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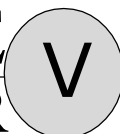


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EDITORIAL

It is encouraging to see the *Josephine Researcher* entering a new stage of growth and establishing itself as a unique research book with increasing repute. *Josephine Researcher* has been dreaming big as the faculty and student community have published more research papers since 2018. Consequently, this academic year, we are compelled to release Part II for *Josephine Researcher*, Volume V. St. Joseph's College, Moolamattom, through this new research book, brings together researchers, scientists, social activists, and faculty members from several disciplines to add priceless knowledge to the treasure trove known as *Josephine Researcher V*, Part II. We are deeply grateful to the former editors for their guidance and vision. The results of investigations and tests that breathe life into the pages excite readers with illuminating and equivocal facts.

We sincerely appreciate the wise counsel provided by our manager, Very Rev. Dr. George Edayadiyil CMI. Rev. Dr. Thomas George CMI, our local manager and managing editor, has our gratitude. This resource book was given life by our Principal, Dr. Sabukkutty M.G., whose inspiration and resourceful assistance are truly appreciated. We would also like to thank our bursar, Rev. Dr. Jomon Kottarathil CMI.

We hope to not only support research but also create a global platform where the results can be shared.

For Editorial Team
Dr. Justine Joseph & Dr. Alex E R

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Introspecting the Childhood Self of Amir in *The Kite Runner*

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Abstract

The Kite Runner is the debut novel of Afghan-American writer Khaled Hosseini. The novel revolves around the betrayal, mental conflicts and the redemption of Amir. This study aims to explore the childhood experiences of Amir that formed the basis of his mature self. Studies in the field of child psychology states that the events that occur in the lives of children deeply impacts on their later lives. Children construct an understanding of the world around them, and experience discrepancies between what they already know and what they discover in their environment. By applying psychoanalytical reading to Khaled Hosseini's *The Kite Runner*, the paper explores the relationship between the protagonist Amir's childhood experiences and his internal conflict.

Keywords: Childhood, Psychology, Trauma, Self

Introduction

Khaled Hosseini's novel *The Kite Runner* (2003) depicts the internal conflicts of Amir. He is never free from the traumatic childhood event that he had met with at 1975 when he was twelve years old. The complex relations in his childhood have a significant impact up on his judgments and actions. Jean Piaget, the Swiss clinical psychologist known for his pioneering work in child development regarded cognitive development as a process which occurs due to biological maturation and interaction with the environment.

Children are in great need of protection while they are growing up. Being a single-parent child as he lost his mother on his birth, Amir finds his early years very tough on him. Amir adores his father but lacks a relationship with him. Baba is a smart and good man at heart but he is just unable to come to terms with his son's interests, and ultimately neglects him because there is a lack of connection. Baba negatively shapes Amir's attitudes towards his sense of self from a young age. Amir never stood up for himself and he was different. He liked poetry, something that Baba believed was not normal for a young boy. Baba speaks to Rahim Khan, his best friend and business partner, about his confusion with Amir that he does not understand why his son's interests are not similar to his own. "He's always buried in those books or shuffling around the house like he's lost in some dream...I wasn't like that." Baba sounded frustrated, almost angry" (23). Amir fails to rise according to the wishes of his father. Baba's indifference inculcates in him low self esteem and insecure. He craves to get loved. He tries in vain to attract the attention of his father and longs to spend his time with him. But his father callously dismisses him and asked to be with Hassan. He thinks that his father loved Hassan more than him.

The early years of childhood is great disappointment for Amir, as he is not well received by his father. Amir spends most of the first twelve years of his life with Hassan, the son of the family's servant Ali. The early years of Amir and Hassan's friendship is filled with innocent joy. There is adoration, loyalty, and genuine affection between the boys. Later, with the comments and attitudes of the people around him, his attitude to Hassan changes. Hassan is the one who helped Amir choose the path of his future career. Since he is jealous of Hassan as he feels Baba has special concerns for him, Amir takes advantage of the friendship between Hassan and him. He made fun of him whenever he had the chance, but Hassan never took it to heart and still perceived Amir as his best friend. Throughout the entire story, Amir felt that Baba was not giving him the attention he needed. Anytime Amir wanted to be alone with his father, Baba asked Hassan to join him and that made him jealous of Hassan.

The cultural values and customs of his land contributed greatly to the thought process of Amir. Racial politics prevalent in the Afghan society influences Amir in his perspectives. Although Amir and Hassan spent all their formative childhood moments together, Amir internalizes the social hierarchy in the socioeconomic culture of Afghanistan. Amir and Hassan have different ethnic groups: Amir is Pashtun and Hassan is Hazara.

All these tensions come to a breaking point during the kite-fighting tournament. Amir sees the kite-fighting tournament as a way to finally win Baba's love. Amir's desire to feel appreciated and loved becomes the most prominent thing on his mind, and as a result, he disregards other relationships. Amir does nothing to save Hassan when he is raped by Assef.

Conclusion

Different stages in a person's life is closely inter related. Relationships with parents, friends, and other institution have great effect on how children think, learn and develop. Amir is evolved out of his childhood experiences. His self is deeply entangled in the trauma and despair extended by the circumstances of his early years. The guilt that he carried for years found its redemption only when he come back and save Hassan's son from Assef.

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A Comparative Exploration of Truth and Integrity: Henrik Ibsen's *An Enemy of the People* and Satyajit Ray's *Ganashatru*

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Abstract

This chapter provides a comparative exploration of truth and integrity in Henrik Ibsen's *An Enemy of the People* and Satyajit Ray's *Ganashatru*. It delves into the universality of themes, emphasizing how both works, despite distinct cultural contexts, resonate with audiences globally. The chapter examines character transformations, the role of irony, and the significance of film as a medium for adaptation. It underscores the timeless relevance of themes such as morality and the consequences of challenging societal norms. Ultimately, this analysis offers insights into human nature, ethics, and the pursuit of truth, whether through Ibsen's classic play or Ray's cinematic reinterpretation.

Keywords: society, adaptation, morality, individual, disillusionment

Henrik Ibsen's *An Enemy of the People* and Satyajit Ray's *Ganashatru* offer two distinct yet interconnected narratives that delve into themes of truth, morality, and the consequences of challenging a corrupt majority. While Ibsen's classic play serves as the source material, Ray's adaptation transplants the story into the cultural and temporal context of 20th-century India. This chapter explores the universality of the themes within both works, their cultural adaptations, character transformations, and the role of irony and social critique. It also examines the significance of the film medium in adapting a classic play and the broader cultural relevance and social commentary provided by both Ibsen and Ray.

At the core of both *An Enemy of the People* and *Ganashatru* lies a profound exploration of universal themes. Ibsen's original work, set in 19th-century Norway, and Ray's adaptation, rooted in 20th-century India, reveal the timeless nature of themes such as truth, morality, and the clash between individual integrity and collective interests. Regardless of their cultural and historical contexts, the central themes remain relevant to audiences around the world.

Satyajit Ray's adaptation demonstrates the malleability of classic literature when transplanted into different cultural landscapes. By setting the story in India and infusing it with Indian cultural elements, Ray successfully makes the narrative relatable to Indian audiences while preserving the essence of Ibsen's original themes. The contrast between the Western and Indian contexts underscores how universal themes can manifest differently in various cultural settings.

Both Dr. Thomas Stockmann in *An Enemy of the People* and Dr. Ashoke Gupta in *Ganashatru* undergo similar transformations throughout their respective journeys. Their arcs trace a path from initial optimism and dedication to eventual disillusionment in the face of opposition. These character transformations serve as poignant reminders of the personal and emotional costs associated with speaking truth to power.

Both Ibsen and Ray employ irony as a powerful narrative tool to critique societal norms and human behavior. The irony of individuals seeking to protect public welfare being vilified as enemies of the people resonates deeply with audiences. It highlights society's tendency to prioritize short-term economic interests over ethical considerations and the consequences of challenging the status quo.

Satyajit Ray's *Ganashatru* showcases the potential of cinema as a medium for adapting classic plays. The visual storytelling, cinematography, and carefully chosen settings add depth

to the narrative and enhance its impact on the audience. Ray's adaptation demonstrates the transformative power of film in translating a literary work into a new cultural and visual context.

Ibsen's *An Enemy of the People* reflects 19th-century European concerns about individualism and morality. In contrast, *Ganashatru* addresses issues that were pertinent to India in the late 20th century, including faith, tradition, and societal values. Both works serve as powerful commentaries on their respective societies, offering insights into the complexities of human nature and the dynamics of societal change.

The comparative analysis of Ibsen's *An Enemy of the People* and Ray's *Ganashatru* reveals the enduring relevance and adaptability of the play's themes across different cultural and temporal contexts. These works stand as testaments to the universal truths about truth, morality, and the consequences of challenging the prevailing norms of society. Whether through Ibsen's original masterpiece or Ray's cinematic reinterpretation, these narratives continue to captivate audiences and provoke contemplation on the nature of integrity, societal pressures, and the pursuit of truth.

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Cultural Integration in 'Brick Lane' by Monica Ali

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Abstract

"Brick Lane" by Monica Ali delves into the complexities of cultural integration in the multicultural neighborhood of Brick Lane, London. The novel portrays characters like Nazneen, who left their homelands to seek new lives in London, offering a rich exploration of their experiences. Through these characters, the story navigates the delicate balance between preserving cultural heritage and embracing the unfamiliar, shedding light on identity, family, love, and the profound impact of cultural integration. Monica Ali's work serves as a window into the immigrant experience, emphasizing the intricate interplay of cultural adaptation, generational conflicts, and self-discovery in a diverse and ever-changing world. The novel's exploration of relationships showcases how individuals from different cultural backgrounds navigate challenges and opportunities in a multicultural society, highlighting the fluidity of cultural identity and the potential for meaningful connections across cultural boundaries.

Keywords: Culture, integration, diaspora, family, social life, identity

In the heart of London's East End lies the enchanting neighborhood of Brick Lane, a melting pot where cultures collide and intertwine. Monica Ali's novel, "Brick Lane," serves as a guide into this vibrant world, where diverse cuisines perfume the air, and myriad languages fill the streets. This captivating narrative takes readers on a journey through the lives of its characters, exploring the intricacies of cultural integration amidst the backdrop of this multicultural tapestry.

"Brick Lane" is not a simple story of assimilation but a complex exploration of the negotiations, tensions, and adaptations that occur when diverse cultures converge in a shared urban space. It delves into the lives of immigrants like Nazneen, who left their homelands to seek new lives in London. Through Monica Ali's prose, the novel examines the delicate balance between preserving cultural heritage and embracing the unfamiliar.

Set against the bustling markets and quiet kitchens of Brick Lane, the novel paints a vivid picture of the challenges and choices faced by characters striving to weave their unique narratives into the neighborhood's fabric. At its core, "Brick Lane" is a poignant exploration of identity, family, love, and the profound impact of cultural integration.

Monica Ali's novel is a critically acclaimed work that provides a window into the immigrant experience in a multicultural urban setting. It navigates the complexities of cultural adaptation, the clash of generations, and the quest for self-discovery in a world marked by diversity and change.

Monica Ali, the author, was born in Bangladesh but raised in England. Her debut novel, "Brick Lane," catapulted her into literary prominence and ignited discussions on multiculturalism, immigration, and the immigrant experience in the UK. Her lyrical prose and exploration of human relationships, identity, and cultural diversity continue to resonate with readers, cementing her as a significant voice in contemporary literature.

In "Brick Lane" by Monica Ali, the characters' relationships and interactions provide a nuanced exploration of the complexities of cultural integration. These relationships highlight the diverse ways in which individuals from different cultural backgrounds navigate the

challenges and opportunities of living in a multicultural society. Here's an analysis of key relationships and their impact on cultural integration in the novel:

Nazneen and Chanu's Marriage:

Nazneen's arranged marriage to Chanu represents a traditional aspect of Bengali culture. Their relationship reflects the dynamics of a first-generation immigrant couple adjusting to life in London. While initially, Nazneen is submissive and deferential to her husband, her growing independence and interactions with others in the neighborhood lead to changes in their relationship dynamics. The marriage also demonstrates the tension between preserving cultural traditions (arranged marriages) and adapting to new cultural norms (individual choice in marriage).

Nazneen and Karim's Romantic Relationship:

Nazneen's relationship with Karim, a younger man and political activist, symbolizes her journey of self-discovery and empowerment. Their romantic involvement crosses cultural and generational boundaries, reflecting the evolving nature of cultural integration in immigrant communities. The relationship represents a fusion of cultures and the breaking of traditional expectations, as Nazneen explores her desires and independence.

Shahana's Friendship with Razia:

Shahana's friendship with Razia, a non-Bengali girl from school, highlights the potential for cross-cultural friendships among the younger generation. Their relationship symbolizes the willingness of young immigrants to engage with and learn from other cultures, challenging stereotypes and fostering integration. Shahana's friendship with Razia is a source of support and connection outside her Bengali community, emphasizing the importance of diverse friendships in the process of integration.

Karim's Activism and Community Connections:

Karim's involvement in political activism and his relationships within the immigrant community underline the role of community engagement in cultural integration. His interactions with various characters, regardless of their cultural backgrounds, emphasize the importance of solidarity and shared goals in transcending cultural differences. Karim serves as a bridge between cultures, advocating for immigrant rights while maintaining a strong connection to his Bengali heritage.

Chanu's Professional Aspirations:

Chanu's interactions with colleagues and superiors in his workplace highlight his aspiration for success in British society. His determination to pursue education and career advancement is emblematic of the immigrant experience of seeking opportunities in the host culture while preserving aspects of one's cultural identity. Chanu's interactions at work illustrate the challenges and opportunities faced by immigrants as they strive for economic integration.

Mosque and Religious Community:

The mosque and religious gatherings serve as focal points for characters to connect with their cultural and religious heritage. These communal spaces foster a sense of belonging and provide opportunities for immigrants to share their experiences and support one another.

Religious communities represent a form of cultural integration as individuals come together to practice their faith while living in a multicultural society.

In "Brick Lane," the relationships between characters are instrumental in portraying the multifaceted nature of cultural integration. These relationships underscore the fluidity of cultural identity, the impact of generational differences, and the potential for individuals to bridge cultural gaps through meaningful connections. The novel's characters navigate these relationships as they grapple with questions of identity, belonging, and the challenges of adapting to a new cultural environment.

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(M)otherhood: On the Choices of Being a Woman Deconstructs Modern-Day Motherhood

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Abstract:

In *(M)otherhood: On the Choices of Being a Woman*, Pragya Agarwal deconstructs modern-day motherhood, highlighting the cultural gender roles that pressure women to prioritize raising children over careers and the normative images and fertility advertisements they face. The role of motherhood has been deemed the ultimate realization of womanhood since time immemorial, and the paper argues for tackling society's obsession with women's bodies and fertility. Agarwal points out that women are victims of a system that makes them feel worthless if they are not mothers. The text also discusses personal dilemmas and societal pressures surrounding the concept of motherhood, highlighting the incomplete image of a mother always being a selfless caregiver. The literary archetype of the "mother" persona is commonly used, but maternal personalities can also reflect traits like neglect, insensitivity, and selfishness. The text also explores the image of a "New Woman" who is not satisfied only by being a mother, as seen in literature and artistic genres.

Keywords: Motherhood, Archetype, identity, women's body, new woman, gender relations

Introduction:

The Old Testament Book of 1 Kings tells the story of two prostitutes who give birth to sons. One dies, and the other's mother switches the dead baby. Solomon, King of Israel, decides to cut the live child in two, but the first woman is given the child. The grateful mother goes forth with the infant. This story highlights the extremes of motherhood, revealing the complexities of love and self-sacrifice. In literature, mothers have been depicted in various ways, from being revered to obnoxious and controlling. Classical literature often portrays good mothers as immoral, while Shakespeare's *Romeo and Juliet* portrays surrogate mothers as helpful. Later, mothers are often portrayed as gullible or inept, like Mrs. Bennet in Jane Austen's *Pride and Prejudice*. In Victorian and modern eras, mothers faced issues like poverty, globalization, and war, challenging preconceived notions about relationships and parenthood. Examples include Tolstoy's *Anna Karenina*, Flaubert's *Emma Bovary*, and Wharton's *Undine Spragg*, who marries and divorces frequently, often abandoning her children. The Victorian fin de siècle saw significant changes in art, politics, science, and society, particularly in the role of women. With improved educational and employment prospects, marriage and motherhood were no longer seen as the only path to financial security, transforming the male-dominated world. The fin de siècle saw a shift in societal norms, with sex and sexuality playing a significant role in seeking new experiences. The New Woman and Dandy, both fashionable at the time, challenged traditional gender roles and masculinity, sparking outrage from critics like Max Nordau. Punch magazine mocked the New Woman as an embittered spinster. **The New Woman** was viewed differently by men and women as the woman who remained a force for change throughout the late Victorian and Edwardian periods. Some men found women's emancipation desirable, while others, like novelist Mary Augusta Ward, opposed it.

The term 'New Woman' was first used in 1894 by novelist Sarah Grand in her article, 'The New Aspect of the Woman Question', which addressed the double standards in Victorian marriages, emphasizing the importance of the wife's sexual virtue over the husband's. 'The New

Woman' became a popular shorthand to describe independent, educated women, but the qualities and characteristics that defined it had already been present in 1880s literature. The term's origins are disputed, but it became popular in the early 20th century. The New Woman was a feminist, social reformer, poet, and playwright who addressed female suffrage. In literature, she often mirrored societal attitudes, reflecting her aspirations and desires. Early examples include Nora in Hans Ibsen's *A Doll's House*, Lyndall in Schreiner's *The Story of an African Farm*, and Grace Melbury in Hardy's *The Woodlanders*. The new woman, associated with suffrage, fought for women's rights, education, and political participation, challenging traditional gender roles and promoting independence and self-reliance.

The New Woman, a feminist icon, is controversial due to its portrayal of women in media as radical cartoons and its fictional origin. However, the movement was valid and led to a new generation of active women in public life. Pragya Agarwal's book, *(M)otherhood: On the Choices of Being a Woman*, is a pro-motherhood memoir that explores themes of infertility, childbirth, and reproductive justice. It calls for addressing society's obsession with women's bodies and fertility, highlighting the importance of motherhood in shaping our lives. This book explores the stigma and pressures faced by women in the past, focusing on the shapes and choices they face in motherhood.

“(M)otherhood: On the Choices of Being a Woman,” by Dr. Pragya Agarwal, is a deeply fascinating book, both for its contents and for its literary personality. Its identity as a book reflects the identity of diaspora women of colour; varied chapter by chapter, difficult to define, ticking many boxes but fitting into none. The title itself is a nod to the whole world of “otherment” that mothers experience, a role which is viewed as completely biological and instinctual but can be extremely complicated for many. Dr. Agarwal explores gendered language in textbooks, highlighting the negative impact of gender norms on our understanding of sex, menstruation, and conception. She highlights the pressure on women to have children, which can affect their self-esteem and social worth. She emphasizes the importance of personal accountability and the role of women in perpetuating this toxic phenomenon. The book highlights the complexities of human reproduction and the multifaceted nature of privilege and oppression. It highlights that women from different countries may have different experiences and access to abortion, highlighting the interconnectedness of these institutions.

The New Woman, a literary figure in turn-of-the-century Britain, sought equality and sexual freedom in various forms, including education, marriage, and sexual freedom. Despite their identities, they all aimed to challenge an alternative to the Victorian model. The 1880s saw an economic boom and a rise in consumer culture, leading to the emergence of the New Woman. However, the literary representation of this woman was flawed, with Grand's New Woman struggling with a loveless marriage and Schreiner's New Woman dying in childbirth. Victorian society must change to accommodate this.

The New Woman, a figure in Victorian literature and media, was a professional woman who worked outside the home and contributed to public education through various roles. She also aided her husband and contributed to the empire and political issues through single-issue groups. The New Woman model provided women with direct entry into politics through single-issue groups promoting education and the empire. Middle-class women working in professional careers were a new type of woman, challenging Victorian gender roles and becoming valid contributors to feminist movements and British society. Despite their challenges, these women became their own New Women and valid contributors to feminist movements.

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Culture in Nadia Hashmi's *One Half from the East: A Justifying Voice*

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Abstract

Cultural study is a field of study in which culture is understood as a complexly patterned way of life. Every society is different in its cultural practices. No one can decide, which is the exact culture that is to be followed by everyone uniformly. Culture differs across cultures. Afghan society has a strict adherence to its traditions and customs. It is rich in traditions and customs because of its geographical position. Bacha posh is a cultural practice that has been followed by many families since ancient times. The main character in the novel, Obayda had to undergo this tradition. This article highlights the significance of tradition and its impact on strengthening its roots.

Keywords: Culture studies, Bacha Posh, Resilience and Patriarchy

Culture is a means of expressing creativity, forging an individual identity, and enhancing or preserving a community's sense of pride. Culture and literature are in harmony with each other. Culture includes the practices, beliefs, and values of a society and literature expresses them in different literature shapes. Cultural Studies is a field of study in which culture is understood as a complexly patterned way of life.

Cultural studies introduce you to critical approaches used in the study of a wide variety of cultural forms and practices. It helps us to understand the complexity of everyday life and the way that habits and beliefs are socially patterned and laden with values and meaning. It will provide a range of tools to analyse how cultural practices and meanings are produced, circulated, and exchanged. According to Raymond Williams, "culture is a system by which meanings and ideas are expressed, not only in 'art and learning', but also in 'ordinary behaviour'". Every society is different in its cultural practices. No one can decide, which is the exact culture that is to be followed by everyone uniformly. Culture differs across cultures.

Cultural practices are traditional practices developed within a specific ethnic-cultural group. Literature can be described as the medium to popularise forms of culture. Nadia Hashmi uses her Afghan roots to craft fiction that reveals the cultural practices and beliefs in Afghanistan. Afghani's life is affected by constant political conflict. Resilience is now an essential trait that has become instilled within the Afghan character as a result of these experiences.

Afghan society has a strict adherence to its traditions and customs. It is rich in traditions and customs because of its geographical position. Afghanistan is positioned at the meeting point of four major cultural areas, the Middle East, Central Asia, the Indian subcontinent, and the Far East. Islam is the official religion of Afghanistan. Religion also played a major role in shaping the culture of Afghanistan.

Bacha posh is a gender-twisting custom, fairly common in Afghanistan and parts of Pakistan. Bacha posh is a Persian name that literally means dressed up as a boy. Even though this practice is against a background of rigid gender norms and the male-centric nature of Afghan families. It is known that individuals who raise girls as boys have less conservative gender norms, apparent from their acknowledgment that bacha posh can be experienced as gender-liberating for girls who are able to experience the privileged side of a patriarchal society.

It is a cultural practice that has been followed by many families since ancient times. The main character in the novel, Obayda had to undergo this tradition. People outside the

Afghan culture came to know about this after it was portrayed in a literary work like that of *One Half from the East*. Nadia Hashmi recorded real-life experiences of Afghan women by converting them into a fictional work. In a bacha posh system, the younger daughter of the family had to undergo a gender change for many reasons just like Obayda. Obayda's aunt in the novel speaks about the reasons for changing her into a bacha posh.

It's very simple dear. Make Obayda into a boy. With her as a son, she will bring good luck to your home. You'll see your husband cheer up. Then you plan for another baby in the family. Having a bacha posh at home brings boy energy into your household. The next baby that comes will be a boy. And once you have a real son, watch what happens. Your husband will come back to life. I have seen this work in the families around us. It's not magic- it's just how it is. And that's when Obayda can go back to being a girl. Everyone wins. (17)

According to the belief of Afghan society, boys will bring good luck to the family. The family needed some good fortune to escape from their financial struggle. They also believe that making their daughter into a bacha posh will make the subsequent child to be born a boy. They are desperate for a boy child due to the socio-political rules in rural Afghanistan. Only a boy child can inherit his father's property under the traditional system that prevailed in Afghanistan.

The research article aims to study the cultural practices of Afghanistan and their justification. Culture is different in each society. One can't attribute an inferior status to any cultural practice. Because it is the culture that determines the identity of a person. It is through literature the practice of bacha posh becomes popular. Nadia Hashmi wins by bringing the attention of the reader who is out of the Afghan culture to the traditional practices and beliefs. Bacha posh is the gender-twisting custom that has been practiced by Afghanis even for a century. It is to adapt to the patriarchal nature of the tribal society without deconstructing the rules of the society. Hashmi also touches slightly on the political condition that prevailed in Afghanistan. The power asserted by the Taliban on the Afghan people remains unquestionable. There exists gender apartheid in society. It is not the family that supports gender equality. Indeed, bacha poshes come from more gender-equitable families. They consider it gender-liberating and want their children to perform every possible thing in life.

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Depiction of Gender Bias in Nadia Hashmi's *One Half from the East*

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Abstract

Literature is influenced by the diversity of culture. Enhancing the identity and individuality of families in society is achieved by it. Afghan culture is characterized by a collective mindset where individuals prioritize their family's interests above their own. This implies that family responsibilities tend to be more important than personal needs. Being loyal to one's family is more important than being loyal to one's tribe or ethnicity. Having a bacha posh in the family is associated with better gender norms. Their status in Afghan society is equal to that of a boy. This research article aims to explore the relevance of culture and its optimistic attitude toward gender bias.

Keywords: Ethnicity, terrorism, Gender studies, and Purdah system

Culture can include everything that gives a family its identity. Culture represents the beliefs and practices of a group that shares those beliefs and practices. Neither family nor culture could exist without the other. Diversity in culture is essential for the difference in literature. It enhances the identity as well as the individuality of the families in the society.

Afghanistan is known for its unique ethnicity. They give paramount importance to their culture. Afghans value their ancestral practices and continue to observe them. Afghan culture is very collective and people generally put their family's interests before their own. This means that family responsibilities tend to hold greater importance than personal needs. Loyalty to one's family supersedes any obligations to one's tribe or ethnicity.

Obayda's parents do not show any kind of discrimination based on their feminine gender when they are residing in the city. Only a male child can work outside the house and earn money. The poverty of families made families send their children to work at an early age. As there is vast inequality between the sexes, bacha posh injects cultural flexibility. Also, the females of a family must have a male escort to travel in the rural parts of Afghanistan. Women's mobility was tightly controlled by the Taliban regime enforcing women not to leave their house without a male companion. If there is no boy to escort women, it will limit their mobility which in turn results in limiting their public access. So, to overcome this issue, Afghan tradition found another tradition called bacha posh.

A bacha posh in the family is linked to more equitable gender norms. They enjoy equal status to that of a boy in Afghan society. A bacha posh child can behave more freely. Not having a boy child is considered a social disgrace in the archaic patriarchal setting. Women in Afghan society are mocked by calling them "dokhtar zai", which means she only brings daughters, and husbands are called "mada posht", which means whose women will only deliver girls. There is constant pressure on families to have at least one boy child. To raise their social standing, the parents convert their daughters into bacha posh. This gender-changing custom will provide social relief to families having no boy child. It is clear from the dialogue with Obayda's aunt that this practice is very common in Afghanistan. Obayda came to see another bacha posh in the Afghan society later.

This custom is documented at least one century ago. It is a much older practice, practiced still today in modern-day Afghanistan. However, it received very little attention in the literature. Turning a child into a bacha posh is somewhat of a public secret in society as it

does not have the approval of religion. Families have several reasons to change their child to a bacha posh. One main reason is the poverty the family faces. Women's mobility, particularly in rural settings, is often highly constrained and a purdah system is imposed upon them. One can escape from all these restrictions by changing into a bacha posh.

Nevertheless, bacha posh may be a practical response to navigating the gender terrain in Afghanistan. Interestingly, bacha posh could be used as a way to resist the strict societal codes that dictate how women should and should not behave. Bacha posh is linked to less patriarchal gender norms and can be a way for girls and women to acquire education, mobility, and engagement in income-generating activities. This practice supports their family economically by making the girl child work in a patriarchal society. Moreover, according to a study conducted by an international journal, women reporting bacha posh in Kabul had higher monthly savings, suggesting that girls raised as boys may be making important economic contributions to household savings, either through their own work or else through enabling women to work. In order to erase patriarchy, every household must have a bacha posh in the family. It will result in less patriarchal individual gender attitudes. Many people outside this cultural practice will think that this practice is victimizing girls. But it actually changes the position from victims to a stage where they can realise their real strength and innate potentialities.

People of Afghanistan express disappointment or dismay at the fact that most Western perceptions of their country are formulated around the news of terrorism and turmoil without insight into the geographical factors that caused such conflicts. Such perceptions overlook many of the positive aspects of the culture. Embellishment is also noticeable in the language, with poetry being one of the most admired art forms.

The researcher concluded that gender is performative rather than innate. It can be proved by the novel *One Half from the East*, in which the researcher sees the subversion of the gender identity of a preteen girl to a boy. Our biological gender is not what we perform. The performance of our gender is decided by the type of performance. If one is performing masculinity, he or she can be considered male. In the same way, one who is performing feminine attributes can be called a female. The binary is not decided by traditional gender analysis. Gender is a broad spectrum and is fluid. There can be a gender change based on performance. Transvestism and cross-dressing are so common in many societies and countries. It is not unique to Afghan society. If one's biological gender is restricting them from doing certain things, it is ok to change to a wished identity and do everything they wish. The researcher came to the conclusion that gender is an objective natural thing, that does not exist. The novel *One Half from the East* proves that gender is real only when it is performed.

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***Samskara* as a text that Raises Subaltern Issues**

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Abstract:

The caste system has existed in India for at least 3,000 years. It is a social hierarchy, passed down through families, and it can dictate the professions, social status etc. But the evilness of the caste system disrupts the lives of million people in India year by year. Superstitious beliefs, discrimination, marginalisation, untouchability, greed, exploitation, selfishness takes a major role in caste system for the distraction of the society

Keywords: Discrimination, marginalisation, untouchability.

Samskara A rite of dead man, a classic of modern literature, is an intense exploration of subaltern issues such as the caste system, inequality, untouchability, patriarchy, Orthodoxy of Brahminism and marginalisation. As an insider's account of life in a community that practised these issues, the novel assumes even greater significance. The book offers a scathing critique of the caste system. U R Ananthamurthy lived in a society in which the caste system was very critical. So his experience and intense opposition are visible in the novel.

Ananthamurthy is unafraid to criticise the style of life of the Brahmins. The stupid insistence on adhering to religious commandments is what causes Naranappa's body to decay. Rats and vultures are drawn in by the nauseating odour, making life in the aghara intolerable. The community values ceremony above a dead man's entitlement to a good funeral. Naranappa, the anti-Brahmin against the most-Brahmin Praneshacharya and Brahmanism itself, is the book's most intriguing figure. Although Naranappa dies in the first scene, he is constantly present throughout the entire book. He is honest despite his coarse behaviour. As compared to the Brahmins' false behaviour, this honesty causes Praneshacharya to question whether Naranappa will reach God first. In short, even a dead man becomes the victim of marginalisation because of casteism. The depiction of women and lower castes is real and miserable. Women were treated as mere sexual objects. The crucial point of the novel is when the protagonist made a sexual relationship with Chandri It brings a change in the novel. It's led to a dilemma in one own identity.

Ananthamurthy's brilliant depiction of characters can be seen throughout the novel. It really presents the aftermath of the caste system and social inequalities through the career of a limited hero. Each of the characters are the representative of the social system. Through their traits and ideologies author put a question to think and transform

Samskara celebrated three major themes, the caste system, self-discovery and transformation and greed. In connection with the dogma of Brahminism, greed is silent sarcasm upon their blind beliefs. Because Chandra's gold changed the attitude of Brahmins regarding the cremation of Naranappa. The people who rejected to do the cremation themselves come forward to do cremation in front of the gold. That means the rules caste system is merely for subordination and suppression of the lower caste.

To sum up, the act of uniting binary opposites by embracing the non-traditional side of the separation, *Samskara* seems to promote a new paradigm. It focuses on the social questions of the caste system and highlights the cognitive dissonance created in the minds of its followers. *Samskara* means the funeral that is given to a dead person but in another sense it is

transformation and purification of mind-set. So we can assure that samsKara can do a purification in the mind of society by realizing the dogma of the caste system. I believe that this Novel should be explored more by readers today and drive forward the impending social change built on the foundations of equality.

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Liberal Feminism in the Novel *Daisy Miller*

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Abstract:

Liberal feminism is one of the earliest forms of feminism stating that women's secondary status in society is based on unequal opportunities and segregation from men. Emerging out of the abolitionist and women's movement in the U.S, This body of feminism focuses on eliminating gender inequality. The basic beliefs are grounded in liberalist philosophical traditions, as well as French and British feminist theory. The novel *Daisy Miller* discusses the concept of liberal feminism.

Keywords: Empowerment, Liberation, feminism

European and American women in the nineteenth century lived in an age characterized by gender inequality. At the beginning of the century, women were not allowed to enjoy legal, social, or political rights that are now taken for granted in western countries. They could not vote, could not testify in court, had very much limited control over personal property after marriage, they were rarely granted with legal custody of their children in cases of divorce, they were denied the right for higher education. They were under the control of their fathers and husbands.

Women's occupational choices were also extremely limited. The women from upper – class and middle – class generally remained home, to take care of their children, and for the household work. Lower – class women worked outside the home, usually as poorly – paid domestic servants in factories and mills. Many of the scholars supports the point that the Victorian age was a time of especially gender polarization as women were expected to adhere to a rigidity defined sphere of domestic and moral duties, restrictions that women increasingly resisted in the last two – thirds of the century. *Daisy Miller* represents the society of America of the early 19th century and woman's status in the very society. It draws a portrait of an American girl from Schenectady offends the delicate social sense of various so – called patriarchal norms and values and how she is misunderstood. Daisy is hounded for her actions by the other two women present in the novel, Mrs. Costello and Mrs. Walker. Mrs. Costello represents the ideal and respectable woman of late 1800's Europe. She is aunt of Daisy. She is shown in the novel as a refined, proper, and properly opposite all that Daisy embodies. Mrs. Costello is continuously interfere in the severe criticism of Daisy's behaviour, thinking of anyone could behave so vulgarly, she is baffled. Society accepts that Mrs. Costello is right, and her opposite, Daisy is wrong. Without a trial, Daisy's behaviour is condemned, and is met with death.

The huge difference between the behaviours of two young, single Americans abroad, Daisy and Winterbourne, has one clear explanation apart from the divergent personalities: as a man, Winterbourne is free to act as he likes and to lead an independent lifestyle without any restriction, while Daisy is not. The novel *Daisy Miller* implicitly if not explicitly develops this unjust difference based on gender norms. Daisy is a representative of a generation of American woman who have more options than ever were open – movements on women's rights were beginning in earnest, and the Grand Tour to Europe, which had earlier been open to men only, could now be enjoyed as well as women. However, it's meaning is not women were fully independent. At Daisy's desire to walk alone, Mrs. Costello, Mrs. Walker, and others grow so

shoked. The word allow usually meaning with one man, unaccompanied by a Chaperone – underlines these drawbacks. In many ways, The novel mentions just how frustrating these drawbacks and lack of freedom can be for intelligent, curious, young women. At this historical moment, still James is seemingly very ambivalent about the position of young American women. The book does not agree to Daisy's behaviour as a model for young women, because her death at the end, and is also shown as stemming from her own mistakes and rash choices. As the place of the woman in American and European culture was rapidly changing, Henry James painted some of society's own ambivalent views on what paths the New woman could take, and what dangers she still faces, especially in the older, more established European culture. Women have been lowered to the status of signs in society – especially 19th century society and have had to secure as carriers of meaning for men. James was straightly concerned with this signifying process and treated the sign versus conscious self - contradiction of women's lives through his fiction

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Challenges and Opportunities for Women Working Remotely

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Abstract

When we talk about remote work, we never realize how different it can mean for men and women. The challenges and opportunities women working remotely have, are quite distinct from those of men. Reports suggest that 80% of women are unwilling to return to work as compared to 60% of men. This article sheds light on the challenges and opportunities for women working remotely. Women consider remote work an advantage due to the freedom to work from the convenience of home and better integration of career and personal life.

Keywords: Remote Working, Gender Disparity, Work-Life balance

Introduction

The challenges and opportunities women working remotely have are quite distinct from those of men. Women consider remote work an advantage due to the freedom to work from the convenience of home and better integration of career and personal life. Despite all the benefits of working remotely, women report a sense of insecurity and the fear of losing out on growth opportunities. In a way, working remotely is widening gender disparity for women. Despite women's empowerment and advancement, men are still preferred for significant roles, and women are still the primary caregivers. Then why do women still prefer working remotely? This study will elaborate on how remote working has affected women and how can they decide if working remotely is right for them.

Challenges and opportunities for women working remotely

Women are always expected to take care of children and do household chores. It can be quite daunting for women to focus on work in the hustle and bustle of household responsibilities and simultaneously move up the corporate ladder. Let's take a look at all challenges woman face while working remotely.

1. **Feeling Burnout:** Working from home, taking care of kids, preparing meals, and doing other housework at the same time can be pretty challenging. Remote work blurs the line between work and personal responsibilities. Even the family members expect a woman to cater to their needs when she's at home. It causes distraction and diverts focus. Women work extra hours to accomplish tasks and deliver work before deadlines. This can lead to over-exhaustion and burnout. Working remotely can be rather stressful and deplete motivation.
2. **Stagnant career growth:** Working virtually can take away significant growth opportunities from women as they might miss being part of important discussions and decisions. Women have been struggling to be heard and get equal opportunities for a very long time and now working behind the scenes might make it even harder for them to get access to those opportunities. Although organizations set up performance metrics in virtual work environments, forming associations and networking is a massive part of getting recognized and promoted. Women might miss establishing corporate bonds while working from home.
3. **Feeling lonely:** Watercooler chats, friendly conversations, and connecting with like-minded colleagues are a part of the in-office work environment. Women feel intellectually satisfied when they make these bonds and form meaningful friendships that foster a growth mindset. Working alone from home while entangled in household chores might make women feel lonely and dissatisfied. Staying at home and working in your pajamas is indeed very comfortable, but it can take away the drive, motivation,

and slower work speed. It gives confidence and motivation to work when you dress up for the job and work in a facilitative office environment.

4. **Lack of optimum resources:** Some women might face the challenge of inadequate resources like a lack of comfortable office furniture, an undistracted work environment, and supportive family members. Even if they have adequate resources, it might cost them extra to set up the optimum work environment. In such situations, women should work from their work location or the company must compensate them for office equipment and internet bills, etc.

Despite the various challenges of working remotely, the majority of women are willing to work from home. Let's take a look: why?

1. **Better work-life balance:** Saving time and money by avoiding traveling time and extra unproductive office hours enables women to spend quality time on their children, health, and hobbies. A mother wants to spend quality time with her children, especially during their growing up years, and not miss any personal milestone. Remote work can give women the flexibility to enjoy the best of both worlds.
2. **Safety and comfort:** The biggest benefit women report while working remotely is that they don't have to face the challenge of commuting. Women face harassment and sexual advances using public transport. Even those who own a vehicle avoid traveling alone due to security concerns. It also saves time and money. During menstruation, it is even more comfortable for women to be able to work from the comfort of their homes. Not all companies allow ample maternity leaves and childcare support. Remote work enables them to take care of their health and look after their children while not losing on professional opportunities.
3. **Multiple opportunities:** Women are expected to move and shift careers depending on their husbands' careers. Remote work has allowed them to keep working in their regular jobs while moving from one location to another. Another advantage that women report is, technology has enabled them to voice their opinion without being shut down or interrupted by a male employee. They also have the time and flexibility to work on multiple projects and choose a job irrespective of geographical location. Remote work has given women wings to focus on the work they are passionate about without worrying about personal issues.

Steps organizations can take to minimize challenges for women working remotely

- Organizations must continually review, analyze and modify work-from-home policies to ensure equality and sustainability for women.
- Accurate performance metrics and reward systems must be set in place so that women do not lose out on deserving recognition.
- Appropriate HR training should be mandatory for managers and supervisors to ensure they practice inclusivity and give equal opportunities to women in virtual work environments. They must be aware of the biases and judgments women face at work so that they can keep that behavior in check and follow a zero-tolerance policy for indiscrimination.
- Boundaries, goals, and guidelines must be clearly defined to avoid any confusion. A fair and transparent evaluation system must be set up.

- Along with remote work, flexibility to choose work hours and time off to avoid stress and burnout must be considered by employers too.

Conclusion

There are both challenges and opportunities for women working remotely. It's an individual and organizational responsibility to create gender-neutral and fair working conditions. As a woman, you must set clear priorities and learn to say NO, to avoid burnout and exhaustion. Develop time management skills to seamlessly integrate work and personal life. Make your mental and physical health a priority.

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Environmental Sustainability: A Necessity for Survival

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Abstract

Environmental sustainability is one of the biggest issues faced by the mankind at present. Increasing population along with tremendous escalation in anthropogenic activities has raised several questions on the sustainability of natural resources on our planet. No part of the earth is now untouched by the effect of human activities or pollution. In addition to this, urbanization, industrialization and modern agricultural practices have polluted the water resources, air and soil all around the globe. The natural resources are thus not only being over-exploited but also becoming contaminated with toxic chemicals making it difficult for the survival of future generations.

Keywords: Environment Sustainability, Population, Pollution, Future generations

Introduction

Environmental sustainability is the ability to maintain an ecological balance in our planet's natural environment and thus conserve natural resources to support the wellbeing of current and future generations. Environmental sustainability is about ecological balance. For nearly two millennia, human beings have been carbonizing our planet, which has contributed to global climate change.

The three pillars of sustainability

Sustainability is about meeting the needs of present generations without compromising the ability of future generations to meet their own needs. There are three main pillars of sustainability that many organizations strive to achieve:

- **Social sustainability:** For businesses, social sustainability includes crucial issues of the workplace and employees, like health and safety, inclusion, empowerment, professional development opportunities, and work-life balance.
- **Economic sustainability:** While it may seem that this pillar is focused on an organization's ability to remain profitable throughout its lifetime, economic sustainability isn't just about money. An economically sustainable organization is one that can drive revenue and maintain long-term business growth without negatively impacting the community, environment, or health and wellbeing of its employees.
- **Environmental sustainability:** This pillar is all about protecting the environment for future generations. Environmentally sustainable organizations take steps to enhance efficiencies, reduce resource consumption and waste, and measure and monitor carbon emissions across the entire supply chain.

A brief history of environmental sustainability

The United States first made a national commitment to environmental sustainability in 1969, with the enactment of the National Environmental Policy Act (NEPA). According to the United States Environmental Protection Agency (EPA), under NEPA, the U.S. made it a national policy "to create and maintain conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations." In more recent years, many organizations have made environmental sustainability a priority, expanding their efforts to decrease carbon emissions, reduce and eliminate waste, and consume less water.

Why is environmental sustainability important?

Environmental sustainability is important for the wellbeing of current and future generations. Climate change presents a variety of complex environmental, social, and

economic challenges for countries across the globe. In recent decades, the consequences of climate change have become increasingly apparent—from rising global temperatures and more extreme droughts to strengthening tropical storms, destructive wildfires, and devastating floods. As humans and ecosystems across the planet are suffering from the damaging impacts of climate change, many individuals, communities, and organizations worldwide are embracing environmental sustainability and making this critical cause a priority. These efforts will allow us to decarbonize our planet and conserve natural resources to support the health and wellbeing of future generations.

For organizations, environmental sustainability isn't just good for the environment—it's also good for business. By advocating for sustainability and launching programs that support a healthier environment, organizations across all industries can build brand trust, boost customer loyalty, and enhance employee satisfaction. Environmental sustainability is no longer a luxury for organizations—it's now a corporate social responsibility.

Examples for Environmental sustainability: Six ways to reduce your footprint

While organizations across the globe want to accelerate their sustainability efforts, many do not know where to begin. If you're looking for ways to reduce your organization's environmental impact, here are a few environmental sustainability examples and tips to help you get started:

- a) **Switch to renewable energy:** In an effort to reduce their environmental footprint, many organizations are shifting to renewable energy sources like solar, hydro, geothermal, and wind. Projections show that 50 percent of total power generation after 2035 will be renewables—mainly wind, solar, and hydroelectric.
- b) **Commit to a zero-waste future:** Each year, people consume 100 billion tons of materials—and in 2020, only 8.6 percent of those materials were cycled back into the economy after use. To help reduce waste, some organizations are taking an increasingly circular approach to materials management. This not only means increasing the use of recycled content, but also responsibly sourcing materials for operations, products, and packaging.
- c) **Reduce your organization's carbon emissions:** Innovative environmental sustainability solutions allow organizations to measure, record, and report carbon emissions across their supply chain. This allows organizations to reduce their impact, gain efficiencies, and make lasting changes.
- d) **Protect ecosystems:** Healthy ecosystems are essential for a healthy planet. According to research by the United Nations, the health of the world's ecosystem is deteriorating more rapidly than we previously realized. That's why environmentally conscious organizations are looking for ways to manage their impact on ecosystems and taking steps to help preserve natural resources for a climate-stable future.
- e) **Conserve water:** Many organizations that are committed to environmental sustainability are working to reduce their overall water consumption—and some have set goals to be water positive within the next decade. Due to population growth, economic development, and ever-increasing consumption, there's a global increase in water demand. If we don't take action, projections show that there will be a 56 percent deficit in water supply relative to demand by 2030.
- f) **Advocate for sustainability policies:** Another way organizations can increase their sustainability efforts is by advocating for policies that support the cause. This includes policies designed to help reduce carbon emissions, advance zero-carbon energy, effectively manage ecosystems, and increase water access, availability, and quality. By pushing for greater sustainability action across your community, country and the world, your organization can make a substantial difference.

What is ESG?

ESG, which stands for environmental, social, and governance, is a set of standards that organizations follow as they strive to be more socially responsible. ESG is important because this is the criteria investors evaluate as they determine whether or not to invest in a company. Every organization has a direct impact on environmental, social, and governance concerns. Today, the way businesses approach ESG is more important than ever as environmental and social responsibility has become a focus for a wide range of stakeholders—from communities and customers to shareholders and suppliers. Plus, when an organization commits to strong ESG standards, it can help them attract and retain top talent. That's because an increasing number of employees are drawn to companies that care about bigger issues beyond profitability and take steps to address environmental, social, and governance concerns.

Conclusion

Targeting short term gains, humans have destroyed the natural systems at a fast pace. It is very important to assess the impact of human activities on the local ecosystems and the planet as a whole on a regular basis. Use of latest technologies and tools help the assessment of the situation but the need is to find suitable green solutions with the help of technological tools. Biotechnological approaches and green technologies are providing the solutions to these problems. Scientists are in the process of developing green fuels and novel energy sources which could replace petroleum products and provide green energy so as to cut down the emission of green house gases. Similarly, management of pollutants, organic wastes and biodegradation of contaminated sites are being achieved by the help of biotechnological tools.

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Mechanism of Conflict Management in Business Organizations

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Abstract

Conflict management is a critical aspect of maintaining a healthy and productive work environment in business organizations. This article explores various mechanisms and strategies that organizations can employ to effectively identify, address and resolve conflicts. It emphasizes the importance of communication, conflict resolution procedures, mediation, negotiation, training, leadership and HR support. By implementing these mechanisms, businesses can foster collaboration, creativity and innovation while preventing conflicts from becoming detrimental to their success.

Keywords: Conflict management, mediation, negotiation, conflict resolution, team building

Introduction

Conflict is an inevitable part of human interaction, and this holds in the context of business organizations. When managed effectively, conflicts can lead to positive outcomes such as improved decision-making, increased creativity, and stronger relationships within teams. However, if conflicts are left unaddressed or mismanaged, they can result in decreased morale, decreased productivity, and even damage to an organization's reputation.

This article explores the mechanisms and strategies that business organizations can employ to manage conflicts successfully. We will delve into the importance of communication, conflict resolution procedures, mediation, negotiation, training, leadership, HR support, team building, codes of conduct, and performance feedback in conflict management. By understanding and implementing these mechanisms, organizations can foster a harmonious work environment and prevent conflicts from hindering their growth and success.

Mechanism of Conflict Management

1. Communication

Effective communication is the cornerstone of conflict management in any organization. It serves as the foundation for understanding, empathy and cooperation among employees. Open and transparent communication channels can prevent conflicts from escalating and help in their resolution.

2. Conflict Resolution Procedures

Establishing clear conflict resolution procedures and policies is crucial. These procedures should outline the steps to be taken when conflicts arise and guide how to address them constructively. Having a documented process in place ensures that everyone in the organization knows what to do when conflicts occur.

3. Mediation

Mediation involves a neutral third party who helps conflicting parties reach a mutually acceptable solution. This mechanism can be internal or external, depending on the nature and severity of the conflict. Mediators facilitate communication, assist in identifying common ground, and guide the parties toward resolution. Mediation is particularly effective when conflicts are deeply rooted or when there is a significant power imbalance between the parties involved.

4. Negotiation

Encouraging parties involved in a conflict to engage in negotiations can lead to a compromise that satisfies all parties. Negotiation skills are essential for both employees and managers. Training employees in negotiation techniques can be beneficial in resolving conflicts at an early stage, before they escalate.

5. Conflict resolution training

It provides employees and managers with the knowledge and skills necessary to manage conflicts effectively. This training covers the causes of conflicts, emotional intelligence, communication skills, and strategies for finding constructive solutions. By investing in conflict resolution training, organizations empower their workforce to handle conflicts more constructively and productively.

6. Leadership and Management

Leadership and management play pivotal roles in preventing and managing conflicts. Effective leaders set a positive example by addressing conflicts in a fair and timely manner. They also promote a culture of respect, collaboration, and open communication within the organization. When leaders demonstrate these qualities, employees are more likely to follow suit, reducing the occurrence of conflicts.

7. Establishing a Code of Conduct

A well-defined code of conduct outlines expected behavior and values within the organization. It sets clear boundaries and expectations for employees and management alike. Ensuring that employees are aware of the code of conduct and its consequences for violations can help prevent conflicts and maintain a harmonious work environment.

8. Team Building

Investing in team-building activities and exercises can enhance team dynamics and reduce the likelihood of conflicts. Strong, cohesive teams are more resilient to conflicts, as members trust and understand each other better. Team-building efforts can improve communication, collaboration, and problem-solving skills, fostering a positive work environment.

9. HR Support

Human resources (HR) departments play a significant role in conflict management. They provide guidance, support, and resources for employees and managers dealing with conflicts. HR can also conduct impartial investigations when necessary to ensure that conflicts are resolved fairly and in compliance with company policies and relevant laws.

10. Performance Feedback

Regular performance feedback mechanisms are essential for addressing issues before they escalate into conflicts. Constructive feedback helps employees understand their strengths and weaknesses and guides improvement. Effective feedback fosters personal and professional development, reducing the likelihood of conflicts arising from misunderstandings or unaddressed issues.

Conclusion

Conflict management is a vital aspect of maintaining a healthy and productive work environment in business organizations. By implementing mechanisms such as communication, conflict resolution procedures, mediation, negotiation, training, leadership, HR support, team building, codes of conduct, and performance feedback, organizations can effectively identify, address, and resolve conflicts.

These mechanisms empower employees and managers to handle conflicts constructively, prevent them from becoming detrimental to the organization's success, and even harness their potential for positive outcomes. As businesses continue to evolve, conflict management will remain a critical skill, ensuring that teams collaborate effectively and contribute to the organization's growth and prosperity.

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Emotional Maturity among Graduate Students in India

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Abstract

This article inquires into the concept of emotional maturity among graduate students in educational institutions in the country. Emotional maturity is a crucial aspect of personal development that profoundly impacts academic performance and overall well-being. The article examines key factors influencing emotional maturity, highlights its significance, and presents pertinent facts and figures to shed light on the current state of emotional maturity among graduate students in the country.

Keywords: Emotional maturity, personal development, academic performance

Introduction

Emotional maturity is not only a critical factor but also a defining one in the lives of graduate students in the country. The unique blend of academic pressures, cultural diversity and the pursuit of personal and professional growth in India's educational landscape makes emotional development an essential facet of a graduate student's journey. As they navigate the demanding academic rigors and prepare for the competitive job market, understanding the state of emotional maturity among these students becomes imperative. This article aims to shed light on the emotional maturity landscape, inquire into its complexities, and present compelling statistics that illuminate the current scenario, all while underlining the significance of fostering emotional maturity for the benefit of India's graduate student community.

Significance of Emotional Maturity

Emotional maturity, also known as emotional intelligence, encompasses the ability to recognize, understand, and manage one's own emotions and those of others effectively. It is of paramount importance for graduate students in India due to several reasons:-

Academic Performance: Emotional maturity contributes to improved problem-solving skills, decision-making abilities, and effective time management, which are essential for academic success.

Stress Management: Graduate studies can be demanding and emotionally mature individuals are better equipped to cope with stress and pressure, reducing the risk of burnout.

Interpersonal Relationships: Emotional maturity fosters healthier interpersonal relationships, which are crucial for networking, collaboration and personal well-being.

Mental Health: High emotional maturity is associated with better mental health outcomes, reducing the prevalence of anxiety, depression and other mental health issues.

Factors Influencing Emotional Maturity

The various factors that influence emotional maturity among graduate students in India are:-

Family Background: The family environment plays a significant role in shaping emotional maturity. Supportive and nurturing families tend to promote emotional growth.

Educational System: The structure of the Indian education system, including the pressure to excel in academics, can impact emotional development. High-stakes examinations and competition can either bolster or hinder emotional maturity.

Cultural Norms: India's diverse cultural landscape influences the perception and development of emotional maturity, with varying expectations and norms across regions and communities.

Emotional Maturity in India

The various factors influencing the emotional maturity of graduate students in India are:

Academic Pressure

Academic pressure is a prevalent issue in India, particularly among students. According to a survey conducted by the National Sample Survey Office (NSSO) in 2019, approximately 35% of Indian students in the age group of 5 to 29 years reported experiencing educational stress. This statistic underscores the challenges faced by students in managing academic demands, which can significantly affect their emotional well-being and maturity.

Mental Health Concerns

India grapples with a high burden of mental health issues. The World Health Organization (WHO) reported that India is one of the countries with the highest rates of depression and anxiety. These mental health concerns are closely linked to emotional maturity, as individuals with higher emotional intelligence tend to have better mental health outcomes.

Emotional Intelligence Programs

Some Indian educational institutions are taking proactive measures to enhance emotional maturity among their students. For instance, the Indian Institute of Technology (IIT) Delhi offers a course on Emotional Intelligence and Life Skills. This course aims to equip students with essential emotional intelligence skills, which can improve their emotional maturity and overall well-being.

Career Prospects

Emotional maturity has a significant impact on career success. According to a survey conducted by the National Association of Colleges and Employers (NACE) in India, employers highly value emotional intelligence in job candidates. 71% of employers opined that they consider emotional intelligence more critical than cognitive intelligence when making hiring decisions. This emphasizes the practical relevance of emotional maturity for graduate students in India as they prepare to enter the job market.

Strategies to Foster Emotional Maturity

To promote emotional maturity among graduate students in India, educational institutions and policymakers should consider the following strategies:

Incorporate Emotional Education

Educational institutions should integrate emotional intelligence and coping skills into their curricula. These programs can equip students with the tools they need to manage their emotions effectively.

Mentorship and Counseling

Mechanisms should be installed to provide access to mentors and counselors who can guide students in navigating the emotional challenges of graduate education. Having a trusted support system can significantly contribute to emotional growth.

Peer Support Groups

Encourage the formation of peer support groups where students can share their experiences and learn from one another's coping strategies. Peer support can be invaluable in fostering emotional maturity.

Wellness Programs

Establish wellness programs that prioritize physical and mental health. These programs should emphasize the importance of emotional well-being and provide resources for students to manage stress and build emotional resilience.

Conclusion

Emotional maturity is a critical factor in the lives of graduate students in India, influencing their academic success, career prospects and overall well-being. The statistics presented in this article reveal the prevalence of academic pressure, mental health concerns and the importance of emotional intelligence in the Indian context. Promoting emotional maturity should be a priority for educational institutions and policymakers.

In a rapidly changing world, emotional maturity is an invaluable asset that empowers students to navigate challenges with grace and achieve their full potential. By implementing strategies such as emotional education, mentorship and peer support, India can foster a generation of emotionally mature and resilient graduate students who are better prepared for the challenges and opportunities that stand ahead.

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Product Mix and Strategies - An Introduction

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Abstract

A product mix is the set of all products and items a particular seller offers for sale. Product mix helps determine in which direction your company is heading, and the data accumulated by it helps you determine where you want to lead the company. In this book chapter we will introduce the term product mix and the various strategies of product mix.

Introduction to Product Mix

A product mix is the set of all products and items a particular seller offers for sale. A company's product mix has a certain width, length, depth, and consistency. These concepts are illustrated with the help of selected HUL products.

1. **A product line** is a group of related products sold by the same company, probably under various brand names, often differentiating by price, quality, country, or target demographic, seeking to distinguish them from each other for better usability for consumers.
2. **Product Line length** refers to the number of products/brands that come under a single product category/line.
3. The **width of a product mix** refers to how many different product lines the company carries. The table below shows a product mix width of 11 lines.
4. The **length of a product mix** refers to the total number of items in the mix. In the Table below, it is 42. Length refers to the total number of products in a firm's product mix. The length of the product mix refers to the total number of products in the mix. E.g., That is if a company has 5 product lines and 10 products each under those product lines, the length of the mix will be 50 [5 x 10]. We can also talk about the average length of a line. We obtain this by dividing the total length (here 42) by the number of lines (here 11), for an average product line length of over 3.
5. The **depth of a product mix** refers to how many variants are offered of each product in the line. E.G.1., If LUX comes in four variants (Rose, Lavender, Jasmine, Lotus), and in two sizes, it would have a depth of 8 because there are eight distinct variants. The average depth of HUL's product mix can be calculated by averaging the number of variants within the brand groups

Product Mix Strategies

Companies seeking high market share and market growth will generally carry longer product lines. Companies that emphasize high profitability will carry shorter lines consisting of carefully chosen items. A company lengthens its product line in 5 ways/strategies

1) Line Stretching

Every company's product line covers a certain part of the total possible range. For example, Mercedes automobiles are located in the upper price range of the automobile market. **Line stretching** occurs, when a company lengthens its product line beyond its current range, whether down-market, up-market, or both ways.

Product Line Length	Product Mix Width										
	Personal Care					Home Care			Food		
	Personal Wash	Skin Care and Cosmetics	Hair Care	Deodorants	Oral Care	Fabric Care	Kitchen and Floor Care	Tea	Coffee	Food	Ice Cream
	Lux	Fair & Lovely	Sunsilk	Axe	Closeup	Surf Excel	Domex	Brooke Bond Red Label	Brooke Bond Bru	Kissan	Kwality Wall's
	Lifebuoy	Pond's	Clinic Plus	Rexona	Pepsodent	Rin	Cif	Lipton		Knorr	
	Liril 2000	Vaseline	Clear			Active Wheel	Vim	Brooke Bond 3 Roses		Annapurna	
	Hamam	Aviance				Sunlight		Brooke Bond Taaza		Modern	
	Breeze	Lakme				Comfort		Brooke Bond Taj Mahal			
	Dove	Ayush				Sunlight		Brooke Bond Sehatmand			
	Pears										
Rexona											

a) Down-Market Stretch A company positioned in the middle market may want to introduce a lower-priced line for any of three reasons:

1. The company may notice strong growth opportunities as mass retailers such as Wal-Mart, Big Bazaar, and others attract a growing number of shoppers who want value-priced goods.
2. The company may wish to tie up lower-end competitors who might otherwise try to move up-market. If the company has been attacked by a low-end competitor, it often decides to counterattack by entering the low end of the market.
3. The company may find that the middle market is stagnating or declining.

A company faces several naming choices in deciding to move down-market:

1. Use the parent brand name on all its offerings. Sony has used its name on products in a variety of price tiers.
2. Introduce lower-priced offerings using a sub-brand name, such as Gillette Vector, the lower-priced version of men's shaving razors.
3. Introduce the lower-priced offerings under a different name, such as Tiger Biscuits. This strategy is expensive to implement and means brand equity will have to be built from scratch, but the equity of the parent brand name is protected.

b) Up-Market Stretch Companies may wish to enter the high end of the market to achieve more growth, realize higher margins, or simply position themselves as full-line manufacturers. Many markets have spawned surprising upscale segments: Toyota's Lexus, Nissan's Infiniti etc. They invented entirely new names, because consumers might not have given the brand "permission" to stretch upward when those lines were first introduced.

c) Two-way stretch Companies serving the middle market might stretch their line in both directions. Titan introduced its first watches in the medium-quality segment of the market. Gradually, it has added watches in the premium segment under brand names such as Titan Edge, Nebula and Xyllys, where it competes with European brands. In the economy segment, Titan introduces the Sonata collection. The kind of two-way stretch has helped Titan gain market dominance in the watch category.

2) Line Filling

A firm can also lengthen its product line by adding more items within the present range. Motives for line filling include reaching for incremental profits satisfying dealers who complain about lost sales because of items missing from the line, utilizing excess capacity, trying to become the leading full-line company, and plugging holes to keep out competitors.

Line filling is overdone if it results in self-cannibalization and customer confusion. The company needs to differentiate each item in the consumer's mind with a just-noticeable difference. Good Knight mosquito repellents, have been successful as the brand has been offered in different forms (coils to mats to liquid vaporizer) and variants over time, thus filling consumer need gaps.

3) Line Modernization

In rapidly changing markets, **modernization** is continuous. Companies plan improvements to encourage customer migration to higher-valued, higher-priced items. Microprocessor companies such as Intel and AMD, and software companies such as Microsoft and Oracle continually introduce more advanced versions of their products. It's important to time improvements so they do not appear too early (damaging sales of the current line) or too late (giving the competition time to establish a strong reputation).

4) Featuring

The product line manager typically selects one or a few items in the line to **feature**. Firms will announce a special low-priced washing machine to attract lower-middle/value customers. At other times, managers will feature a high-end item to lend prestige to the product line.

Sometimes a company finds one end of its line selling well and the other end selling poorly. The company may try to boost demand for slower sellers, especially if a factory is idled by a lack of demand, but it could be counter-argued that the firm should promote items that sell well rather than support weak ones.

e.g., Nike's Air Force 1 basketball shoe, introduced in the 1980s, is a billion-dollar brand that is still a consumer and retailer favorite and a moneymaker for the company due to collectible designs and tight supplies. Since their introduction, Air Force 1 shoes have been designed or inspired by many celebrities and athletes are still featured in its product line.

In short firms featuring product line that **protects against economic ups and downs**: We can often see companies offering products under different brand names/variants intended for the discount, middle-market, and premium segments, in part in case the economy moves up or down.

5) Pruning

Using sales and cost analysis, product line managers must periodically review the line for deadwood that depresses profits. In 1999, **Unilever** announced its "Path to Growth" program designed to get the most value from its brand portfolio by **eliminating** three-quarters of its 1,600 distinct brands by 2003. More than 90 percent of its profits came from just 400 brands, prompting Unilever co-chairman Niall FitzGerald to liken the brand reduction to "weeding a garden", so "the light and air get into the blooms/buds which are likely to grow the best."

Multi-brand companies all over the world try to optimize their brand portfolios. This often means focusing on core brand growth and concentrating resources on the biggest and most established brands. **Procter & Gamble's(P&G)** "back to basics strategy" concentrated on brands with over \$1 billion in revenue, such as Tide, Crest(toothpaste), Pampers, and Pringles. Every product in a product line must play a role, as must any brand in the brand portfolio.

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IR Sensor Interfacing using Arduino

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Abstract

In this study, we explore the integration of infrared (IR) sensors with Arduino microcontrollers for various applications, such as proximity sensing, object detection, and remote control systems. The research focuses on the principles of IR sensor operation, their interfacing techniques with Arduino boards, and the development of practical projects that harness the capabilities of these sensors. Through hands-on experiments and programming, we demonstrate how Arduino can efficiently process IR sensor data, enabling users to create responsive and versatile electronic systems with a wide range of real-world applications. This work underscores the significance of IR sensor and Arduino synergy in the realm of sensor-based technology and serves as a valuable resource for enthusiasts and engineers seeking to leverage these technologies for innovative projects.

Key Words: Arduino Nano, Infra Red (IR) sensor, microcontroller, Integrated Development Environment (IDE)

About the Circuit

The interfacing of IR sensors with Arduino involves a straightforward yet effective process that enables the Arduino to receive and interpret data from the sensor. The working principle of this setup revolves around the transmission and reception of infrared light. When an IR sensor is powered on, it emits infrared light in its active state. When an object comes within the sensor's detection range, it reflects some of this emitted light back to the sensor. The IR sensor then detects this reflected light and generates an analog or digital signal, depending on its type, which indicates the presence or absence of an object.

Arduino, acting as the central controller, receives this signal through one of its digital or analog pins. Depending on the sensor's output, the Arduino can perform various actions, such as displaying information on an LCD, triggering an alarm, or controlling other devices like motors or LEDs. This integration is made possible through Arduino's versatile programming environment, which allows users to define specific threshold values and logic for processing the IR sensor's input. Consequently, the Arduino-IR sensor interface opens up a wide array of applications, from simple object detection in robotics to more complex applications like home automation and remote control systems, making it a valuable tool for electronics enthusiasts and engineers alike.

Circuit Diagram

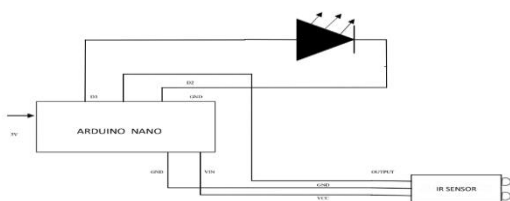


Fig1: Circuit Diagram

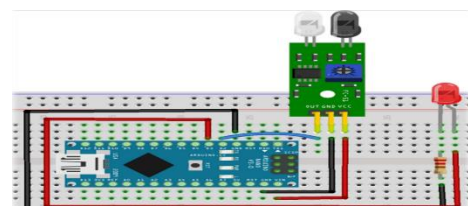


Fig: Circuit Prototype

Components:

1. Arduino board (e.g., Arduino Uno)
2. IR sensor module
3. Breadboard and jumper wires
4. Resistor (typically 10k Ω)
5. LED and current-limiting resistor (optional)

Connections:

1. Connect the VCC (or +) pin of the IR sensor to the 5V output on the Arduino.
2. Connect the GND (or -) pin of the IR sensor to the GND (Ground) on the Arduino.
3. Connect the OUT (or signal) pin of the IR sensor to a digital input pin on the Arduino (e.g., D2).
4. If you want to use an LED as an indicator when the IR sensor detects an object, connect the anode (longer lead) of the LED to a digital output pin (e.g., D7) through a current-limiting resistor (usually around 220-330 Ω). Connect the cathode (shorter lead) of the LED to GND.

Arduino Code

Here's a simple code example for reading the IR sensor's output and controlling an LED:

```
arduino
```

```
const int irSensorPin = 2; // Digital pin connected to the IR sensor
const int ledPin = 7;     // Digital pin connected to the LED

void setup() {
  pinMode(irSensorPin, INPUT);
  pinMode(ledPin, OUTPUT);
  Serial.begin(9600); // Initialize serial communication for debugging (optional)
}

void loop() {
  int irValue = digitalRead(irSensorPin); // Read the IR sensor's output

  if (irValue == LOW) { // IR sensor detects an object
    digitalWrite(ledPin, HIGH); // Turn on the LED
    Serial.println("Object detected!");
  } else {
```

```
digitalWrite(ledPin, LOW); // Turn off the LED  
  
}  
  
}
```

This code reads the output from the IR sensor and turns on the LED when an object is detected.

Conclusion

In conclusion, the interfacing of IR sensors with Arduino microcontrollers offers a versatile and accessible platform for a wide range of applications. This integration allows for the efficient detection and processing of infrared signals, enabling the creation of responsive electronic systems capable of tasks like object detection, proximity sensing, and remote control. The synergy between IR sensors and Arduino empowers electronics enthusiasts and engineers to develop innovative projects that bridge the physical and digital worlds. Whether used in robotics, home automation, or security systems, the interfacing of IR sensors with Arduino remains a valuable tool in the realm of sensor-based technology, offering limitless opportunities for creative and practical implementations.

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Persistence of Vision Display

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Abstract

A Persistence of Vision (POV) display created with Arduino is a captivating and dynamic visual technology that leverages the human eye's inherent persistence of vision to create mesmerizing animations and messages. By rapidly illuminating an array of LEDs in a precise sequence as the display is moved, Arduino-controlled POV displays can craft the illusion of static images or text floating in mid-air. This innovative fusion of hardware and software engineering not only showcases the versatility of Arduino microcontrollers but also offers a captivating medium for artistic expression and communication, as it allows users to project intricate designs that seem to magically hang in space before their eyes, making it a compelling platform for interactive art installations, advertising, and educational demonstrations.

Keywords

Arduino, Persistence of Vision (POV), Microcontroller

Circuit Description and Working

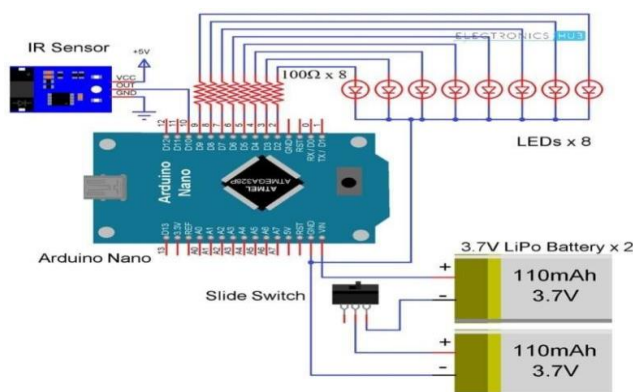


Fig 1: Circuit Prototype

The working of the POV Display can be explained with a simple example. Consider you want to display the alphabet 'B'. In order to display this character, the LEDs get turned on and off in a pattern over 5 steps. Each step is associated with a column of the LEDs and shown in the following image. The delay between the switching of the columns is very less usually in the order of hundreds of microseconds (as you can see in the code). In order to fix a starting point, the Arduino uses the IR Sensor as a reference i.e. whenever a signal from the IR Sensor is received, it starts displaying the text. Components used for the construction are Arduino Nano, LEDs x 8, 100Ω Resistors x 8, 9 V battery, IC 7805, Jumper Wires, IR Sensor Module, Slide Switch, Perf Board, 12V DC Motor, Power Supply for Motor.

A Persistence of Vision (POV) display, implemented with Arduino, operates by capitalizing on the concept of visual persistence in the human eye. This ingenious technology employs an array of LEDs positioned in a linear or rotational configuration. As the display moves, whether through a spinning rotor or linear motion, Arduino's precise timing capabilities come into play. The microcontroller orchestrates the activation of each LED with impeccable timing, ensuring that it lights up precisely when it occupies a particular position within the

display's rotation or movement. This synchronization is crucial as it enables the LEDs to form a coherent image or text when observed by an onlooker.

The illusion of a persistent image emerges because the human eye retains an image for a brief moment even after the LED has moved to the next position. By carefully controlling the timing of the LED activations relative to the display's motion, Arduino creates the perception of a complete and stable image, despite the LEDs individually flashing on and off. This dynamic interplay between precise timing control and the physiological phenomenon of visual persistence results in mesmerizing animations, messages, or patterns that appear to hang in mid-air, making Arduino-powered POV displays a compelling platform for artistic expression, communication, and educational demonstrations.



Fig 2 : POV Clock Display

Persistence of Vision (POV) displays using Arduino find versatile applications in various domains, including Digital Clocks, Advertising and Branding, Educational Demonstrations, Art Installations, Message Boards and Signage

Conclusion

The Persistence of Vision (POV) display powered by Arduino exemplifies the creative synergy between technology and human perception. This ingenious application of microcontroller precision and visual persistence principles results in mesmerizing displays that can convey information, artistry, and innovation in a dynamic and captivating manner. Whether used for crafting digital clocks, conveying messages, or producing stunning animations, Arduino-based POV displays continue to showcase the limitless potential of human ingenuity and engineering. These displays serve as a testament to the power of harnessing scientific principles to create engaging and interactive visual experiences that defy conventional limitations, offering endless opportunities for artistic expression, education, and communication in the digital age.

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Arduino-Uno Microcontroller-Driven Irrigation Automation

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Abstract

The experiment's primary objective is to monitor soil moisture levels and automatically administer water to the soil through an Arduino Uno microcontroller-based automation system. This intelligent soil moisture control system effectively manages field moisture and can be adapted to detect methane gas levels in greenhouses. The system, designed for agricultural greenhouses, boasts an impressive man-machine interface, facilitating a high degree of automation. In addition to its water conservation benefits, the system operates as a self-sustaining prototype, drawing water from a reservoir. Furthermore, the integration of solar energy enhances its environmental friendliness.

Keywords: Arduino, microcontroller, moisture control

Introduction

India, where a significant portion of the population relies on agriculture for sustenance, faces challenges in providing technological support to its rural farmers. The "Arduino Uno Microcontroller-Driven Irrigation Automation" project aims to alleviate this issue and enhance greenhouse conditions. The central component of this system is the Arduino Uno microcontroller, which manages water supply based on soil moisture levels. Additionally, the system can be adapted for automatic plant protection against extreme temperatures and methane gas detection in greenhouses. Excess water can be efficiently reused, and the project can be powered by solar cells in this age of non-conventional energy sources. The primary objective is to create a highly reliable greenhouse monitoring system for optimal crop yields, focusing primarily on soil moisture control, with potential for further parameters like temperature and methane levels in advanced iterations.

Experimental

In the hardware implementation of this project, a soil moisture sensor was connected to the ATmega328p microcontroller, coupled with a motor driver module, and powered by a battery. The flowchart for the entire project is illustrated in Figure 9. The soil moisture sensor detects soil moisture levels, and based on these values, the microcontroller initiates the necessary control actions. If the soil's moisture level falls below the desired threshold, the motor is activated, and vice versa.

Soil Moisture Sensor: This sensor gauges soil moisture content, and depending on the readings, it triggers the motor control circuit to pump water. Figure 1 depicts this sensor, which helps determine whether the soil is dry or wet.

DC Motor & Drive Circuit: The DC motor's primary role is to assist in pumping water into the soil when the soil moisture level drops below the predetermined threshold set in the microcontroller program. Figure 2 illustrates the DC motor and the driver circuit used.

Relay Modules: Relay modules depend on the magnetic field generated by the coil, ensuring power isolation between the coil and the switching pins. This allows the coils to be easily powered from Arduino.

Arduino Uno: Arduino Uno microcontroller (Figure 3) boasts 14 digital input-output pins, 6 analog inputs, and a 16 MHz ceramic resonator. It can be connected to a computer via a USB cable or powered through an AC to DC adapter or a battery.

For advanced versions of this project, additional components like the LM35 temperature sensor and MQ2 methane sensor can be incorporated.

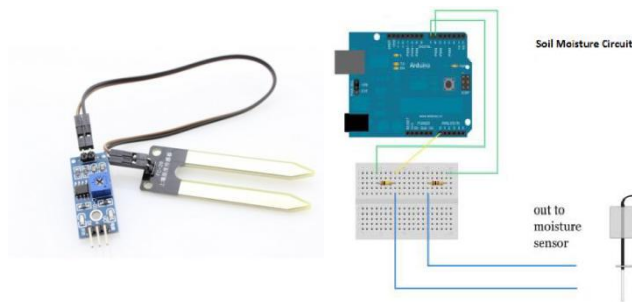


FIG.1 Soil Moisture Sensor and Circuit

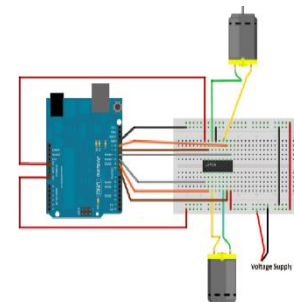


FIG.2 DC Motor Driver



FIG.3 Arduino Uno Microcontroller experimental set up

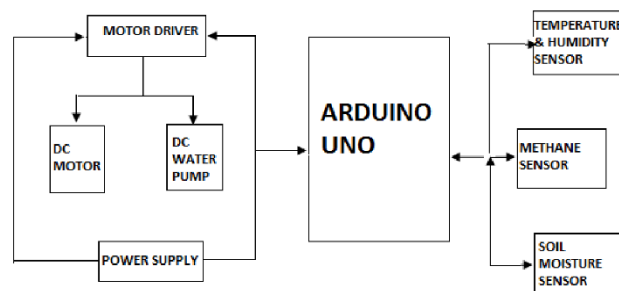


FIG. 4 Block diagram of the

Result and Conclusion

The soil moisture sensor plays a pivotal role in the agricultural system by determining soil moisture levels in the root zone. Every minute, the Arduino Microcontroller collects data from the sensor, recording and analyzing it to take appropriate actions. Soil moisture levels are configured based on plant specifications, soil type, and seasonal rainfall patterns. The Arduino microcontroller regularly uploads observed data and adjusts water supply accordingly, ensuring optimal moisture conditions for plants.

Beyond irrigation control, this system offers versatility. It can be adapted to serve as an automatic alarm system to protect plants from excessive atmospheric temperatures or detect methane gas in greenhouses. Moreover, it enables the recycling of excess water in the field.

The applications of a greenhouse monitoring system in agriculture are vast. Automating greenhouse monitoring reduces the workload on humans, ensuring that plants are cultivated under precise conditions with minimal error. The system's ability to control appliances via the internet opens up further possibilities for integration.

In the near future, there's potential for the system to become completely autonomous, capable of autonomously taking all necessary actions to optimize plant growth. By employing a bi-directional motor pump, while retaining the rest of the project setup, cost-effectiveness can be achieved, making this technology even more accessible and beneficial.

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Comparative Analysis of Viscosity Measurement Techniques: Manual, Poiseuille's Method, and Automated Approach

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Abstract:

Viscosity measurement is a critical parameter in fluid dynamics, with applications spanning various industries. This paper presents a comparative analysis of three methods for measuring viscosity: the manual method, Poiseuille's method, and an automated approach using flow sensors and Arduino microcontrollers. The study aims to evaluate the accuracy, precision, and feasibility of these methods. While the manual method is cost-effective, it is prone to human errors. Poiseuille's method, utilizing solenoid valves and sensors, faces challenges due to sensor inaccuracies. The automated approach, although more expensive, promises higher accuracy and precision when appropriately calibrated. Our analysis reveals the advantages and limitations of each method.

Keywords: Viscosity, Poiseuille's Methods,

Introduction:

Viscosity, the measure of a fluid's resistance to flow, plays a pivotal role in various industries such as aerospace, automotive, and chemical engineering. Accurate and precise viscosity measurements are essential for quality control, process optimization, and research in fluid dynamics. This paper compares three viscosity measurement methods: the manual method, Poiseuille's method, and an automated approach using flow sensors and Arduino microcontrollers. Our analysis aims to guide researchers and engineers in selecting the most suitable method for their specific requirements.

Methodology:

1. **Manual Method:** The manual method involves measuring the time taken for a fixed volume of liquid to pass through a tube of known dimensions. The flow rate and average velocity of the liquid are calculated, and viscosity is determined using Poiseuille's equation. However, this method is prone to human errors and parallax inaccuracies.
2. **Poiseuille's Method:** Poiseuille's method uses solenoid valves and VL53L0X sensors to measure flow through a capillary tube. While theoretically sound, the method faces challenges due to sensor inaccuracies and calibration difficulties.
3. **Automated Approach:** The automated approach utilizes flow sensors and Arduino microcontrollers to measure flow rate accurately. The program calculates viscosity based on flow frequency, tube dimensions, and the Blasius equation. Proper calibration is crucial for precise results.



Figure: Automated setup for measuring viscosity

Results:

In the manual method, viscosity was calculated as 1.05 ± 1.364 Pa.s, indicating a relatively high level of uncertainty. In contrast, the Poiseuille's method using solenoid valves and VL53L0X sensors resulted in inconclusive outcomes due to sensor inaccuracies.

The automated approach, despite its potential for high precision, yielded unexpected results due to calibration errors and sensor inaccuracies. Viscosity was calculated as 0.01 Pa.s, but this value was likely affected by calibration mistakes and sensor inaccuracies.

Conclusion:

In conclusion, our comparative analysis highlights the strengths and weaknesses of three viscosity measurement methods. The manual method, while cost-effective, is prone to human errors. Poiseuille's method, although theoretically sound, faces challenges with sensor inaccuracies. The automated approach, with proper calibration techniques, promises high accuracy and precision but may be cost-prohibitive and require programming skills.

Ultimately, the choice of method should align with the specific requirements and resources of the experiment or industry. For those seeking high accuracy and precision, the automated approach remains promising, provided calibration challenges are addressed. Meanwhile, the manual and Poiseuille's methods may still find utility in scenarios where cost and ease of use are paramount. Further research and development in sensor technology and calibration techniques could enhance the performance of automated viscosity measurement systems.

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Premarital Life Partner Expectations among Rural Adults

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Abstract

The major objective of the study was to explore premarital life partner among adults based on their living area. The sample (young adults aged 18 to 30) were selected by using convenient sampling method (N=305, urban N=83 and rural N=222). Questionnaire method was used to collect data. Premarital life partner expectation scale developed by Reeta Kumari and Pushplata, (1971) and marital attitude scale of Pramod Kumar (1988). The study found that premarital life partner expectation is higher among rural than urban. The study also revealed that sample having post-graduation possessed higher level of premarital life partner expectations.

Keywords: premarital life expectation, Rural adults, Education

Introduction

Premarital life partner expectations are the beliefs and desires that people have about their future spouses before they get married. These expectations can vary based on many factors, such as culture, religion, education, personality, and place of birth. Place of birth can influence premarital expectations in different ways, depending on the social and economic conditions of the region, the exposure to different lifestyles and values, and the availability of potential partners. According to a study by Das and Rout¹, (2023) rural youth tend to marry earlier and have lower levels of education and income than urban youth. They also have higher prevalence of premarital sex, especially among females, due to lack of awareness and access to contraception. Urban youth, on the other hand, tend to delay marriage and have higher levels of education and income. They also have more exposure to mass media and western culture, which may influence their preferences and choices of partners. Urban youth may have more autonomy and freedom to select their partners based on love and compatibility, rather than family or community pressure.

Place of birth can affect the norms and values of the society, as well as the opportunities and challenges for finding suitable partners. Therefore, it is important for couples to understand and respect each other's expectations before getting married, and to communicate and compromise when necessary. premarital life partner expectations can differ based on place of birth, as it influences the social and cultural context of the individuals.

Premarital life partner expectations have undergone a profound transformation, significantly influenced by education. In the past, unions were often arranged based on societal norms and familial considerations. However, as education has become more accessible and widespread, individuals are increasingly seeking partners who share their intellectual and emotional compatibility. Education equips individuals with critical thinking skills and a broader perspective on life, leading them to prioritize qualities like shared values, goals, and communication skills over traditional factors like social status or wealth. Furthermore, education fosters independence, encouraging people to be more selective in choosing a partner who aligns with their personal aspirations and ideals. This evolution in partner expectations underscores the profound impact of education on our quest for lifelong companionship.

Result and discussion

Premarital life partner expectation was higher among rural than urban young adults. In rural areas have higher expectation to ensure they find the most compatible match. Rural communities often place a strong emphasis on family values, leading individuals to seek partner who align with their cultural and traditional beliefs. In close-knit rural communities, people often rely more on their partner for support, companionship, and livelihood, which could lead to higher expectations in a life partner. Premarital life partner expectation was higher among rural adults than urban adults in India because of the differences in their exposure to alternative forms of intimate relationships, influence from their families and communities, and access to information and education about sexual and reproductive health.

Smith and Johnson (2020) found that urban-born adults showed a significantly higher preference for partners with ambitious career goals, while rural-born adults placed greater importance on shared family values when it came to premarital life partner expectations.

Education qualification is another factor that influenced the premarital life partner expectation. The results showed that life partner expectations comparatively less among lower educational groups and it is higher among individuals having post graduation.

Postgraduate students often have higher premarital life partner expectations due to various factors. Firstly, their extended educational journey provides more time for self-discovery, leading to a clearer understanding of their desires and needs in a partner. Additionally, advanced education fosters intellectual and emotional growth, making them seek partners who can engage in meaningful discussions and provide intellectual stimulation. Economic stability, often associated with postgraduate degrees, can lead to higher expectations in terms of financial security. Lastly, exposure to diverse perspectives in academia may raise their standards for cultural compatibility, further elevating their expectations for a life partner. These factors collectively contribute to the heightened expectations among postgraduate students. Bhandari (2017) explored the family's involvement in pre-marital relationships of young adults aged 24–31 in India. It argues that pre-marital relationships often model themselves on structures and expectations of a marital union, and that the family can influence the course of a relationship by either obstructing or encouraging it. The study of Kumari (2021) found that the students have high expectations of their future spouses in terms of education, occupation, personality, and compatibility, and that they use various methods to search for and evaluate potential partners. Present findings supporting both of these studies.

Conclusion

These findings indicated the significance of socio-cultural factors shaping marital expectations among rural communities and education also influencing partner preferences. It was a time-bounded study, so as to having various limitations. But it provides an idea regarding the expectations of rural adults.

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Gender Difference in Premarital Life Partner Expectation and Marital Attitude

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Abstract:

The prime objective of the study was to explore premarital life partner expectations and marital attitude among adults based on gender. The sample (young adults aged 18 to 30) were selected by using convenient sampling method (N=305, males N=142 and female N=163). Questionnaire method was used to collect data. Premarital life partner expectation scale developed by Reeta Kumari and Pushplata, (1971) and marital attitude scale of Pramod Kumar (1988). The study found that premarital life partner expectation is higher among females than males. The study also revealed that marital attitude is more or less similar among males and females. No statistically significant gender difference was observed.

Key words: Gender, Marital Attitude, Premarital Life Expectations

Introduction

Gender difference is one of the factors that may influence the expectations and attitudes of young adults towards marriage. Some studies have suggested that there are significant differences between males and females in their views on various aspects of marriage, such as sexual relationship, type of marriage, criteria for choosing life partner and specific motives for successful marriage. These differences may reflect the different social and cultural norms, values and roles that are assigned to each gender in different societies. Premarital expectations refer to what a person anticipates from married life before to getting married. It is a regular occurrence to sense and anticipate something before really experiencing it. Premarital expectations or wants of a spouse are expected from the other partner and are beyond the individual's control, leaving them feeling vulnerable. In addition, when these expectations are not met, it can be incredibly disheartening and aggravating. Marital contentment is an experience that varies from person to person and can only be measured by the response to the marital satisfaction questionnaire (Deressu & Girma, 2019).

Premarital expectations tend to play a significant effect in the marriage life of a person. Once marriage expectations are met, it is recognised that the individual is more likely to enjoy more happiness and marital satisfaction. Particularly, expectations regarding the spouse are regarded as one of the strongest indicators of marital satisfaction (Rios, 2010). Today's generation values companionship, mutual commitment, familial support, sexual needs, and financial independence more than prior generations. Existing research suggests that reciprocal appreciation and cooperation are factors of marital expectations. In addition, other factors influence spousal expectations, such as the spouse's relationship with children and family, professional life, religion, and physical and emotional health (Villa & Prette, 2013). These marital expectations play an important part in the lives of married individuals by influencing their marital satisfaction and quality. According to research undertaken by Signorielli (1999), television plays a significant impact in the formation of perceptions and ideas towards marriage and intimate relationships.

Marital attitudes and expectations form a cognitive schema about relationships brought about by experience (Fletcher & Thomas, 1996; as cited in Riggio & Weiser, 2008). Attitudes and expectations about relationships are important cognitions regarding perceptions of and behaviors in personal relationships (Riggio & Weiser, 2008). One may form attitudes and expectations regarding marital life through personal experiences with a partner, by observing one's parents, or by watching others negotiate the process of courtship and marriage. Highly embedded positive marriage attitudes may influence behaviour and highly embedded negative marriage attitudes may also affect beliefs about relationships (Riggio & Weiser, 2008). Individuals with highly embedded positive attitudes about

marriage view their own current and future marriages as happy and successful but those with highly embedded negative attitudes have less positive expectations (Riggio & Weiser, 2008).

Results and discussions

Premarital life partner expectations higher among females than males. Some of these reasons could be influenced by societal norms, personal experiences, and evolutionary factors. For example, historically, women may have sought partners who could provide security and support, as they often had primary responsibilities in child-rearing. Additionally, changing gender roles and increased emphasis on equality may have led women to seek partners who are supportive, understanding, and share responsibilities in a more balanced way (Smith & Johnson et al., 2020). The study found that male participants tended to prioritize physical attractiveness and shared interests in a partner, while female participants placed more emphasis on emotional intelligence and financial stability as key factors in their premarital life partner expectations. In another study Lee and, Chen, et al., (2019) there were significant gender differences in premarital life partner expectations. Additionally, educational and professional opportunities have expanded for women, raising their standards for intellectual compatibility and financial stability in potential partners. Women possessed higher levels of romances in their premarital life than males. The study of Harrison (2011) revealed that women were more romantic and tend to fall in love faster than men. This proved that women have more expectations in premarital life regarding their partner.

Conclusions

Young adults normally having higher level expectations regarding their life partner in premarital life. But gender has a significant role in determining the magnitude of expectations. Females obtained higher scores in expectations in this study. But the study shed a light in premarital life partner expectations and attitude towards marriage among new generation youngsters.

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Influence of Gender, Type of Family and Marital Status of Fear of Failure among Performing Artists

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Abstract

Performance failure means any disruption or failure of service including without interruption or delay or any mistake committed by the performer resulting lower level performance is considered as performance failure. Present study was conducted on 200 artists from different areas of arts. The sample were collected by using convenient sampling method and the researcher used Performance failure appraisal inventory (PFAI) 2003 developed by David. E. Conroy to assess the performance failure. The results showed that performance failure not significantly varied on the basis of gender. It was similar among male and female Performers. Further the study revealed that fear of failure was more or less similar among married and unmarried sample. Type of family also does not influence the fear of failure of performing artists.

Keywords: Gender, Type of family, Marital status, Performing artists.

Introduction

Fear of failure has often been described as a “disposition to avoid failure or a capacity for experiencing shame or humiliation as consequence of failure” (Atkinson, 1966). According to Elliott and Thrash (2004) it is seen as “dispositional tendency to avoid failure in achievement settings” due to overwhelming feeling of humiliation and embarrassment caused by failure. The personality traits have its origin in problems like anxiety, shame, and feelings of inferiority (Birney et al., 1969). The fear of failure may exhibit as perfectionist tendency of some students (Beery, 1975) but for others it could cripple their desire to succeed in academics (Rothblum, 1990). They lack self-confidence and in order to save themselves from shame and Embarrassment caused by failing, they perform poorly as an excuse to protect their self-Worth (Beery, 1975). Conroy (2002) states that fear of failure is an encouragement to avoid failure, especially the negative consequences such as shame, lowered self-concept, and loss of social influence.

The performing arts industry is a realm where creativity meets vulnerability, where artists pour their hearts and souls into their craft. Amidst the spotlight and applause, there exists a shadowy companion – the fear of failure. This fear, which can be both motivating and debilitating, is not uniform across all artists. Rather, it is influenced by many factors, including gender, type of family upbringing, and marital status. These aspects, deeply rooted in an artist's personal life and societal context, play a significant role in shaping their perceptions, expectations, and coping mechanisms in the face of artistic challenges. These factors are not isolated variables but intricate threads woven into the tapestry of an artist's life. Gender, with its societal expectations and cultural nuances, can influence how an artist perceives failure and how they respond to it. The type of family one is raised in, whether nurturing and supportive or laden with expectations, plays a vital role in shaping an Individual's self-belief and resilience. Marital status, whether single, married, or in any other configuration, brings its own set of dynamics that can affect an artist's fear of failure.

In the world of the performing arts, where the pursuit of creative excellence is both a passion and a livelihood, the fear of falling short can be a constant companion. The pressure to succeed, the vulnerability of artistic expression, and the unpredictability of the industry create

fertile ground for this fear to take root. What makes this exploration even more fascinating is the realization that the fear of failure is not a one-size-fits-all emotion. It is shaped, molded, and sometimes intensified by an artist's gender, their family background, and their marital status.

Result and Discussions

Gender, type of family, and marital status do not have a significant impact on the performance failure of performing artists. Both male and female artists can experience performance failure, and the reason behind such failures can vary widely and are not inherently related to gender. Factors such as preparation, experience, mental state, external pressure, and various other aspects can play a role in performance outcomes for all individuals, regardless of their gender. It's essential to avoid generalisations and recognize that each artist's experience is unique and influenced by various personal and situational factors. Performance outcomes are multifaceted and depend on a combination of personal qualities and professional circumstances rather than these demographic characteristics. Performance failure typically should not affect artists based on their gender, marital status, or family type due to several reasons. An artist's ability and creativity are not determined by gender, marital status, or family type. Artistic talent is a personal attribute unrelated to these factors. Art is subjective, and the evaluation of an artist's work should be based on its merit rather than personal characteristics.. And also artists are judged primarily on their professionalism and the quality of their work.

Conclusion

Performance failure among performing artists can be influenced by various factors, including physical and mental exhaustion, stress, and lack of preparation. The expectation of flawless technique and the extraordinary demands performers go through, as well as the judgment and critiques performers get about performance, can contribute to the development of the performance failure (Hays, 2002). Addressing these challenges through proper training, mental health support, and balanced schedules could potentially reduce the occurrence of performance failures in the performing arts.

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Performance Failure among Individuals Performing in Traditional Art Forms of Kerala

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Abstract:

The prime objective of the study was to explore performance failure among individuals performing in traditional art forms of Kerala. Present study was conducted on 200 artists from different areas of arts. The samples were collected by using convenient sampling method and the researcher used Performance failure appraisal inventory (PFAI) 2003 developed by David. E. Conroy to assess the performance failure. The results showed that performers studying in traditional Art forms (Kathakali) have lower level of performance failure. More over performers living with both parents also having lower performance failure than others.

Key words: Performance failure, Kathakali, Traditional art forms.

Introduction

Performance failure among performing artists is a widespread and complex issue that affects individuals across various artistic disciplines. Performance failure among individuals engaged in traditional art forms of Kerala is a significant concern that warrants attention. Kerala, known for its rich cultural heritage, boasts a wide array of traditional art forms such as Kathakali, Mohiniyattam, koothu all of which hold a special place in the state's cultural fabric. Performance failure among individuals performing in traditional art forms of Kerala is a multifaceted issue with deep cultural and social roots. These types of art forms demands a high degree of skill, precision, and emotional expression, making it a challenging art form to master and perform consistently. The pressure to meet these exacting standards can lead to performance anxiety. There are several factors contributing to performance failure:

Insufficient Training: Inadequate training can leave performers ill-prepared, lacking the necessary skills and understanding of the art forms.

Physical Demands: Many traditional art forms require exceptional physical fitness and stamina, making it challenging for those not in peak condition.

Cultural Context: A lack of cultural understanding can result in performances that lack depth and authenticity, failing to convey the essence of these art forms.

Stage Anxiety: The pressure to honor the legacy of these art forms can lead to stage fright and anxiety, affecting a performer's confidence and execution.

Resource Constraints: Absence of essential costumes, props, and musical accompaniments can hamper the overall impact of the performance.

Audience Expectations: Kerala's audiences hold high expectations for these art forms, and falling short can lead to disappointment and perceived failure.

Competition: Intense competition among performers adds to the stress, making it difficult to deliver outstanding performances.

Overall, Fear of failure has been found across different levels of perceived and actual ability (Covington, 1992, Elliot & Thrash, 2004). On the one hand, Fear of failure may serve as a

motivating factor, in terms of striving for and reaching high levels of performance. However, it can also prevent individuals from actualizing their potential due to high anxiety and perceived incompetence (Conroy et al., 2002; Martin & Marsh, 2003).

Result and Discussions

Traditional art forms like Kathakali are also do not have a significant impact on performance failure. Kathakali performers wear elaborate makeup, mask and costumes. Which can provide a sense of liberation on stage. This physical transformation may help students feel more confident and less worried about personal judgment. In Kathakali, students often perform in groups, which can create a sense of camaraderie and shared responsibility. Traditional art forms often require years of rigorous and structured training. Artists learn from experienced mentors and follow well-established techniques, which can reduce the likelihood of failure due to a strong foundation of skills. These artists are motivated by a deep sense of cultural preservation. This commitment can drive them to uphold the standards and practices of their art, leading to more consistent performances. Traditional art forms like Kathakali places a strong emphasis on facial expressions and body language to communicate emotions and stories. However, it's essential to recognize that artists in traditional art forms can still experience performance challenges and occasional failures. Additionally, the perception of lower failure rates in traditional art forms may be influenced by cultural biases or a preference for preserving and highlighting successful performances.

Conclusion

The research on performance failure among individuals performing in traditional art forms of Kerala reveals a multifaceted landscape. This study has shed light on the factors that contribute to the perceived lower incidence of performance failure in these traditional art forms, including rigorous training, dedication to tradition, mastery of techniques, supportive communities, and the cultural significance of these art forms. What one individual considers a failure, another may see as a valuable opportunity for artistic exploration and development. Ultimately, performance failure, while challenging, is an inherent aspect of the performing arts. It is essential for artists to embrace it as a potential stepping stone toward greater artistic achievement and resilience, recognizing that setbacks can be transformed into valuable experiences that contribute to their growth and evolution as performers.

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Analysis of the IPL Data Set

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Abstract

Cricket, a popular outdoor game, generates significant statistical data, particularly in India, with the Indian Premier League (IPL) editions becoming increasingly popular. This article analyzes the IPL cricket match results from 2008-2016, examining factors affecting match outcomes such as team auction, game planning, franchise branding, and fan base accumulation. The data is analyzed using existing data mining algorithms on balanced and imbalanced datasets. Accuracy is used as a performance metric and evaluation criteria, with percentages varying depending on the algorithms used. The article aims to understand the influence of these data on team auction, game planning, franchise branding, and fan base accumulation.

Keywords: IPL, Exploratory Analysis, Batting

Introduction

The Indian Premier League (IPL) is a significant global sports event, and data mining tools and technologies have enabled the prediction of future trends and behaviors based on cricket data. Data mining algorithms have been applied to the IPL dataset, analyzing the knowledge from each algorithm with high accuracy and performance. The dataset includes around 786 matches, with 14 teams participating so far. In today's competitive cricket landscape, teams must prepare from the outside before entering the field. Sports Analytics is crucial for team preparation, as it informs players, coaches, and team management about decision-making on and off the field. On-field analytics helps players make key decisions on the field, while off-field analysis helps prepare and plan for matches. The main objective of this project is to help players make informed decisions based on previous data, using data from 2008 to 2020. The more data available, the better the analyst can assist players in making informed decisions for better results.

Materials And Method

Dataset

The dataset was obtained from the Kaggle. For visualizing and analysing the data of IPL we have used google colab notebook and visualizing tool like Tableau BI. The dataset contains the data of every match that has been played from 2008 to 2020. It has 18 columns and 193468 rows. Each row represents details of a unique match, each column represents a specific attribute. The dataset gives information about id, innings, overs, ball, batsman, non-striker, bowler, batsman runs, extra runs, total runs boundaries, wickets, dismissals, fielders, batting and bowling teams.

Data Pre-processing

Data pre-processing is crucial for obtaining better insights from raw data, as it can be noisy, missing, inconsistent, biased, and have duplicate records. To improve conclusions, data should be cleaned, transformed, and reduced according to requirements. In a dataset with 18 columns and 193468 rows, some columns, such as dismissal type, player dismissed, fielder, extras type, and team won margin, were missing. To streamline analysis, these columns were removed. Additionally, columns like umpire1, umpire2, venue, and neutral venue were removed. The date column was changed from int to date data type, replacing the year with the year of the match.

Data Analysis and Visualization

From 2008 to 2020, 786 matches were played, with 60.69% of teams choosing to field first in 477 matches and 39.31% batting. The winning team won 51.9% of matches, while the chasing team had a higher chance of winning in 55.7% of matches. However, factors such as dew,

batting team scores, player consistency, and the fall of the wicket rate per over can affect the chances of winning. The data can be pre-processed to reveal hidden insights and help make informed decisions. The chasing teams have a higher chance of winning, but this can depend on factors like dew, batting team scores, player consistency, and the wicket rate per over.

Fig 1: Information of the dataset



From 2008 to 2020, 14 teams participated in the IPL, with the Duckworth Lewis method (D/L) used to declare winners in 19 matches. Mumbai Indians played the most matches, with around 200 matches until 2020. KKR, RCB, and Kings XI Punjab played over 175 matches, indicating their success in games to advance to finals and semifinals. Pune Warriors, Gujarat Lions, Delhi Capitals, Rising Pune Supergiants, and Kochi Tuskers Kerala played less than 50 matches until 2020, suggesting they have not participated in all seasons of IPL.

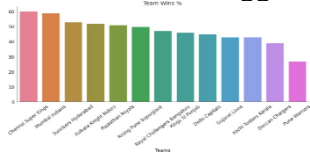


Fig 2: Win over First Batting vs Second Batting

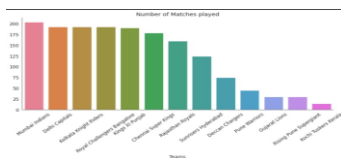


Fig 3: Number of matches played by teams

The Indian Premier League (IPL) has seen a decline in matches since its inception in 2008 to 2010, with fewer than 60 matches played in each season. From 2012 to 2013, the number of matches decreased to 74, and from 2015 to 2020, the number remained below 60 due to widespread rumours of cricket scams and betting. The IPL has been played in 32 cities globally, with Mumbai hosting around 100 matches, Kolkata, Delhi, and Hyderabad hosting over 60 matches. The IPL has played over 40 matches in Chennai, Chandigarh, Jaipur, Abu Dhabi, Dubai, and Sharjah. The visual provides a clear picture of the matches, demonstrating high accuracy in robust and statically significant cases. Ranking lists of rising stars are presented in both domains.

Fig 4: Total runs obtained by the teams

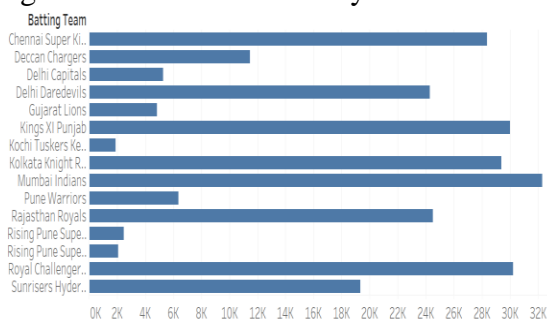


Fig 5: Top 10 Bowlers- Highest number of balls

From 2008 to 2020, it would be exciting to know which team won maximum matches. The data shows that Mumbai Indians has won in about 120 matches followed by Chennai Super Kings winning more than 100 matches. Kolkata Knight Riders won more than 90 matches. The graph gives us a detailed picture regarding the matches won by various teams.

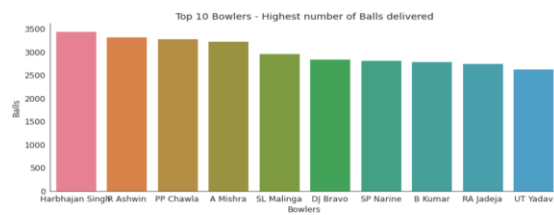


Fig 6: Team Wins over the team played

We got a clear picture regarding which team won the match and how many times. Data also shows the number of times the team won the matches. From the below visual we get the clear picture that Mumbai Indians won close to 100 tosses followed by KKR, CSK, and RR. It seems that Pune Warriors, Delhi Capitals, Gujarat Lions, Rising Pune Supergiant, Kochi Tuskers Kerala have won less than 20 tosses till 2020.

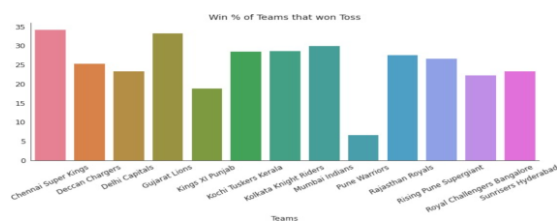


Fig.7. Matches won by various teams over toss

The Indian Premier League (IPL) has seen a significant rise in the number of players who have been awarded man of the match multiple times. C H Gayle and AB de Villiers have been awarded man of the match for 20+ matches, while Rohit Sharma, M S Dhoni, DA Warner, and S R Watson have been awarded man of the match for 15+ matches.

Fig.8 Top Batsman who scored the most runs

Conclusion

This paper explores IPL data and presents insights through graphical representation and comparative analysis. It aims to help Indian Premier League fans make informed decisions on

V Kohli	MS Dhoni	YK Pathan	SE	JH Kallis	DR	SR	SPD	F du	SS Iyer	R	RA	RR Pan		
SK Raina	RV Uthappa	KA Pollard				KK Nair	S	N	BJ	SS	HH	SC	DJ	CA
DA Warner	G Gambhir	BB McCullum						TM	IK			M		
		PA Patel												
RG Sharma	AM Rahane		AJ Finch											
		Yuvraj Singh												
S Dhawan	SR Watson													
		V Sehwag												
	KD Karthik	KL Rahul												
AB de Villiers														
	AT Rayudu	M Vijay												
CH Gayle	MK Pandey													

team performance and predict future trophy winners. The study uses data mining algorithms to analyze the results of IPL matches from 2008-2016, focusing on balanced and imbalanced datasets. The main objective is to pre-process imbalanced data, as classifiers are more sensitive to majority class and less sensitive to minority class. The balanced dataset provides greater accuracy than imbalanced sampling, with higher outcome values and fewer errors.

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Students' use of Alcohol

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Abstract

Alcohol consumption has become widespread, but it can have detrimental effects on individuals, families, and society. This paper zeroes in on the behavior of students and their alcohol consumption during school. It utilizes a dataset from Gabriel Pereira and Mousinho da Silveira schools in Portugal. The analysis includes feature selection, examining how alcohol relates to students' grades, and predicting grades through data visualization.

Keywords -Feature Selection, Prediction, Data Visualization.

Introduction

According to a 2016 survey on drug and health, a concerning 72% of students nationwide engage in daily alcohol consumption, with detrimental effects on their futures and society as a whole. Binge drinking has become a popular and exciting trend, particularly among students aged 15-20. Adolescents often turn to alcohol to cope with life's challenges, leading to an increase in early-age drinking. Binge drinking leads to behavioral changes that harm both individuals and others. The toxic effects of alcohol impair cognitive abilities, hindering innovation and the development of a values-driven society. This paper analyzes alcohol consumption among students and its impact on their academic performance, utilizing publicly available data to shed light on this critical issue.

Methodology

In the implementation phase, we'll utilize three types of data mining tools to analyze our dataset. The goal is to predict the impact of alcohol consumption on students and how it influences their academic grades.

a) Python

We'll employ Python machine learning for data analysis, ensuring concise and readable code. Python excels in managing complex algorithms and providing a human-friendly interface. Its simplicity, versatility, and reliability make it a popular choice, particularly in today's industries seeking efficient solutions..

b) Tableau

Tableau is a rapidly emerging tool with widespread usage in both industry and education. It's primarily employed for data visualization and reporting, offering a fantastic way to understand data comprehensively. What makes Tableau even more appealing is its user-friendly interface, making it accessible to those without prior coding knowledge. We'll use Tableau visualization on our dataset to gain a clearer and more insightful perspective on the data's scope.

c) Orange

The Orange tool is one of the data mining tools used widely over the Weka tool. We do the prediction using the orange tool.

d) Dataset

We've obtained the student alcohol consumption dataset from Kaggle, consisting of approximately 395 instances and 33 attributes. Python will help us understand the dataset, perform necessary pre-processing steps, and then Tableau will assist in visualizing the data, allowing us to extract deeper insights and draw meaningful conclusions.

	school	sex	age	address	famsize	Pstatus	Medu	Fedu	Mjob	Fjob	famrel	traveltime	good	Dalc	Walc	health	absences	G1	G2	G3	
0	GP	F	16	U	GT3	A	4	4	at_home	teacher	...	4	3	4	1	3	6	5	6	6	
1	GP	F	17	U	GT3	T	1	1	at_home	other	...	5	3	3	1	3	4	5	5	6	
2	GP	F	15	U	LE3	T	1	1	at_home	other	...	4	3	2	2	3	10	7	8	10	
3	GP	F	15	U	GT3	T	4	2	health	services	...	3	2	2	1	1	5	2	15	14	15
4	GP	F	16	U	GT3	T	3	3	other	other	...	4	3	2	1	2	5	4	6	10	10
...	
290	MS	M	20	U	LE3	A	2	2	services	services	...	5	5	4	4	5	4	11	9	9	9
291	MS	M	17	U	LE3	T	3	1	services	services	...	2	4	5	3	4	2	3	14	16	16
292	MS	M	21	R	GT3	T	1	1	other	other	...	5	5	3	3	3	3	5	10	8	7
293	MS	M	18	R	LE3	T	3	2	services	other	...	4	4	1	3	4	5	0	11	10	10
294	MS	M	19	U	LE3	T	1	1	other	at_home	...	3	2	3	3	3	5	5	8	9	9

395 rows × 21 columns

365 rows x 33 columns

e) Pre-processing

In data mining and also in data analysis the first and foremost step is data pre-processing. It will offer a better quality to the data that we deal with. The pre-processing includes appropriate dealing with the missing value, data cleaning and data compression and feature selection if needed in case of in numerous attributes when we consider

```
print("Total missing values: ",sum(data.isnull().sum()))
```

Total missing values: 0

```
print("Numerical Features:",num_end="\n\n")
print("Categorical Features:",cat)
```

Numerical Features: ['age', 'Medu', 'Fedu', 'traveltime', 'studytime', 'failures', 'famrel', 'freetime', 'gout', 'Dalc', 'Walc', 'health', 'absences', 'G1', 'G2', 'G3']

Categorical Features: ['school', 'sex', 'address', 'famsize', 'Pstatus', 'Mjob', 'Fjob', 'reason', 'guardian', 'schoolsup', 'famsup', 'paid', 'activities', 'nursery', 'higher', 'Internet', 'romantic']

The dataset contains no missing values.

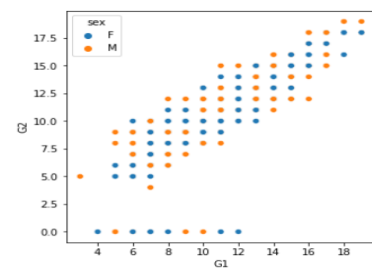
Both categorical and numerical attributes are present in our data

Correlation among the attribute will easily provide about their relationship.

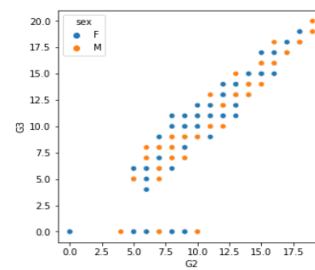
```
# Relationship between G1 and G2
plt.figure(figsize=(5,5))
sns.scatterplot(x=data['G1'],y=data['G2'],hue=data['sex'])

# Relationship between G2 and G3
plt.figure(figsize=(5,5))
sns.scatterplot(x=data['G2'],y=data['G3'],hue=data['sex'])
```

<AxesSubplot:xlabel='G1', ylabel='G2'>



<AxesSubplot:xlabel='G2', ylabel='G3'>



The graph shows that grades G1 and G2 are correlated.

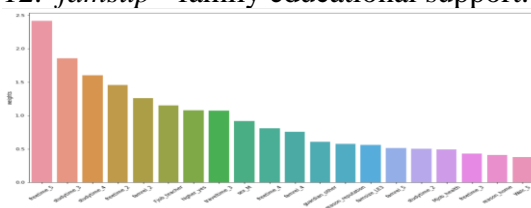
The graph shows that the grades G1 and G2 are much related.

Result And Discussion

a. Linear Regression (Python)

The features that mainly affects our target when we consider the linear regression would be the following :-

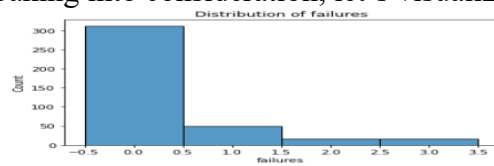
1. *failures* - number of past class failures.
2. *freetime* - free time after school.
3. *Medu* - mother's education.
4. *studytime* - weekly study time.
5. *schoolsup* - extra educational support.
6. *famrel* - quality of family relationships.
7. *Fjob* - father's job (whether father is teacher or not).
8. *Mjob* - mother's job (whether mother is teacher or not).
9. *traveltime* - home to school travel time.
10. *higher* - wants to take higher education.
11. *health* - current health status.
12. *famsup* - family educational support.



Among the dataset we consider only five main factor how they are related to our target.

- Failure

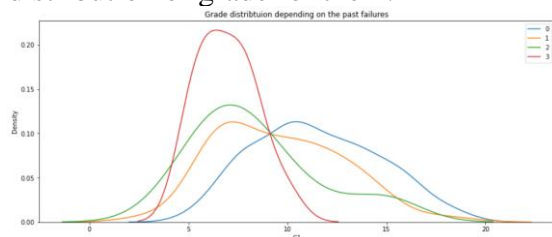
Taking into consideration, let's visualize how failure is affecting the final grade.



failures	
0	0.789873
1	0.126562
2	0.043038
3	0.040506

```
sns.histplot(data['failures'], discrete=True)
plt.title('Distribution of failures')
plt.show()
data['failures'].value_counts(normalize=True).to_frame()
```

We get the inference from here is, 78% of students are not affected by the past class failure. We will separate the dataset according to the number of past class failures and build a distribution of grade for them.



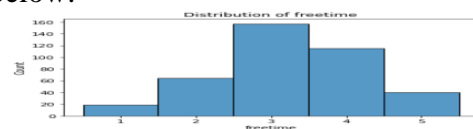
Clearly we can say that the students who did not have any past class failure have better grade.

- Free time

When we consider the free time feature with respect to the target, we get:-

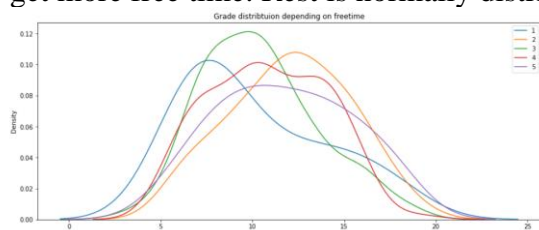
```
sns.histplot(data['freetime'], discrete=True)
plt.title('Distribution of freetime')
plt.show()
data['freetime'].value_counts(normalize=True).to_frame()
```

When we consider the graphical representation of free time over the final grade we get as below:-



freetime	
0	0.397489
1	0.291139
2	0.162025
3	0.101266
4	0.048101

We can infer from here that only a 10 % of students get more free time. Rest is normally distributed.



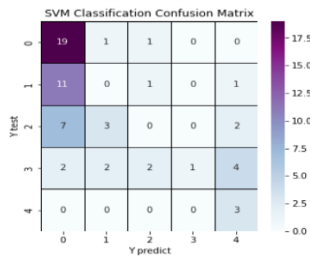
So, from these we can identify that our model gives us an accurate value on the target and other features.

Evaluation Matrix

Model	Train Score	Test Score
0	SVM	63.88
		43.33

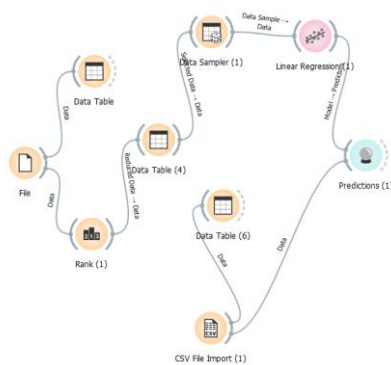
```
Train Score LR- 64.4776119402985 %
Test Score LR- 45.0 %
Recall score 0.4333499833499833
Precision score 0.3964502164502164
CONFUSION MATRIX [[17 3 1 0 0]
 [ 8 1 3 0 1]
 [ 5 2 3 1 1]
 [ 0 1 4 4 2]
 [ 0 0 0 1 2]]
```


In SVM model we get the train score as 63.88% and test score as 43.33%



This shows the confusion matrix for the actual versus predicted.

b. Linear Regression (Orange Tool)



Model	MSE	RMSE	MAE	R2
Linear Regression (1)	0.802	0.896	0.736	0.524

We get the evaluation matrix values as above:-

Conclusion

Based on the findings, it can be inferred that most students who consume alcohol fall within the age range of 15-28. Binge drinking is not prevalent among them. Moreover, students with more free time tend to consume alcohol, and there is a clear correlation between alcohol consumption and failure rates among students.

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- <https://www.health.harvard.edu/addiction/alcohol-abuse>
- https://www.researchgate.net/publication/279923840_The_Effect_of_Alcohol_Consumption_on_the_Academic_Performance_of_Undergraduate_Students
- <https://www.rsisinternational.org/virtual-library/papers/impact-of-alcohol-consumption-on-cognitive-and-academic-performance-of-students-at-david-livingstone-college-of-education/>

Emotional Competence of Cancer Patients

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Abstract

This study employs a descriptive method to investigate the emotional competence among cancer patients in the Idukki district. A convenience sampling method is utilized to gather data from 100 individuals in this specific demographic group. Convenience sampling, a non-probability sampling technique, was chosen to facilitate data collection. The primary objectives of this research were to explore the association between age, gender, and family type with emotional competence in cancer patients. The major findings of this study reveal a statistically significant relationship between age and emotional competence among the sampled patients. Specifically, the research identifies that as individuals within the age group of 51 to 70 advance in age, there is a noticeable change in their emotional competence.

Keywords: Emotional competence, emotional intelligence, physiological change, cancer patients, convenience sampling.

Introduction

Emotion is difficult to define but always consists of feelings, behaviour, physiological change and cognitions and always occurs in a particular context which influences it. Its major function is to give information to the individual about their interaction with the world (Mendes EJ, 2003). According to Saarni (1999) emotional competence as the functional capacity where in a human can reach their goals after an emotion-eliciting encounter. She defined emotion as a building block of self-efficacy. She described the use of emotions as a set of skills achieved which then lead to the development of emotional competence. Attainment of the skills of emotional competence is crucial to self-efficacy. An emotional competence is a learned capacity based on emotional intelligence that results in outstanding performance at work. For superior performance in jobs of all kinds, emotional competence matters twice as much as IQ plus technical skill combined. Emotional Competence is the ability to identify and manage one's emotions. This includes knowing how to nourish your emotional state, take turns, delay gratification, and cope with and loss. It also involves knowing how to control impulses, use failure good judgment and adapt emotions in response to others' emotions and reactions.

Goleman (1989) argued that emotional intelligence underlies emotional competence and that emotional competence is a required antecedent to performance. Emotional intelligence enhances employee potential for learning, and emotional competence translates that potential into task mastering capabilities. Merely displaying high emotional intelligence is insufficient. Emotional intelligence traits only suggest that an employee has the capability for learning task competencies, not that the competencies have actually been learned.

Emotions, or feelings, may be considered to be the ultimate motivator as they fuel a passion for work such that the work becomes enjoyable, effortless, and physically and cognitively rewarding. In such a state, employees give their best in terms of creativity and intuition. Flow may be likened to personal engagement (Kahn, 1990), in which engaged employees become one with the Job. Motivation and self-awareness give employees a clear sense of whether their personal values fit with those of the organization. If such a fit exists, commitment is strengthened. Emotional literacy is the ability to transcend impulsiveness in favour of a more

rational approach to emotion (Cooper & Sawaf, 1997). Conflicts and frustrations experienced as a rising intensity of constrictive emotions are caught early and suppressed. Setbacks are viewed as learning experiences to be used constructively to spur future growth. Over time, the continuous substitution of positive for negative emotions improves satisfaction and commitment.

Results & Discussions

Most of the cancer patients face problems with Quality of life related issues. The problem can be psychologically approached with a two-step process by addressing the individual's illness representations and resilience abilities. Advances in medical treatments and facilities which are available today are capable of controlling the progression of the disease in many chronic diseases like cancers. However the limitations of the treatment in curing these diseases completely are helping as secondary preventive measures leaving the patient to compromise with many day today issues which ultimately affect their quality of life. Cancer is a disease which is related and restricted to the body of an individual hence any patient can be approached with a similar treatment approach with a subtle variations related to the location of cancer and its severity. Treatment of cancer cannot be done in isolation, it needs to consider the bio psych social model of health and need to consider individual differences. The results we found that there is significant difference in emotional competence based on gender are more among females than males.

When considering the emotional well-being of cancer patients in a specific age group, there are numerous factors that come into play. Firstly, it is crucial to acknowledge that young cancer patients encounter unique obstacles as they navigate their diagnosis and treatment. They often grapple with feelings of fear, isolation, and uncertainty about their future. Moreover, these individuals may have limited life experiences compared to older patients, which can exacerbate the emotional toll of cancer.

However, it is equally important not to underestimate the resilience and strength that many young cancer patients possess. Despite their tender age, they frequently exhibit remarkable emotional competence by discovering ways to cope with their diagnosis, seeking support from friends or siblings who are facing similar challenges, and maintaining a positive outlook on life. Healthcare providers and loved ones must provide tailored support to address the emotional needs of these young individuals, enabling them to navigate this arduous journey with grace and resilience.

Research suggests that cancer patients who receive strong family support tend to exhibit greater emotional competence throughout their journey. This is because a loving and supportive family can enhance their self-esteem, provide a sense of security, and create a safe haven for them to freely express their emotions. Conversely, individuals lacking such support may encounter more difficulties in managing their emotions. Without close family ties, they may struggle to find someone to confide in or seek solace from during challenging moments. It is crucial for healthcare professionals and loved ones to acknowledge the profound influence that various family dynamics can have on a cancer patient's emotional well-being and offer appropriate support accordingly.

Conclusion

This study examined the emotional competence in cancer patients focusing on their emotion, attitude towards their sickness. The study is mainly based in their age, gender, family type. The study was conducted for checking the emotional competence among cancer patients. Hence, the conclusion is that the cancer patients have significant difference in emotional competence and it depends on the demographics.

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Boston House Forecast Prices

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Abstract

This paper aims to create predictive models for house prices in Boston using historical data from a Kaggle dataset. The primary goal is to build and compare multiple models for accuracy. The dataset contains information on 506 houses with 13 features and a target column for price. The tools used for this project are Python (for implementation) and Tableau (for visualization). The predictive models employed are Linear Regression and Random Forest Regressor. The dataset includes the following attributes: CRIM, ZN, INDUS, CHAS, NOX, RM, AGE, DIS, RAD, TAX, PTRATIO, BLACK, LSTAT, and PRICE.

Keywords: Predictive models, real estate market of Boston, regression.

Introduction

In the dynamic real estate market of Boston, data analysts have a valuable opportunity to analyze and predict property price changes. This is crucial because property prices serve as indicators of the overall market conditions and a country's economic health. The provided data involves a substantial set of property sales records in an unknown format with unknown data quality issues. Purchasing a home in Boston, with its millennial appeal, vibrant culture, favorable climate, and abundant job opportunities, can be challenging. The project's objective is to create a model capable of accurately predicting Boston house prices based on various attributes. The model will be developed and assessed using data collected from Boston houses. Once a robust model is established, it can be used to predict the monetary value of houses in the Boston area. Such a model would be a valuable tool for real estate agents who can use this information for their daily operations.

Implementation

Dataset

This project focuses on predicting housing prices, a key economic factor of interest to both buyers and sellers. It aims to create a regression model that can accurately estimate house prices based on various explanatory variables that encompass multiple aspects of residential properties. The dataset is designed for Boston House Price Prediction and provides individual features for each house, including attributes such as the number of rooms and the crime rate in the house's area.

1. **CRIM** per capital crime rate by town
2. **ZN** proportion of residential land zoned for lots over 25,000 sq.ft.
3. **INDUS** proportion of non-retail business acres per town
4. **CHAS** Charles River dummy variable (= 1 if tract bounds river; 0 otherwise)
5. **NOX** nitric oxides concentration (parts per 10 million)
6. **RM** average number of rooms per dwelling
7. **AGE** proportion of owner-occupied units built prior to 1940
8. **DIS** weighted distances to five Boston employment centers
9. **RAD** index of accessibility to radial highways 10. **TAX** full-value property-tax rate per 10,000 USD
11. **PTRATIO** pupil-teacher ratio by town
12. **Black** $1000(B_k - 0.63)^2$ where B_k is the proportion of blacks by town
13. **LSTAT** % lower status of the population.
14. **MEDV** Median value of owner-occupied homes in \$10,000's.

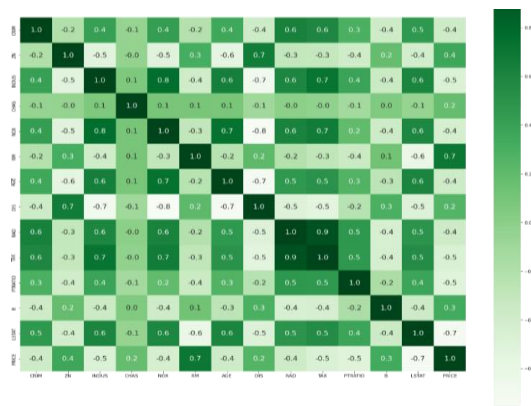
Preprocess

The Boston dataset had five missing values, which were not dropped due to negative impact on

the Root Mean Square Error (RMSE). Instead, they were replaced with the mean value of their respective columns. The dataset was obtained from Kaggle in a cleaned state, and preprocessing was done by checking for missing values and examining the dataset's shape. The target variable was renamed "Price" to avoid confusion. The dataset was split into a Training set (80%) and a Testing set (20%), maintaining equal proportions of columns with only two distinct values. A stratified shuffle split was used for better results. The data was visualized using a heatmap after preprocessing.

Model Building

The major aim of this project is to predict the house prices based on the features using some of the regression techniques and algorithms. The algorithms are Linear Regression and Random Forest Regressor.



Linear Regression

Fig.HeatMap

Linear Regression is a machine learning algorithm that performs a regression task. It is mostly used between variables and forecasting for finding out the relationship. Fig. 3 represents the workflow of the proposed Linear Regression method. Linear regression performs the task which is shown in Fig, that a given independent variable (x) is used to predict a dependent variable value (y). So, it finds out a linear relationship between x (input) and y (output) using Linear Regression.

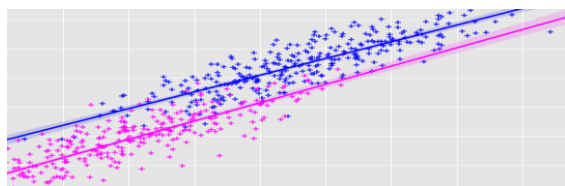


Fig Linear Regression

The result of the linear regression is in the form of R^2 , Adjusted R^2 , MAE, MSE, RMSE and it show below.

For Train Data:

R^2 : 0.731639262717006
Adjusted R^2 : 0.721378410997362
MAE: 2.751702866484017
MSE: 13.4679476415065
RMSE: 3.669870248592789

For Test Data:

R^2 : 0.6891647061758694
Adjusted R^2 : 0.6598831205257703
MAE: 2.890566098055463
MSE: 16.298551020721817
RMSE: 4.03714639575057

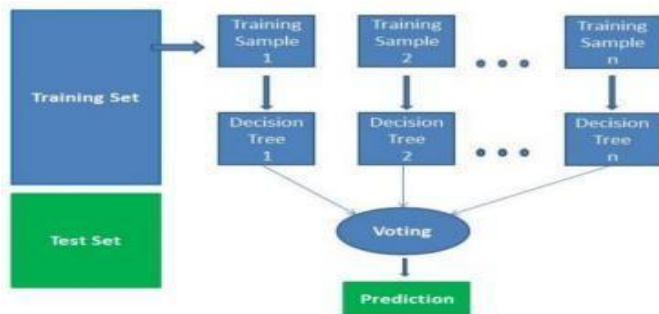
Fig:Train Data of Linear Regression

Fig: Test Data of Linear Regression

Random Forest Regressor

Random forest is a supervised machine learning algorithm. It can be used for both regression and classification. It is the most flexible algorithm. We have many decision trees in Random trees. To classify a new object, attributes of each tree are considered, as part of the voting process. Based on the voting result, the forest chooses the classification. Shortly, with Random Forest for small amounts of data, we can train the model and can expect pretty good results. Below Fig represents the workflow of the proposed Random Forest method.

Fig: Flowchart of Random Forest



The result of the random forest regressor is in the form of R^2 , Adjusted R^2 , MAE, MSE, RMSE and it show below

For Train Data:

R^2 : 0.9719677068020771
 Adjusted R^2 : 0.9708958838268624
 MAE: 0.8384282485875705
 MSE: 1.4068282151977416
 RMSE: 1.186097894441155

Fig:Train Data of Random Forest Regressor

For Test Data:

R^2 : 0.7051961141916434
 Adjusted R^2 : 0.6774247336444794
 MAE: 2.52337697368421
 MSE: 15.457949175723678
 RMSE: 3.931659849951885

Fig:Test Data of Random Forest Regressor

RMSE - Root mean square error or root mean square deviation is one of the most commonly used measures for evaluating the quality of predictions. It shows how far predictions fall from measured true values using Euclidean distance.

R^2 - R-squared is a statistical measure that represents the goodness of fit of a regression model. The ideal value for r-square is 1. The closer the value of r-square to 1, the better is the model fitted.

Adjusted R^2 - The Adjusted R-squared takes into account the number of independent variables used for predicting the target variable. In doing so, we can determine whether adding new variables to the model actually increases the model fit.

MSE - The Mean Squared Error (MSE) is perhaps the simplest and most common loss function, often taught in introductory Machine Learning courses. To calculate the MSE, you take the difference between your model's predictions and the ground truth, square it, and average it out across the whole dataset.

MAE - Absolute error refers to the magnitude of difference between the prediction of an observation and the true value of that observation.

Result and Discussion

The Boston house price dataset contains 506 rows with 13 attributes (features) and a target column for price. Python was used for implementation, and Tableau facilitated visualization. The dataset underwent missing value imputation and other preprocessing steps. Following data selection and preprocessing, a Training-Test data split was performed. Predictive experiments

were carried out using two machine learning algorithms: Linear Regression and Random Forest Regressor. Their performances were evaluated, and visualization was done in Tableau. Based on the results, it was determined that Linear Regression is the superior model for Boston house price prediction. This conclusion was drawn primarily based on the Root Mean Square Error (RMSE) value, which was lower for Linear Regression compared to the RMSE of the Random Forest Regressor.

Visualization - TABLEAU

Tableau is a Data Visualization tool that is widely used for Business Intelligence but it is not limited for it. It helps to create various graphs and charts in the form of dashboards and worksheets to gain business insights. Here bar plot is used to plot the train data and test data and visualization is given below

For Train Data:

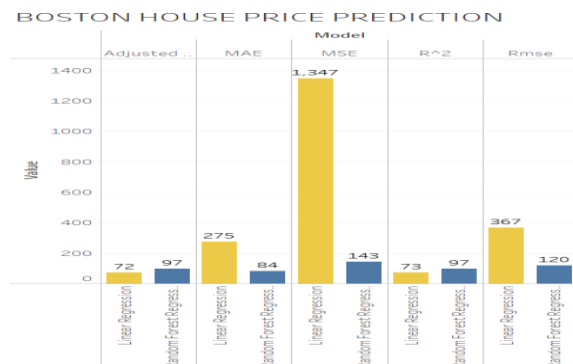


Fig: Visualization of Train Data

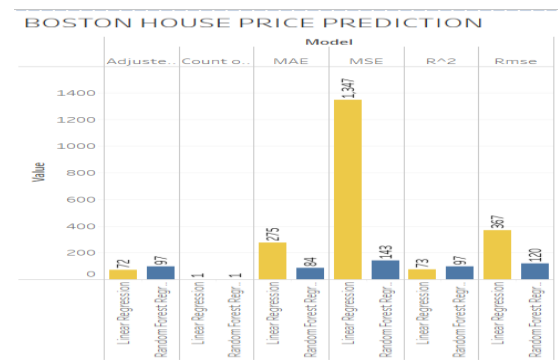


Fig: Visualization of Test Data

Conclusion

For boston house price prediction, this paper investigates two different types of Machine Learning methods including Linear Regression and Random Forest Regressor. Their performances are compared and analyze for the best solutions. Although these methods achieved desired outcomes, different models have their pros and cons. Experimental results show that the proposed Linear Regression method gives better result than the other method; it has the lowest error and performed very well for both training and testing data. We hope this study will help to provide some methodological and practical contributions for evaluation and presenting an alternative way to deal with the valuation of the price of the house in Boston. The future direction of research may consider a bigger geological area with more features, incorporating additional property transaction data beyond housing development.

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Analysing and Visualizing Weather Data with Tableau

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Abstract

Temperature and precipitation are fundamental measurements for describing the climate and can have wide-ranging effects on human life and ecosystems. Here this case study focuses on analyze how the temperature and precipitation varies over time. Trend analysis is done over six different cities. The study focuses on answering some questions, with visualization. Visualization will help everyone to understand the concepts easily. Tableau is the data visualization tool used for visualizing my case study.

Keywords: Linear regression, prediction, tableau, temperature, precipitation, visualization, dashboard.

Introduction

Tableau is a visual analytics platform transforming the way we use data to solve problems-empowering people and organizations to make the most of their data. As a data analytics student my case study deals with answering some relevant questions about temperature and precipitation changes through visualization. Visualization gives us a clear idea of what the information means by giving it visual context through maps or graphs. We need a creative thought process to visualize the data that we see in rows and columns. To answer a relevant question through visualization, first we need to visualize that concept on our mind. It was the basic challenge that I face during the case study. I created Dashboards in Tableau. Dashboards are very much interesting as they show visualizations dynamically.

Our dataset contains Temperature data (Minimum, Average, Maximum) in degrees Centigrade and Precipitation data in mm. This data is collected from Weather Station across India. Data for the following cities is present:

- Delhi
- Bangalore
- Chennai
- Lucknow
- Rajasthan
- Mumbai

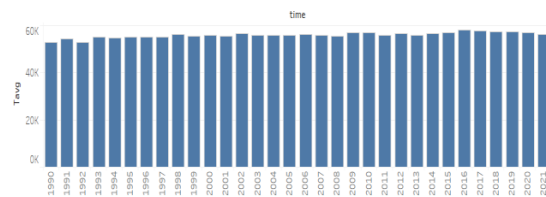
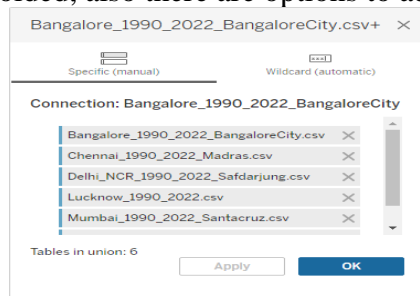
The dataset Consist of 10,000 instances and 5 features. The station Geolocation file will give you the approximate location from where these measurements are taken. Some pre-processing are done on the data at the time of visualization.

Pre-Processing

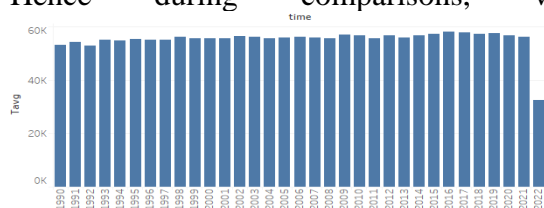
The data was in the form of 7csv files, where 6csv files contain the data regarding cities and the station geo location file will give you the approximate location from where these measurements are taken. To get a collective inference about the data we need to join these 6 datasets, only then we can compare cities and analyses the effect of temperature and precipitation each city. We have the feature 'Time' as a common feature for these 6 files. Hence a new dataset is created with a union of these 6 cities and a new feature called 'Table Name' is also created.

The other main type of pre-processing is handling the missing values. Here the null values can be avoided while visualizing the plots. In most of the settings by default the null values will be

avoided, also there are options to add the entire data while visualizing.



The data set is a time series data, where the data collected continuously over a time period. The dataset contains 11,894 instances. The last data collected was on July 25 th 2022 so there is only 206 instances in 2022 dataset. Hence when we compare the aggregate of the data based on year, we must exclude the year 2022. These are the 7 months during 2022. Hence during comparisons, we must exclude the year 2022.



After removing the instances, the remaining data can be used to yearly comparison.

ANALYSIS

The aim of this case study is to arrive at certain conclusions regarding how temperature and precipitation are changing by time. Hence through this case study I aim at answering some of the questions that we face today. The answers to each of the questions are explained with corresponding visualizations.

Q1) Find the Hottest and Coldest year in each city.

To Visualize the Hottest and Coldest years of each city I created a dashboard with three different types of visualizations. Two of them are bar graphs for Max Temperature and Avg Temperature.

Lucknow



- The Hottest Year of Lucknow was: 2006
- The Coldest Year of Lucknow was: 2012
- **Mumbai**



- The Hottest Year of Mumbai was: 2016
- The Coldest Year of Mumbai was: 2006

Bengaluru

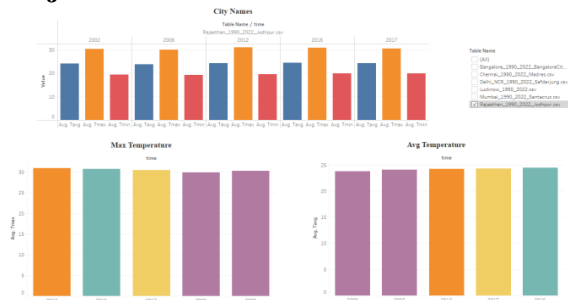


- The Hottest Year of Bengaluru was: 2012
- The Coldest Year of Bengaluru was: 2006
- **Delhi**



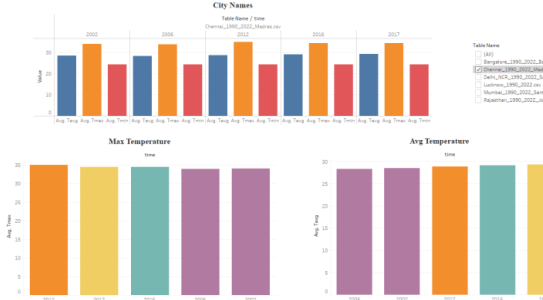
- The Hottest Year of Delhi was: 2016
- The Coldest Year of Delhi was: 2012

Rajasthan



- The Hottest Year of Rajasthan was: 2012
- The Coldest Year of Rajasthan was: 2006

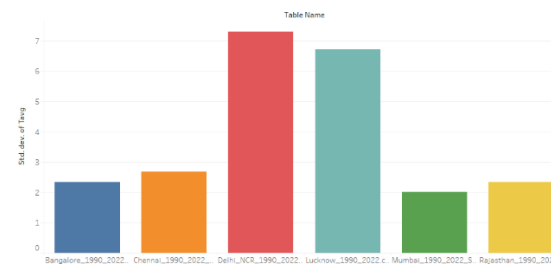
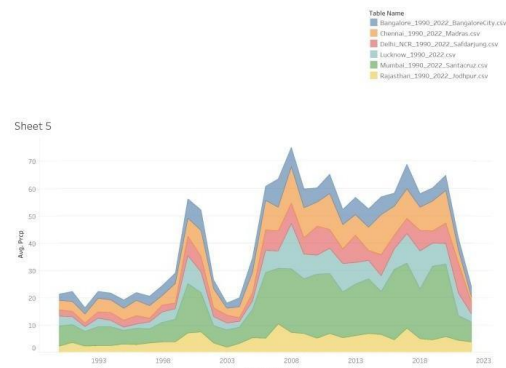
Chennai



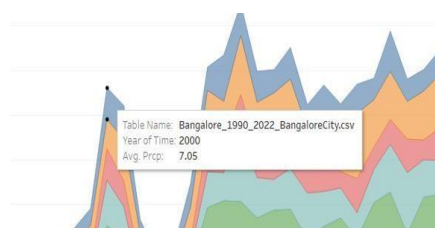
- The Hottest Year of Chennai was: 2012
- The Coldest Year of Chennai was: 2006

Q2) Can you find the precipitation average and tell when rainfall was abnormally less or more?

The graph shows the average of perspiration plotted against year. Here the color helps us to classify the data with respect to city. From the plot Rajasthan is the place having the least amount of precipitation and Bengaluru is the one with the highest value of precipitation. There are scenarios where rainfall was abnormally less and more

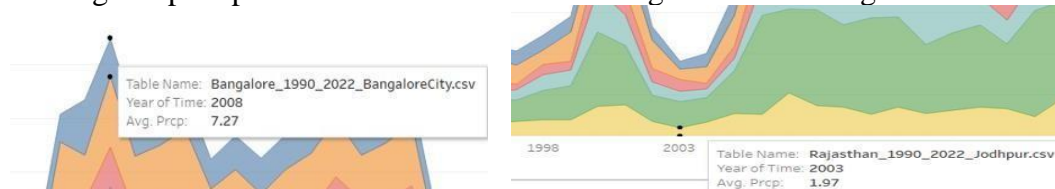


During the year 2000 there is a hike in the average precipitation level across all the states and the highest precipitation during 2000 was over Bengaluru.



	tavg	year	prcp	year
0	23.2	1990	0	0.0
1	22.2	1990	1	0.0
2	21.8	1990	2	0.0
3	25.4	1990	3	0.0
4	26.5	1990	4	0.0

The highest precipitation level was detected during 2008 over Bengaluru.



It was during 2003, the lowest amount of precipitation is recorded. It was affected over all the cities but most affected by Rajasthan. The average precipitation level was only 1.97 millimeters.

Q3) Predict the Future Trends in Temperature and Precipitation

Our dataset consists of 6 cities, in which Delhi and Lucknow are the cities with highest standard deviations. That means the average temperature over these cities varies over a wide range. Hence to predict the future temperature and precipitation we choose Mumbai as the best option.

Because it has the least standard deviation compared to other cities.

Here we build a model to predict the temperature and precipitation of Mumbai.

Created 2 data frames to predict the unknown values of temperature and precipitation from year.

```
: y_pred = model.predict([ [2050]])
print(f"Predicted Temperature of 2050:\n{y_pred}")
```

```
Predicted Temperature of 2050:
[[29.81597504]]
```

```
: y_pred = model.predict([ [2050]])
print(f"Predicted Precipitation of 2050:\n{y_pred}")
```

```
Predicted Precipitation of 2050:
[[23.33742761]]
```

```
: y_pred = model.predict([ [2050]])
print(f"Predicted Temperature of 2050:\n{y_pred}")
```

```
Predicted Temperature of 2050:
[[29.81597504]]
```

Conclusion

The main aim of my project was to get in touch with the visualization tool Tableau. As a data analyst student, we deal with programming languages like python and R programming which also provides visualization techniques. But tableau is a tool for business intelligence and data visualization. It helps to simplify raw data into the form of dashboards and worksheets that make the process of understanding and comprehending them very easy and accurate.

Through this project my dataset was large; it consists of 10,000 instances and 5 features. The data was over seven CSV files. Tableau provides joining options like relationships and joins (inner join, left outer join, right outer join, and full outer join), which helped me join my six of the CSV files together and treat them as a single dataset. Also the other interesting feature of tableau was filters with will help as to filter through data. Filters play a major role in the dynamic visualization of dashboards.

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An Analysis of OTT Platforms' Utilisation of BI

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Abstract

The COVID-19 pandemic significantly altered entertainment habits, driving a surge in Over-The-Top (OTT) platform usage worldwide. OTT platforms, like Amazon Prime and Disney+, harnessed Business Intelligence (BI) to collect user data, adapting to evolving viewer preferences. In India, these platforms gained popularity for their budget-friendly options. This paper explores various OTT platforms and utilizes data analysis to provide personalized movie recommendations, enhancing the user's OTT experience amid the changing landscape of entertainment consumption.

Keywords: Business intelligence, OTT market, pandemic, UI.

Introduction

Business Intelligence (BI) is essential for OTT platforms like Netflix, Amazon, Disney+, and YouTube to analyze data, understand customer behavior, and stay competitive in the dynamic digital entertainment landscape. This allows them to optimize content and enhance user experiences, contributing to their success in the Asia Pacific OTT market, which is projected to generate \$42 billion in revenue from 351 million subscribers.

Methodologies

System development approaches have evolved, emphasizing methodologies like prototyping, Object-Oriented Analysis and Design Methodology (OOADM), and Rapid Application Development (RAD) to transform traditional systems design. In the context of Business Intelligence (BI) systems, the importance of effective implementation methods is highlighted due to past costly issues. The OTT market, valued at \$85.16 billion in 2019 and projected to reach \$194.20 billion by 2025, has seen accelerated growth during the COVID-19 pandemic. To aid users in selecting the right OTT platform among many, personalized recommendation systems are being developed to simplify the decision-making process.

Datasets

This study delved into content listings from Netflix, Amazon Prime, and Disney+ to tackle the challenge of helping users select the right OTT platform, especially with the emphasis on original content. It aimed to go beyond recommending specific shows and considered the hosting platforms themselves. The primary goal was to offer personalized recommendations to simplify the OTT platform decision-making process. Datasets for each platform were thoughtfully curated with relevant columns, underscoring the significance of data in enhancing user experiences within the streaming world.

Data Preprocessing and Exploratory Analysis

Data preparation is crucial in this study, where movie datasets from Amazon underwent preprocessing to ensure reliable analysis. Disney+, HBO, and Netflix compete in India's growing OTT industry, each offering distinct content and subscription options. Smartphone penetration is rising, and the OTT market is expected to grow significantly. Netflix and

Amazon Prime have substantial subscriber bases, while Disney+ focuses primarily on Disney content, catering to specific audiences. Comparing content offerings is advisable to choose the right service. The analysis highlights Disney's success but suggests areas for improvement in Amazon's browser-based streaming. Other platforms like Zee5, Eros Now, and Sony LIV offer diverse content choices.

Analysis Based on the User Interface

Amazon, Netflix, and Disney+ have gained substantial audiences with diverse content and high-quality User Interface (UI) designs, especially during the COVID-19 pandemic. Their focus on engaging UI experiences is key to captivating viewers and promoting content consumption. While they compete intensely, each has distinct UI strengths and weaknesses. The success of these OTT giants relies on compelling content and effective UI design, essential for attracting and retaining users in a competitive market.

- **Amazon Prime Video**

Amazon Prime Video has achieved success as a competitor to Netflix and Disney+ through a combination of compelling content, Prime benefits, and a user-friendly interface. Its content library includes popular series and successful originals. The user-friendly interface strategically positions controls for easy access, with features like X-ray and content suggestions. However, some users have expressed concerns about the readability of the suggestion box text and the platform's somewhat subdued color scheme. Overall, Amazon Prime Video's success is attributed to its content and UI, with room for further user satisfaction improvements.

- **Netflix**

Netflix stands out in the OTT streaming industry with its extensive content library, user-friendly interface, and versatile playback options. Its well-organized content, stylish design, intuitive controls, and innovative features like playback speed control highlight its excellence in UI design, enhancing the overall user experience.

- **Disney+**

Disney+ Hotstar, despite entering the OTT market later, has gained international prominence with a user-friendly interface, five main categories, and a complementary color scheme. Its straightforward UI enables easy episode switching in full-screen mode. The platform's surge in subscriptions during the pandemic reflects its appeal in a changing OTT landscape, driven by simplicity and compelling content offerings.

Conclusion

The study delved into BI's role in OTT platforms, examining UI, content, and marketing. Age analytics aid users in selecting age-appropriate content platforms. Category stats showcased genre strengths for Netflix, Amazon Prime, and Disney+. Netflix's UI and extensive content make it a standout. The pandemic's impact on subscriptions underscores BI's influence on user preferences in the competitive streaming arena.

Future Scope

The global OTT market is on track to exceed \$194 billion by 2025, with increasing competition as more content providers join the OTT landscape. Providing high-quality, unique content is crucial for attracting and retaining subscribers. The future of OTT belongs to platforms offering personalized user experiences with AI and machine learning integration. Utilizing OTT SaaS solutions like MAZ Systems

can enhance app aesthetics. Consideration of cost-effective membership plans for underserved demographics is essential. This is a prime moment for both established broadcasters and emerging content creators to launch their OTT platforms, capitalizing on the shift from traditional cable TV to on-demand content and the immense potential in the OTT services market.

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Business Acumen in Social Media

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Abstract

Social media platforms enable easy communication, document sharing, and community creation. Data mining methods can be used to analyze content for decision-making. Business intelligence is a collection of tools and technologies that process qualitative information to help entrepreneurs understand their business and marketplace. It collects and processes historical business data, enabling users to create targeted ads and create reports and dashboards. Social business intelligence also helps make predictions based on user's watch history, search history, ratings, and preferences.

Keywords: Social media, business intelligence, data mining.

Introduction

Social media technologies have revolutionized communication, providing a platform for individuals, teams, and organizations to connect and share information. However, businesses face challenges due to the vast amount of data available on these platforms, which can provide valuable insights into people's opinions and offer new opportunities for business intelligence (BI). Currently, customer analytics are the primary method used by businesses to understand their environment, but they are insufficient for a deeper understanding of customers' behaviors. Social media provides a wealth of information for marketers to understand their target audience's behaviors and preferences, but it is a chaotic hub of thoughts and opinions, necessitating the capture of vast amounts of data for reliable conclusions.

Methodology

This research involves several steps, including data collection, analysis, data warehouse design, business intelligence design, text classification, and evaluation methods. Data collection is conducted using social media platforms like Instagram, Facebook, and Twitter, with the first step being data collection. Data classification evaluates the quality of the data after filtering. Text-mining tools are developed to analyze social media platform performance, tracking and interpreting online texts from news, emails, blogs, and other outlets. The data warehouse process includes four stages: selecting the business process, declaring the grain, identifying dimensions, and identifying facts. ETL (extraction, transformation, loading) is another process in the data warehouse process, where methods like database analysis and social media database results are used to analyze content and load data.

Analysis

Social media marketing is a powerful tool for companies to interact with customers, understand their preferences, and gain direct responses. Business Intelligence solutions offer marketers the ability to analyze data captured by popular social media platforms like Twitter, LinkedIn, and YouTube, providing a quick and cost-effective way to understand the impact of these activities. Engagement metrics reveal people's reaction to a brand's social media content and presence, while content analytics help understand how healthy marketing initiatives and paid campaigns work. Social listening data allows marketers to tune in to discussions across social media, helping them discover what people are talking about and how their brand can join the conversation.

Market research helps businesses stay updated on consumer interest in products and industry

trends, which can be used to launch new products or expand markets. Social BI can also track channels that drive the best results for a business, allowing for data-driven improvements and better content creation. Evaluating sales funnels is crucial for businesses to create more effective campaigns and intelligently structure offers.

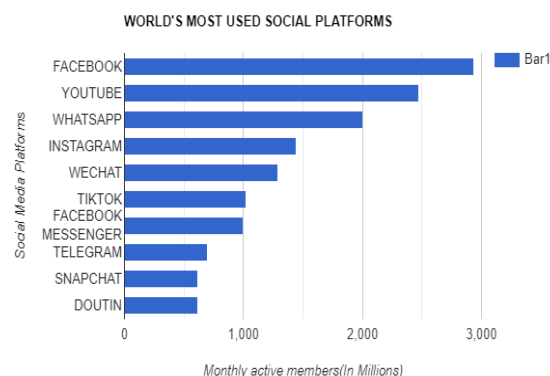
Study

A study reveals that by July 2022, 4.70 billion people worldwide will be using social media, accounting for 59.0% of the global population.

Important Social Media Platforms

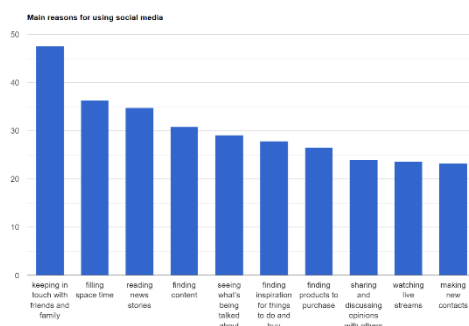
Although Facebook continues to be the most well-known social media site worldwide, there are currently seven others that each claim to have more than one billion monthly active members. Meta owns four of these seven platforms.

1. Facebook has at least 2.036 billion monthly active users.
2. Youtube's potential advertising reach is 2.476 billion.
3. Whatsapp has more than 2 billion monthly users.
4. Instagram's potential advertising reach is 1.440 billion.
5. WeChat has 1.288 billion monthly active users.
6. TikTok ads reach 1.02 billion adults over 18 each month.



Why Social Media

Social media is crucial for marketing strategies, especially for businesses. Understanding its primary purpose and popular platforms is essential. Understanding the reasons for using social media allows marketers to construct a platform mix that suits individual campaigns and activity intentions. Marketers should explore the different needs of people using different platforms to identify the best platforms for individual campaigns. Motivations for social media use vary by country, age group, and platform, as shown in the chart.



Challenges

Over a billion users on social media platforms generate vast amounts of data through actions like posts, likes, and comments. This data presents challenges in data entry, processing, and display. Data collection is challenging due to the diverse structures, types, and speeds of data creation. Developing appropriate data collection tools for each platform can help address this issue. However, unstructured data from a wide range of users can decrease data quality. Data integration may be difficult due to the diversity of data sources. Data filtering and cleaning techniques can help address this issue. Protecting user privacy is another challenge. Businesses must balance the use of user data with privacy concerns, considering factors like service type, personal information, clients, and regulatory frameworks. Processing this massive data is another challenge, as it can be structured, semi-structured, unstructured, and in various formats like texts, images, videos, and audio. This massive data, heterogeneity, diversity, high complexity, and high dimensionality make it difficult to conduct data visualization.

Conclusion

A post-pandemic environment necessitates new procedures and strategies for businesses. A survey revealed Facebook as the most widely used social media platform, followed by YouTube, WhatsApp, and Instagram. Users use social media for various reasons, including keeping in touch with friends and family, reading, spending free time, watching videos, reading articles, making new contacts, and shopping. Younger generations are more active on Instagram, while older generations prefer WhatsApp and Facebook. Social media is crucial in day-to-day activities, and business intelligence software can integrate social media data to engage customers and understand customer feedback. By understanding social media usage, businesses can better engage with their customers and improve their overall performance.

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[users#:~:text=The%20world's%20biggest%20social%20media%20platforms&text=Furthermore%2C%2017%20social%20media%20platforms,see%20more%20Facebook%20stats%20here\)](https://datareportal.com/social-media-users#:~:text=The%20world's%20biggest%20social%20media%20platforms&text=Furthermore%2C%2017%20social%20media%20platforms,see%20more%20Facebook%20stats%20here)

Early Diagnosis of Diabetes

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Abstract

Diabetes is a chronic condition caused by high blood glucose levels due to insufficient insulin production by the pancreas. Insulin, produced by the pancreas, helps cells use glucose for energy. Insufficient insulin causes high glucose levels called hyperglycemia and potential harm. Diabetes has different causes, including genetics and autoantibodies. This paper evaluates prediction accuracy with diverse classification models for comparison.

Keywords: Diabetes, Type 1, Type 2

Introduction

Diabetes is a chronic metabolic disease causing high blood glucose levels, leading to severe bodily damage. There are four major types: type 1 (pancreas doesn't produce enough insulin, often in youth), type 2 (often in those over 40, linked to genetics and lifestyle), gestational diabetes (occurs during pregnancy without symptoms), and prediabetes (slightly elevated glucose levels not yet type 2). Type 1 can be diagnosed by checking for autoantibodies and ketones in urine. Gestational diabetes prevention involves weight loss and fitness before pregnancy. Prediabetes can be managed through a healthy diet and physical activity.

Literature Review

This paper discusses diabetes mellitus, a metabolic disorder characterized by hyperglycemia, and its causes, types, diagnosis, and treatment. It also covers Diabetic Mononeuropathies and Diabetic Amyotrophy, which affect the oculomotor nerve and cause severe pain, muscle weakness, atrophy, and weight loss. The article also examines the impact of iron deficiency anemia on HbA1c, a blood sugar measurement tool. It also discusses diabetic ketoacidosis, a complication of gestational diabetes mellitus, a life-threatening disorder often linked to hyperglycemia. The paper also reports the first case of neonatal COVID-19 infection in China, related to breastfeeding during the pandemic. The article also presents clinical characteristics and outcomes of COVID-19 hospitalized patients with diabetes in the UK, highlighting the increased mortality risk due to older age and the absence of diabetic ketoacidosis. It also addresses the heterogeneity of COVID-19 data among South Asians/Asian Indians and its implications for research and pathophysiology. The paper concludes by highlighting the increased risk of severe infection and death for people with diabetes during the pandemic.

Implementation Methodology

In this implementation, you are using three data mining tools to analyze a dataset related to the effects of alcohol consumption on students and their academic performance. Here's a breakdown of your methodology:

a) Python:

Python is being used for machine learning to analyze the dataset. Python's simplicity and readable code are advantageous. It can handle complex algorithms in a human-understandable way. Python's versatility is highlighted for data analysis tasks.

b) Tableau:

Tableau is used for data visualization and reporting. It provides a clear understanding of the data. Its user-friendliness makes it accessible to those without coding knowledge. Tableau visualization is applied to gain insights from the dataset.

A) Data Preparation:

Data is collected through questionnaires from Sylhet Diabetes Hospital in Bangladesh.

The dataset aims to predict diabetes based on symptoms.

Age 1.20-65

Sex 1. Male, 2. Female

Polyuria 1. Yes, 2. No.

Polydipsia 1. Yes, 2. No.

sudden weight loss 1. Yes, 2. No.

weakness 1. Yes, 2. No.

Polyphagia 1. Yes, 2. No.

Genital thrush 1. Yes, 2. No.

visual blurring 1. Yes, 2. No.

Itching 1. Yes, 2. No.

Irritability 1. Yes, 2. No.

delayed healing 1. Yes, 2. No.

partial paresis 1. Yes, 2. No.

muscle stiffness 1. Yes, 2. No.

Alopecia 1. Yes, 2. No.

Obesity 1. Yes, 2. No.

Class 1. Positive, 2. Negative.

Age	Gender	Polyuria	Polydipsia	sudden weight loss	weakness	Polyphagia	Genital thrush	visual blurring	itching	Irritability	delayed healing	partial paresis	muscle stiffness	Alopecia	Obesity	class
40	Male	No	Yes	No	Yes	No	No	No	Yes	No	Yes	No	Yes	Yes	Yes	Positive
58	Male	No	No	No	Yes	No	No	Yes	No	No	No	Yes	No	Yes	No	Positive
41	Male	Yes	No	No	Yes	Yes	No	No	Yes	No	Yes	No	Yes	Yes	No	Positive
45	Male	No	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	No	No	No	Positive
60	Male	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Positive
39	Female	Yes	Yes	Yes	No	Yes	No	No	Yes	No	Yes	Yes	No	No	No	Positive
48	Female	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	No	No	Positive
58	Female	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes	No	Yes	Positive
32	Female	No	No	No	Yes	No	No	Yes	Yes	No	No	No	No	No	Yes	Negative
42	Male	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Negative

Figure 1 dataset overview

The target variable is class

B) Data Preprocessing:

Preprocessing involves preparing the data for analysis.

```
val=data.isnull().sum()
```

```
sum(val)
```

0

The dataset has no missing values.

The dataset contains both numeric and categorical attributes. So, the gender attribute's male is replaced by 1 and female by 0. Later symptoms attribute's yes is replaced by 1 and no by 0.

Age	Gender	Polyuria	Polydipsia	sudden weight loss	weakness	Polyphagia	Genital thrush	visual blurring	itching	Irritability	delayed healing	partial paresis	muscle stiffness	Alopecia	Obesity	class
40	1	0	1	0	1	0	0	0	1	0	1	0	1	1	1	Positive
58	1	0	0	0	1	0	0	1	0	0	0	1	0	1	0	Positive
41	1	1	0	0	1	1	0	0	1	0	1	0	1	1	0	Positive
45	1	0	0	1	1	1	1	0	1	0	1	0	0	0	0	Positive
60	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	Positive
39	0	1	1	1	0	1	0	0	1	0	1	1	0	0	0	Positive
48	0	1	1	1	1	1	0	0	1	1	1	1	0	0	0	Positive
58	0	1	1	1	1	1	0	1	0	0	0	1	1	0	1	Positive
32	0	0	0	0	1	0	0	1	1	0	1	0	0	1	0	Negative
42	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Negative

Since class is target variable it's not converted from categorical to numeric.

```
x_train,x_test,y_train,y_test=train_test_split(x,y,train_size=0.7,shuffle=True,random_state=1)
```

The data is splitted into train and test and scaling is performed by Standard Scalar.

Age	Gender	Polyuria	Polydipsia	sudden weight loss	weakness	Polyphagia	Genital thrush	visual blurring	itching	irritability	delayed healing	partial paresis	muscle stiffness	Alopecia
-0.658902	0.740902	-0.994521	1.129159	-0.846747	0.841974	1.104315	-0.590429	-0.870893	1.044996	1.682730	1.083259	1.148247	1.333951	-0.74535
-0.913060	0.740902	-0.994521	-0.885915	-0.846747	0.841974	-0.905539	-0.590429	-0.870893	-0.956999	-0.594273	1.083259	-0.870893	-0.749821	1.34194
0.018852	0.740902	-0.994521	1.129159	1.180990	0.841974	-0.905539	-0.590429	1.148247	1.044996	1.682730	1.083259	-0.870893	-0.749821	-0.74535
1.120204	0.740902	1.005510	1.129159	1.180990	0.841974	1.104315	1.784351	1.148247	1.044996	-0.594273	-0.936103	-0.870893	-0.749821	1.34194
-1.082499	-1.349706	1.005510	1.129159	1.180990	0.841974	1.104315	-0.590429	1.148247	1.044996	-0.594273	1.083259	1.148247	1.333951	-0.74535
...
0.018852	0.740902	1.005510	1.129159	1.180990	0.841974	-0.905539	-0.590429	-0.870893	1.044996	-0.594273	-0.936103	1.148247	-0.749821	1.34194
1.712239	0.740902	1.005510	1.129159	-0.846747	-1.187685	1.104315	-0.590429	1.148247	1.044996	1.682730	-0.936103	1.148247	-0.749821	-0.74535
1.459081	-1.349706	-0.994521	-0.885915	-0.846747	-1.187685	-0.905539	1.784351	-0.870893	-0.956999	-0.594273	-0.936103	-0.870893	-0.749821	-0.74535
-1.844973	0.740902	-0.994521	-0.885915	-0.846747	-1.187685	-0.905539	-0.590429	-0.870893	-0.956999	-0.594273	-0.936103	-0.870893	-0.749821	-0.74535
1.289643	0.740902	1.005510	1.129159	1.180990	0.841974	1.104315	-0.590429	1.148247	-0.956999	-0.594273	-0.936103	-0.870893	1.333951	1.34194

Accuracy of the models are checked

```
for name,model in models.items():
    print(name+':{:2f}%'.format(model.score(x_test,y_test)*100))
```

```
Logistic Regression:{:2f}% 92.3076923076923
K-Nearest Neighbour:{:2f}% 90.38461538461539
Decision Tree:{:2f}% 97.43589743589743
Random Forest:{:2f}% 98.07692307692307
Support Vector Machine:{:2f}% 95.51282851282851
```

By this we can understand that Decision tree and random forest provides more accurate result.

Models Used

Logistic Regression:

Classification algorithm used for binary, multinomial, or ordinal outcomes. Suitable when data is linearly separable. Supervised machine learning model. Efficient and easy to implement.

K-Nearest Neighbor (KNN):

Used for both classification and regression. Approximates outcomes by averaging neighboring data points. Better for high Signal-to-Noise Ratio (SNR) data. Known as a "lazy learning" algorithm. Requires setting the number of neighbors (k) and calculating Euclidean distances.

Decision Tree

Probability tree where internal nodes represent attribute tests, and leaves represent class labels. Highly interpretable model. Can handle both classification and regression tasks. Allows incorporating expert opinions and preferences. Can become complex with many categorical variables.

Random Forest:

Ensemble learning method consisting of multiple decision trees. Suitable for classification and regression tasks. Balances errors and detects variable interactions. Improved precision with more trees in the forest.

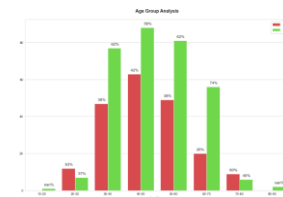
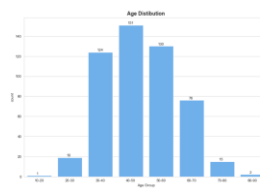
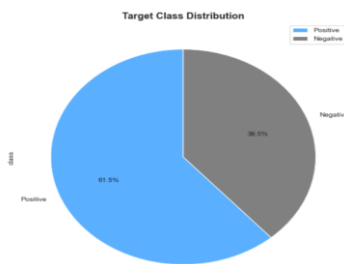
Support Vector Machine (SVM):

Used for classification, regression, and outlier detection. Linear SVM for linearly separable data; Non-Linear SVM for non-linearly separable data. Finds a hyperplane that separates data into classes. Support Vectors are the closest data points to the hyperplane. These models have various strengths and applications, and their selection depends on the nature of your dataset and the specific problem you are trying to solve.

Results

```
import matplotlib.pyplot as plt
import seaborn as sns
red="#ff8c94"
blue="#5ab0ff"
green="#99ff99"
green="#63ee33"
red="#ee3338"
sns.set_style("whitegrid")
plt.figure(figsize=(7,7))
data['class'].value_counts().plot(kind='pie', colors=[blue, 'grey'], legend=True, labels=["Positive", "Negative"],
startangle=90, autopct='%1.1f%%')
plt.title('\nTarget Class Distribution', fontweight='bold', fontsize=14)
plt.tight_layout()
plt.show()
```

Pie chart of class is visualized. By the survey conducted 61.5% of them are tested positive by the symptoms and 38.5% negative.



The age group of 60-70 was tested more positive

Conclusion

By this model it can be concluded that 40-50 age group range are more prone affecting diabetes and Decision tree and random forest provides more accuracy.

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Forecast for Tesla Stock

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This machine learning experiment aims to predict stock prices using a system that tracks the closing price of a targeted stock, Tesla. Tesla has suffered a 30% loss this year due to negative catalysts. The project focuses on predicting stock prices based on factors such as open, high, low, volume, year, and month. The goal is to build multiple prediction models and select the one with the best accuracy. The dataset for the project was obtained from Yahoo Finance website. The Twitter case, where Elon Musk sold a significant portion of his Tesla shares to fund Twitter's buyout, led to a 30% decline in Tesla's stock price in that month alone. The project aims to build multiple prediction models and select the most accurate model.

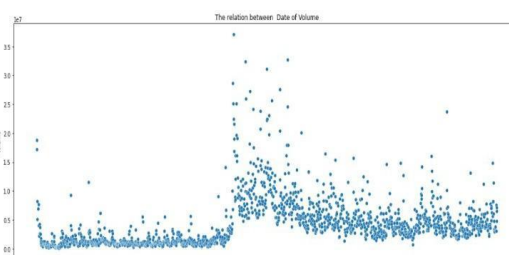
Keywords: TESLA, machine learning, regression, stock prediction

Introduction

The price of a stock can change due to a variety of circumstances, from specific news regarding a company's earnings to a shift in investor sentiment toward the stock market as a whole.

The stock prices of businesses in the same sector frequently move in lockstep with one another. This is due to the fact that businesses within the same industry are typically impacted similarly by market conditions. However, if two businesses are vying for the same market, occasionally bad news for one will boost the stock price of the other.

Due to the convergence of several significant negative events, Tesla stock has lost 30% of its value so far this year. It's vital to keep in mind that Musk opted back in April to sell a sizeable amount of his Tesla stock in order to raise the money necessary for Twitter's acquisition even though the Twitter case has nothing to do with Tesla's day-to-day operations or financial results. Although it corresponded with the overall slump caused by the change in macroeconomic conditions, such a decision caused a 30% decrease in the TSLA stock price in only that month.



Implementation

Dataset

The dataset was obtained from the Yahoo finance .This dataset contains 1269 records. The dataset consisted of 7 attributes used in the measurements of closing price of the Tesla stock.

	Date	Open	High	Low	Close	Volume	Adj Close
0	8/29/2010	19.000000	25.000000	17.540001	23.869999	18766300	23.889999
1	9/30/2010	25.790001	30.420000	23.209000	23.330000	17197100	23.830000
2	7/1/2010	25.000000	25.920000	20.270000	21.959999	8218800	21.959999
3	7/2/2010	23.000000	23.100000	18.709999	19.200001	5139800	19.200001
4	7/6/2010	20.000000	20.000000	15.630000	16.110001	6866000	16.110001

Prediction

Prediction has been performed using both traditional statistical and machine learning

approaches. In case of statistical prediction, training of model is not necessary. This approach predicts data by using statistical mean of previous closing prices. We have performed four such methods.

- Simple Linear Regression method is applied for closing price prediction using opening price, highest price and lowest price as training attributes.
- K-Nearest Neighbor algorithm has been used with algorithm = auto and leaf_size = 50 for prediction. Scaled values are used as training attributes.

Model Building

Preprocess

Preprocess is done to transform the data into useful format for easy access. Initially the dataset was preprocessed. So, in order to start improving the dataset quality, the first step would be to remove the null values. Then the data information is extracted. For analysing statistical insights data description is taken followed by removing the unwanted attributes scaling the variables.

Data Splitting

The dataset has been split into two parts as training data and test data. Here, 1200 data has been considered as training data and rest 492 data has been kept for testing. (a) Training Data (1200 days): 29-06-2010 to 06-04-2015 Testing Data (492 days): 07-04-2015 to 17-03-2017 (b) Training Data (1000 days): 02-01-2014 to 19-12-2017 Testing Data (258 days): 20-12-2017 to 31-12-2018

Scaling

All the data are scaled with standard scaler to limit the ranges of the variables. By scaling of data, those can be compared on common environments in case of all the methods

Feature Selection

For predicting future values, selection of features is an important task. Selecting best features can make the prediction performance higher, whereas, selection of worst features can direct the prediction to a wrong way. In this system, three features have been selected for closing price prediction. These are the opening price, the highest price and the lowest price.

In this we have used four three models for predicting the closing price of the stock namely Linear Regression, Decision Tree Regressor and K Neighbors Regressor.

1. Linear Regression

Linear regression is a statistical method used in various fields for predicting and forecasting outcomes. It helps identify the relationships between a dependent variable and one or more independent variables. The goal of linear regression analysis is to forecast the value of a variable by analyzing its relationship to another variable. The dependent variable is the variable to be anticipated, while the independent variable is the variable to be predicted based on another variable's value. The linear equation and one or more independent variables are used to determine the most accurate predictors of the dependent variable's value. Linear regression can be fitted using a straight line or surface to minimize differences between projected and actual output values. Linear regression calculators use the least squares technique to find the best fit for a given set of paired data.

```
regressor.fit(X_train,y_train)
dfr=pd.DataFrame({'Actual price':y_test,'predicted Price':predict})

LinearRegression()
print(dfr)

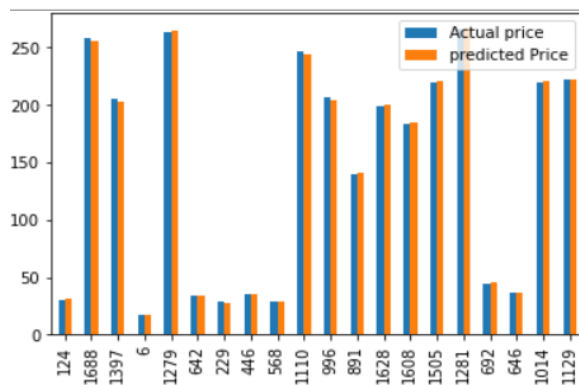
print(regressor.coef_)
[-5.61128249e-01  8.20244083e-01  7.40523854e-01 -2.44481307e-08]

print(regressor.intercept_)
0.034399579495072885
```

	Actual price	predicted Price
124	30.090000	31.253574
1688	258.000000	255.654999
1397	204.990005	202.532384
6	17.459999	16.689894
1279	263.820007	265.429280
...
1222	236.800003	233.685818
215	26.440001	26.628928
536	31.170000	30.576112
1630	202.490005	201.294051
1548	222.929993	223.740777


```
regressor.score(X_test,y_test)
```

```
0.9997034844419701
```



2. Decision Tree Regressor

Decision tree in an incremental fashion. The completed task produces a tree that has decision nodes as well as leaf nodes. A decision node, such as Outlook, may have two or more branches, such as Sunny, Overcast, and Rainy, with each branch reflecting a different possible value for the analysed property. A decision regarding the numerical target is represented by each leaf node, such as "Hours Played." The root node is the decision node at the very top of a tree, and it corresponds to the predictor.

3. KNeighbors Regressor

KNN regression is a non-parametric method that, in an understandable manner, approximates the relationship between independent variables and the continuous outcome by averaging the observations in the same neighbourhood. This method was developed by K. Neighbor Networks. The analyst is responsible for determining the size of the neighbourhood, but they also have the option of utilising cross-validation (which will be covered in a later lesson) to determine the size of the neighbourhood that results in the smallest amount of mean-squared error. When the number of dimensions increases, or when there are a large number of independent variables, the method, despite the fact that it is highly tempting, quickly becomes impractical.

```
# make for Loop for Regression
```

```
li = [DTR,KNR]
d = {}
for i in li:
    i.fit(X_train,y_train)
    ypred = i.predict(X_test)
    print(i,":",r2_score(y_test,ypred)*100)
    d.update({str(i):i.score(X_test,y_test)*100})
```

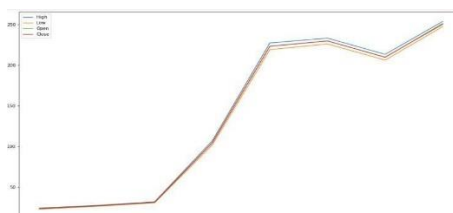
```
DecisionTreeRegressor() : 56.54432094009801
```

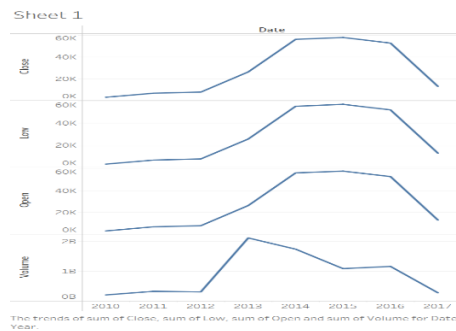
```
KNeighborsRegressor(algorithm='brute', leaf_size=50, n_neighbors=10, p=15,
weights='distance') : 58.964901626416236
```

A regression or classification model can be constructed using a decision tree, which presents the data in the form of a tree hierarchy. It takes a dataset and divides it up into smaller and smaller sections while simultaneously developing an associated.

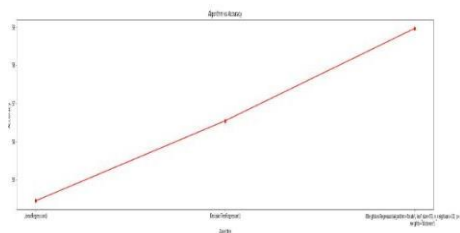
```
# make graph about Accuracy
```

```
plt.figure(figsize=(30, 6))
plt.title("Algorithm vs Accuracy")
plt.xlabel("Algorithm")
plt.ylabel("Accuracy")
plt.plot(d.keys(),d.values(),marker='o',color='red')
plt.show()
```





Experimental Results and Discussions



The closing price of the stock is the most important attribute. The Tesla dataset contains 1264 observations which contain the six-year stock data of Tesla. The correlation between each attribute in accordance with data is visualized using Tableau. Here the Volume of the stock follows a trend when compared with other attributes in the dataset. For various models like Linear-Regression, Decision Tree Regressor and KNeighbors-Regressor are shown. As observed from the values, it clearly shows that Linear-Regression gives the highest accuracy compared to other models.

Conclusion

One main outcome of this study was to compare major machine learning algorithms: Linear-Regression, Decision Tree Regressor and KNeighbors-Regressor with regard to their precision, accuracy, and sensitivity to predict the close price based on date, open, high, and low prices of the stock. When compared with the other characteristics of the dataset, we can see that the Volume of the stock follows a trend here. There is representation here for a variety of models, including Linear-Regression, Decision Tree Regressor, and KNeighbors-Regressor. When compared to other models, linear regression provides the best level of accuracy, as can be seen from the observations made regarding the values. Hence we conclude that Linear Regression is the best model.

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Trade Analysis of India

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Abstract

This research paper aims to uncover hidden trade patterns and draw valuable insights from the "India Trade Data" dataset obtained from Kaggle. The dataset spans eight years, from 2010 to 2018. Leveraging Python and Tableau, the research involves data preprocessing and visualization. Analyzing a country's trade relationships is of utmost importance to assess the stability of its economy. Through this analysis, the paper identifies key insights such as the most frequently exported commodities from India and the top destination countries for India's exports. These visualizations and findings contribute to India's economic stability and decision-making. In summary, this research paper utilizes data analysis and visualization techniques to shed light on India's trade dynamics, helping to inform economic strategies and bolster the country's economy.

Keywords: trade, value, import, export, countries.

Introduction

Trade is a crucial aspect of business, involving the exchange of goods or services. It can be categorized into domestic and foreign trade. Domestic trade involves goods moving from producers to wholesalers, retailers, and consumers. This analysis focuses on foreign trade, specifically between India and its trading partners. Foreign trade leverages surplus resources by trading them for resources it lacks, which other countries can provide. It is essential for economic balance and aims for economic growth by introducing new opportunities and capital, providing access to higher-quality goods and services, and maximizing the utilization of natural resources. India's foreign trade has its origins in the Indus Valley civilization but gained momentum during British rule. Organizational efforts to promote foreign trade began after Independence, particularly with the advent of economic planning. Over the past five decades, India's foreign trade has seen significant changes in value, composition, and trading partners.

Implimentation

Tools Used

This analysis utilized Tableau 2022.2 and Jupyter Notebook, two powerful data visualization tools in the Business Intelligence field. Tableau simplifies raw data into understandable formats through dashboards and worksheets, converting it into actionable insights through features like bar charts and line charts. Jupyter Notebook, an open-source web application, supports Python, R, and Julia programming languages and allows the creation and sharing of documents containing live code, visualizations, equations, and text. Tableau was used for data visualization, while Jupyter Notebook facilitated data pre-processing and analysis through Python code execution.

Dataset

The dataset for this analysis is collected from Kaggle. The dataset is India Trade dataset (2010-2018) that had two csv files import and export data. Each of which had the following columns:

- **HSCode:** The Harmonized System is a standardized numerical method of classifying traded products. It is used by customs authorities around the world to identify products

when assessing duties and taxes and for gathering statistics.

- Commodity: Name of the commodity
- Value: Value of Import or Export according to the dataframe.
- Country: Name of the country
- Year: Year of Import or Export according to the dataframe.

	HSCode	Commodity	value	country	year
0	5	PRODUCTS OF ANIMAL ORIGIN, NOT ELSEWHERE SPECI...	0.00	AFGHANISTAN TIS	2018
1	7	EDIBLE VEGETABLES AND CERTAIN ROOTS AND TUBERS	12.38	AFGHANISTAN TIS	2018
2	8	EDIBLE FRUIT AND NUTS, PEEL OR CITRUS FRUIT OR...	268.60	AFGHANISTAN TIS	2018
3	9	COFFEE, TEA, MATE AND SPICES	35.48	AFGHANISTAN TIS	2018

Data Pre-processing

In the initial data pre-processing phase conducted using Python in Jupyter Notebook:

1. **Removing Missing Values:** The import dataset had 11,588 missing values out of 76,124 entries, and the export dataset had 14,038 missing values out of 137,023 entries. These missing value rows were removed from the datasets using the `dropna()` function.
2. **Dropping Column:** The column "HSCode" was deemed unnecessary for the analysis purposes in this paper and was consequently dropped using the `drop()` function in Python.

The pre-processed data was then imported into Tableau for visualization. In Tableau, various bar charts and line charts were created by simply dragging and dropping elements, making the data more comprehensible for analysis in the subsequent section.

Result And Discussions

The Visualisation charts build in tableau and the inferences driven from each graph are the following:

This chart (Fig 1.) is built to show the total import value of each country from 2010 – 2018. There are many more countries other than that displayed in the bar chart. The sorting in descending order option was performed

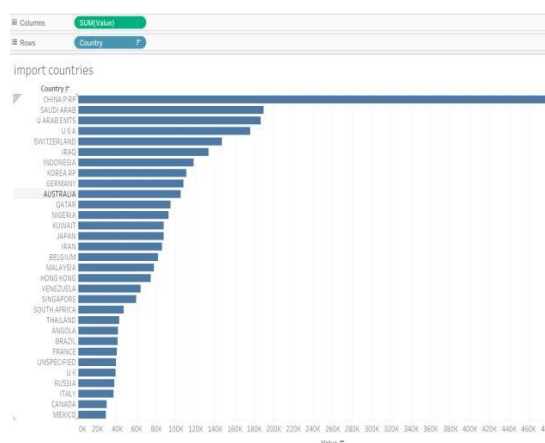


Fig 1. Import country vs value horizontal bar chart

Inference (Fig1): The top 5 countries from which India imported the most were: China P RP, Saudi Arabia, U Arab EMTS, USA, Switzerland, Iraq.

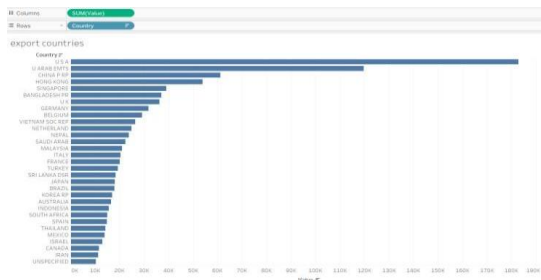


Fig 2. Export country vs value horizontal bar chart

This chart (Fig 2.) is built to show the total export value of each country from 2010 – 2018. There are many more countries other than that displayed in the bar chart. The sorting in descending order option was performed.

Inference (Fig2): The top 5 countries to which India exported the most were: USA, U Arab EMTS, China P RP, Hong Kong, Singapore. And India should keep good relationships with such countries and continue to produce more goods that these countries more commonly import.

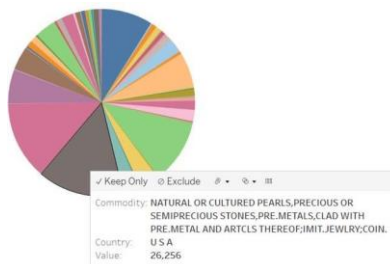


Fig 3. Pie chart of country USA split by the commodity that it imports.

A similar pie chart was created for all the top 5 exporting countries and it was found that these countries imported mostly the commodities listed below in large quantities:

Inference (Fig3): So, these above said commodities India should produce abundantly and supply it to increase its export rate.

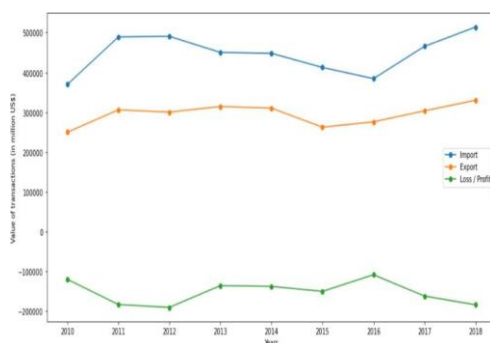


Fig 4. Import, Export and Loss/Profit trend analysis over the years from 2010-2018

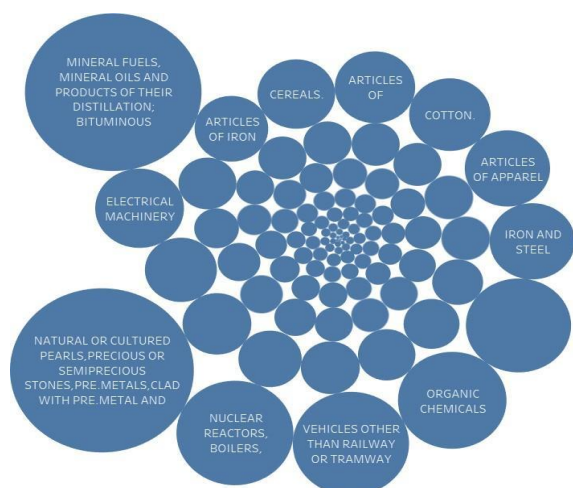


Fig 5.A dataframe formed from the combination of import, export, import-export.

In the process of visualising Fig 4., firstly a dataframe was created using python code, the total import and export, import-export values for each year were calculated and combined as a single dataframe. A country makes profit when it exports and is spending its money when it imports. A country is in trade deficit if the country is importing more than its export.

Inference (Fig.4 & Fig.5): The most evident inference is that the export is always less for each year than the import. So, India is not making a profit according to the graph. But there are certain significant years in which the loss was pretty low and those years are 2016 and 2010. The loss was at its highest during 2011, 2012 and 2018.

	Import	Export	Loss / Profit
2010	369762.25	249801.18	-119961.07
2011	489311.81	305948.28	-183363.53
2012	490730.07	300384.32	-190345.75
2013	450192.99	314388.61	-135804.38
2014	448026.63	310321.02	-137705.61
2015	412537.53	262274.30	-150263.23
2016	384350.29	275835.27	-108515.02
2017	465574.02	303507.85	-162066.17
2018	514071.33	330058.64	-184012.69

Fig 6. A commodity value depicting figure where the area of the circle is proportional to the total value of export for each commodity. Inference (Fig 6): The top 3 most exported commodities are given in anticlockwise order: natural or cultured pearls, precious or semiprecious stones, pre-metals, clad with pre-metal and artcls thereof; imit.jewelry; coin. nuclear reactors, boilers.vechicels otherthan railway or tramway

Inference (Fig 6): The top 3 most imported commodities are given in anticlockwise order: natural or cultured pearls, precious or semiprecious stones, pre-metals, clad with pre-metal and articles thereof; imit. jewelry; coin. Electrical machinery and equipment mineral fuels, mineral oils and products of their distillation; bituminous substances, mineral waxes.

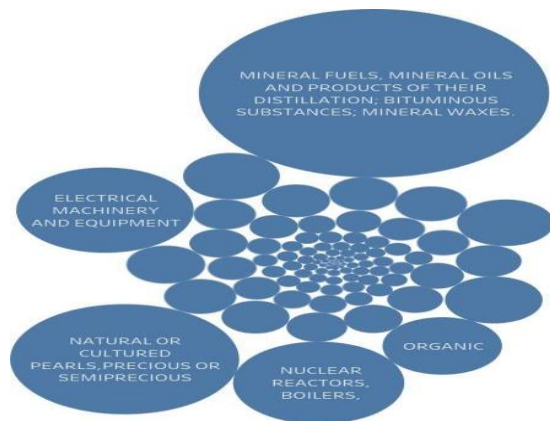


Fig 7. A commodity value depicting figure where the area of the circle is proportional to the total value of import for each commodity.

Conclusion

The preprocessing and visualisation using python and tableau in this paper helped to simplify the dataset and visualise it in an understandable form and hence gain interesting insights such as the most exported/imported commodities, the countries to which India exported/imported the most, the trend of the import export in India during the time period 2010-2018. These insights will help maintain a better economy by taking suitable actions such as increasing the productivity of commodities that are mostly exported, improving trade laws and so on.

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Data Analysis for Air Quality and Pollution

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Abstract

Today India is the second most polluted country in the world. It is posing a heavy threat to the country's health and economy. Almost all of India's 1.4 billion people are exposed to unhealthy levels of ambient PM 2.5 – the most harmful pollutant - emanating from multiple sources. Here I present the analysis of government air quality data of India from 2015–2020 from the Central Pollution Control Board (CPCB). The dataset contains air quality data and AQI (Air Quality Index) at hourly and daily level of various stations across multiple cities in India. I analyzed the data to get a better understanding of the major causes of air pollution in India and how the air quality varies over the years.

Keywords: Air quality index, air pollution, exploratory data analysis, time series analysis, data visualization.

Introduction

In India, air pollution is a major environmental problem. In 2019, 21 of the world's 30 most polluted cities were located in India. At least 140 million people in India breathe air that is ten times or more polluted than the WHO acceptable limit, according to a research based on data from 2016, and 13 of the 20 cities in the world with the worst yearly levels of air pollution are in India. The Air Quality Index (AQI) is a figure that is used to indicate the amount of air pollution. It basically provides information on the amount of air pollution in a certain city on a particular day. In this article, I used Tableau and Python to analyse a dataset that included hourly and daily AQI and air quality data from several stations spread throughout many Indian cities. To better comprehend the data, I've used a variety of data visualisation approaches as well as exploratory data analysis.

Delhi and Ahmedabad end up being the most polluted cities in our nation. The most over-regulated pollutant is PM 2.5, which is followed by PM 10, NO₂, CO, and ozone.

Literature Review

Research on air pollution in India has been conducted using various techniques. Anikender Kumar and Pramila Goyal forecasted the daily air quality index (AQI) value for Delhi using previous records and meteorological parameters. Aditya C R et al. used machine algorithms to detect and forecast PM_{2.5} concentration levels based on atmospheric conditions in a specific city. Nidhi Sharma et al. analyzed data from 2009-2017 and proposed a critical observation of 2016-2017 air pollutants trends in Delhi. They predicted future trends of pollutants such as Sulfur Dioxide, Nitrogen Dioxide, Suspended Particulate Matter, Ozone, Carbon Monoxide, and Benzene using data analytics Time series Regression forecasting. Mohamed Shakir and N.Rakesh analyzed the proportion of air pollutants and estimated the effect of environmental parameters like temperature, wind speed, and humidity on these pollutants using WEKA tool. R. Gunasekaran et al. monitored air quality in Salem Swadeswari College, Tamil Nadu, from April 2011 to March 2011, and found no serious pollution issues related to pollutants like Sulfur Dioxide, Nitrogen Oxides, and Suspended Particulate Matter, as their annual average concentrations are within national standards.

Implementation

We are using python and Tableau to do exploratory data analysis and visualization techniques

on the data to get various insights.

a. Python

Python is a popular programming language in scientific computing due to its data-oriented features, which speed up and simplify data processing, saving time. It is a multi-functional, maximally interpreted language used to streamline massive and complex data sets.

b. Tableau

Tableau is a popular tool for data visualization and reporting in industry and education, providing a comprehensive understanding of data reachability. Its simplicity in performance allows anyone without prior coding knowledge to work efficiently. By applying Tableau visualization to our dataset, we can gain a better understanding of the data's scope and scope.

c. Dataset

The dataset contains air quality data of India from 2015-2020 and AQI (Air Quality Index) at hourly and daily level of various stations across multiple cities in India. The attributes are City, Date, Pollutants like PM2.5, PM10, NO, NO2, NOx, NH3, CO, SO2, O3, Benzene, Toluene, Xylene, AQI, Air quality. The cities in this dataset are Ahmedabad, Aizawl, Amaravati, Amritsar, Bengaluru, Bhopal, Brajrajnagar, Chandigarh, Chennai, Coimbatore, Delhi, Ernakulam, Gurugram, Guwahati, Hyderabad, Jaipur, Jorapokhar, Kochi, Kolkata, Lucknow, Mumbai, Patna, Shillong, Talcher, Thiruvananthapuram, Visakhapatnam.

d. Exploratory Data Analysis

Exploratory data analysis is an approach of analyzing data sets to summarize their main characteristics, often using statistical graphics and other data visualization methods. EDA is applied to investigate the data and summarize the key insights. It will give you the basic understanding of your data, its distribution, null values and much more. You can either explore data using graphs or through some python functions.

e. Time Series Analysis

Time series analysis is a specific way of analyzing a sequence of data points collected over an interval of time. In time series analysis, we record data points at consistent intervals over a set period of time.

Results And Discussion

Bar plot of Air Quality Index in various cities is plotted. From this we find that

- Ahmedabad and Delhi are the most polluted cities in India
- Amaravati is the least polluted city.

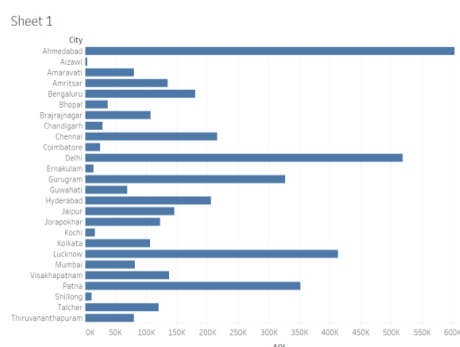


Fig 1 : Bar plot of Air Quality Index in various cities

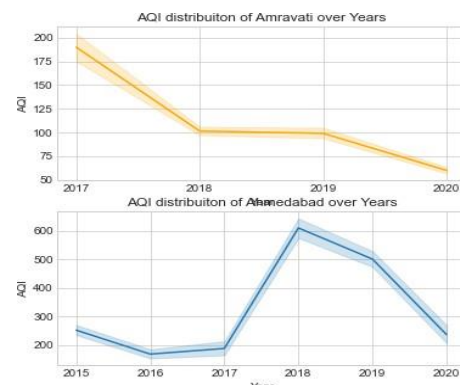


Fig 2: AQI distribution of Ahmedabad and Amaravati from 2015 to 2020:

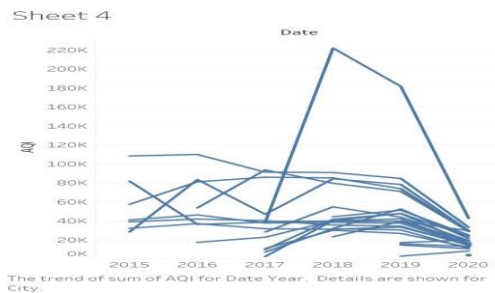


Fig 3:AQI distribution of all cities over the years

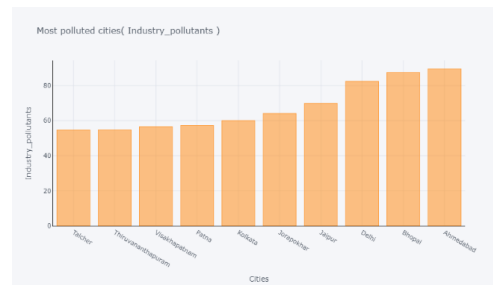


Fig 4: Most polluted cities due to industrial pollutants

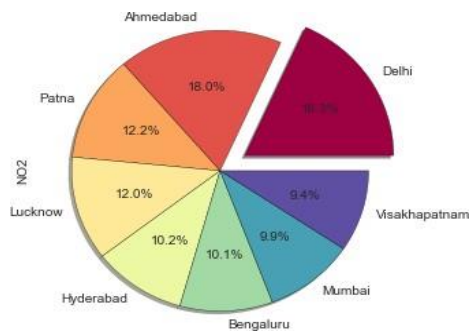


Fig 5 : Distribution of NO2 in various cities.

- From the above plots it is clear that during COVID19 lockdown there is gradual decrease in vehicular pollution contents, industrial pollution content.
- Delhi is the most polluted city in terms of vehicular pollution contents.
- Ahmedabad is the most polluted city in terms of industrial pollution content.
- Of the pollutants, PM 2.5 exceeds the standards the most, followed by PM 10, NO₂, CO, and Ozone.
- The cities with AQI less than 50 have a relatively good air quality.
- Amaravati and Hyderabad are the least polluted cities.

Conclusion

Since air pollution has a negative influence on both the environment and human health, it is imperative that it be controlled. To protect the environment, the concentration of air pollutants like must be managed. Lung cancer, heart disease, and respiratory conditions like emphysema are among the long-term health impacts of air pollution. The government should enact appropriate laws and regulations, raise public awareness, and restrict the number of automobiles on the road, the number of people living in cars, the number of industries, and the amount of energy used in order to reduce air pollution. We must treat the problem of pollution seriously since it is unwise to proceed in ignorance. The world has to wake up and take immediate action because environmental challenges are becoming more and more significant. The stakes are quite high.

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A Machine Learning-Based Analysis of Crop Recommendation Systems

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Abstract

Crop recommendation analysis is a machine learning technique that predicts the best crop to grow based on factors affecting crop growth. This helps farmers increase yields, profitability, and farming strategies. Crop selection is a major factor affecting farmers' profits or losses. Various prediction techniques, such as decision tree regressor, logistic regression, support vector machine, and Random Forest, are used to help farmers select the best crop for their fields. This reduces the risk of wrong crop choices and increases productivity. The paper solves this problem by implementing techniques like random forest, support vector machine, and logistic regression with high accuracy and efficiency, resulting in more accurate and efficient crop cultivation methods.

Keywords: -Crop Recommendation, Random Forest, machine learning, Analysis

I.Introduction

Agriculture is a vital aspect of human existence, and the Indian economy relies heavily on it for food production. However, population growth has diminished agriculture's potential, particularly in land utilization and fertility. In this era of urbanization and globalization, crop prediction is crucial to maximize existing land. Farmers often face challenges such as soil usability, irrigation issues, and weather, leading to loss in cultivation. A crop recommendation system can help solve these issues and increase profits for farmers. The "crop recommendation" dataset, published by Kaggle, was used to analyze various prediction methods to predict the best crop based on environmental factors. Agriculture benefits from modern farming techniques, but growth is not equitable. The dataset includes features like rainfall, atmospheric transpositions, and soil nitrogen, phosphorus, and potassium ratios. By predicting these factors, the system provides the ideal conditions for cultivating crops, enabling farmers to identify the most suitable crop for their fields, leading to better yields.

Implementation

Python

Python is object-oriented, interpreted, high-level programming. It was created by Guido van Rossum and released in 1991. It is mainly used for web development, software development, mathematics and system scripting.

Orange

Orange is a data mining software and were developed by scientists at the University of Ljubljana in 1997. The widget is a user-friendly one that help users to read data, display the data in table and graphical format, feature selection, comparison and visualization of items.

Tableau

It is the leading visualization tool used for data analytics and business intelligence. It was started by an American Company in 2003. It supports powerful data discovery and exploration of data.

Data Collection

The data used in this analysis is collected from kaggle. The dataset consists of 2200 instances and 8 columns. the target variable containing 22 unique crop such as rice, maze, banana, mango, coconut, jute, coffee, etc. The remaining features in the data are rainfall, atmospheric transpositions, ph value of the soil and the ratio of Nitrogen, Phosphorus, Potassium contained in the soil.

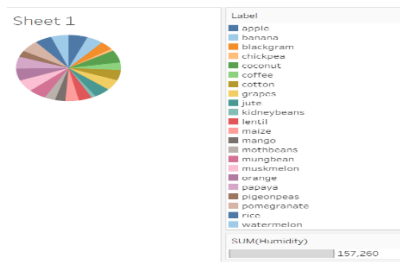


Fig 1:Analysis of dataset with respect to crop

The features other than target variable are ratio of Nitrogen content in the soil, ratio of phosphorus content in the soil, ratio of potassium content in the soil, Temperature, Humidity, Ph value of the soil and rainfall. Among these features Humidity and rainfall are the most important features to recommend the crop.

		#	Gai...tio	Gini
1	N humidity		0.783	0.101
2	N rainfall		0.752	0.099
3	N K		0.678	0.079
4	N P		0.630	0.073
5	N N		0.480	0.054
6	N temperature		0.416	0.046
7	N ph		0.320	0.035

Fig 2:illustration of Rank using orange rank widget

Data preprocessing

The dataset consists of only one categorical variable i.e., the target variable. All other features are Numeric. For regression analysis of the data replaced the categorical values into numeric then splitted the full data into training and testing set by keeping 80% in train data and 20% in test data. In this analysis various regression models such as decision tree, Logistic regression, support vector machine and random forest are build to check which regression model is more accurate.

Model Implementation

To analyse this data four different machine learning algorithms are used

1. Decision Tree

Decision tree divides the data into tree-like structure, where internal nodes represent the features of a dataset, the branches represent the decision rules and each leaf node represents the outcome. Decision tree regressor is used in this analysis to predict the crop.

r squared score: 0.8902113361221382

MSE : 4.420454545454546

RMSE : 2.1024877039960415

Fig 3:Decision tree model score and mean square using python

2. Logistic Regression

Logistic regression is a popular machine learning algorithm that is used to predict the dependent variable using a given set of independent variables. In this analysis logistic regression is used to predict crop that is dependent variable using the other features that is independent variable.

r squared score: 0.8619315825988432

MSE : 5.5590909090909095

RMSE : 2.357772446418634

Fig 4:Logistic regression model score and mean square using python

3. Support Vector Machine

SVM is one of the most popular Supervised Learning algorithms, which is used for Classification as well as Regression problems. The goal of the SVM algorithm is to create the best line or decision boundary that can segregate n- dimensional space into classes so that we can easily put the new data point in the correct category in the future. This best decision boundary is called a hyperplane.

r squared score: 0.913975360539917

MSE : 3.4636363636364

RMSE : 1.8610847276887648

Fig 5:Svm model score and mean square using python

4. Random Forest

In a random forest, we create a large number of decision trees, and in each decision tree, every observation is fed. The final output is the most common outcome for each observation. We take a majority vote for each classification model by feeding a new observation into all the trees.

r squared score: 0.9645854396472805

MSE : 1.4259072727272728

RMSE : 1.194113592891092

Fig 6:Random Forest model score and mean square using python

RESULT AND DISCUSSION MODEL

The dataset with 2200 rows was split into training set and testing set it is splitted in the ratio 80:20 using a sampler.import features of the data were analyzed using decision tree,logistic regression,support vector machine and Random forest models.evaluated the performance of each model by calculating R squared score,Mean square error and root mean square error in each model.

Model

DT	0.8908
LR	0.8619
RANDOM FOREST	0.9646
SVM	0.9140

Fig7:Highlight table in tableau for R Squared score

DT	4.395
LR	5.559
RANDOM FOREST	1.426
SVM	3.464

Fig 8:Highlight table in tableau for Mean squared error

It is observed that among the other models Random forest gives the highest R square score (0.964) and lowest mean squared error (1.425)

Data Visualization

Data visualization is done using table Tableau software is an interactive data visualisation tool which uses business intelligence and AI techniques for its smart and easy visualisation of the data.

Summary 4 rows 5 fields

Show Fields

Down Arrow

Model	Accuracy	MSE	R2	Rmse
SVM	0.9909091	3.46364	0.913975	1.86108
RANDOM FOREST	Null	1.42591	0.964585	1.19411
LR	0.9681818	5.55909	0.861932	2.35777
DT	0.9750000	4.39545	0.890832	2.10249

Fig 9:illustration of data visualization using tableau



Fig 10:illustration of data visualization using tableau

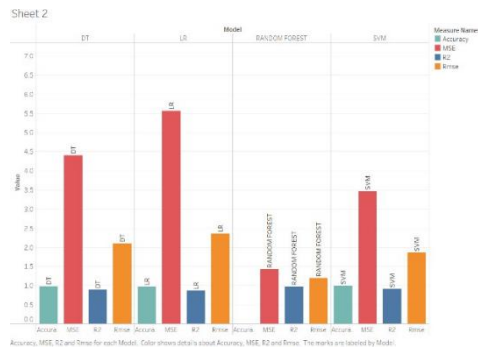


Fig 11: illustration of data visualization using tableau from the visualized data it is inferred that the best model is Random Forest. the R square score of 0.9645.

Conclusion

Developing a model to suggest a crop based on environmental parameters is the aim of this investigation. Four distinct machine learning techniques, including decision trees, logistic regression, support vector machines, and random forests, were compared. Based on our analysis of these algorithms, we were able to determine that Random forest was the superior regression model for the given data. This study aids farmers in choosing the crop that will provide the highest yield on their land.

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Song Analysis on Spotify

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Abstract

Music is a vital source of entertainment, and online platforms like Spotify have become popular for streaming digital music. Spotify offers access to various types of music, including classical, western, and rap, in various languages. A dataset of 2017 songs and their audio features, including name, artist, and "target" label, is used to predict song preferences. Various algorithms, including Random Forest, Support Vector Machine (SVM), K-Nearest Neighbors Algorithms, and Gradient Boosting, are used to create models. An accurate model is chosen to predict which songs users like based on the 2017 rows and 17 features.

Keywords- Spotify song, Classification, Gradient Boosting, data mining techniques.

Introduction

Music platforms like Spotify and Resso offer easy access to a vast array of songs worldwide. To cater to user preferences, they classify songs based on genre and language. Data mining techniques are used to classify songs based on user preferences. The dataset, collected from Spotify's Web API, is used to estimate song liking or dislike. The model aims to predict user preferences by labeling songs as "1" or "0" and comparing results.

Implementation

Python

Python is an object-oriented, interpreted, high-level programming language. It was created by Guido van Rossum and released in 1991. It is mainly used for web development, software development, mathematics and system scripting.

Orange

Orange is a data mining software and developed by scientists at the University of Ljubljana in 1997. The widget is a user friendly, that help users to read data, display the data in table and graphical format, feature selection, comparison and visualization of items.

Tableau

The visualization tool, developed by an American company in 2003, is a powerful tool for data analytics and business intelligence. It uses data from Spotify's API to predict song preferences based on various characteristics like acousticness, danceability, duration_ms, energy, instrumentalness, key, liveness, loudness, mode, speechiness, tempo, time-signature, and valence. The tool has 17 columns, including 13 song attributes, a song name, artist, label, and index.

Data Preprocessing

- **Missing Values**

The process of replacing missing values is called missing data imputation or imputing. So for in this dataset there is no missing values or duplicates values that to be replaced.

- **Relevant Feature Selection**

Feature selection is a crucial step in building a machine learning model, involving identifying relevant attributes from a dataset. Avoiding redundant variables can reduce the model's generalization capacity and complexity. Information gain, calculated by reducing entropy from a dataset transformation, can be used to identify relevant features. By evaluating each variable's information gain in relation to the target variable, the best set of features can be identified.

Those attributes are: Instrumentalness, Loudness, Danceability, Duration_ms, Speechiness, Tempo and valence.

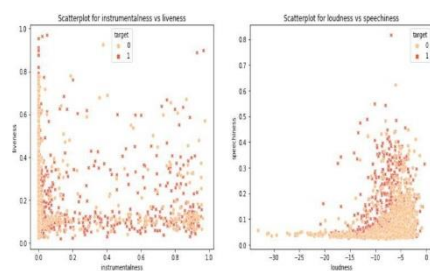


Figure1:Rank of attributes in Orange

• Feature Scaling

Standardization or Z-score Normalization is used to centralize the data. It is a scaling technique where the values are centered around the mean with a unit standard deviation.

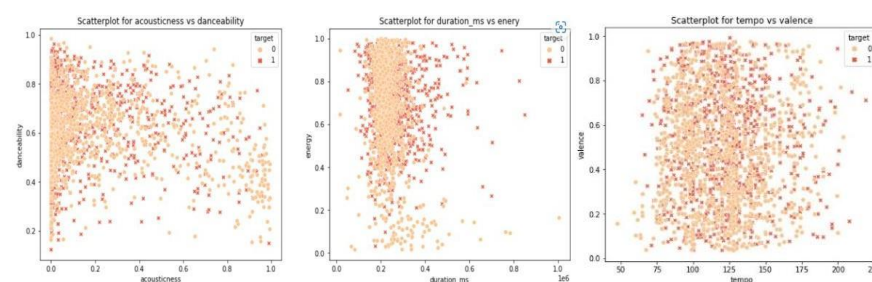
Splitting Data

Here, we divide the data into train and test data in the ratio 80:20 for accurate analysis. Here, out of 2017 songs, I took 1613 rows as train data making the remaining data i.e.404

rows as test data

Visualization

- Distribution of the features with other



- There are few outliers between acousticness and danceability , loudness and speechiness.
- The acousticness vs danceability and duration_ms energy group is heavily distributed between 0-0.2 and 0.2-0.4.

Classification

In this work we have used four classifiers namely Random Forest, Support Vector Machine (SVM), KNN algorithm which are briefly explained as follows.

Random Forest

Random Forest is a machine learning algorithm that belongs to the supervised learning technique. It can be used for both classification and regression problems in machine learning. It is based on the concept of ensemble learning. It is a process of combining multiple classifiers to solve a complex problem and to improve the performance of the model. Given below shows the parameter values for Random Forest.

Random Forest Model Evaluation Parameter:

Accuracy: 0.7202970297029703

Precision: 0.7248677248677249

Recall: 0.6919191919191919

f1-score: 0.7080103359173128

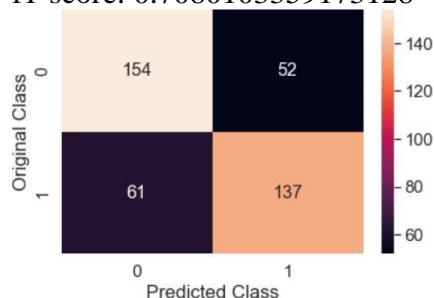


Figure2: Random Forest Model Confusion Matrix

Support Vector Machine

Support Vector Machine (SVM) is a supervised machine learning algorithm used for classifying and predicting continuous values using regression. It is a computationally generalized linear classifier with good accuracy and avoids data over fitting. The SVM algorithm identifies a hyperplane that divides n-dimensional space into target classes, with the margin being the distance between the support vector and the hyperplane. The hyperplane's dimensions depend on the number of attributes in the dataset.

SVM Model Evaluation Parameter:

Accuracy: 0.6485148514851485

Precision: 0.6666666666666666

Recall: 0.5656565656565656

f1-score: 0.6120218579234972

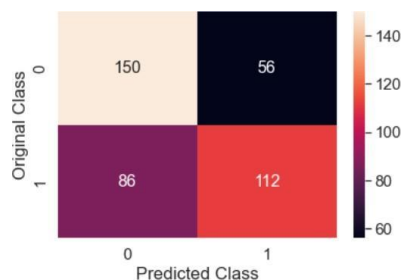


Figure3 : SVM Model Confusion Matrix

K-Nearest neighbors Algorithm

The K-Nearest Neighbors(KNN) algorithm is a simple, supervised machine learning algorithm that is easy to understand and implement which will solve both classification and regression problems. When a sample comes, the algorithm begins by calculating the distance between the new sample and the existing data points and it is assigned to the group common to the k nearest selected neighbors. The given figure shows the parameter values used for KNN model. Given below shows the parameter values for KNN.

KNN Model Evaluation Parameter:

Accuracy: 0.7079207920792079

Precision: 0.7150537634408602

Recall: 0.6717171717171717

f1-score:0.6927083333333333



Figure4 : KNN Model Confusion Matrix

Gradient Boosting Algorithm

Gradient Boosting is a sequential ensemble technique used for classification and regression problems. It improves model performance over iterations by optimizing an absolute differentiable loss function. As weak learners are added, a new model is created, providing a more precise estimation of the response variable. This robust technique applies multiple risk functions and optimizes model prediction accuracy. The parameter values for the Gradient Boosting algorithm are provided.

KNN Model Evaluation Parameter:

Accuracy: 0.7623762376237624

Precision: 0.7771739130434783

Recall: 0.7222222222222222

f1-score: 0.7486910994764399

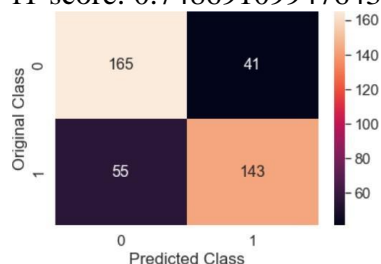


Figure5: Gradient Boosting Model Confusion Matrix

Result

The dataset of 2017 songs are split in the ratio 80:20 using a data sampler. The data sample with 80% split(1614 songs) were used for the model building purpose and the remaining data was used to check the model performance on new data. Then I identified important features using information gain and have selected relevant attributes. A total of four different models were built on our dataset using the classification techniques and these include Random Forest, Support Vector Machine, KNN and Gradient Boosting.

Performance value of all the implemented models:

	Model	Score
3	Gradient Boosting	0.764851
0	Random Forest	0.720297
2	KNN	0.707921
1	SVC	0.648515

Figure6:Accuracy Score of all Models Visualization of the result:

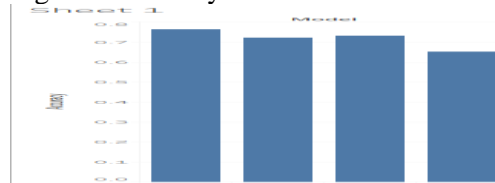


Figure7:Accracy score Using Tableau Matrix

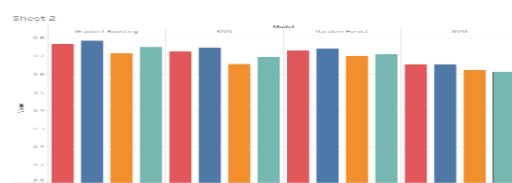


Figure8:Visualization Of Evaluation

As observed from the values it clearly shows that Gradient Boosting gives the highest accuracy 76%,Recall and precision values compared to other models. So I choosed Gradient Boosting as the final model.

Conclusion

The paper aimed to develop a model that predicts a song's popularity based on its audio features. Four machine learning models were investigated: Random Forest, SVM, KNN, and Gradient Boosting. The Gradient Boosting model was found to be the most accurate, with an accuracy of 76%. The model correctly predicted that out of 1614 songs, 50.8% were liked, and 49% were disliked. The model also predicted that out of 403 songs, 35.1% were liked and 41.3% disliked. The project's objective was to determine the type of song the user likes or dislikes. The model revealed that the user prefers songs with higher valence, loudness, and acoustic qualities.

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Analysis of Campus Recruitment

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Abstract

Campus recruitment is a crucial process for corporate companies to hire students about to graduate from educational institutions. It involves pre-placement talks, written tests, group discussions, and interviews. Students and recruiting companies are major stakeholders, with entry level salaries and recruitment season being important parameters. Recruitment is a critical human resource management function that impacts organizational performance. Poor recruitment decisions can limit goal achievement, and it is taking time for public service agencies to identify and implement effective hiring strategies. Acquiring and retaining high-quality talent is essential for an organization's success. In a competitive and diverse job market, recruiters need to be more selective in their choices. This paper discusses strategies organizations can employ to ensure the best possible pool of qualified applicants, identifying their advantages, drawbacks, and suggestions for ensuring their utility.

Keywords – Campus recruitment, Random forest, Logistic regression

Introduction

Economic and demographic trends continue to impact the job market, affecting employers' campus recruitment programs. Maintaining strong relationships with faculty, administrators, career center staff, and students is crucial for success in a competitive environment. Winning companies must adapt their recruitment practices to the needs of Generation Y and attract good talent for admissions or research. Educational institutions must position themselves among corporate entities through branding activities and collaborations with industry partners. This analysis uses data from kaggle Campus Recruit, which contains 215 student data including education level, degree, gender, and specialization. Machine learning techniques such as decision tree, random forest, and logistic regression are used to classify student status into job placement or not placement. Different classification techniques are compared to determine the best prediction for the dataset. A regression analysis is performed using only job-placed students to identify key factors influencing salary. The analysis is performed in Python using Jupyter Notebook. Various techniques that are used in this analysis are:

- Exploratory data analysis
- Random forest regressor and classifier
- Logistic regression classifier
- Multiple linear regression

Data Preprocessing

Data preprocessing is a crucial process that transforms raw data into a clean set, ensuring it is free from missing values, noise, and inconsistencies. This is done before the algorithm is executed. Data cleaning, also known as data cleansing or data scrubbing, is the removal of corrupt or unnecessary data from a dataset before analysis. This ensures only relevant data is analyzed, leading to more accurate results. There are a number of different data cleaning techniques you can use, depending on the type of data at your disposal and the type of analysis you wish to do.

Drop a column

Drop a column is used to remove the columns. The first column sl_no will be dropped from the dataset as it's an index column.

isnull().sum()

The isnull().sum() is used to return the number of missing values in the dataset.

Groupby

It is used to split the data into separate groups so that it can be used to perform computations for better analysis. In this dataset several attributes are grouped by using this attribute to predict which category was placed the most.

Categorical variable to numerical

A machine learning model requires all its inputs and outputs to be in the form of numeric values. If we have any categorical data then convert it into numeric values before fitting and evaluating a model.

Figure 1 Dataset description

	ssc_p	hsc_p	degree_p	etest_p	mba_p	salary
count	215.000000	215.000000	215.000000	215.000000	215.000000	148.000000
mean	67.303395	66.333163	66.370186	72.100558	62.278186	288655.405405
std	10.827205	10.897509	7.358743	13.275956	5.833385	93457.452420
min	40.890000	37.000000	50.000000	50.000000	51.210000	200000.000000
25%	60.600000	60.900000	61.000000	60.000000	57.945000	240000.000000
50%	67.000000	65.000000	66.000000	71.000000	62.000000	265000.000000
75%	75.700000	73.000000	72.000000	83.500000	66.255000	300000.000000
max	89.400000	97.700000	91.000000	98.000000	77.890000	940000.000000

Equations

Logistic Regression is a classification algorithm. It is used to predict a binary outcome (1 / 0, Yes / No, True / False) given a set of independent variables. To represent binary/categorical outcome, we use dummy variables. You can also think of logistic regression as a special case of linear regression when the outcome variable is categorical, where we are using log of odds as dependent variable. In simple words, it predicts the probability of occurrence of an event by fitting data to a logit function.

$$g(E(y)) = \alpha + \beta x_1 + \gamma x_2$$

Here, $g()$ is the link function, $E(y)$ is the expectation of target variable and $\alpha + \beta x_1 + \gamma x_2$ is the linear predictor (α, β, γ to be predicted). The role of link function is to 'link' the expectation of y to linear predictor.

After we load the data, we can see that there are 215 observations and 14 columns in this dataset with a mix of categorical and numeric variables. The target variable for our classification problem is the status column, which is stored as Placed and Not Placed. There are other binary variables such as gender, workex need to transfer into 0 and 1 later in the analysis. Also, the first column sl_no will be dropped from the dataset as it's an index column.



Figure 2 Relationship between gender & status

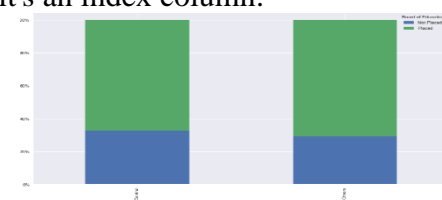


Figure 3 Relationship between ssc_b & status

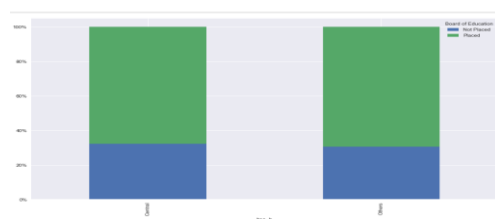


Figure 4 Relationship between hsc_b & status

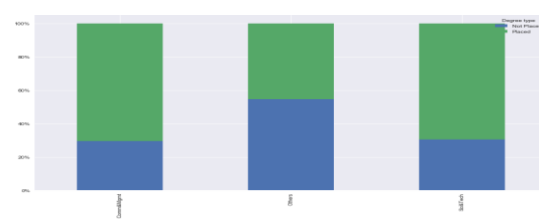


Figure 5 Relationship between degree_t & status

status

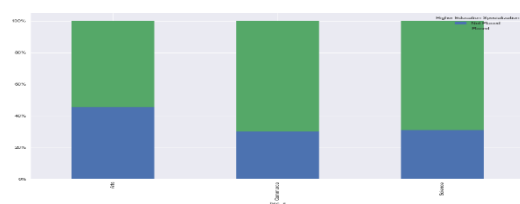


Figure6 Relationship between hsc_s & status

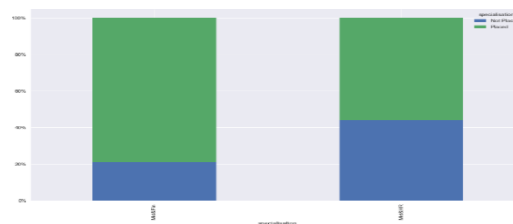


Figure7 Relationship btw specialization & status

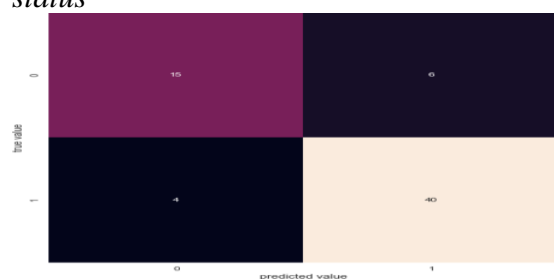


Figure 8 Confusion matrix of logistic regression

Model Architecture

Random Forest Classifier

Random Forest Algorithm is a supervised learning algorithm which collects samples from different data sets and predicts the best solution. It is forming a Decision Tree like Structure. And It's more accurate than the Decision Tree. But quite slower in prediction and complex in constructing.

Random Forest Regressor

A random forest regressor. A random forest is a meta estimator that fits a number of classifying decision trees on various sub- samples of the dataset and uses averaging to improve the predictive accuracy and control over-fitting.

Logistic Regression

In Logistic Regression there are only 2 outcomes. For Example: True or False, 1 Or 0 .Logistic Regression uses one or more Independent Variables to determine an outcome hence the following feature makes the algorithm faster and better to perform.

Experimental Results

As we could see that the status attribute of the dataset is the target variable, we have performed different classification algorithms such as logistic regression, random forest classifier and random forest regressor. After all these models have provided us with the accuracy the authors have come to the results that logistic regression gives about 83 percent accuracy while random forest gives 81 percent . Hence, after seeing all the accuracy one can know that logistic regression is performing the best.

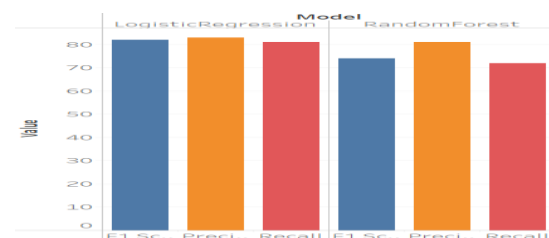


Figure 9 Bar graph representation

Conclusion

Finally, after performing all the steps needed to get the results from preprocessing to model building the authors have concluded that the model which performs the best out of all these is the logistic regression model with 83 percent accuracy

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Analysis of Campus Recruitment Parameters in an Indian Context

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Analysis on a Case Study on Traffic Safety and Accidents in India

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Abstract

This case study thoroughly examines the issue of road accidents in India, investigating causes and solutions. It reveals vulnerabilities in the 30-59 age group, links accidents to extreme weather and working hours, and underscores regional disparities in accident rates. Despite efforts, India's road safety situation is deteriorating, with other road users' behavior identified as the primary cause in most accidents (70-95%). A Delhi-based pilot study sheds light on the tendency of younger and experienced drivers to violate traffic rules under stress. The study calls for population-based research to understand road user behavior and suggests using business intelligence to address the problem. Without innovative interventions, India's traffic fatalities are projected to exceed 250,000 by 2025.

Keywords: Accident control, national highway accidents, role of BI in accidents, factors affecting.

Introduction

India faces a significant issue with road accidents, despite having the world's second-largest network. These accidents account for a significant percentage of accidental deaths, impacting the nation's prosperity and development. Over the past three decades, fatal road accidents have increased, becoming a leading global cause of mortality. Factors contributing to accidents include overtaking and lane discipline issues, poor road conditions, potholes, traffic congestion, and increased air and noise pollution.

Methodologies

This statistical analysis identifies several significant factors contributing to road accidents in India:

1. Road Conditions and Traffic Control: Poor road durability and inadequate maintenance, coupled with political challenges, impact road safety. Lack of speed bumps and reflectors on curve and straight roads contribute to accidents.
2. Climate Conditions: Uncontrollable factors like hilly terrain and slippery roads occasionally lead to accidents. Addressing this includes improving tire alignment and fog lamps in vehicles and installing SOS lights in hilly areas.
3. Poor Lighting: Insufficient street lighting, particularly in remote areas of states like Kerala, Gujarat, and Bihar, poses a significant risk to both drivers and pedestrians.
4. Traffic Situations: Challenges such as illiteracy, lack of awareness, and inadequate traffic signals contribute to traffic accidents. Implementing measures like cycle lanes, zebra crossings, and overhead foot ramps can enhance safety.
5. Surprise Factor: Human factors like carelessness, rule violations, and emotions like ego and road rage contribute to unpredictable road situations. Government intervention through education and tests during Motor Vehicle Department (MVD) classes is suggested to address this issue.

Addressing these factors is crucial to improving road safety in India and reducing the number of accidents and fatalities.

One of the main key factors in road accidents is situational incidents like natural situations such as a pedestrian crossing or a pothole in the road and there are better ways to correct this.

Let us look at the specific states in India where accidents are more often.

States	2016	2017	2018	2019	2020
Tamil Nadu	22,573	20,696	19,583	17,633	15,269
Uttar Pradesh	13,078	14,333	16,198	16,181	13,695
Madhya Pradesh	10,709	11,150	9,967	10,440	9,866
Kerala	9,209	8,993	9,161	9,459	6,594
Maharashtra	10,364	9,327	9,355	8,360	6,501
Rajasthan	6,567	6,851	6,726	6,883	5,784
Total	72,500	71,350	70,990	68,956	57,709

As this data shows from 2016 that Tamil Nadu and Goa are one of the top most places to have accidents for numerous reasons and Lakshadweep is low the land is small. Fast forwarding to 2021 the data has only increased and now it is in millions and this is an alarming thing in India.

As you see the trend observed here is gradually declining which is good but have to get better because the lesser the numbers the more people we save

National highway accidents: in India have seen a significant number of fatal accidents over the past seven years, with 72.6% of these accidents occurring between 2016 and 2020. Over speeding is a predominant factor contributing to these accidents. Uttar Pradesh consistently

ranks high in national highway accidents. A significant 74.2% of national highway accidents in India are attributed to over speeding, indicating a critical area for correction. Drunk driving and wrong-side driving contribute 5.2% and 3%, respectively, and could be addressed through strict rules and deterrent measures. A minor 0.8% results from running red lights, which, although relatively low, still poses a risk, especially during late-night hours when some disregard traffic rules, emphasizing the need for caution during this time.

Role Of Business Intelligence For Resolving

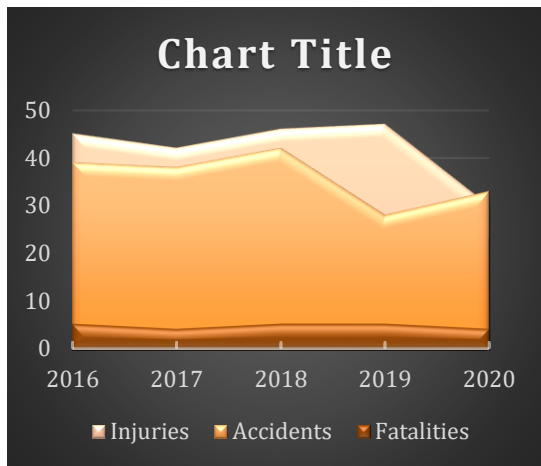
Business Intelligence (BI) is crucial for analyzing and preventing road accidents. European countries utilize historical data to create real-time BI dashboards for informed decision-making. In India, a BI solution involves the Statistical Application for Population Health and Intelligence (SAPHaRI) based on SAS Enterprise, accessing data from hospitals and road safety organizations. Real-time data from sources like ARF and CCTV monitoring software is uploaded to BI, although latency issues exist. Kerala successfully reduced accidents using this approach, implementing strict rules and investing in road improvements.

To implement BI for accident prevention, consider data sourcing from historical and live reports, weather conditions, and more. The data warehouse, using dimensions like accident, causality, vehicle, road, driver, and time, can adopt a star schema to efficiently store and analyze data, enabling strategic queries for road safety improvement.

Data Analysis And Results

Several crucial questions need to be addressed for effective accident analysis and prevention:

1. Accident Severity Trends: Analyzing historical data and conducting trend analysis can reveal how many accidents have occurred each year, categorized by severity (fatal, serious injury, minor injury, and damage only). Notably, damage-only accidents have shown a significant 11.93% decline over the past three years.



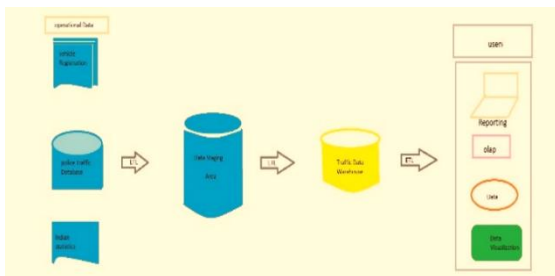
2. Accidents by Police Station District: Understanding how many accidents are recorded in each dedicated police station district is essential for efficient data collection and real-time Business Intelligence (BI) processing, minimizing latency.

3. Age Group and Gender Analysis: Segmenting accident data by age group and gender provides valuable insights into which demographics are most responsible for accidents, facilitating targeted preventive measures.

These questions and analyses are fundamental for developing strategies to enhance road safety and reduce accidents in India.

In this graph, the 18-25 age group is the most age group in accidents and fatality that is of 55%, and the rest 30% and 15% are in the 25-50 and 50-60 age groups respectively.

Conclusion



In conclusion, this case study highlights the potential of Business Intelligence (BI) to significantly reduce road accidents. By leveraging BI for data analysis, India can implement effective preventive measures. Furthermore, as BI technology continues to evolve, it holds the promise of addressing current challenges and further improving road safety in the future.

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Attitude towards Alcohol among Adolescents

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St. Joseph's College, Moolamattom

Abstract

The primary objective of the study was to evaluate attitudes towards alcohol among adolescents. The study was conducted on 300 samples of adolescents (12-18). Random sampling method was used to select samples. The researcher used a questionnaire method for data collection. The main tools for data collection are socio demographic sheet and attitude towards alcohol scale. The descriptive research design was used by the researcher. The statistical procedure used by the researcher was mean and standard deviation, t test and ANOVA. The study revealed that there is a significant difference in attitude towards drug and alcohol among adolescents in relation with age, residential area and presence of alcohol addict in family.

Keywords: Daily life, alcohol, early childhood, adolescent.

Introduction

In early childhood, children develop physically and learn things they need to use in daily life. However, in adolescence, teens learn and shape their mindset as they see in family, school, society, and peer groups. Attitude is a settled way of thinking or feeling, characteristically imitated in a person's behaviour. Psychologists say that attitude is a way of evaluating things in a certain way after learning from others and society. Evaluating things may encompass evaluation of people, objects, issues, and events and it can be either positive or negative contingent upon nurturing by parents. It is also believed that attitude is the outcome of personal experience of an individual or by observing others such as parents, friends, or celebrities. As stated, before 'celebrities' influence teenagers the most. Teenagers follow their ways as shown on screen, driving fast, and drinking alcohol.

Moreover, if parents ignore their children's adolescence years might induce them to ruin their lives unknowingly. The sudden and rapid physical changes that adolescents go through make them very self conscious, sensitive, and worried about their own body changes. They may make painful comparisons about themselves with their peers (Jenkins, 2007). Pursuing this further, observing others or when teenagers compare themselves with someone higher than them in society, it makes them feel inferior. To conquer their fear of losing their position in a peer group, sometimes they are compelled to make wrong decisions in life.

The most common diagnosed disorders among alcohol abusers were antisocial personality (Harford et al., 1994), Personality disorders), depression and risk-taking behaviour (Lutz & Snow, 1985; Weissman et al., 1977). Despite reported close association between these psychopathologies and alcohol addiction, it cannot be inferred that all individuals having above reported syndromes become alcohol addicts. However, the co-occurrence of the presence of these mental disorders in alcohol patients is a very important consideration when it comes to the treatment part. (Franken and Hendriks 1999) in fact found that very troubled people showed virtually no improvement in any de-addiction treatment.

Result & Discussion

Age groups of students belonging to the age group 15-16 have a positive attitude towards alcohol.

Females from positive attitude were 30.66% percent. Which means the majority of the students have a positive attitude towards alcohol. Males are 45.66% of the total and 27.33% are having a positive attitude towards alcohol.

Positive attitudes of the rural residents were 35.33%, which means the majority of the students belonging to rural residencies have a positive attitude towards alcohol. Members from urban residency had a low attitude towards alcohol.

During adolescence everyone's attitude will be almost similar towards alcohol. Age is a factor to determine the attitude towards alcohol among adolescents. It may be due to peer pressure, influence, family background, and educational level all are the factors that decide their attitude, so age group 15-16 kept a difference in the other two age groups and it is higher.

Conclusion

The study entitled “Attitude towards alcohol among adolescents “ is an attempt to examine the level of attitude based on different demographic details such as age, parental status, presence of addict, number of siblings, religion, economic status etc. The researcher could find that there is a significant relationship in Attitude towards alcohol on different socio- demographic details especially with age and presence of addict. The study also enlightened that Attitude towards alcohol and Age has a correlation.

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Building a Foetal Health Model

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Abstract

Global health complications during gestation can lead to fetal mortality, particularly in developing countries. Cardiotocography is a diagnostic technique used to measure fetus heartbeat and uterine contractions, interpreting outputs as physiological, suspicious, or pathological. The project aims to visualize data using a table to classify foetus and maternal mortality as physiological, suspicious, or pathological. The dataset, obtained from Kaggle, consists of 2126 rows and 21 features. Tableau is used for visualization, and Python is used for implementation. The goal is to build multiple classification models with the best accuracy.

Introduction

Fetal health is crucial during pregnancy, with each trimester lasting three months. Regular check-ups are essential to prevent disability or mortality in the newborn. Cardiotacagraphy (CTG) is a primary tool for assessing fetal health, but doctors often rely on machine and deep learning algorithms for accurate predictions. This study aims to develop a machine learning model that can identify high-risk fetuses as accurately as highly trained medical professionals. The main objective is to prove the prediction accuracy using different classification models and compare their performance. The goal is to develop a machine learning model that can accurately identify high-risk fetuses.

Implementation

Dataset

The dataset, obtained from Kaggle, contains 2126 records of features from Cardiotocogram exams, including 21 attributes used to measure FHR and uterine contractions. Fetal health is a crucial field that can be used as a target variable. The main risk variable used to determine fetal state includes qualitative and quantitative descriptions of FHR, such as baseline heart rate, baseline variability, accelerations per second, early, late, and variable decelerations per second, prolonged decelerations per second, and sinusoidal pattern and UCs like baseline uterine tone, contraction frequency, duration, and strength.

The CTG of pregnant women were classified by three expert obstetritians into 3 classes:

- Normal
- Suspect
- Pathological

Preprocess

Preprocess is done to transform the data into useful format for easy access. Initially the dataset was pre-processed. So, in order to start improving the dataset quality, the first step would be to remove the null values. Then the data information is extracted

.For analysing statistical insights data description is taken. Then the attribute fetal health is set as the target variable consisting of 3 different values. The correlation matrix is used in getting the relation of each feature or attribute with itself and also with the other features present out in the database. The correlation among various attributes with in the dataset is examined using heat map.

Model Building

In this we have used four classifiers namely Decision tree, K- nearest neighbour algorithm, Gradient Boosting algorithm and Random Forest which are briefly explained as follows:

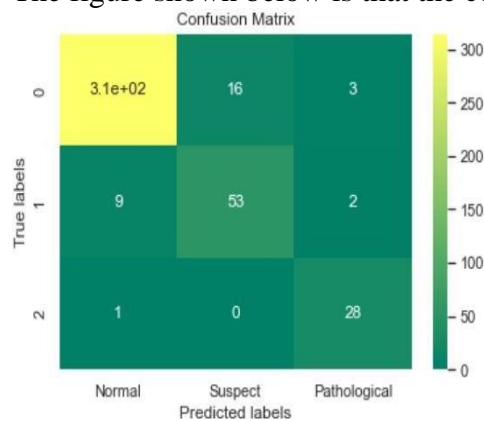
Decision Tree

Decision Tree is a supervised learning algorithm used to improve classification and regression problems. It aims to create a training model that predicts the target variable's category or value by learning simple decision rules from prior data. The algorithm starts by comparing the foundation attribute values with the record's attribute, then jumps to the next node. Input features are used to construct a tree, which then generates rules representing various classes. These rules are used to predict the category of a new instance with an unknown class. The accuracy of Decision Tree is calculated to be 92.723005.

Classification Report				
	precision	recall	f1-score	support
1.0	0.97	0.94	0.96	333
2.0	0.77	0.83	0.80	64
3.0	0.85	0.97	0.90	29
accuracy			0.93	426
macro avg	0.86	0.91	0.89	426
weighted avg	0.93	0.93	0.93	426

Classification report of Decision Tree

The figure shown below is that the confusion matrix obtained after implementing Tree.



Confusion Matrix of Decision Tree

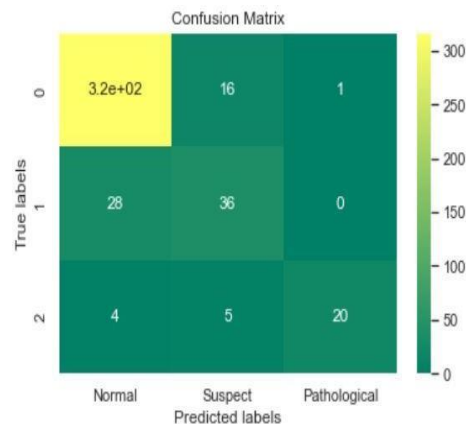
K-Nearest Neighbours Algorithm

This algorithm was supervised algorithm. The simplest algorithm and easy to implement, It can solve both classification and regression problems where a new coming sample is classified based on the closest training samples present in feature field. where a new coming sample is classified based on the closest training samples present in feature field. The accuracy calculated for KNN is 87.323944 The figure shown below is that the classification report obtained after implementing KNN.

Classification Report				
	precision	recall	f1-score	support
1.0	0.91	0.95	0.93	333
2.0	0.63	0.56	0.60	64
3.0	0.95	0.69	0.80	29
accuracy			0.87	426
macro avg	0.83	0.73	0.77	426
weighted avg	0.87	0.87	0.87	426

Classification report of k-nearest neighbours algorithm

The figure shown below is that the confusion matrix obtained after implementing KNN.

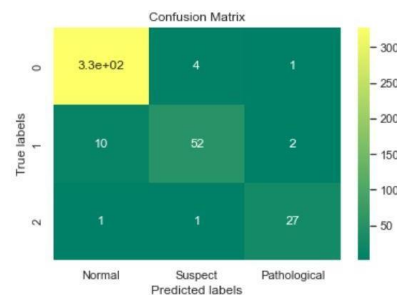


Confusion matrix of k-nearest neighbours algorithm

Random Forest

Random Forest is a classifier technique that contains a number of decision trees on various subsets of the given dataset and takes the average to improve the predictive accuracy of that dataset. Instead of relying on a decision tree, the random forest takes the prediction from each tree and based on the majority votes of predictions, and it predicts the final output. The higher number of trees in the forest leads to higher accuracy and prevents the problem of overfitting. The accuracy calculated for Random Forest is 95.539906. The figure shown below is that the evaluation result and confusion matrix obtained after implementing Random Forest.

Classification Report				
	precision	recall	f1-score	support
1.0	0.97	0.98	0.98	333
2.0	0.91	0.81	0.86	64
3.0	0.90	0.93	0.92	29
accuracy			0.96	426
macro avg	0.93	0.91	0.92	426
weighted avg	0.95	0.96	0.95	426



Classification report of Random Forest

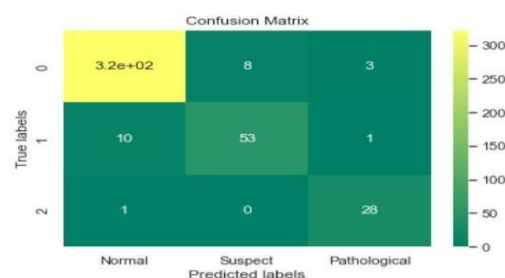
Confusion matrix of Random Forest

Gradient Boosting

The next type classification method is Gradient Boosting. Gradient Boosting is most effective one to classify the most complex dataset. They are a group of algorithms that combine many weak learning models together to create a strong predictive model. Decision trees are usually used when gradient boosting is done. The calculated accuracy of gradient boosting is 94.600939

The figure below shows the classification report and confusion matrix of naïve bayes respectively.

Classification Report				
	precision	recall	f1-score	support
1.0	0.97	0.97	0.97	333
2.0	0.87	0.83	0.85	64
3.0	0.88	0.97	0.92	29
accuracy			0.95	426
macro avg	0.90	0.92	0.91	426
weighted avg	0.95	0.95	0.95	426



Classification report of gradient boosting

Confusion matrix of gradient boosting

Performance Evaluation Criteria

In here there are five methods are used to measure the performance, they are accuracy, sensitivity, specificity, AUC respectively.

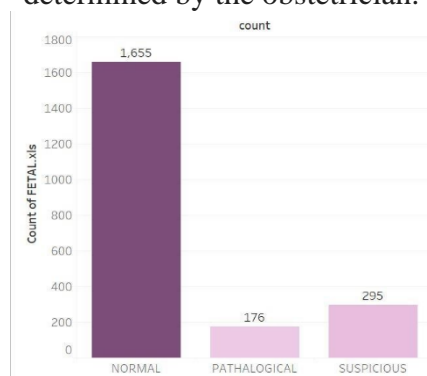
Accuracy = $(TP+TN)/(TP+FN+FP+TN) \times 100$

Precision = $TP/(TP+FP) \times 100\%$ Recall = $TP/(TP+FN) \times 100\%$ Where,

TP, true positive refers to the number of correct classifications. FN, false negative refers to the number of incorrect classifications. TN, true negative refers to the number of correct classifications. FP, false refers to the number of incorrect classifications

Experimental Results And Discussions

The health feature is the most important attribute . The CTG data of 2126 pregnant women were classified into the normal, suspect, or pathologic state by three obstetricians. The CTG data comprised of 77% normal fetal state, 15% suspect state, and 8% pathologic state as determined by the obstetrician.



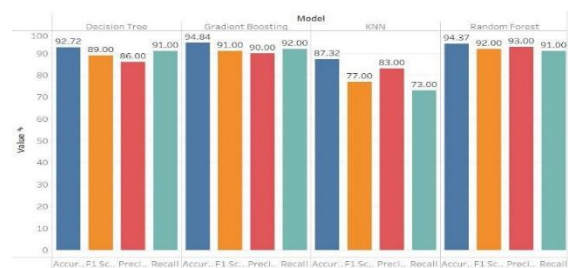
Fetal health count

A total of 4 different models were made on our dataset using the classification techniques. To judge the prediction built by the models we used the calculated accuracy. After all these models have provided us with the accuracy the authors have come to the results that KNN gives about 87.3 percent accuracy while random forest gives 94.3 percent, gradient boosting gives 94.8 percent and Decision tree gives 91.7percent.

Model	Accuracy	precision	recall	f1 score
KNN	87.3239	83	73	77
Gradient Boosting	94.8357	90	92	91
Random Forest	94.3662	93	91	92
Decision Tree	92.723	86	91	89

Evaluation matrix of various models

Visualization is done using tableau. Various values like accuracy, precision, recall, f1score are all considered for examining the best model. The visualization is shown above. Here the values for various models like KNN, Decision Tree, Gradient Boosting and Random Forest are shown. As observed from the values it clearly shows that gradient boosting gives the highest accuracy compared to other models. So had chosen gradient boosting as our final model.



Visualization using tableau

Conclusion

One main outcome of this study was to compare major machine learning algorithms Decision

tree, KNN, Random Forest and Gradient Boosting with regard to their precision accuracy and sensitivity to predict normal, suspect, or pathologic fetal state based on given 21 CTG attributes. Various statistical techniques were used to compare the performance of the algorithms. These included precision score, and overall accuracy. Using these statistical techniques we compare the machine learning algorithms and came to a conclusion that with the help of gradient boosting people can identify that who may be at high risk for adverse perinatal outcomes based on CTG findings, for referral and further management. So that gradient boosting is the best model suited for this dataset comparing with the other datasets.

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Physical Problems Faced by Transgender Women during the Period of their Hormone Treatment Period after Sex Reassigning Surgery

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Abstract

The study aims to investigate the physical problems faced by transgender women during the period of their hormone treatment. In this study, the sample population includes transgender women who undergo sex reassignment surgery between the ages of 20 to 35. Descriptive research designs were used in this research. The tools used were self-prepared questionnaires.

Introduction

A transgender woman is a woman identified as male at birth. Transgender women have a female gender identity, may experience gender dysphoria, and may transition; this process commonly includes hormone replacement therapy and sometimes gender reconstructive surgery, which can bring relief and resolve feelings of gender dysphoria. Like cisgender women, transwomen may have any sexual orientation. Transgender woman is not always interchangeable with transsexual woman, although the terms are often used interchangeably. Feminizing hormone therapy is the administration of exogenous endocrine agents to induce changes in physical appearance. Since hormone therapy is inexpensive relative to surgery and highly effective in the development of secondary sex characteristics estrogen in combination with an anti-androgen is the standard first-choice gender-affirming hormone treatment for transwomen. Complication includes Blood clots in a deep vein or the lungs, Heart problems, High levels of triglycerides, High levels of potassium in the blood, Higher levels of the hormone prolactin in the blood, Nipple discharge, weight gain, Infertility, High blood pressure, Type 2 diabetes, Stroke. Transwomen hormone treatment has reported high levels of mental health problems, particularly anxiety, depression and self-harm, which are likely caused by several internal and external stressors. Studies examining mental health in transwomen have primarily focused on individuals attending transgender health services and hence those who are likely to experience a higher level of distress about their assigned sex at birth. These studies have primarily looked cross-sectionally at levels of anxiety, depression and self-harm. Feminizing or masculinizing hormone therapy is the administration of exogenous endocrine agents to induce changes in physical appearance. Since hormone therapy is inexpensive relative to surgery and highly effective in the development of secondary sex characteristics in [FTM] individuals or breast tissue in male-to-females [MTFs]), hormone therapy is often the first, and sometimes only, medical gender affirmation intervention accessed by transgender individuals looking to develop masculine or feminine characteristics consistent with their gender identity. In some cases, hormone therapy may be required before surgical interventions can be conducted. Transwomen who undergo hormone treatment as part of their sex reassignment surgery may experience a range of physical changes. These changes can vary depending on the specific hormone therapy regimen they are prescribed, as well as individual factors such as age, health status, and genetics. One of the most common physical changes faced by transwomen during hormone treatment is the development of breast tissue. Hormone therapy typically involves the use of oestrogen, which can stimulate breast growth in transwomen. While this can be a positive outcome for many transwomen, it can also lead to discomfort or pain in the breasts, as well as social stigma and discrimination. Another physical change faced by transwomen during hormone treatment is changes in body fat distribution. Oestrogen can cause fat to redistribute from the abdomen and upper body to the hips, thighs, and buttocks. While

this can lead to a more feminine body shape, it can also lead to weight gain and other health concerns. Transwomen undergoing hormone treatment may also experience changes in their skin, hair, and nails. Oestrogen can cause skin to become softer and smoother, hair to become thinner and less coarse, and nails to become more brittle. While these changes can be positive for some transwomen, they can also be a source of discomfort or insecurity. In addition to these physical changes, transwomen undergoing hormone treatment may also experience a range of health risks associated with hormone therapy. These risks can include blood clots, high blood pressure, liver damage, and certain types of cancer. Regular monitoring by a healthcare provider is essential to minimise these risks and ensure the safety of hormone therapy. It is important to note that not all transwomen will experience the same physical changes during hormone treatment. Factors such as age, health status, genetics, and the specific hormone therapy regimen prescribed can all play a role in the physical changes that occur. Overall, while hormone therapy can lead to positive physical changes for transwomen, it can also lead to a range of challenges and health risks. Transwomen need to work closely with their healthcare providers to manage these challenges and ensure the best possible outcomes from hormone therapy. Regular monitoring and communication with healthcare providers can help transwomen navigate the physical changes and health risks associated with hormone therapy.

Result

45% of the respondents rarely think seriously about trying to hurt themselves that in a way resulted in their death 35% of the respondents never think seriously about trying to hurt themselves that in a way resulted in their death and 20% of the respondents rarely think seriously about trying to hurt themselves that in a way resulted in their death.

In this study majority of the respondents rarely think seriously about trying to hurt themselves that in a way resulted in their death. Feeling bothered by thoughts of self-harm or suicidal ideation is a serious and concerning symptom that should be addressed immediately. It is crucial for transwomen experiencing these thoughts to reach out for help and support from healthcare professionals, friends, or helplines. Hormone therapy after sex reassignment surgery can sometimes have an impact on an individual's mental health, including an increased risk of depression and suicidal thoughts. These thoughts may be influenced by the hormonal changes in the body, as well as the emotional and psychological challenges associated with transitioning.

Conclusion

Hormone treatment after gender reconstructive surgery is an important step for many transgender individuals in aligning their physical appearance with their gender identity. This treatment typically involves the use of hormone replacement therapy (HRT) to introduce hormones that are consistent with the individual's gender identity. Hormone treatment after gender reconstructive surgery can have various effects on the body and mind. Some of these effects may include changes in physical appearance, such as breast development or facial hair growth, as well as changes in mood and emotional well-being. While hormone treatment can bring about positive changes for many individuals, it is important to recognize that it can also have an impact on relationships. Similar to hormone treatment before surgery, mood swings and emotional instability can occur during hormone treatment after gender reconstructive surgery. Transwomen who undergo hormone treatment as part of their sex reassignment surgery may experience a range of physical changes. These changes can vary depending on the specific hormone therapy regimen they are prescribed, as well as individual factors such as age, health status, and genetics. One of the most common physical changes faced by transwomen during hormone treatment is the development of breast tissue. Hormone therapy typically

involves the use of oestrogen, which can stimulate breast growth in transwomen. While this can be a positive outcome for many transwomen, it can also lead to discomfort or pain in the breasts, as well as social stigma and discrimination. Another physical change faced by transwomen during hormone treatment is changes in body fat distribution. Oestrogen can cause fat to redistribute from the abdomen and upper body to the hips, thighs, and buttocks. While this can lead to a more feminine body shape, it can also lead to weight gain and other health concerns. Transwomen undergoing hormone treatment may also experience changes in their skin, hair, and nails. Oestrogen can cause skin to become softer and smoother, hair to become thinner and less coarse, and nails to become more brittle. While these changes can be positive for some transwomen, they can also be a source of discomfort or insecurity. In addition to these physical changes, transwomen undergoing hormone treatment may also experience a range of health risks associated with hormone therapy.

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Criminal Propensity among Youth

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Abstract

This research employs a descriptive method to investigate the criminal propensity among youth within the age group of 18 to 25 in the state of Kerala, India. The study utilizes a convenience sampling method to gather data from 300 individuals in this demographic group. Convenience sampling, a non-probability sampling technique, was chosen to facilitate data collection. The primary objectives of this research were to explore the association between age, profession & marital status and criminal propensity among the youth in Kerala. The major findings of this study reveal a statistically significant relationship between age and criminal propensity among the sampled youth. Specifically, the research identifies that as individuals within the age group of 18 to 25 advance in age, there is a discernible change in their likelihood to engage in criminal behavior.

Keywords: Criminal Propensity

Introduction

The word "crime" is derived from the Latin word "Krimos" which means "to accuse". It covers those acts which are against social order and deserve disapprobation and condemnation of society. As stated, crime is essentially concerned with social order. Emile Durkheim's (Paranjape, 2007) "Crime as a Normal Phenomenon" mentioned a society composed of persons with angelic qualities would not be free from violation of the norms of that society. Criminal propensity is the tendency of an individual to be inclined towards criminal behaviour. Criminal propensity explains the various forms of antisocial behaviour, "criminal propensity is genetic however these pathological traits interact and are often aggravated by environmental social conditions" (Delisi, 2005).

Over the last decade, the crime rate has become a menace affecting millions of youths and children in our nation. As per the National Crime Records Bureau among states, Kerala has the highest crime rate, (NCRB-2021). The crime rate is crime incidence per 100,000 of the population. Young people with a strong morality and capability to exercise self-control are likely to refrain from crime, regardless of their level of criminogenic exposure while those with a weaker morality and capability to exercise self-control are more likely to engage in acts of crime when exposed to criminogenic settings. People's exposure to criminogenic settings is dependent on the places they frequent and with whom they tend to frequent them. Criminal propensity is defined as criminal minds, which is defined as the mindset that allows people to consider using illegitimate means to achieve a goal.

Results & Discussions

There is a statistically significant relationship between age and criminal propensity. As individuals age, there is a gradual increase in the likelihood of engaging in criminal behavior. The criminal behavior tends to peak during early adulthood, typically in the late teens and early twenties. This period is characterized by a higher propensity for impulsive and risk-taking behaviors. Several factors contribute to the age-related variation in criminal propensity, including social, economic, and psychological factors. Younger individuals often face unique challenges such as peer pressure, limited employment opportunities, and lower impulse control. The findings of this research support the notion that criminal propensity is not a static characteristic but varies over the lifespan. It is crucial to recognize the influence of age-related factors in understanding and addressing criminal behavior. Early interventions and targeted

support for individuals during their high-risk years may prove effective in reducing criminal activity.

The study also aimed to understand whether there is a correlation between leading a solitary life and a higher likelihood of engaging in criminal behavior when compared to married individuals who typically have more social connections. Married individuals, as a group, had lower levels of reported loneliness compared to unmarried individuals. This suggests that marriage is associated with decreased feelings of loneliness. The findings suggest that social isolation, particularly loneliness, is associated with a higher likelihood of engaging in criminal behavior. The study underscores the importance of social connections in reducing criminal propensity and highlights the potential role of marriage as a protective factor against loneliness and its associated criminal outcomes.

The study sought to understand whether the environment, specifically urban or rural living, had an impact on an individual's likelihood of engaging in criminal behavior. There was no statistically significant difference in criminal propensity between individuals living in urban and rural areas. Both groups showed a comparable likelihood of engaging in criminal behavior. The study also considered demographic factors such as age and gender. While these factors were associated with variations in criminal propensity, they did not show a significant correlation with the urban or rural divide.

The findings of this research challenge the assumption that certain occupational groups may be more prone to criminal behavior than others. There were no statistically significant differences in criminal propensity among the various occupational groups. Participants across different professions displayed similar levels of the likelihood of criminal behaviour. Individuals from different occupational backgrounds were equally likely to be involved in various types of criminal activities, including property crimes, white-collar crimes, drug offenses, and violent crimes. The findings underscore the need for a nuanced understanding of the factors contributing to criminal behaviour, moving beyond occupational stereotypes. Policymakers and law enforcement agencies should adopt a holistic approach to crime prevention that addresses the multifaceted nature of criminal activities.

Conclusion

Crimeless society is a myth and youth delinquency is a universal phenomenon, India is not an exception. Youth is an intense period of rapid development culminating in identity formation and social integration tasks. During this developmental phase family, moral values, peers, technology, etiquette and society influence their upbringing. Youth are our future who will develop as an adult personality on the world platform. Similarly, the Constitution of India secured special status for youth for their optimal growth and development.

In modern times crime is an issue of serious concern throughout the world, and it is a menace with which all sections of society have to deal. The present study has emphasised the prevention of this social evil and is based on different treatment programs and analysis

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Cyber Etiquette among Young Adults

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Abstract

This descriptive research study aimed to investigate the state of cyber etiquette among young adults using a sample of 268 participants. Cyber etiquette, encompassing digital manners, online behaviors, and ethical conduct in the digital realm, was examined with a particular focus on gender and the distinction between students and employees. The findings of this research revealed intriguing insights into cyber etiquette practices among young adults. One major result indicated that the level of cyber etiquette was significantly higher among females when compared to males. This gender difference suggests that females may exhibit more considerate and ethical behaviors in their online interactions and digital conduct. Another noteworthy finding of the study was the distinction in cyber etiquette related to piracy and plagiarism between students and employees. Specifically, the research identified that cyber etiquette piracy and plagiarism were more prevalent among students than among employees.

Key Word: Cyber Etiquette

Introduction

The term etiquette was first introduced in 1750 from the French word 'etiquette' which means ticket. Etiquette is the ticket to the proper way of doing things. Human beings are complex social animals. Individuals cannot get along by themselves; people need other members of the species around them. Etiquette and manners help keep people from hurting each other so they can remain together. (Choukimath, 2006). It is the conventional rule of personal behaviour in polite society. It is the customary code of polite behaviour in society or among members of a particular profession or a group. According to (cuppy, 1929) etiquette is behaving yourself a title better than is essential. Etiquette can be considered as an unwritten rule, synonymous with manners.

Cyber etiquette refers to etiquette acceptable with respect to the use of technology. To put it simply cyber etiquette is a certain code of conduct of behavior or conduct and manners applied to the use of internet technology in everyday scenarios. Cyber etiquette is an asset of acceptable rules and norms that must be followed with the use of technology. These rules are to ensure individual and community safety, security and positive communication across the internet (Lohmann, 2010). Cyber etiquette is extremely important in this era of connectedness and increased virtual interconnection. As the world is fast adapting to online practices for learning, working and entertainment there is a growing need to ensure respect security, social sensitivity and appropriate communication. Cybercrime is a term used to broadly describe criminal activity in which computers or computer networks are a tool, a target, or a place of criminal activity and includes everything from electronic cracking to denial-of-service attacks. Everyone appreciates the use of the Internet but there is another side of the coin which is Cyber Crime by the use of Internet (Saini, 2012). Cybercrime is a by-product of the ever-increasing development in the areas of information and communication technology (ICT). Therefore, it is important to expose and make the younger generation understand unethical online activities (Freestone & Mitchell, 2010) as well as provide ethical guidelines and encouragement for improving responsible behaviour and positive qualities when engaging in cyberspace. The study aims at promoting awareness and the need to exhibit responsible behaviour online among

youth.

Findings and Discussions

The study recognised the level of cyber etiquette is higher among females than males. The result that females exhibit higher cyber etiquette than males likely stems from a specific research study that observed or surveyed online behavior and found that, on average, females tended to display more polite and respectful conduct. From a young age, individuals are often socialized differently based on their gender. Females may be encouraged to be more polite, empathetic, and considerate in their interactions, both offline and online. This socialization can influence their online behavior and lead to a perception of higher cyber etiquette.

The study shows that cyber etiquette piracy and plagiarism are higher among students than employees. Students are generally less experienced in professional and academic environments compared to employees. They may not have a full understanding of the consequences and ethical implications of piracy and plagiarism. In contrast, employees often have more exposure to workplace expectations and may be more aware of the legal and ethical boundaries. Peer influence can play a significant role in shaping behavior. Students may be more likely to engage in unethical practices if they perceive that their peers are doing the same. In contrast, employees may have a different peer group with different norms and expectations. While there may be instances where cyber etiquette, piracy, and plagiarism are more common among students than employees, it's crucial to recognize that these behaviors are not limited to any particular group. The prevalence of such behaviors can vary based on multiple factors, including age, education, context, and awareness of consequences.

Sample of young adults without online gaming habits have higher levels of piracy and plagiarism than young adults with online gaming habits. Young adults with an online gaming habit may allocate a significant portion of their leisure time to gaming. This can leave them with less time to engage in other activities, including searching for and engaging in piracy or plagiarism. On the other hand, young adults without this habit may have more free time on their hands, potentially leading to more opportunities for unethical behavior. Online gaming often requires the development of various skills, such as problem-solving, strategy, and coordination. Young adults who are invested in gaming may channel their energy into honing these skills, leaving them less inclined to engage in activities like piracy and plagiarism, which do not contribute to skill development. Privacy and confidentiality are higher at the age of 21-25. The age range of 21-25 typically represents a period of transition from adolescence to adulthood. During this time, individuals often become more independent and gain a stronger sense of autonomy. As a result, they may place a higher value on their privacy and confidentiality as they navigate their own lives and make personal decisions. Many individuals in this age range are pursuing higher education or starting their careers. They may be aware that maintaining privacy and confidentiality can be essential in professional and academic settings, where sensitive information or personal data may be at stake. This awareness can lead to more careful handling of private information.

Conclusion

Cyber etiquette is a part of digital citizenship that everyone needs to obey, which was later coined as netiquette. (Sari, et al,2020). The lack of awareness and knowledge about cyber etiquette caused some undesired negative impacts on the users of cyberspace. A wide range of ethical issues like Information indecency, online safety issues (identity theft, fraud, hacking, and phishing), the misuse of information (plagiarism and illegal access to protected content)

and health risks (screen exposure and internet addiction) etc. are prominent issues in this context. Therefore, it is important to expose and make the younger generation understand unethical online activities (Freestone & Mitchell, 2010) as well as provide ethical guidelines and encouragement for improving responsible behaviour and positive qualities when engaging in cyberspace. The study aims at promoting awareness and the need to exhibit responsible behavior online among youth.

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Dyadic Adjustment and Emotional Intelligence among Middle-Aged Women

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Abstract

The major objective of the study was to examine Dyadic Adjustment and Emotional Intelligence among middle-aged women. The study was conducted on a group of middle-aged (40 to 60) couples including both males and females. The convenient sampling method was used to select the sample. The data was collected by using the survey method. Emotional intelligence and Dyadic adjustment were assessed by using Emotional Intelligence Scale, and Revised Dyadic Adjustment scale. Results of the study revealed that Emotional Intelligence and Dyadic Adjustments were more or less similar among Males and Females. Further, the study revealed that middle-aged couples having single children showed higher levels of Dyadic Adjustment than couples having more children.

Key Words – Dyadic Adjustment, Emotional Intelligence, Middle-Aged Women

Introduction

Middle age is the stage of adulthood that comes just before old age. While the specific age range for middle age can vary from person to person, it is generally considered to be between 40 and 60 years old. During this period, individuals typically experience both physical and psychological changes, including a gradual decline in physical abilities and an increased awareness of their mortality. In middle age, people often shift their focus from anticipating the future to reflecting on the past, engaging in reminiscence and recollection. When approached with a positive outlook, middle age can serve as a valuable preparation for a fulfilling and productive old age.

Emotional intelligence and marital adjustments are closely related to each other. Within a marriage, there are many unspoken emotional dialogues and verbal and non-verbal communication that can affect marital satisfaction (Dildar et al., 2012). Managing and controlling self-emotions and other's emotions helps the partner to resolve conflicts and live a satisfying life (Fitness, 2001). Dyadic adjustment is a process with consequences that can be identified with the rule of a couple's problematic conflicts, interpersonal tensions, individual anxiety, marital satisfaction, coherence integrity, and collaboration about important problems. Dyadic adjustment seems to be a comprehensive conceptualization of the quality of marriage since it can be a blanket term to cover either or both marital satisfaction and marital happiness. Emotional Intelligence is the ability to monitor your own emotions as well as the emotions of others, to distinguish between and label different emotions correctly, and to use emotional information to guide your thinking and behavior and influence that of others. Emotional intelligence refers to the ability to recognize, understand, and manage one's own emotions as well as the emotions of others. Middle-aged people, typically between the ages of 40 to 60, often exhibit a higher level of emotional intelligence compared to younger individuals due to their life experiences and maturity. Middle-aged individuals tend to be more adept at handling complex emotions and interpersonal relationships. They have had ample time to develop coping strategies, empathy, and self-awareness, which can positively impact their social interactions and decision-making.

The relationship between emotional intelligence and dyadic adjustment can be varied among individuals regardless of their gender. Research has shown mixed results, but some studies

have suggested that emotional intelligence can positively impact dyadic adjustment in both men and women. Individuals with higher emotional intelligence may be better equipped to understand and manage their own emotions and those of their partners, leading to healthier and more satisfying relationships.

Results and Discussions

The findings of the study no significant differences in Emotional Intelligence and Dyadic Adjustment among middle-aged Couples based on Gender. This means that Emotional Intelligence and Dyadic Adjustment were more or less similar among males and females. Over time traditional gender roles have evolved, leading to more equitable distribution of emotional expression and relationship responsibilities between men and women. This shift means that both genders now have more similar opportunities to develop emotional intelligence and contribute to the quality of their relationships. Society has become increasingly aware of the importance of emotional intelligence and healthy relationships. Schools, families, and communities often emphasize the development of these skills for both boys and girls, reducing potential gender gaps in these areas. These findings are supported by the study of Kshirsagar and Sarika Shivaji (2021). They found no significant gender differences in Emotional Intelligence and Dyadic Adjustment.

Further, the study revealed that middle-aged couples having single children showed higher levels of Dyadic Adjustment than couples having more children. These findings are supported by the findings of Douglas et al., (1985). The study found that significant difference with Dyadic Adjustment based on the number of children. Couples with one child may have more time and resources to invest in their relationship, leading to increased satisfaction. The presence of multiple children can create additional stressors and demands on a couple's time and attention, potentially leading to lower relationship satisfaction. Additionally, having one child can foster a stronger sense of intimacy and connection between partners, as they may rely more on each other for companionship and support.

Conclusion

The current study resolves intending to understand and analyze Emotional Intelligence and Dyadic Adjustment among middle-aged Women. The study could find that good Emotional intelligence and Dyadic Adjustment are present in Middle-aged Couples. Middle-aged couples having single children showed higher levels of Dyadic Adjustment than couples having more children. The study was conducted within a limited period, so it has certain limitations.

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Exploring the Relation Between Economic Status and Individuals' Perception of Social Support, and Its Impact on Psychological Well-Being.

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Abstract

This paper investigates the intricate relationship between economic status and its impact on the perceived social support and psychological well-being of elderly individuals. The study, comprising a sample size of 200 older adults from Idukki & Kottayam districts of Kerala, employed a simple random sampling method for participant selection. Data collection was carried out through a comprehensive questionnaire consisting of a demographic data sheet, the Multi-dimensional Scale of Perceived Social Support, and the Psychological Well-being Scale. Data analysis was conducted using t-tests, ANOVA, and correlation analyses. The results of this study reveal a significant positive association between economic status and the perceived social support experienced by elderly participants.

Introduction

The world is experiencing a demographic shift of unprecedented proportions. The global population is aging, with a significant increase in the proportion of elderly individuals. According to the World Health Organization (WHO), the number of people aged 60 years and older is expected to double by 2050, reaching nearly 2.1 billion. This demographic transformation brings about multifaceted challenges, particularly in addressing the well-being and social support systems for the elderly.

As individuals advance in age, they often encounter a variety of physical, psychological, and social changes. These changes can significantly impact their quality of life and overall well-being. Among the many factors influencing the well-being of the elderly, economic status stands out as a crucial determinant.

Economic status, encompassing income, assets, and financial security plays a pivotal role in the lives of older adults. The financial resources available to them can shape their access to healthcare, housing, and other essential services. Furthermore, economic well-being is intricately linked to the social fabric of society, influencing the extent and quality of social interactions and support networks that seniors can access.

At the heart of this intricate relationship lies the concept of perceived social support—the subjective evaluation of the availability and adequacy of social connections and assistance. The perception of social support can significantly impact an individual's psychological well-being, affecting emotional stability, self-esteem, and mental health. Thus, understanding how economic status influences perceived social support and, subsequently, the psychological well-being of the elderly is a matter of critical importance.

Umukoro, Omonigho Simon, conducted a study on the Implications Of Social Support And Socio-economic Status On the Perceived Health And Wellbeing Of Psychiatric Patients(August 2018) Social support and educational status emerged as significant predictors of health status among psychiatric patients while income did not predict health status among psychiatric patients. Social support, income and educational status did not jointly predict the

subjective well-being of psychiatric patients in State Hospital Adeoyo while only educational status emerged as a significant predictor of subjective well-being among psychiatric patients.

Results & Discussions

The ANOVA of Perceived social support and psychological well-being concerning Economic Status with variables significant other, family, and friends perceived social support and psychological well-being shows that the calculated F value of significant other is 14.74, which is greater than the table value and it is significant at 0.01 levels. The calculated F value of significant other is 10.81 which is greater than the table value and it is significant at 0.01 levels. The calculated F value of friends is 6.27, which is greater than the table value and it is significant at 0.01 levels. The calculated F value of perceived social support is 12.31, which is greater than the table value and it is significant at 0.01 levels. The calculated F value of Psychological well-being is 16.49, which is greater than the table value and it is significant at 0.01 levels.

One way of explaining these contradictory findings concerns variations in the choice of socioeconomic indicators that can be associated with social networks and support in different ways. Poverty can lead to social exclusion. Social participation requires financial resources to afford activities to pay member fees, buy gifts, etc. Therefore, it seems plausible that less external, non-family ties are established in low-income groups.

In a study by Simone Weyers (Low socio-economic position is associated with poor social networks and social support), findings show that socially disadvantaged persons are more often exposed to poor social networks and social support. In bivariate analyses, it becomes obvious that there is a higher percentage of having no confidant and no partner, of no participation, of being socially isolated and lacking social support. In multivariate analyses, odds ratios are elevated in low SEP groups. Both income and education are likely to impact well-being. A higher education, higher financial resources, and thus, a higher SES increase psychological well-being in various respects.

However, there is also evidence that lower socioeconomic status is associated with higher levels of psychological distress. It seems reasonable to suggest, however, that patterns of economic success and failure, and the associated different mixes of environmental resources and demands, would have an important impact on the extent to which feelings of accomplishment, mastery, and self-acceptance, for example, develop over the life course. Since occupation is closely tied to socioeconomic level, some support for this assertion can be found in Kohn and Scholar's work in which they demonstrated that job characteristics, which are highly correlated with social class, exert a growing influence over time on psychological well-being. A study by G.A Kaplan (2008) showed that as economic status is higher, psychological well-being improves.

This study also validates the point that Individuals who have high economic status show high perceived social support and psychological well-being.

Conclusion

In conclusion, the research findings highlight a noteworthy relationship between economic status and psychological well-being among the elderly, underscoring the importance of financial stability in maintaining overall mental health and life satisfaction.

These findings provide valuable insights into the critical role of economic resources in shaping the social support networks and psychological well-being of elderly individuals. The implications of this research hold promise for policymakers, healthcare providers, and social support organizations seeking to enhance the well-being of an aging population, emphasizing the need for strategies that address economic stability as a cornerstone of elderly care.

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Educational Status, Loneliness & Depression: A Study of Older Adults

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Abstract:

This research study investigates the influence of educational status on feelings of loneliness and levels of depression among elderly individuals aged 60 and above. A convenient sampling method was employed to gather data from a diverse sample of 250 participants, comprising both men and women. The tools used for data collection are a demographic data sheet, UCLA (University of California, Los Angeles) Loneliness Scale, and Geriatric Depression Scale. The analysis utilized statistical tests, including mean and standard deviation, t-tests, ANOVA, and correlation, to explore the relationship between marital status and the emotional well-being of the elderly population. The study's major findings reveal that educational status significantly impacts feelings of loneliness and levels of depression among elderly individuals. Notably, the data underscores the profound effect of the level of education on these emotional states.

Keywords: education, loneliness, depression, older adults

Introduction:

In an increasingly interconnected and aging world, the well-being of our elderly population has emerged as a paramount concern. Depression and loneliness represent two formidable challenges that often afflict older individuals, casting shadows over what should be their golden years. In a study conducted by Archana Singh & Nishi Misra (2009), results revealed a significant relationship between depression and loneliness. Amidst this backdrop, the role of education, a potent catalyst for personal growth and social engagement, has garnered growing attention. This research endeavors to explore the intricate relationship between education and the mental and emotional well-being of the elderly, shedding light on how access to and participation in lifelong learning can potentially mitigate the pervasive issues of depression and loneliness among this vulnerable demographic. In an era marked by demographic shifts and the evolving landscape of education, understanding this connection takes on renewed significance, offering promising avenues for enhancing the lives of our elderly citizens.

In this research, it delves into a less explored facet of the battle against loneliness and depression among older adults – the role of education. While numerous factors contribute to the prevalence of these emotional challenges, education emerges as a potentially transformative force. Education, often associated with the vigor of youth, should not be relegated to the past as individual's age. Instead, it offers a promising avenue to mitigate the effects of loneliness and depression among older adults, fostering resilience and promoting a sense of purpose.

Findings of a study conducted by Gul, S. N., Chishti, R., & Bano, M. (2019) revealed that the educational qualification of the sample had a positive impact on their social support and they were less socially isolated as compared to uneducated elderly. The study on the relationship between social isolation, loneliness, and social support to disease outcomes among the elderly indicated that belongingness support related most consistently to health outcomes (Joe Tomaka et al. 2006). Other research shows that senior citizens with less financial resources and low educational level especially those who are jobless are prone to feel loneliness when contrasted with those with advanced education and high financial resources and those who are employed (Hawkey, et al., 2008; Creecy, Berg & Wright 1985; Pinquart and Sorensen 2001; Lauder, Sharkey & Mummery 2004).

This study embarks on an exploration of the multifaceted relationship between education and the mental and emotional well-being of older adults. It investigates how the level of education can influence, alleviate, and potentially prevent the onset of loneliness and depression. By examining the interplay between education, loneliness, and depression, it aims to shed light on the potential benefits of educational interventions in improving the lives of older adults. In doing so, the study aspires to contribute to a more comprehensive understanding of the challenges faced by this demographic and to offer insights that may guide policies and practices aimed at enhancing their emotional well-being.

Results & Discussion:

The ANOVA results of geriatric depression and loneliness show that the calculated 'F' value of geriatric depression is 5.24, which is higher than the table value of 4.60 and is significant at 0.01 level. So there is a significant difference in geriatric depression among old age people based on their education. Hence the hypothesis will have a significant difference in geriatric depression among old age people based on education.

In the case of loneliness, the 'F' value is 9.19 which is higher than the table value of 4.60 and it is significant at 0.01 levels. So there is a significant difference in loneliness among old age people based on their education. Hence the hypothesis will have a significant difference in loneliness among old age people based on education.

The Post Hoc test of geriatric depression concerning education shows that the total score of geriatric depression is higher among the sample below SSLC compared to the sample of education in degree. Geriatric depression is higher among the sample belonging to below SSLC. Geriatric depression is comparatively lower among the sample belonging to a degree. The educational status of SSLC +2 and below SSLC did not differ from each other.

The present findings supported the study of James Mitchell(1999)et. al The study found that there is a significant difference in geriatric depression concerning education.

The Post Hoc test of loneliness concerning education shows that the total score of loneliness is higher among the sample residing below SSLC compared to a sample of education in degree. Loneliness is higher among the sample belonging to below SSLC. Loneliness is comparatively lower among the sample belonging to a degree. The educational status of SSLC +2 and below SSLC differ from each other too. The present findings supported the study of Dr.Catherine Turner (2009)et. al the study found that there is a significant difference in loneliness concerning education university-level respondents have a low level of loneliness compared to those with secondary education.

Conclusion:

In conclusion, this research has provided valuable insights into the relationship between educational level and loneliness and depression among the elderly. The results of this study have demonstrated a statistically significant positive correlation between lower educational levels and increased feelings of loneliness and depression in the elderly population. These findings emphasize the importance of addressing educational disparities in interventions and support systems for the elderly. By recognizing the impact of education on mental well-being in later life, we can better tailor programs and initiatives to provide targeted assistance to those with lower educational backgrounds, potentially reducing the prevalence of loneliness and depression among this vulnerable demographic. Furthermore, this research underscores the

need for continued investigation into the multifaceted factors contributing to mental health in the elderly, to develop holistic strategies to enhance their overall well-being and quality of life.

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Family Type and Its Impact on Social Support & Psychological Dimensions among the Elderly

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Abstract

This research employs a descriptive method to investigate the impact of family type on perceived social support and psychological well-being among older adults above the age group in the state of Kerala, India. The study utilizes a random sampling method to gather data from 200 individuals in this demographic group. The primary objectives of this research were to check the influence of family type such as nuclear or joint or significant other relations on the perceived social support and psychological mental health of the elderly. The data were collected using a questionnaire method and the main tools for data collection were a socio-demographic data sheet, perceived social support, and psychological well-being scale. The major findings of this study reveal a statistically significant relationship between friends subscale and perceived social support among the sampled older adults. Specifically, the research identifies that for individuals above the age of 60, there is a significant relation between friends and family type on their perceived social support.

Keywords: Family type, perceived social support, psychological well-being, older adults

Introduction

Today, even in joint families, the elders do not feel that much support and well-being. All family members are busy with their work and jobs. So there is no time to spend with elders. All have their work to do. Those who live in joint families have a high perception of support from friends. In a joint family, elders get free time and can participate and integrate into the community. They spend their time with their friends. They get more time to share with friends than family. In a study by Majid and Fatemeh (2017) shows that for older people, friends accompany them in social activities more than their children or relatives. Family members compared to friends, exert more social control and the elderly expect social support from friends when needed. Also, the quality of an individual's relationships with spouse, children, and other family members was associated with personal feelings of well-being, but the quantity of such associations had little impact on either physical or psychological health.

Haifeng, Yang Ji, and Tianyong conducted a study on The Roles of Different Sources of Social Support on Emotional Well-Being among Chinese Elderly (March 2014). The results showed that the order of contact, frequency, and mutual support followed a hierarchical order from the spouse, children, to friends; zero-order correlations of Both family support and friend support were associated with more positive affect and less negative affect; and when Compared with the relative role of family and friend support, spouse (children if the spouse is not available) support had Greater contribution on decreasing negative affect, while friend support had a greater influence on increasing positive effect, These results were better Explained in light of the task specificity model rather than the hierarchical compensatory model.

This paper delves into the analysis of research findings that investigate the relationship between family type and social support dimensions among the elderly. Specifically, the study aimed to determine if there were significant differences in perceived significant others, family, friends, and psychological well-being based on family type. Statistical tests, including t-tests, were employed to analyze data collected from the sample.

Results & Discussion:

The findings suggest that, in general, family type does not significantly influence perceived significant others, family, and psychological well-being among the elderly in this study. This aligns with existing research that has also reported limited impacts of family structure on these aspects among elderly individuals. On the contrary, the significant difference observed in the friends subscale underscores the unique role that friends play in the perceived social support of the elderly. The t-value for the friend's subscale was calculated to be 1.99, surpassing the critical table value at the 0.05 significance level. This indicates that there is indeed a statistically significant difference in the friend's subscale based on the family type.

It suggests that family type may affect the extent to which elderly individuals rely on and receive support from their friends. This finding emphasizes the importance of friendships in the lives of the elderly, potentially compensating for any variations in family support.

These findings have several implications for policymakers, healthcare providers, and families themselves. Firstly, the results suggest that promoting joint family structures or attempting to recreate their benefits within nuclear families may contribute to increased perceived social support among the elderly. However, it's essential to recognize that family dynamics and relationships within any structure are complex and cannot be reduced solely to structural factors.

Additionally, the findings underscore the importance of considering individual differences and external support systems when assessing the psychological well-being of elderly individuals. Healthcare interventions and support services should be tailored to address the unique needs of each elderly person, taking into account their family context.

Conclusion

In conclusion, these research findings, indicate that while family type does not significantly affect perceived significant others, family, and psychological well-being among the elderly in the sample, it does indeed have a significant impact on the friend's subscale. This underscores the importance of friendships as a key element of perceived social support among elderly individuals. These findings contribute to our understanding of the complex interplay between family type, friendships, and social support among the elderly population, emphasizing the need for tailored support strategies that consider the role of friends in promoting the well-being of older individuals

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Feelings of Isolation & Depression in Elderly: Influence of Financial Factors

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Abstract:

The prime objectives of the study were to explore the role of financial factors in loneliness and depression among old age people. The sample was selected by using the Convenient sampling method (n=250). The tools used were a self-prepared socio-demographic data sheet Geriatric Depression Scale (Sherry A Greenberg, 2022), and the UCLA Loneliness Scale (Daniel W Russell, 1994). The obtained data was analyzed using the SPSS tool and used 't' test, ANOVA, and Correlation. Through a comprehensive analysis of the collected data, a significant relationship between financial factors and the experiences of loneliness and depression in the elderly population was revealed. These findings emphasize the critical role that economic stability plays in the mental well-being of older adults.

Keywords: Isolation, depression, financial factors

Introduction:

In an aging global population, the emotional well-being of elderly individuals has emerged as a critical concern. Feelings of isolation and depression among the elderly can have profound implications for their overall quality of life. While numerous factors contribute to these emotional struggles, the role of financial income in exacerbating or alleviating such sentiments remains an underexplored yet pivotal aspect.

A stable and sufficient income source, such as a pension or savings, provides the elderly with a sense of financial security. This security can alleviate worries about basic needs like housing, healthcare, and food, reducing anxiety and the risk of depression. Also, income often facilitates social engagement opportunities. Elderly individuals with the means to participate in social activities, travel, or hobbies are more likely to stay connected with friends, family, and their communities. Social engagement is a potent antidote to loneliness. The income–depressive symptoms relationship among older adults is likely due to psychosocial factors (Geyer et al. 2006; Osafo et al. 2015). Low income levels can create financial strain and daily stress, involving worries over financial matters and the future of household members (Zimmerman and Katon 2005). In the case of older adults, several recent studies in Europe have incorporated income into their analyses. The evidence generated by these studies suggests that household income inequality plays a remarkable role in the social gradient in depression among older adults (Brinda et al. 2016; Freeman et al. 2016).

Adequate income enables access to healthcare services, including mental health support. Regular medical check-ups and counseling can prevent or manage depression, ensuring a higher quality of life. Also, stable income has a significant role in maintaining independence. Income can enable elderly individuals to continue living independently. This independence preserves their sense of agency and control over their lives, reducing the risk of feeling isolated or dependent on others. Another important advantage of income source is it reduces financial stress. A lack of financial resources can lead to constant stress, which is a known contributor to depression. Having a reliable income source minimizes financial stressors and allows the

elderly to focus on their emotional well-being. Ultimately, income source significantly influences the overall quality of life for the elderly. It impacts their ability to engage in enjoyable activities, maintain social connections, and access essential services, all of which play crucial roles in combating loneliness and depression.

The source and adequacy of income for the elderly have a profound impact on their mental and emotional well-being. Exploring this relationship is essential in developing strategies to enhance the lives of our aging population and address the growing concerns of loneliness and depression among them. Thilak (June 2016), had worked on “Prevalence and factors associated with depression among the elderly in rural areas of Kannur, North Kerala, and India: a cross-sectional study”. The study was conducted at two-gram panchayat areas of Kannur Medical College surrounding. Findings suggested that depression in this area was very high and associated factors were financial dependency and one or more co-morbidities causing more worsening of the cases.

This research endeavors to shed light on the intricate relationship between financial income and the mental health of the elderly, delving into the nuanced ways in which economic resources can either serve as a buffer against isolation and depression or act as an additional stressor in their lives.

Results & Discussion

From the ANOVA analysis concerning income the calculated ‘F’ value of geriatric depression is 2.43, which is lower than the table value 2.99 and it is not significant. So there is no significant difference in geriatric depression among old age people based on their education. In the case of loneliness, the ‘F’ value is 6.29 which is higher than the table value 4.60 and it is significant at 0.01 levels. So there is a significant difference in loneliness among old age people based on their source of income.

The present findings supported the study of Rajesh Gupta (2005) et al who found that there is a significant difference in loneliness between sources of income showing that elderly individuals relying on traditional agricultural income reported higher levels of loneliness.

On analyzing the Post Hoc test for loneliness concerning sources of income such as current job, pension, and rented, the total score obtained for loneliness is higher among samples residing in rent compared to samples having current job. Loneliness is higher among the sample belonging to the rent source of income. Loneliness is comparatively lower among the sample belonging to the current job in the source of income. Pension and rent as sources of income did not differ from each other.

The present findings supported the study of Rajesh Gupta (2005) et al the study found that there is a significant difference in loneliness between sources of income that show the elderly.

Conclusion:

In conclusion, this research has shed light on the significant role that income plays in the isolation and depression experienced by the elderly. The findings underscore the harsh reality that older individuals with lower financial stability are more vulnerable to feelings of loneliness and depression. As our aging population continues to grow, it becomes increasingly imperative for society to address the economic disparities that contribute to the well-being of our elderly citizens. By recognizing and addressing these challenges, we can work towards fostering a

more inclusive and supportive environment for our aging population, ultimately improving their overall quality of life and mental health.

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Does Number of Children Influence Life Satisfaction & Quality of Life? A Study among Elderly

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Abstract:

The primary objective of the study was to evaluate life satisfaction and quality of life among elderly parents living alone. The study was conducted on a group of 202 elderly including both males (N=80) and females (N=122). The convenient sampling method was used to select samples. The present study tries to find out any significant difference in Life satisfaction and Quality of life with respect to the number of children. The tools used were a self-prepared questionnaire, a life satisfaction scale, and a quality of life scale. The Data was collected by using a survey method. The statistical procedures used to analyze the acquired data were the 't' test, ANOVA, and correlations. The study reveals that life satisfaction and quality of life have a significant difference with respect to the number of their children.

Introduction:

The dynamics of family structures and demographics have undergone significant transformations in recent decades, with a notable shift in the size of families and the aging population. One intriguing aspect of this evolution lies in the influence of the number of children on the life satisfaction and quality of life experienced by the elderly. As societies continue to grapple with aging populations and changing family patterns, understanding the intricate relationship between the number of children and the well-being of the elderly has become increasingly relevant.

Doerwaldet. al, in ' Domain specific life satisfaction among older adults with and without children: the role of intergenerational contact' shows that the domain-specific approach to life satisfaction can elucidate differences in the correlates of life satisfaction and well-being between older adults with and without children. They further suggest that the benefits of working with children for life satisfaction may be more pronounced in older adults without children than older adults with children.

The relationship between the numbers of children a person has and their quality of life and life satisfaction in old age is a complex and multifaceted one. It encompasses various social, economic, and emotional factors that can significantly influence the well-being of the elderly. This relationship can have a key influence on the lives of the elderly. Firstly, it is the social Support. The number of children can impact the level of social support available to an elderly individual. More children can potentially mean a larger network of family members to provide emotional, physical, and financial support. This support can enhance the overall quality of life and life satisfaction of the elderly by reducing feelings of isolation and loneliness. Secondly, a greater number of children can lead to a larger pool of potential caregivers and financial contributors. This can alleviate financial stress in old age, improving access to healthcare, housing, and other essential needs, thus enhancing quality of life. On the flip side, having more children can also mean more caregiving responsibilities for the elderly. While this can provide emotional satisfaction and a sense of purpose, it can also be physically and emotionally draining, potentially affecting life satisfaction. Also, the physical health and mobility of the elderly can influence the impact of the number of children on their quality of life. Healthier

individuals may derive more satisfaction from interacting with their children and engaging in family activities.

In a study conducted by Shiv Prakash (2020) among 100 elderly, most of the respondents (30%) who live with their adult children were satisfied in their lives, and but remaining group, those who are living alone or independently were slightly not satisfied.

Even though, in another study conducted by, Papi and Cheraghi,(2001), showed that the majority of older adults had low or moderate life satisfaction. Life satisfaction was not favorable in older adults. This research has demonstrated that older adults with fewer children had a higher score in life satisfaction which was contrary to the older adults traditional attitude towards having more children in the family.

In essence, the relationship between the number of children and the quality of life and life satisfaction among the elderly is highly individualized and context-dependent. It involves a complex interplay of social, economic, emotional, and cultural factors that require careful examination to draw meaningful conclusions and provide insights into how best to support our aging populations.

This research endeavors to explore the multifaceted connections between family size and the contentment and overall quality of life among the elderly, shedding light on an essential aspect of gerontology in our evolving world.

Results & Discussion:

The major findings of the study are given below:

Table 1. ANOVA of life satisfaction and quality of life based on the number of children

Variables		Sum of square	Df	Mean of square	F
Life satisfaction	Between groups	278.112	3	92.70	1.613
	Within groups	11377.49	198	57.46	
	Total	11655.60	201		
Quality of life	Between groups	1419.35	3	473.11	2.98*
	Within groups	31339.54	198	158.28	
	Total	32758.89	201		

*significant at 0.05

The ANOVA of life satisfaction and quality of life of samples based on their number of children shows there is no significant difference in life satisfaction based on the number of children. But quality of life shows a significant difference and the calculated 'F' value is 2.98 which is higher than the table value.

The present findings supported the study of Henning-Smith, C. (2016). The study found a significant positive difference between the number of children an elderly person has and their overall quality of life.

Table 2. Post hoc of quality of life based on the number of children

Number of children	N	Subset of alpha =0.05	
		1	2
1	39	92.12	
Above 3	36	94.94	94.94
3	29	96.65	96.65
2	98		98.94
Sig.		0.127	0.178

As per the above table elderly having 2 children kept difference with having 1 children. It is higher among elderly having 2 children and lower among 1 children. The elderly having 3 children and above 3 children do not differ from each other.

From the analysis of data, it is evident that elderly individuals with more children tend to report higher levels of social support, emotional well-being, and overall quality of life.

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Influencing Factors of Dyadic Adjustment among Middle-Aged Couples

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Abstract

The primary objective of the study was to identify the Influencing factors of Dyadic Adjustment among Middle-aged couples. The study was conducted on a group of 290 Middle aged couples including both males and females. The convenient sampling method was used to select samples. The tool used to assess Dyadic adjustment was the Revised Dyadic Adjustment Scale. The Data was collected by using a survey method. The study found that there are significant differences in Dyadic Adjustment among middle-aged couples based on certain demographic factors. Such as age. Family structure, Number of Children, Place of residence. Further, it revealed that the Dyadic Adjustment among middle-aged couples did not vary based on Gender, Education, Monthly Income, and Duration of Marital life. The study also revealed that Dyadic Adjustment is related to age, as the age increased the Dyadic Adjustment increased.

Keywords –Dyadic Adjustment, Middle aged couples

Introduction

Dyadic adjustment, referring to the quality of a romantic relationship between two individuals, is influenced by a multitude of socio-demographic factors. These factors encompass various aspects of individuals' lives, such as age, education, income, and cultural background. Age can impact dyadic adjustment as younger couples may face different challenges and priorities compared to older couples. Education can influence communication and problem-solving skills, while income can affect stress levels and access to resources.

Cultural backgrounds bring diverse values and expectations into the relationship, affecting everything from gender roles to conflict resolution styles. Additionally, factors like urban or rural living, religious beliefs, and family structures all play a role in shaping dyadic adjustment. Understanding how these socio-demographic factors intersect and influence a couple's relationship dynamics is essential for promoting healthy and thriving partnerships.

Dyadic adjustment among middle-aged couples is a complex and evolving dynamic influenced by various factors. During this life stage, couples often navigate a multitude of challenges, including career changes, raising children, and potential shifts in personal goals and values. Maintaining a healthy dyadic adjustment becomes crucial at this juncture. Communication and empathy remain key components, as couples must adapt to evolving needs and expectations. Middle-aged couples may also experience a renewed sense of intimacy and companionship as they face an "empty nest" phase, with children leaving home. Overall, dyadic adjustment for middle-aged couples hinges on their ability to effectively communicate, support each other's growth and aspirations, and find new ways to sustain their bond as they journey through this pivotal life stage.

Results and Discussions

The study revealed that dyadic Adjustment was higher among middle-aged couples belonging to nuclear families. The 't' value of Dyadic Adjustment 3.29 Is greater than the table value. The Subscales of Dyadic Adjustment such as Consensus, Satisfaction, and Cohesion Show significant differences The 'value of Consensus is 2.00, Satisfaction 2.85, and Cohesion 4.27 which is greater than the table value. The mean of the nuclear family and joint family is 24.78

and 23.71, Satisfaction 16.43 and 15.38, and Cohesion 13.58 and 11.54. The mean of the Dyadic Adjustment and its Subscales are higher among members of the nuclear family than those Joint family.

Dyadic Adjustment is positively related to age, which means that as age increases, the dyadic adjustment increases. According to the Correlation table, there is a significant relationship between age and dyadic Adjustment. There is a relationship between Subscales Consensus and total Dyadic Adjustment with age and the relationship is significant at 0.05 level. The subscale satisfaction is also keeping a significant relationship with age at 0.01 level.

Further, the study revealed that middle-aged couples having single children showed higher levels of Dyadic Adjustment than couples having more children. From the ANOVA analysis with respect to the number of Children the calculated 'F' value of satisfaction is greater than the table value and it is statistically significant. The difference is significant at 0.05 level. Cohesion (3.41) and total Dyadic Adjustment (3.88) are greater than the table value and it is statistically significant. These findings are supported by research done by Douglas et al., (1985). The study found that significant difference with Dyadic Adjustment based on the number of children.

The calculated 'f' value of satisfaction (7.70) is greater than the table value and it is statistically significant, the difference is significant at 0.001 level. Cohesion (3.48) and total Dyadic Adjustment (4.59) are greater than the table value and are statistically significant. The difference is significant at 0.05 level. Consensus (2.10) is lower than the table value it is not statistically significant. The study revealed that dyadic Adjustment was higher among semi-urban.

Conclusion

The study found that there are significant differences in Dyadic Adjustment among middle-aged couples based on certain demographic factors. Such as age, Family structure, Number of Children, and Place of residence. Further, it revealed that the Dyadic Adjustment among middle-aged couples did not vary based on Gender, Education, Monthly Income, and Duration of Marital life. The study also revealed that the Dyadic Adjustment is related to age, as the age increased the Dyadic Adjustment among middle-aged couples increased. The study was conducted within a limited period, so it has certain limitations. But Dyadic Adjustment research is relevant because it helps us better understand, assess, and improve the quality of romantic relationships, which has significant implications for individuals, couples, and society as a whole.

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Role of Marital Status in Loneliness & Depression among Elderly

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Abstract:

This research study investigates the influence of marital status on feelings of loneliness and levels of depression among elderly individuals aged 60 and above. A convenient sampling method was employed to gather data from a diverse sample of 250 participants, comprising both men and women. The tools used for data collection are a demographic data sheet, the UCLA (University of California, Los Angeles) Loneliness Scale, and the Geriatric Depression Scale. The analysis utilized statistical tests, including mean and standard deviation, t-tests, ANOVA, and correlation, to explore the relationship between marital status and the emotional well-being of the elderly population. The study's major findings reveal that marital status significantly impacts feelings of loneliness and levels of depression among elderly individuals. Notably, the data underscores the profound effect of widowhood on these emotional states. Widowed elderly participants reported significantly higher levels of both loneliness and depression compared to their married counterparts.

Introduction:

In an era marked by rapid demographic shifts and an aging global population, the well-being of elderly individuals has gained increasing significance. Among the multifaceted challenges faced by this demographic group, loneliness, and depression stand out as critical concerns that affect not only the individuals themselves but also society as a whole. Loneliness and depression in the elderly are complex phenomena, influenced by a myriad of factors, one of which is marital status.

Jabin (2016), in her article "Loneliness & Depression among Old Aged People," tried to find out the relationship between loneliness and depression among old aged people, assessed the degree of depression, and examined the level of loneliness among the elderly. The findings, on the whole, indicated that there was a significant difference between loneliness and depression levels in old people.

Marital status is one significant factor that can influence these emotions. While marriage can provide companionship and emotional support, it doesn't guarantee immunity from loneliness and depression in old age. Widowhood, divorce, or never having married can introduce unique challenges.

The role of marital status in shaping the emotional and psychological experiences of elderly individuals has long been a subject of interest for researchers, policymakers, and healthcare professionals. Marriage, traditionally seen as a source of emotional support and companionship, can play a pivotal role in alleviating feelings of loneliness and depression. Conversely, the absence of a spouse, either due to widowhood or lifelong singlehood, can exacerbate these emotional challenges. Singh and Kiran (January 2013), carried out a study on "Loneliness among elderly women". This study was focused on various theories with special reference to widowhood from a loneliness perspective. Findings suggested that older women report more loneliness than male peers. The other truth comes out that widowhood and relocation have increased the vulnerability to loneliness.

In a study conducted by Zhao, L, et.al (2022), the results showed that middle-aged and older women were more likely to suffer from depression than men, and married middle-aged and older people were less likely to be depressed than those who were separated or divorced, widowed and never married

This research endeavor seeks to delve into the intricate interplay between marital status and the mental well-being of elderly individuals. By examining the impact of marriage, widowhood, and singlehood on loneliness and depression among the elderly, this study aims to provide valuable insights that can inform healthcare interventions, support systems, and policy decisions aimed at enhancing the quality of life for this vulnerable population. The significance of this research lies not only in its potential to uncover empirical evidence but also in its broader societal implications.

As the global elderly population continues to grow, understanding how marital status influences emotional well-being becomes increasingly vital for fostering healthier aging and addressing the rising burden of mental health issues among the elderly. In this comprehensive exploration of the role of marital status in loneliness and depression among elderly individuals, we will examine existing literature, present methodological approaches, and anticipate potential findings. Ultimately, this research endeavor seeks to contribute to the ongoing dialogue on aging, mental health, and the dynamics of marital relationships in the context of the elderly population.

Results & Discussion:

In the analysis using ANOVA, The calculated 'F' value of geriatric depression is 25.59 which is higher than the table value of 3.32 and it is significant at 0.01 level. So there is a significant difference in geriatric depression among old age people based on their marital status. Hence the hypothesis will have a significant difference in geriatric depression among old age people based on marital status.

In the case of loneliness, the 'F' value is 51.96 which is higher than the table value of 3.32 and it is significant at 0.01 levels. So there is a significant difference in loneliness among old age people based on their marital status. Hence the hypothesis will have a significant difference in loneliness among old age people based on marital status.

The Post Hoc test for geriatric depression shows that the total score of geriatric depression is higher among the sample residing in widow compared to samples married. Geriatric depression is higher among the sample belonging to the widow category. Geriatric depression is comparatively lower among the sample belonging to married. Divorced, widower, and widow did not differ from each other.

The present findings supported the study of Alejandro Gomes (1998) et. al the study found that there is a significant difference in geriatric depression with respect to marital status.

Also, the Post Hoc test for Loneliness shows that the total score of loneliness is higher among the sample residing in widow compared to samples of married and single. Loneliness is higher among the sample belonging to the widows. Loneliness is comparatively lower among the sample belonging to married and single. Widower and widow did not differ from each other.

Conclusion:

The present findings supported that the study of Prof.Sofia Hernandez (1994) et.al. The study found that there is a significant difference in loneliness with respect to marital status.

Loneliness and depression mostly occur among widows due to the loss of loved ones and nobody to support them social exclusion also being the reason behind the serious difference in loneliness and depression among old age people compared to the marital status.

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A Study on Internet Addiction and Psychological Distress among Early Adulthood with Special Reference to Ramankary Grama Panchayath

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Abstract

The study aims to investigate the prevalence of internet addiction, psychological distress, and self-esteem in early adulthood. In this study, the term Early Adulthood refers to the individual who falls in the age range of 18 to 29 years in Ramankary Grama Panchayat. A total of 120 participants were selected from Ramankary Grama Panchayath using the convenient sampling method. The participants included both males (N=62) and females (N=58). Descriptive research designs were used in this research. The tools used were self-prepared questionnaires, the Young Internet Addiction Test, the Kessler Psychological Distress Scale, and the Rosenberg self-esteem scale. The data was collected using online questionnaires.

Keywords: internet addiction, psychological distress, self-esteem, early adulthood

Introduction

In the contemporary digital era, the internet has become an indispensable part of our lives, transforming the way we communicate, work, access information, and entertain ourselves. Its vast array of online platforms and services has opened up endless opportunities, connecting people across borders and fostering global communities. However, along with its many advantages, the internet also poses certain challenges, one of which is internet addiction.

Internet Addiction Disorder (IAD) is a definition introduced by Ivan Goldberg in 1995. It describes net addiction as “a pathology, a disorder, overuse of this technology, including a wide range of behaviors and impulse control. (Goldberg, 1995). Excessive and compulsive reliance on the Internet that interferes with a person's everyday life, relationships, and general well-being is referred to as Internet addiction. It is characterized by an insatiable drive to use the internet, discourses neglect of obligations decreased productivity, and withdrawal symptoms when Internet usage is restricted. Although the idea of addiction is not new, the internet's development has given addicting behaviors a new channel through which to express themselves.

According to a report published by IAMAI(Internet and Mobile Association of India), the majority of Indians have become active Internet users with 52% of the population, or 759 million people accessing the Internet at least once a month in 2022, according to a report published by IAMAI and Kantar Wednesday. By 2025, the number is expected to grow to 900 million.(Romita Majumdar,, Bureau ET. IAMAI Report.2023).

Psychological Distress is a set of painful mental and physical symptoms that are associated with normal fluctuations of mood in most people. In some cases, however, psychological distress may indicate the beginning of a major depressive disorder, anxiety disorder, schizophrenia, somatization disorder, or a variety of other clinical conditions. It is thought to be what is assessed by many putative self-report measures of depression and anxiety.

A person's daily functioning and general quality of life can be significantly impacted by psychological distress. It can make it difficult for them to perform well at job or school, strain their connections, and prevent them from fully engaging in formerly enjoyable activities. Psychological distress can develop into more severe mental illnesses including major depressive disorder, generalized anxiety disorder, or post-traumatic stress disorder if it is not treated.

Promoting mental health and halting further psychological decline requires identifying and treating psychological suffering. Individuals can get the assistance and treatment alternatives they need by consulting mental health professionals like psychologists or therapists. Therapy, counseling, medicine, or a combination of strategies adapted to the individual's particular needs may all be included in the course of treatment.

Self-esteem, as an overall reflection of an individual's self-worth, encompasses beliefs about oneself as well as an emotional response to those beliefs. Representing the capacity to feel worthy of happiness and be able to successfully address life challenges, self-esteem is an important determinant of early adults mental health and development. Self-esteem is needed for the efficient functioning of their lives.

It is important to know the magnitude of internet addiction psychological distress and self-esteem among adults before the initiation and implementation of intervention strategies. The present study will provide baseline data on these three factors among early adults. The study findings can help understand the implications of internet addiction, psychological distress, and self-esteem among early adults, and provide impetus for policymakers, and stakeholders in health and education sectors to initiate policies that will address these issues among early adults.

Results & Discussions

The study shows that only 73.4% of respondents are addicted to the Internet. The rest 26.6% of respondents are not addicted to the Internet. The majority of the respondents have a moderate level of internet addiction (33.3%). 23.3% of respondents have mild levels of internet addiction and 16.6% of respondents have severe levels of internet addiction. The study reveals that the majority of the respondents spent more time being online, preoccupied with the internet and it also interfered with their daily activities. The study depicts that 75% of respondents have psychological distress and only 25% of the samples are likely to be well. The severity of psychological distress varies from mild level to severe levels 40% of the respondents have mild level to severe levels.

13.3% of respondents have severe levels of psychological distress. It is followed by 21.6% of respondents having a moderate level of psychological distress and 40% of respondents having a mild level of psychological distress. The study shows that 13.3% of respondents are at a higher risk for mental health problems. The study shows that overall self-esteem levels among the respondents are low (53.3%). 46.6% of respondents have a normal level of self-esteem.

Conclusion

Throughout the study, various key findings and implications have emerged, offering valuable insights into the prevalence and range of internet addiction, psychological distress,

and self-esteem among early adults. The study revealed a significant prevalence of internet addiction among early adults, indicating a concerning pattern of excessive and compulsive internet use. The study depicts majority of the respondents have an addiction to the Internet. Through the Kessler Psychological Distress scale, the study highlights the substantial prevalence of psychological distress among adults. The majority of the respondents have psychological distress and it varies from mild level to severe level of distress. The study revealed the considerable prevalence of low self-esteem among young adults in the early stages of adulthood. The findings reveal that a significant portion of individuals in this age group struggle with negative self-perceptions, self-doubt, and feelings of inadequacy. This emphasizes the importance of addressing low self-esteem and its potential impact on overall well-being during this critical developmental period. By recognizing the prevalence, contributing factors, consequences, and potential interventions associated with these issues, policymakers, mental health professionals, educators, and individuals themselves can work collaboratively to develop comprehensive strategies and support systems. These efforts aim to promote healthy internet use, enhance mental well-being, and foster a positive sense of self-esteem, empowering young adults to navigate the challenges and transitions of early adulthood successfully.

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Resilience among Type 2 Diabetic Patients

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Abstract

The prime objective of the study was to explore the resilience among type 2 diabetes patients. The samples (aged 40 – 60) were selected by using the convenient sampling method (N=210). The questionnaire method was used to collect data and the Resilience scale (Annalakshmi, 2009) was administered to assess the resilience level among the sample. The study found that resilience is higher among people with type 2 diabetes. The study also revealed that people with type 2 diabetes have more age and above 10 years duration of illness showed a greater level of resilience.

Keywords: Resilience. Type 2 Diabetes

Introduction

Resilience is defined as a dynamic process that individuals exhibit positive behavioral adaptation when they encounter significant adversity, trauma, (Luthar, Cicchetti, & Becker, B, 2000) tragedy, threats, or even significant sources of stress. It is different from strengths or developmental assets which are a characteristic of an entire population, regardless of the level of adversity they face. Under adversity, assets function differently (a good school, or parental monitoring, for example, have a great deal more influence in the life of a child from a poorly resourced background than one from a wealthy home with other options for support, recreation, and self-esteem) (Annunziata, Hogue, Faw. & Liddle, 2006). Resilience is a two-dimensional construct concerning the exposure to adversity and the positive adjustment outcomes of that adversity (Luthar & Cicchetti, 2000). This two-dimensional construct implies two judgments: one about a “positive adaptation” and the other about the significance of risk.

Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose (or blood sugar), which leads over time to serious damage to the heart, blood vessels, eyes, kidneys, and nerves. The most common is type 2 diabetes, usually in adults, which occurs when the body becomes resistant to insulin or doesn't make enough insulin. In the past 3 decades, the prevalence of type 2 diabetes has risen dramatically in countries of all income levels. Type 1 diabetes, once known as juvenile diabetes or insulin-dependent diabetes, is a chronic condition in which the pancreas produces little or no insulin by itself. For people living with diabetes, access to affordable treatment, including insulin, is critical to their survival. There is a globally agreed target to halt the rise in diabetes and obesity by 2025(WHO 2023).

Type 2 diabetes is a condition that happens because of a problem in the way the body regulates and uses sugar as a fuel. That sugar also is called glucose. This long-term condition results in too much sugar circulating in the blood. Eventually, high blood sugar levels can lead to disorders of the circulatory, nervous, and immune systems. In type 2 diabetes, there are primarily two problems. The pancreas does not produce enough insulin — a hormone that regulates the movement of sugar into the cells. Cells respond poorly to insulin and take in less sugar. Type 2 diabetes used to be known as adult-onset diabetes, but both type 1 and type 2 diabetes can begin during childhood and adulthood. Type 2 is more common in older adults.

Results and Discussions

Sugar levels, adopt healthier lifestyles, and adapt to the challenges of diabetes. Also, they have

a heightened awareness of long-term complications associated with diabetes, motivating them to take better care of their health. As people age they may be more inclined to make positive lifestyle changes such as improving their diet, increasing physical activity, and managing stress which contributes to better diabetic management (DeNisco, 2011). And the study shows that resilience was higher among 40-50 age groups of people. It is mainly the patients who have lived with diabetes for a longer time that tend to develop better-coping mechanisms and adapt to the challenges of managing their conditions. They become Resilience is higher among type 2 Diabetic patients. It is because, mainly type 1 diabetes is affected at younger ages and they may take restrictions on food, start to take medicines from the younger period of life, and have created high worries and stress related to the chronic illness. In the case of type 2 diabetic patients, the condition starts from the elder stage of life and they start to accept the condition. They may have learned how to better control their blood more familiar with their dietary, medications, and lifestyle needs. Long-term diabetic patients often have established relationships with healthcare providers. Regular checkups, monitoring, and adjustments to their treatment plan can help maintain better control over blood sugar levels and overall health.

People with diabetes often make lifestyle modifications to manage their condition effectively. Those with a longer duration of illness may have incorporated healthier habits into their daily routine, such as regular exercise and a balanced diet. Over a long-term illness condition, psychological resilience can also develop within the patient. Thus, the patient may develop a positive mindset, better stress management skills, and a sense of empowerment in managing their health. Long-term diabetic patients may belong to support groups or communities where they can share experiences and strategies for managing the condition, providing valuable emotional support. The heightened resilience can be attributed to these several factors. The experience of living with diabetes can foster a sense of empowerment and self-efficacy as individuals learn to navigate the complexities of their condition. This increased self-confidence can contribute to higher resilience as they become more capable of handling adversity and adapting to changes in their health. It can be concluded that diabetic patients with type 2 respect to having a higher duration of illness, and with aged group of people has greater resilience.

Conclusions

Patients with diabetes 2 have greater resilience than those with type 1 diabetes. The higher age group range, with respect to the duration of illness, which is greater than that of above 10 years of illness has greater resilience. The study was conducted within a limited period, so it has certain limitations. However, the study shed light on type 2 diabetic patients having greater resilience than type 1.

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Influence of Gender and Age on Sibling Relationship among Middle-Age

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Abstract:

The prime objective of the study was to explore the relationship between adult siblings in middle age based on gender and age. The sample (aged 40 to 60) was selected by using a convenient sampling method (N=299, males N=147 and female N=152). The questionnaire method was used to collect data. The Adult Sibling Relationship Scale (ASRS) was prepared by Shobha Nandwana and Madhur Katoch was used for the study. The study found that the adult sibling relationship is more common among people belonging to the age group 40 to 50 than among people belonging to the age group 51 to 60. The study also revealed that adult sibling relationships in females were more than that in males.

Keywords: Gender, Age, Sibling Relationship, Middle Age

Introduction

Adulthood marks a significant phase in an individual's life, representing a time of transition, growth, and self-discovery. As one emerges from the sheltering cocoon of youth, the journey toward adulthood introduces a range of new challenges, responsibilities, and opportunities. According to Dunn, J., and Kendrick, C. (1982), Sibling relationship refers to the bond and connection between individuals who share at least one biological or adoptive parent. Sibling relationship refers to the bond and connection between individuals who share at least one common biological or adoptive parent. Siblings are brothers and sisters, and the relationship can be characterized by love, rivalry, support, and shared experiences.

In the human life cycle, middle age refers to the period of life that occurs after early adulthood and before late adulthood. It is characterized by individuals typically being between the ages of 40 to 65 years old. During this phase, people often experience various physical, psychological, and social changes, which may include adjustments in career, family roles, and personal priorities. Erik H. Erikson (1950). It's important to remember that everyone ages differently, and individual experiences of middle age can vary widely. Some individuals may experience a sense of fulfillment and contentment during this period, while others may face significant challenges or changes. The concept of middle age is just one way of understanding and categorizing different stages of the human lifespan. An individual thrives within a network of relationships with parents, grandparents, friends, and siblings. Siblings are vital members of kin in fostering an individual's development. Sibling relationship fulfills different needs and holds different meanings for adults. Sibling bonds may become more salient during adult years as a source of emotional support. Key life transitions play a role in early adulthood, sibling relationships that are marked by increased separation and decreased overs quality are affected by events like marriage, an increase in geographic proximity among siblings, the birth of a child, or establishment in career On the other hand during late adulthood, that age 60 and over siblings become undoubtedly of great importance, Intensity of the sibling relationship resumes after demands of career and children diminishes and solidarity between siblings becomes even stronger than that with parents. Caring for aging parents and property inheritance has been suggested as a source of conflict for siblings, but may also bring them closer (Bedford, 1996) Sibling contact becomes voluntary and ties become loosened and diffused Even though general contact includes phoning or in-person contact, residential proximity and quality of the sibling-inlaw relationship has been associated with frequency of contact and it places obvious constraints on interaction.

Gender exerts a profound influence on adult sibling relationships. Societal norms and expectations related to gender roles and behavior play a pivotal role in shaping the dynamics between brothers and sisters as they grow into adulthood. These influences manifest in communication styles, emotional expression, and even the division of responsibilities within the sibling bond. Exploring how gender impacts adult sibling relationships provides valuable insights into the intricacies of familial connections and the interplay between societal constructs and personal experiences.

Result and Discussion

There is a significant difference in adult sibling relationships based on age group. As adult siblings age, their relationships can evolve in complex ways. Factors such as changing life stages, geographic separation, and evolving priorities can impact the closeness between them. As individuals mature, they often take on responsibilities like starting families and pursuing careers, leaving less time for sibling bonding. Geographic separation, driven by career choices or personal circumstances, can also hinder regular interaction. Additionally, divergent interests, personal growth, and shifting values can lead to differences that affect the connection between adult siblings. While age can potentially decrease the frequency of contact and shared experiences, it's important to remember that sibling bonds can remain strong with effort and communication. A study on Sibling Relationships over the Life Course conducted by Lynn White(2004) also supports this finding. The study found that the measures(dimensions) of sibling relationships decline significantly with respect to increase in age.

The study revealed that there is a significant difference in adult sibling relationships based on gender. Adult siblings' relationships can indeed be influenced by gender. Females tend to maintain closer and more frequent connections with their siblings than males. This phenomenon is often attributed to societal norms emphasizing emotional expression and communication among women. Female siblings often bond over shared experiences, emotions, and caregiving roles, fostering stronger relationships. In contrast, societal expectations for males may encourage independence and less emotional sharing, potentially leading to more distant sibling relationships. However, it's essential to note that individual personalities, family dynamics, and cultural factors also play significant roles in shaping sibling relationships, making each case unique. A study conducted by Connidis and Leder(1993) shows the complications in adult sibling relationships. According to the study, conflict is more between male siblings than female siblings.

Conclusion

The adult sibling relationship is more common among people belonging to the age group 40 to 50 than people belonging to the age group 51 to 60. When the age increases the sibling relationship becomes decreased. So age has a significant role in the adult sibling relationship. Also, females have more adult sibling relationships than males. The study was conducted within a limited period, so it has certain limitations. However, the study gives an elaborate idea about adult sibling relationships influenced by age and gender.

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An Overview about Tax

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Abstract

The word tax is derived from the Latin word “taxare” meaning to estimate. It is a compulsory contribution to the state revenue levied by the government on worker’s income and business profits or added to the cost of some goods, services and transactions. In general, it is a financial charge or fee imposed by the government and tax is the principal source of revenue for a country’s government.

Keywords: Tax, Assessment year, financial Year

Introduction

The first known taxation system was in Ancient Egypt around 3000-2800 BC, with the most widespread form being the corvée and tithe. The corvée was forced labor provided by poor peasants to the state, while tithes were collected by the Pharaoh. Early taxation is also described in the Bible, where Joseph instructed the people of Egypt to divide their crops and give a portion to the Pharaoh. In India, taxation is rooted in the Manu Smriti and Arthashastra periods and is based on the theory of maximum social welfare. Taxes are the largest source of income for the government, and they are determined by the Central and State Governments, local authorities, and municipal corporations. The authority to levy taxes is derived from the Constitution of India, which requires each tax to be backed by an accompanying law.

Introduction To Gst

The first known taxation system was in Ancient Egypt around 3000-2800 BC, with the most widespread form being the corvée and tithe. Early taxation is also described in the Bible. In India, taxation is rooted in the Manu Smriti and Arthashastra periods and is based on maximum social welfare. Taxes are the largest source of income for the government, determined by Central and State Governments, local authorities, and municipal corporations. The authority to levy taxes is derived from the Constitution of India, which requires each tax to be backed by an accompanying law.

The proposed GST system in India will maintain the central government's power to impose taxes on inter-state trade and commerce, while states can levy GST on intrastate transactions. The GST Council will administer the system, with a turnover threshold of Rs. 1 million. The central government will impose IGST on inter-state goods and services supply, while imports will be subject to basic customs duty and IGST. GST will cover central and state-level taxes, with a provision to remove entry tax/octroi. Entertainment tax will be subsumed, but taxes on entertainment at the panchayat, municipality, or district level will continue.

Benefits Of Gst

- ✓ Removal of bundled indirect taxes such as VAT, CST, Service tax, CAD, SAD, and Excise.
- ✓ Less tax compliance and a simplified tax policy compared to the current tax structure.
- ✓ Removal of cascading effect of taxes i.e. removes tax on tax.
- ✓ Reduction of manufacturing costs due to lower burden of taxes on the manufacturing sector. Hence prices of consumer goods will be likely to come down.
- ✓ Lower the burden on the common man i.e. public will have to shed less money to buy the

- same products that were costly earlier.
- ✓ Increased demand and consumption of goods.
- ✓ Increased demand will lead to increased supply. Hence, this will ultimately lead to a rise in the production of goods.
- ✓ Control of black money circulation as the system normally followed by traders and shopkeepers will be put to a mandatory check.
- ✓ Boost to the Indian economy in the long run.

Dual GST Model | GST Details

Before discussing GST details we shall first discuss what is dual GST and why is it required. The Dual GST is assumed to be a simple tax with one or two Central Goods and Service Tax (CGST) and State Goods and Services Tax (SGST) rates. In India, both the Centre and State have been assigned the powers to levy and collect taxes through appropriate legislation. Both the Centre and State Government have distinct responsibilities to perform according to the division of powers as prescribed in the Constitution that needs resources for implementation. A dual GST therefore, is appropriately aligned with the Constitutional requirement of fiscal federalism.

Features of the proposed dual model

GST consists of two components: Central GST, levied by the Centre, and State GST, levied by the States. Both apply to all transactions of goods and services, and taxes paid against Central GST can be taken as input tax credit (ITC). Cross-utilization of ITC between Central GST and State GST is only permitted for inter-state supply. Credit accumulation on refund of GST should be avoided, except for exports and capital goods purchases. A uniform procedure for collection and a common format for taxpayers are required.

Taxes to be Subsumed Central Tax and Levies to be Subsumed

- ❖ Central Excise duty
- ❖ Additional duties of excise
- ❖ Excise duty levied under medicinal
- ❖ Toiletries Preparation Act
- ❖ Additional Duties of Customers
- ❖ Service Tax
- ❖ Surcharges and Cesses

State Taxes and Levies to be subsumed

- ❖ VAT/Sales Tax
- ❖ Entertainment Tax (other than those levied by local bodies)
- ❖ Luxury Tax
- ❖ Purchase tax
- ❖ Entry Tax

Following is the list of indirect taxes in the pre –GST regime

- Central Excise Duty
- Duties of Excise
- Additional Duties of Excise
- Additional Duties of Customs
- Special Additional Duty of Customs
- Cess
- State VAT
- Central Sales Tax
- Purchase Tax
- Luxury Tax
- Entertainment Tax
- Entry Tax
- Taxes on advertisements
- Taxes on lotteries, betting, and gambling

Conclusion

An important turning point in India's taxation system is the Goods and Services Tax (GST). It simplifies the tax code, lessens the burden of compliance on companies, and makes doing business easier. By bringing down the price of consumer products and production, it promotes economic growth. GST promotes accountability and transparency, which reduces the flow of illegal money. It also drives demand, which increases supply and boosts the Indian economy. GST's successful implementation is a prime example of India's dedication to economic reform and world advancement.

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An Overview about GST

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Abstract

The Goods and Services Tax (GST) was introduced in India as a significant taxation reform since 1947. Implemented from July 1, 2017, it replaced various taxes and levies, including central excise duty, services tax, additional customs duty, surcharges, state-level value added tax, and Octroi. The dual GST system, SGST and CGST, was adopted for State and Central India.

Keywords: GST, SGST, CGST

Introduction

India's tax system is governed by the Central, State, and local governments, with some minor taxes levied by local authorities. Direct and indirect taxes are imposed on income, with indirect taxes collected by businesses. The retail industry is experiencing growth, with an estimated \$650 billion mark for organized retail by 2011, with \$421 billion investment planned for the next four years. Footwear has the highest organized retail penetration, followed by clothing. Overview on

CGST: Collected by the Central Government on an intra-state sale (Eg: transaction happening within Maharashtra) Under GST, CGST is a tax levied on Intra State supplies of both goods and services by the Central Government and will be governed by the CGST Act. SGST will also be levied on the same intra-state supply but will be governed by the State Government.

This implies that both the Central and the State governments will agree on combining their levies with an appropriate proportion for revenue sharing between them. However, it is mentioned in Section 8 of the GST Act that the taxes be levied on all Intra-State supplies of goods and/or services but the rate of tax shall not exceed 14%, each.

SGST: Collected by the State Government on an intra-state sale (Eg: transaction happening within Maharashtra) Under GST, SGST is a tax levied on Intra State supplies of both goods and services by the State Government and will be governed by the SGST Act. As explained above, CGST will also be levied on the same intra-state supply but will be governed by the Central Government.

Note: Any tax liability obtained under SGST can be set off against SGST or IGST input tax credit only. An example for CGST and SGST: Let's suppose Rajesh is a dealer in Maharashtra who sold goods to Anand in Maharashtra worth Rs. 10,000. The GST rate is 18% comprising of a CGST rate of 9% and an SGST rate of 9%. In such case, the dealer collects Rs. 1800 of which Rs. 900 will go to the Central Government and Rs. 900 will go to the Maharashtra Government.

IGST: Collected by the Central Government for inter-state sale (Eg: Maharashtra to Tamil Nadu)

Objectives of GST

The objective of the new taxation regime in short as under:

a. No cascading of taxes

- b. Reduced compliance cost
- c. Seamless flow of credit
- d. Less wastage of time and effort to comply
- e. Few numbers of taxes
- f. Transparent and corruption-free
- g. Supportive to compete at Domestic and International Markets
- h. Buoyancy in tax collection both for Central and State/UT
- i. Tax impact on inflation should be minimal

Features of GST

- (i) GST would be applicable on the “supply” of goods or services as against the present concept of tax on the manufacture of goods on the sale of goods or the provision of services.
- (ii) GST would be based on the principle of destination-based consumption taxation as against the present principle of origin-based taxation.
- (iii) It would be a dual GST with the Centre and the States simultaneously levying it on a common base. The GST to be levied by the Centre would be called Central GST (central tax-CGST) and that to be levied by the States [including Union territories with legislature] would be called State GST (state tax-SGST). Union territories without legislature would levy Union territory GST (union territory tax- UTGST).
- (iv) An Integrated GST (integrated tax- IGST) would be levied on inter-state supply (including stock transfers) of goods or services. This would be collected by the Centre so that the credit chain is not disrupted.
- (v) Import of goods would be treated as inter-state supplies and would be subject to IGST in addition to the applicable customs duties.
- (vi) Import of services would be treated as inter-state supplies and would be subject to IGST.
- (vii) CGST, SGST /UTGST & IGST would be levied at rates to be mutually agreed upon by the Centre and the States under the aegis of the GSTC.
- (viii) GST would replace the following taxes currently levied and collected by the Centre:
 - a) Central Excise Duty;
 - b) Duties of Excise (Medicinal and Toilet Preparations);
 - c) Additional Duties of Excise (Goods of Special Importance);
 - d) Additional Duties of Excise (Textiles and Textile Products);
 - e) Additional Duties of Customs (commonly known as CVD);
 - f) Special Additional Duty of Customs (SAD);
 - g) Service Tax;
 - h) Cesses and surcharges insofar as they relate to the supply of goods or services
- (x) GST would apply to all goods and services except Alcohol for human consumption.
- (xi) GST on five specified petroleum products (Crude, Petrol, Diesel, ATF and natural gas) would be applicable from a date to be recommended by the GSTC.
- (xii) Tobacco and tobacco products would be subject to GST. In addition, the Centre would continue to levy Central Excise duty.
- (xiii) A common threshold exemption would apply to both CGST and SGST. Taxpayers with an annual turnover of Rs. 20 lakh (Rs. 10 lakh for special category States (except J&K) as specified in article 279A of the Constitution) would be exempt from GST. A compounding option (i.e. to pay tax at a flat rate without credits) would be available to small taxpayers (including to manufacturers other than specified category of manufacturers and service providers) having an annual turnover of up to Rs. 75 lakh (Rs. 50 lakh for special category States (except J&K and Uttarakhand) enumerated in article 279A of the Constitution). The threshold exemption and compounding scheme would be optional.

- (xiv) The list of exempted goods and services would be kept to a minimum and it would be harmonized for the Centre and the States as well as across States as far as possible.
- (xv) All Exports and supplies to SEZs and SEZ units would be zero-rated.

GST benefits

It includes a lean tax structure, a unified Indian market, lower business costs, benefits export-oriented businesses, and lower prices for consumers. It allows suppliers, manufacturers, wholesalers, and retailers to recover GST incurred on input costs as tax credits, reducing costs and enabling fairer prices. The tax system also brings transparency and better compliance, reduces the number of tax departments, and widens the tax base. IGST, a tax levied on inter-state supplies of goods and services, applies to both imports and exports. Tax is shared between the Central and State Governments.

Conclusion:

The Goods and Services Tax (GST) has revolutionized India's taxation landscape since its implementation in July 2017. The dual GST system, comprising Central Goods and Services Tax (CGST) and State Goods and Services Tax (SGST), aims to eliminate the cascading effect of taxes, reduce compliance costs, facilitate credit flow, streamline tax processes, minimize tax rates, ensure transparency, and boost India's competitiveness in domestic and international markets. GST has simplified tax collection, ensured continuity of the credit chain, and subsumed earlier taxes and levies. However, certain categories like alcohol and petroleum products remain excluded. GST has also improved transparency, compliance, and rationalized tax administration by reducing the number of tax departments. It has also regulated taxes on imports and exports, ensuring fair revenue-sharing between the two governments.

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Financial Principles is an Authentic Guide to Budgeting, Investment Strategies, and Risk Management

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Abstract

The importance of sound financial principles, efficient budgeting, sound investment methods, and risk management in making wise financial decisions is emphasized in this essay. The importance of these ideas for achieving goals, financial stability, and growth is examined. Making a budget guarantees responsible spending, debt avoidance, and efficient financial priority. Budgeting supports strategic planning and financial stability for firms by assisting with resource allocation, spending control, and revenue forecasting. Investment strategies cover a variety of methods for accumulating wealth and matching risk appetite with financial goals. Understanding risk tolerance, time horizons, and financial objectives is necessary for effective investment strategies. Stocks have large profits but higher risk, thus diversification is required. While providing stability, bonds and fixed-income investments typically offer lower returns. Real estate requires careful selection and administration but also has the potential for rental income and capital growth. Assessing, managing, and reducing financial risks is essential for both individuals and corporations. Hedging techniques, insurance, and emergency cash are essential resources. Insurance protects against unforeseen events and includes health, life, and property coverage. During times of need, emergency funds offer financial protection.

Keywords: Budgeting, Investment Strategies, and Risk Management

Introduction

Understanding financial principles is necessary for making wise decisions, and financial literacy is critical for economic success. It involves risk management, investment planning, and budgeting. Understanding these ideas promotes growth and stability in one's finances and has numerous advantages for both people and organizations. It explores the importance of financial principles, delves into budgeting, investment strategies, and risk management, and provides valuable insights into how businesses and individuals can benefit from mastering these concepts.

Budgeting

Budgeting is a crucial financial management tool for individuals and businesses, allowing them to track spending, identify savings opportunities, and make informed decisions. It helps in forecasting revenues, managing expenses, and allocating resources efficiently. In the corporate world, budgeting includes revenue forecasting, expense allocation, and capital budgeting. Effective business budgets support strategic planning, identify cost-saving opportunities, and ensure financial stability.

Investment strategies, such as diversification, involve spreading investments across different asset classes to reduce risk. Understanding risk tolerance, time horizon, and financial goals is essential for successful investment. Stocks offer high returns but come with greater risk, while bonds provide stability but lower returns. Real estate offers potential for rental income and capital appreciation but requires careful property selection, management, and market analysis.

Risk Management

All financial ventures involve risk. To safeguard their financial security, both businesses and individuals must evaluate, control, and mitigate risks. Risk management requires the use of

hedging tactics, insurance, and emergency money. Making wise decisions and preparing for unforeseen setbacks require a thorough awareness of financial risk. An essential risk management tool is insurance. To protect themselves from unanticipated disasters, people should acquire health insurance, life insurance, and property insurance. Employer benefit programs, business interruption insurance, and liability insurance are all things that businesses should think about. Both people and corporations should keep an emergency fund on hand. In the event of unanticipated disasters, such as sudden medical expenses, job loss, or economic downturns, this savings buffer offers financial protection.

Conclusion

Financial literacy is crucial for both individuals and businesses, as it helps build a solid foundation for goal achievement and resilience against setbacks. Mastering financial principles, such as budgeting, investment strategies, and risk management, enables confident navigation of the complex financial world and fosters a secure future. Financial literacy is not a luxury but a necessity in today's world.

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Sleep Disorders, Insomnia, Irregular Schedules, and Academic Pressure, Coping Mechanisms and Interventions to Sleep Disorders, and their Impact on the Mental Health of College Students

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Abstract:

This article explores the intricate relationship between sleep disorders, particularly insomnia, irregular schedules, and the demanding academic pressures faced by college students. Sleep is a fundamental aspect of mental and physical well-being, and its disruption can have far-reaching consequences on a student's mental health. We delve into the prevalence of these issues, their causes, and their effects on students' mental health. Additionally, we discuss strategies and interventions that can help mitigate these challenges, emphasizing the importance of a holistic approach to student well-being.

Introduction

Sleep is a fundamental pillar of human well-being, playing a crucial role in maintaining both physical and mental health. It is during sleep that the body regenerates, repairs tissues, and consolidates memories. Moreover, sleep is closely intertwined with mental health, as disruptions in sleep patterns can lead to a range of psychological issues, including depression, anxiety, and mood disorders. The Most Common Sleep Disorder is insomnia, characterized by difficulty falling asleep or staying asleep, and is one of the most prevalent sleep disorders among college students. It is estimated that up to 60% of college students experience symptoms of insomnia during their academic journey. Factors such as academic stress, irregular schedules, and lifestyle choices contribute to the high prevalence of this disorder.

Sleep is a vital component of human well-being, playing a crucial role in maintaining physical and mental health. Insomnia, a common sleep disorder among college students, is one of the most prevalent, with up to 60% experiencing symptoms during their academic journey. Factors such as academic stress, irregular schedules, and lifestyle choices contribute to the high prevalence of this disorder. College life can be a breeding ground for sleep issues, with erratic schedules, academic demands, socializing, and substance use all contributing to sleep problems. Students often live in dormitories or shared housing, where noise and disturbances can affect sleep quality. Financial stress from tuition costs, student loans, and living expenses can lead to anxiety and depression, further disrupting sleep. The college experience can also be emotionally challenging, leading to conditions like depression, anxiety, and insomnia co-occurring. The relationship between sleep disorders and mental health is complex and often vicious, impacting cognitive function, emotional well-being, and the link between sleep disorders and mental illness. Sleep disorders can lead to memory deficits, concentration and problem-solving difficulties, mood disturbances, and emotional regulation issues. Sleep disorders often co-occur with mental illnesses, making treatment more challenging. Addressing this cycle of sleep disorders and mental health is crucial for overall well-being, often involving a multidisciplinary approach that includes therapy, medication, lifestyle changes, and sleep hygiene practices. Recognizing and addressing sleep issues can significantly improve mental health outcomes and highlight the importance of integrated care for individuals experiencing these interconnected challenges. Sleep is a fundamental pillar of human well-being, playing a crucial role in maintaining both physical and mental health. It is during sleep that the body regenerates, repairs tissues, and consolidates memories. Moreover, sleep is closely intertwined with mental health, as disruptions in sleep patterns can lead to a range of psychological issues, including depression, anxiety, and mood disorders.

Coping Mechanisms And Interventions For Sleep Disorders

Sleep disorders can significantly impact a person's quality of life and lead to various physical and mental health problems. Effective coping mechanisms and interventions are crucial in managing these disorders. Cognitive Behavioral Therapy for Insomnia (CBT-I) is a structured therapeutic approach that targets the root causes of insomnia by changing negative thought patterns and behaviors. Key components include sleep restriction, stimulus control, relaxation techniques, cognitive restructuring, sleep education, sleep hygiene education, stress management techniques, counselling, and medication. Sleep hygiene involves adopting healthy habits, maintaining a regular sleep schedule, creating a comfortable sleep environment, limiting screen exposure, avoiding caffeine and heavy meals, and incorporating regular physical activity. Counselling and support services can help address underlying issues and improve mental well-being.

Sleep disorders among college students are prevalent, with 27.6% reporting poor sleep quality and over 70% obtaining less than the recommended 7-9 hours of sleep per night. Over 20% of students experience symptoms of a sleep disorder, with insomnia being the most prevalent. Academic pressure, irregular schedules, lifestyle factors, and technological and social influences contribute to sleep disorders in college students. The relationship between sleep disorders and mental health is bidirectional, with sleep disorders impairing cognitive function, leading to poor academic performance and increased stress and anxiety levels. Emotional well-being also suffers from sleep disorders, leading to irritability, mood swings, and increased susceptibility to stress and depression. There is a well-established connection between sleep disorders and mental illnesses such as depression and anxiety. College students with untreated sleep disorders are at a higher risk of developing or exacerbating these conditions. To address this issue, interventions include Cognitive Behavioral Therapy for Insomnia (CBT-I), sleep hygiene education, stress management techniques, counselling and support services, and medication as a last resort. Creating a supportive campus environment and reevaluating grading systems, workload expectations, and academic support services can help reduce academic pressure on students and create a supportive campus environment that values well-being over competition. By addressing these issues early, colleges and universities can prevent the development of more severe mental health issues and improve overall student well-being.

Creating A Supportive Campus Environment

Colleges and universities can reduce academic pressure on students by reevaluating grading systems, workload expectations, and academic support services. Promoting healthy sleep habits, destigmatizing mental health, and implementing peer support and mentoring programs can help students cope with sleep disorders. Faculty and staff should be involved in a supportive campus environment by being attentive to student distress, providing flexibility, and directing students to appropriate resources. Addressing sleep disorders is crucial for the overall health and success of college students, and a holistic approach is needed. Collaboration among educational institutions, healthcare providers, and students is essential to raise awareness about the relationship between sleep, mental health, and academic success.

Conclusion

Sleep disorders, particularly insomnia, are prevalent among college students due to academic stress, irregular schedules, and environmental influences. These disorders can worsen mental health issues like depression and anxiety. To reduce sleep disorders, colleges should create a supportive environment, reevaluate grading systems, and offer peer support. Faculty and staff should recognize signs of distress and provide flexibility. Collaboration among institutions, healthcare providers, and students is crucial to raising awareness about sleep, mental health, and academic success.

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Time Management, a Crucial Skill for College Life

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Abstract

Time management is a crucial ability that is crucial to college students' lives. Students who manage their time well are more likely to perform academically, maintain a work-life balance, experience less stress, and acquire skills that will serve them well once they graduate from college. The significance of time management in college life, the difficulties that students encounter, and useful techniques to improve time management skills will all be covered in this extensive article. College students can maximize their potential and succeed academically and personally by exploring the subject and comprehending its value.

Introduction

The college years are an exciting time that offers many chances for new experiences, intellectual improvement, and personal development. Due to the increased workload, extracurricular activities, and the requirement to balance academics with social and personal life, it can, however, also be daunting. The ability to manage one's time well is essential for academic achievement in college. It entails carefully allocating one's time to numerous obligations and tasks to achieve objectives effectively and efficiently. This article analyses the importance of time management for college students, the problems they frequently run into, and some doable solutions. Additionally, we will discuss the long-term benefits of mastering this skill, which extend well beyond the college years.

Time Management in College Life

The clear correlation between time management and academic performance is one of the main reasons it is important in college. Multiple lessons, assignments, projects, and tests must all be balanced by students. It is simple to fall behind on assignments without good time management, which can result in lower marks and more stress. Students who are good at time management can set aside enough time for studying, finishing tasks, and getting ready for tests. It guarantees that they remain organized, fulfil deadlines, and keep up a regular study schedule. Students are thus better prepared to excel academically and realize their educational objectives. The stress of college life might be increased by ineffective time management. Students who put off assignments or have trouble meeting deadlines frequently find themselves in a constant state of tension. On the other hand, efficient time management lessens the stress related to cramming for examinations and the last-minute rush to finish homework. Students can design a balanced schedule that incorporates time for leisure, self-care, and social events by using their time effectively. This equilibrium is necessary for mental and emotional health, which enhances the college experience.

College is about more than simply academics; it's also a time for personal development and discovery. Students participate in social gatherings, part-time jobs, internships, and extracurricular activities. It can be extremely difficult to juggle these responsibilities with schoolwork. Students can schedule time for both academic and extracurricular activities by using time management techniques. It enables them to enjoy a well-rounded college experience by assisting them in finding a balance between their obligations and free time. The value of good time management goes far beyond the classroom. It is a versatile skill that is highly prized in the workplace. Employers are looking for people who can prioritize their tasks wisely, manage their time well, and meet deadlines. College students can better position themselves for success in their future employment by developing their time management abilities. They

develop discipline, organization, and the ability to work efficiently, all of which are qualities that make them highly marketable in the job market.

Challenges to Effective Time Management in College

Although it is obvious how important time management is at college, students frequently encounter some difficulties in learning and keeping this ability. Effective time management is significantly hampered by procrastination. Many students have a propensity to put off assignments until the last minute, which results in hurried and inadequate work. Procrastination-busting needs self-control and the capacity to rank tasks according to importance. Students in college may have a full schedule of obligations, including classes, clubs, part-time employment, and social events. Overcommitting can thwart time management efforts and cause burnout. Prioritizing obligations and learning to say no are crucial life skills. Some pupils have trouble setting priorities. They may spend too much time on less important activities while neglecting critical assignments. Learning to distinguish between urgent and important tasks is crucial for effective time management. Without a well-structured plan, time management efforts can fall apart. Students need to set clear goals, create schedules, and allocate time wisely to ensure they make the most of their available hours.

Strategies for Enhancing Time Management Skills

College students can use a variety of ways to get beyond these obstacles and master good time management. Create an agenda for each week that includes all of your classes, study sessions, hours at work, and extracurricular events. A visual representation of your time obligations makes it easier for you to see when you have time for serious study. SMART goals are time-bound, relevant, specified, measurable, and achievable. Establish definite, attainable goals for both your personal and academic lives. Your time management efforts will be guided by these goals, which will also keep you motivated. Use methods like the Eisenhower Matrix to group jobs according to their urgency and importance. Prioritize finishing urgent and crucial activities before moving on to less crucial ones. Contrary to what many people think, multitasking occasionally backfires. It might cause a lack of attention and poorer work. Instead, focus on and offer each work your undivided attention. Utilize modern technology and tools to help you keep organized and use your time effectively, such as calendar apps, to-do lists, and time monitoring apps. Setting limits and abstaining from overcommitting is crucial. Refuse invitations or commitments politely if they would fill up your schedule and interfere with your time management attempts. Regular breaks during study or work sessions can improve focus and productivity. The Pomodoro Technique, which involves 25-minute focused work intervals followed by a 5-minute break, is a popular method. Regularly review your time management strategies to identify what's working and what needs improvement. Be flexible and adjust your schedule and goals as necessary.

Long-Term Benefits of Effective Time Management

Learning time management skills in college has long-term advantages. Employees with strong time management skills are highly valued by employers. Strong time management skills enable college grads to handle difficult workloads and flourish in their employment. Throughout their lifetimes, people who are good at time management can balance their jobs and personal lives. Overall pleasure and well-being are influenced by this equilibrium. Time management supports ongoing education and personal growth. People who can efficiently manage their time are more inclined to pursue continued education and self-improvement. Stress is reduced in both the professional and personal realms by effective time management. To maintain healthy mental and physical health, stress management is essential.

Conclusion

Time management is not just a college student's concern; it's a life skill that influences academic success, career growth, and overall well-being. College life presents unique challenges that demand effective time management to navigate successfully. By recognizing the importance of time management, understanding common challenges, and implementing practical strategies, students can unlock their full potential and lay the foundation for a successful future. In the fast-paced and demanding world of academia and work, effective time management is a skill that will continue to pay dividends long after graduation. It is a skill that empowers individuals to achieve their goals, reduce stress, and lead balanced and fulfilling lives. As college students embark on their academic journeys, they should embrace time management as a valuable ally on their path to success.

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Environmental Attitude among Young Adults

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Abstract

With an emphasis on demographics including age, gender, occupation, socioeconomic level, marital status, education, kind of residence, place of residence, and religion, the study assessed the environmental attitudes of 265 young adults. Based on these criteria, the results revealed substantial differences in environmental attitudes, with age having a favourable link with environmental attitudes and place of residence not indicating a significant difference.

Keywords: Young Adults, Environmental Attitude

Introduction

The study, which included 265 participants who were both male and female, sought to evaluate the environmental attitudes of young adults. The study analyzed the variations in environmental views based on socio-demographic information using self-made socio-demographic tools. The phrase "environment" refers to the collection of external physical factors that have an impact on an organism's survival, growth, and development. It includes everything on Earth, both living and non-living, as well as natural phenomena, all-natural resources, and non-human activities. The environment has a significant impact on life quality, thus people need to utilize resources and use them wisely to support sustainable development. The environment, which includes the climate, soil, water, light, plants, and other elements, is a system that sustains life.

Environmental Problems

The significance of environmental issues has grown in recent years as the effects of human activity on the environment become more obvious. Rapid mechanization, industrialization, and scientific advancements have improved human comfort while wreaking havoc on the environment. Human knowledge, attitudes, values, ethics, and environmental behaviors all influence the quality of the environment. Human activities, particularly economic activities, are directly tied to environmental problems. These issues include deforestation, loss of biodiversity, climate change, water pollution, and air pollution. Industrial operations, traffic, and energy generation all contribute to air pollution, which worsens respiratory conditions and other health concerns. Governments can establish regulations that lower emissions from transportation and industrial activities, promote the use of renewable energy sources, and provide incentives for people to cut their carbon emissions to combat air pollution.

Water pollution is another major environmental issue, affecting aquatic ecosystems and human health. Governments can regulate industrial and agricultural practices to minimize waste and runoff, while individuals can reduce their water footprint by conserving water at home and disposing of household waste properly. Climate change is perhaps the most significant environmental problem facing the world today, caused by the release of greenhouse gases, primarily carbon dioxide, into the atmosphere. To address climate change, governments can implement policies that encourage the use of renewable energy, promote energy efficiency, and reduce carbon emissions.

Environmental Pollution

Contaminants are released into the environment, harming living things and harming the environment as a whole. It is a significant source of disease and death, with regional differences in exposure patterns. Major difficulties in India include air, water, soil, and noise pollution, with excessive levels of toxic pollutants resulting in respiratory conditions and other health

disorders. Vehicle emissions, industrial activity, and open rubbish burning are the main causes of air pollution. Water scarcity and issues with public health are the results of water contamination, which is primarily brought on by untreated sewage and industrial waste. Microplastics are widespread and can disturb naturally occurring flora and animals. They are a prevalent source of water contamination. With agricultural practices contributing to soil contamination and the dumping of industrial waste, soil pollution is a rising issue in India. In many Indian towns, noise pollution is a serious problem because of how loud construction, transportation, and industrial activities are frequently. Electronic waste is a rising issue in India, where it is produced in vast amounts and illegally disposed of, posing risks to the environment and human health. Through measures like waste management plans, pollution control rules, and the development of renewable energy sources, the Indian government and non-governmental organizations are attempting to address these problems. Pollution in India is exacerbated by the country's quick industrialization, inadequate waste management, wasteful agricultural practices, obsolete automobile emissions, open burning, lack of regulations, and population expansion. To address these issues, the government, private sector, and civil society must work together to implement effective policies, improve waste management, promote cleaner energy and transportation, and raise awareness about environmental issues.

Environmental Attitude

An individual's views, values, and attitudes about the environment and their relationship with it are referred to as their environmental attitude. It is a psychological propensity that manifests itself in how we perceive our surroundings—either favourably or unfavourably. Individuals' attitudes about the environment can vary greatly, and they can be influenced by things like education, personal experiences, cultural and societal conventions, and prevailing beliefs. These principles and attitudes serve as guidance for making decisions. The earliest evidence of ecological consciousness dates back at least 5,000 years when Taoists and Vedic sages called for living in harmony with nature and Vedic sages praised wild woods. Early human myths provide us with important lessons about the value of restraint, the holiness of wilderness, and our responsibility to preserve the environment. Early human civilizations recognized the effects of pollution on human health and practiced waste management and sanitation. In the 17th century, naturalist John Evelyn wrote that London resembled "the suburbs of Hell," inspiring the first "renewable" energy boom in Europe. Dutch artist Pieter Bruegel the Elder painted scenes of raw sewage and pollution emptying into rivers, and Dutch lawyer Hugo Grotius wrote *The Free Sea*, claiming pollution and war violate natural law. The 18th century saw the emergence of modern environmental rights, with Benjamin Franklin advocating for waste management and clean air removal. Artist George Catlin proposed Indigenous land protection as a "natural right." Thomas Malthus warned of ecological destruction due to human overpopulation. Ralph Waldo Emerson's *Nature* in 1835 encouraged appreciation for the natural world and proposed a limit on human expansion into the wilderness. Botanist William Bartram and ornithologist James A.

Conclusion

To safeguard the environment, the chapter explores how important environmental attitudes are in determining environmental behaviour. The bulk of the world's population, young adults aged 18 to 40, are the study's primary target group. The overall attitude toward the environment is determined by beliefs about health and hygiene, wildlife, forests, pollution, population growth, and environmental issues. According to age, gender, occupation, socioeconomic status, marital status, education, type of residence, religion, and other aspects, the study attempts to understand the environmental attitude among young adults. Major studies show that men are more environmentally conscious than women and that married people are more likely to be

environmentally conscious than unmarried people. Environmental attitude is higher among the higher age group (30-40) than lower-aged individuals. Education also influences environmental attitudes. The study found that environmental attitude is higher among hostel dwellers and lower among apartment dwellers. Hindus have a higher environmental attitude than non-Hindus. Urban and rural young adults have similar environmental attitudes, and age positively influences environmental attitudes.

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College Life: The Most Productive and Transformative Period in the Lives of Undergraduate Students

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Abstract:

The years spent in college are frequently seen as a turning point in one's quest for both personal and professional development. The reasons why undergraduate (UG) students view their time in college as the most fruitful and transforming time of their lives are examined in this article. It explores a range of collegiate experiences, including intellectual, social, and personal growth, and offers insights into how these encounters affect UG students' futures. The article advises on maximizing this era of transformation while also addressing difficulties encountered during this phase.

Introduction

College is an important stage in a person's life and is sometimes viewed as the transitional period between adolescence and maturity. One of the most fruitful and transforming times in a person's life, is a time when they are exposed to a wide range of chances and difficulties. Students grow personally and socially during their undergraduate (UG) years, which affects how they will live in the future. The purpose of this post is to examine why college is thought to be the most fruitful and transforming time for UG students. It explores the many facets of college life, including academic, social, and personal development, and talks about the opportunities and challenges that come with it. By understanding the significance of this phase, UG students can make the most of their college experience and prepare for a successful future.

Academic Growth

College offers a comprehensive academic atmosphere with a variety of majors, electives, and courses. Undergraduate students get the chance to investigate a variety of subjects, which enables them to identify their passions and interests. For them to make educated decisions regarding their future employment, this exposure is essential. The college promotes an environment where students are encouraged to question, discuss, and explore new ideas. It also develops intellectual curiosity. This fosters the growth of critical thinking abilities, which are beneficial in all facets of life. Students get the information and abilities needed for their chosen fields in college. It offers a well-organized curriculum that aims to create a solid academic foundation and lay the framework for success in the future. The college focuses not just on subject-specific knowledge but also on skill development. Research, problem-solving, and communication skills are taught to undergraduate students, and they can be applied to a variety of jobs. Through challenging courses and analytical debates, critical thinking is honed. Mentoring is a common role for college professors and instructors.

Social Development

College campuses are centres of variety, bringing together students from various racial and ethnic origins. Students' horizons are expanded, tolerance is fostered, and they are more equipped for a globalized society when they interact with people from many cultures, nationalities, and viewpoints. The networking opportunities and lasting contacts that may be formed in college are unmatched. Students build a useful social and professional network through connecting with peers, teachers, and professionals. Communication skills are improved by participating in group projects, presentations, and extracurricular activities. Any career requires effective communication, and college life offers many opportunities to practice it. Student leadership and teamwork experiences are exposed through participation in clubs, organizations, and sports teams. These encounters aid in the development of leadership abilities, teamwork capabilities, and the capacity for productive collaboration. College often

hosts cultural events, international programs, and exchange opportunities. These experiences expose students to different cultures and perspectives, fostering a greater understanding of the world and promoting cultural competence.

Personal Growth

College is a period for discovering oneself. Students have the flexibility to explore their interests, values, and beliefs when they are away from home and their familiar surroundings. They learn about themselves and what they aspire to accomplish in life. Responsibilities, time management, and budgeting are taught to students who live alone or in a communal environment. They acquire crucial life skills such as how to balance work, social commitments, and personal obligations. Undergraduate students balance a variety of obligations, including coursework, homework, part-time employment, and extracurricular activities. This calls for efficient time management and prioritization, which are abilities that will help them in their professions. Challenges and setbacks are a part of college life. Students gain the ability to handle adversity well and adjust to shifting conditions. These characteristics are extremely beneficial to professionals. These qualities are invaluable in the professional world. The college encourages ethical and moral development.

Challenges Faced In College

College's demanding academic requirements sometimes be too much to handle. Students frequently experience academic pressure, which causes stress and anxiety. The cost of a college education can put many students under financial strain. It might be difficult to balance living expenses, student loans, and tuition. It might be challenging to strike the correct balance between social obligations and academic obligations. Some students have trouble setting priorities and managing their time. It can be emotionally difficult to adjust to college life. Students may feel homesick, lonely, or suffer from mental health conditions including depression and anxiety. Students in college frequently struggle with uncertainties regarding their future professions. It might be difficult to decide on a major, look into internships, and make plans for life after college.

Maximizing the College Experience

Students should have clear academic and personal goals to get the most out of college. They can maintain their focus and motivation by having a clear vision for the future. Students must ask their teachers, academic advisors, and counsellors for assistance. These people can offer direction and resources to assist students in overcoming obstacles. The college experience is enhanced by participating in clubs, groups, and volunteer activities. It aids kids in forming friendships, gaining leadership experience, and creating a well-rounded resume. College campuses are multicultural mashups. Inclusion is cultivated and pupils are better equipped for a globalized society when diversity is celebrated and accepted. To handle stress and maintain their mental and physical health, students should put self-care first. This entails obtaining enough rest, maintaining a healthy diet, and asking for assistance when required.

The Role of Technology in College Life

Through e-learning platforms, online materials, and digital libraries, technology has changed education. These resources improve learning and provide access to education. Students, alumni, and professionals can communicate and connect more easily thanks to social media and networking sites. These sites can be utilized for professional network growth and career advancement. While technology has many advantages, it also has drawbacks like privacy concerns and digital diversions. To fully benefit from technology, students must utilize it responsibly.

Preparing For Life after College

The best time to look for internships, co-ops, and part-time work relating to one's subject of interest is during college. These encounters improve employability and offer priceless insights into the working world. College is where graduate school preparations begin for individuals

contemplating advanced degrees. Professors and counselors are available for guidance from students regarding graduate programs and admission requirements. Alumni associations, employment fairs, and college networking activities all present chances to meet mentors and employers. Having a strong professional network can open doors to employment. Graduates should also think about financial planning, which includes handling student loans, creating a budget, and setting aside money for the future.

Conclusion

College is a transformative experience for undergraduate students, offering academic, interpersonal, and personal development opportunities. It promotes independence, resilience, diversity, communication, and cultural exposure. The knowledge and experiences gained during college shape personal beliefs, career trajectories, and lifelong learning. However, the journey continues beyond graduation, requiring students to apply their learnings to future endeavors. By understanding and actively participating in college, UG students can maximize their college experience and achieve success.

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New Trends in Accounting and Auditing

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Abstract

In the world of money and business, auditing and accounting are crucial tasks. They are crucial in guaranteeing financial accountability, transparency, and the accuracy of financial reporting. The trends and practices in accounting and auditing change along with the corporate environment. The most recent trends in these areas are examined in this article, along with how technological advancements, legislative modifications, and changing business paradigms are altering how firms approach their financial reporting and auditing processes. We dive into subjects like artificial intelligence in auditing, block chain technology, data analytics, and sustainability reporting. Businesses and accounting professionals can better position themselves for the future of accounting and auditing by knowing these rising trends.

Key Words: Business, Accounting and Auditing

Introduction

Technology developments, legislative changes, and changing company practices are just a few of the elements transforming the accounting and auditing industry. These modifications are altering how businesses approach financial reporting, compliance, and assurance. We will examine some of the most important trends in accounting and auditing in this article, emphasizing how they affect organizations and the accounting profession. We will also talk about how these patterns affect decision-making, risk management, and financial transparency.

Blockchain Technology and Distributed Ledger Accounting

Block chain technology, most notably associated with crypto currencies like Bit coin, has gained prominence in recent years. Beyond digital currencies, block chain has the potential to revolutionize accounting by providing a secure, transparent, and tamper-proof ledger of financial transactions. Traditional accounting systems rely on centralized databases that are vulnerable to fraud and manipulation. In contrast, block chain employs a decentralized ledger, reducing the risk of financial misreporting.

Distributed ledger accounting and blockchain technology

In recent years, block chain technology has become more well-known, most notably in connection with crypto currencies like Bit coin. Block chain technology has the potential to transform accounting in addition to digital currencies by offering a safe, open, and unchangeable ledger of financial transactions. Centralized databases, the foundation of traditional accounting systems, are susceptible to fraud and manipulation. In contrast, the decentralized ledger used by block chain technology lowers the possibility of financial reporting fraud.

Data Analytics

Modern accounting and auditing procedures are increasingly relying on data analytics. Organizations have a wealth of data at their disposal, which presents opportunity to learn important lessons about risk, compliance, and financial performance. Accounting and auditing professionals may now extract useful data from massive databases thanks to advanced analytics technologies.

Statistical Analysis & Environmental Reporting

To predict future financial trends and spot potential problems, predictive analytics makes use of historical data and statistical algorithms. For instance, firms can proactively manage liquidity by using machine learning algorithms to predict cash flow variations. With regard to risk analysis and strategic planning, their predictive abilities are invaluable. Sustainability reporting is an emerging area in accounting and auditing. Companies are increasingly recognizing the importance of disclosing their environmental, social, and governance (ESG) performance. Investors and stakeholders are demanding greater transparency on sustainability matters, and accounting professionals are instrumental in providing accurate ESG data.

Artificial Intelligence (AI) and Continuous Auditing

Automating repetitive activities and enhancing risk assessment are two ways artificial intelligence has the potential to revolutionize auditing. Software with AI-powered audit capabilities may evaluate massive datasets more quickly than people, freeing up auditors to concentrate on challenging problems. As a result, the risk of fraud is decreased. It can also spot anomalies and irregularities in financial data. Continuous auditing, which conducts audit operations in real-time or more often, is made possible by AI. With this strategy, openness is improved and timely information on compliance and financial performance is provided. Organizations can lessen the likelihood of financial irregularities by using continuous auditing to quickly identify and address problems.

Ethical Considerations and Regulatory Changes and Compliance

Concerns concerning algorithmic bias, data privacy, and the value of human judgment are brought up by the use of AI in auditing. AI systems must be fair, impartial, and in accordance with all applicable laws, according to auditors. Global momentum for the implementation of International Financial Reporting Standards (IFRS) is still growing. With the help of IFRS, international corporations can more easily prepare and present their financial statements consistently. IFRS offers a single language for financial reporting. Reg Tech solutions, which employ technology to streamline compliance processes, are being developed in response to changing regulatory requirements. These technologies assist firms in more effectively navigating complicated regulatory environments and lowering compliance risks.

Remote Auditing and Cyber security

Remote auditing procedures were quickly adopted as a result of the COVID-19 epidemic. Auditors now conduct audits remotely using digital tools and communication channels. While there is more flexibility as a result, there are issues with data security and confidentiality. The switch to remote auditing emphasizes how crucial effective cyber security measures are. Auditors are required to protect against online dangers that can jeopardize the accuracy of financial statements and ensure the protection of sensitive financial data.

Evolving Role of Accountants and Auditors

Accountants and auditors are becoming strategic consultants as technology automates mundane duties. They are getting more and more involved in offering opinions and suggestions to help with financial planning, risk management, and commercial decision-making. Accounting professionals need to pursue lifelong learning and professional development if they want to stay current with these changing responsibilities and trends. This entails keeping up with new technological developments, legislative modifications, and industry best practices.

Conclusion

Technology developments, regulatory reforms, and evolving business models are driving a dramatic revolution in the accounting and auditing industries. How financial information is

recorded, analyzed, and audited is changing as a result of block chain technology, data analytics, artificial intelligence, and remote auditing. These trends are enhancing efficiency, transparency, and decision-making in the financial world. However, they also bring challenges related to data privacy, ethics, and cyber security. Accountants and auditors must adapt to these changes by embracing new skills and technologies. By doing so, they can remain at the forefront of their profession and continue to provide valuable insights and assurance to organizations and stakeholders.

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Self Confidence and Mathematical Problem Solving Ability among Adolescents

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Abstract

The period of adolescence is both demanding and rewarding, characterized by the development of new abilities, a complicated social life, and changes in familial ties. Between childhood and maturity, this age is one of biological, cognitive, social, and emotional transformations. Siblings are frequently the closest companions and confidantes of adolescents, with whom they engage frequently. Particularly during adolescence, self-confidence is a critical component of one's emotional and psychological growth. Significant physical, cognitive, and social changes that occur during adolescence result in a greater demand for self-assurance and identity development. To help people develop a positive self-image and give them the confidence they need to face the challenges of life with resiliency and assertiveness, it is crucial to understand the elements that affect self-confidence. An individual's apparent capacity to respond appropriately to circumstances, get things done, and overcome challenges is referred to as self-confidence.

Introduction

Self-confident individuals are willing to risk disapproval and accept themselves, while those without self-confidence may rely too much on others' approval and avoid taking risks. Self-confidence is a complex concept that can vary across individuals. It is not a universal trait and can be influenced by various factors such as parents' attitudes, peer influence, academic achievement, physical appearance, parental style, past experiences, personality traits, cultural background, and mental and emotional health. Parents play a crucial role in shaping children's self-confidence, as they provide acceptance and love when they make mistakes. Friends can also play a significant role in shaping self-confidence, as they re-examine values and develop their identities. Factors influencing adolescents' self-confidence include social support, peer influence, academic achievement, physical appearance, parental style, past experiences, personality traits, cultural and ethnic background, and mental and emotional health. Barriers to self-confidence include fear, which can be either fear of failure or ridicule, an inferiority complex, worrying, negative thoughts, procrastination, and indecision. It is essential to avoid these barriers and focus on personal growth and development. By addressing these barriers, individuals can develop self-confidence and overcome challenges in various aspects of their lives.

The review literature

The literature review discusses various studies on self-confidence, personality traits, and academic achievement in students. It reveals that self-confidence is important for personality and is directly related to academic achievement and adjustment. Studies have found that students from different castes and socio-economic backgrounds have different self-concepts, with some showing higher intelligence and imagination, while others have more practical traits. Vijay Laxmi's research on self-confidence and adjustment in family-raised and institution-raised children found that self-confidence is related to personality adjustment. Lanier's study on the effects of ethnicity and perceived performance on academic performance and self-confidence found that black male adolescents had significantly higher anagram scores than their white counterparts. Heflin's study on the effect of subliminal suggestion treatment on self-confidence found no significant change in self-confidence at a 0.05 level of significance. Verma and Sangeeta's study found no significant difference in self-confidence between male and female students. Kitisook's study on gender differences and information use on self-

confidence development during the early stages of learning a motor task found that gender differences and information may influence self-confidence. Sansanwal and Sharma's study on scientific creativity showed that self-confidence students had significantly higher scientific creativity scores. Agarwal's study on the relationship between sex and general self-concept in IX-grade students also found no significant differences. The study reveals that girls have a higher mean score in various aspects of self-concept, including identity, self-satisfaction, and self-criticism. Self-concept is a good predictor of creativity but is less efficient in predicting composite creativity. A comparative study found that Navodya Vidyalaya students had a better self-concept profile than Government High School students in Karnataka. Talniya's study found that caste, region of residence, and sex do not affect self-confidence and aspiration levels. Chopra, Vasudeva, and Sandhu's study found a significant main effect of procrastination on neuroticism, but no significant effect on general well-being and self-esteem. Tevendale's study found that instability in self-evaluations of peer relationships and physical appearance predicted greater depression independent of trait-oriented self-evaluations and daily hassles. Raddy, Rao, and Mohan's study found that the confidence levels and motivation levels of men and women are not equal. Srivastava and Verma's study found that Vidya Bharati athletes had higher self-confidence levels than their mean.

The study aims to investigate the relationship between self-confidence and mathematical problem-solving ability among single adolescents. The research hypothesizes that factors such as birth order, age, gender, religion, educational qualification, residential area, family, father's occupation, and mother's occupation will significantly influence these factors. Self-confidence is defined as a positive attitude towards one's self and problem-solving is a process of overcoming difficulties. It can empower individuals to face challenges, take risks, and handle setbacks with resilience. The findings are significant and warrant further research.

Conclusion

Self-confidence is crucial for single adolescents' social, academic, and emotional well-being, shaping their abilities, worth, and capacity to handle challenges. It is influenced by factors such as peer pressure, academic stress, and personal experiences. Developing self-confidence involves fostering a supportive environment, providing opportunities for exploration, teaching coping strategies, valuing oneself, and embracing imperfections. Promoting a healthy lifestyle, including regular exercise, nutrition, and sleep, also positively impacts self-confidence. Mathematical problem-solving ability among adolescents can vary greatly, with some demonstrating advanced skills while others struggle with certain concepts. Factors influencing their abilities include exposure to math education, quality of instruction, innate aptitude for math, and motivation to learn. The study aimed to assess self-confidence and mathematical problem-solving ability among single adolescents in Kerala using a Self-confidence inventory and problem-solving ability test. Understanding self-confidence is vital for adolescent development, as it influences resilience, risk-taking, and assertiveness. Nurturing self-confidence involves creating supportive environments, setting achievable goals, and encouraging the exploration of strengths and talents.

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The Profound Impact of Swami Vivekananda's Philosophy in Human Life

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Abstract

The philosophical beliefs of Swami Vivekananda, a well-known Indian philosopher and spiritual figure, have endured throughout time. His great understanding of spirituality, human potential, and religious peace has had a significant influence on people and society at large. This page explains how Swami Vivekananda's philosophy has influenced individuals all around the world and how his teachings still serve as a source of inspiration, direction, and influence.

Introduction

Swami Vivekananda was a spiritual giant, philosopher, and supporter of human welfare. He was born Narendranath Datta in Kolkata, India, in 1863. His Vedanta-based teachings have persisted through the ages and continue to motivate millions of people all around the world. Swami Vivekananda's philosophy emphasizes self-realization, interfaith cooperation, and service to humanity. It cuts beyond religious lines and speaks to the core of human existence. This article explores Swami Vivekananda's philosophy's enormous influence on people and society at large.

Swami Vivekananda's life's path was characterized by a desire to serve humanity and a search for spiritual truth. He underwent a significant shift after meeting the mystic Sri Ramakrishna Paramahansa. He accepted Vedanta philosophy, a branch of Hinduism that emphasizes the unity of the personal soul (Atman) and the collective soul (Brahman).

Although Vivekananda's worldview significantly incorporates Vedanta, it is not limited to one particular tradition. His message is global and goes beyond religious dogma, emphasizing the inherent divinity in every person and the fundamental oneness of all religions. His life's work consisted of sharing these ideas with others and causing a spiritual awakening. At the heart of Swami Vivekananda's philosophy lies the concept of Vedanta. Vedanta posits that the ultimate reality, Brahman, is one and indivisible. Every individual soul (Atman) is a manifestation of this supreme reality. Vivekananda's teachings emphasize self-realization—the process of recognizing one's true nature as divine and transcending the limitations of the ego.

The people who embrace this idea of self-realization are profoundly affected by it. It promotes self-awareness, inner fortitude, and the quest for enlightenment. The philosophy of Swami Vivekananda offers people a road map for navigating the complexity of life with purpose and clarity.

The philosophy of Swami Vivekananda has a transformational power over anyone who tries to comprehend it and use it in their life. Those who are on a spiritual path would identify strongly with his emphasis on self-discipline, introspection, and meditation as instruments for self-realization.

People can undergo a significant viewpoint change by internalizing Vivekananda's teachings, which fosters greater self-awareness and a sense of purpose. His exhortation to "Arise, awake, and stop not until the goal is reached" acts as a call to action for individuals pursuing spiritual and personal development.

Swami Vivekananda's support for interfaith cooperation and the universal applicability of spiritual principles is one of his most noteworthy contributions to philosophy. He was adamant that all religions contained divine insight and that all religious paths ultimately led to the same ultimate truth.

Vivekananda's message of harmony and respect for all religions stands as a ray of hope in a world where religious conflicts are frequently the source of division. His teachings promote dialogue and understanding among people of different religions, fostering a sense of global community and shared spiritual values.

The philosophy of Swami Vivekananda emphasizes the value of serving humanity as well as interfaith harmony and personal growth. He held that genuine spirituality should result in compassion and altruistic devotion to others.

Numerous people and organizations have been motivated to participate in charitable and humanitarian activity as a result of Vivekananda's call to "Serve man as God." The Ramakrishna Mission and other institutions devoted to helping the less fortunate were founded in large part as a result of his teachings.

Conclusion

The philosophy of Swami Vivekananda has had a profound impact on humanity. His emphasis on spiritual awakening, interreligious cooperation, and humanitarian assistance continues to serve as a road map for people. His ideas speak to those looking for unity, meaning, and purpose in a world that is becoming more and more dispersed.

We acknowledge Swami Vivekananda's philosophy's ongoing relevance and cross-cultural appeal as we consider its significant influence. His optimistic blueprint for a better, more peaceful society is one in which people accept their divine nature, respect the diversity of religious traditions, and put endless effort into advancing the welfare of all living things.

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College Education: A Unique Opportunity for Intellectual, Spiritual Exploration, and Holistic Growth of Adolescents

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Abstract

College education plays a pivotal role in the intellectual, spiritual, and holistic growth of adolescents. It serves as a transformative period in one's life, shaping not only career prospects but also personal values, beliefs, and perspectives. This article delves into the multifaceted aspects of college education, highlighting how it fosters intellectual development, nurtures spiritual exploration, and contributes to the holistic growth of young individuals. This comprehensive article explores the multifaceted role of college education in fostering intellectual, spiritual, and holistic growth in adolescents. It underscores the transformative power of higher education, the challenges it faces, and its ongoing relevance in an ever-changing world. Ultimately, college education remains a beacon of hope, providing young individuals with the tools and opportunities to reach their full potential and contribute positively to society.

Introduction

Young adults frequently view attending college as a rite of passage that signifies their passage from adolescence to maturity. College offers a special chance for intellectual, spiritual, and holistic growth in addition to its role in professional preparation. People can study a variety of academic fields, exercise critical thinking, challenge preconceived notions, and deepen their sense of identity and purpose during this transformative time. This article aims to examine the significant effects of higher education on adolescents' intellectual, spiritual, and overall development. It will explore the numerous dimensions of human development, looking at how college encourages intellectual growth, supports spiritual discovery, and aids in the overall development of young people.

Intellectual Growth through College Education

The chance to study a variety of academic fields and topics is one of the main advantages of a college education. Students have the chance to investigate areas they might not have previously experienced, fostering intellectual curiosity. Students' horizons are expanded and interdisciplinary thinking is encouraged by this experience. Critical thinking and problem-solving abilities are honed in a college environment. Students gain the ability to understand complicated situations, evaluate evidence, and make educated judgments through challenging coursework. These abilities are important for success in a variety of vocations in the real world as well as in academic contexts. The centers of innovation and research are colleges and universities. Students frequently get the opportunity to work on research projects that progress their fields. College education instills a lifelong love of learning. By encouraging intellectual curiosity and providing access to resources, it equips students with the skills to continue their education beyond graduation. This mindset becomes an invaluable asset in an ever-evolving world.

Spiritual Exploration in the College Environment

College campuses are recognized for their variety and inclusiveness. Students can develop their spiritual and philosophical ideas in an environment that supports freedom of thought and religion without having to worry about bias or discrimination. In college, students encounter a variety of opinions, including those that conflict with their own. By encouraging tolerance and open-mindedness, the exposure aids students' understanding of the complex web of human

spirituality and belief systems. For many students, college is a time of self-discovery. It enables people to look into their passions and hobbies, which might lead to a stronger sense of meaning and purpose in life. Their philosophical and spiritual development frequently coexists with this search for meaning.

Holistic Development, Challenges and Criticisms

College education helps young adults navigate emotions and relationships, while also providing practical skills and practical experiences. Colleges offer internships and cooperative education programs, preparing students for the workforce. However, standardized education can limit creativity and individual growth. Critics argue that a one-size-fits-all approach may not cater to diverse needs. Balancing coursework, extracurricular activities, and social life can be challenging, and colleges must provide adequate support for students' mental well-being.

The Future of College Education

Advancements in technology are reshaping the landscape of higher education. Online learning platforms, virtual reality, and artificial intelligence are revolutionizing the way students access and engage with educational content. The concept of education is evolving beyond the traditional college experience. Lifelong learning and continuing education are becoming integral to career development, as individuals seek to acquire new skills and knowledge throughout their lives.

Conclusion

A college education offers a special chance for holistic, intellectual, and spiritual growth. By exposing children to a variety of knowledge, developing critical thinking abilities, encouraging inquiry and invention, and establishing a lifetime love of learning, it promotes intellectual development. Additionally, it offers a setting for spiritual inquiry, promoting intellectual freedom, exposing students to many worldviews, participating in ethical debates, and assisting people in discovering meaning and purpose. Through extracurricular activities, social and cultural awareness, emotional intelligence, and career preparation, college education encourages holistic growth in addition to academics. It also promotes civic participation, inclusivity, and alumni contributions to society, acting as a catalyst for social change. College education is still a worthwhile and important institution, despite difficulties and criticisms. Its capacity to mould young people's minds and ideals, prepare them for the modern world's intricacies, and promote societal advancement cannot be emphasized. It is crucial that we increase access to and affordability of higher education as we go forward. To satisfy the changing requirements of students, we also need to keep innovating in teaching, technology, and support systems. By doing this, we can ensure that a college education remains a life-changing and powerful experience for future generations.

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How Teenagers' Self-Confidence Affects Their Intellectual and Personal Development

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Abstract

Adolescence is a crucial phase of human development, marked by physical, cognitive, emotional, and social changes. During this transformative period, self-confidence plays a pivotal role in shaping academic performance and personality development. This article explores the multifaceted relationship between self-confidence, academic success, and the formation of an adolescent's personality.

Key words: Self-Confidence, Intellectual Development and Personality Development

Introduction

Adolescence is a critical period of transition from childhood to adulthood, characterized by numerous physical, emotional, cognitive, and social changes. During this phase, adolescents begin to develop their sense of identity, values, and beliefs, laying the foundation for their future lives. Academic performance and personality development are two significant aspects of adolescent growth, and the role of self-confidence in shaping these areas cannot be overstated. Self-confidence is a complex psychological trait that influences how individuals perceive themselves, their abilities, and their potential for success. It plays a crucial role in academic pursuits and is closely intertwined with an adolescent's personality development.

Purpose of the Study

The primary purpose of this study is to explore the multifaceted role of self-confidence in the lives of adolescents. We will investigate how self-confidence impacts academic performance, including motivation, goal setting, study habits, and test anxiety. Additionally, we will examine the influence of self-confidence on various aspects of personality development, such as self-identity, resilience, interpersonal relationships, and emotional regulation. Through a comprehensive examination of psychological theories, empirical research, and real-life examples, we aim to provide valuable insights into the significance of self-confidence in adolescent development.

Adolescence: A Period of Change

Adolescence is a period of significant physical, cognitive, and emotional transformation, affecting an adolescent's self-perception and self-confidence. Body image, cognitive development, and identity formation are key factors in adolescence. Positive body image and self-acceptance can boost self-confidence, while critical thinking skills can challenge societal norms and anxiety. The emotional ups and downs of adolescence can also impact self-confidence.

Understanding Self-Confidence

Self-confidence is a psychological trait that reflects an individual's belief in their abilities, competence, and worthiness. It is a dynamic and context-dependent quality that can vary across various domains, such as academics, sports, or social interactions. Self-concept, which includes beliefs about physical appearance, abilities, personality traits, and values, is a foundational component of self-confidence. Positive self-concept leads to higher self-confidence. Self-esteem and self-confidence are related but distinct constructs.

The Connection between Self-Confidence and Academic Performance

Self-confidence is a key factor in academic success, as it motivates adolescents to set high standards and view challenges as opportunities for growth. High self-confidence leads to ambitious, achievable goals, reinforcing a sense of accomplishment and self-worth. Adolescents with high self-confidence engage in proactive study behaviors, such as time management and self-regulated learning, with a growth mindset. Conversely, those with low self-confidence struggle to initiate and maintain productive study habits, leading to subpar academic performance. Therefore, self-confidence is crucial for academic success.

Self-Confidence and Test Anxiety

Test anxiety is a common challenge faced by adolescents, and self-confidence plays a pivotal role in mitigating or exacerbating this anxiety. Adolescents with high self-confidence tend to approach tests with a positive attitude and a belief in their ability to perform well. This positive mindset can reduce anxiety and enhance test performance. Conversely, adolescents with low self-confidence may experience heightened test anxiety. They may doubt their abilities, fear failure, and experience physical symptoms of anxiety, such as increased heart rate and sweating.

Self-Confidence and Personality Development

Adolescence is a crucial period for self-identity formation, closely linked to self-confidence. High self-confidence leads to a stable, positive self-identity, while low self-confidence can cause inner conflicts and identity crises. Adolescents with high self-confidence tend to align their values and aspirations, while those with low self-confidence may struggle.

The Role of Self-Confidence in Building Resilience

Resilience, the ability to overcome adversity, is crucial for adolescent growth. High self-confidence adolescents view challenges as opportunities for growth, seeking solutions and support. Low self-confidence may lead to feelings of helplessness and despair, hindering resilience and personal growth. Both self-confidence and resilience are closely linked in adolescence.

Self-Confidence in Interpersonal Relationships

Adolescents' self-confidence significantly influences their ability to navigate interpersonal relationships and manage emotions effectively. High self-confidence leads to assertive communication, setting boundaries, and healthy relationships, fostering positive interactions with peers and adults. Conversely, low self-confidence can lead to passive or aggressive communication styles, difficulty setting boundaries, and reluctance to express true thoughts, hindering personality development. Emotional regulation is also crucial for adolescents, with high self-confidence allowing them to handle intense emotions with resilience. Conversely, low self-confidence can lead to emotional outbursts, avoidance, or suppression, hindering overall well-being.

Personal Growth and Self-Confidence

Personal growth is a continuous process, and self-confidence plays a crucial role in this process. Adolescents with high self-confidence are more open to learning and growth opportunities, viewing mistakes as valuable learning experiences. Conversely, those with low self-confidence may avoid challenging themselves, hindering their development. High self-confidence also promotes healthy emotional regulation, allowing adolescents to handle emotional challenges with resilience. On the contrary, low self-confidence may lead to emotional outbursts, avoidance, or suppression, hindering overall well-being.

Strategies for Enhancing Self-Confidence in Adolescents

Self-reflection and creating a supportive environment are essential for enhancing adolescent self-confidence. Journaling is a useful practice, as it helps adolescents record their achievements and growth experiences. Parents, teachers, and peers can provide encouragement, constructive feedback, and emotional support. Self-compassion, which involves treating oneself with kindness and understanding, can counteract negative self-talk and promote a healthier self-concept. Mindfulness practices, such as deep breathing and meditation, help adolescents develop self-awareness and self-regulation, reducing anxiety and improving self-esteem.

Conclusion

This article explores the relationship between self-confidence, academic performance, and personality development in adolescents. It highlights that self-confidence is a crucial trait that influences an adolescent's belief in their abilities, competence, and worthiness. Factors influencing self-confidence include parental influence, peer relationships, school environment, cultural and societal factors, and technology and social media. Strategies to enhance self-confidence include self-reflective practices, building a supportive environment, encouraging self-compassion, promoting mindfulness, and seeking professional help.

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Self-Confidence and Mathematical Problem-Solving Ability among Single Adolescents

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Abstract

The purpose of the study was to assess single adolescents' mathematical problem-solving skills and sense of self. In order to find significant differences in self-confidence and problem-solving skills depending on age, gender, education, birth order, residential area, family type, and the jobs of the father and mother, the study employed a convenient sample technique. The findings indicated that while single adolescents had stronger self-confidence, they were less adept at solving mathematical puzzles. Based on the mother's profession, family structure, or residential area, there was no discernible difference in her ability to solve mathematical puzzles.

Introduction

Adolescence is a difficult yet rewarding time when people learn new skills, develop more complex social lives, and change their family dynamics. It is a period of biological, cognitive, social, and emotional transition from childhood to adulthood. Adolescents' social lives are greatly influenced by their siblings, whom many view as their best friends and with whom they engage regularly. A person who is an only child doesn't have any siblings, yet they might have half- or step-siblings. Children with younger or older siblings could grow up in a similar family structure.

Self-confidence and Adolescents

An individual's emotional and psychological growth, particularly throughout adolescence, the period between childhood and adulthood, depends greatly on their level of self-confidence. Significant physical, cognitive, and social changes during adolescence result in a greater demand for self-assurance and identity development. To help young people develop a positive self-image and equip them with the resilience and assertiveness necessary to face the challenges of life, it is crucial to understand the elements that affect self-confidence in adolescents. An individual's apparent capacity to perform skillfully in a scenario to get things done, overcome challenges, and go well is referred to as self-confidence. It may or may not be a universal quality that permeates all parts of a person's life. Parents' attitudes play a significant role in children's feelings about themselves, particularly in their early years. Lack of self-confidence is often the result of focusing too much on unrealistic expectations or standards of others, especially parents and society. Friends' influences can be as powerful as parents and society in shaping feelings about one's self.

Mathematical Problem-Solving Ability

Adolescents must develop their mathematical problem-solving skills as they become ready for their future academic and professional pursuits. It entails comprehending mathematical ideas, using rules to resolve issues, and clearly expressing mathematical concepts. Strong mathematical problem-solving abilities in adolescents increase their chances of success in college and many occupations in the sciences, technology, engineering, and mathematics. Teenagers must practice frequently, compete, work with friends, and use technology like online games, tutorials, and applications in order to acquire these skills. Home settings and emotional intelligence also significantly influence one's capacity for problem-solving. A solid foundation in fundamental arithmetic abilities, critical and logical thinking, desire and enthusiasm for math, excellent math instruction and resources, and a supportive environment are all factors that affect one's ability to solve mathematical problems. Teenagers who are really interested in

arithmetic are more inclined to work hard to hone their problem-solving abilities. Strong mathematical problem-solving abilities can also be aided by having access to materials and education in arithmetic of the highest caliber, including textbooks, online tutorials, and math software.

Single-Child Adolescence

Adolescence is a challenging and rewarding period, transitioning from childhood into adulthood through biological, cognitive, social, and emotional transitions. It can be divided into three stages: early adolescents (12-14 years), middle adolescents (14-17 years), and late adolescents (17-19 years). The biological transition of adolescence, or puberty, is characterized by physical changes, cognitive transition, and emotional transition. Physically, only children may feel lonely or isolated due to the lack of siblings in the home. However, this preference for adult companionship is not interpreted as loneliness. Cognitively, only children may have a higher sense of independence than their peers, as they have to navigate family life alone. They may have less experience in sharing resources and may have less experience in sharing with others. Hyperindependence may be their chosen coping mechanism if high expectations are placed on them. Poor social skills are common among 'only children', as they have fewer opportunities to engage in casual, everyday interactions. With adult time as their primary social outlet, they may have a more challenging time relating to other children at first. High achievers may feel pressure to attain high levels of achievement in academics, extracurricular activities, and future careers. Lastly, only children may be highly sensitive to criticism, as they do not have consistent interaction with other children and do not learn how to manage negative feedback.

Significance of the Study

Urbanization, growing housing expenses, and changes in gender roles are only a few of the causes contributing to the popularity of the idea of single-child families. Couples now place a greater emphasis on the welfare of their lone child, enabling them to invest more time and money in their child's growth. The idea of raising a single child has been affected by societal developments, including a greater appreciation of parenting that emphasizes quality over number. However, different cultures and geographical areas have different rates of single-child families. The predominance of single-child households may be impacted by government rules, such as China's one-child policy, while cultural norms may still favor bigger families. Understanding the experiences of single-child teenagers can help societal policies, parental techniques, and educational practices that support good outcomes for these kids.

Self-confidence in single adolescents is crucial for their social, academic, and emotional well-being. It is influenced by factors such as peer pressure, academic stress, and personal experiences. Building self-confidence involves fostering a supportive environment, positive reinforcement, setting achievable goals, and encouraging the development of strengths and talents. However, self-confidence can fluctuate due to factors like peer pressure, academic stress, and personal experiences. To build self-confidence, adolescents should be encouraged to explore their interests, teach coping strategies, and embrace their imperfections. Promoting a healthy lifestyle, such as regular exercise, proper nutrition, and sufficient sleep, can also positively impact self-confidence. Mathematical problem-solving ability among adolescents can vary greatly, with factors such as exposure to math education, quality of instruction, innate aptitude, and motivation to learn influencing their abilities. A supportive learning environment, engaging teaching methods, and practice opportunities can enhance mathematical problem-solving skills.

Conclusion

The purpose of the study was to examine how single adolescent self-confidence and mathematical problem-solving skills differ depending on factors like birth order, age, gender, religion, educational attainment, residential area, family, and father's and mother's occupations. The findings indicated that self-confidence was comparable between boys and females, with girls having a stronger capacity for solving mathematical puzzles. Teenagers with nuclear homes were more self-assured, and those between the ages of 14 and 18 were better at solving mathematical puzzles. The most self-assured teenagers were those who were born alone, whereas those whose fathers were employed in the public sector exhibited greater assurance. Students at higher secondary schools demonstrated the best aptitude for solving mathematical puzzles. According to residential location or mother's profession, the study also revealed no evidence of a substantial difference in the self-confidence and problem-solving skills of solitary teenagers. Limitations of the study included time limitations and the inability to detect single adolescents. The study's limitations include a limited sample size and a time limit.

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Business Economics: The Nexus of Profit and Strategy

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Abstract

The main ideas, theories, and applications of business economics are all covered in-depth in this article. This article emphasizes how important business economics is in directing businesses toward successful and long-term business plans. A thorough understanding of business economics is crucial for corporate success in today's dynamic business environment. An interdisciplinary field called business economics studies how economics and business management interact. This article explores the core ideas, theories, and applications of business economics, emphasizing how crucial it is in determining business strategy, optimizing profits, and fostering long-term growth. Key economic concepts like supply and demand, cost analysis, market structures, pricing schemes, and decision-making instruments will be covered. We will also look at how business economics aids businesses in navigating dynamic markets, adapting to shifting customer tastes, and dealing with the forces of the global economy. Readers will have a thorough understanding of the significance of business economics in modern corporate contexts by the end of this article.

Key Words: Business, economics, supply and demand, pricing strategies, and decision-making

Introduction

Business economics acts as a link between economic theory and actual business activities, giving businesses the resources and knowledge they need to make wise decisions. It covers a broad spectrum of subjects, such as supply and demand analysis, cost management, market structures, pricing tactics, and decision-making procedures. The fundamental goal of business economics is to maximize profits while effectively utilizing the resources at hand. By weighing the advantages and disadvantages of numerous options, it helps businesses make informed decisions. It applies equally to charitable organizations and governmental organizations working to allocate resources effectively; it is not just confined to for-profit businesses. The works of classical economists like Adam Smith, David Ricardo, and John Stuart Mill can be used to trace the origins of business economics. However, it wasn't until the early 20th century when economists like Alfred Marshall and John Bates Clark made ground-breaking contributions that managerial economics officially emerged as a separate profession

Importance in Modern Business

Businesses must continually make decisions about pricing, production, investment, and resource allocation in today's complicated and fiercely competitive business climate. The profitability and long-term viability of a corporation are significantly impacted by these choices. This idea is applied in business to manage inventories, anticipate sales, and establish prices. Supply and demand are influenced by a number of variables, such as customer preferences, market competition, outside shocks, and governmental policies. For businesses to continue to be successful and competitive, they must continuously monitor and adjust to these elements.

Cost Analysis

Another crucial component of corporate economics is cost analysis, which aids businesses in choosing the most economical production and pricing strategies. Variable costs change with production while fixed costs are constant regardless of the degree of production. It's essential to comprehend these expense areas if you want to maximize your profits. Cost-cutting

strategies are frequently used by businesses to lower variable costs and boost profitability. Expenses that can be changed immediately include labor and materials, which are considered short-run expenses. Choosing to increase or decrease production capacity is one of the more fundamental decisions that affect long-term expenses. A detailed cost analysis aids businesses in making the best short- and long-term choices. Companies strive to produce goods and services for the least amount of money without sacrificing quality. Finding effective production techniques, maximizing resource use, and negotiating advantageous supplier contracts are all part of cost-minimization tactics.

Perfect Competition & Monopolistic Competition

In a perfectly competitive market, there are many buyers and sellers, homogeneous products, and easy entry and exit. Prices are determined solely by supply and demand forces, and no single firm can influence the market price. Businesses in perfect competition focus on cost efficiency to remain profitable. A monopoly exists when a single firm dominates an entire industry. Monopolists have significant pricing power and can set prices above their production costs. Government regulation often intervenes in monopolistic industries to prevent abuse of market power. Monopolistic competition combines elements of both monopoly and perfect competition. Firms produce differentiated products, allowing them some control over prices. Marketing and product differentiation are essential in this market structure.

Pricing

Pricing tactics are essential to understanding business economics since they have a direct impact on the sales and profits of an organization. Companies use a variety of pricing strategies to accomplish their goals. Price discrimination entails setting different rates for various client segments according to their capacity to pay. For instance, airlines have varied ticket costs for leisure and business travelers. Segmenting markets and prohibiting resale between groups are necessary for effective price discrimination. With cost-plus pricing, the selling price is calculated by adding a markup to the production cost. This strategy guarantees that all expenses are met and offers a desired profit margin. However, it might not take into account customer preferences or market conditions. Value-based pricing places an emphasis on how customers perceive the worth of a good or service. Businesses determine the prices that consumers are willing to pay and set them accordingly. This tactic can result in greater profitability by matching price with customer expectations. Pricing that is competitive means basing costs on what other businesses charge. Although this strategy could result in price wars, it can also aid a company in gaining market share. Competitive pricing requires strategic competitor analysis.

Game Theory and Investment Appraisal Methods

It incorporates internal rate of return (IRR) and net present value (NPV), two metrics that help assess the financial sustainability of such actions. In competitive situations, game theory examines the strategic interactions between businesses. Businesses utilize game theory to simulate rivals' behavior and make choices that will optimize their own results. In industries with interdependent enterprises, like telecommunications and aviation, game theory is particularly pertinent.

Conclusion

Strategic decision-making in modern company environments is supported by the dynamic discipline of business economics. Its tenets and methods support businesses in maximizing profits, adjusting to market dynamics, and thriving in the face of forces from the global economy. Business economics continues to play a crucial role in leading organizations toward sustainable growth and profitability as the business landscape changes.

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The Profound Impact of Swami Vivekananda and the Indian Knowledge System on Shaping the Present Student Community

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Abstract:

The old Indian knowledge system and Swami Vivekananda, a respected spiritual teacher and philosopher, have had a profound impact on today's student population. The significant influence of Swami Vivekananda's teachings and the extensive Indian knowledge system on the minds, values, and aspirations of today's students is explored in depth in this article. It looks at how these inspirations and guiding principles still help students grow holistically and gain a better knowledge of what their lives are for. Through his teachings on spirituality, self-realization, and human potential, he made an enduring impression on the world. His impact has endured for generations of pupils all throughout the world, far beyond his own lifetime. The enormous influence of Swami Vivekananda's teachings on the current student community is examined in this article. Through his emphasis on self-discovery, character development, and the pursuit of knowledge, Swami Vivekananda continues to inspire students to lead purposeful lives and contribute positively to society.

Introduction:

His lessons, which are grounded in Vedanta philosophy and the core of the Indian knowledge system, have been crucial in forming the current student body. For countless millennia, the ancient knowledge of India – contained in writings like the Vedas, Upanishads, and Bhagavad Gita – has served as a source of illumination and direction. Swami Vivekananda is a towering figure in the enormous universe of spiritual and philosophical philosophers, whose ideas have permeated space and time. This essay dives into his emphasis on self-realization, character growth, and the pursuit of knowledge and shows how his timeless advice continues to serve as an example for young people who want to live meaningful lives and have a positive impact on the world.

Swami Vivekananda believed that young people in India had enormous potential and might usher in a beneficial transformation. He highlighted the importance of education in fostering one's character, intelligence, and spirituality. His well-known speech at the World's Parliament of Religions in Chicago in 1893 marked the start of his endeavor to uplift and inspire young people. Young minds were profoundly affected by Vivekananda's message of self-assurance, bravery, and the pursuit of perfection. An important moment in Swami Vivekananda's life was his historic appearance at the World's Parliament of Religions in Chicago in 1893. His address, which began with the iconic words "Sisters and brothers of America," introduced the world to the rich spiritual heritage of India and its universal relevance. This event catapulted him onto the global stage as a representative of Hindu philosophy and Vedanta. From that point forward, Swami Vivekananda dedicated his life to spreading the message of self-realization, human unity, and the importance of a holistic education.

Swami Vivekananda recognized the immense potential of the youth in India and envisioned them as the harbingers of positive change. He emphasized the development of character, intellect, and spirituality as essential components of education. His famous address at the World's Parliament of Religions in 1893 in Chicago marked the beginning of his mission to inspire and uplift the youth. Vivekananda's message of self-confidence, fearlessness, and the pursuit of excellence resonated deeply with young minds. Swami Vivekananda's historic

appearance at the World's Parliament of Religions in Chicago in 1893 marked a turning point in his life.

His call to "Arise, awake, and stop not until the goal is reached" serves as a powerful mantra for students facing adversity. In an era marked by competitiveness and peer pressure, Swami Vivekananda's emphasis on self-confidence and self-awareness empowers students to navigate challenges with resilience and a positive outlook. Swami Vivekananda stressed the importance of character development and ethical values as the foundation of a fulfilling life. He believed that true education should not only impart knowledge but also cultivate noble qualities and virtues in individuals. Swami Vivekananda's advocacy for truthfulness, integrity, and compassion resonates deeply with the student community. His words inspire them to uphold ethical principles even in the face of adversity, encouraging them to become responsible citizens who contribute to the greater good. Education was of paramount importance to Swami Vivekananda, who saw it as a means of empowerment and transformation. He believed that true education should nurture both the mind and the soul, enabling individuals to develop their full potential. His call for education that goes beyond rote learning and encourages critical thinking is particularly relevant in today's knowledge-driven society.

The teachings of Swami Vivekananda, which place a strong emphasis on holistic education that involves the development of the body, mind, and spirit, have had a tremendous impact on India's educational system. Students have been affected by his demand for truth, integrity, and compassion to make moral decisions and work through challenging moral conundrums. His message of self-realization and self-empowerment has influenced the mindset of today's youth, inspiring them to overcome self-imposed barriers and pursue excellence. The Bhagavad Gita, one of the Upanishads, and other ancient works that form the foundation of the Indian knowledge system continue to offer profound insights into the nature of existence, the self, and the quest for a meaningful life.

Conclusion:

Swami Vivekananda's teachings continue to have a profound impact on shaping the present student community. His message of self-realization, character development, and the pursuit of knowledge resonates deeply with students seeking meaning and purpose in their lives. In a world marked by uncertainty and rapid change, his timeless wisdom serves as a guiding light, empowering students to navigate their academic, personal, and ethical journeys with confidence and integrity. As we reflect on the enduring relevance of Swami Vivekananda's teachings, it is evident that his legacy transcends generations and borders. Students hoping to have a positive impact on society continue to find great inspiration in his vision of a peaceful, enlightened world where people recognize their divinity and work to improve humanity. The wisdom of the Indian knowledge system and Swami Vivekananda's teachings have had a lasting influence on the current student body. They have given kids the tools they need to succeed academically and lead meaningful lives by instilling principles like honesty, compassion, and self-realization. Students' brains and emotions continue to be profoundly shaped by Swami Vivekananda's vision for youth and the rich legacy of Indian knowledge, leading them toward a better and more enlightened future.

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Building Relationships with Professors and Mentors: A Key to College Success

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Abstract

The years spent in college are a critical time in a student's academic and personal development. Building relationships with instructors and mentors may be a fulfilling and meaningful experience outside of the lectures and homework in the classroom. This essay addresses the value of developing these relationships while in college and how they support both academic and personal development. We highlight the benefits of mentorship and provide advice on how students can successfully develop these valuable relationships by using a variety of viewpoints, examples, and research. We also talk about the possible lifetime benefits of such connections, such as potential career prospects and personal growth.

Introduction

A young adult's journey through college is a crucial time marked by academic and personal development as well as the pursuit of long-term objectives. Many people use this time to learn about themselves, go on adventures, and acquire important life skills. Beyond the academic curriculum, the relationships made during this time frequently have a significant impact on how people develop. Mentors and professors are crucial to a student's college experience. In order to help students manage the complexity of higher education, they provide direction, knowledge, and support. Developing relationships with these people can be transformative and give students the resources they need to excel in both their academic and personal lives.

Why Building Relationships Matters

The academic help that professors and mentors offer is one of the main advantages of doing so. These people can provide study advice, provide clarity on course materials, and even draft recommendations for graduate school or employment applications. They could also represent students who are having academic difficulties. Professors and mentors can aid students in developing personally as well as academically. They can help students make critical life decisions, provide career advice, and provide emotional support during trying times. These people's knowledge and life experiences can be extremely helpful in molding a student's character and perspective. Professors and mentors frequently have wide networks in the fields they work in. Developing connections with them might lead to chances for internships, research projects, and prospective employment offers.

These contacts may play a key role in launching a student's career and offering insightful information about the working world. Professors at colleges are knowledgeable authorities who love to impart their knowledge. Developing a relationship with them might open up prospects for research or academic collaboration as well as a greater understanding of the topic area. They offer advice on choosing a major, choosing courses, and academic preparation. They can support students in making well-informed choices about their academic and professional aspirations. Mentors are those who provide advice and support, frequently outside of the classroom. They could be teachers, former students, or experts in the student's chosen profession. Mentors offer insightful advice and helpful career guidance. Peer bonds are also crucial to development; they can be with professors, alumni, or professionals in the student's field of interest. Mentors provide valuable insights and career advice. Building relationships with peers is also important. Study groups and friendships can enhance the college experience and create a support system for academic and personal challenges.

Benefits of Mentorship

Academic progress can be strongly impacted by mentoring. Mentors can offer advice on time management, study habits, and learning practices that will increase academic performance and knowledge retention. Mentors can provide career advice and frequently have real-world experience. They can offer guidance on job seeking and networking, as well as assist students in identifying their talents, interests, and potential career routes. Mentors can act as role models for students, assisting them in the development of critical life competencies including leadership, problem-solving, and communication. In trying times, they can also offer emotional support.

How to Build Relationships

Attending the teachers' office hours is one of the simplest ways to get in touch with them. In-depth discussions about coursework, research interests, or professional goals can be had during this one-on-one session. Active involvement in class shows commitment to and enthusiasm for the subject. Additionally, it gives educators the chance to get to know their students. Never be afraid to ask your instructors or mentors for suggestions or advice. Their opinions can be quite valuable on a variety of topics, including academics, job options, and personal issues. Clubs and groups focused on academics and careers can be found at many institutions. Students can find classmates and mentors who share their passions by joining these clubs. Participating in extracurricular activities or research initiatives run by professors can give hands-on experience and deepen relationships.

Success Stories

There are stories of individuals whose lives were positively impacted by mentors and professors during their college years. Profiles of successful individuals who credit their college relationships with professors and mentors as key factors in their achievements. There are examples of people whose mentors and teachers throughout their college years had a good influence on their lives. Profiles of successful people who attribute a large part of their success to their ties with instructors and mentors during college. Investigating how relationships made in college might help people later in life, including in terms of their employment and personal growth. The value of having a wide network of teachers, mentors, and peers to tap into while looking for chances and contacts in different career domains.

Conclusion

A review of the long-term benefits of forming friendships with teachers and mentors while in college and how they support a student's development both academically and personally. Finally, some final words of incentive and encouragement for students to actively seek out and cultivate these crucial connections throughout their college experience. a thorough listing of sources, writings, and publications on the subject of forming bonds with college mentors and professors that can be used as a starting point for additional research. In conclusion, developing relationships with mentors and professors while in college can have a profoundly positive effect on a student's academic progress, personal development, and chances for the future. Students will be motivated and empowered by the tales, studies, and advice to actively seek out and cultivate these priceless connections throughout their college careers and beyond.

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Psychological Capital among Middle Aged

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Abstract

The major objective of this study was to evaluate the psychological capital among middle-aged employees. The study was conducted on middle-aged employees living in urban, semi-urban and rural areas. The sample was collected through a convenient sampling method. 270 samples were collected for the study. The descriptive research method was used by the researcher. The main tool for data collection was socio-demographic details and the psychological capital scale of Luthans, Youssef and Avolio. The study reveals that there is no significant difference in psychological capital based on age, religion, monthly income, marital status, etc.

Keywords: Psychology, Capital, Marital status, Religion, Income and Adult

Introduction

Changes in roles and social expectations describe middle age as a time of major transformation. A person's physical and mental health may suffer during this time due to biological, social, and psychological influences. A complex interplay of elements affecting physical, mental, emotional, and social well-being exists. Workplace factors that affect employees' welfare include the standard and security of the physical environment, how well-treated they feel at work, the nature of the task, and the organization. For employees, prosperity is a crucial asset, and a positive working atmosphere is crucial. Work performance can be impacted by mental health problems, which can result in burnout, hopelessness, stress-related illnesses, and strain on the organization. For the sake of social transformation, economic development, and mental health, psychological capital, or Psy Cap, is essential. To maintain good mental wellness, factors such as training, work, salary, and housing play crucial roles. Positive psychology in the workplace, known as Positive Organizational Behavior (POB), aims to cultivate the best employees while focusing on excellence and decency. The study of psychological capital among middle-aged employees aims to understand and analyze its importance for overall well-being.

Middle Aged

Middle age is a time of significant psychological challenges, with women experiencing depression and grief more frequently than men. Erikson suggests that middle-aged individuals should engage in procreative, productive, and creative behaviors, adapt to physical and physiological changes, and ensure economic security for old age. Balancing responsibilities as breadwinners and homemakers, as well as caring for their parents, can lead to emotional conflict and guilt. Additionally, middle-aged individuals may experience a decline in physical fitness, affecting both men and women. These changes can affect the overall well-being of middle-aged individuals, affecting their overall well-being.

Psychological Challenges

Middle-aged women are twice as likely to experience psychiatric issues as men due to societal and familial circumstances. Depression is the most prevalent mental illness in women aged 30-50, characterized by melancholy, hopelessness, and sleep disturbances. Grief is common in middle life, ranging from loss of friends to job stress. Erikson suggests that middle-aged adults should engage in procreative, productive, and creative behaviors, adapt to physical and physiological changes, reevaluate vocational accomplishments, ensure economic security, help

children become responsible adults, reorganize living arrangements, and participate in the community.

Vocational Satisfaction Among Middle Aged

Transitioning to middle age involves adjusting to new interests, attitudes, and behaviors in job, family, and social contexts. Males face challenges due to retirement and physical changes in their jobs, while women transition from housewives to working in business or industry. Factors affecting career adjustment include job satisfaction, social attitudes, advancement prospects, professional expectations, automation, coworker attitudes, and relocation. Middle-aged workers may face challenges like boredom, lack of pride, and increased workplace speed. The transition is complex and requires careful consideration and adaptation.

Psychological Capital

Positive psychology, or psychological capital, was developed in the 1990s to assess and manage people's strengths and psychological core meanings. It represents motivational tendencies resulting from healthy psychological concepts like efficacy, optimism, hope, and resilience. Psychological capital is influenced by cognitive development, job drive, and intrapersonal and interpersonal performance. It is a crucial aspect of positive organizational behavior, based on a quality-based methodology. It includes four measures: expectation, idealism, self-viability, and strength. A reliable and valid Psychological Capital Questionnaire (PCQ) measure can measure psychological capital. A study examined the psychological capital of middle-aged employees in government and private sectors, finding that these factors have diminished in their personal lives, and most find satisfaction in their work.

Conclusion

The study explores the psychological capital of middle-aged employees, highlighting the complex interplay of physical, psychological, and social challenges they face. It emphasizes the importance of understanding and addressing these challenges, particularly for women, who are more susceptible to mental health issues like depression and grief. The study also emphasizes the importance of vocational satisfaction, as the transition to middle age often involves significant adjustments in career and life roles. Psychological capital, which includes qualities like efficacy, optimism, hope, and resilience, is crucial for maintaining the well-being of middle-aged employees. It contributes to personal growth, happiness, societal well-being, economic development, and mental health.

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The Role of Emotional Maturity in Building Resilience among College Students

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Abstract

In order for young adults to successfully traverse the difficulties and changes that come with college life, resilience is a crucial component in their growth. This essay examines how emotional maturity helps college boys and girls develop resilience. It explores what emotional maturity and resilience are, how important they are in the context of higher education, and the many things that go into developing them. Colleges and universities can better support their students in their journey toward personal and academic success by recognizing the connection between emotional maturity and resilience.

Keywords: Maturity, Resilience, College Students

Introduction

A young person's life is transformed at college, which is characterized by intellectual challenges, social changes, and growing independence. Additionally, it is a time when people start to define their identities and acquire the knowledge and abilities needed to deal with the challenges of maturity. The development of resilience, which enables pupils to recover from setbacks, adapt to change, and prosper despite adversity, is essential to this process. An individual's emotional maturity is crucial in determining how resilient they are, as it affects their capacity to control their emotions, forge solid relationships, and make wise judgments. In this essay, we'll examine the crucial connection between college boys' and girls' emotional development and resilience.

Defining Resilience & Emotional Maturity

An individual's capacity to respond constructively to adversity, trauma, tragedy, threats, or other substantial sources of stress falls under the umbrella of resilience, which is a multidimensional concept (Masten, 2001). It entails not just surviving terrible situations but also thriving as a result of them. Positive outlooks, problem-solving abilities, emotional control, and robust social support networks are just a few of the traits that resilient people exhibit (Rutter, 2012). The ability to identify, comprehend, manage, and utilize one's emotions is referred to as emotional maturity, also known as emotional intelligence (EQ) or emotional maturity (Salovey & Mayer, 1990). It includes abilities like self-awareness, emotional control, empathy, and interpersonal efficacy. Emotional maturity enables individuals to navigate social situations with finesse, make decisions based on a balance of reason and emotion, and build meaningful relationships (Goleman, 1995).

The Importance of Resilience and Emotional Maturity in College

Academic demands associated with college life can include intense homework, difficult tests, and the need for time management. Resilient and emotionally mature students are better able to handle these academic stresses. They can recover from poor grades, ask for assistance when necessary, and keep a growth mentality that encourages ongoing learning (Duckworth, Peterson, Matthews, & Kelly, 2007). Students frequently experience homesickness, loneliness, and worry as they make the adjustment to college, which can be emotionally exhausting. Individuals with emotional maturity are able to control these emotions, seeking help when needed and engaging in self-care. By enabling students to persevere and adapt, resilience ensures that setbacks in their mental health do not undermine their overall wellbeing (Connor & Davidson, 2003). Young adults make new friendships and love connections during their time

in college, which can be both beneficial and difficult. Students that are emotionally mature are better able to connect with others, solve problems, and communicate clearly. Their ability to bounce back from social setbacks like breakups or friendship disputes helps them develop resilience (Brackett, Rivers, & Salovey, 2011). This prevents these experiences from defining their college years. A key competency for the workplace is emotional maturity since it encourages effective leadership, teamwork, and communication. Individuals that are resilient are able to deal with obstacles in their career path, adapt to shifting employment markets, and recover from professional setbacks (Boyatzis, Goleman, & Rhee, 2000).

Factors Contributing to Emotional Maturity and Resilience

Growing up in a familial context has a big impact on how resilient and emotionally mature you become. According to Luthar, Cicchetti, and Becker (2000), families that are emotionally loving and supportive tend to create kids who are more emotionally aware and better able to handle adversity.

Through specialized educational programs and treatments, colleges and universities can play a significant role in promoting emotional maturity and resilience. Students can acquire the necessary abilities by taking courses on emotional intelligence, stress management, and interpersonal communication (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010). Peer interactions also contribute to the development of emotional maturity and resilience. Positive friendships can provide emotional support and opportunities for growth, while conflicts with peers can serve as valuable learning experiences (Larson & Richards, 1991). Positive and negative life experiences can influence emotional development and resiliency. Emotional resilience can be boosted by overcoming difficult life experiences like the death of a loved one or a life-threatening illness (Hjemdal, Vogel, Solem, Hagen, & Stiles, 2011).

Strategies for Helping College Students Develop Emotional Maturity and Resilience

Colleges may provide workshops and courses that emphasize the development of emotional intelligence. These courses can aid students in developing their emotional control, empathy, and self-awareness. Support for mental health: Having access to resources and counseling services is crucial. Students should be urged to seek assistance when necessary and mental health problems should be de-stigmatized. Programs for peer mentoring: Incoming freshmen may benefit greatly from advice and emotional support from friends who have already made the transition to college life. Stress Management and Coping Strategies: Teaching students effective stress management techniques and coping strategies can enhance their ability to handle academic and personal challenges. Experiential Learning: Encouraging students to engage in internships, volunteer work, or study abroad experiences can foster personal growth and resilience.

Conclusion

As college boys and girls manage the intricacies of higher education, emotional maturity and resilience are priceless assets. Their general well-being is improved by their capacity to control their emotions, overcome challenges, and uphold healthy relationships. In order to provide students with the skills they need to succeed in college and beyond, colleges and universities have a responsibility to encourage the development of these fundamental abilities.

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The Role of Self-Confidence in Adolescents' Academics and Personality

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Abstract

This article explores the relationship between self-confidence, personality traits, and academic achievement in students. It reveals that self-confidence is crucial for personality and is directly related to academic achievement. Studies show that students from different castes and socio-economic backgrounds have different self-concepts, with some showing higher intelligence and imagination while others have more practical traits. Gender differences and information use may influence self-confidence development. High self-confidence students have higher scientific creativity scores. Self-concept is a good predictor of creativity but less efficient in predicting composite creativity. However, caste, region of residence, and sex do not affect self-confidence and aspiration levels.

Keywords: Self-confidence, Adolescents' Psychology

Introduction

Adolescence is a challenging yet rewarding period characterized by new abilities, social changes, and emotional transformations. Self-confidence is crucial for emotional and psychological growth and is influenced by factors such as parents' attitudes, peer influence, academic achievement, physical appearance, parental style, past experiences, personality traits, cultural background, and mental and emotional health. Barriers to self-confidence include fear, an inferiority complex, worrying, negative thoughts, procrastination, and indecision. Recent research denotes that there is a strong relationship between self-confidence, personality traits, and academic achievement in students. Studies show that students from different castes and socio-economic backgrounds have different self-concepts, with some showing higher intelligence and imagination while others have more practical traits. Gender differences and information use may also influence self-confidence development.

Role of Self-Confidence in Adolescents' Academics and Personality

The period of adolescence is both demanding and rewarding, characterized by the development of new abilities, a complicated social life, and changes in familial ties. Between childhood and maturity, this age is one of biological, cognitive, social, and emotional transformations. Siblings are frequently the closest companions and confidantes of adolescents, with whom they engage frequently. Particularly during adolescence, self-confidence is a critical component of one's emotional and psychological growth. Significant physical, cognitive, and social changes that occur during adolescence result in a greater demand for self-assurance and identity development. To help people develop a positive self-image and give them the confidence they need to face the challenges of life with resiliency and assertiveness, it is crucial to understand the elements that affect self-confidence. An individual's apparent capacity to respond appropriately to circumstances, get things done, and overcome challenges is referred to as self-confidence. Self-confident individuals are willing to risk disapproval and accept themselves, while those without self-confidence may rely too much on others' approval and avoid taking risks. Self-confidence is a complex concept that can vary across individuals.

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engage frequently. Particularly during adolescence, self-confidence is a critical component of one's emotional and psychological growth. Significant physical, cognitive, and social changes that occur during adolescence result in a greater demand for self-assurance and identity development. To help people develop a positive self-image and give them the confidence they need to face the challenges of life with resiliency and assertiveness, it is crucial to understand the elements that affect self-confidence. An individual's apparent capacity to respond appropriately to circumstances, get things done and overcome challenges is referred to as self-confidence.

It is not a universal trait and can be influenced by various factors such as parents' attitudes, peer influence, academic achievement, and physical appearance, parental style, past experiences, personality traits, cultural background, and mental and emotional health. Parents play a crucial role in shaping children's self-confidence, as they provide acceptance and love when they make mistakes. Friends can also play a significant role in shaping self-confidence, as they re-examine values and develop their identities. Factors influencing adolescents' self-confidence include social support, peer influence, academic achievement, and physical appearance, parental style, past experiences, personality traits, cultural and ethnic background, and mental and emotional health. Barriers to self-confidence include fear, which can be either fear of failure or ridicule, an inferiority complex, worrying, negative thoughts, procrastination, and indecision. It is essential to avoid these barriers and focus on personal growth and development. By addressing these barriers, individuals can develop self-confidence and overcome challenges in various aspects of their lives.

This article explores the relationship between self-confidence, personality traits, and academic achievement in students. It reveals that self-confidence is crucial for personality and is directly related to academic achievement. Studies show that students from different castes and socio-economic backgrounds have different self-concepts, with some showing higher intelligence and imagination while others have more practical traits. Gender differences and information use may influence self-confidence development. High self-confidence students have higher scientific creativity scores. Self-concept is a good predictor of creativity but less efficient in predicting composite creativity. However, caste, region of residence, and sex do not affect self-confidence and aspiration levels.

Conclusion

Adolescence is a challenging and rewarding period characterized by new abilities, complex social life, and changes in familial ties. It is a period of biological, cognitive, social, and emotional transformations, with siblings often being the closest companions and confidantes. Self-confidence is a critical component of emotional and psychological growth, and it is influenced by factors such as parents' attitudes, peer influence, academic achievement, and physical appearance, parental style, past experiences, personality traits, cultural background, and mental and emotional health. Barriers to self-confidence include fear, inferiority complex, worrying, negative thoughts, procrastination, and indecision. It is essential to avoid these barriers and focus on personal growth and development to develop self-confidence and overcome challenges in various aspects of life. Self-confidence is crucial for personality traits and is directly related to academic achievement. Studies show that students from different castes and socio-economic backgrounds have different self-concepts, with some showing higher intelligence and imagination while others have more practical traits. Gender differences and information use may influence self-confidence development. Adolescents' self-confidence is crucial for their social, academic, and emotional well-being. Building self-confidence involves supportive environments, positive reinforcement, setting achievable goals, and

encouraging them to develop their strengths and talents.

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Attitude of College Lectures towards Educational Administration

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Abstract

The major objective was to study the attitude of college lectures towards educational administration. The sample constituted a of total 203 college lectures belonging to seven districts of Kerala. The Attitude towards Educational Administration scale prepared by Dr. T.R. Sharma was used this for this study. The data was collected, scored, and calculated. The statistical procedure used is mean, Standard Deviation. 't' test, ANOVA, and Correlation. The study revealed that there is significance in the attitude of college lectures toward educational administration based on some demographic factors such as monthly income and residential area. Also, the study revealed that age, and educational qualifications designation did not affect the attitude toward educational administration.

Keywords: Attitude. College Lectures, Educational Administration

Introduction

Attitude is an important psychological factor that contributes towards success and this is an important factor in helping any person to get through the highs and lows of life. That is to say, once a particular attitude is formed, it likely is what often comes out of a person. Having a positive attitude allows me to be more productive at work. People who have a positive attitude regularly set goals and achieve them. Being able to accomplish things is fostering a positive attitude, and it enhances the effectiveness. For an administrator, a positive bent of mind is essential to execute his duties wholeheartedly. (P. Karjee, 2014). Education administrators are employed in educational institutions for the management of Institutions. They manage the routine activities of the institutions and provide instructional leadership. Educational administration is a discipline within the study of education that examines the administrative methodology in general and educational institutions and educators in particular activities. Educational Administration is regarded as the process of integrating available human and material resources for achieving the execution of the programs. The term "Administration" refers to several processes such as planning, organizing, directing, coordinating, controlling, and evaluating the processes. To achieve these, the head of the educational organization plans various programs and activities.(Venkataraman&Manivannan,2017) An administrator works in every level of education, may direct programming, hire and supervise staff, manage budgets, and make decisions that affect the academic community. One of the major problems the world is facing today is several persons are excluded from the educational system. So the aims of the Indian constitution (45article) are not to be achieved and the society is not being developed. As per the census of India (2011), 21 percent (out of the total population) of disabled persons in India live both in rural and urban areas. In this population, some persons are facing different types of problems in the educational system, and as a result, they are excluded from the educational system. In such type of situation, the Indian govt. has started different types of programs/incentives such as Sarva Shiksha Mission (1988), Sarva Shiksha Abhiyan (SSA,2001) District Primary Educational Programmed (DPEP)and the National Curriculum Frame Work(NCF,2005)is just to promote the opportunities for all children to participate, learn and have equal opportunities of the education system.

Components of attitude

- ☐ Cognitive component: Your thoughts and beliefs about the subject

- ☐ Affective component: How the object, person, issue, or event makes you feel
- ☐ Behavioral component: How attitude influences your behavior

Attitudes can also be explicit and implicit. Explicit attitudes are those that we are consciously aware of and that influence our behaviors and beliefs. Implicit attitudes are unconscious but still affect our beliefs and behaviors. (Journal of Sociology and Social Welfare. 2011.)

Cognitive Component

The cognitive component of attitudes refers to the beliefs, thoughts, and attributes that we would associate with an object. It is the opinion or belief segment of an attitude. It refers to that part of the attitude that is related to the general knowledge of a person.

Affective Component

The affective component is the emotional or feeling segment of an attitude. It is related to the statement which affects another person. It deals with feelings or emotions that are brought to the surface about something, such as fear or hate. Using the above example, someone might have the attitude that they love all babies because they are cute or that they hate smoking because it harms health.

Behavioral component

The behavior component of an attitude consists of a person's tendencies to behave in a particular way towards an object. It refers to a part of attitude that reflects the intention of a person in the short run or long run.

Attitudes and behavior

We tend to assume that people behave according to their attitudes. However, social psychologists have found that attitude and actual behavior are not always perfectly aligned. (The journal of sociology and social welfare, 2011)

Attitude towards Drugs and Alcohol among Middle People

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Abstract

The prime objectives of the study were to explore stress vulnerability and Attitude towards Drugs and alcohol among middle-aged people. Present Study analysed the differences between socio-demographic details and stress vulnerability and Attitude towards Drugs and alcohol among middle-aged people. The sample was selected by using a convenient sampling method (n=249). The tools used were a self-prepared socio-demographic data sheet stress vulnerability scale (L.H. Miller and A.D. Smith, 1985) and a Scale of Attitude towards Drugs and Alcohol (Dr. Poorva Jain and Dr. AmitbDeolia, 2016). The obtained data was analysed using the SPSS tool and conducted a 't' test, ANOVA and Correlation. The study found that there is no significant difference in Stress vulnerability and Attitude towards Drugs and alcohol among middle-aged people based on some demographic factors such as type of gender, age group, residential area, Education status and monthly income. The study showed that there is no difference in stress vulnerability and attitude towards drugs and alcohol.

Keywords: Attitude, Drugs and Alcohol, People

Introduction

According to WHO "Stress can be defined as a state of worry or mental tension caused by a difficult situation. Stress is a natural human response that prompts us to address challenges and threats in our lives. Everyone experiences stress to some degree. The way we respond to stress, however, makes a big difference to our overall well-being".

Stress is our body's natural physical and mental response to challenges or changes. It may help you overcome obstacles and push yourself to new levels of personal growth. When your body's stress response system starts dysfunctioning, though, the same feelings can become barriers and limit your ability to perform at your best. Research has even shown that stress can trigger or aggravate several conditions and impair the functioning of different body systems. There are so many things that can trigger the fight-or-flight response, which is your body's natural reaction to stress. When something or someone triggers the stress response, your body goes into immediate action to either confront the threat or flee.

Physically, when you feel stressed, what you're feeling is your nervous system signaling a flood of hormones to be released from your adrenal glands, such as cortisol (the stress hormone) and epinephrine (adrenaline). Adrenaline is responsible for the physical symptoms you experience, such as a rapid heartbeat. (Pugle, 2021)

Types of Drugs

Drugs under international control include amphetamine-type stimulants, coca/cocaine, cannabis, hallucinogens, opiates and sedative-hypnotics. Countries have decided to control these drugs because they pose a threat to health. Physicians have long recognized that different types of drugs affect people differently. Nonetheless, drugs may be categorized or classified according to certain shared symptomatology or effects. The DRE categorization process is premised on these long-standing, medically accepted facts. DRES classify drugs in one of seven categories: central nervous system (CNS) depressants, CNS stimulants, hallucinogens, dissociative anesthetics, narcotic analgesics, inhalants, and cannabis.

1. Legal Drugs

Drugs are chemicals that are known to change the way a body functions. People take them when they are ill and when the doctor prescribes them these medicines. Medicines are legal when they are taken in proper doses and when doctors prescribe them. However, drug abuse is termed illegal. People indulge in an illegal act when they sell or buy and possess and consume drugs banned in a country. Tobacco and alcohol are two drugs that are legal in most countries.

2. Illegal Drugs

Whenever we think or hear of the phrase illegal drugs, images of marijuana, charas, LSD, and other psychotic and hallucinogenic come across our minds, Cocaine, heroin, Cannabis, etc. are some of the popularly known illegal drugs. However, abuse of legal drugs is also considered illegal in many jurisdictions. Illegal drugs or controlled drugs carry penalties for consumption and even possession. There are classes of these drugs with different penalties for different classes of different drugs. Thus, all drugs that are banned or prohibited by law in a country can be considered illegal. One found in possession or dealing with these drugs has to face legal proceedings with a possible prison sentence.

Conclusion

The study demonstrates that individuals with higher stress vulnerability are more likely to develop negative attitudes toward substance abuse, while those with healthier coping mechanisms tend to exhibit more positive attitudes. These insights underscore the importance of addressing stress management strategies and promoting healthy attitudes as essential components in preventing substance misuse and fostering overall well-being. Further research is warranted to explore additional factors that may influence this dynamic relationship.

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Dyadic Adjustment among Spouse of Individuals Having Chronic Diseases

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Abstract

The prime objectives of the study were to explore dyadic adjustment and resilience among spouses of individuals having a chronic disease and also to analyse the differences between socio-demographics. The sample was selected by using a convenient sampling method (N=200). The tools used were self prepared socio-demographic data sheet and a Revised Dyadic Adjustment Scale and resilience scale. The obtained data was analyzed using the SPSS tool and conducted 't' test, ANOVA, and Correlation. The study found that there is a significant difference in the dyadic adjustment and resilience of spouses of chronic diseases based on some demographic factors such as gender, type of family, occupation, economic status, and income. Further, it revealed that dyadic adjustment was more common in female spouses living in the nuclear family. And also resilience was higher in low economic status with low income of daily wage occupations. Moreover, age was not related to dyadic adjustment and resilience. Any type of changes in age did not affect the dyadic adjustment and resilience of spouses having chronic diseases.

Keywords: Diseases, Cancer, Chronic illness

Introduction

In our modern world, with the advances in science and technology, and the hustle and bustle of daily life, there has also been an increase in lifestyle and stress-related illnesses. Long working hours, productivity stresses, and the competition for scarce resources have led to an increase in stress that people face. Stress, coupled with a more sedentary lifestyle, has contributed to a boom in stress and lifestyle-based illnesses (World Health Organization, 2018; Conner & Norman, 1998). Chronic Illness and Chronic Disease are two distinct terms; however, in practice, are used interchangeably. Chronic diseases are based on biomedical disease classification, whereas chronic illnesses are subjective experiences of living with that disease (Martin, 2007). Overall, a chronic illness or disease has no complete cure; it can only be controlled and is long-standing in nature. Literature suggests that chronic illnesses account for 60% of deaths under the age of 70, with 80% occurring in low and middle-income countries (World Health Organization, 2005; 2015). Cardiovascular diseases account for almost 17.5 million deaths yearly, followed by cancers at 8.2 million, respiratory diseases at 4 million, and diabetes at 1.5 million deaths (World Health Organization, 2015; Mozaffarian et al., 2014). The World Health Organization (2018) reported 57 million deaths globally in 2016. Of those total deaths, 31% were caused by cardiovascular disease, 16% by cancers, 7% by chronic respiratory disease, 3% by diabetes, and 15% were other non-communicable diseases. In 2016, it was seen that 71% of all deaths in the world were from Non-Communicable Diseases. It is estimated that between the ages of 30 to 70, there is a 26% chance of dying from the four major categories of non-communicable diseases (World Health Organization, 2018; Riley & Cowan, 2014).

Chronic Illnesses

Chronic Illnesses could be communicable or non-communicable, are long-lasting; and require individuals to live life and cope with the disorder. It may include unpleasant sensations as well as social stigmas attached to it (Martin, 2007; College of Family Physicians of Canada, 2006; Walker, 2001). Cluff (1981), summarised chronic illnesses as "a condition not cured by medical intervention, requiring periodic monitoring and supportive care to reduce the degree of illness, maximize the person's functioning, and their responsibility for self-care" (Lubkin et

al., 2006). In 2001, chronic diseases contributed to about 60% of deaths. In 2016, it contributed to 71% of deaths and 46% of the global burden of disease (World Health Organization, 2002; 2003; 2018). Obesity and diabetes already affect a huge proportion of the population and have also started to appear much earlier in life. Developing countries are suffering from high levels of health problems, much of which are related to chronic diseases. Of all deaths worldwide due to chronic diseases, 79% occur in developing countries (World Health Organization, 2002; 2003). By 2025, the number of people in developing countries with diabetes will rise to an estimated 228 million (World Health Organization, 2001; 2003). On a global level, developing countries will account for 60% of the total burden of Chronic diseases. In India and China, the incidence and prevalence of cardiovascular diseases are higher than in all the economically developed countries combined (World Health Organization, 2002; 2003; 2018; Mozaffarian et al., 2014). India has a unique problem, a combination of both communicable diseases and Chronic diseases. All prediction nonetheless points to the fact that communicable diseases will continue to occupy a critically important position (Lopez et al., 1996; WHO, 2003). Reports from India suggest that the number of deaths due to chronic diseases has been steadily rising (Mohan, 2014; Patel, 2011; Mohan, 2011; World Health Organization, 2005). The World Health Organization (2018) reported 95,69,000 deaths in India in 2016. Of those total deaths, 27% were caused by cardiovascular disease, 11% by chronic respiratory disease, 9% by cancers, 3% by diabetes, and 13% were other Non-communicable Diseases. In 2016, it was seen that 63% of all deaths were from Non-Communicable Diseases, which is higher than the 60% reported by the World Health Organization in 2014 (World Health Organization, 2018, 2014; Riley & Cowan, 2014)

Diabetics

Diabetes is the most common chronic illness, affecting almost 30 million people worldwide (Gale & Anderson, 1998). The pancreas secretes insulin, which controls blood glucose levels, disruption which results in diabetes. High blood sugar levels (hyperglycaemia) lead to diabetes mellitus (DM). There are two main forms of this: Type I diabetes or Insulin-Dependent Diabetes Mellitus (IDDM) and Type II diabetes or Non-Insulin-Dependent Diabetes Mellitus (NIDDM) All forms of DM are characterised by hyperglycaemia and disturbances in the metabolism of carbohydrates, Fats, and proteins, related to deficiencies of insulin action and/or secretion (Forshaw, 2003; Bradley et al., 1998). Presenting symptoms of diabetes include fatigue, unexplained weight loss, extreme thirst, recurrent infections, unexplained itchiness and excessive urination, and recur if symptoms are left uncontrolled (Bradley et al., 1998). Chronic complications from uncontrolled diabetes include microvascular complications of retinopathy (leading to blindness and nephropathy (leading to renal failure), as well as macrovascular complications (heart disease and stroke). Other complications of autonomic neuropathy (damage to the nerves that control autonomic functions like heart rate, blood pressure, sweating, bowel and bladder functioning) and peripheral neuropathy (damage to the peripheral nerves, causing weakness, numbness, lack of sensations, or pain), as well as impotence, is seen in 40% of diabetics develop diabetic neuropathy, affecting kidney function. Damage to the kidney's filtration system leads to complete failure of the kidneys called End-Stage Renal Disease (ESRD), which requires continuous dialysis or even kidney Transplants (Mayo Clinic, 2016). Diabetes involves a great deal of self-management, taking control, and making necessary lifestyle changes to keep diabetes in check. Lifestyle modification is challenging. The dangers of failing to follow self-care and self-treatment regimes are not immediate and may lead to risks of Neuropathy and Nephropathy, which could show up years later (Forshaw, 2003)

Coronary heart disease

Coronary heart disease (CHD) / ischemic heart disease / atherosclerotic heart disease refers to the hardening of arteries due to clumps of fat called plaques building up inside the arterial

walls. These make the arteries less elastic and narrower, restricting blood flow. Ischemic heart disease results from coronary atherosclerosis (Forshaw, 2003). Myocardial ischemia is insufficient blood flow to cardiac tissue. Ischemia may be accompanied by chest pain called angina pectoris. Repeated or severe myocardial ischemia predisposes individuals to life-threatening disturbances in the cardiac rhythm (Arrhythmias), which result in sudden cardiac death. Hypertension is an increase in blood pressure (BP) beyond normal limits, causing stress on the body as well as on the arterial walls, predisposing people to myocardial infarctions (MI), sudden cardiac death, and cerebrovascular accidents (CVA) or strokes. A heart attack, or myocardial infarction (MI), results when cardiac tissue dies because of either a complete blockage of the artery or prolonged or severe ischemia (Forshaw, 2003; Krantz & Lundgren, 1998). Risk factors for CHD include smoking, eating high-fat foods, hypertension, high Lower-Density Lipoprotein (LDL) cholesterol and low levels of low-density lipoprotein (LDL) cholesterol, diabetes, obesity, and a sedentary lifestyle. More risk factors increase the risk of CHD. Medication, surgery and lifestyle change could help to lower the risks of CHD (Forshaw, 2003; Krantz & Lundgren, 1998). Chronic stress, mental, physical, or emotional stress plays a role in CHD by contributing to changes in blood pressure. Excessive reactions to stress are direct risk factors. How one interprets and responds to stress mediates the effects of stress. Social support has a moderating effect. Chronic stress, low social support, and high levels of anger are potential triggers for CHD (Forshaw, 2003; Krantz & Lundgren, 1998). Personality traits, such as hostility and anger, are also risk factors for CHD. Type-A behaviour pattern (TABP) characterised by extreme competitiveness, impatience, and being on the go was thought to be correlated with CHD. However, recent studies report that hostility, which is basic anger at people and things, and an inclination to dislike others, is a better predictor of CHD (Forshaw, 2003; Krantz & Lundgren, 1998). Depression is a poor prognostic factor. The presence of depression is associated with poorer psychosocial rehabilitation and increased morbidity. Depression leads people to “give up”, reducing compliance with medication, exercise and essential lifestyle changes increasing the probability of a cardiac event (Krantz & Lundgren, 1998)

Cancer

Cancer is the growth of uncharacteristic, abnormal cells that do not follow the normal cell cycle, multiply faster, and grow in a disorganized manner. Cancer cells harm the surrounding tissue and can spread to other body parts. Malignancy results in the formation of a mass or a tumour and, if not halted, can metastasize or spread to other body parts. Cancer eventually grows to such an extent that the system it affects cannot perform its function, eventually leading to death (Forshaw, 2003; Nezu et al., 2003). Not everyone diagnosed with cancer dies from it. When not terminal, it is a chronic illness, as it may take years to be successfully treated and may recur (Forshaw, 2003). Depending on their personalities, patients being diagnosed may experience an array of emotions. People's emotions and cognitions affect the course of the illness. Evidence shows that Type C personalities who repress emotions, tend to be over-cooperative, have lower self-image and social support and do not forgive easily, are more prone to developing cancer (Temoshok, 1987). Bottling up feelings can be associated with cancer development through psycho-neuro-immunology, where holding on to stressful emotions suppresses the immune system and creates an environment where the body may not be able to deal with rogue cells that potentially could be cancerous (Forshaw, 2003). Post-treatment relapses can occur. The fear of re-experiencing the same tests and treatments creates distress. The distress caused by cancer recurrence is far more significant than the distress created by the original diagnosis (Forshaw, 2003). Behaviours Influencing Health, Morbidity, and Mortality Health behaviour can be any activity undertaken to prevent or detect diseases and/or improve well-being (Conner & Norman, 1996b). Behaviours may include health screenings, compliance with medical advice, as well as healthy lifestyle choices in terms of diet, exercise, and reducing

smoking and alcohol (Conner & Norman, 1998). Several lifestyle changes like not smoking, moderating alcohol intake, sleeping properly, exercising regularly, and eating healthy are associated with lower morbidity and higher chances of long-term survival (Belloc, 1973; Belloc & Breslow, 1972; Breslow & Enstrom, 1980). Smoking : Smoking is closely related to overall long-term negative outcomes for health. Doll et al. (1994) and Friedman et al. (1979) found high coronary heart disease (CHD) Morbidity and mortality rates for smokers, with a strong positive correlation between the number of cigarettes smoked per day and the incidence of CHD (Friedman et al., 1979; Conner & Norman, 1998). Smoking is linked to lung, throat, stomach, and bowel cancer. Reduced lung capacity may increase the risks of bronchitis (Royal College of Physicians, 1983). In India, nearly half of cancers among males and one-fourth of cancers among females are tobacco-related (Ministry of Health and Family Welfare, 2010). In 2010, the Government of India reported that 34.6% of individuals above fifteen use tobacco. 14% of adults in India smoke. 76% smoke daily. In 2010, it was estimated that smoking caused 9,30,000 adult deaths in India (Jha et al., 2008). Diet: Sedentary lifestyles, excessive calorie consumption, and inadequate exercise have made obesity a prominent health issue. Diet plays a major role in cardiovascular diseases (CVDs), diabetes, obesity, and cancer (Conner & Norman, 1998). The prevalence of hypertension and type 2 diabetes in adults within India has increased significantly from 17.2% to 29.2% in urban (Aguirre, 2013; Anchala et al., 2014; Ministry of Women and Child Development Government of India, 2015). The prevalence of obese individuals increased from 4% to 15% (Kalra & Unnikrishnan, 2012; Ministry of Women and Child Development Government of India, 2015). Children are increasingly diagnosed with Type 2 diabetes, which is usually common in adults (Dabelea, 2014; Ministry of Women and Child Development Government of India, 2015). About 36 % of girls and 22% of boys in post-pubescent children had Insulin resistance (Misra et al., 2004; Ministry of Women and Child Development Government of India, 2015). Exercise: Despite the known benefits of exercise, a major proportion of the population tends to lead a lifestyle (The General Household Survey, 1989; The Allied Dunbar Fitness Survey, 1992). Exercise lowers blood pressure, reduces cardiovascular mortality and morbidity, Increases metabolism (Oberman, 1985; Blair et al., 1984; Lennon et al., 1983; Rosenthal Et al., 1983), as well as improves mood, and self-esteem, and reduces levels of anxiety and stress (Singer, 1992; Brown, 1991; Sachs, 1984; Folkins & Sime, 1981).

Career Difference among Adolescents

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Abstract

The primary objective of the study was to evaluate the career conflict among adolescents in Idukki district, Kerala. The study was conducted on a group of 300 adolescents including both males (N=132) and females (N=168). Convenient sampling method was used to select sample. Present study tried to find out any significant difference in adolescents career conflict with respect to their demographic details. The researcher used self-prepared questionnaire and Career conflict scale (2015) for data collection. The data was collected by using survey method. The statistical procedure used to analyze the acquired data were 't' test, ANOVA and correlations. The study found that there is significant difference in career conflict among adolescents based on certain demographic factors such as age group it is higher among age group 14-15 as compared to age group 16-18, gender which is higher among males as compared to females, type of school which is higher among the students of government school as compared to students of CBSE, standard of studying is higher among the students of 9th standard as compared to 10th and +2, place of residence is higher among students residing at rural area as compared to that of urban area. Further it revealed that adolescents' career conflict did not vary on the basis of type of family, religion, birth order, fathers and mothers educational qualification. No relationship was found in career conflict and age.

Keywords: Career, Adolescent, CBSE

Introduction

Career choice is one of the supreme significant decisions in an individual's life but, there are Countable factors that put an influence on the career choice of adolescents. These factors may include personal (self) and environmental factors, gender roles, academic background, peer pressure, parental influences, interest and many more which create conflicts for an adolescent to choose the most suitable career. Amir & Gati (2006) explored that making career decisions is not an easy task. Indeed, career decision making difficulties are among the most prevalent vocational problems of individuals. Adolescence is that period of life when a student must take fair decisions of vocational choices. It is a period of major turning in life. The career will depend upon the subjects selected at this level. Choice of career is the most crucial stage for adolescents. Decisions about career which are wrongly taken may badly affect the future life (physically and mentally) of an adolescent. In Chinese communities, the influence of family in career decision and career development is critical and career choices as well as work related issues are inseparable from relationships, especially in Asian communities (Young et. al., 2003). Abundant influences of family which consists of expectations of family, family support, family responsibilities and commitments, family as a safe in-group and friction between family on career decision making and shaping the values (Fouad et. al., 2008). Adolescents perceive a substantial number of barriers to career goal attainment, including ethnic and sex discrimination, financial problems, family attitudes, social support, perceived lack of ability and lack of interest (Brown, et. al., 2012). Adolescents believe that the career-related barriers currently exist or that may be encountered in the future are not necessarily based on information. Several social science scholars have investigated the influence of socio-economic status on the occupational/career decision of the youth. These studies consistently found that the socio-economic status of family has small but significant (Marjoribanks, 2002) to a large (Schoon & Parsons, 2002) effect on the career choices of the adolescents.

Conclusion

The present finding was contradictory to the study of Smith (1999). The study revealed that there is significant difference in career conflict among adolescents based on age group. Specifically, older adolescents (ages 17-19) reported higher levels of career conflict compared to younger adolescents (ages 14-16). The findings suggested that age could play a role in shaping career-related challenges and decision-making during adolescence. Secondary school is the first step of choosing a career path in a student's life. This decision making requires in-depth research and understanding of various options available. At this age of adolescences, students lack maturity, so a constant support, interaction and guidance is required for them to make a sound career decision. It is highly necessary to provide the students with an accepting and open atmosphere, so that it becomes easy for them to know and understand various fields before coming to any conclusion. Till this age students are usually spoon fed and are dependent on the surrounding like family and school but at this stage it is highly advisable that students do good research and not just rely on the surrounding. It is important for the students to acknowledge their abilities and interests while making the decisions. Not only the students but the teachers and the parents should acknowledge the interests and abilities of the student before influencing them about their preferences related to the student's career. In this era of education there are a lot of options available and many career opportunities coming up, making it difficult for students to choose a particular field of interest.

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Emotional Competence among Urban People

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Abstract

Emotional competence among urban people, similar to any other demographic group, is important for overall well-being, effective social interactions, and successful navigation of the challenges and stresses that urban environments often present. Here are some key considerations regarding emotional competence among urban residents.

Keywords: Emotion, Urban People, Emotional Awareness

Introduction

Promoting emotional competence in urban populations may involve community programs, workshops, and educational initiatives that focus on emotional intelligence, stress management, and interpersonal skills. Additionally, employers in urban areas can play a role by fostering emotionally intelligent workplaces that support employees' well-being. Ultimately, emotional competence contributes to individuals' overall quality of life in urban environments by helping them navigate the unique challenges and opportunities presented by city living.

Emotional Awareness: Urban dwellers should be able to recognize and understand their own emotions. The fast-paced and often stressful nature of urban life can lead to a wide range of emotions, and being aware of these emotions is essential for managing them effectively.

Stress Management: Urban areas can be associated with high levels of stress due to factors like traffic, noise, pollution, and the demands of work and daily life. Emotional competence involves the ability to manage stress through healthy coping mechanisms such as mindfulness, relaxation techniques, or physical exercise.

Adaptability: Urban environments are dynamic and constantly changing. Emotional competence includes the capacity to adapt to new situations, handle uncertainty, and recover from setbacks or unexpected challenges.

Empathy and Social Skills: In urban settings, individuals often interact with a diverse range of people from various backgrounds. Emotional competence includes the ability to understand and empathize with others' emotions and to communicate effectively in diverse social situations.

Resilience: Urban living can be intense, and emotional competence contributes to resilience in the face of adversity. The ability to bounce back from difficult experiences is valuable for urban residents dealing with the pressures of city life.

Relationships: Building and maintaining healthy relationships is crucial in urban environments. Emotional competence helps people navigate the complexities of personal and professional relationships, resolve conflicts, and foster positive connections.

Self-Regulation: The temptations and distractions of city life, such as nightlife and consumerism, may require self-regulation. Emotional competence includes the ability to make responsible decisions and avoid impulsive behaviors.

Community and Support Networks: Urban dwellers can benefit from strong support networks. Emotional competence involves seeking and offering support to others and fostering a sense of community in urban settings.

Mental Health: Emotional competence plays a significant role in mental health. In urban areas, where access to mental health services may be more readily available, individuals should be encouraged to seek help when needed and to maintain positive mental well-being.

Cultural Competence: In diverse urban environments, cultural competence is an important aspect of emotional competence. Understanding and respecting different cultural norms and

values can enhance relationships and reduce misunderstandings

Time Management: Urban life often involves juggling various responsibilities and commitments. Emotional competence includes effective time management and the ability to prioritize tasks to reduce stress and increase productivity.

Environmental Awareness: Urban residents should also be aware of the impact of their emotions on the urban environment, including issues related to pollution, noise, and community well-being. Emotional competence can lead to more responsible and sustainable behaviors.

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Emotional Maturity among Young Adults

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Abstract

The primary objective of the study was to evaluate the conflict resolution and emotional maturity of young adults in Kerala. The study was conducted on a group of 250 young adult including both males (N=100) and females (N=150). A convenient sampling method was used to select the sample. The present study tried to find out any significant difference in young adults' emotional maturity and conflict resolution with respect to their demographic details. The researcher used a self-prepared questionnaire, conflict resolution scale, and emotional maturity scale for data collection. The Conflict Resolution Questionnaire was developed by McClellan (1997) and the Emotional Maturity Scale was developed by Singh & Bhargava (2010). The data was collected by using the survey method. The statistical procedures used to analyse the acquired data were 't'-test, ANOVA, and correlations. The study found that there is a significant difference in the emotional maturity of young adults based on gender and marital status. And there is a significant difference in conflict resolution of young adults based on qualification. Further, it revealed that conflict resolution and emotional maturity of young adults did not vary on the basis of age group, residential area, family type, handling emotions, taking initiative and balanced life. The study also revealed that conflict resolution and emotional maturity have no relation with age, which means age is not an accurate indicator for conflict resolution and emotional maturity of young adults.

Introduction

Conflict arises when individuals or groups encounter goals that both parties cannot obtain satisfactorily. According to David. L. Austin (1972), "It can be defined as a disagreement between two or more individuals or groups with each individual or group trying to gain acceptance of its view or objective over others". Conflict comes from the Latin word for striking, but it isn't always violent. Conflict can arise from opposing ideas. In simple words "Conflict is the perception of differences of interests among people (L. Thompson, The Mind and Heart of the Negotiator, 1998) Conflict will also be found in society, as the basis of conflict may be personal, racial, class, caste, political, or international. A clash of interests, values, actions, or directions often results in conflict. Conflict refers to the existence of that clash. Psychologically, conflict exists when the reduction of one motivating stimulus involves an increase in another so that a new adjustment is demanded. Even when we say there is a potential conflict, people are implying that there is already a conflict of direction even though a clash may not yet have occurred. Conflict may also be emotional, intellectual, and theoretical in which case academic recognition may or may not be a significant motive. Conflict is a common inevitable part of life. It exists because people don't always get along or agree.

A state of conflict is characterised by the following features:

1. It arises when two or more individuals or groups think differently.
2. It is caused by different perceptions that different individuals hold about the same object or goal.
3. While A thinks a course of action is right, B does not hold the same opinion. This leads to conflict of opinion on the same subject.
4. It usually arises because of the scarcity of resources. When people compete for scarce

resources, they hold different views about how best individuals can utilize those resources to achieve the organisational goals.

Interpersonal and other forms of conflicts are an essential, natural, and unavoidable human phenomenon in both homogeneous and diverse societies as daily life increasingly brings individuals with different backgrounds, cultures, values, morals, beliefs, ethics, personalities, and objectives into contact with another. (Ghaffar 2009: Turnukluet al 2009) This diversity often leads to conflicting solutions by and between individuals, organizations, entities, and nation-states. In the context of conflict Dogan (2016) points out that the occurrence of conflicts in every environment in which humans are present appears to be quite normal. Getting involved in conflicts can happen from time to time, but knowing how to handle those conflicts can be difficult, which is why it is so important to have strong conflict resolution skills.

Employees' Mental Health among Working Women

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Abstract

The primary objective of the study was to evaluate the emotional violence and employees' mental health among working women. The study was conducted on a group of 260 working women including both Married (N=100) and Unmarried (N=160) Convenient sampling method was used to select the sample. The present study tries to find out any significant difference between emotional violence and employees' mental health with respect to their demographic details. The tools used were self self-prepared questionnaire, an emotional violence scale, and an employee mental health scale. The emotional violence scale was developed by Dr. Mrs. S.K Bawa and Mrs. Sumanpreet Kaur and the employee's mental health scale was developed by. The data was collected by using the survey method. The statistical procedures used to analyse the acquired data were the test, ANOVA, and correlations. The study found that there is a significant difference in emotional violence and employee mental health among working women on the basis of age group, type of organisation, marital status, place of residence, working experience, and occupation. The study also reports that there is a significant difference in emotional violence on the basis of religion. The study shows there is a significant difference in employee's mental health on the basis of monthly income. Further, it revealed that emotional violence and employees' mental health did not vary on the basis of education, residential area, and number of siblings. The study also revealed that emotional violence is negatively related to age, which means that as age increases, emotional violence decreases. An employee's mental health is positively related to age, which means that as age increases, the employee's mental health also increases.

Introduction

Violence against women and the threat of violence are the main barriers to women's empowerment and equal participation in society. However, they often go unnoticed and undocumented and therefore unresolved. When stress and violence increase in society in general, as they have in the transition region, women's safety in the home, workplace, and community is often seriously affected. The UN Declaration on Violence against Women, adopted in 1993, defines violence against women as encompassing "any act of gender-based violence that results in or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivations of liberty. Whether occurring in public or private life". Violence is considered as an action with observable physical results as the definition that comes to mind first, the limits of the definition are much wider. Studies have shown that "violence" I perceived as physical violence (Saban and Akbulut, 2012; Yurtal and Artut, 2008). There are psychological, sexual, economic, cultural, and social dimensions of violence as well as the physical dimension (Güleç et al., 2012; Yildiz and Sağlam, 2017). According to the definition of the World Health Organization, violence is "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either result in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation" (WHO, 2002). Violence is described as the situation by Karatas and Kiliçarslan (2013) in which individuals sometimes feel in the form of pressure on the individual, impulsively or indirectly, whose physical and psychological effects cannot be determined. In other words, violence is the various pressures that are felt directly and in a concrete way, whose physical and psychological effects, on individuals cannot be measured exactly. The causes of violence are diverse and

multidimensional. Cultural and social norms also support violence. The characteristics and pressure of the social structure are accepted as important elements shaping violence (Shonkoff and Garner, 2012, WHO, 2010). Violence exposes women to many risks some of which are life threatening (Merriam 2011). The most severe ones include death, severe physical injuries, mental illness, loss of income and property, and separation or divorce. Loss of access to health services can cause death or long-term effects following a small injury or illness that has not been treated (Calves 2009). When exposed to violence women develop long-term and short-term post-traumatic stress disorders (PTSD) which is a severe reaction to trauma. Trauma may lead to miscarriage in some cases and most of all psychological issues (Black, 2011). United Nations Commission [UNC] (1994). Declaration on the Elimination of Violence against Women (EVAW), defines violence as any act of gender based violence (GBV) that causes physical, sexual, or mental injury. According to Merriam (2011), household violence is a pattern of behavior in a household used to gain power and control over a partner. Abuse can be physical, sexual, emotional, and economic, or a combination of all of them. Social empowerment is a way of developing a sense of autonomy and self-confidence and being able to act individually and in groups to change social relationships that exclude women and keep them in poverty (Calves, 2009). To empower women, violent acts need to be reduced and enhance their capacity to decide for themselves (Calves, 2009). Empowering women and making them autonomous go hand in hand in improving their social, economic, and political status which is necessary for sustainable development in all areas of life.

According to the World Report on Violence and Health (WHO, 2002), violence was classified into three groups self-directed violence, interpersonal violence, and collective violence. It is an inevitable fact that these three different forms of violence are closely related to each other. The society consists of individuals. The individual is affected by society and the society from the individual. In addition, individuals are emotionally affected by all kinds of violence. Although the emotional violence experienced by the individual is often ignored, it has implications not only for the individual but also for the whole society.

Emotional Violence

Emotional violence is a form of aggression that involves manipulating, intimidating, or undermining an individual's sense of self-worth and dignity. Emotional violence mostly manifests itself in the form of humiliation, yelling, calling insufficient, jealousy, intimidation (Kocacik and Caglayandereli, 2009). According to Vissing et al. (1991), all kinds of situations such as humiliation, disrespect, discrimination, ridicule, obstruction, display, forcing (to a job) that affect the person's values, qualifications, self-confidence, and mental structure are describe as psychological violence. According to Özgentürk et al. (2012), all kind of action is emotional violence applied to isolate one from society to control or punish, to exploit and humiliate them emotionally, to conduct systematic psychological pressure against them. Iyaloğlu (2006) defines it as all of the acts impairing mental health implemented without physical pressure that are neglecting emotional needs such as affection and support, denying beliefs attributed to religion, race, language, cultural group, or history or forcing to act against them, humiliating and hurting pride in front of others, threatening physical violence, restricting the freedom of the person to express their feelings and thoughts, prohibiting conversation and communication with relatives, restricting the freedom to dress as desired. Cetiner (2006) reports that there is a close relationship between psychological/emotional violence and physical violence, and the degree of physical violence is directly related to the degree of psychological/emotional violence, and although physical violence decreases, psychological/emotional violence usually continues and it continues to be as a threat of the physical violence. For this reason, approximately three-quarters of women who experience physical violence feel that emotional violence has a more negative effect than physical violence. Şahin and Turk (2010) state that

psychological violence is more dangerous than physical violence because psychological violence may have permanent psychological and psychosomatic effects. Westhues (2002) emphasizes that violence is experienced at a more intense level than it is known, or that a greater number of people than it is anticipated are exposed to violent attitudes and behaviors with them being aware or not. Although there are no physical symptoms, emotional violence is one of the most difficult to treat health problems. If emotional violence is continuous, the survivors can develop long-lasting negative impacts on their physical and mental health (Shagun Sharma2021). Across the world, women are subjected to different forms of violence and discrimination. Of all the forms of violence, one is an underestimated form, Emotional Violence. As per UN Women, "Emotional violence includes undermining a person's sense of self-worth through constant criticism; belittling one's abilities; name-calling or other verbal abuse; damaging a partner's relationship with the children, or not letting a partner see friends and family." Emotional violence is different but closely related to psychological violence which is defined as, "Psychological violence involves causing fear by intimidation; threatening physical harm to self, partner or children; destruction of pets and property: 'mind games'; or forcing isolation from friends, family, school, and/or work," by UN Women. Emotional or psychological abuse includes any act intended to denigrate, isolate, or dominate a partner. Emotional abuse is intended to control victims by limiting resources and social contacts; creating actual and emotional dependence; and reducing victims' sense of self-worth. Competence, and value. Emotional maltreatment can include verbal abuse, such as insults, criticism, ridicule, name-calling, discounting, and discrediting, isolation of the victim; control of social and family contacts; denial of access to finances or transportation; demonstration of extreme jealousy and possessiveness; the monitoring of behavior, accusations of infidelity; threats of harm to the victim's family, children, or friends; threats of abandonment or infidelity; and damage to or destruction of personal property. Emotional abuse can happen to anyone at any time in their lives. Women, children, teens, and adults all experience emotional abuse. Emotional abuse can have devastating consequences on relationships and all those involved. Just because there is no physical mark doesn't mean the abuse isn't real and isn't a problem or even a crime in some countries. "Emotional abuse is any kind of abuse that is emotional rather than physical. It can include anything from verbal abuse and constant criticism to more subtle tactics, such as intimidation, manipulation, and refusal to ever be pleased. Emotional abuse can take many forms. Three general patterns of abusive behavior include aggressing, denying, and minimizing'." Even though there is no established definition for emotional abuse, emotional abuse can possess a definition beyond verbal and psychological abuse. Blaming, shaming, and name-calling are a few identifiers of verbal abuse which can affect a victim emotionally. The victim's self-worth and emotional well-being is altered and even diminished by the verbal abuse and the result is an emotionally abused victim. The victim may experience severe psychological effects. This would involve the tactics of brainwashing, which can fall under psychological abuse as well, but emotional abuse consists of the manipulation of the victim's emotions. The victim may feel their emotions are being affected by the abuser so much that the victim may no longer recognize what their feelings are about the issue/s the abuser is trying to control. The result is the victim's self-concept and systematically taken away. Independence is systematically taken away.

Social Emotional Competency among Adolescence

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Abstract

The primary objective of the study was to evaluate the social-emotional competency of adolescents in Kerala. The study was conducted on a group of 327 including both males (N=265) and females (N=62). A convenient sampling method was used to select the sample. The present study tried to find out any significant difference in teachers' social-emotional competence with respect to their demographic details. The researcher used self-prepared questionnaire and Teachers' Social Emotional Competency Scale (2008) developed by W.L. Nonglait and E.B. Myrthong for data collection. The data was collected by using the survey method. The statistical procedures used to analyse the acquired data were the 't' test, ANOVA and correlations. The study found that there is significant difference in social social-emotional competency of adolescents based on certain demographic factors such as gender, residential area, marital status, monthly income etc. Further it revealed that the adolescence social emotional competency did not vary on the basis of total experience, religion, qualification and the number of children. The study also revealed that the social-emotional competency of teachers related to age, as the age increased the social-emotional competency of adolescence became reduced.

Introduction

Promoting social-emotional competency among adolescents requires a collaborative effort involving parents, educators, communities, and the adolescents themselves. It's a lifelong skill set that can positively impact their personal and academic success, as well as their overall happiness and well-being. Social-emotional competency among adolescents refers to their ability to understand, manage, and express their emotions effectively, as well as their capacity to form and maintain positive relationships with others. It plays a crucial role in their overall well-being, academic success, and prospects.

Here are some key aspects and strategies for promoting social-emotional competency among adolescents

1. Emotional Awareness: Adolescents should be encouraged to identify and understand their emotions. This involves recognizing various emotions (e.g., happiness, anger, sadness), understanding the triggers for these emotions, and being able to differentiate between different feelings.
2. Emotion Regulation: Adolescents need to develop strategies to manage their emotions constructively. This includes deep breathing exercises, mindfulness practices, and problem-solving techniques. Teaching them how to cope with stress and disappointment can be particularly beneficial.
3. Empathy: Adolescents should be encouraged to understand and share the feelings of others. Developing empathy helps them build better relationships and navigate conflicts more effectively. Activities like volunteering or community service can promote empathy.
4. Interpersonal Skills: Adolescents should learn how to communicate effectively, resolve conflicts, and build positive relationships. These skills include active listening, assertiveness, and negotiation. Group activities and team sports can help foster these skills.
5. Self-esteem and Self-confidence: Helping adolescents develop a positive self-image is essential for social-emotional competence. Encourage them to set realistic goals, celebrate their achievements, and provide positive reinforcement.

6. **Resilience:** Teach adolescents how to bounce back from setbacks and adversity. Resilience involves problem-solving skills, adaptability, and a growth mind-set (the belief that abilities and intelligence can be developed through effort).
7. **Social Awareness:** Adolescents should be encouraged to understand and appreciate diversity, cultural differences, and social norms. This fosters respect and inclusivity, which are important aspects of social-emotional competence.
8. **Positive Decision-Making:** Adolescents need to learn how to make responsible and ethical decisions. Discussing real-life scenarios and their potential consequences can help them develop good judgment.
9. **Peer Support:** Encourage adolescents to seek help and support from trusted peers when needed. Peer relationships can have a significant impact on their social and emotional development.
10. **Adult Mentoring:** Provide opportunities for adolescents to connect with positive adult role models, such as teachers, coaches, or community leaders. These relationships can offer guidance and support.
11. **Family Involvement:** Engage parents and caregivers in promoting social-emotional competency. Schools and communities can offer workshops and resources to help parents support their adolescents' development.
12. **Social-Emotional Learning (SEL) Programs:** Implement SEL programs in schools that explicitly teach these skills through structured curricula and activities. CASEL (Collaborative for Academic, Social, and Emotional Learning) provides evidence-based resources for educators.
13. **Assessment and Feedback:** Regularly assess adolescents' social-emotional skills and provide constructive feedback. This can help them track their progress and identify areas for improvement.

Social Emotional Competency among Teachers

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Abstract

The primary objective of the study was to evaluate the social-emotional competency of school teachers in Kerala. The study was conducted on a group of 327 teachers including both males (N= 265) and females (N=62). A convenient sampling method was used to select the sample. The present study tried to find out any significant difference in teachers' social-emotional competence with respect to their demographic details. The researcher used self prepared questionnaire and Teachers' Social Emotional Competency Scale (2008) developed by W.L. Nonglait and E.B. Myrthong for data collection. The data was collected by using the survey method. The statistical procedures used to analyse the acquired data were the 't' test, ANOVA and correlations. The study found that there is a significant difference in the social-emotional competency of teachers based on certain demographic factors such as gender, residential area, marital status, monthly income etc. Further, it revealed that the teacher's social-emotional competency did not vary on the basis of total experience, religion, qualification and the number of children. The study also revealed that the social-emotional competency of teachers related with the age, as the age increased the social-emotional competency of teachers became reduced.

Introduction

Teaching

Teaching has been considered a noble profession since ancient times. Still, it's a noble profession. The teachers are assigned the noble teaching education work which helps in bringing up our future guardians. The quality of education is determined by the quality of the teacher. The main function of a teacher is to create a learning environment in which the learners are motivated to learn. The role and responsibilities of a teacher are infinite and limitless and the success of any educational system depends much on the requisite qualities of a teacher. The teacher is the axis of the education system. Teachers have a tremendous responsibility in shaping the lives of individuals. Teachers aim to build character and inculcate values that enhance the learning capacity of children; and build confidence to be innovative and creative, which in turn will make them competitive. The responsibility of making the nation is on teachers more than the other members of society. In a classroom situation, the teacher imparts the knowledge to his pupil. Each child is guided to develop their peculiar potentialities. Teaching is a mother profession giving birth to all other professions (Chukwuemeke, 2007). Teachers should ignite the minds of the young in such a way that throughout life they have a quest for knowledge and a desire to make this world a place to live in (Loomba, 2008). His personality has a vital influence on pupils learning manners, behaviour and above all his character and personality. In present Indian society teacher has a very pivotal role to play in the social reconstruction and the transmission of wisdom, knowledge and experience from one generation to another. The emerging Indian society can achieve all-round development with the help of the teacher who acts as a powerful agency in transmitting its cherished values. A teacher is not only a custodian of a nation's values but also an architect par excellence of new values, the teacher can help our country in the process of reconstruction (Unnisa, 2007). Teaching is an activity, which contributes to the natural development of an individual. It involves, "perceiving the process analytically as constituting a host of activity" (Bhattacharya, 1974, p.17). Teaching is a dynamic interplay between teacher and pupil. Therefore, it is expected that every school teacher must have adequate training in teaching skills and its effective implementation. These skills will enhance the classroom interest and active

participation of the students in classroom activities. To deal with the problems of the students of the state, a teacher must also possess social and emotional competence to enable him to sense the slightest changes in the classroom and makeover the teaching strategies accordingly. An emotionally competent teacher is the heart and soul of a successful educational programme. Thus, to identify and develop such characteristics in secondary school teachers, one needs to assess the influence of teachers' Social-Emotional Competency on classroom behaviour. Therefore, the investigation into this area will help teachers in all spheres of life, especially in imparting knowledge and raising the quality of life of young adolescents. Hence, it is justified to investigate the problem to provide factual findings, suggestions and remedial measures for improvement. Dr. Radhakrishnan, former President (1949) rightly noted, "The position of the educator in the community is very important. They act as an advocate of transmittal intellectual traditions and technical skills through generations and help keep the lamp of progress glowing." Therefore, at the public level, educators are the real protectors and preservers of the community. Chapman and Mahlck (1997), Darling-Hammond (1999), Miguel and Barsaga (1997), and Nye, Konstantopoulos and Hedges (2004) highlighted a positive relationship between teacher quality and student accomplishment. If teachers acquire professional competencies, teaching aptitude, and attitude towards teaching and show a great sense of responsibility in their work and if they are enabled and empowered to perform multiple tasks the result would be a high quality of teaching which will eventually lead to nation-building. A competent teacher is identified through his/her transactional phase of teaching and this transactional phase should be interlinked very closely with the students to whom the teacher is imparting teaching (Allen & Valette, 1997; Quist, 2000). Hence, the teacher is the principal agency for implementing educational programmes at various levels. Therefore, teachers have an important and pivotal place in shaping and moulding students and their skills on the right side. Measured in terms of its members, teaching is the world's largest profession. In the 21st century, it was estimated that there were about 80 million teachers throughout the world. Though their roles and functions vary from country to country, the variations among teachers are general greater within a country than they are between countries. Because the nature of the activities that constitute teaching depends more on the age of the persons being taught than on any other one thing, it is useful to recognize three subgroups of teachers: primary school, or school, teachers; secondary-school teachers; and university teachers. Elementary school teachers are by far the most numerous worldwide, making up nearly half of all teachers in some developed countries and three-fourths or more in developing countries. Teachers at the university level are the smallest group. The entire teaching corps, wherever its members may be located, shares most of the criteria of a profession, namely (1) a process of formal training, (2) a body of specialized knowledge, (3) a procedure for certifying, or validating, membership in the profession, and (4) a set of standards of performance—intellectual, practical, and ethical—that is defined and enforced by members of the profession.

A teacher is someone who helps students learn by imparting knowledge to them and by setting up a situation in which students can and will learn effectively. But teachers fill a complex set of roles, which vary from one society to another and from one educational level to another. Some of these roles are performed in the school, some in the community.

Roles and Responsibilities

Mediator of learning: -

A mediator of learning, also known as an instructional mediator or a learning facilitator, is an individual who assists and guides learners in the process of acquiring knowledge, skills, and understanding. The role of a mediator of learning is to support learners in actively constructing their knowledge and making sense of information. The primary responsibility of a mediation of learning is to create an environment that promotes effective learning, engages learners, and facilitates their progress.

Disciplinarian or controller of student behaviour: -

A disciplinarian is someone who enforces discipline or imposes strict rules and regulations to maintain order and control. They are often associated with authority figures such as teachers, parents, coaches, or supervisors who establish and enforce guidelines and consequences to shape behaviour and ensure compliance

Confidants: -

Confidants are individuals who are trusted with personal and confidential information, often serving as trusted friends, advisors, or companions. They are people with whom one can share their thoughts, feelings, and secrets, knowing that they will keep them in confidence and provide support and understanding.

Judge of achievement: -

A “judge of achievement” refers to an individual or entity responsible for evaluating and assessing the accomplishments or performance of others in a particular domain. This role is often associated with competitions, awards, assessments, or evaluations aimed at recognizing and rewarding excellence or progress in various fields such as academics, sports, arts, or professional endeavors.

Public servant: -

A teacher is often regarded as a public servant due to their role in the education sector. As public servants, teachers work for government-funded educational institutions, such as public schools, and their primary responsibility is to provide quality education to students. Here are some key points highlighting the teacher’s role as a public servant: Public Education, Government Employment, Public Accountability, Public Funding, Public Interactions, Civil Service Benefits,

Public Policy and Advocacy:-

Teachers may also engage in public policy discussions and advocate for changes in the education system. They can voice their opinions, propose reforms, and participate in education-related initiatives to improve the quality of education and address societal needs. It is important to note that while teachers are considered public servants, their role extends beyond mere service delivery. They are educators, mentors, and influencers who shape the lives of students and contribute to the overall progress of society.

Community leader: -

Teachers can also serve as community leaders, playing a significant role in shaping and strengthening the communities they work in. Teachers possess unique knowledge, skills, and influence that enable them to serve as community leaders. Their dedication to education and their commitment to the holistic development of students make them valuable contributors to building strong, cohesive communities. As a teacher, one has the opportunity to be a leader in his community.

Here are some ways in which teachers can be community leaders: Role Model:

Teachers often serve as role models for their students and the community at large. They inspire and motivate students to achieve their full potential and act as positive examples of hard work, integrity, and dedication. By embodying these values, teachers can influence and shape the character of the community; Community Engagement: Teachers frequently engage with the local community by participating in community events, volunteering, and collaborating with community organizations. They establish connections between the school and the broader community, fostering a sense of belonging and partnership; Parental Involvement: Teachers play a crucial role in fostering strong relationships with parents and guardians. They communicate regularly with parents, provide updates on students’ progress, and seek parental input on educational matters. By involving parents in their children’s education, teachers strengthen the bond between the school and the community; Advocacy and Empowerment: Teachers can advocate for community needs and concerns, particularly those related to

education. They have first-hand knowledge of the challenges and opportunities within the community and can use their influence to address these issues. By advocating for quality education, equal opportunities, and resources, teachers contribute to the overall development of the community; Community Problem Solving: Teachers can facilitate community problem-solving initiatives by involving students and community members in projects that address local issues. They can organize service-learning activities, encourage civic engagement, and promote active citizenship among students, thereby fostering a sense of responsibility towards the community; Collaboration with Community Organizations: Teachers can collaborate with various community organizations such as non-profits, local businesses, and government agencies, to enhance educational opportunities and resources for their students. By forging partnerships, teachers can create internships, mentorship programs, and career development opportunities, which benefit both students and the community; Bridging Cultural Divides: In diverse communities, teachers can play a pivotal role in promoting understanding, tolerance, and inclusivity. By fostering a multicultural and inclusive classroom environment, teachers encourage respect for different backgrounds, languages, and perspectives. They help bridge cultural divides within the community and promote harmony.

അങ്ങേക്കു സ്തുതി

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സിജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}

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പ്രബന്ധസംഗ്രഹം

ഫ്രാൻസിസ് മാർപാപ്പയുടെ “Laudato Si” അഥവാ “അങ്ങേക്കു സ്തുതി” എന്ന ചാക്രികലേഖനത്തിന്റെ ഭാരതീയ മാനങ്ങളെക്കുറിച്ചുള്ള ഒരു പരിചിന്തനമാണീ ലേഖനം. വരും തലമുറയുടെ ശോഭനമായ ഭാവി നമ്മുടെ കൈയിലാണെന്നു നമുക്കു മറക്കാതിരിക്കാം. നമുക്ക് ചുറ്റും പൂങ്കാവനം ഒരുക്കണമോ അതോ മരുഭൂമികൾ സൃഷ്ടിക്കണമോ എന്ന് തീരുമാനിക്കേണ്ടത് നാം തന്നെയാണ്. “മാനവസേവയാണു മാധവസേവ” എന്ന ബോധ്യത്തോടെ ഭൂമിയിലെ പാവപ്പെട്ടവന്റെ ശബ്ദമാകുവാൻ നമുക്ക് സാധിക്കട്ടെ.

കീലപദങ്ങൾ: അങ്ങേക്കു സ്തുതി, അമർവ വേദം, ചാക്രിക ലേഖനം

“ഭൂമീദേവി, ഞാൻ നിന്നിൽ നിന്ന് എന്താണോ കുഴിച്ചെടുക്കുന്നത് അത് വീണ്ടും അതിവേഗം വളർന്നുവരട്ടെ എല്ലാം ശുദ്ധീകരിക്കുന്ന ഭൂമീ ദേവി ഞങ്ങൾ നിന്റെ മർമ്മഭാഗങ്ങൾക്കോ ഹൃദയത്തിനോ യാതൊരു പരിക്കുമേൽപ്പിക്കാതിരിക്കട്ടെ ” അമർവ വേദം , ഭൂമി സൂക്തം (12.1)

വേദങ്ങളിൽ നാലാമത്തേതായ അമർവ വേദം 1500 ബി.സി.ക്കും 1000 ബി.സി.ക്കും ഇടയിൽ എഴുതപ്പെട്ടതാണ്. അതിൽ മനുഷ്യന്റെ ഭൂമിയോടുള്ള പരിപാവനമായ ബന്ധത്തിന്റെ ഹൃദയസ്पर्ശമായ ഒരു അവതരണമാണു ഈ പ്രാർത്ഥന. ഭാരത തത്വചിന്തയും ആത്മീയതയും ആഴമായ പ്രകൃത്യാവബോധത്തിൽ രൂപീകരിക്കപ്പെട്ടിരിക്കുന്നു: അത് ഇന്നോ ഇന്നലയോ തുടങ്ങിയതല്ല, പ്രത്യുത ഭാരത സംസ്കാരത്തിന്റെ രേഖീകൃതമായ ചരിത്രത്തിന്റെ നാൾവഴികളിൽ മുഴുവൻ നിഴലിച്ചു കാണുന്ന ഒരംശമാണു എന്നതിന്റെ വ്യക്തമായ ഒരടയാളമാണ് ഈ സൂക്തം. ഭൂമിയെ ദേവിയായും അമ്മയായും സർവ്വംസഹയായും കാണുന്ന പാരമ്പര്യമാണ് ആർഷഭാരതത്തിന്റേത്. പഞ്ചഭൂതങ്ങൾ മനുഷ്യന്റെ ഇന്ദ്രിയാനുഭൂതികൾ നിർണ്ണയിക്കുന്നു: ഗന്ധംകൊണ്ട് മണ്ണ് (പ്രിഥ്വി), കാഴ്ചകൊണ്ടു അഗ്നി (തീ), സ്पर्ശംകൊണ്ട് വായു (മായ), രുചികൊണ്ട് വെള്ളം (അപ്പി), ശബ്ദംകൊണ്ട് ആകാശം. അതിനുപുറമേ, നദികളെ ഭൂമിയുടെ ഞരമ്പുകളായും മഹാമേരു പർവ്വതത്തെ (ഹിമാലയം) ഭൂമിയുടെ സുഷുമ്ന കാന്ധമായും കാറ്റിനെ ഭൂമിയുടെ

ശ്വാസോച്ഛാസമായും നാം ഗണിക്കുന്നു. ചുരുക്കത്തിൽ, പ്രകൃതിയെ ബ്രഹ്മാണ്ഡമായും മനുഷ്യനെ സൂക്ഷ്മബ്രഹ്മാണ്ഡമായും പരിഗണിക്കുന്ന ഈ പ്രപഞ്ച ദർശനം മനുഷ്യനും പ്രകൃതിയും ഒരു നാണയത്തിന്റെ രണ്ടു വശങ്ങളാണു അഥവാ പ്രപഞ്ചത്തിന്റെ ഈടും പാവുമാണെന്നുള്ള യാഥാർത്ഥ്യമാണു വിളിച്ചോതുന്നത്. അതുകൊണ്ടുതന്നെ മനുഷ്യനില്ലെങ്കിൽ പ്രകൃതിയില്ല; പ്രകൃതിയില്ലെങ്കിൽ മനുഷ്യനും!

ഇത്തരൂണത്തിൽ, ഭാരതീയ പ്രകൃതിദർശനങ്ങളോട് ചേർന്നു നിൽക്കുന്നതും വളരെ ആനുകാലിക പ്രസക്തവുമായ ഒരു ഉത്തമാഹ്വാനമാണ് ഫ്രാൻസിസ് മാർപാപ്പയുടെ ചാക്രികലേഖനമായ "Laudato Si" അഥവാ "അങ്ങേക്കു സ്തുതി." (ചാക്രിക ലേഖനം -മാർപാപ്പ കത്തോലിക്ക സഭയിലെ അംഗങ്ങളെ ചില പ്രത്യേക വിഷയങ്ങളിൽ സഭയുടെ നിലപാടുകളും പ്രബോധനങ്ങളും അറിയിക്കുവാനായി എഴുതുന്ന പ്രത്യേക ലേഖനം). പരിസ്ഥിതി സംരക്ഷണ പ്രവർത്തനങ്ങളുടെ മധ്യസ്ഥനായി കത്തോലിക്ക സഭ കരുതുന്ന വി. ഫ്രാൻസിസ് അസ്സീസിയുടെ സൃഷ്ടിഗീത പ്രാർത്ഥനയുടെ (ഇതിൽ സൂര്യനെയും കാറ്റിനെയും അഗ്നിയും സഹോദരന്മാരെന്നും ചന്ദ്രനേയും വെള്ളത്തെയും സഹോദരിമാരെന്നും അഭിസംബോധന ചെയ്യുന്നു.) ആരംഭ വചനമാണ് അദ്ദേഹത്തിന്റെ നാമധാരിയായ ഇപ്പോഴത്തെ മാർപാപ്പയുടെ ഈ ചാക്രിക ലേഖനത്തിന്റെപേരും എന്നത് യാദൃച്ഛികമല്ല. ഇതിന്റെ ഉപശീർഷകമായി ഉപയോഗിച്ചിരിക്കുന്നത് "നമ്മുടെ പൊതുഭവനത്തിന്റെ സംരക്ഷണത്തിനു" എന്നാണ്. സാധാരണഗതിയിൽ കത്തോലിക്ക വിശ്വാസികളെയാണു ചാക്രികലേഖനങ്ങൾ അഭിസംബോധന ചെയ്യുന്നതെങ്കിൽ ഇവിടെ ലോകത്തിലുള്ള എല്ലാ സുമനസ്സുകളെയുമാണ്. ആമുഖം കൂടാതെ ആറ് അദ്ധ്യായങ്ങളും 246 ഘണ്ഡികകളുമായി 180 പേജുകൾ ഉള്ള ഇതിന്റെ പ്രധാന പ്രതിപാദ്യ വിഷയം ഏതു തരത്തിലുള്ള ലോകമാണ് നാം വരും തലമുറയ്ക്ക് കൈമാറാൻ പോകുന്നത് എന്ന നമ്മുടെ ഓരോരുത്തരുടെയും ആശങ്ക തന്നെയാണു.ഭൂമിയെ സഹോദരിയായും അമ്മയായും കാണാനുള്ള വലിയൊരു ഉത്തരവാദിത്വബോധമാണ് "അങ്ങേക്കു സ്തുതി" നമുക്ക് സമ്മാനിക്കുന്നത്. പരിസ്ഥിതി സംരക്ഷണവുമായി ബന്ധപ്പെട്ടു വിരചിതമായ ആദ്യ ചാക്രിക ലേഖനമായ ഇതിനെ "പരിസ്ഥിതി സംരക്ഷണത്തിന്റെ മഗ്നാകാർട്ട" എന്നാണ് ലോകം വിശേഷിപ്പിക്കുന്നത്. പരിസ്ഥിതിയുടെ വിലാപം പാവപ്പെട്ടവന്റെ വിലാപമാണെന്ന നിലപാട് സ്വീകരിച്ചിരിക്കുന്ന "അങ്ങേക്കു സ്തുതി" അതിനാൽത്തന്നെ പാശ്ചാത്യ മുതലാളിത്ത വ്യവസ്ഥിതിയുടെ കണ്ണിലെ കരടായിതീർന്നിരിക്കുന്നു.

"അങ്ങേക്കു സ്തുതി"യുടെ ഒന്നാം അദ്ധ്യായത്തിൽ ഭൂമിക്കു എന്ത് സംഭവിക്കുന്നു എന്ന് അന്തരീക്ഷ മലിനീകരണത്തിന്റെയും കാലാവസ്ഥ വ്യതിയാനത്തിന്റെയും ജല ദുർലഭ്യതയുടെയും ജൈവവൈവിധ്യ നഷ്ടത്തിന്റെയും അസമത്വലോകത്തിലെ പാവപ്പെട്ടവന്റെ ദുർബല

മറുപടികളുടെയും വെളിച്ചത്തിൽ വിശകലനം ചെയ്യുന്നു. തുടർന്ന് ജീവജാലങ്ങളും വി. ഗ്രന്ഥവും തരുന്ന സൂചനകളിലൂടെ കടന്നുപോകുന്ന “അങ്ങേക്കു സ്തുതി” പാരിസ്ഥിതിക സംഘർഷത്തിന്റെ മാനുഷികവേരുകൾ ശാസ്ത്ര-സാങ്കേതിക മുന്നേറ്റത്തിന്റെ മനുഷ്യകേന്ദ്രീകൃത മനോഭാവമാണെന്ന ആപത്കരമായ സത്യം നമ്മോടു വിളിച്ചുപറയുന്നു. ഇന്നിന്റെ ആവശ്യം ഒരു സമഗ്രമായ പരിസ്ഥിതി നയമാണെന്നും അതിൽ നമുക്കോരോരുത്തർക്കും പ്രായോഗികമായി വഹിക്കാനുള്ള പങ്കിനെക്കുറിച്ചും അതിനായി മതവും ശാസ്ത്രവും രാഷ്ട്രവും പ്രകൃതിക്കൊപ്പം അണി ചേരണമെന്ന ആഹ്വാനവുമായാണു ഇത് അവസാനിക്കുന്നത്.

പ്രകൃതി സംരക്ഷണ പ്രവർത്തനങ്ങൾക്കുള്ള ഒരോർമ്മപ്പെടുത്തലും അതോടൊപ്പം നമുക്ക് ആത്മപരിശോധനയ്ക്കുള്ള സമയം അതിക്രമിച്ചു കഴിഞ്ഞു എന്ന ശക്തമായ മുന്നറിയിപ്പുമായി ഇത് മാറുന്നു. വരും തലമുറയുടെ ശോഭനമായ ഭാവി നമ്മുടെ കൈയിലാണെന്നു നമുക്കു മറക്കാതിരിക്കാം. നമുക്ക് ചുറ്റും പൂങ്കാവനം ഒരുക്കണമോ അതോ മരുഭൂമികൾ സൃഷ്ടിക്കണമോ എന്ന് തീരുമാനിക്കേണ്ടത് നാം തന്നെയാണ്. “മാനവസേവയാണു മാധവസേവ” എന്ന ബോധ്യത്തോടെ ഭൂമിയിലെ പാവപ്പെട്ടവന്റെ ശബ്ദമാകുവാൻ നമുക്ക് സാധിക്കട്ടെ. “വസുധൈവ കുടുംബകം” (ഭൂമി ഒരു കുടുംബമാണ്) എന്നതാകട്ടെ നമ്മുടെ മനോഭാവം.

“കാത്തിരിക്കുന്നു ഞാൻ ആ നല്ല നാളിന്റെ ആഗമനത്തിനായി മുകളനായി...

ആശ്ചര്യമില്ലാതെ അങ്കലാപ്പില്ലാതെ കാത്തിരിക്കുന്നു ഞാൻ ഏകനായി...

..ഓർക്കുന്നു ഞാനിന്നീ മരുഭൂമിയിൽ നിന്നും ...ദൈവനാടിന്റെ ആ ഗ്രാമ ഭംഗി...” “എന്റെ ഗ്രാമം” സി.വി. അബ്ദുൽ റഷീദ്

സഹായകഗ്രന്ഥസൂചി

ഫ്രാൻസിസ് മാർപാപ്പ, (2014). അങ്ങേക്കു സ്തുതി (ചാക്രികലേഖനം). തിരുവനന്തപുരം: കാർമൽ ഇൻ്റർനാഷണൽ.

എം പി കുഞ്ഞാമു (വിവ.) (2012) വിജയത്തിലേക്കുള്ള ജീവിതമൂല്യങ്ങൾ. ആചാര്യ മഹാ പ്രജ്ഞ, എ പി ജെ അബ്ദുൽ കലാം (The Family and the Nation) കോട്ടയം: ഡി സി ബുക്ക്സ്

സി.വി.അബ്ദുൽ റഷീദ്. എന്റെ ഗ്രാമം.

http://njankettakavithakal.blogspot.com/2013/01/blog-post_30.html

കരുണ: സഭയുടെ ഹൃദയത്തുടിപ്പ്

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സിജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}
^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

ഫ്രാൻസിസ് മാർപാപ്പ പ്രഖ്യാപിച്ച കരുണയുടെ വർഷത്തെയും അതിനോടനുബന്ധിച്ചു കാരുണ്യത്തിന്റെ അസാധാരണ ജൂബിലി പ്രഖ്യാപിച്ചുകൊണ്ടുള്ള കല്പനയായ കാരുണ്യത്തിന്റെ മുഖം എന്ന അപ്പസ്തോലിക ലേഖനത്തിന്റെയും ഒരു സ്വതന്ത്ര അവലോകനം. കരുണ എല്ലാ പ്രതിബന്ധങ്ങളും അതിജീവിച്ച്, എല്ലാ മതിലുകളും തകർത്ത് മനുഷ്യനെ മനുഷ്യനായി കാണുവാൻ അഭ്യസിപ്പിക്കുന്നു. ഹൃദയങ്ങളെയും ജീവിതങ്ങളെയും രൂപാന്തരപ്പെടുത്തുന്നത് കരുണയാണ്.

കീലപദങ്ങൾ: കരുണ, കരുണയുടെ വർഷം, കാരുണ്യത്തിന്റെ മുഖം, സമർപ്പിത ജീവിതം.

കത്തോലിക്ക സഭയുടെ സ്ഥിതിവിവരക്കണക്കു അനുസരിച്ചു 2,09,670 സ്കൂളുകളിലായി 5,76,12,936 കുട്ടികളും കോളേജുകളിലും മറ്റുമായി 55,33,795 വിദ്യാർത്ഥികളും സഭയുടെ സേവനം പ്രതിവർഷം സ്വീകരിക്കുന്നു. ഇതിനു പുറമേ 1,17,205 ആരോഗ്യ- ഉപവി സ്ഥാപനങ്ങളിലൂടെ ലക്ഷക്കണക്കിന് ആളുകളും വർഷം തോറും സഭയുടെ കരുണയുടെ മുഖം ദർശിക്കുന്നവരാണ്. എന്തുകൊണ്ടാണ് സഭ ഇത്രമാത്രം കാരുണ്യപ്രവർത്തികൾ ചെയ്യുന്നത്? സഭയുടെ സമ്പത്ത് രാജാവിനു കൊടുക്കാതെ പാവങ്ങൾക്ക് വിതരണം ചെയ്തതിന്റെ പേരിൽ ഡയക്ലിഷ്യൻ ചക്രവർത്തി വധിച്ച റോമിലെ വി. ലോറൻസും മോളോക്കയിലെ കുഷ്ഠരോഗികൾക്കായി ജീവിതം ഉഴിഞ്ഞുവച്ച വി. ഡാമിയനും ഓഷ് വിറ്റ്സിലെ നാസികയാമ്പിൽ സഹ തടവുകാരന് വേണ്ടി ജീവൻ കൊടുത്ത വി. മാക്സ് മില്ലൻ കോൾബെയും ഉപവിയുടെ രക്തസാക്ഷികളായി മാറിയതും വി. വിൻസന്റ് ഡി പോൾ ഉപവിയുടെ അപ്പസ്തോലൻ എന്നറിയപ്പെടുന്നതും കോൽകോത്തയിലെ വാ. മദർ തെരേസ പാവങ്ങളുടെ അമ്മയായതും സാമൂഹ്യ സേവന പ്രവർത്തനങ്ങൾ സഭയുടെ നീട്ടപ്പെട്ട കരങ്ങളുടെ പ്രതിരൂപമായിത്തീർന്നതും എന്തുകൊണ്ടാണ്? ഇൻഡോറിലെ സി. റാണി മരിയ രക്തസാക്ഷിയായതും മധ്യപ്രദേശിലെ ദയാഭായിയും ദൈവപരിപാലന ഭവനത്തിലെ സി. മേരിലിറ്റിയും അതുപോലെ ആയിരക്കണക്കിനു സന്യസ്ത സഹോദരീ സഹോദരന്മാരും അകാശപ്പറവകളുടെ അനേകം കുട്ടുകാരും നവജീവൻ തോമസുചേട്ടനെപ്പോലുള്ള ധാരാളം സുമനസ്സുകളും

എന്തിനുവേണ്ടിയാണ് തങ്ങളുടെ വിലപ്പെട്ട ജീവിതം വ്യയം ചെയ്യുന്നത്? ഉത്തരം ഒന്നേയുള്ളൂ: “ ദൈവികസൗന്ദര്യത്തിനു വേണ്ടിയുള്ള ദാഹം തങ്ങളുടെ സഹോദരീ സഹോദരന്മാരിൽ വികൃതമാക്കപ്പെട്ടിരിക്കുന്ന ദൈവികച്ഛായയെ ശുശ്രൂഷിക്കാൻ സമർപ്പിതരെ പ്രേരിപ്പിക്കുന്നു. ”(Vita Consecrata, 75) സഭയുടെ ദാഹം ക്രിസ്തുവിന്റെ കരുണയുടെ പ്രവർത്തികൾ തുടരുക എന്നതാണ്. അതിന്റെ പ്രതീകമായാണ് ഫ്രാൻസിസ് മാർപാപ്പ ‘കരുണയുടെ വർഷം’ പ്രഖ്യാപിച്ചിരിക്കുന്നത്.

ദൈവാത്മാവിന്റെ ശുദ്ധവായു സഭക്കുള്ളിൽ പ്രവേശിക്കട്ടെ എന്ന് പറഞ്ഞുകൊണ്ട് സഭയുടെ കോട്ടവാതിലുകൾ മലർക്കെ തുറന്നിട്ട രണ്ടാം വത്തിക്കാൻ സൂനഹദോസ് (11 ഒക്ടോബർ 1962 - 8 ഡിസംബർ 1965) സമാപിച്ചതിന്റെ 50-ആം വാർഷിക ദിനമായ 2015 ഡിസംബർ 8 നു റോമിലെ കത്തീഡ്രൽ ദേവാലയമായ സെന്റ് ജോൺ ലാറ്ററൻ ബസിലിക്കയുടെയും അതോടൊപ്പം മറ്റൊരു കത്തീഡ്രലുകളുടെയും വാതിലുകൾ, ദൈവത്തിന്റെ കരുണയുടെ പ്രതീകമായി തുറന്നുകൊണ്ട് ആരംഭിക്കുന്ന കരുണയുടെ വർഷം സമാപിക്കുന്നത് 2016 നവംബർ 20 നു ക്രിസ്തുവിന്റെ രാജ്യത്തിരുനാളിലാണ്. ക്രിസ്തുവിന്റെ മണവാട്ടിയായ സഭക്കാവശ്യം കരുണയെന്ന മരുന്നാണ് എന്ന് പറഞ്ഞുകൊണ്ട് വി. ജോൺ 23-ആമൻ പാപ്പ ആരംഭിച്ച സൂനഹദോസ് സമാപിച്ചപ്പോൾ വാ.പോൾ 6-ആമൻ പാപ്പ പറഞ്ഞത് ഉപവി പ്രവർത്തനം ഇതിന്റെ പ്രധാന ലക്ഷ്യങ്ങളിലൊന്നായി മാറിയെന്നാണ്.

ദൈവത്തിന്റെ കരുണ നീതിയെ അതിലംഘിക്കുന്നതാണ്. ദൈവം നീതിമാനാണെങ്കിലും അവിടുന്ന് നീതിയേക്കാളുപരി കരുണക്കാണ് പ്രാധാന്യം നൽകുന്നത്. അതുകൊണ്ടാണ് “ദൈവത്തിനു തന്റെ കരുണ പിൻവലിക്കുന്നതിനേക്കാൾ എളുപ്പം അവിടുത്തെ കോപം ശമിപ്പിക്കുന്നതാണ്” എന്ന് വി. അഗസ്റ്റിൻ പറയുന്നത്. വി. ഗ്രന്ഥം മുഴുവൻ ഉത്ഘോഷിക്കുന്നത് ദൈവത്തിന്റെ ഈ കരുണയാണ്. പഴയനിയമം മുഴുവൻ പ്രഘോഷിക്കുന്നത് ക്ഷമാശീലനും കാരുണ്യവാനുമായ ദൈവത്തെയാണ്. 136-ആം സങ്കീർത്തനത്തിൽ ആവർത്തിച്ച് പറയുന്നത് ‘ദൈവത്തിന്റെ കരുണ എന്നെന്നും നിലനിൽക്കും’ എന്നതാണ്. അതുകൊണ്ടാണ് ‘പിതാവിനെപ്പോലെ കരുണയുള്ളവരായിരിക്കുവിൻ’ (ലൂക്ക 6:36)എന്ന തിരുവചനം ഈ കരുണയുടെ വർഷത്തിന്റെ ആദർശവാക്യമായി പരി. പിതാവ് തിരഞ്ഞെടുത്തിരിക്കുന്നത്.

ക്രിസ്തു ഭൂമിയിലേക്കു വന്നത് ദൈവത്തിനു സ്വീകാര്യമായ വർഷം അഥവാ ‘കരുണയുടെ വർഷം’ പ്രഖ്യാപിക്കാനാണ് (ലൂക്ക 4:19)എന്ന് പരി. പിതാവ് ഊന്നിപ്പറയുമ്പോൾ ക്രിസ്തുവിലൂടെ പൂർത്തീകരിക്കപ്പെട്ട ദൈവികകാരുണ്യമാണ് അർത്ഥമാക്കപ്പെടുന്നത്. അതുകൊണ്ടാണ് ‘ഞാൻ

ഞാൻ തന്നെ' (പുറ. 3:14) എന്ന് സ്വയം വെളിപ്പെടുത്തിയ ദൈവത്തിനു വി. യോഹന്നാൻ 'ദൈവം സ്നേഹമാണ്' (1 യോഹ.4: 8,16) എന്ന സുന്ദരമായ നിർവചനം നൽകുന്നത്.

സഭയുടെ ആണിക്കല്ല് തന്നെ ദൈവിക കാരുണ്യമാണു. 'കരുണയില്ലാത്ത ഒരു ക്രൈസ്തവൻ ഉണ്ടാകുമോ' എന്ന ചോദ്യത്തിനു 'ഇല്ല' എന്ന മറുപടിയാണ് പാപ്പ നൽകുന്നത്.. ഒരു ക്രിസ്ത്യാനി തീർച്ചയായും കരുണയുള്ളവനായിരിക്കണം. കാരണം സുവിശേഷത്തിന്റെ ഹൃദയമാണത്. ക്രിസ്തുവിന്റെ, സഭയുടെ ഈ ഹൃദയത്തുടിപ്പ് തൊട്ടറിഞ്ഞ ഫ്രാൻസിസ് പാപ്പ തന്റെ ആദർശവാക്യമായി തിരഞ്ഞെടുത്തത് 'എളിയവനായിരുന്നിട്ടും എന്നെ തിരഞ്ഞെടുത്തു' എന്ന വി. ബീഡിന്റെ തിരുവചനവ്യാഖ്യാനമാണു. പുണ്യ സ്മരണാർഹനായ ജോൺ പോൾ രണ്ടാമൻ മാർപാപ്പയുടെ ദ്വിതീയ ചാക്രിക ലേഖനമായ "കരുണാ സമ്പന്നൻ" ധൂർത്തപുത്രന്റെ ഉപമയിലെ കരുണാസമ്പന്നൻ ആയ ദൈവപിതാവിനെപ്പോലെ കാരുണ്യമുള്ളവരാകാൻ നമ്മെ ക്ഷണിക്കുകയാണ്.

കരുണയുടെ വർഷത്തിൽ ആത്മീയ രംഗത്തും ഭൗതിക രംഗത്തും കാരുണ്യത്തിന്റെ വാതിലുകൾ മലർക്കെ തുറന്നിടുവാനും അതോടൊപ്പം ദൈവത്തിന്റെ കരുണയുടെ അതിരില്ലാത്ത ദയാവായ്പ് അനുരഞ്ജന കൂദാശയിലൂടെ ആവോളം നുകരാനും പാപ്പ നമ്മോട് ആഹ്വാനം ചെയ്യുന്നു. 1216-ലെ രാത്രിയിൽ തനിക്കുണ്ടായ പ്രലോഭനത്തെ അതിജീവിക്കുവാൻ വി.ഫ്രാൻസിസ് അസ്സീസി ആശ്രമ വളപ്പിലെ മുളളുകളുള്ള റോസാച്ചെടികളിൽ കിടന്ന് ഉറങ്ങുന്നതിനെ അനുസ്മരിക്കുന്ന ചരിത്രസംഭവം 'അസ്സീസി നൽകുന്ന പാപമോചനം' (Pardon of Assisi) എന്നപേരിൽ എല്ലാ വർഷവും ആഗസ്റ്റ് 2-ന് അനുരഞ്ജന ദിനമായി സഭയിൽ ആചരിക്കുന്നു. പിന്നീട് തൽസ്ഥാനത്ത് നിന്നിരുന്ന മുളളുകൾ നിറഞ്ഞ റോസാച്ചെടികൾ മുളളില്ലാത്ത ഇനമായി പരിണമിച്ചു. ഇന്നും ആ തായ്ച്ചെടിയുടെ തളിരുകൾ അസ്സീസിയിൽ പടർന്നു നിൽക്കുന്നുണ്ട്. വി. ഫ്രാൻസിസിനെപ്പോലെ അനുരഞ്ജനത്തിന്റെ കൂദാശയിലൂടെ നമ്മുടെ പാപബന്ധനങ്ങളിൽനിന്നും പുറത്തിറങ്ങി ദൈവികകാരുണ്യം തേടുവാനും, ദിവ്യാകാരുണ്യം സ്വീകരിക്കുവാനുമുള്ള വിളിയാണ് 'അസ്സീസി നൽകുന്ന പാപമോചനം'. അത് ഫലപ്രദമായി ഉപയോഗിക്കാൻ പാപ്പ ഈ വർഷത്തെ അനുരഞ്ജനദിനത്തിൽ പ്രത്യേകമായി സഭയോട് ആഹ്വാനം ചെയ്യുന്നുമുണ്ട്. കരുണ എല്ലാ പ്രതിബന്ധങ്ങളും അതിജീവിച്ച്, എല്ലാ മതിലുകളും തകർത്ത് മനുഷ്യനെ മനുഷ്യനായി കാണുവാൻ അഭ്യസിപ്പിക്കുന്നു. ഹൃദയങ്ങളെയും ജീവിതങ്ങളെയും രൂപാന്തരപ്പെടുത്തുന്നത് കരുണയാണ്. കരുണ മനുഷ്യന് പുതുജീവൻ നൽകുകയും സമൂഹവുമായി വീണ്ടും

കൂട്ടിയിണക്കുകയും ചെയ്യുന്നു. അതിനാൽ നമ്മുടെ ഹൃദയപരിവർത്തനത്തിനുള്ള എല്ലാ സാധ്യതകളെയും നാം ഉപയോഗിക്കുകയും അക്രമത്തിനും അഴിമതിയ്ക്കും വഴിവയ്ക്കുന്ന 'പണമാണ് പരമോന്നതം' എന്ന മൗഢ്യ ചിന്ത വെടിയുകയും നീതിയുടെ മുകളിൽ കരുണ പ്രാമുഖ്യം നേടുകയും ചെയ്യുമ്പോഴാണ് കരുണയുടെ വർഷം ഫലവത്താകുന്നത്.

'ഇതാ ദൈവത്തിന്റെ കൂടാരം മനുഷ്യരോട് കൂടെ' (വെളി. 21:3): ഈ കൂടാരത്തിൽ നമുക്കും വസിക്കാം. സഭയുടെ ഹൃദയത്തുടിച്ചായ കരുണ നമ്മുടെ നെഞ്ചോടു ചേർത്തു പിടിക്കാം. സഭയുടെ കരുണയുടെ നീട്ടപ്പെട്ട കരങ്ങളായി നമുക്കും മാറാം. കരുണയുടെ വർഷത്തിന്റെ സത്ഫലങ്ങളും, അനുഗ്രഹങ്ങളും ചൂടിക്കൊണ്ടു, കരുണയുടെ സുഗന്ധം നമുക്ക് ചുറ്റും വിതറിക്കൊണ്ട് നമുക്കും പിതാവിനെപ്പോലെ കരുണയുള്ളവരാകാം. ഈ ഉദ്യമത്തിൽ കരുണയുടെ അമ്മയായ പരിശുദ്ധ മറിയത്തെയും കരുണയുടെ അപ്പസ്തോലയായ വി. ഫ്രാൻസിസ് നെയെയും നമ്മുടെ കൂടാരങ്ങളിലേക്കു നമുക്ക് ക്ഷണിക്കാം...

സഹായകഗ്രന്ഥസൂചി

ഫാ മാത്യു തുണ്ടത്തിൽ (വിവ.). കാരുണ്യത്തിന്റെ മുഖം (2015) തിരുവനന്തപുരം: കാർമൽ ഇൻറർനാഷണൽ.

Pope John Paul II (1996). Vita Consecrata (Encyclical). Rome: L' Osservatore Romano

സമർപ്പണത്തിൻ ആനന്ദം

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സി.ജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}

^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

ഫ്രാൻസിസ് മാർപാപ്പ പ്രഖ്യാപിച്ച സമർപ്പിത വർഷത്തിന്റേയും അതിനോടനുബന്ധിച്ചു പുറത്തിറക്കിയ “ആനന്ദിച്ച് ആഹ്ളാദിക്കുവിൻ” എന്ന അപ്പസ്തോലിക ഉദ്ബോധനത്തിന്റേയും ഒരു സ്വതന്ത്ര അവലോകനം. സമർപ്പണം ഒരിക്കലും ഒരു വാക്കിൽ അവസാനിക്കുന്നതല്ല മറിച്ച്, അനുനിമിഷം കൂടുതൽ കൂടുതൽ ആഴത്തിൽ അനുഭവിച്ചുകൊണ്ടേയിരിക്കേണ്ട ഒരു ആത്മീയാനുഭൂതിയാണത്.

കീലപദങ്ങൾ: സമർപ്പിത വർഷം, ആനന്ദിച്ച് ആഹ്ളാദിക്കുവിൻ.

“ഇതാണ് സമർപ്പണത്തിന്റെ ചാരുകഥ: അത് ആനന്ദമാണ്, ആനന്ദമാണ്...” 2013 ജൂലൈ ആറാം തീയതി റോമിൽ വെച്ചു നടന്ന സെമിനാരി വിദ്യാർത്ഥികളുടെയും നവസന്യാസാർത്ഥികളുടെയും സമ്മേളനത്തിൽവെച്ച് ഫ്രാൻസിസ് മാർപാപ്പ സമർപ്പിത ജീവിതത്തിന്റെ മനോഹാരിതയെപ്പറ്റി വിശേഷിപ്പിച്ചത് ഇപ്രകാരമാണ്. ഇത് കേവലം സമർപ്പിത- സന്യാസ- പൗരോഹിത്യ - വിളികൾ സ്വീകരിച്ചവർക്കുവേണ്ടി മാത്രമുള്ള ഒരാഹ്വാനമല്ല, പ്രത്യുത ക്രിസ്തുവിൽ വിശ്വസിക്കുന്ന ഏതൊരു വ്യക്തിയുടെയും ജീവിതത്തിന്റെ അന്തസ്സത്തയിലേക്കുള്ള ഒരു നേർക്കാഴ്ചയാണ്. അതുകൊണ്ടു തന്നെ ഇന്നത്തെ ലോകത്തിൽ വിശുദ്ധിയിലേക്കുള്ള വിളിയെക്കുറിച്ചു ഫ്രാൻസിസ് പാപ്പയുടെ അപ്പസ്തോലിക ഉദ്ബോധനത്തിനു “ആനന്ദിച്ച് ആഹ്ളാദിക്കുവിൻ” (Gaudete et Exsultate - G. E.) എന്ന പേര് തികച്ചും അനുയോജ്യമാണ്. വിശുദ്ധിയാണ് തിരുസഭയുടെ ഏറ്റവും ആകർഷകമായ മുഖമെന്നു പറയുമ്പോഴും (G. E. no. 9) തങ്ങളുടെ അനുദിന ജീവിതത്തിലെ തെറ്റുകളുടെയും പരാജയങ്ങളുടെയും ഇടയിൽപ്പോലും കർത്താവിനു പ്രിയപ്പെട്ടവരായി മുന്നോട്ടു നീങ്ങുകയും (G. E. no. 3) ചെയ്ത പൂർവ്വികരും ഇന്നും ആ പാതയിൽ ചരിക്കുന്ന നമ്മുടെ മാതാപിതാക്കളും ബന്ധുജനങ്ങളുമടങ്ങുന്ന ദൈവജനത്തെ വിശുദ്ധിയുടെ മധ്യവർഗമെന്നാണ് (G. E. no. 7) പാപ്പ വിശേഷിപ്പിക്കുന്നത്. നാം എവിടെ ആയിരുന്നാലും സ്നേഹത്തിൽ അധിഷ്ഠിതമായ ജീവിതം നയിക്കുകയും എല്ലാറ്റിലും ക്രിസ്തുവിനു നേർ സാക്ഷ്യമാവുകയും ചെയ്യുന്നത് വഴി നാമും വിശുദ്ധിയിലേക്കുള്ള വഴിയിലാണെന്നു (G. E. no. 14) പാപ്പാ നമ്മെ ഓർമ്മപ്പെടുത്തുന്നു. ഇപ്രകാരം ക്രിസ്തുവിൽ ആനന്ദിക്കുന്ന ജീവിതം

നയിക്കുക വഴി ഓരോ ക്രൈസ്തവനും സമർപ്പണത്തിന്റെ പൂർണ്ണത തങ്ങളുടെ ഹൃദയങ്ങളിൽ പേറുന്നവരാകുന്നു.

സമർപ്പണം ഒരിക്കലും ഒരു വാക്കിൽ അവസാനിക്കുന്നതല്ല മറിച്ച്, അനുനിമിഷം കൂടുതൽ കൂടുതൽ ആഴത്തിൽ അനുഭവിച്ചുകൊണ്ടിരിക്കേണ്ട ഒരു ആത്മീയാനുഭൂതിയാണ്. “അവിടുത്തെ തിരുമനസ്സ് നിറവേറട്ടെ” എന്ന് പറഞ്ഞുകൊണ്ട് കാൽവരിക്കുമുമ്പിൽ തല കുനിച്ച ക്രിസ്തുവും “ഇതാ കർത്താവിന്റെ ദാസി” എന്നു പ്രത്യുത്തരിച്ച പരിശുദ്ധ അമ്മയും ഈ ചൈതന്യത്തിന്റെ വറ്റാത്ത നീരുറവകളാണ്. സഹാറാ മരുഭൂമിയിലെ ക്രൈസ്തവ താപസനായിരുന്ന വാഴ്ത്തപ്പെട്ട ചാൾസ് ദെ ഫുക്കോൾഡ് ഈ സ്രോതസ്സിൽനിന്നും ആവോളം നുകരാൻ ഭാഗ്യം ലഭിച്ച ഒരു വിശുദ്ധ വ്യക്തിത്വമായിരുന്നു. അതുകൊണ്ടാണ് അദ്ദേഹത്തിന് ഇപ്രകാരം പറയാൻ കഴിഞ്ഞത്, “ദൈവമുണ്ടെന്നു ഞാൻ തിരിച്ചറിഞ്ഞതിനുശേഷം അവിടുത്തെക്കുറേണ്ടി മാത്രമായി ജീവിക്കാതിരിക്കാൻ എനിക്ക് സാധ്യമായിരുന്നില്ല.” ഈ തിരിച്ചറിവ് അദ്ദേഹത്തെ നയിച്ചത് രക്തസാക്ഷിത്വ മകുടത്തിലേക്കായിരുന്നു എന്നത് ഈ ആത്മീയാനുഭൂതി അദ്ദേഹത്തിൽ എത്ര ഗാഢമായിരുന്നു എന്നതിന്റെ തെളിവാണ്.

യഥാർത്ഥ സമർപ്പണം സമമായ അർപ്പണമാണ്. അത് സമ്യക്കായ അർപ്പണമാണ്. അതുകൊണ്ടാണ് ഈശോ ഇപ്രകാരം പറയുന്നത് “നിങ്ങളുടെ നിക്ഷേപം എവിടെയോ അവിടെയായിരിക്കും നിങ്ങളുടെ ഹൃദയവും (Mt. 6:21). ആത്മാവും ഹൃദയവും ശരീരവും മനസ്സുമെല്ലാം സമമായി, സമ്പൂർണ്ണമായി ദൈവത്തിനും ദൈവജനത്തിനുമായി സമർപ്പിക്കുമ്പോൾ മാത്രമേ സന്യാസ-പൗരോഹിത്യ-ഏകസ്ഥ സമർപ്പണം സമ്പൂർണ്ണമാകുകയുള്ളൂ. അതിനാലാണ് സമർപ്പിത ജീവിതത്തെക്കുറിച്ചുള്ള അപ്പസ്തോലിക ഉദ്ബോധനമായ “സമർപ്പിത ജീവിത (Vita Consecrata)”-ൽ വി. ജോൺ പോൾ രണ്ടാമൻ പാപ്പ ഇപ്രകാരം പറയുന്നത് “ദൈവികസൗന്ദര്യത്തിനായുള്ള അന്വേഷണം സമർപ്പിതരായ ആളുകളെ അവരുടെ സഹോദരീസഹോദരന്മാരുടെ മുഖത്തു് ദൈവത്തിന്റെ വിരുപമാക്കപ്പെട്ട പ്രതിച്ഛായയെ പരിപാലിക്കുന്നതിനു് പ്രേരിപ്പിയ്ക്കുന്നു” (Vita Consecrata no. 75). കുടുംബം സ്നേഹത്താൽ സ്ഥാപിക്കപ്പെടുകയും സജീവമാക്കപ്പെടുകയും ചെയ്യുന്നതിനാൽ അവിടെ ദമ്പതികൾ, മാതാപിതാക്കൾ, മക്കൾ, ബന്ധുക്കൾ എന്നിവരടങ്ങിയ സമൂഹത്തിൽ സ്നേഹത്തിനും ജീവനും പോഷണം നൽകി ദൈവിക സ്നേഹത്തിൽ ചരിക്കുമ്പോഴാണ് കുടുംബാംഗങ്ങളുടെ സമർപ്പണം അമൂല്യമാകുകയുള്ളൂ. സ്നേഹത്താൽ സമൂഹത്തിലേക്ക് തുറന്നിരിക്കുന്ന കുടുംബം ഓരോ വ്യക്തിയിലും മിശിഹായുടെ മുഖം കണ്ടെത്തുന്നു (Apostolic Exhortation “Familiaris Consortio” by St. John Paul II, nos.18, 64). സമർപ്പിത ജീവിതം ജനിക്കുന്നത് ദരിദ്രനും,

കളങ്കമില്ലാത്തവനുമായ യേശുവുമായുള്ള കണ്ടുമുട്ടലിലൂടെയാണെന്നും സമർപ്പിതജീവിതത്തിൽ ദൈവവുമായുള്ള കണ്ടുമുട്ടൽ നവീകരിക്കുന്നതിന് അപരരെക്കൂടാതെ കഴിയുകയില്ലായെന്നും ഫ്രാൻസിസ് പാപ്പ 2018 ഫെബ്രുവരി രണ്ടാം തീയതി യേശുവിനെ ദേവാലയത്തിൽ കാഴ്ചയർപ്പിച്ചതിന്റെ അനുസ്മരണ ആചരിക്കുന്ന തിരുനാൾ ദിനത്തിലെ തന്റെ സന്ദേശത്തിൽ നമ്മെ ഓർമ്മിപ്പിക്കുന്നു.

ഒരു വിധത്തിൽ പറഞ്ഞാൽ എല്ലാ മനുഷ്യരും സമർപ്പിതരാണ്: ചിലർ ദൈവത്തിന്, ചിലർ കുടുംബത്തിന്, ചിലർ സമ്പത്തിന്, ചിലർ അധികാരത്തിന്, ചിലർ ജോലിക്ക്, ചിലർ സാമൂഹ്യ മാധ്യമങ്ങൾക്ക്, ചിലർ കൂട്ടുകാർക്ക്, ചിലർ അലസതക്ക്, അങ്ങനെ പോകുന്നു ഓരോരുത്തരുടെയും സമർപ്പണങ്ങൾ. ചിലർ ഒരു കാര്യത്തിനായി സമ്പൂർണ്ണമായി സമർപ്പിക്കുമ്പോൾ മറ്റു ചിലർ പലതിനായി സമർപ്പിക്കുന്നു. ചിലരുടെ സമർപ്പണം വൈരുധ്യാത്മകമാണ്. അവർ ഉത്തരത്തിൽ ഉള്ളത് എടുക്കുകയും വേണം, കക്ഷത്തിൽ ഉള്ളത് പോകാനും പാടില്ല എന്ന മനോഭാവക്കാരാണ്. അങ്ങനെയുള്ളവരോടാണ് “ദൈവത്തെയും മാമോനെയും ഒരുമിച്ചു സേവിക്കാൻ കഴിയുകയില്ല” എന്ന് ക്രിസ്തുനാഥൻ പറയുന്നത്. അതിനാൽ “ഓരോരുത്തരും അവന്റെ അല്ലെങ്കിൽ അവളുടെ സ്വന്തം മാർഗത്തിൽ” സമർപ്പണം പൂർത്തിയാക്കുവാൻ കടപ്പെട്ടിരിക്കുന്നു എന്ന രണ്ടാം വത്തിക്കാൻ കൗൺസിലിന്റെ ആഹ്വാനത്തിനർത്ഥം “ഓരോരുത്തരും അവന്റെ അല്ലെങ്കിൽ അവളുടെ സ്വന്തം തോന്നലുകൾക്കനുസരിച്ചു” സമൂഹത്തിൽ ജീവിക്കുകയെന്നല്ല, പ്രത്യുത ഏതു ജീവിതാന്തസ്സിലായിരിക്കുന്നുവോ അവിടെ പൂർണ്ണമായി ആയിരിക്കുക എന്നത്രെ. “നീ എവിടെ നടപ്പെട്ടിരിക്കുന്നു അവിടെ ഇത്തിശ്ശക്കണ്ണിയാവുക” എന്നല്ല, മറിച്ച് “നീ എവിടെ നടപ്പെട്ടിരിക്കുന്നു അവിടെ പുഷ്പിക്കപ്പെടുക” എന്നതാണ് ഓരോ ക്രൈസ്തവന്റെയും ധർമ്മം.

ഇപ്രകാരം സമർപ്പണത്തിന്റെ അനുഭവത്തിലായിരിക്കുന്ന ഏതൊരു വ്യക്തിയും ദൈവത്തിനും സഹജർക്കുമായി ആനന്ദത്തോടെ തങ്ങളെത്തന്നെ സമ്പൂർണ്ണമായി വ്യയം ചെയ്യുന്നു.

സഹായകഗ്രന്ഥസൂചി

Pope Francis, (2018 Rejoice and be Glad (Apostolic Exhortation)

John Paul II (1981). Familiaris Consortio, (Apostolic Exhortation)

തങ്ങൾ കുത്തി മുറിവേൽപ്പിച്ചവനെ അവർ നോക്കി നിൽക്കും

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സിജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}
^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

ജീവിതവഴിയിൽ നാം പലപ്പോഴും മുറിവേറ്റവന്റെയും മുറിവേൽപ്പിച്ചവന്റെയും അങ്കികൾ മാറിമാറി അണിയുന്നവരാണ്. മുറിവേറ്റവരാകുമ്പോൾ പഞ്ചക്ഷതധാരിയായ ക്രിസ്തുവിന്റെ ഭാഗധേയമാണ് നമുക്കുള്ളത്. ക്ഷതമുള്ളവൻ ക്ഷമിക്കുന്നവനാകുമ്പോഴാണ് അവൻ ഉത്ഥിതന്റെ സ്വന്തമാകുന്നത്.

കീലപദങ്ങൾ: മുറിവ്, ക്ഷമ

മദ്ധ്യപ്രദേശിലെ ഇൻഡോർ രൂപതയിലെ ഉദയ് നഗറിൽ സുവിശേഷപ്രഘോഷണം നടത്തുകയും അതോടൊപ്പം അവരുടെ സാമൂഹ്യവും സാമ്പത്തികവുമായ ഉന്നമനത്തിനു പ്രയത്നിച്ചിരുന്ന സി. റാണി മരിയ വട്ടാലിൽ എന്ന ഫ്രാൻസിസ്കൻ സന്യാസിനിയെ (വാഴ്ത്തപ്പെട്ട സി. റാണി മരിയ) അവിടുത്തെ ജന്മിമാരുടെ പ്രേരണമൂലം സമുന്ദർ സീങ്ങ് എന്ന വ്യക്തി നാച്ചൻബോർ എന്ന പ്രദേശത്തു വെച്ച് കുത്തി വീഴ്ത്തി. പിന്നീട് സ്വാമിയച്ചൻ എന്നറിയപ്പെടുന്ന ഫാ.മൈക്കിൾ പുറാട്ടുകര സി.എം.ഐയുടെ ഇടപെടലുകളിലൂടെ തന്റെ തെറ്റ് തിരിച്ചറിഞ്ഞ സമുന്ദർ സാധിക്കുമ്പോഴൊക്കെ നാച്ചൻബോറിലെത്തി അവിടെയുള്ള സ്മൃതി മണ്ഡപത്തിൽ ഇപ്രകാരം പ്രാർത്ഥിക്കാറുണ്ട്; “ദീദി, ഹോ സക്തി ഹേ തോ മാഫ് കർന...” (പ്രിയ സഹോദരീ, എന്നോടു ദയവായി ക്ഷമിച്ചാലും). ആ സ്മൃതിമണ്ഡപത്തിൽ സിസ്റ്ററിന്റെ പേരിനു താഴെ ആലേഖനം ചെയ്തിരിക്കുന്നത് ഇപ്രകാരമാണ്; “പ്രഭു, യഹ് പാപ് ഇൻ പർ മത് ലഗാ...” (കർത്താവേ, ഈ തെറ്റ് ഇവരുടെ മേൽ ആരോപിക്കരുതേ).

മോശ മരുഭൂമിയിൽ ഉയർത്തിയ സർപ്പത്തിന്റെ പ്രതീകം മുതൽ പഴയനിയമത്തിലെ അസംഖ്യം ബിംബങ്ങളും അടയാളങ്ങളും പ്രതീകങ്ങളും ക്രിസ്തുവിന്റെ ഉത്ഥാനരഹസ്യത്തെക്കുറിച്ച് വി. യോഹന്നാൻ ശ്ലീഹയുടെ സുവിശേഷത്തിൽ ഉപയോഗിക്കുന്നുണ്ട്. അതിൽ അവതരണത്തിലും ഉൾക്കാമ്പിലും ഏറ്റവും ശ്രേഷ്ഠമായതും ഉത്ഥാനത്തിന്റെ അർത്ഥതലങ്ങളെ ഏറ്റവും മനോഹരമായി സംവദിക്കുന്നതുമായ പഴയനിയമഭാഗങ്ങളിലൊന്നാണ് “തങ്ങൾ കുത്തിമുറിവേൽപ്പിച്ചവനെ അവർ നോക്കിനിൽക്കും” എന്ന സ്കറിയായുടെ പുസ്തകത്തിലെ 12-ആം അധ്യായത്തിലെ 10-ആം

വചനം. ക്രൂശിതനായ ക്രിസ്തുവിന്റെ കുരിശിനോട് ചേർത്താണ് ഈ തിരുവചനം നിൽക്കുന്നതെങ്കിലും (Jn. 19:17) അവിടുത്തെ മഹത്വീകരണത്തിന്റെ, ഉത്ഥാനത്തിന്റെ മൂന്നാസ്വാദനമായിട്ടാണ് വി. യോഹന്നാൻ സക്കറിയായുടെ ഈ പ്രവചനത്തെ അവതരിപ്പിക്കുന്നത്. ഉയിർപ്പു തിരുന്നാൾ നമ്മുടെയൊക്കെ ഹൃദയങ്ങളിൽ കോറിയിടുന്ന ചില സന്ദേശശകലങ്ങൾ ഇപ്രകാരമുള്ളതാണ്. മുറിവേൽപ്പിച്ചവർ മുറിവേറ്റവനെ നോക്കി "ഇവൻ സത്യമായും ദൈവപുത്രനാണ്" എന്ന് ഉദ്ഘോഷിക്കുകയും മുറിവേറ്റവൻ മുറിവേൽപ്പിച്ചവരെ നോക്കി "നിന്റെ കൈ നീട്ടി എന്റെ മുറിവിൽ വയ്ക്കുക" എന്ന് പറയുകയും ചെയ്യുന്നതിന്റെ ഓർമ്മയാണ്. വാ. സി. റാണി മരിയയുടെയും സമുദ്രസിങ്ങിന്റെയും ജീവിതത്തിൽ ഈ ദർശനമാണ് നമുക്ക് കാണാൻ സാധിക്കുന്നത്.

ജീവിതവഴിയിൽ നാം പലപ്പോഴും മുറിവേറ്റവന്റെയും മുറിവേൽപ്പിച്ചവന്റെയും അങ്കികൾ മാറിമാറി അണിയുന്നവരാണ്. മുറിവേറ്റവരാകുമ്പോൾ പഞ്ചക്ഷതധാരിയായ ക്രിസ്തുവിന്റെ ഭാഗധേയമാണ് നമുക്കുള്ളത്. ഉത്ഥിതനായ ക്രിസ്തുവിനെ നാം എപ്പോഴും എവിടെയും കാണുന്നത് പഞ്ചക്ഷതധാരിയായാണ്. ക്ഷതമുള്ളവൻ ക്ഷമിക്കുന്നവനാകുമ്പോഴാണ് അവൻ ഉത്ഥിതന്റെ സ്വന്തമാകുന്നത്. ക്രിസ്തുവിന്റെ ബലമെന്നത് അവന്റെ മുറിവുകളായിരുന്നു. മുറിവേറ്റ ക്രിസ്തുവിന്റെ മുറിവുകളിൽനിന്നു നിർഗ്ഗളിച്ചതു സ്നേഹത്തിന്റെ ചോരയും നീരുമായിരുന്നു. അവിടുത്തെ ഹൃദയരക്തത്തിൽ രചിച്ച സ്നേഹത്തിന്റെ കവിതയാണ് ഹൃദയം കുത്തിത്തുറന്നപ്പോൾ പുറത്തുവന്നത്. "സർവ്വനീതിയും പൂർത്തിയാക്കാൻ" (Mt. 3:15) ജ്ഞാനസ്നാനം സ്വീകരിച്ചവൻ, "എനിക്ക്ൊരു മാമോദീസ മുങ്ങുവാനുണ്ട്, അത് പൂർത്തിയാകുന്നതുവരെ ഞാൻ അസ്വസ്ഥനാകുന്നു" (Lk.12:50) എന്ന് പറഞ്ഞവൻ, കുരിശിൽ കിടന്നു തന്റെ അവസാനതുള്ളി രക്തവും വാർന്നുകൊണ്ടു പറയുന്നത് "എല്ലാം പൂർത്തിയായി" (Jn. 19:30) എന്നാണ്. മനുഷ്യവംശത്തോടുള്ള തന്റെ സ്നേഹമാണ് മരണത്തേക്കാൾ ശക്തമെന്നു കാണിക്കാനാണ് ആത്മാവിനെ വെടിഞ്ഞശേഷവും രണ്ടുമൂന്നു തുള്ളി അമൃല്യരക്തം "ദൈവിക ലുബ്ധനായ" ക്രിസ്തു തന്റെ ശരീരത്തിൽ "പൂഴ്ത്തിവെച്ചതെ"ന്നാണ് ബിഷപ്പ് ഫുൾട്ടൻ ജെ. ഷീൻ പറയുന്നത്. മുറിവേറ്റ ക്രിസ്തുവിനെ ആദ്യം തള്ളിപ്പറഞ്ഞ പത്രോസ് പഞ്ചക്ഷതധാരിയായ ക്രിസ്തുവിന്റെ പടത്തലവനായി മാറിയ ചരിത്രമാണ് തിരുസഭയുടേതെന്നതും നാം മറന്നുകൂടാ. മുറിക്കപ്പെടുന്നത് തൃപ്തരാകുമ്പോളും ഭക്ഷിക്കാൻ കൊടുക്കാനാണ് എന്ന് അഞ്ചപ്പവും രണ്ടുമീനും മുറിച്ചു നൽകിയപ്പോൾ അവിടുന്നു നമ്മെ പഠിപ്പിച്ചു. "വിഭജിച്ച് ഭരിക്കുക" എന്ന രാഷ്ട്രമീമാംസ തത്വത്തിന്റെ കാലഘട്ടത്തിൽ "വിഭജിച്ചു പങ്കുവയ്ക്കുക " എന്ന ധാർമിക തത്വമാണ് പെസഹാ

അനുസ്മരണത്തിൽ അവിടുന്നു തെളിവാക്കുന്നത്. “ വിശ്വാസം മൂലം രക്തസാക്ഷികൾ തങ്ങളുടെ ജീവിതം സമർപ്പിച്ചു. സുവിശേഷത്തിന്റെ സത്യത്തിന് സാക്ഷ്യംവഹിച്ചുകൊണ്ട് അങ്ങനെ ചെയ്തു. ആ സത്യം അവരെ രൂപാന്തരപ്പെടുത്തി. സ്നേഹത്തിന്റെ ഏറ്റവും വലിയ ദാനം നേടാൻ അത് അവരെ ശക്തരാക്കി. തങ്ങളെ പീഡിപ്പിച്ചവരോട് ക്ഷമിക്കാനുള്ള കഴിവാണു് ആ ദാനം.” (വിശ്വാസത്തിന്റെ വാതിൽ, നമ്പർ 13). ആന്തരിക മുറിവുകൾ ജീവിതത്തിൽ നിറയുമ്പോൾ മുറിവേറ്റ സിംഹത്തിന്റെ രൗദ്രഭാവമല്ല മറിച്ച്, മുറിവേറ്റ ക്രിസ്തുവിന്റെ ആർദ്രഭാവമാണ് ഞാൻ ഉൾക്കൊള്ളേണ്ടത് എന്ന് നമ്മെ അനുസ്മരിപ്പിച്ചുകൊണ്ടാണ് ഉയിർപ്പു തിരുന്നാൾ ആഗതമാകുന്നത്.

വി. പൗലോസ് ശ്ലീഹ പറയുന്നതുപോലെ നമ്മുടെ എല്ലാവരുടെയും ശരീരത്തിൽ ബലഹീനതയുടെ ഓരോ മുള്ളുകൾ നൽകപ്പെട്ടിട്ടുണ്ട് (2. Cor. 12: 7-10). അത് നാം ക്രിസ്തുവിൽ പൂർണ്ണമായ പ്രത്യാശ അർപ്പിച്ചു ജീവിക്കുന്നതിനാണ്. കാരണം എന്റെ ബലഹീനതയിലാണ് അവിടുത്തെ ശക്തി പൂർണ്ണമായും തിരിച്ചറിയാൻ എനിക്ക് സാധിക്കുന്നത്. എന്റെ നിസ്സാരതയെക്കുറിച്ചു എനിക്ക് എത്രമാത്രം ബോധ്യമുണ്ടോ അത്രയധികമായി ദൈവത്തിന്റെ ശക്തി എന്നിൽ പ്രകടമാകും. ഞാൻ എന്റെ ബലഹീനത കൊണ്ട് എന്റെ സഹോദരനെ/ സഹോദരിയെ മനസാ-വാചാ-കർമ്മണാ കുത്തിമുറിവേൽപ്പിച്ചുപോയ അവസരങ്ങളെ തിരിച്ചറിയുകയും ആ മുറിവുകളിലേക്കു നോക്കി “എന്റെ സഹോദരന്റെ കാവൽക്കാരനാ”കേണ്ടിയിരുന്നവനായിരുന്നല്ലോ ഞാൻ എന്ന് പശ്ചാത്താപത്തോടെ ഹൃദയത്തിൽ വിളിച്ചു പറയുകയും ചെയ്യേണ്ട അവസരമാണ് ഉത്ഥാനത്തിരുന്നാൾ. ഞാൻ ആരായാലും ശരി എന്റെ ജീവിതത്തിലെ തെറ്റുകൾ തുടരാനുള്ളതല്ല പിന്നെയോ അവ തിരുത്തപ്പെടേണ്ടതാണ് എന്ന് വി. മരിയ ഗൊരേത്തിയുടെ അന്തകനായ അലക്സാണ്ടറിന്റെയും ഭാരതത്തിലെ ആദ്യ ഏതദേശീയ രക്തസാക്ഷിണിയായ വാഴ്ത്തപ്പെട്ട സി. റാണിമരിയയുടെ ഘാതകനായ സമുന്ദർ സിങ്ങിന്റെയും മാനസാന്തരങ്ങൾ നമ്മെ ഓർമ്മിപ്പിക്കുന്നു. അതോടൊപ്പം ഞാൻ കുത്തിമുറിവേൽപ്പിച്ചവർ സത്യമായും ദൈവാംശം നിറഞ്ഞവരായിരുന്നു എന്നും അവരോട് ഞാനതു ചെയ്തപ്പോൾ “എന്നോട് തന്നെയാണ് നിങ്ങൾ അത് ചെയ്തത്” എന്ന ക്രിസ്തു വാക്യാനുസ്മരണവുമാണ് നമ്മുടെ ഉള്ളിൽ നിറയുന്നത്. അങ്ങനെ എന്റെ ചുറ്റുമുള്ളവരിലെ ദൈവികസാന്നിധ്യത്തെക്കുറിച്ചു ധ്യാനിക്കുവാനും “തങ്ങൾ കുത്തി മുറിവേൽപ്പിച്ചവനെ അവർ നോക്കി നിൽക്കും” എന്ന ഈ തിരുവചനം നമ്മെ ക്ഷണിക്കുന്നു. മോശ മരുഭൂമിയിൽ ഉയർത്തിയ പിള്ള സർപ്പത്തെ നോക്കിയവരെല്ലാം സുഖപ്പെട്ടെങ്കിൽ പിതൃഭവനത്തിൽനിന്നിറങ്ങിവന്നവൻ തിരികെ കയറിപ്പോകുമ്പോൾ അവനെ നോക്കുന്നവർക്കെല്ലാം അവൻ നിത്യരക്ഷയുടെ ഉറവിടമായിരിക്കുമെന്നതിനാൽ ആ മാതൃക

പിന്തുടർന്ന് ക്രിസ്തുവിനെയും അവിടുത്തിൽ മുറിവേറ്റവരെയും പ്രതീക്ഷയോടെ നമുക്ക് നോക്കാം. അതോടൊപ്പം ഞാൻ മൂലം മുറിവേറ്റവരെ പശ്ചാത്താപത്തോടെ നോക്കിക്കൊണ്ട് സ്നേഹത്തിന്റെയും ശുശ്രൂഷയുടെയും പ്രവാചകരാകാൻ ആത്മാർത്ഥമായി പരിശ്രമിച്ചുകൊണ്ടു യഥാർത്ഥ ഉത്ഥിതസമൂഹമായി നമുക്ക് മാറാം. അങ്ങനെ കുത്തി മുറിവേൽപ്പിച്ചവനെ നിർവ്വീകാരതയോടെ നോക്കിനിൽക്കുന്ന ഒരു ജനമാകാതെ അപരന്റെ മുറിവിൽ ലേപനമായി മാറുന്ന ഒരു ദൈവികജനമായി മാറാൻ പരിശ്രമിക്കാം. “മുറിവേറ്റ ക്രിസ്തുവാൻ യഥാർത്ഥ ക്രിസ്തു; മുറിവേറ്റ സഭയാണ് യഥാർത്ഥ സഭ; മുറിവേറ്റ ക്രിസ്ത്യാനിയാണ് യഥാർത്ഥ ക്രിസ്ത്യാനി” എന്ന ബിഷപ്പ് ഫുൾട്ടൻ ജെ. ഷീനിന്റെ ഓർമ്മപ്പെടുത്തൽ ഹൃദയത്തിൽ സ്വീകരിച്ചുകൊണ്ട് “മുറിവേറ്റ സൗഖ്യദായകനായ” ക്രിസ്തുവിന്റെ പാത പിന്തുടരുന്നവരാകാം.

സഹായകഗ്രന്ഥസൂചി

Fulton J Sheen (1958). Life of Christ. Doubleday

മനനഭൂവെന്ന കലാലയം

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സിജോ ഫ്രാൻസിസ്^{1*}, സി. ബെറ്റ്സി പോൾ^{1*} & ബിജു സ്കറിയ^{1*}
^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

മൗനത്തിലും ശാന്തതയിലുംനിന്ന് ശക്തി സംഭരിച്ചുകൊണ്ട് ജീവിതത്തെ പടുത്തുയർത്തുവാനും നവീകരിക്കുവാനും നമുക്ക് കഴിയണം. പ്രവാചകപ്രമുഖനായ ഏലിയായും പുതിയനിയമത്തിനു വഴികാട്ടിയായ സ്നാപകനും ക്രിസ്തുനാമനുമെല്ലാം മരുഭൂമിയിലെ ഏകാന്തതയിൽ, മനനഭൂവെന്ന കലാലയത്തിൽ തങ്ങളുടെ വിദ്യാഭ്യാസം പൂർത്തിയാക്കിയവരാണ്. ആശ്രാപ്യമായതിന്റെ ശ്രവണം നമ്മുടെ കാഴ്ചപ്പാടുകളെ അന്വേഷിപ്പിക്കുന്നു.

കീലപദങ്ങൾ: മൗനം, ശാന്തത, ജീവിതനവീകരണം.

ഭരണനിർവ്വഹണരംഗത്ത് പ്രവർത്തിക്കുന്നവർക്ക് ഗുരുക്കന്മാർ സാധാരണ കൊടുക്കുന്ന ഒരു പദമാണ് “കാനനനാദം” എന്ന ഉപമയുടെ സാരാംശം. അതിപ്രകാരമാണ്: എ. ഡി.മൂന്നാം നൂറ്റാണ്ടിൽ ജീവിച്ചിരുന്ന താവോ രാജാവ് തന്റെ മകൻ തായിയെ രാജകുലകൾ അഭ്യസിപ്പിക്കാനായി പാൻ-കു എന്ന മഹാഗുരുവിനടുത്തേക്കു അയച്ചു. മഹാഗുരു കാനന നാദം ശ്രവിക്കാനായി തായിയെ മിങ്-ലി വനത്തിലേക്കയച്ചു. ഒരു വർഷത്തിനുശേഷം തിരിച്ചെത്തിയ രാജകുമാരൻ താൻ ശ്രവിച്ച കിളിനാദത്തെക്കുറിച്ചും ചീവീടിന്റെ മുളലിനെക്കുറിച്ചും മരങ്ങളുടെ മർമ്മരത്തെക്കുറിച്ചും ഗുരുവിനോട് വാതോരാതെ വർണ്ണിച്ചു. തനിക്ക് കൂടുതലായി എന്തൊക്കെ കേൾക്കാൻ സാധിക്കുമെന്ന് ഒന്ന് കൂടി നോക്കുവാൻ പറഞ്ഞുകൊണ്ട് തായിയെ മഹാഗുരു വീണ്ടും വനത്തിലേക്കയച്ചു. ഇനിയെന്തുണ്ട് എന്നു കരുതി ഇതികർത്തവ്യതാമൂഢനായി അവൻ ദിനരാത്രങ്ങൾ ചിലവഴിച്ചു. അങ്ങനെ ഒരു സുപ്രഭാതത്തിൽ ഒരു വൃക്ഷച്ചുവട്ടിൽ ധ്യാനാത്മകമായി ഇരുന്ന അവന്റെ കാതുകളിൽ ഇതുവരെ കേൾക്കാത്ത ചില മൃദുലസ്വരങ്ങൾ മുഴങ്ങാൻ തുടങ്ങി. ജ്ഞാനോദയം ഉണ്ടായ അവൻ കൂടുതൽ ജിജ്ഞാസയോടെ കാതു കൂർപ്പിച്ചിരുന്നു. മഹാഗുരുവിനെ സമീപിച്ച അവൻ സന്തോഷത്തോടെ പറഞ്ഞു. “ഗുരോ, ഞാൻ മുഴുമനസ്സോടെ ശ്രവിച്ചപ്പോൾ ആശ്രാപ്യമായിരുന്ന പലതും എനിക്ക് ശ്രാപ്യമായിത്തീർന്നു. പൂക്കൾ വിടരുന്നതിന്റെയും സൂര്യകിരണങ്ങൾ ഭൂമിയെ വാരിപ്പുണരുന്നതിന്റെയും പുൽച്ചെടികൾ തുഷാരബിന്ദുക്കൾ നുകരുന്നതിന്റെയും മൃദുലനാദം ഞാൻ കേട്ടു.” ഗുരു അവനോട് പറഞ്ഞു, “ആശ്രാപ്യമായതു ശ്രവിക്കുക; അത് തന്നെയാണ് നിനക്കുണ്ടാകേണ്ട ഏറ്റവും വലിയ ഗുണം. എങ്കിൽ മാത്രമേ

മറ്റുള്ളവരുടെ ഹൃദയങ്ങളോട് ചേർന്നിരിക്കാൻ, അവരുടെ വെളിപ്പെടാത്ത വികാരങ്ങൾ കേൾക്കാൻ, രഹസ്യമായിരിക്കുന്ന വേദനകൾ അറിയാൻ, പുറത്തുപറയാത്ത പരാതികൾ ഗ്രഹിക്കാൻ, അവരിൽ ആത്മവിശ്വാസം ജനിപ്പിക്കാൻ, അവരുടെ ആവശ്യങ്ങൾ മനസ്സിലാക്കാൻ, ഉപരിപ്ലവമായ സ്തുതിപാഠകവചനങ്ങൾ തിരിച്ചറിയാൻ, തെറ്റുകൾ സ്വയം കണ്ടെത്തി തിരുത്താൻ നിനക്കു സാധിക്കൂ”.

നോമ്പുകാലം ആത്മപരിശോധനയുടെയും സ്വയം വിശകലനത്തിന്റെയും ഒരു കാലഘട്ടമാണ്. ഞാനാരോ ആണെന്ന ഭാവത്തെ ത്യജിച്ച് ഞാനാരാകണം എന്ന് സ്വയം ചോദിക്കേണ്ട ഒരു സമയം. അത് നിശബ്ദതയുടെ, മനനത്തിന്റെ, ചെവിയോർക്കലിന്റെ കാലമാണ്. പ്രവാചകപ്രമുഖനായ ഏലിയായും പുതിയനിയമത്തിനു വഴികാട്ടിയായ സ്നാപകനും ക്രിസ്തുനാമനുമെല്ലാം മരുഭൂമിയിലെ ഏകാന്തതയിൽ, മനനഭൂവെന്ന കലാലയത്തിൽ തങ്ങളുടെ വിദ്യാഭ്യാസം പൂർത്തിയാക്കിയവരാണ്. “പുലി പതുങ്ങുന്നതു കുതിക്കാനാണ്” എന്നത് “കുതിക്കണമെങ്കിൽ പതുങ്ങിയാലേ സാധിക്കൂ” എന്ന തിരിച്ചറിവാണു നമുക്ക് പകർന്നു തരുന്നത്. സങ്കീർത്തകവചനങ്ങൾ ഇത്തരൂണത്തിൽ ശ്രദ്ധേയമാണ്; “ശാന്തമാകുക, ഞാൻ ദൈവമാണെന്നറിയുക (സങ്കീ. 46.10).

ഹോറെബ് മലയിൽ മുദുലവും നിശബ്ദവുമായ ഇളംതെന്നലിൽ ദൈവവുമായുള്ള കണ്ടുമുട്ടലിന്റെ ഉച്ചകോടിയിൽ എത്തുന്ന നിമിഷം വരെയും ഓരോ സംഭവവികാസങ്ങളിലും വിശുദ്ധ ഗ്രന്ഥത്തിലെ തന്റെ പ്രതിഛായയ്ക്കു അനുയോജ്യമാംവിധം വിശുദ്ധീകരണത്തിന് വിധേയനായിക്കൊണ്ടും ബോധദീപ്തി ആർജിച്ചുകൊണ്ടും തന്റെ പ്രവാചകശുശ്രൂഷയുമായി മുന്നേറിയ വ്യക്തിയായിരുന്നു ഏലിയാ പ്രവാചകൻ(ഉണർന്നിരിക്കുവിൻ- സന്യസ്തവർഷ പ്രബോധനം (2015), No. 6). സൈന്യങ്ങളുടെ കർത്താവായ ദൈവത്തെക്കുറിച്ചുള്ള തീക്ഷ്ണതയാൽ എറിഞ്ഞിരുന്ന (1 Kings. 19:10) അദ്ദേഹത്തിന് ഭയത്തെയും ശക്തിയെയുംകുറിച്ചുള്ള തന്റെ തന്നെ വിശ്വാസ സങ്കല്പങ്ങൾ ആ പ്രാർത്ഥനാനുഭവത്തിൽ തകർക്കപ്പെടുകയാണ്. താൻ പ്രാർത്ഥിക്കുമ്പോൾ ഉണ്ടായ കൊടുങ്കാറ്റിലോ ഭൂകമ്പത്തിലോ അഗ്നിയിലോ കർത്താവിനെ കാണാൻ കഴിയാതിരുന്ന പ്രവാചകൻ മന്ദമാരുതന്റെ ശാന്തതയിൽ കർത്താവിനെ കണ്ടെത്തുകയാണ്. അതുവരെ പ്രവാചകന്മാരിൽ താൻ മാത്രമേ വിശ്വസ്തനായി അവശേഷിക്കുന്നുള്ളൂ എന്ന തെറ്റിദ്ധാരണയിൽ മാനസികത്തകർച്ച ബാധിച്ചു ജീവിച്ച പ്രവാചകൻ ഏഴായിരത്തിലധികം വിശ്വസ്തസാക്ഷികൾ ഇനിയുമുണ്ടെന്ന തിരിച്ചറിവ് നേടുകയും തുടർന്ന് എലീഷായെ കണ്ടെത്തി തന്റെ പിൻഗാമിയായി അവരോധിക്കുകയും

ചെയ്തു (ഉണർന്നിരിക്കുവിൻ- No. 6). ആശ്വാസ്യമായതിന്റെ ശ്രവണം നമ്മുടെ കാഴ്ചപ്പാടുകളെ അന്വേ മാറ്റിമറിക്കുമെന്നതിനു ഇതിൽപ്പരം ഒരുദാഹരണം ആവശ്യമുണ്ടോ?

സ്നാപകന്റെ മൗനത്തെക്കുറിച്ചു കാർലെൽ എന്ന തത്ത്വചിന്തകന്റെ വാക്കുകൾ ഇപ്രകാരമാണ്, “അദ്ദേഹത്തിന്റെ നിശബ്ദതയുടെ സുവിശേഷം വ്യാഖ്യാനിക്കാൻ ഇരുപതിലധികം പുസ്തകങ്ങൾ വേണ്ടിവരും”. “മരുഭൂമിയിൽ വിളിച്ചു പറയുന്നവന്റെ ശബ്ദം” എന്ന് സ്നാപകനെ വിശേഷിപ്പിക്കുമ്പോൾ കൊടുങ്കാറ്റിലും അഗ്നിയിലും ഭൂകമ്പത്തിലും സംസാരിക്കാതെ മന്ദമാരുതന്റെ മൃദുലതയിൽ ഏലിയാ പ്രവാചകനോട് സംസാരിച്ച ദൈവത്തിന്റെ (1. Kings. 19: 12) പ്രതിനിധിയെന്നും മരുഭൂമിപോലെ ഊഷരമായ ഇടത്തുപോലും നിറസാന്നിധ്യമായ വചനത്തിന്റെ പ്രതിബിംബമെന്നും മണൽക്കാടുപോലെയുള്ള മനസുകളിലേക്കു പെയ്തിറങ്ങുന്ന ദൈവികസ്വരമെന്നും നമുക്കതിനെ കാണാനാകും. മൗനം വാചാലമാണ് എന്ന് പറയുമ്പോൾ ദൈവികമായ ഈ വാചാലത നാം ശീലിക്കണമെന്നല്ലേ അതിനർത്ഥം?

ക്രിസ്തുനാമന്റെ മരുഭൂമിയനുഭവവും ഇത്തരൂണത്തിൽ തന്നെത്തന്നെ പരസ്യജീവിതത്തിനു ഒരുക്കുന്ന ഒരു കാലഘട്ടമായിരുന്നു. മൂന്നു വർഷത്തെ പ്രവർത്തനത്തിനു മൂപ്പതു വർഷങ്ങളാണ് അവിടുന്ന് ഒരുങ്ങിയത്. തന്റെ ലക്ഷ്യത്തിലേക്കുള്ള യഥാർത്ഥ മാർഗമേതെന്ന് അവിടുന്ന് തിരിച്ചറിയുകയാണ്; അതിന്റെ സാധ്യതകളും ബാധ്യതകളും ഗ്രഹിച്ചുകൊണ്ടു അതിലുണ്ടാകാവുന്ന വാഴ്ചകളും വീഴ്ചകളും വിവേചിക്കാനായിട്ടാണ് നാല്പതു ദിനരാത്രങ്ങൾ അവിടുന്ന് ചിലവഴിച്ചത്. മൂന്നു പ്രലോഭനങ്ങളും സാരാംശത്തിൽ ഒന്ന് തന്നെയാണ്: ഉപരിപ്ലവമായ ദൈവവിശ്വാസത്തിനും അതോടൊപ്പം ദൈവനിഷേധത്തിനുമുള്ള ഒരാഹ്വാനം! (Pope Benedict XVI, Jesus of Nazareth, p. 28). മനുഷ്യചരിത്രത്തിന്റെ ഒരു ധ്യാനാത്മക പുനർവായന ക്രിസ്തുനാമൻ ഇവിടെ നടത്തുന്നത് നാം കാണുന്നു. അതുകൊണ്ടു തന്നെയാണ് മനുഷ്യചരിത്രം രക്ഷാകരമാണെന്നുള്ള പഴയനിയമധ്യാനം അതിന്റെ അവിദ്യാജ്യ ഘടകമായി സുവിശേഷഭാഗത്തു നാം കാണുന്നത്. അതിലൂടെ തന്റെ ദൗത്യം എന്തെന്ന് അതിന്റെ പൂർണ്ണതയിൽ അവിടുന്ന് ഗ്രഹിക്കുന്നു. തൻമൂലം “അവൻ എല്ലാ കാര്യങ്ങളിലും തന്റെ സഹോദരരോട് സദ്യശ്യനാകാൻ” (Heb.2:17) തീരുമാനിക്കുന്നു. ദാരിദ്ര്യവും വേദനയും കഷ്ടതയുമെല്ലാം ദൈവശാപമെന്നു വിചാരിച്ചവരോട് അവ ഭാഗ്യദായകമെന്നും (Mt. 5:1-12) ജനത്തിന്റെ അടിമത്തമെന്നത് യഥാർത്ഥത്തിൽ പാപത്തിന്റെ ബന്ധനമാണെന്നും പല രോഗങ്ങൾക്കും കാരണം മനസിലുള്ള വെറുപ്പും വിദ്വേഷവുമാണെന്നും സഹോദരനോട് ഹൃദയപൂർവ്വം ക്ഷമിക്കുമ്പോൾ

അത് സൗഖ്യദായകമാണെന്നുമുള്ള നവീന ചിന്തയല്ലേ അവിടുന്നു നമുക്ക് പകർന്നു തരുന്നത്?

ഏകാന്തതയിൽ ക്രിസ്തുവിൽ നിർലീനരാകാൻ വെമ്പിയ ചില ഹൃദയങ്ങളിൽനിന്നാണ് കത്തോലിക്കാ സഭയിലെ സന്യാസജീവിതം മുളയെടുത്തത്. ഈ സന്യാസ ജീവിത മാതൃകകൾ പിന്നീട് സഭയുടെ ജീവശ്വാസമായി മാറി. സഭയെന്ന ശരീരത്തിന്റെ ജീവനാഡിയായി മാറിക്കൊണ്ട് അതിനെ സ്നേഹത്തിന്റെയും സേവനത്തിന്റെയും പര്യായമാക്കുവാനും അങ്ങനെ “ദൈവം സ്നേഹമാണെന്നു” ലൗകിക ലോകത്തിൽ പ്രത്യക്ഷ സാക്ഷ്യമാകാനും സന്യാസജീവിതത്തിനു സാധിച്ചത് ഈ ധ്യാനാത്മകതയിൽനിന്നുമാണ്. കേരള നവോത്ഥാന നായകരിൽ അഗ്രഗണ്യനായിത്തീർന്ന വി. ചാവറ കുര്യാക്കോസ് എലിയാസ് എന്ന കർമ്മലീത്ത മിഷനറിയുടെ ജീവിതശൈലി “പ്രാർത്ഥനയിൽനിന്നുരുത്തിരിയുന്ന പ്രവർത്തന”മായിരുന്നു. “മനുഷ്യരാശിയോടുള്ള കാരുണ്യം ലബനോൻ വനംപോലെ ക്രിസ്തുവിന്റെ മനസ്സിൽ തഴച്ചു നിന്നതിനാൽ സ്നേഹത്തിന്റെ വീഞ്ഞും ധ്യാനവും നിറഞ്ഞ മനസ്സുമായി ക്രിസ്തു കുരിശിലേക്കു നടന്നു” എന്നാണ് കെ.പി. അപ്പൻ തന്റെ “ബൈബിൾ: വെളിച്ചത്തിന്റെ കവചം” എന്ന കൃതിയിൽ പറഞ്ഞുവയ്ക്കുന്നത്. അങ്ങനെ അവിടുന്ന് നിന്ദ്യമായതിനെ വന്ദ്യമാക്കിത്തീർത്തു. “ക്രിസ്തുവിലായിരിക്കുന്ന ഒരാൾ സ്വയം പുതിയ സൃഷ്ടിയായിത്തീരുന്നു. അയാൾ അയാളായിത്തന്നെ ഇരുന്നുകൊണ്ട് ക്രിസ്തുവിലേക്കു, കുരിശിലേക്കു വളരണം”. എന്നാൽ പലപ്പോഴും ‘കുരിശിലേക്കു യാന്ത്രികമായി വളർന്നുകൊണ്ട്’ നാം ക്രിസ്തുവിനെ മറക്കുന്നു എന്ന മുന്നറിയിപ്പ് കൂടി അദ്ദേഹം പങ്കുവയ്ക്കുന്നുണ്ട്. ഇത്തരം ആപത്തുകളുള്ള ഒരു പ്രതിവിധിയാകട്ടെ ഏകാന്തതയിൽ, ഏകാഗ്രമായി, ഏക മനസ്സോടെ, “നാമാ, അരുളിച്ചെയ്താലും, അങ്ങയുടെ ദാസനിതാ/ ദാസിയിതാ ശ്രവിക്കുന്നു”(1 Sam. 3:10) എന്ന മനോഭാവത്തോടെ ആശ്വാസമായതിന്റെ ശ്രവണത്തിനുള്ള ഈ നോമ്പുകാലത്തെ നമ്മുടെ പരിശ്രമം.

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ഫാ മാത്യു തുണ്ടത്തിൽ (വിവ.) (2015), ഉണർന്നിരിക്കുവിൻ Thiruvananthapuram: Carmel International Publishing House

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ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സിജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}

^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

ഏതൊരു തൊഴിലും മഹത്തരമാണ്; അതിന്റെ മഹത്വമെന്നത് അത് ചെയ്യുന്നവരുടെ മഹത്വത്തെ ആശ്രയിച്ചിരിക്കുന്നു. അന്നദാതാവായ ദൈവപുത്രന്റെ ഭൂമിയിലെ വാസസമയത്തു അന്നനുഭവേണ്ടുന്ന ആഹാരത്തിനായി അധ്വാനിച്ച അദ്ദേഹം തന്റെ നെറ്റിയിലെ വിയർപ്പുകൊണ്ട് അന്നം തേടുന്ന ഏതൊരു വേലയും ഏറ്റവും മഹത്കരമെന്നു തന്റെ സൗമ്യവും ശാന്തവും കുലീനവും എളിമയാർന്നതുമായ തച്ചത്വത്തിലൂടെ നമുക്ക് കാണിച്ചുതന്നു.

കീലപദങ്ങൾ: തൊഴിൽ, അർപ്പണമനോഭാവം, വി. യൗസേപ്പ്

കർണ്ണാടക നിയമസഭാ മന്ദിരമായ വിധാനസൗധയുടെ മുകളിൽ ആലേഖനം ചെയ്തിരിക്കുന്ന വരികൾ ഇപ്രകാരമാണ്; “സർക്കാരു കെലസ ദേവര കെലസ” (രാജ്യഭരണം ദൈവികവേലയാണ്). വളരെ മഹത്തായ ഉദ്യമത്തിലാണ് തങ്ങൾ ഏർപ്പെട്ടിരിക്കുന്നത് എന്ന് അവിടെ ജോലിക്കായി എത്തുന്ന ഓരോരുത്തരെയും ഈ പ്രമാണസൂക്തം ഓർമ്മപ്പെടുത്തുകയാണ്. വി.ബെബിളിലെ ഒരു വചനം നേരിട്ട് ആദർശവാക്യമായി സ്വീകരിച്ചിരിക്കുന്ന ഏക അമേരിക്കൻ സംസ്ഥാനമായ ഒഹിയോയുടെ ആപ്തവാക്യവും ഇത്തരൂണത്തിൽ ശ്രദ്ധേയമാണ്; “ദൈവത്തോടു കൂടി എല്ലാം സാധ്യമാണ്” (Mt.19:26) (Greek: para de Theō panta dynata). ഇപ്രകാരം പല ഭരണകൂടങ്ങളും തങ്ങളുടെ പ്രവർത്തികളിൽ ദൈവികമായ ഒരു അംശം നേരിട്ടോ പരോക്ഷമായോ കാണുവാൻ ആഗ്രഹിക്കുന്നവരാണ്. ഏതൊരു തൊഴിലും ദൈവോന്മുഖമായിരിക്കണമെന്നും തൊഴിൽ ചെയ്യാൻ നമ്മെ ശക്തിപ്പെടുത്തുന്നത് ദൈവമാണെന്നും തൊഴിലിടങ്ങളിലെ ദൈവികസാന്നിധ്യസ്ഥരായ നമ്മെ കൂടുതൽ വിവേകത്തോടും അർപ്പണബുദ്ധിയോടും ഉത്തരവാദിത്വങ്ങൾ നിർവഹിക്കാൻ പ്രാപ്തരാക്കുമെന്നും അനുസ്മരിപ്പിക്കുന്നതാണ് ഇത്തരത്തിലുള്ള ആപ്തവാക്യങ്ങൾ. ‘താൻ പാതി, ദൈവം പാതി’ എന്ന പഴഞ്ചൊല്ലും “കർത്താവു ഭവനം പണിയുന്നില്ലെങ്കിൽ പണിക്കാരുടെ അധ്വാനം നിഷ്ഫലമാണ്” എന്ന സങ്കീർത്തക വചനഭാഗത്തിനു അടിവരയിടുന്നതാണ്. തന്നെ ഏൽപ്പിക്കുന്ന ഉത്തരവാദിത്വങ്ങൾ എത്രമാത്രം വിശ്വസ്തതയോടെ നിർവഹിക്കാൻ ഒരു വ്യക്തിക്കു സാധിക്കുമെന്നും സാധിക്കണമെന്നുമുള്ള ചിത്രങ്ങളാണ് ക്രിസ്തുനാഥൻ തന്റെ ജീവിതത്തിലൂടെയും സാരോപദേശങ്ങളിലൂടെയും വരച്ചു കാണിക്കുന്നത്. എല്ലാ ഭക്ഷണപദാർത്ഥങ്ങളും ശുദ്ധമാണെന്നു പ്രഖ്യാപിച്ചവൻ (Mk. 7:19) സാധാരണക്കാരിൽ സാധാരണക്കാരനായി

ജീവിച്ചുകൊണ്ട് തച്ചന്റെ മകനെന്ന പുച്ഛസ്വഭാവത്തിലുള്ള വിളികളെ (Mt.13:55) മനസ്സിലാക്കി പൊഴിച്ചുകൊണ്ട് നേരിടുമ്പോൾ, ഭൂമിയിൽ ഏതു ജോലിയും മഹത്തരമെന്നുള്ള മറ്റൊരു പ്രഖ്യാപനമല്ലേ അവിടെ നടത്തുന്നത്?

ഭാരതരത്നജേതാവു മുൻ രാഷ്ട്രപതിയുമായ ഡോ. എ.പി.ജെ.അബ്ദുൾകലാം തന്റെ ജീവിതത്തിലെ ഒരനുഭവം വിവരിക്കുന്നത് ഇപ്രകാരമാണ്. തിരുച്ചിറപ്പള്ളി സെയിന്റ് ജോസഫ് കോളേജിലെ പഠനകാലത്തു ഒരിക്കൽ വീട്ടിൽ ചെന്നപ്പോൾ ഉമ്മയോട് “എന്റെ പ്രായത്തിൽ ഉപ്പ എങ്ങനെയിരുന്നു” എന്ന് ചോദിച്ചപ്പോൾ ഉമ്മ മറുപടി പറഞ്ഞു “അദ്ദേഹം നിന്നെപ്പോലെയായിരുന്നില്ല, അദ്ദേഹം ഒരിക്കലും ഒരു വക്കീലോ പ്രൊഫസറോ മറ്റെന്തെങ്കിലുമോ ആവാൻ കൊതിച്ചില്ല; ഒരു ഭർത്താവായാ, അച്ഛനായാ, മുത്തച്ഛനായാ മാത്രമേ ആഗ്രഹിച്ചുള്ളൂ. ഈ ദീപിൽ അദ്ദേഹത്തിന് മോഹിക്കാവുന്ന ഒരൊറ്റ തൊഴിലെ ഉണ്ടായിരുന്നുള്ളൂ-കഠിനാധ്വാനിയായ ഒരു പുരുഷനാകുക. അദ്ദേഹത്തിന്റെ ധർമ്മാചരണത്തിൽ ആളുകൾ അദ്ദേഹത്തെ സ്നേഹിച്ചു.” നഗരത്തിൽ ശാസ്ത്രം പഠിച്ചു, ഉന്നത ജോലികളിൽ വിരാജിക്കുന്നതു വലിയ കാര്യമായി കരുതിയ താൻ ഉപ്പയുടെ ലളിതവും നങ്കൂരമിട്ടതുമായ ജീവിതത്തെ ആരാധനയോടെ വീക്ഷിക്കുന്ന ഉമ്മയെ കണ്ടപ്പോൾ ചമ്മിപ്പോയി എന്നാണ് “Guiding Souls” എന്ന തന്റെ കൃതിയിൽ രേഖപ്പെടുത്തുന്നത്. എന്ത് ചെയ്യുന്നു എന്നതിനേക്കാൾ എങ്ങനെ ചെയ്യുന്നു എന്നതിനാണ് പ്രാധാന്യമെന്നു ഈ സംഭവം നമ്മെ ഓർമ്മിപ്പിക്കുന്നു. കർമ്മലീത സഭാംഗമായ, സ്നേഹത്തിന്റെ കുറുക്കുവഴിയിലൂടെ ദൈവരാജ്യം കരസ്ഥമാക്കിയ ലിസ്യൂവിലെ കൊച്ചുത്രേസ്യ പുണ്യവതി ഇപ്രകാരം പറയുകയുണ്ടായി; “ദൈവദൃഷ്ടിയിൽ ഒന്നും ചെറുതല്ല എന്ന് ഓർക്കുക, ചെയ്യുന്ന ഓരോ പ്രവൃത്തിയും സ്നേഹത്തോടെ ചെയ്യുക, അതാണ് ദൈവം ആഗ്രഹിക്കുന്നത്.” ഇത്തരൂണത്തിൽ പാവങ്ങളുടെ അമ്മയായ മദർ തെരേസയുടെ വാക്കുകളും പ്രസക്തമാണ്; “നമുക്കെല്ലാവർക്കും വലിയ കാര്യങ്ങൾ ചെയ്യാൻ സാധിക്കണമെന്നില്ല, പക്ഷെ നമുക്ക് ചെറിയ കാര്യങ്ങൾ വലിയ സ്നേഹത്തോടെ ചെയ്യാൻ കഴിയും.”

തൊഴിലിനെയും തൊഴിലാളിയെയും കുറിച്ച് ചിന്തിക്കുമ്പോൾ തൊഴിലാളി മധ്യസ്ഥനായ വി. യൗസേപ്പിതാവിന്റെ ജീവിതമാണ് നമ്മുടെ മുൻപിൽ ആദ്യം തെളിയുക. ചെറിയ കാര്യങ്ങൾ ചെയ്തുകൊണ്ട് വലിയ മാതൃകയായിത്തീർന്ന ഒരു വ്യക്തിത്വമാണ് അദ്ദേഹത്തിൽ നാം ദർശിക്കുക. വി. യൗസേപ്പിനെക്കുറിച്ചുള്ള സഭയുടെ സമീപകാലത്തെ പ്രബോധനങ്ങളിൽ ആദ്യത്തേത് 1870 ഡിസംബർ 8 ന് ഒൻപതാം പിയൂസ് പാപ്പയുടെ Quemadmodum Deus എന്ന ഡിക്രിയാണ്. സാർവത്രിക സഭയുടെ രക്ഷാധികാരിയായി വി. യൗസേപ്പിനെ

പ്രഖ്യാപിക്കുന്ന ഈ ഡിക്രിയിൽ അദ്ദേഹത്തെ വിശേഷിപ്പിച്ചിരിക്കുന്നത് ദൈവത്തിന്റെ സർവ്വസമ്പത്തിന്റെയും വസ്തുവകകളുടെയും നാമനും അധിപനുമായി നിയമിക്കപ്പെട്ടവനും അവിടുത്തെ ഏറ്റവും മികച്ച നിക്ഷേപങ്ങളുടെ കാവൽക്കാരനുമെന്നാണ്. ഭൂമിയിലെ എല്ലാ ജീവജാലങ്ങളുടെയും (Gen.1:26) കരവേലകളുടെയും (Ps.8:6) അധിപനാക്കി മനുഷ്യനെ മാറ്റിയ ദൈവം ഏറ്റവും അമൂല്യനിധിയായ തന്റെ പുത്രന്റെ മേൽനോട്ടം ഏൽപ്പിച്ചത് വി. യൗസേപ്പിനെയാണ്. അത് മുന്തിരിതോട്ടത്തിലെ കൃഷിക്കാരെപ്പോലെയോ പഴയനിയമ ജനതയെപ്പോലെയോ ലാഘവബുദ്ധിയോടെയും നിരുത്തരവാദിത്വപരമായും അദ്ദേഹം ഒരിക്കലും പെരുമാറില്ല. മറിച്ച് യേശുവിന്റെ ഉപമകളിൽ കാണുന്നതുപോലെ ശത്രുവിന്റെ വാളിനുമുൻപിലും കള്ളന്മാരുടെ മുൻപിലും നെഞ്ചുവിരിച്ചുനിന്നുകൊണ്ട്, തന്നെ ഏൽപ്പിച്ച ജോലികൾ നൂറുശതമാനം വിശ്വസ്തതയോടെ ചെയ്യുന്ന നല്ലിടയനാണ് അദ്ദേഹം എന്ന് ദൈവത്തിനു പൂർണ്ണബോധ്യമുണ്ടായിരുന്നതുകൊണ്ടാണ്. അന്നദാതാവായ ദൈവപുത്രന്റെ ഭൂമിയിലെ വാസസമയത്തു അന്നനുഭവേണ്ടുന്ന ആഹാരത്തിനായി അധ്വാനിച്ച അദ്ദേഹം തന്റെ നെറ്റിയിലെ വിയർപ്പുകൊണ്ട് അന്നം തേടുന്ന ഏതൊരു വേലയും ഏറ്റവും മഹത്കരമെന്നു തന്റെ സൗമ്യവും ശാന്തവും കുലീനവും എളിമയാർന്നതുമായ തച്ചത്വത്തിലൂടെ നമുക്ക് കാണിച്ചുതന്നു. ലിയോ പതിമൂന്നാമൻ മാർപാപ്പ QUAMQUAM PLURIES എന്ന ചാക്രിക ലേഖനത്തിൽ കുടുംബങ്ങൾക്കും ജോലിക്കാർക്കും സവിശേഷവും അനുകരണീയവുമായ മാതൃകയായി വി. യൗസേപ്പിനെ നൽകുന്നു. കുന്നോളം ജോലി ചെയ്താലും കുനിക്കുരുവോളമെങ്കിലും ആത്മാർത്ഥത ചാലിക്കുമ്പോഴാണ് ഗുണഭോക്താക്കളിൽ തേൻമധുരസ്ഥൂതിയേകാൻ അതിന് സാധിക്കുക. ജോലിയുടെ അന്തസ്സും സ്ഥാനവലിപ്പവും നോക്കി നെടുവീർപ്പെടുത്ത വ്യക്തികളോടും സമൂഹങ്ങളോടും “എളിയ തൊഴിലുകളിൽ ലജ്ജാകരമായത് ഒന്നുമില്ലെന്നും പിന്നെയോ, അതിൽ ശ്രേഷ്ഠമനോഭാവം കൂട്ടിച്ചേർക്കുകയാണെങ്കിൽ അതിന്റെ ഔന്നത്യം വർധിക്കുമെന്നും” വി. യൗസേപ്പിന്റെ ഉദാഹരണത്തിലൂടെ പാപ്പാ ഉദ്ബോധിപ്പിക്കുന്നു.

തൊഴിലിനോടുള്ള ഈ മനോഭാവം ജീവിതത്തിലെ ഏതൊരു പ്രവൃത്തിയിലും നിഴലിച്ചു കാണാം. തൊഴിലിനോടുള്ള അപകർഷത ജീവിതത്തോടുള്ള അപകർഷതയാണ്. ജീവിതത്തിലെ ഓരോ നിമിഷത്തിന്റെയും സൗന്ദര്യം ആസ്വദിക്കാൻ കഴിയുന്നവന് ജീവിതവും മധുരതരമായിരിക്കും. കർദ്ദിനാൾ വാൻ തുവാൻ തന്റെ ക്രിസ്തുവിശ്വാസത്തെപ്രതി തടവിൽ കിടന്നപ്പോൾ സ്വതന്ത്രനാക്കപ്പെടുന്ന ദിവസം കാത്ത് സമയം കളയാതെ “വർത്തമാനകാലത്തെ സ്നേഹംകൊണ്ട് അതിന്റെ വക്കുവരെ നിറച്ച്

ജീവിച്ചു.” അദ്ദേഹം ഇപ്രകാരം തീരുമാനിച്ചു. “എന്റെ അനുഭവജീവിതസന്ദർഭങ്ങളൊന്നും നഷ്ടമാക്കാതെ സാധാരണ കർമ്മങ്ങൾ അനിതരസാധാരണവിധത്തിൽ ഞാൻ പൂർത്തിയാക്കും.” Family Wisdom from the Monk who Sold His Ferrari എന്ന കൃതിയിൽ പ്രശസ്ത പ്രചോദനാത്മക എഴുത്തുകാരനായ Robin Sharma പറയുന്നത് ഇപ്രകാരമാണ്; “നാം പലപ്പോഴും ജീവിതത്തിൽ പ്രമുഖ പുരസ്കാരങ്ങൾ ലഭിക്കാതെ പോകുന്നവരാണ്- നോബൽ സമ്മാനം, പുലിറ്റ്സർ, ഓസ്കാർ, മുതലായവ. പക്ഷേ, നാമെല്ലാം ജീവിതത്തിലെ ചില ചെറിയ സന്തോഷങ്ങൾക്കു അർഹരാണ്- ഒരു തലോടൽ, ഒരു ചുംബനം, ഒരു പൂർണ്ണ ചന്ദ്രൻ, ഒരു സദ്യ, ഒരു വർണ്ണാഭമായ സൂര്യാസ്തമനം, മുതലായവ. വലിയ സ്ഥാനമാനങ്ങൾ കിട്ടാത്തതിൽ ആത്മപീഡാക്ലേശം അനുഭവിക്കുന്നവരാകാതെ ചെറിയ ചെറിയ കൗതുകങ്ങളിൽ ഹർഷപൂർവ്വകിതരാകൂ; അവ നമുക്കെല്ലാവർക്കും ധാരാളമുണ്ട്.”

നമുക്കും നാം ആയിരിക്കുന്ന ചെറിയ ഇടങ്ങളിൽപ്പോലും ആത്മാർത്ഥതയോടെ ആയിരുന്നുകൊണ്ട് അവിടെ ചെറുതിരി വെളിച്ചങ്ങളാകാൻ പരിശ്രമിക്കാം.

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ഹൃദയത്തിൽ മനുഷ്യന്റെ കയ്യൊപ്പുള്ള ദൈവം

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സിജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}

^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

ക്രിസ്തു ഹൃദയത്തിൽ ദൈവത്തിന്റെ കയ്യൊപ്പമായാണ് ഭൂമിയിലേക്ക് വന്നത്. പക്ഷേ, തിരിച്ചുപോയത് തന്റെ ഹൃദയത്തിൽ മനുഷ്യന്റെ കൈയ്യൊപ്പുകൾ അവശേഷിപ്പിച്ചുകൊണ്ടാണ്. മനുജകുലം സമ്മാനമായി നൽകിയ മുൾക്കിരീടം ഹൃദയത്തോട് ചേർത്തുവെച്ചുകൊണ്ടാണ്.

കീലപദങ്ങൾ: ഹൃദയം, ദൈവത്തിന്റെ കയ്യൊപ്പ്, മനുഷ്യന്റെ കൈയ്യൊപ്പ്

മലയാളത്തിന്റെ നലം തികഞ്ഞ കഥാകാരനായ പെരുമ്പടവം ശ്രീധരന്റെ സാർവത്രിക- സാർവ്വകാലീനഭാവങ്ങൾ ഉൾക്കൊള്ളുന്ന അമൂല്യ കലാസൃഷ്ടിയാണ് "ഒരു സങ്കീർത്തനം പോലെ" എന്ന നോവൽ. "ദൈവത്തിന്റെ കയ്യൊപ്പ് പതിഞ്ഞ നോവൽ" എന്നാണ് മലയാള സാഹിത്യലോകം ഈ ഉത്കൃഷ്ടരചനയെ വാഴ്ത്തുന്നത്. അതിലെ കേന്ദ്ര കഥാപാത്രങ്ങൾ വിശ്വവിഖ്യാതനായ റഷ്യൻ സാഹിത്യകാരനായ ദസ്തയേവ്സ്കിയും അദ്ദേഹത്തിന്റെ പുതിയ നോവൽ എഴുതുവാൻ സഹായത്തിനു വന്ന അന്ന എന്ന പെൺകുട്ടിയുമാണ്. ഒരു മധ്യവയസ്കനായ ചിത്രകാരനും നന്നേ ചെറുപ്പക്കാരിയായ പെൺകുട്ടിയുമായുള്ള സ്നേഹബന്ധത്തിന്റെ കഥ പറയാനാഗ്രഹിച്ച ദസ്തയേവ്സ്കി അവസാനം അന്നയെ പ്രണയിച്ച കഥയാണ് ഇതിന്റെ ഇതിവൃത്തം. "ഹൃദയത്തിൽ ദൈവത്തിന്റെ കയ്യൊപ്പ് പതിഞ്ഞ ഒരാൾ" എന്നാണ് ഇവിടെ ദസ്തയേവ്സ്കിയെന്ന സാഹിത്യമഹാമേരുവിനെ പെരുമ്പടവം വിശേഷിപ്പിക്കുന്നത്. ക്രിസ്തുവും ഹൃദയത്തിൽ ദൈവത്തിന്റെ കയ്യൊപ്പമായാണ് ഭൂമിയിലേക്ക് വന്നത്. പക്ഷേ, തിരിച്ചുപോയത് തന്റെ ഹൃദയത്തിൽ മനുഷ്യന്റെ കൈയ്യൊപ്പുകൾ അവശേഷിപ്പിച്ചുകൊണ്ടാണ്, മനുജകുലം സമ്മാനമായി നൽകിയ മുൾക്കിരീടം ഹൃദയത്തോട് ചേർത്തുവെച്ചുകൊണ്ടാണ്. കുരിശിൽക്കിടക്കുമ്പോഴും മനുഷ്യവംശത്തോടുള്ള സ്നേഹാഗ്നി ജ്വാലയാൽ എരിഞ്ഞിരുന്ന ക്രിസ്തുവിന്റെ ഹൃദയത്തിൽനിന്ന് താൻ സ്നേഹിച്ച ജനത്തിന്റെ കൗതുമനയേറ്റതിന്റെയും മുൾക്കിരീടമുറിവിന്റെയും പരിണിതഫലമായി രക്തം വാർന്നുകൊണ്ടിരിക്കുന്ന വൈരൂഢ്യാത്മകതയാണ് തിരുഹൃദയചിത്രം പലപ്പോഴും നമ്മെ ഓർമ്മപ്പെടുത്തുന്നത്.

വെറുക്കപ്പെട്ട വ്യക്തിത്വങ്ങളായി പലരും എഴുതിത്തള്ളിയവരെയെല്ലാം

അവൻ ഹൃദയത്തോട് ചേർത്തുപിടിച്ചു; അവന്റെ ഹൃദയതാളത്തിന്റെ ലയവിന്യാസങ്ങൾക്കിടയിൽ അവർ തങ്ങളുടെ ജീവിതതാളങ്ങൾ പാടിപ്പഠിച്ചു; അവന്റെ വായ്ത്താരികൾ അവർക്കു ഉണർത്തുപാട്ടുകളായി. എങ്കിലും എല്ലാറ്റിന്റെയും അന്ത്യം മനുഷ്യസഹജമായ ആ വാസന തന്നെയായിരുന്നു-അവർ അവനെ വധിക്കാനായി വിധിച്ചു! നെഞ്ചോടുചേർന്നുനിന്നവൻ ചേർത്തുപിടിച്ചവനെ കമാവശേഷനാക്കുന്നതു പലപ്പോഴും ചലച്ചിത്രകാരന്മാരുടെ ഇഷ്ട വിഷയമാണ്, രാഷ്ട്രീയത്തിലെ നിത്യസംഭവവുമാണ്. എന്നാൽ ഇത്തരമൊരു ഹീനത്വമാർന്ന ജീവിതാനുഭവത്തെ ക്രിസ്തു ചിത്രീകരിക്കുന്നത് എത്ര മധുരവും മനോജ്ഞവും മാതൃകാപരവുമായിട്ടാണ്. കിട്ടിയതൊന്നും അവൻ നഷ്ടപ്പെടുത്തിയില്ല; തന്നതൊന്നും സ്വീകരിക്കാതെയുമിരുന്നില്ല. എല്ലാം തന്റെ ആത്മാവോട് അവൻ ചേർത്തുവെച്ചു. അതിൽ തനിക്കു കിട്ടിയ പരിഹാസമുണ്ടായിരുന്നു; സഹനത്തിന്റെ പാനപാത്രങ്ങളുണ്ടായിരുന്നു; തന്റെമേൽ കാർക്കിച്ചു തുപ്പിയ തുപ്പലുണ്ടായിരുന്നു; മുൾക്കിരീടമുണ്ടായിരുന്നു; മുളളാണികളുണ്ടായിരുന്നു; ചക്ര കുത്തിപ്പിളർന്ന കുന്തമുണ്ടായിരുന്നു. താഴെ വെച്ചാൽ ഉറുമ്പരികും തലയിൽ വെച്ചാൽ പേനരികും എന്ന് പറയുംപോലെ, പ്രപഞ്ചത്തിലെ ഏറ്റവും അമൂല്യനിധിപോലെ, അതീവശ്രദ്ധയോടെ തന്റെ നെഞ്ചോട് ചേർത്തുവെച്ചു. ഒരു കുട്ടി തനിക്കു കിട്ടുന്ന പ്രിയപ്പെട്ട കളിപ്പാട്ടമെല്ലാം ദൂരദേശത്തു ജോലിചെയ്യുന്ന തന്റെ പിതാവ് വരുമ്പോൾ കാണിക്കാനായി സൂക്ഷിച്ചു വയ്ക്കുന്നതുപോലെ അവൻ അവയെല്ലാം ശേഖരിക്കുകയും തന്റെ ഉത്മാനത്തിനുശേഷം തന്റെ പ്രിയപ്പെട്ടവർക്കെല്ലാം അതിന്റെ മിന്നൊളി ദർശനം നൽകുകയും ചെയ്തു. ഈ ആനന്ദാതിരേകത്തിലാണ് തോമാശ്ലീഹാ ക്രിസ്തുവിന്റെ പഞ്ചക്ഷതങ്ങളിലേക്കു കണ്ണോടിച്ചപ്പോൾ “എന്റെ കർത്താവേ, എന്റെ ദൈവമേ” എന്ന് ദീഗന്തങ്ങൾ മുഴങ്ങുമാറ് ഉദ്ഘോഷിച്ചത്; ക്ലയർവോയിലെ വി.ബർണാർഡും അസ്സീസീയിലെ വി. ഫ്രാൻസിസും ക്രിസ്തുവിന്റെ തിരുമുറിവുകളെക്കുറിച്ചു ധ്യാനിച്ചതും പ്രഘോഷിച്ചതും; വി.മാർഗരറ്റ് മേരി അലക്കോക്ക് 17-ആം നൂറ്റാണ്ടിൽ തിരുഹൃദയ ഭക്തിയുടെ പ്രചാരകയായതു; 19-ആം നൂറ്റാണ്ടിൽ ജീവിച്ചിരുന്ന തിരുഹൃദയത്തിന്റെ വാ.മേരി എന്ന നല്ലിടയസഭാ സന്യാസിനി സർവ്വലോകത്തെയും തിരുഹൃദയത്തിനു പ്രതിഷ്ഠിക്കാൻ പതിമൂന്നാം ലിയോ മാർപ്പാപ്പയോട് ആവശ്യപ്പെട്ടത്. തന്റെ ആനന്ദത്തിനു സാക്ഷികളാകാൻ അവിടുന്ന് തന്റെ സ്നേഹിതരെയും ക്ഷണിക്കുകയാണിവിടെ.

“നമ്മുടെ ദുഃഖങ്ങളാണ് അവൻ ചുമന്നത്... അനേകരുടെ പാപഭാരം അവൻ പേറി; അതിക്രമങ്ങൾക്കുവേണ്ടി മാധ്യസ്ഥ്യം വഹിച്ചു.” (ഏശ.53:4-12) എന്ന ഏശയ്യാ പ്രവാചകന്റെ

സഹനദാസനെക്കുറിച്ചുള്ള പ്രവചനം ദൈവപുത്രനായ ക്രിസ്തു തന്റെ ശരീരത്തിൽ സ്വീകരിക്കുവാനിരുന്ന 'മനുഷ്യന്റെ കയ്യൊപ്പി'നെ സൂചിപ്പിക്കുന്നതാകാം. അതുവഴിയായി മനുഷ്യനോട് കൂടുതൽ താദാത്മ്യപ്പെടുവാനും പെസഹാക്കുഞ്ഞാടിനെപ്പോലെ മനുഷ്യ വർഗ്ഗത്തിനുമുഴുവൻ വേണ്ടി തന്നെത്തന്നെ കാഴ്ചയായി നൽകാനും അവിടുന്നു തിരുമനസ്സായി. അതിൽമാത്രം ഒരുങ്ങിനിൽക്കാതെ ക്രിസ്തുനാഥൻ നമ്മെ അത്ഭുതപ്പെടുത്തുന്ന മറ്റൊരു സമ്മാനം കൂടി നൽകുകയാണ്. "അവർക്കു ഞാൻ ഒരു പുതിയ ഹൃദയം നൽകും; ഒരു പുതിയ ചൈതന്യം അവരിൽ ഞാൻ നിക്ഷേപിക്കും. അവരുടെ ശരീരത്തിൽനിന്ന് ശിലാഹൃദയം എടുത്തുമാറ്റി ഒരു മാംസളഹൃദയം ഞാൻ കൊടുക്കും. അങ്ങനെ അവർ എന്റെ കൽപ്പനകൾ അനുസരിച്ചു ജീവിക്കുകയും എന്റെ നിയമങ്ങൾ ശ്രദ്ധയോടെ പാലിക്കുകയും ചെയ്യും. അവർ എന്റെ ജനവും ഞാൻ അവരുടെ ദൈവവും ആയിരിക്കും" (എസ.11:19-20). ഈ പുതിയ മാംസളഹൃദയം ക്രിസ്തുവിന്റെ തിരുഹൃദയവും പുതിയ ചൈതന്യം പരിശുദ്ധാത്മ ചൈതന്യവും പുതിയ ജനമെന്നത് ക്രിസ്തുവിൽ രൂപപ്പെട്ട പുതിയ ദൈവജനവുമായി നാം ദർശിക്കുമ്പോൾ ക്രിസ്തുവിന്റെ തിരുഹൃദയച്ചായ പേറുന്നവരാകാൻ നമുക്കോരോരുത്തർക്കും ലഭിക്കുന്ന അനന്തസൗഭാഗ്യത്തിലേക്കുള്ള ഒരു ചുണ്ടുപലകയാണി തിരുവചനമെന്നതു സുവ്യക്തമാണ്.

"നിങ്ങൾ മക്കളായതുകൊണ്ടു ആബ്രാ- പിതാവേ എന്നു വിളിക്കുന്ന തന്റെ പുത്രന്റെ ആത്മാവിനെ ദൈവം നമ്മുടെ ഹൃദയത്തിലേക്ക് അയച്ചിരിക്കുന്നു" (ഗലാ.4:6). വലിൽ ജിബ്രാന്റെ "പ്രവാചകൻ" പറയുന്നതിപ്രകാരമാണ്, "സ്നേഹിക്കുമ്പോൾ ദൈവം എന്റെ ഹൃദയത്തിലുണ്ട് എന്ന് നിങ്ങൾ പറയരുത്; ഞാൻ ദൈവത്തിന്റെ ഹൃദയത്തിലുണ്ട് എന്ന് പറയുക." മനുഷ്യ -ദൈവ മനോഭാവങ്ങളുടെ ഇത്തരമൊരു സമജ്ഞസവും ഔന്നത്യമാർന്നതുമായ മുർത്തീമദ്ഭാവമാണ്, ഈ ദൈവഭാവങ്ങളും സംയോജിപ്പിക്കുന്ന ഏകജാലകമാണ്, ഈ പിതൃ-പുത്ര ബന്ധത്തിന്റെ ഹൃദയവാതിലാണ് ക്രിസ്തു. ദൈവവിചാരമെന്നത് ദൈവ-മനുഷ്യ ഹൃദയങ്ങൾ തമ്മിലുള്ള ആശയവിനിമയമാണെന്ന് ചേർത്തും പേർത്തും നാം അയവിറക്കുമ്പോൾ തിരുഹൃദയവാതിലിലൂടെ ദൈവമനുഷ്യഹൃദയങ്ങളുടെ സംവാദമാണ് നടക്കുന്നതെന്ന് നാം പറയാതെ പറയുകയാണ് ചെയ്യുന്നത്. തോട്ടക്കാരനെന്ന് തെറ്റിദ്ധരിച്ച മഗ്ദലനക്കാരിയെ പേരുചൊല്ലിവിളിച്ചതും എമ്മാവൂസിലേക്ക് നാടുവിട്ടുപോയവരുടെ ഹൃദയത്തിൽ വചനമായി ജ്വലിച്ചതും പേടിച്ചരണ്ട് മുറിയിൽ കതകടച്ചിരുന്നവരോട് സമാധാനമായിരിക്കൂ എന്ന സമാശ്വാസവചനങ്ങൾ ഉച്ചരിച്ചതും കടലിൽ മീൻപിടിക്കാൻ പോയവർക്ക് അപ്പവും മീനും കരുതി കരയിൽ കാത്തിരുന്നതും

തള്ളിപ്പറഞ്ഞവനോട് എന്റെ ആട്ടിൻപറ്റത്തിന്റെ മേൽനോട്ടം ഇനിമുതൽ നിനക്കായിരിക്കുമെന്ന് ചുമതലയേൽപ്പിച്ചതും ഒരു സങ്കീർത്തനം പോലെ ക്രിസ്തുസഭ്യശ്യമായ സ്നേഹത്തിന്റെ മാത്രം സവിശേഷതയാണ്. ക്രിസ്തുവിന്റെ ജീവിതത്തിൽ മനുഷ്യന്റെ കയ്യൊപ്പു ചാർത്തിയിരുന്നതിനാൽ “മനുഷ്യനിലുള്ളത് എന്താണെന്ന് അവൻ വ്യക്തമായി അറിഞ്ഞിരുന്നു”. അതുകൊണ്ടുതന്നെയാണ് ആർക്കുവേണമെങ്കിലും എപ്പോഴും സമീപിക്കാവുന്നവിധം ക്രിസ്തുവിന്റെ തിരുഹൃദയം ഇത്രമേൽ മാധുര്യമേറിയതായത്, അവിടുന്ന് അതിനെ മാധുര്യമുള്ളതാക്കിത്തീർത്തത്.

ഒരു മനുഷ്യഭൂണത്തിൽ ആദ്യം രൂപപ്പെടുന്നതും അവൻ അന്ത്യശ്വാസം വലിക്കുമ്പോൾ മാത്രം നിശ്ചലമാവുന്നതുമായ അവയവം അവന്റെ ഹൃദയമാണ്. മറ്റൊരുവിധത്തിൽ പറഞ്ഞാൽ ഒരുവന്റെ അസ്തിത്വം നിർണ്ണയിക്കുന്നത് അവന്റെ ഹൃദയമാണ്. അതുപോലെതന്നെ ഒരുവന്റെ വ്യക്തിത്വത്തിന്റെ അളവുകോൽ എന്നത് അവന്റെ ഹൃദയതയാണ്. ഹൃദയകേന്ദ്രീകൃതമായിട്ടാണ് ശരീരം വളരുന്നതും വികസിക്കുന്നതും. അപ്പോൾ തിരുഹൃദയകേന്ദ്രീകൃതമായ ആത്മീയവളർച്ച തീർത്തും അർത്ഥവത്താണ്. നാം ഹൃദയാലുതയെക്കുറിച്ചും ഹൃദയവിശാലതയെക്കുറിച്ചും ഹൃദയതയെക്കുറിച്ചും ഹൃദയസ്പർശകായ സംഭാഷണത്തെക്കുറിച്ചും ഹൃദയചോരനായ ആത്മാർത്ഥ സുഹൃത്തിനെക്കുറിച്ചുമെല്ലാം വാതോരാതെ സംസാരിക്കാറുണ്ട്. അതോടൊപ്പം തിരുഹൃദയനാമനെക്കുറിച്ചുള്ള ദിവ്യസ്മൃതികളും ചിരസ്മരണയായിത്തീരട്ടെ. “നിങ്ങളുടെ ഹൃദയം വസന്തത്തെ കിനാവ് കാണുന്നു” (ജിബ്രാൻ - “പ്രവാചകൻ”): തിരുഹൃദയവസന്തത്തെ കിനാവുകാണുന്നവരായി നമ്മുടെ ഹൃദയങ്ങൾ മാറട്ടെ.

സഹായകഗ്രന്ഥസൂചി

പെരുമ്പടവം ശ്രീധരൻ (1992), ഒരു സങ്കീർത്തനം പോലെ. ദീപിക വാർഷിക പതിപ്പ്.

ഉണർന്നിരിക്കുന്നവരോടൊത്തിരിക്കുന്നവൾ

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സി.ജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}

^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

കർമ്മലചൈതന്യത്തിന്റെ പൈതൃകമാണ് ഏലിയാ പ്രവാചകനിൽ നാം കാണുന്നതെങ്കിൽ ആ ചൈതന്യത്തിന്റെ മാതൃത്വവും ഒളിമങ്ങാത്ത ദീപവും കെടാവിളക്കും വഴിവിളക്കും വഴിത്താരയും എന്തിന് ആ ചൈതന്യം തന്നെയാണ് കർമ്മലീത്തരുടെ വിശിഷ്ടമാതൃകകളിൽ രണ്ടാമതായി കാലചക്രക്രമത്തിൽ നാം കാണുന്ന കർമ്മലനാഥയായ പരി.മാതാവ്.

കീലപദങ്ങൾ: ഏലിയാ പ്രവാചകൻ, കർമ്മലമല, കർമ്മല മാതാവ്

ഇറ്റലിയുടെ തെക്കു ഭാഗത്തുള്ള കലാബ്രിയ റീജിയന്റെ ആസ്ഥാനമായ പാൽമി എന്ന സ്ഥലം അതിന്റെ ഭൂപ്രകൃതിയുടെ സവിശേഷതകൊണ്ട് മെസ്സിന കടലിടുക്കിന്റെ മടുപ്പാവ് എന്നാണ് വിശേഷിപ്പിക്കപ്പെടുന്നത്. 1540ൽ കർമ്മലീത്താ സന്യാസികളുടെ സാന്നിധ്യത്താൽ അനുഗ്രഹിതമായതുമൂതൽ കർമ്മല മാതാവിനോടുള്ള ഭക്തി പുലർത്തുന്ന ഒരു ദേശമാണത്. കർമ്മല മാതാവിന്റെ അനുഗ്രഹത്താൽ പാൽമിയിലെ ജനം തങ്ങളുടെ ചരിത്രത്തിൽ സുവർണ്ണ ലിപികളിലെഴുതുന്ന അവിസ്മരണീയ ദിനമായി 1894 നവംബർ 16 മാറി. 1894 ഒക്ടോബർ 31 മുതൽ 17 ദിവസം കർമ്മല മാതാവിന്റെ തിരുസ്വരൂപത്തിൽ മുഖഭാവങ്ങളുടെ വ്യതിയാനവും മിഴിച്ചലനവും അസാധാരണമാം വിധത്തിൽ ദർശിച്ച ജനതതി നവംബർ 16 ന് തിരുസ്വരൂപവുമായി വർണ്ണശബളമായ നഗരപ്രദക്ഷിണം നടത്തി. അത് പട്ടണത്തിന്റെ അതിർത്തിയിലെത്തിയപ്പോൾ അതിഭീകരമായ ഒരു ഭൂകമ്പം പാൽമി ദേശത്തെയൊന്നാകെ പിടിച്ചു കുലുക്കി. അവിടുത്തെ ഭവനങ്ങളെയൊന്നടങ്കം വിഴുങ്ങിയെങ്കിലും 9 പേരുടെ മാത്രമേ ജീവൻ നഷ്ടമായുള്ളൂ. ഈ മഹാതടുതത്തിന്റെ സ്മരണാർത്ഥം നവംബർ 16 ആ ദേശത്തിന്റെ കൃതജ്ഞതാദിനമായി മാറി. കർമ്മലാംബികയുടെ സവിശേഷമായ ഒരു സ്വഭാവസവിശേഷത നമുക്കീ വിസ്തയാവഹമായ സംഭവത്തിൽ ദർശിക്കാനാകും; ഉണർന്നിരിക്കുന്നവരുടെ ചാരെ അവരെ പുണർന്ന് ഉണർന്നിരിക്കുന്ന ഒരമ്മ!

ദൈവവഴിയിൽ കണ്ണും കാതും കൂർപ്പിച്ചിരിക്കുന്ന ഒരു ജനതയുടെ പിൻതലമുറക്കാരാണ് കർമ്മലീത്ത സഹോദരരോരുത്തരും. മറ്റു ക്രിസ്തീയ സന്യാസസമൂഹങ്ങൾ തങ്ങളുടെ ക്രിസ്താനുകരണത്തിന്റെ ഊടും പാവും നെയ്യാനായി പുതിയനിയമപാതകൾ തേടുകയും ക്രിസ്തുവിനെ കൂടുതൽ അടുത്തനുകരിച്ചവരെ അടുത്തനുകരിക്കാനായി പുതുവഴികൾ തേടുകയും ചെയ്തപ്പോൾ

പഴയനിയമത്തിലെ ഓരോധാരണ ഏടിലേക്ക് ക്രിസ്താനുസരണത്തിനായ് തിരിഞ്ഞവരാണ് കർമ്മലീത്തർ. ഒരു കത്തോലിക്കാ സന്യാസസഭയുടെ കാരണഭൂതമെന്നോ മാതൃകയെന്നോ മാർഗ്ഗദർശിയെന്നോ ഒക്കെ വിശേഷിപ്പിക്കപ്പെടുന്ന ഏക പഴയനിയമ പ്രവാചകനായിരിക്കും ഏലിയനിവ്യ. സൈന്യങ്ങളുടെ ദൈവമായ കർത്താവിനെ പ്രതിയുളള തീക്ഷ്ണതയാൽ എറിഞ്ഞുകൊണ്ടിരിക്കുന്നവൻ (1 രാജാ.19:10) എന്നു തന്നെത്തന്നെ വിശേഷിപ്പിക്കുമാറ് ദൈവോപാസനയിൽ അനുവിടാതെ നിർലീനനായ മഹാത്മാവ്. മണവാളനെ എതിരേൽക്കാൻ കാത്തിരുന്ന അഞ്ച് വിവേകമതികളെപ്പോലെ, കിട്ടിയ താലത്ത് പൂഴ്ത്തിവയ്ക്കാതെ വിവേകപൂർവ്വം വ്യാപാരം ചെയ്തവനെപ്പോലെ, ഏൽപ്പിക്കപ്പെട്ട ഉത്തരവാദിത്വങ്ങളോട് അനുനിമിഷം നിതാന്തജാഗ്രത പ്രകടിപ്പിച്ച കാര്യസ്ഥനെപ്പോലെ “ജാഗരൂകരായിരിക്കുവിൻ” എന്ന കൃസ്തീയാഹ്വാനത്തോട് കൂറ് പുലർത്തുവാൻ മുൻപേ പറന്ന പക്ഷിയാണദ്ദേഹം. തന്റെ വാത്സല്യത്തിന്റെയും സ്നേഹത്തിന്റെയും കൃപയുടെയും അനുഗ്രഹത്തിന്റെയും ആത്മാവാകുന്ന അങ്കിയുടെ ഇരട്ടിപങ്കു പ്രിയശിഷ്യൻ ലഭിക്കണമെന്നാഗ്രഹിച്ച യഥാർത്ഥ ഗുരുവരനാണ് കർമ്മലയിലെ സുഗന്ധപുഷ്പങ്ങളുടെ ആദ്യമാതൃകയെന്നതിൽ കർമ്മലമക്കൾ തീർച്ചയായും ഭാഗ്യവാന്മാരാണ്. കർമ്മലമലയിലെ ഐതിഹാസികബലിയും മഴയ്ക്കുവേണ്ടിയുള്ള അദ്ദേഹത്തിന്റെ പ്രാർത്ഥനയും ആകാംക്ഷാഭരിതമായ കാത്തിരിപ്പും മനുഷ്യകരത്തോളമുള്ള കാർമേഘത്തിൽനിന്ന് ഒരു നാടിനെ മുഴുവൻ നനക്കാനും ഹരിതാഭമാക്കാനും ദാഹമകറ്റാനും ജീവസമൃദ്ധിയുണ്ടാക്കുവാനും ഉതകുമാറ് അതിൽ ദൈവപരിപാലനദർശിക്കുകയും ചെയ്ത ഈ പ്രവാചകശ്രേഷ്ഠൻ ദൈവരാജ്യസമാഗമനത്തിനുവേണ്ടി ഉണർന്നിരിക്കുന്നവരുടെയെല്ലാം പ്രതീകമാണ്. മനുഷ്യകരത്തോളമുള്ള ഈ മേഘത്തുണ്ട് മനുഷ്യകുലത്തൊടൊത്തുള്ള പരി.മാതാവിന്റെ സാന്നിധ്യത്തിന്റെ മൂന്നാസ്വാദനമായിരുന്നു എന്ന് പല ദൈവശാസ്ത്രജ്ഞരും വ്യാഖ്യാനിക്കുന്നുണ്ട്.

കാർമ്മൽ എന്ന ഹീബ്രു പദത്തിനർത്ഥം ഉദ്യാനം അഥവാ പൂന്തോട്ടഭൂമി എന്നാണ്. പഴയനിയമകാലം മുതൽ കർമ്മലമലയിലും പരിസരപ്രദേശങ്ങളിലും തപസും പ്രാർത്ഥനയുമായി നീതിനിഷ്ഠരും ദൈവഭക്തരും ഇസ്രായേലിന്റെ ആശ്വാസവും രക്ഷയും പ്രതീക്ഷിച്ചിരുന്നവരുമായ (ലൂക്ക.2:25,38) “യഹോവയുടെ പാവപ്പെട്ടവരുടെ” (The Anawim of Yahweh) ഒരു ചെറിയ സമൂഹം നിലനിന്നിരുന്നു. പരി.അമ്മയും സ്നാപകയോഹന്നാനുമെല്ലാം ഈ ചെറിയ അജഗണത്തിന്റെ ഭാഗമായിരുന്നുവെന്നും സ്നാപകന്റെ

ശിഷ്യർ പന്തക്കുസ്ത ദിനത്തിൽ മാമ്മോദീസ സ്വീകരിക്കുകയും കർമ്മലമലയിൽപോയി താമസമുറപ്പിക്കുകയും പിന്നീട് പരി.അമ്മയുടെ നാമധേയത്തിൽ ദേവാലയം സ്ഥാപിക്കുകയും ചെയ്തു എന്നും അങ്ങനെ ക്രിസ്തീയ സന്യാസത്തിന്റെ പിള്ളത്തൊട്ടിലായി ഇവിടം മാറിയെന്നും അവർ "കർമ്മല മലയിലെ പരി.മാതാവിന്റെ സഹോദരർ" എന്ന പേര് സ്വീകരിച്ചു എന്നും പറയപ്പെടുന്നു. ഏതായാലും 12-ആം നൂറ്റാണ്ടുമുതലുള്ള കർമ്മലീത്ത സന്യാസികളും മാതാവിന്റെ നാമധേയത്തിലെ ദേവാലയവും ചരിത്രത്തിലുണ്ട്. കർമ്മല സഭയെ പ്രതിസന്ധി ഘട്ടങ്ങളിൽ കൈപിടിച്ച് നടത്തിയ പരി.കന്യകാമറിയത്തിന്റെ അവാച്യമായ സംരക്ഷണം കർമ്മലീത്തരുടെ അവകാശമാണെന്നു പറയാനുതകുന്നതാണ് വി. സൈമൺ സ്റ്റോക്കിന് പരി.അമ്മ നേരിട്ട് നൽകിയതെന്നു വിശ്വസിക്കപ്പെടുന്ന കർമ്മലോത്തരീയം. ലൂർദിൽ 1858ൽ പരി.മാതാവ് ഏറ്റവും അവസാനം പ്രത്യക്ഷപ്പെട്ടത് കർമ്മലമാതാവിന്റെ തിരുനാൾ ദിനമായ ജൂലൈ 16 നാണ്. അതുപോലെതന്നെ 1917 ഒക്ടോബർ 13 നു ഫാത്തിമയിൽ പ്രത്യക്ഷപ്പെട്ട പരി.അമ്മയുടെ വേഷം കർമ്മലമാതാവിന്റെതായിരുന്നു എന്ന് സി. ലൂസിയ സാക്ഷ്യപ്പെടുത്തുന്നു. ഇതൊക്കെ വിരൽചൂണ്ടുന്നത് കർമ്മലമാതാവിന്റെ അനിർവ്വചനീയ സംരക്ഷണവലയം ഇന്നും എന്നും സഭയോടൊത്തുണ്ട് എന്നതിലേക്കാണ്. കർമ്മലചൈതന്യത്തിന്റെ പൈതൃകമാണ് ഏലിയാ പ്രവാചകനിൽ നാം കാണുന്നതെങ്കിൽ ആ ചൈതന്യത്തിന്റെ മാതൃത്വവും ഒളിമങ്ങാത്ത ദീപവും കെടാവിളക്കും വഴിവിളക്കും വഴിത്താരയും എന്തിന് ആ ചൈതന്യം തന്നെയാണ് കർമ്മലീത്തരുടെ വിശിഷ്ടമാതൃകകളിൽ രണ്ടാമതായി കാലചക്രക്രമത്തിൽ നാം കാണുന്ന കർമ്മലനാമയായ പരി.മാതാവ്.

കർമ്മലീത്ത സഭാസമുദ്ധാരകയായ വി. അമ്മത്രേസ്യയുടെ ജീവിതം പൂർണ്ണമായും പരി.അമ്മയുടെ കീർത്തനഗാനമാണ്. വി. അമ്മത്രേസ്യ 12 - ആം വയസ്സിൽ പെറ്റമ്മ മരിച്ചപ്പോൾ ഇച്ഛാഭംഗത്തോടെ പരി.അമ്മയോട് തന്റെ അമ്മയായിരിക്കണമെന്ന് പ്രാർത്ഥിച്ചു. തന്റെ നിഷ്കളങ്കതകൊണ്ടാണ് പ്രാർത്ഥിച്ചതെങ്കിലും തന്റെ ജീവിതകാലം മുഴുവൻ അമ്മയുടെ സഹായവും കൃപയും ലഭിച്ചുവെന്നും എന്നാൽ അമ്മയോട് പൂർണ്ണമായി വിശ്വസ്തയാകാൻ സാധിച്ചില്ലെന്നും അമ്മത്രേസ്യ പുണ്യവതി തന്റെ ആത്മകഥയിൽ വിലപിക്കുന്നു. തന്റെ ആത്മീയപിതാവും കർമ്മല സഭാനവീകരണത്തിന്റെ പിതാവുമെന്നറിയപ്പെടുന്ന ഫാ.ഗ്രേഷ്യനു ദൈവവിളിയെക്കുറിച്ചുള്ള പ്രതിസന്ധി ഉണ്ടായ ഘട്ടത്തിൽ അമ്മത്രേസ്യ നൽകുന്ന ഉപദേശവും "പരി.അമ്മയോടുള്ള ഭക്തിയിൽ വളരുക; തന്റെ സംരക്ഷണത്തിൻ കീഴിൽ സമർപ്പിക്കുന്നവന് പരി.അമ്മയുടെ സഹായം നിരന്തരം

ലഭിക്കും"മെന്നുമാണ്. ഇന്ത്യയിലെ ആദ്യ ഏതദ്ദേശീയ സന്യാസസഭാസ്ഥാപകനും കേരള നവോത്ഥാന നായകരിൽ അഗ്രഗണ്യനും കർമ്മലീത സന്യാസിയുമായ വി. ചാവറ കുര്യാക്കോസ് ഏലിയാസച്ചനും ഇമ്മട്ടിലുള്ള ചില ചിന്തകൾ തന്റെ ആത്മകഥാനുവാഖ്യാനികയായ "ആത്മാനുതാപം" എന്ന കാവ്യാത്മക രചനയിൽ അതിവിനയത്തോടും ഈശ്വരാനുഭൂതിയോടും കൂടെ വർണ്ണിച്ചിരിക്കുന്നു. പൈതലായിരിക്കെ രാത്രിയിൽ ഉണരുമ്പോൾ പാതിരാവിലും പ്രാർത്ഥനാനിമഗ്നയായ തന്റെ അമ്മയെ കാണുന്നതും വെച്ചൂർ പള്ളിയിൽ മാതാവിന് അടിമ വച്ചതും "നിന്നുടെ നാമ മാതാവവൾക്ക് ദാസൻ നീയേയെന്നിതു മനസ്സതിലെപ്പോഴും സ്ഥിരീകരണം" എന്ന മാതൃഉപദേശവുമെല്ലാം ഇന്നലെ നടന്നവ പോലെ അദ്ദേഹം ഓർത്തെടുക്കുകയാണ്. തന്റെ ജീവിതം പോലും മറ്റൊരു മാതൃസ്തവമാണെന്ന് അദ്ദേഹം ഈ കൃതിയിലൂടെ പറയാതെ പറയുകയാണ്. കർമ്മലസഭയെ പരിപൂഷ്ടിപ്പെടുത്തിയ വിശുദ്ധ ജീവിതങ്ങളോരോന്നും വിശുദ്ധ ജനനിയുടെ അങ്കിളുകളിൽ തങ്ങളുടെ ജീവിതങ്ങളെ ഭരമേല്പിച്ചു നല്കിയവരായിരുന്നുവെന്നതിന്റേയും പിടക്കോഴി കണ്ണിമവെട്ടാതെ തന്റെ കുഞ്ഞുങ്ങളെ കാക്കുന്നതുപോലെ അമ്മ അവരെ കാത്തുപരിപാലിച്ചിരുന്നുവെന്നതിന്റേയും ചില ഓർമ്മപ്പെടുത്തലുകളാണ് ഇവിടെ നാം ദർശിച്ചത്.

കർമ്മലമലയെന്ന പൂന്തോട്ടത്തിൽ കർമ്മലനാമയെന്ന വടവൃക്ഷത്തിന്റെ തണലിൽ നമുക്കും അഭയം തേടാം. ഏലിയാ പ്രവാചകൻ തന്റെ അങ്കി ശിഷ്യന് നൽകിയെങ്കിൽ പരി.കന്യക തന്റെ കർമ്മല അങ്കികൊണ്ട് ശിഷ്യഗണങ്ങളെ പൊതിഞ്ഞു സംരക്ഷിക്കുന്നവളാണ്. പരിശുദ്ധാത്മ പ്രചോദനങ്ങൾക്ക് ചെവി ചായിക്കുകയും അവയോട് ക്രിയാത്മകമായി പ്രത്യുത്തരിക്കുകയും പരിശുദ്ധാത്മാവിനോട് അനവരതം സംവദിക്കുകയും ചെയ്ത കർമ്മലനാമ ദൈവസ്വരം തിരിച്ചറിയാൻ നമ്മെ പ്രാപ്തരാക്കട്ടെ. ദൈവത്തിനുവേണ്ടി ഉണർന്നിരിക്കുന്നവരോടുകൂടെ, ദൈവവേലയിൽ സദാ മുഴുകുന്നവരോടുകൂടെ ആ നിരസാന്നിധ്യം നമുക്ക് പ്രതീക്ഷിക്കാം. കർമ്മലസഭയുടെ അലങ്കാരമായ രാജ്ഞി നമ്മുടെ ഉറക്കമൊഴിഞ്ഞ രാവുകളിൽ നമ്മോടൊത്തു ഉണർന്നിരിക്കുമെന്ന് നമുക്ക് പ്രത്യാശിക്കാം. കർമ്മലനാമയോട് തന്റെ അങ്കിളുകളിൽ നമ്മെയും പൊതിഞ്ഞു കാക്കണമേ എന്ന് നമുക്കും പ്രാർത്ഥിക്കാം.

സഹായകഗ്രന്ഥസൂചി

ചാവറ കുര്യാക്കോസ് ഏലിയാസ് (1868), ആത്മാനുതാപം.

കുരിശുകൾ വാരിപ്പുണരുവാൻ ക്ഷണിക്കപ്പെട്ടവർ

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സി.ജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}

^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

കുരിശുകൾക്കിടയിപ്പെട്ടു തെരുങ്ങുന്നവർക്കുള്ള ഒരു ഉത്തേജനമെന്നാണ് ഏണസ്റ്റ് ഹെമിംഗ് വെയുടെ "കിഴവനും കടലും" എന്ന കൃതി. കുരിശിൽനിന്നു കുരിശിലേക്കുള്ള ഒരു യാത്രയായി നമ്മുടെ ജീവിതം മാറിക്കൊണ്ടിരിക്കുന്നു. കടലിനെ ശാന്തമാക്കിയവൻ കടൽത്തീരപോലെ ആർത്തീരവുമുന്ന തന്റെ മനസ്സിനെയും ശാന്തമാക്കാൻ പരിശീലിപ്പിച്ചിട്ടുണ്ടായിരുന്നു. "കിഴവനും കടലും" എന്ന കൃതിയുടെ വെളിച്ചത്തിൽ മനുഷ്യസഹങ്ങളിലേക്കൊരു തിരിഞ്ഞുനോട്ടമാണീ ലേഖനം.

കീലപദങ്ങൾ: കിഴവൻ, കടൽ, കുരിശ്, വേദന, പുഞ്ചിരി

അമേരിക്കൻ സാഹിത്യകാരനായ ഏണസ്റ്റ് ഹെമിംഗ് വെയുടെ സാഹിത്യനോബേൽ സമ്മാനം നേടിയ കൃതിയാണ് "കിഴവനും കടലും". കടലിന്റെ ചൂറും ചൊറുക്കും കരയിലും പിന്തുടരപ്പെടുന്ന ഹതഭാഗ്യനെന്ന് ഏവരായും വിശേഷിപ്പിക്കപ്പെട്ടിരുന്ന സാൻറിയാഗോ എന്ന കിഴവനായ മൂക്കുവന്റെ ജീവിത പ്രാരാബ്ധങ്ങളോടുള്ള ക്രിയാത്മകമായ പടവെട്ടലിന്റെയും പോരാട്ടവീര്യത്തെ സ്വപ്നങ്ങളായി നെയ്തെടുത്തു അവയുടെ സാക്ഷാത്കാരത്തിനായി അഹോരാത്രം ജീവിക്കുന്നതിന്റെയും കഥയാണിത്. ഒരു പരിധി വരെ കഥയല്ലിതു ജീവിതം തന്നെയാണ്; കഥാകൃത്തിന്റെയും അവന്റെ സമൂഹത്തിന്റെയും അതിജീവനത്തിന്റെ നേർക്കാഴ്ച! കുരിശുകൾക്കിടയിപ്പെട്ടു തെരുങ്ങുന്നവർക്കുള്ള ഒരു ഉത്തേജനമെന്നാണിത്.

കാഴ്ചയിൽ കിഴവനെങ്കിലും കടൽനീലക്കണ്ണുകളും കനൽ കെടാത്ത മനസ്സും സാൻറിയാഗോയ്ക്ക് സ്വന്തമായുണ്ടായിരുന്നു. തകർന്ന ശരീരവും തകരാത്ത മനസ്സുമായി ജീവിതത്തോടു യുദ്ധം ചെയ്തുകൊണ്ട് അയാൾ മുന്നേറുകയായിരുന്നു. നീണ്ട എൺപത്തിനാല് ദിവസങ്ങൾ വലവീശിയിട്ടും ഒരു ചെറുമീൻ പോലും കൂടുങ്ങാതിരുന്നിട്ടും എൺപത്തിയഞ്ചു എന്റെ ഭാഗ്യനമ്പരാണ് എന്ന് പറഞ്ഞുകൊണ്ട് അടുത്ത ദിവസം ജീവിതത്തെ തോൽപ്പിക്കാൻ അയാൾ വീണ്ടും കടലിലേക്ക് പുറപ്പെടുകയാണ്. മുന്നൂറാൾ താഴ്ചയിൽ ചൂണ്ടയെറിഞ്ഞപ്പോൾ ഭീമാകാരനായ ഒരു മാർലിൻ മത്സ്യം അയാളുടെ ചൂണ്ടയിൽ കുടുങ്ങി. പിന്നീട് മൂന്നുദിവസം ആ മത്സ്യം

അയാളെയുംകൊണ്ട് കടലിലൂടെ ചുറ്റിയശേഷമാണ് പൊങ്ങിവന്നത്. വള്ളത്തെക്കാൾ വലുപ്പമേറിയ ആ മത്സ്യത്തെ വള്ളത്തിൽ കേറ്റിവലിച്ചുപോരുമ്പോൾ തുടർന്നുള്ള യുദ്ധം ചോരയുടെ മണത്തിൽ ആകൃഷ്ടരായി അടുത്തുകൂടിയ വമ്പൻ സ്രാവുകളോടായിരുന്നു. കരകാണാക്കടലിലെ ആ യുദ്ധത്തിൽ തന്റെ പണിയായുധങ്ങൾ ഓരോന്നോരോന്നായി നഷ്ടപ്പെട്ട സാൻറിയാഗോയുടെ എല്ലാ പ്രതീക്ഷകളും കരക്കെത്തുമ്പോൾ വീണ്ടും തല്ലിക്കെടുത്തപ്പോൾ; അയാൾ പിടിച്ച മീനിന്റെ അസ്ഥികൂടം മാത്രമേ കരയിൽ എത്തുമ്പോൾ അവശേഷിച്ചിരുന്നുള്ളൂ. ഈ നിർഭഗാവസ്ഥയിലും അയാൾ രാത്രി കിടക്കുമ്പോൾ സ്വപ്നം കാണുന്നത് ആഫ്രിക്കയിലെ സിംഹങ്ങളെയാണ്!

അതിതീക്ഷ്ണവിശ്വാസിയല്ലെങ്കിലും തിരുഹൃദയത്തിന്റെയും കോബ്ര മാതാവിന്റെയും ചിത്രങ്ങൾ കുടിലിൽ സൂക്ഷിക്കുന്ന, ജീവിതാനുഭവങ്ങളിൽ ദൈവഹിതം ദർശിക്കുന്ന, പ്രതിസന്ധിയുടെ മുർദ്ധന്യത്തിൽ പലപ്പോഴും കർത്തൃപ്രാർത്ഥനയും നന്മനിറഞ്ഞ മറിയവും ചൊല്ലുന്ന സാൻറിയാഗോ എന്ന പടുവൃദ്ധന്റെ കഥ പറയുന്ന “കിഴവനും കടലും” എന്ന ഈ കൃതിയുടെ രചനയിൽ ക്രിസ്തുവിന്റെ ബിംബം തെളിവാകുന്നു എന്നാണ് പല സാഹിത്യ നിരൂപകരും അഭിപ്രായപ്പെടുന്നത്. ക്രൈസ്തവ ബിംബങ്ങളുടെ തടവുകാരൻ എന്ന് വിമർശകർ പലപ്പോഴും വിശേഷിപ്പിക്കുന്ന, അധുനാനുഭവമലയാള സാഹിത്യനിരൂപണ പ്രസ്ഥാനത്തിന് ദിശാബോധം നൽകിയ നിരൂപകനായ കാർത്തികയിൽ പത്മനാഭൻ അപ്പൻ എന്ന കെ പി അപ്പൻ ഇക്കാര്യം തന്റെ “ബൈബിൾ വെളിച്ചത്തിന്റെ കവചം” എന്ന കൃതിയിൽ അസന്ദിഗ്ദ്ധമായി പ്രസ്താവിക്കുന്നുണ്ട്. ‘പായ്മരവും തോളിലേറ്റി കുടിലിലേക്കുള്ള സാൻറിയാഗോയുടെ യാത്ര കാൽവരിയിലേക്ക് മരക്കുരിശുമേന്തിയുള്ള ക്രിസ്തുവിന്റെ അവസാനത്തെ യാത്രയെ അനുസ്മരിപ്പിക്കുന്നു’ എന്ന് സാഹിത്യനിരൂപകരായ ജോൺ ഗ്രോത്തും മാക്സ് ഈസ്റ്റ്മാനും എലിയറ്റ് പോളും ആൽഫ്രഡ് കസിനും ലിയോ ഗുർക്കോയും ജെയിംസ് ഗ്രെയുമൊക്കെ പറയുന്നതിന് വളരെ മുൻപേ ഈ ദർശനം ബൈബിൾ വായനയിലൂടെ താൻ ആർജിച്ചിരുന്നു എന്ന് അഭിമാനത്തോടെ അദ്ദേഹം പറയുന്നു. പീഡാസഹനത്തിനു വിധേയരായ മനുഷ്യരെക്കുറിച്ചു പറയുന്ന ഏതു മികച്ച കൃതിയും തനിക്കു സമാന്തരസുവിശേഷങ്ങളായിത്തീർന്നുവെന്നും അത്തരം കൃതികളിലെ കഥാപാത്രങ്ങളിൽ ക്രിസ്തുവിന്റെ യാതനകളുടെ നിഴൽ വീണ്ടു കിടക്കുന്നുവെന്നും അദ്ദേഹത്തിനു അനുഭവപ്പെട്ടിരുന്നു.

സാൻറിയാഗോയുടെ ജീവിതത്തിൽ കാണുന്നപോലെ പ്രാരാബ്ധങ്ങളാകുന്ന കുരിശുകളിലേക്ക് നോക്കുവാനും അവയിലേക്ക് വളർന്നുകൊണ്ടു അവയെ ഉത്ഥാനരഹസ്യങ്ങളാക്കി മാറ്റാനും

സാധിക്കുക എന്നത് സാധാരണ മനുഷ്യന് പലപ്പോഴും അപ്രാപ്യമാണ്. 'കുരിശാണ് രക്ഷ, കുരിശിലാണ് രക്ഷ' എന്നൊക്കെ നാം പലവുരു ആവർത്തിക്കാറുണ്ടെങ്കിലും കുരിശുകൾ യഥാർത്ഥത്തിൽ നമ്മെ ഭയവിഹ്വലരാക്കുകയല്ലേ ചെയ്യുന്നത്? അനുഭവ ജീവിതത്തെക്കുറിച്ചുള്ള നമ്മുടെ വിലാപം 'ഒരു വേദന തീരും മുൻപേ മറ്റൊന്ന് വന്നു കഴിയുന്നു' എന്നുള്ളതാണ്. അങ്ങനെ കുരിശിൽനിന്നു കുരിശിലേക്കുള്ള ഒരു യാത്രയായി നമ്മുടെ ജീവിതം മാറിക്കൊണ്ടിരിക്കുന്നു. ദുരിതങ്ങളിൽനിന്ന് തീവ്രദുരിതങ്ങളിലേക്കുള്ള ഒരു പുറപ്പാടായിരുന്നു ബെത്ത്ലഹേമിൽനിന്നു കാൽവരിയിലേക്കുള്ള ക്രിസ്തുവിന്റെ യാത്രയെന്നത് സ്മരണാർഹമാണ്. കുരിശിൽക്കിടക്കുമ്പോൾ ഉള്ള കാഴ്ചയും അതിഭയനീയമായിരുന്നു. ആശ്വാസത്തിനായി ഇടത്തേക്കും വലത്തേക്കും തിരിഞ്ഞപ്പോൾ അവിടെയും കുരിശുകൾ! താഴേക്കുനോക്കിയപ്പോൾ അനാഥത്വത്തിലേക്കു തള്ളിവിടപ്പെട്ട അമ്മയും പ്രിയ ശിഷ്യരും! മുകളിലാകട്ടെ മനസ്സുപോലെത്തന്നെ കാർമ്മേഘാവൃതമായ ആകാശവും! ഇങ്ങനെ നാനാവശത്തുമുള്ള കുരിശുകൾക്കുള്ളിൽക്കിടന്നു നീറുന്നതിനിടയിലാണ് നല്ല കള്ളനെ ആശ്വസിപ്പിക്കാനും അമ്മയുടെ സംരക്ഷണം പ്രിയ ശിഷ്യനെ ഏൽപ്പിക്കാനും പ്രിയ ശിഷ്യരുടെ മാതൃകയും മാർഗ്ഗദർശിയുമായി പ്രിയമാതാവിനെ വിട്ടുകൊടുക്കാനും ഉന്നതങ്ങളിലുള്ള പ്രിയപിതാവിന്റെ ഹിതത്തിനു തന്നെത്തന്നെ ഭരമേല്പിക്കാനും അവിടുന്നു തയ്യാറാകുന്നത്. കടലിനെ ശാന്തമാക്കിയവൻ കടൽത്തീരപോലെ ആർത്തിരമ്പുന്ന തന്റെ മനസ്സിനെയും ശാന്തമാക്കാൻ പരിശീലിപ്പിച്ചിട്ടുണ്ടായിരുന്നു.

നീറുന്ന വേദനയിലും പുഞ്ചിരിക്കാനും നല്ല കാലം വരും എന്ന് പ്രത്യാശയോടെ കാത്തിരിക്കാനും കഴിയുക എന്നത് എല്ലാവർക്കും സാധിക്കുന്ന കാര്യമല്ല. നമ്മുടെയൊക്കെ മാതാപിതാക്കളോ പൂർവികരോ ഒക്കെ ഒരുപക്ഷേ ഈ പാതയിൽ ചരിച്ചവരായിരിക്കാം. കുരിശുവഹിക്കുക എന്നത് ജീവിതത്തിലെ സനാതന സത്യങ്ങളിലൊന്നാണ്. ഒന്നിൽനിന്നു ഓടി മാറിയെന്നു നാം ആശ്വസിക്കുമ്പോൾ അതിനേക്കാൾ ഭീകരമായ മറ്റൊന്ന് നമ്മെത്തേടിയെത്തും. അതിനാൽ "സന്തോഷത്തോടെ കുരിശു വഹിച്ചാൽ അത് നമ്മെ ചുമന്നു ആഗ്രഹിക്കുന്ന ലക്ഷ്യത്തിലെത്തിക്കും; മനസില്ലാതെയാണ് അത് വഹിക്കുന്നതെങ്കിൽ അതിന്റെ ഭാരം വർദ്ധിക്കും; വ്യഥാ വലിയ ഭാരം നിന്റെമേൽ നീ ഏറ്റുന്നു. സ്വമനസാ കുരിശിനു തന്നെത്തന്നെ കീഴ്പെടുത്തുമ്പോൾ അനർത്ഥങ്ങളുടെ ഭാരമെല്ലാം ദൈവികാശ്വാസം ലഭിക്കുമെന്ന പ്രത്യാശയായ് മാറും" (ക്രിസ്താനുസ്മരണം 2.12.). കുരിശിന്റെ പുകഴ്ചയുടെ അന്തസ്സത്തയും ഇതുതന്നെയല്ലേ? കുരിശുകൾ രക്ഷാകരമാകുന്നതും ഇങ്ങിനെയല്ലേ? ഇതിനൊരുദാത്ത മാതൃകയാണ് 'പുഞ്ചിരി ഒരു തിരിവെട്ടമാണ്,

വേദനിക്കുന്നവരുടെ നേരെ നോക്കി കരുണയോടെ ഞാൻ പുഞ്ചിരിക്കും' എന്ന് പറഞ്ഞ സഹനപുത്രിയെന്നു നാം വിശേഷിപ്പിക്കുന്ന വി. അൽഫോൻസാമ്മ. യഥാർത്ഥത്തിൽ പുഞ്ചിരിയെ പ്രണയിച്ചു പുണ്യവതിയാണവൾ. സഹനമെന്ന തീച്ചുളയെ പുഞ്ചിരിയെന്ന തേനമൃതാക്കിയ മൂശയായിരുന്നു അൽഫോൻസാമ്മ.

“കുരിശിനാലെ ലോകമൊന്നായ് വീണ്ടെടുത്തവനേ” എന്ന് ക്രിസ്തുവിനെ വിശേഷിപ്പിക്കുമ്പോൾ അവിടുത്തെ കുരിശു ഭോഷത്തമല്ല ദൈവത്തിന്റെ ശക്തിയാണെന്ന പരമാർത്ഥം നാം ഏറ്റുപറയുകയാണ്. നീ എന്നെ എത്രത്തോളം സ്നേഹിക്കുന്നു എന്ന ചോദ്യത്തിന് കുരിശോളം കൈ വിരിച്ചു “ഇത്രത്തോളം” എന്ന് പറയുമ്പോൾ ഭൂമിയെ അതിരുകളില്ലാതെ സ്നേഹിക്കുന്ന ക്രിസ്തു സ്നേഹമാണ് വെളിവാക്കപ്പെടുന്നത്. “ഒരാൾ പീഡാസഹനത്തിനു വിധേയനാകുമ്പോൾ ക്രിസ്തുവിന്റെ കുരിശിലെ സഹനം ചെറിയ തോതിലെങ്കിലും ചരിത്രത്തിൽ പുനരാവിഷ്കരിക്കപ്പെടുകയാണ്. ജീവിക്കുന്ന രക്തസാക്ഷിയായി മാറിക്കൊണ്ട് ആ നിമിഷങ്ങളിൽ പെസഹാ രഹസ്യത്തിലെ ക്രിസ്തുവിനെ അയാൾ ഉൾക്കൊള്ളുന്നു. ഈ നിമിഷങ്ങൾ ക്രിസ്തുവിന്റെ സംവത്സരങ്ങൾ അവസാനിക്കുകയില്ലെന്ന സന്ദേശം നമ്മെ അറിയിക്കുന്നു”(ബൈബിൾ വെളിച്ചത്തിന്റെ കവചം).

ക്രിസ്തുസ്നേഹത്തെ പിന്തുടരുവാനാണ് നാമും വിളിക്കപ്പെട്ടിരിക്കുന്നത്: ക്രിസ്തുവിനോളം, ക്രിസ്തുവിനോടുകൂടി, ക്രിസ്തുവിൽ കുരിശു ചുമക്കാൻ! ജീവിതത്തിൽ അകാരണമായുണ്ടാകുന്ന സഹനങ്ങളെക്കുറിച്ചു ഫ്രാൻസിസ് പാപ്പ ഇപ്രകാരം പറയുന്നു. “നമ്മുടെ ജീവിതങ്ങളെ വികലമാക്കാനോ അവയെ ചെറുതാക്കാനോ വേണ്ടി അവയിൽ പ്രവേശിക്കാൻ അവിടുന്ന് ആഗ്രഹിക്കുന്നില്ല. പ്രത്യുത അവയെ പൂർത്തീകരണത്തിലേക്കു ആനയിക്കാനാണ് അവിടുന്ന് ആഗ്രഹിക്കുന്നത്. ദൈവത്തിന്റെ രഹസ്യത്തെ സമീപിക്കാൻ വേണ്ടി നമ്മെത്തന്നെ പിന്നിൽ ഉപേക്ഷിക്കുന്ന ഒരു ആധികാരിക പ്രക്രിയയാണത്”(ആനന്ദിച്ച് ആഹ്ലാദിക്കുവിൻ no.175). സാന്റിയാഗോയെപ്പോലെ, അൽഫോൻസാമ്മയെപ്പോലെ ക്രിസ്തുവിന്റെ കുരിശിന്റെ രഹസ്യം സ്വായത്തമാക്കുവാൻ നമുക്ക് പരിശ്രമിക്കാം. കുന്നോളം കുരിശുകൾ കുമിഞ്ഞുകൂടിയാലും അതിനും മുകളിൽ കയറിനിന്ന് മന്ദസ്ഥിരം പുകാൻ നമുക്ക് കഴിയട്ടെ!

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Pope Francis, (2018 Rejoice and be Glad (Apostolic Exhortation)

സവിശേഷ സുവിശേഷമാകുക

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സി.ജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}

^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

ഫ്രാൻസിസ് പാപ്പയുടെ Eximius Missionis Mensis യുടെ ഒരു കേരളീയ വായന. എന്റെ ജീവിതമാണ് എന്റെ സന്ദേശം എന്ന ഗാന്ധിസൂക്തംപോലെ വ്യക്തിപരമായ ക്രിസ്താനുഭവവും മറ്റൊരു സുവിശേഷമാക്കാനുള്ള സവിശേഷവിളിയാണ് നാം ഓരോരുത്തരുടെയും.

കീലപദങ്ങൾ: മാമ്മോദീസാ, ദൗത്യം, പ്രേഷിതൻ

ബെനഡിക്ട് പതിനഞ്ചാമൻ മാർപാപ്പയുടെ അപ്പസ്തോലിക ലേഖനമായ Maximum Illud 1919 നവംബർ 30 നു പുറത്തിറക്കിയതിന്റെ നൂറാം വാർഷികത്തോടനുബന്ധിച്ച് ഫ്രാൻസിസ് പാപ്പ 2019 ഒക്ടോബർ മാസം അസാധാരണ പ്രേഷിതമാസമായി (Eximius Missionis Mensis) പ്രഖ്യാപിച്ചിരുന്നു. ഒരു ചാക്രിക ലേഖനമല്ലെങ്കിലും സഭയുടെ പ്രേഷിതാഭിമുഖ്യത്തിനും അതിന്റെ സ്വഭാവത്തിനും പുതിയൊരു ദിശാബോധം നൽകിയതിനാൽ 1919-1959 കാലഘട്ടത്തിൽ ഇറങ്ങിയതും സഭയുടെ പ്രേഷിതാഭിമുഖ്യത്തെ പുനഃവ്യാഖ്യാനം ചെയ്തതുമായ അഞ്ചു ചാക്രിക ലേഖനങ്ങളിൽ ആദ്യത്തേതായി Maximum Illudനെ പലരും കരുതുന്നു. “ജ്ഞാനസ്നാനപ്പെട്ട അയക്കപ്പെട്ടവർ: പ്രേഷിതദൗത്യവുമായി ക്രിസ്തുവിന്റെ സഭ ലോകത്തിൽ” (Baptized and Sent: The Church of Christ on Mission in the World) എന്നതാണ് അസാധാരണ പ്രേഷിതമാസത്തിന്റെ വിചിന്തന വിഷയം.

മാമ്മോദീസാവഴിയായി നമുക്ക് സൗജന്യമായി ലഭിക്കപ്പെട്ട ദൈവികജീവൻ പ്രഘോഷിക്കാനും പങ്കുവയ്ക്കാനുമുള്ള നമ്മുടെ ഉത്തരവാദിത്വമാണ് പ്രേഷിതപ്രവർത്തനത്തിന്റെ അന്തഃസത്ത. അത് ക്രിസ്ത്യാനിയുടെ ഉത്തരവാദിത്വമാണ് (മത്താ.28:19-20) അതുകൊണ്ടാണ് സഭ സ്വഭാവത്താൽ തന്നെ പ്രേഷിതയാണെന്നും സുവിശേഷപ്രഘോഷണം എല്ലാവരുടെയും കടമയാണെന്നും തിരുസഭ പഠിപ്പിക്കുന്നത് (Ad Gentes 2). ജ്ഞാനസ്നാനം സ്വീകരിച്ച എല്ലാവരും സഭയിലെ അവരുടെ സ്ഥാനമോ വിശ്വാസത്തിലെ അവരുടെ പ്രബോധനതലമോ എന്തുതന്നെയായിരുന്നാലും, സുവിശേഷവൽക്കരണത്തിന്റെ പ്രതിനിധിയാണ് (സുവിശേഷത്തിന്റെ ആനന്ദം 120). “എല്ലാ കത്തോലിക്കാ പ്രവർത്തങ്ങളിലും വെച്ച് ഏറ്റവും മഹത്തും പരിശുദ്ധവുമായത് പ്രേഷിതപ്രവർത്തനമാണ്” (ഒൻപതാം പിയൂസ് പാപ്പ). ഈ ദൗത്യം നമ്മുടെ തനിമയുടെ ഭാഗമായതിനാൽ പിതാവിന്റെ ദത്തുപുത്രരാകാനുള്ള തങ്ങളുടെ വിളി മനസിലാക്കാൻ

സകലമനുഷ്യരെയും പ്രാപ്തരാക്കാനുള്ള കടമയും നമുക്കുണ്ട്.

ഓരോ വ്യക്തിയും ഓരോ മിഷൻ(ദൗത്യം) ആണെന്നു ലോകപ്രേഷിതദിനത്തോടനുബന്ധിച്ചുള്ള മാർപാപ്പയുടെ സന്ദേശം നമ്മെ ഓർമ്മപ്പെടുത്തുന്നു. 'ശിഷ്യർ', 'പ്രേഷിതർ' എന്ന വ്യത്യാസമില്ലതെ നാമെല്ലാം 'പ്രേഷിതശിഷ്യർ ആണ്'. ക്രിസ്തുവിനെ കണ്ടമാത്രയിൽ പ്രഘോഷിച്ച ആദ്യശിഷ്യരും (യോഹ.1:41) സമരിയക്കാരി സ്ത്രീയും(യോഹ. 4:39) അവൾ വഴി ക്രിസ്തുവിനെ അറിഞ്ഞമാത്രയിൽ അതേറ്റുപറഞ്ഞ സമരിയക്കാരും (യോഹ. 4:42) ഉത്ഥിതനായ ക്രിസ്തുവിനെ കണ്ട മഗ്ദലനമറിയവും (യോഹ. 20:18) ശിഷ്യരും (യോഹ.20:25) ക്രിസ്തുവിനെ അനുഭവിച്ച സാവൂൾ എന്ന പൗലോസും (അപ്പ.പ്രവ.9:20) "ഉടൻതന്നെ ക്രിസ്തുവിനെ പ്രഘോഷിച്ചു". ദൈവത്തിന്റെ രക്ഷാകരസ്നേഹം യഥാർത്ഥത്തിൽ അനുഭവിച്ചവർക്കു ആ സ്നേഹം പ്രഘോഷിക്കാൻ അധികം സമയമോ പരിശീലനമോ ആവശ്യമില്ല(സുവിശേഷത്തിന്റെ ആനന്ദം 120). അവരോരുത്തരും തങ്ങൾ അനുഭവിച്ച ക്രിസ്തുവിനെയാണ് പ്രഘോഷിച്ചത്. "എന്റെ ജീവിതമാണ് എന്റെ സന്ദേശം" എന്ന ഗാന്ധിസൂക്തംപോലെ വ്യക്തിപരമായ ക്രിസ്താനുഭവവും മറ്റൊരു സുവിശേഷമാക്കാനുള്ള സവിശേഷവിളിയാണ് ഓരോ ക്രിസ്ത്യാനിയുടേതും.

"ഓരോരുത്തരെയും അവന്റെ അല്ലെങ്കിൽ അവളുടെ മാർഗ്ഗത്തിൽ കർത്താവു വിളിക്കുന്നു." എന്ന് രണ്ടാം വത്തിക്കാൻ കൗൺസിൽ നമ്മെ അനുസ്മരിപ്പിക്കുന്നു (Lumen Gentium 11). ഓരോ വിശുദ്ധരും അവരുടെ തനതായ ശൈലിയിൽ ക്രിസ്തുവിനു സാക്ഷ്യം നൽകിയവരാണ്. അത് അതേപടി പകർത്തുകയെന്നതല്ല നമ്മുടെ ദൗത്യം. അങ്ങനെ വന്നാൽ കർത്താവിനു നമ്മെക്കുറിച്ചുള്ള പദ്ധതിയിൽനിന്ന് നാം അകന്നുപോയെന്നുവരാം എന്ന വലിയ ദൗർഭാഗ്യത്തെക്കുറിച്ചു ഫ്രാൻസിസ് പാപ്പാ മുന്നറിയിപ്പ് തരുന്നു. അവരവർക്കുവേണ്ടി ഉദ്ദേശിച്ചിട്ടില്ലാത്ത ചിലതു അനുകരിക്കുന്നതിനേക്കാൾ ഉത്തമം ഓരോരുത്തരും സ്വന്തം പാത വിവേചിച്ചറിയുക എന്നതാണ് (ആനന്ദിച്ചു ആഹ്ളാദിക്കുവിൻ 11). ദൈവത്തിന്റെ ജീവൻ ചിലർക്ക് ഒരുവിധത്തിലും മറ്റു ചിലർക്ക് വേറൊരു വിധത്തിലുമാകയാൽ(കുരിശിന്റെ വി. യോഹന്നാൻ, സ്നേഹഗീത 2) അവരവരുടെ ഹൃദയങ്ങളിൽ ദൈവം നിക്ഷേപിച്ചിട്ടുള്ള ഏറ്റവും വ്യക്തിപരമായ ദാനങ്ങൾ പുറത്തുകൊണ്ടുവരിക എന്നതാണ് ഒരുവനെ സംബന്ധിച്ചു ഏറ്റവും അഭിലഷണീയം. ദൈവാത്മാവ് ഓരോരുത്തരിലും വിഭിന്നമായ രീതിയിലാണ് പ്രവർത്തിക്കുന്നത്. ഒരേ ആത്മാവ് ദൈവമക്കൾക്കു വിവേകത്തിന്റെ വചനവും ജ്ഞാനവരവും വിശ്വാസവരവും രോഗശാന്തിവരവും അത്ഭുതശക്തികളും പ്രവചനവരവും ഭാഷാവരവും വ്യാഖ്യാനവരവുമെല്ലാം തരുന്നത് ഒരേ

ആത്മാവിൽ ഏകശരീരത്തിലെ അവയവങ്ങൾ പോലെ ഒരുമയോടെ എന്നാൽ വ്യതിരിക്തധർമ്മങ്ങളോടെ നാം ജീവിക്കാനാണ് (1 കോറി.12:1-31).

പ്രേഷിതൻ സ്വന്തം ചുറ്റുപാടിന്റേയും സംസ്കാരത്തിന്റേയും വേലിക്കെട്ടുകൾ പൊളിച്ചുകളഞ്ഞു സഭാതരുവിന്റെ വിത്തു ഏതു മണ്ണിലാണോ വീണത് ആ മണ്ണിന്റെ സുഗന്ധവും പരിമളവും പരത്തുന്ന പ്രേഷിതനാകുകയെന്നതാണ് അവന്റെ വെല്ലുവിളി. അതുകൊണ്ടാണ് ആടിന്റെ മണമുള്ള ഇടയന്മാരാകാൻ ഫ്രാൻസിസ് പാപ്പാ ആഹ്വാനം ചെയ്യുന്നത്. എന്റെ സംസ്കാരവും പാരമ്പര്യവും ആശയങ്ങളും ചിന്തയും വംശമഹിമയും ആഡ്യത്വവും അപ്രമാദിത്വവും പ്രേക്ഷകരിലേക്ക് പകരുക എന്നതല്ല പ്രേഷിത ദൗത്യമെന്ന് പാപ്പാ നമുക്ക് മുന്നറിയിപ്പ് തരുന്നുണ്ട്. പന്തക്കുസ്താദിനത്തിൽ ശിഷ്യർ സംസാരിച്ചത് ഓരോരുത്തരും അവരവരുടെ മാതൃഭാഷയിലാണ് ശ്രവിച്ചത് എന്ന് അപ്പസ്തോല പ്രവർത്തനങ്ങൾ സാക്ഷ്യപ്പെടുത്തുന്നത് (അപ്പ.പ്രവ.2:1-11) ഭാവി സുവിശേഷപ്രവർത്തകർക്കുള്ള ഒരു മാർഗ്ഗരേഖയാണ്. ബെൽജിയൻ മിഷണറിയായിരുന്ന ഫ്രഡറിക് വിൻസന്റ് ലെബ്ബെ (1877 - 1940) ചൈനയിൽ പ്രേഷിതപ്രവർത്തനം ചെയ്യവെയാണ് ചൈനയിൽ ആദ്യത്തെ തദ്ദേശീയ മെത്രാൻ അഭിഷിക്തനാകുന്നത്. “ചൈന ചൈനക്കാർക്ക് വിട്ടുകൊടുക്കുക അപ്പോൾ ചൈനക്കാർ ക്രിസ്തുവിലേക്ക് തിരിയും” എന്ന മുദ്രാവാക്യവുമായി തദ്ദേശീയ മെത്രാനുവേണ്ടിയുള്ള അദ്ദേഹത്തിന്റെ പരിശ്രമം Maximum Illudനെയും പിയൂസ് 11-മൻ പാപ്പയുടെ Rerum Ecclesiae എന്ന ചാക്രിക ലേഖനത്തെയും സ്വാധീനിച്ചു. പാശ്ചാത്യമെത്രാന്മാർ നിയമപരിരക്ഷയുടെ സുരക്ഷിതമേഖലയിൽ വിരാജിച്ചപ്പോൾ അവയെല്ലാം നിസ്വമായിക്കരുതി അദ്ദേഹം ചൈനീസ് പൗരത്വം സ്വീകരിക്കുകയും പീഡനങ്ങൾ സഹിച്ചു മരിക്കുകയും ചെയ്തുകൊണ്ട് ഈ ദർശനത്തിന്റെ ഉദാത്ത മാതൃകയായി മാറിയതുപോലെ തദ്ദേശീയ ജീവിതശൈലി സ്വാംശീകരിക്കുക എന്നത് പ്രേഷിതപ്രവർത്തനത്തിന്റെ ഫലപ്രാപ്തിക്കു അനിവാര്യമാണ്.

ക്രിസ്ത്യാനിയുടെ പ്രേഷിതദൗത്യം ദൈവത്തിന്റെ പിതൃത്വത്തിലും സഭയുടെ മാതൃത്വത്തിലും വേരുറച്ചതാണ്. ദൈവം പിതാവായിട്ടുള്ളവന് സഭ മാതാവായിട്ടുണ്ടാകുമെന്നു വി.സിപ്രിയാൻ പറയുന്നത് ഇത്തരൂണത്തിൽ സ്മരണീയമാണ്. അതിനാൽത്തന്നെ മാതൃവാത്സല്യത്താൽ നിറഞ്ഞ, എല്ലാ മനുഷ്യരെയും ഉൾക്കൊള്ളുന്ന തുറന്ന ഹൃദയവുമായിട്ടാണ് സഭാമാതാവിനെ ഫ്രാൻസിസ് പാപ്പാ 'സുവിശേഷത്തിന്റെ ആനന്ദ'ത്തിൽ അവതരിപ്പിച്ചിരിക്കുന്നത്. തന്റെ പുത്രൻ തിരികെ വരുമ്പോൾ പ്രവേശിക്കുന്നതിനുവേണ്ടി എപ്പോഴും വാതിലുകൾ തുറന്നിട്ടിരിക്കുന്ന യൂർത്തപുത്രന്റെ

പിതാവിനെപ്പോലെയാകണം സഭ എന്നാണ് പാപ്പാ ആഗ്രഹിക്കുന്നത്(45).ആത്മാവാൽ പ്രചോദിതരായി ദൈവത്തെ തേടി എത്തുന്ന ഒരുവനും നിരാശനാകാതിരിക്കാൻ എപ്പോഴും തുറന്നുകിടക്കുന്ന ദേവാലയ വാതിലുകൾ പോലെ കൂദാശയുടെ വാതിലുകളും ഹൃദയവാതിലുകളും സഹോദരീസഹോദരർക്കായി സദാ തുറന്നുകൊടുക്കാൻ നമുക്ക് സാധിക്കണം. മാമ്മോദീസ്സായിൽ നാം എല്ലാ പിതൃത്വത്തിൻറെയും യഥാർത്ഥ മാതൃത്വത്തിൻറെയും ഉറവിടത്തെ സ്വീകരിക്കുന്നവരാകയാൽ സ്വർഗ്ഗപിതാവിൻറെയും സഭാമാതാവിൻറെയും ചോദനകളോട് ക്രിയാത്മകമായി പ്രത്യുത്തരിക്കുന്നവരാകുവാൻ നാം ബാധ്യസ്ഥരാകുന്നു.

മാമ്മോദീസ സ്വീകരിച്ച ഓരോ വ്യക്തിയും ഓരോ സുവിശേഷങ്ങളാണ്; ഒരേ സന്ദേശമാണ് നൽകുന്നതെങ്കിലും അതിൻറെ പശ്ചാത്തലവും ഭാഷയും അവതരണവും ശൈലിയും പ്രേക്ഷകരും എല്ലാം വ്യത്യസ്തമാണ്. അസാധാരണ പ്രേഷിതമാസത്തിൽ കേരളസഭയ്ക്കു സന്തോഷം പകരുന്ന ഒരു വാർത്തയാണ് സാധാരണക്കാരിയായി ജീവിച്ചു അസാധാരണ വിധത്തിൽ ക്രിസ്തുവിനെയും സഭയെയും സമൂഹത്തെയും മനസ്സിലാക്കി സുവിശേഷമായിത്തീർന്ന വാഴ്ത്തപ്പെട്ട മറിയം ത്രേസ്യയുടെ വിശുദ്ധപദവി. 2019 ഒക്ടോബർ 13 നു അവർ വിശുദ്ധപദവിയിലേക്കുയർത്തപ്പെടുമ്പോൾ സുവിശേഷ സുവിശേഷങ്ങളാകാനുള്ള നമ്മുടെ പരിശ്രമത്തിനു അത് പുതുചൈതന്യം നൽകട്ടെ. ഈ വിളിയെ അതിൻറെ പൂർണ്ണതയിൽ ആസ്വദിക്കാനും പങ്കുവെക്കാനും നമുക്ക് സാധിക്കട്ടെ.

സഹായകഗ്രന്ഥസൂചി

Pope Benedict XV (1919).Maximum Illud. L' Osservatore Romano.

Pope Francis (2019).Eximius Missionis Mensis. L' Osservatore Romano.

മാറ്റത്തിന്റെ മണിമുഴക്കം

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സി.ജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}

^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

ആംഗലേയ സാഹിത്യകാരനായ ടി. എസ്. എലിയറ്റിന്റെ വശ്യതയാർന്ന ക്രിസ്തുമസ് കവിതയായ 'പൂജരാജാക്കന്മാരുടെ യാത്ര'യുടെ ഒരു പുനഃർ വായനയാണി കുറിപ്പ്. ക്രിസ്തുവിന്റെ ഉത്ഥാനരഹസ്യത്തിലൂടെ സംജാതമായ പുതിയ ലോകവ്യവസ്ഥിതിയെക്കുറിച്ചും അജ്ഞതവാദിയായിരുന്ന കവി ക്രിസ്തുവിനെ സ്വീകരിച്ചപ്പോൾ വ്യക്തിപരമായുണ്ടായ മാറ്റത്തെക്കുറിച്ചുമെല്ലാം ഇവിടെ വ്യംഗ്യമായി സൂചിപ്പിക്കുന്നു.

കീലപദങ്ങൾ: ക്രിസ്തുമസ്, പൂജരാജാക്കന്മാർ, യാത്ര, മാറ്റം

ആംഗലേയ സാഹിത്യകാരന്മാരിൽ അഗ്രഗണ്യനായ ടി. എസ്. എലിയറ്റിന്റെ വശ്യതയാർന്ന ക്രിസ്തുമസ് കവിതയാണ് "പൂജരാജാക്കന്മാരുടെ യാത്ര" (The Journey of the Magi). മൂന്നു ഭാഗങ്ങളിലായി വെറും നാല്പ്പത്തിമൂന്നു വരികൾ മാത്രമുള്ള ഈ കവിത അദ്ദേഹത്തിന്റെ പുതുജന്മത്തിന്റെകൂടി കഥയാണ്. ക്രിസ്തുവിന്റെ ജനനത്തിനു സാക്ഷ്യം വഹിക്കാൻ കിഴക്കുനിന്നെത്തിയ പൂജരാജാക്കന്മാരിലൊരാൾ യാത്രയെക്കുറിച്ചു നടത്തുന്ന ആത്മാവലോകനമാണിത. ആയിരത്തി അറുനൂറുകളിൽ ഇംഗ്ലണ്ടിലെ മെത്രാപ്പോലീത്തയായിരുന്ന ലാൻസിഡോട് ആൻഡ്രൂസിന്റെ ക്രിസ്തുമസ് സന്ദേശത്തിലെ വരികൾ കടമെടുത്തു തുടങ്ങുന്ന കവിത അവസാനിക്കുന്നത് പുരാതന ലോകത്തിന്റെയും പുരാണിക മതത്തിന്റെയും പഴയ മനുഷ്യന്റെയും മരണവും നവീന ലോകത്തിന്റെയും ആധുനിക മതത്തിന്റെയും പുതിയ മനുഷ്യന്റെയും ജനനവും ഉദ്ഘോഷിച്ചുകൊണ്ടാണ്, സമൂലമാറ്റത്തിന്റെ പ്രകാശകിരണങ്ങൾ പ്രഭ വിതരുന്ന പുതിയ കാഴ്ചകളുടെ കേളികൊട്ടുമായാണ്.

പാരമ്പര്യമായി രാജകീയസഞ്ചാരങ്ങൾ സുസ്ഥിരമാർഗ്ഗവും ആനന്ദദായകവുമായി വർത്തിക്കപ്പെടുമ്പോൾ "വർഷത്തിലെ ഏറ്റവും പ്രതികൂല കാലാവസ്ഥയിലാണ് ഞങ്ങൾ ഈ യാത്ര ആരംഭിച്ചിരിക്കുന്നത്; ഭൂമി തണുത്തുറയാൻ തുടങ്ങിയിരിക്കുന്നു; മരണത്തണുപ്പിന്റെ കരാളത ചുറ്റിലും ദർശിക്കുന്നു; വഴികളാകട്ടെ ദുർഘടവും. ഞങ്ങളെ വഹിച്ചിരുന്ന ഒട്ടകങ്ങൾക്കുപോലും ഇത് ദുസ്സഹമായിത്തോന്നി." എന്നുള്ള ഒരു വിചാപഗാനമായി കവിതയുടെ

ഒന്നാം ഭാഗം മാറിയിരിക്കുന്നു. തങ്ങൾ നടത്തുന്നത് വിരസമായ ഒരു സഞ്ചാരമായിത്തീർന്നിരുന്ന ഒരു കനോട്ടക്കാരന്റെ പിറുപിറുപ്പും മുറുമുറുപ്പും മുതൽ കടന്നുപോകുന്ന പട്ടണങ്ങളിലെ ആളുകളുടെ ശത്രുതാമനോഭാവത്തോടെയുള്ള പെരുമാറ്റവും ഗ്രാമീണരുടെ മുതലെടുപ്പും പലപ്പോഴും അഭയമില്ലാതെ അലയേണ്ടിവന്നതും ഉറക്കമൊഴിഞ്ഞ നിശകളുമെല്ലാം ചിലപ്പോഴെങ്കിലും കൈവിട്ട സൗഭാഗ്യത്തിലേക്കു തിരികെച്ചെല്ലാൻ അവരുടെ മനസ്സിനെ പ്രലോഭിപ്പിച്ചുവെന്നാണ് കവി പറയുന്നത്.

ദൈവപുത്രനായ ക്രിസ്തു ഭൂമിയിലേക്ക് കടന്നുവന്നതും അവിടുത്തെക്ക് മനുഷ്യരിൽനിന്നു നേരിടേണ്ടിവന്ന നിന്ദാപമാനങ്ങളും സ്പഷ്ടമാകപ്പെടുന്ന മനോജ്ഞമായ ഒരു ചെറുകവിതയാണിത്. അതോടൊപ്പം ക്രിസ്തുവിന്റെ ഭൗമിക മാതാപിതാക്കളായ യൗസേപ്പിനും മറിയത്തിനും ബെത്ത്ലേഹെം യാത്രയിൽ അഭിമുഖീകരിക്കേണ്ടിവന്ന തിരസ്കൃതാനുഭവങ്ങളും ഇവിടെ വിവക്ഷിക്കപ്പെടുന്നുണ്ട്. വി. ചാവറപ്പിതാവ് തന്റെ “ആത്മാനുതാപം” എന്ന കാവ്യത്തിൽ വർണ്ണിക്കുന്നതുപോലെ,

“ഇരപ്പോർക്കുള്ളദാനം പരപ്പിൽ സമുദ്രംപോ-
ലിരട്ടിച്ചുള്ള പാപം കെടുത്തും മമ സഖേ-
യിങ്ങനെകണ്ടു ചൊല്ലി മറ്റൊരുത്തനോടപ്പോ-
ളങ്ങുന്നു മുൻവന്നെങ്കിൽ മേ ഭാഗ്യം വർധിച്ചേനെ”

(തലചായ്കാനൊരിടത്തിനായി നാട് മുഴുവൻ വലഞ്ഞ യൗസേപ്പിതാവ് ഒരുവനോട് ‘യാചിക്കുന്നവർക്കു ദാനം കൊടുത്താൽ വിസ്തൃതമായ സമുദ്രം പോലെ ഇരട്ടിയായുള്ള പാപം മുഴുവനും ഇല്ലാതാകുകയും ഭാഗ്യം വരുകയും ചെയ്യും’മെന്ന് പറഞ്ഞപ്പോൾ ‘സുഹൃത്തേ, താങ്കൾ നേരത്തെ വന്നിരുന്നെങ്കിൽ എന്റെ ഭാഗ്യം ഇരട്ടിച്ചു വിശാലമാകുമായിരുന്നല്ലോ’ എന്ന് പരിഹസിക്കുകയാണ് ചെയ്തത്.) തീർത്തും പരിഹാസ്യവും ദുരിതപൂർണ്ണവുമായിരുന്നു അവരുടെയും യാത്ര. പക്ഷേ,

“എന്നുടനഗരവും ഗോത്രവും ബന്ധുക്കളും-
മെന്നുള്ളൊരഹംമതിയൊക്കെയും ഫലം നാസ്തി”

(എന്റെ നഗരമാണിത്, എന്റെ ഗോത്രമാണിത്, എന്റെ ബന്ധുക്കൾ ഇവിടെയുണ്ട് എന്നെല്ലാം വിചാരിച്ചു അഹങ്കരിക്കുന്നത് അർത്ഥശൂന്യമത്രെ) എന്ന തിരിച്ചറിവ് ഇതവർക്കു നൽകുന്നു.

ആത്മാവിന്റെ ഇരുണ്ടരാത്രികളിലൂടെ കടന്നു പോകുന്ന ഏതൊരു വിശ്വാസിയുടെയും ആത്മീയ-മാനസികാവസ്ഥകളുടെ പ്രതീകമാണീ പൂജരാജാക്കന്മാർ. ഉണ്ടായിരുന്ന സൗഭാഗ്യങ്ങളൊക്കെയും ത്യജിച്ചു ഇല്ലായ്മയുടെയും വല്ലായ്മയുടെയും മാർഗ്ഗത്തിൽ തീർത്ഥാടനം

ചെയ്യുന്ന സാത്വികരെയും ഈ രാജാക്കന്മാർ പ്രതിനിധാനം ചെയ്യുന്നു. അവരെ സംബന്ധിച്ചിടത്തോളം അത് വയലിൽ ഒളിപ്പിച്ചുവെച്ച നീധിക്കു തുല്യമാണ് (Mt.13:44). അതിനുവേണ്ടി തനിക്കുള്ളതെല്ലാം വിറ്റു അവൻ ആ വയൽ വാങ്ങുകയും ചെയ്യുന്നു. കാണുന്നവനാകട്ടെ ഇവൻ ഒരു ഭോഷനാണല്ലോ എന്ന് പലപ്പോഴും പരിഹസിക്കുന്നു. ചിലപ്പോഴെങ്കിലും ഈ യാത്ര തികതമാകുന്നു. പന്നികൾക്കു നൽകിയിരുന്ന തവിട്ടുകൊണ്ടെങ്കിലും വിശപ്പടക്കാൻ ആഗ്രഹിച്ച ധൂർത്തപുത്രന് അതുപോലും കിട്ടാതിരുന്നപ്പോൾ അവൻ സ്വഭവനത്തിലെ സൗഭാഗ്യത്തെക്കുറിച്ചു ചിന്തിച്ചതുപോലെ (Lk. 15:16-17) ഈ പരിഹസയാവസ്ഥ തങ്ങൾ വിട്ടുപോന്ന കൊട്ടാരങ്ങളുടെയും രാജകന്യകമാരുടെയും സുഭിക്ഷതയുടെയും ചിന്തകൾ അവരിൽ ഉയർത്തിയിരിക്കാം. എമ്മാവൂസിലേക്കു തിരിച്ച ശിഷ്യരെപ്പോലെ 'നടന്നതെല്ലാം മിഥ്യയായിരുന്നു' എന്ന് ആരോ തങ്ങളുടെ ചെവികളിൽ മന്ത്രിക്കുന്നതുപോലെ അവർക്കനുഭവപ്പെട്ടിരിക്കാം. ഇന്നത്തെ സാമൂഹിക ചുറ്റുപാടിൽ, നവമാധ്യമങ്ങളുടെ അതിപ്രസരണം പരിഹസിക്കാനായി ഒത്തുകൂടുന്ന കാഴ്ചക്കാരുടെ എണ്ണത്തെ അത്യധികമായി വർദ്ധിപ്പിക്കുന്നുണ്ട്. 'എന്തിനു ഇതൊക്കെ കേൾക്കണം? സഹിക്കണം? ഈ യാത്ര വ്യർത്ഥമോ?' തുടങ്ങിയ ആത്മഗതങ്ങൾ തീർത്ഥാടകരുടെ മനസ്സിനെ മമിക്കുന്നു. ഇവിടെയെല്ലാം പൂജരാജാക്കന്മാരുടെ നിശ്ചയദാർഢ്യം നമുക്ക് കൈമുതലാക്കാം.

എലിയറ്റിന്റെ കവിതയുടെ അവസാനഭാഗം തിരിച്ചറിവിന്റെ അത്യന്തം സുന്ദരമായ ഒരു പ്രകരണമാണ്. "ഞങ്ങൾ ജനനത്തിലേക്കോണോ അതോ മരണത്തിലേക്കോണോ നയിക്കപ്പെട്ടത്? ജനന-മരണങ്ങൾ വ്യത്യസ്തമാണെന്നാണ് ഞാൻ കരുതിയത്. പക്ഷേ, ഈ പിറവി മൃത്യുവിനെപ്പോലെതന്നെ വിഭ്രാന്തകമാണ്; മൃത്യു തരുന്ന കയ്പേറിയ വേദനയാണിരിക്കാഴ്ച സമ്മാനിക്കുന്നത്. ഞങ്ങൾ ഞങ്ങളുടെ രാജ്യത്തിലേക്ക് മടങ്ങിയെത്തി; പക്ഷേ, പഴയതൊന്നുമായി സമരസപ്പെടാൻ ഞങ്ങൾക്ക് കഴിയുകയില്ല. പഴയതെല്ലാം ഞങ്ങൾക്കിപ്പോൾ അന്യമാണ്; അവയെ സംബന്ധിച്ചിടത്തോളം ഞങ്ങൾ മരിച്ചിരിക്കുന്നു. അതിൽ ഞാൻ സന്തോഷിക്കുന്നു." ക്രിസ്തുവിന്റെ ഉത്ഥാനരഹസ്യത്തിലൂടെ സംജാതമായ പുതിയ ലോകവ്യവസ്ഥിതിയെക്കുറിച്ചും അജേതയവാദിയായിരുന്ന കവി ക്രിസ്തുവിനെ സ്വീകരിച്ചപ്പോൾ വ്യക്തിപരമായുണ്ടായ മാറ്റത്തെക്കുറിച്ചുമെല്ലാം വ്യംഗ്യമായി സൂചിപ്പിക്കുകയാണിവിടെ. ക്രിസ്തുവിന്റെ ജനനം തന്നിലെ പഴയ മനുഷ്യന്റെ മരണമായിത്തീർന്നു. തന്നിൽത്തന്നെ ഒരേ സമയം ജനനവും മരണവും ദർശിക്കപ്പെട്ടു. തന്റെ ദേശത്തു താൻ പുതിയൊരു മനുഷ്യനായിത്തീർന്നു; കാഴ്ചപ്പാടുകളിൽ, മനോഭാവങ്ങളിൽ, ഇടപെടലുകളിൽ എല്ലാം ഈ മാറ്റം പ്രതിഫലിക്കുന്നു.

കാൻറർബറി ആർച്ച്ബിഷപ്പായിരുന്ന റൊവാൻ വില്യംസ് പറയുന്നതുപോലെ വിശ്വാസ ജീവിതത്തെ എല്ലാ ചോദ്യങ്ങൾക്കും സന്തോഷകരമായ ഉത്തരം തരുന്ന ഒരുപകരണമായി കാണുന്നതിനുപകരം വളരെ ആഴമായ ഒരു ആന്തരികമാറ്റം ദ്യോതിപ്പിക്കുന്ന, ജീവിതത്തെ മറ്റൊരു വീക്ഷണകോണിലൂടെ നോക്കാനുപകരിക്കുന്ന, ക്ഷീണിതവും തണുപ്പൻ മനോഭാവവുമുള്ള ലോകത്തിൽ പുതിയൊരുതരം അസ്വസ്ഥത സൃഷ്ടിക്കാനുതകുന്ന ഉത്പ്രേരകമാവുകയെന്നതാണ് അഭികാമ്യം. ക്രിസ്തുവിനെ ദർശിച്ച, ക്രിസ്തുമസ് ദർശിച്ച ക്രിസ്ത്യാനിക്കുണ്ടാകേണ്ട മാറ്റത്തെക്കുറിച്ചു ഇത് നമ്മെ ഓർമ്മപ്പെടുത്തുന്നു. ക്രിസ്തുവിനെ കാണുമ്പോൾ ഹേറോദേസിന്റെ ആതിഥ്യം സ്വീകരിച്ചവർ ക്രിസ്തുദർശനം നേടി മറ്റൊരു വഴിക്കാണ് യാത്ര ചെയ്തത് (Mt.2:12). അതുപോലെ "നിങ്ങളുടെ പഴയ ജീവിതരീതിയിൽനിന്നു രൂപംകൊണ്ട വഞ്ചന നിറഞ്ഞ ആസക്തികളാൽ കലുഷിതനായ പഴയ മനുഷ്യനെ ദൂരെയെറിയുവിൻ. നിങ്ങൾ മനസ്സിന്റെ ചൈതന്യത്തിൽ നവീകരിക്കപ്പെട്ടെ. യഥാർത്ഥമായ വിശുദ്ധിയിലും നീതിയിലും ദൈവത്തിന്റെ സാദൃശ്യത്തിൽ സൃഷ്ടിക്കപ്പെട്ട പുതിയ മനുഷ്യനെ നിങ്ങൾ ധരിക്കുവിൻ" (Eph. 4:22-24). ഇങ്ങനെ ക്രിസ്തുമസ് നമ്മുടെ ജീവിതത്തിൽ മാറ്റത്തിന്റെ മണിമുഴക്കമായിത്തീരട്ടെ!

സഹായകഗ്രന്ഥസൂചി

T. S Eliot (1927). The Journey of the Magi.

മാന്നാനം കുന്നിലെ മെയ് മാസപ്പൂക്കൾ

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സി.ജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}

^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

ബെൻ ജോൺസന്റെ ചെറുകവിതയാ ഉത്കൃഷ്ടപ്രകൃതി യുടെ പശ്ചാത്തലത്തിൽ നിന്നുകൊണ്ട് മാന്നാനം കുന്നിൽ സ്ഥാപിതമായ വലിയൊരു ആത്മീയ- സാമൂഹ്യ മുന്നേറ്റത്തെ നോക്കിക്കാണുന്നു.

കീലപദങ്ങൾ: ലിപ്ലിപ്പൂക്കൾ, മാന്നാനം 17-ആം നൂറ്റാണ്ടിലെ സുപ്രസിദ്ധ നാടകകൃത്തും കവിയുമായിരുന്നു ബെൻ ജോൺസൺ. അനശ്വര നാടകകൃത്തായ ഷേക്സ്പിയർ ഒരു കാലത്തു ഇദ്ദേഹത്തിന്റെ നാടകവൃത്തിയിൽ അഭിനേതാവായിരുന്നു. ബെൻ ജോൺസന്റെ ഒരു ചെറുകവിതയാണ് "ഉത്കൃഷ്ടപ്രകൃതി (The Noble Nature)". അതിലെ അതിമനോഹരവും അർത്ഥവത്തുമായ വരികൾ ഇപ്രകാരമാണ്.

"മരം പോലെ അത് വളരുന്നില്ല
മനുഷ്യനും ഭീമാകാരനായതിനാൽ മെച്ചപ്പെട്ടവനാകണമെന്നില്ല;
മുന്നൂറു വയസ്സു താണ്ടുന്ന കരുവേലമരം പോലെയുമാകേണ്ട,
മരക്കുഷണമായി വരണ്ടുണങ്ങി ഒരുന്നാൾ അത് നിപതിക്കുന്നു;
ദിനാന്തം കൊഴിയുന്ന ലിപ്ലിപ്പൂക്കൾ
ചാരുതയേകിടുന്നേ മെയ് മാസത്തിനു
വാടിവിണൊരാ നിശിമിനിയിൽ കമാവശേഷയാകിലും
ദീപ്തമാക്കുമതിൻ പൂഷ്പാമൃതത്തെ.
സൗന്ദര്യ ദർശനത്തിൻ ചെറുഭാഗമെങ്കിലും
ജീവിതപൂർണ്ണതയ്ക്കുദാത്തമാതുക."

ആകാരഭംഗിയും വലിയും ബന്ധു-മിത്ര ഗണങ്ങളുമല്ല, പ്രത്യുത ജീവിതഗുണമാണ് വ്യക്തിത്വത്തിന്റെ കാതൽ എന്ന അഗോചരസത്യമാണ് കവിഭാവനയിൽ വെളിപ്പെടുന്നത്. മരങ്ങളെപ്പോലെ ബലവും കരുവേലമരത്തെപ്പോലെ നൂറ്റാണ്ടുകൾ നീളുന്ന ആയുർദൈർഘ്യവും ലഭിച്ചാലും അവയുടെ അന്ത്യം ദുരന്തപൂർണ്ണമായിരുന്നു. ഹേ മനുഷ്യാ, നിന്റെ വിധിയും ഇതുതന്നെയായിരിക്കും. അതിനാൽ നമുക്ക് ദിനമാത്രം കൊഴിയുന്ന ലിപ്ലിപ്പൂക്കളെ പോലെയൊക്കാം. മെയ് മാസത്തിനു തന്റെ ചാരുതകൊണ്ട് ഉടുപ്പുതുണുകയാണവൾ. ദിനാന്ത്യത്തിൽ താനും ഭൂമിയോട് അലിഞ്ഞുചേരുമെന്നറിഞ്ഞിട്ടും പകലിനെ അവൾ കൂടുതൽ പ്രകാശമാനമാക്കുന്നു. അവളുടെ മനോഹാരിതയുടെ നൈമിഷികദർശനമാണ് മിന്നലൊളിപ്പോലെ തൂവുന്നതെങ്കിലും അത് ഒരുവനിലുണ്ടാക്കുന്ന നിറവ് അവാച്യമാണ്. 'ജീവിച്ചു വർഷമല്ല,

വർഷിച്ച ജീവിതമാണ് ആയുസ്സിന്റെ പുസ്തകത്തിൽ എണ്ണപ്പെടുക എന്ന് സാരം.

മെയ് മാസത്തിലെ ലില്ലിപ്പൂക്കൾ നമ്മുടെ നാട്ടിലെയും നയനമനോഹരമായ ഒരു കാഴ്ചയാണ്; വേനൽമഴയുടെ തണലുപറ്റി നാടു പച്ചപിടിച്ചു തുടങ്ങുമ്പോൾ അവിടവിടെയായി പുഷ്പിച്ചു നിൽക്കുന്നവ, ചിലയിടത്തേല്ലാം പൂപ്പാടങ്ങൾ തീർക്കുന്നവ, അങ്ങനെയെല്ലാം... വേനലിന്റെ അത്യുഷ്ണത്തിൽനിന്നു മഴക്കാലത്തിന്റെ ആർത്തിരവിലേക്കുള്ള മാറ്റത്തിനിടയിലെ ഹ്രസ്വകാലത്തെ ഓർമ്മിപ്പിക്കുന്ന, ലോലമായ തണ്ടും മൃദുലമായ പൂക്കളുമുള്ള ലില്ലിപ്പൂക്കൾ ദേശാതിവർത്തികളാണ്.

മെയ് മാസം നമ്മുടെയുള്ളിലുയർത്തുന്ന മറ്റു ചില ചിന്തകൾ കൂടിയുണ്ട്; മെയ് ദിനം അഥവാ അവിലലോക തൊഴിലാളി ദിനവും തൊഴിലാളി മധ്യസ്ഥനായ വി. യുസേപ്പിതാവിന്റെ തിരുനാളും മെയ് മാസറാണിയായ പരി.കന്യകാമറിയത്തിന്റെ വണക്കമാസ കാലവുമാണിത്.

മെയ് മാസത്തിന്റെ ഈ പ്രത്യേകതകൾക്കപ്പുറം, എന്നാൽ ഇവയെയെല്ലാം സ്വാംശീകരിക്കുന്ന കേരളക്കരയിലെ മറ്റൊരു ചരിത്ര സംഭവം കൂടിയുണ്ട്;

200 വർഷങ്ങൾക്കുമുമ്പ് നമ്മുടെ കേരളക്കരയിൽ വിരിഞ്ഞ ചില ലില്ലിപ്പൂക്കളുമായി ബന്ധപ്പെട്ടതാണ്. മെയ് മാസപൂക്കളെപ്പോലെ ഹ്രസ്വമായ ജീവിതമെങ്കിലും ദീർഘമായ വീക്ഷണം അവർക്കു കൈമുതലായുണ്ടായിരുന്നു; അറുപത്തിയാറാം വയസ്സിൽ ഇഹലോകവാസം വെടിഞ്ഞ പാലക്കൽ തോമ മല്പാനും (1775-1841) വി.ചാവറ കുര്യാക്കോസ് ഏലിയാസച്ചനും (1805-1871), വെറും നാല്പത്തിയേഴു വർഷം മാത്രം ജീവിച്ച പോർക്കര തോമ കത്തനാരും (1799-1846), കണിയാന്തറ യാക്കോബ് സഹോദരനുമായ (1800-1898) താപസതേജസ്സികളായിരുന്നു ഈ ലില്ലിപ്പൂക്കൾ. ഓരോ മേയ്മാസവും മെയ് ദിനത്തിന്റെയും മെയ് മാസറാണിയുടെയും ഓർമകളോട് ചേർന്ന് കേരള സഭയ്ക്ക് സമ്മാനിക്കുന്നത് ഈ മേയ്മാസ പൂക്കളുടെയും സ്മരണകളാണ്. വിളക്ക് കൊളുത്തി പറയുടെ അടിയിൽ വയ്ക്കാതെ പീഠത്തിന്മേൽ വയ്ക്കുമ്പോൾ അത് സകലർക്കും പ്രകാശമേകും എന്ന തിരുവചനാസൂത്രം 1831 മെയ് 11-ആം തീയതി മാർ മൗറീലിയോസ് മെത്രാപ്പോലീത്തയുടെ അനുഗ്രഹാശിസ്സുകളോടെ ആ പൂക്കൾ കൊളുത്തിവെച്ച ദീപം, കേരളത്തിൽ ഇന്നുള്ളതിൽ ഏതദ്ദേശീയവും ഏറ്റവും പുരാതനവുമായ സന്യാസസഭ, ഇന്ന് ലോകത്തിനുമുഴുവൻ പ്രഭയേകുന്നു. മാനാനം കുനിൽ പരി. അമ്മയുടെ നാമത്തിലുള്ള സന്യാസസഭ വി. യുസേപ്പിതാവിന്റെ നാമധേയത്തിലുള്ള ആദ്യ ഭവനവുമായി ഒരു മെയ് മാസത്തിൽ സ്ഥാപിതമായെങ്കിൽ തീർച്ചയായും

അത് മെയ് മാസപൂക്കളായ ഈ ദൈവികമനുഷ്യരിലൂടെ ദൈവം പ്രവർത്തിച്ചതാണ്. 1955 ലാണ് പിയൂസ് പന്ത്രണ്ടാമൻ പാപ്പാ ലോക തൊഴിലാളി മധ്യസ്ഥനായി വി. യൂസേപ്പിനെ പ്രഖ്യാപിച്ചത്; 1965ൽ പോൾ ആറാമൻ പാപ്പാ Mense Maio എന്ന ചാക്രികലേഖനത്തിലൂടെ മെയ് മാസ ഭക്തി ഔദ്യോഗികമായി പ്രഖ്യാപിച്ചു. എന്നാൽ പരി. കന്യാകാമറിയത്തോടുള്ള മെയ് മാസ ഭക്തിയും തൊഴിലാളി ദിനാചരണവും തൊഴിലാളി മധ്യസ്ഥനായ വി. യൂസേപ്പ് പിതാവിന്റെ തിരുനാളാചരണവുമെല്ലാം മെയ് മാസത്തിന്റെ പ്രത്യേകതകളായി ലോകത്തിൽ അംഗീകരിക്കപ്പെടുന്നതിനു ഒരു നൂറ്റാണ്ടു മുൻപേ തന്നെ ഇവയെല്ലാം സംയോജിപ്പിക്കുന്ന ഒരു ജീവിതരീതിയും സന്യാസചര്യയും കേരളനാടിനു സമ്മാനിക്കപ്പെട്ടുവെന്നത് 'ദൈവത്തിന്റെ സ്വന്തം നാട്'ന കേരളത്തിന്റെ അപരനാമത്തെ അരക്കിട്ടുറപ്പിക്കുന്നു.

മെയ് മാസം വേനലിനെയും മഴയെയും ബന്ധിപ്പിക്കുന്നതെങ്കിൽ വാച്ചവനവാസത്തിനും ലോകത്തിനുമിടയിൽ ഒരു പാലമായിരിക്കാൻ അവർ ആഗ്രഹിച്ചു. പകലിന്റെ പ്രകാശത്തെ കൂടുതൽ പ്രകാശമാനമാക്കുവാൻ അവർ തങ്ങളുടെ ജീവിതം വ്യയം ചെയ്തു. കുറഞ്ഞജീവിതത്തിലെ കൂടുതൽ ആത്മാവും ജീവനും അവർ ദൈവത്തിനും നാടിനുമായി സമർപ്പിച്ചു. നാടിനെ പച്ചപ്പിടിപ്പിക്കാനും അതിന്റെ പുഷ്പീകരിക്കലിനും കൈ-മെയ് മറന്നു അധ്വാനിച്ച അവർ തന്നെയാണ് മെയ്ദിനത്തിന്റെ കേരള മാതൃക. ബലഹീനപാത്രമെന്നു ശാരീരികമായി തോന്നുകിലും കാരിരുമ്പുപോലെ കരുത്തുറ്റ മനസ്സും ഓജസ്സും തേജസ്സും നിറഞ്ഞ ആത്മാവും അവർക്കു കൈമുതലായിരുന്നു; നിറകുടം തുളുമ്പില്ല എന്ന പഴഞ്ചൊല്ലുപോലെ ആ ഭാവമൊന്നും അവരിൽ ലവലേശം പ്രകടമായിരുന്നില്ല താനും. ലില്ലിപ്പൂക്കളെപ്പോലെ അവർ സ്ഥാപിച്ച സിഎംഐ സന്യാസസഭയും ദേശാതിവർത്തിയായും കാലാന്തരങ്ങൾ താണ്ടിയും നിലനിൽക്കുന്നു. കന്യാവ്രതക്കാരുടെ രാജ്ഞിയും മാതൃകയുമായ പരി. മറിയത്തിന്റെയും കന്യാവ്രതക്കാരുടെ മധ്യസ്ഥനായ വി. യൂസേപ്പിന്റെയും കാലടികൾ ഒരുപോലെ പിഞ്ചെന്നവരാണവർ. മെയ് മാസ വണക്കത്തിന്റെ അന്തരീകാർത്ഥം ആഴത്തിൽ ഗ്രഹിച്ച അവർ മാനാനം കുന്നിൽ നമുക്കായി വിരിഞ്ഞ മെയ് മാസപ്പൂക്കൾ തന്നെയാണ്.

സഹായകഗ്രന്ഥസൂചി

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ഈ ഊഷര പ്രണയകാലത്ത്...

ജോമോൻ കൊട്ടാരത്തിൽ ^{1*}, സി.സിജോ ഫ്രാൻസിസ് ^{1*}, സി. ബെറ്റ്സി പോൾ ^{1*} & ബിജു സ്കറിയ ^{1*}
^{1*} സെൻറ്. ജോസഫ്സ് കോളേജ്, മൂലമറ്റം

പ്രബന്ധസംഗ്രഹം

സ്നേഹത്തിന്റെ ഏറ്റവും സമൃദ്ധമായ ഭാവമാണ് ഉദാത്തസ്നേഹം. ഏറ്റവും പരിശുദ്ധവും കറപുരളാത്തതുമായതിനാൽ ശാരീരിക സൗന്ദര്യത്തിനും സൗഹൃദത്തിനും രക്തബന്ധത്തിനുമനപ്പുറമാണിത്. യാതൊരു വ്യവസ്ഥകളുമില്ലാതെ സ്നേഹിക്കുക; സ്നേഹിച്ചുകൊണ്ടേയിരിക്കുക എന്നതിനാൽ സാർവത്രികസ്നേഹമെന്നാണിതിനെ വിളിക്കുന്നത്. പ്രണയം ഉദാത്തസ്നേഹമായി വളരേണ്ടതിന്റെ ആവശ്യകതയിലേക്കു ഇവിടെ വിരൽ ചൂണ്ടുന്നു.

കീലപദങ്ങൾ: പ്രണയം, സൗഹൃദം, വാത്സല്യം, ഉദാത്തസ്നേഹം, വിശ്വവിദ്യാതനായ ആംഗലേയ സാഹിത്യകാരൻ വില്യം ഷേക്സ്പിയറിന്റെ അനശ്വരസ്നേഹഗീതമാണ് "Sonnet 116" അഥവാ "ഗീതിക 116". അതിന്റെ സ്വതന്ത്രവിവർത്തനം ഇപ്രകാരമാണ്: ഹൃദയംഗമസ്നേഹപ്രതീകമാം പ്രാണപ്പെരുത്തത്തിൻ തടസ്സമായി ഞാനില്ല. സ്നേഹം സ്നേഹമല്ലാതാകും അതിൽ കുത്തിത്തരിപ്പുകളുണ്ടെങ്കിൽ, അഥവാ അതിലൊന്ന് വ്യാജമെങ്കിൽ: അങ്ങനെയൊരാളിരിക്കട്ടെ! സ്നേഹമൊരു പ്രകാശഗോപുരം കടൽത്തീരമാലകളുതിനെക്കുലുകുലിപ്പി; നഷ്ടയാനങ്ങൾക്ക് ധ്രുവനക്ഷത്രവുമത്, അതിൻമൂല്യമജ്ഞാതമത്രെ, ഔന്നത്യമറിയിടിലും. സമയത്തിൻ കാരുണ്യമതു കേഴാറില്ല, അംഗലാവണ്യങ്ങളെ കാലചക്രം തൻ കൊയ്ത്തരിവാളാൽ ഇറുത്തീടിലും; പക്ഷവിനാഴികകൾക്കഭേദ്യമാം സ്നേഹം, ജീവിതാന്ത്യത്തോളമതിൻപ്രഭുവിതറുന്നു. ഇസ്സനേഹചിന്തകളിലൊന്നു പിഴവുറ്റതെങ്കിൽ, ഞാനൊന്നുമെഴുതിയിട്ടുമില്ല, ലോകരാരും സ്നേഹിച്ചിട്ടുമില്ല.

ആത്മാർത്ഥ സ്നേഹത്തിന്റെ വക്താവൊരാൾ വെമ്പൽ കൊള്ളുന്ന ഹൃദയാഭിലാഷമാണ് ഇവിടെ കാണുന്നത്; ഇത് കവിയുടെ മാത്രമല്ല, ഓരോ സഹൃദയന്റെയും അഥവാ നമ്മു നിറഞ്ഞ ഓരോ മനുഷ്യന്റെയും വികാരമാണ്. നിർവ്യാജസ്നേഹത്തിന്റെ ശക്തി അപാരമാണ്; സ്വാധീനം അനിർവചനീയവും. ശരീരവടിവും ആകാരഭംഗിയും കാലക്രമേണ അപ്രത്യക്ഷമായാലും ഉദാത്തസ്നേഹം

ചിരഞ്ജീവിയാണ്. സ്നേഹമെന്ന പദത്തെക്കുറിച്ചു ആയിരക്കണക്കിന് പുസ്തകങ്ങൾ എഴുതാൻ സാധിച്ചേക്കാം; എന്നാൽ ആ പദത്തിന്റെ അർത്ഥം അതിന്റെ പൂർണ്ണതയിൽ എത്രമാത്രം ജീവിക്കാൻ സാധിക്കുമെന്നത് നമ്മുടെ മുൻപിലുള്ള വലിയൊരു ചോദ്യചിഹ്നമാണ്. അരുമയാം സ്നേഹം അഭ്യസിക്കുന്നവർക്കു ജീവശ്വാസത്തിനു തുല്യമാണത്; സ്നേഹം നിലയ്ക്കുന്നത് ശ്വാസനം നിലയ്ക്കുന്നതിനു സമാനമാണവർക്ക്.

കാല്പനിക സ്നേഹത്തിന്റെ ഉച്ചസ്ഥായിയായ ഭാവമായിട്ടാണ് പ്രണയം വിശേഷിപ്പിക്കപ്പെടുന്നത്. സ്ത്രീയും പുരുഷനും അവരുടെ വികാര തീക്ഷ്ണതയുടെ പാരമ്യത്തിലേത്തി നിൽക്കുന്ന സ്നേഹമാണിത്. അനശ്വര പ്രണയ കാവ്യങ്ങൾ പലതും രൂപപ്പെട്ടിരിക്കുന്നത് ഇതിനെ കേന്ദ്രീകരിച്ചാണ്. റോമൻ ആഘോഷമായിരുന്ന Lupercalia യുടെ ചുവടുപിടിച്ചാണ് ഇന്ന് പ്രചുരപ്രചാരമായ Valentine's Day തുടങ്ങിയതെന്ന വാദമുണ്ട്. ഒരു പരിധിവരെ പ്രാചീനകാല യുദ്ധങ്ങളുടെ പ്രധാന കാരണങ്ങളിലൊന്ന് പ്രണയമായിരുന്നു. കഥകളുടെയും കവിതകളുടെയും നോവലുകളുടെയും നാടകങ്ങളുടെയുമെല്ലാം അവിഭാജ്യഘടകമായി പ്രണയം ഇന്നും നിലകൊള്ളുന്നു. റോമിയോ-ജൂലിയറ്റ്, മാർക്ക് ആന്റണി-ക്ലിയോപാട്ര, ഷാജഹാൻ-മുംതാസ് തുടങ്ങിയ പ്രണയജോടികൾ നമുക്ക് സുപരിചിതമാണല്ലോ.

പ്രേമത്തിനു കണ്ണില്ല എന്നാണല്ലോ പറയാറ്. അന്യമായ സ്നേഹത്തിന്റെ പര്യായമത്രെ പ്രണയം. അനശ്വരവും ആത്മാർത്ഥവുമായ പ്രണയത്തെക്കുറിച്ചുള്ള ഏറ്റവും സുന്ദരമായ ഗീതകങ്ങൾ ആണ് ബൈബിളിലെ ഉത്തമ ഗീതങ്ങൾ. പാട്ടുകളുടെ പാട്ടെന്നറിയപ്പെടുന്ന ഉത്തമഗീതത്തിൽ ദൈവ - മനുഷ്യസ്നേഹഗീതങ്ങളാണ്; അസാമാന്യ സൗന്ദര്യമുള്ള പ്രണയഗീതമെന്ന് വിശേഷിപ്പിക്കപ്പെടുന്ന ഇത് ദൈവവും ദൈവജനവും തമ്മിലുള്ള അഗാധമായ പ്രണയത്തിന്റെ വിവരണമാണ്.

പ്രണയപുഷ്പങ്ങൾ പൂവിടുന്ന കുളിർമയിൽ നിന്ന് നിർവികാരതയുടെ ഊഷരതയിലേക്കുള്ള സഞ്ചാരമാണ് ഫെബ്രുവരിയുടെ യാത്ര. മനുഷ്യജീവിതവും പലപ്പോഴും ഇതിനു സമാനമായിത്തീരുന്നു. നനുത്ത പ്രണയങ്ങൾ ഊഷരജീവിതങ്ങളായി അവസ്ഥാന്തരം പ്രാപിക്കുന്നു. പ്രാണനേകുന്നതാണ് പ്രണയം എന്നതിൽനിന്ന് പ്രാണൻ എടുക്കുന്ന പ്രണയത്തിലേക്ക് ലോകം മാറിയിരിക്കുന്നു. അമ്മ കുഞ്ഞുങ്ങളെ മറക്കുന്നു; പ്രാണൻ വേണ്ടി വാവിട്ടു നിലവിളിക്കുന്ന പൈതങ്ങളെ അപ്പന്മാർ നിശബ്ദരാക്കുന്നു. സ്ത്രീകൾ ഭാര്യത്വവും മാതൃത്വവും മറന്ന് ഇന്നലെ പരിചയപ്പെട്ടവന്റെ കൂടെ ഒളിച്ചോടിപ്പോകുന്നതും ചതിയിലകപ്പെട്ടു ജീവിതം തന്നെ നശിക്കപ്പെടുന്നതും ഇന്ന് സാധാരണ

സംഭവമായിരിക്കുന്നു. എട്ടും പൊട്ടും തിരിയാത്ത പാവപ്പെട്ട പെൺകുട്ടികളെ വളച്ചെടുത്ത് അവരുടെ ജീവിതങ്ങൾ പിഴിയിച്ചിരുന്ന നരാധമന്മാരുടെ സംഖ്യ അനുഭവം വർദ്ധിക്കുന്നു. കണ്ണും കൈയും കാട്ടി പുരുഷന്മാരുടെ കത്തിയിൽ പാറ്റയിടുന്ന സ്ത്രീജന്മങ്ങളും ഇന്ന് കുറവല്ല. മാതാവിന്റെ നെഞ്ചിടിപ്പും പിതാവിന്റെ നെഞ്ചിലെ ചുടും കുഞ്ഞുങ്ങൾക്ക് ഇന്ന് അന്യമായിക്കൊണ്ടിരിക്കുന്നു.

പ്രണയമെന്ന പദത്തിന്റെ ആർദ്രത തുലോം നഷ്ടമായിക്കൊണ്ടിരിക്കുന്ന ഒരു കാലഘട്ടമാണിത്. പഞ്ചേന്ദ്രിയങ്ങളെ തൃപ്തിപ്പെടുത്തുന്നതിനപ്പുറം സ്ഥായിയായ സ്മൃതിയാകാൻ സാധിക്കുന്നില്ല എന്നതാണതിൻ പരാജയം. ആഘോഷപൂർവ്വമായ ആരംഭവും അലോസരമായ അവസാനവുമാണ് പലപ്പോഴും പ്രണയത്തിനുള്ളത്. ഒരു പരിധിവരെ ഉപരിപ്ലവമായ സ്നേഹത്തിന്റെ പരിണിതഫലമാണ് ലോകത്തിൽ ഇന്ന് കാണുന്ന ദാമ്പത്യപരാജയങ്ങൾ. കവികൾ വാഴ്ത്തിപ്പാടുന്ന പ്രണയത്തിന്റെ മാധുര്യം എങ്ങോ പോയ് മറഞ്ഞിരിക്കുന്നു. ചില പ്രണയങ്ങളെങ്കിലും വെറും മുഖംമൂടികളാണെന്ന് നാം തിരിച്ചറിഞ്ഞുകൊണ്ടിരിക്കുന്നു; നമ്മുടേതും മറ്റുള്ളവരുടേതും. അനശ്വര പ്രണയങ്ങൾ നൈമിഷിക ചേതോഹരങ്ങൾക്ക് വഴിമാറുന്നു. ഇന്നത്തെ ലോകം പ്രണയത്തെ കുറിച്ച് വാതോരാതെ സംസാരിക്കുന്നു; എന്നാൽ അതിന്റെ ചുമതലകൾ അവർക്ക് താങ്ങാനാവാത്ത ചുമട് പോലെ ഭാരമേറിയതായിരിക്കുന്നു. പ്രണയത്തിലവസാനിക്കുന്നതല്ല ജീവിതം; അതിനിനിയും വളരാനുണ്ട്; വളരേണ്ടിയിരിക്കുന്നുമുണ്ട് എന്ന് നാം മനസ്സിലാക്കേണ്ടതുണ്ട്. ഗ്രീക്ക് തത്വചിന്തപ്രകാരം സ്നേഹത്തിന് 4 ഭാവങ്ങളുണ്ട്: അതിലൊന്നുമാത്രമാണ് പ്രണയം(Eros). സൗഹൃദം(Philia), വാത്സല്യം (Storge), ഉദാത്തസ്നേഹം (Agape) എന്നിവയാണ് മറ്റുള്ളവ.

സൗഹൃദം(Philia): സമാനമനസ്ക്കർക്കിടയിൽ കാണപ്പെടുന്ന സ്നേഹമാണ് സൗഹൃദം. ഒരേ മനസ്സും ഒരേ ഹൃദയവുമായി മുന്നേറുന്നവരെ കൂട്ടിയിണക്കുന്ന കണ്ണിയാണിത്. പരസ്പരവിശ്വാസമാണിതിന്റെ ആണിക്കല്ല്. ആർജിക്കുന്ന സൽപ്പേരും വിശ്വാസ്യതയും ഇതിനെ ദൃഢമാക്കുന്നു. പ്രണയങ്ങൾ സൗഹൃദത്തിലേക്കു രൂപാന്തരപ്പെടുമ്പോൾ ആസക്തിയിൽനിന്നുയർന്നു ജീവിതതത്വങ്ങൾ രൂപപ്പെടുത്താനുള്ള പ്രചോദനമായി സൗഹൃദം മാറുമെന്നാണ് പ്ലേറ്റോ പറയുന്നത്. വി. ഫ്രാൻസിസ് അസ്സീസി- വി. ക്ലാർ, വി.യോഹന്നാൻ ക്രൂസ്-ആവിലായിലെ വി. അമ്മ ത്രേസ്യ, വി. ഫ്രാൻസിസ് സാലസ്-വി. ഫ്രാൻസിസ് ഷന്താൾ തുടങ്ങിയ വിശുദ്ധരും അവരുടെ സൗഹൃദവും സഭയ്ക്കും ലോകത്തിനും നൽകിയിട്ടുള്ള നന്മകൾ ഇത്തരൂണത്തിൽ സ്മരണീയമാണ്.

വാത്സല്യം (Storge) : ഏറ്റവും പ്രകൃതിദത്തമാണിത്. സ്നേഹിക്കപ്പെടുന്നയാൾ അതിനർഹനാണോ എന്ന് നോക്കാറില്ല. മൂലം നോക്കാതെ സ്നേഹിക്കുക. കുടുംബബന്ധത്തിലാണ് ഈ സ്നേഹഭാവം കൂടുതൽ വെളിപ്പെടുന്നത്. മാതാപിതാക്കളും മക്കളും തമ്മിലുള്ള സ്നേഹബന്ധത്തിലാണിത് തെളിവായി കാണുക. മാതൃത്വവും പിതൃത്വവും തുളുമ്പുന്ന ഹൃദയങ്ങളിൽനിന്ന് പുറപ്പെടുന്ന സ്നേഹമാണിത്: പുത്രസ്നേഹത്താൽ അന്ധമാകുന്ന വ്യക്തികളായി നാം മാറരുത് എന്നൊരു മുന്നറിയിപ്പുംകൂടി ഇതിനുണ്ട്. നൊമ്പരങ്ങൾ സമ്മാനിക്കുന്ന മക്കൾക്കുപോലും വാത്സല്യം മാത്രം തിരികെക്കൊടുക്കുന്ന മാതാപിതാക്കൾ ഇതിനു മകുടോദാഹരണമാണ്. പഴയനിയമത്തിലെ പൂർവ്വപിതാക്കന്മാരായ യാക്കോബ്-ജോസഫ്, രക്തസാക്ഷിത്വം വരിച്ച ശീമോണിയും ഏഴുമക്കളും(2 മക്ക.7) മകന്റെ മാനസാന്തരത്തിനായി കണ്ണീരോടെ പ്രാർത്ഥിച്ച വി. മോനിക്കയും മകൻ അഗസ്റ്റിനും വി.ചെറുപുഷ്പവും അവളെ വാത്സല്യത്തോടെ വളർത്തി ക്രിസ്തീയസ്നേഹം പകർന്നു നൽകിയ മാതാപിതാക്കളായ വി. മാർട്ടിനും വി.സെലിഗ്ഗരിനും കുടുംബബന്ധത്തിലെ വാത്സല്യമനോഭാവത്തിന്റെ പ്രതിബിംബങ്ങളാണ്.

ഉദാത്തസ്നേഹം (Agape): സ്നേഹത്തിന്റെ ഏറ്റവും സമ്യക്കായ ഭാവമാണിത്. ഏറ്റവും പരിശുദ്ധവും കറപുരളാത്തതുമായതിനാൽ ശാരീരിക സൗന്ദര്യത്തിനും സൗഹൃദത്തിനും രക്തബന്ധത്തിനുമനപ്പുറമാണിത്. യാതൊരു വ്യവസ്ഥകളുമില്ലാതെ സ്നേഹിക്കുക; സ്നേഹിച്ചുകൊണ്ടേയിരിക്കുക എന്നതിനാൽ സാർവത്രികസ്നേഹമെന്നാണിതിനെ വിളിക്കുന്നത്. ക്രിസ്തുവിന്റെ കുരിശിലെ സ്നേഹത്തിലാണിത് പൂർണ്ണമായി ദർശിക്കുക.

ഏറ്റവും ശ്രേഷ്ഠമായ സ്നേഹഗായകൻ ക്രിസ്തുവാണ്; ഏറ്റവും ശ്രേഷ്ഠമായ സ്നേഹവചനം 'നിന്നെപ്പോലെ നിന്റെ അയൽക്കാരനെ സ്നേഹിക്കുക' എന്നതാണ്; ഏറ്റവും ശ്രേഷ്ഠമായ സ്നേഹഗീതം 1 കോറി 13:1 -13 ആണ്; ഏറ്റവും ശ്രേഷ്ഠമായ സ്നേഹകാവ്യം വിശുദ്ധഗ്രന്ഥമാണ്. ക്രിസ്തുമതത്തെ സ്നേഹമതമെന്നാണ് പലരും വിശേഷിപ്പിക്കുന്നത്. ടൈം മാഗസിനിൽ എഴുതിയ ഒരു ലേഖനത്തിൽ ബൈബിളിന്റെ സാരാംശംതന്നെ "തന്റെ ഏകജാതനെ നൽകാൻ തക്കവിധം ദൈവം ലോകത്തെ അത്രമാത്രം സ്നേഹിച്ചു" (യോഹ. 3: 16) എന്ന വചനമാണ് എന്നൊരു പത്രപ്രവർത്തകൻ പറയുന്നു. ദൈവത്തെപ്പോലും സ്നേഹം എന്ന ഒറ്റ വാക്കിൽ വി.യോഹന്നാൻ സംഗ്രഹിക്കുന്നു (1 യോഹ. 4:8, 16)! നമുക്കും ഈ ഉദാത്ത സ്നേഹത്തിന്റെ ബഹിർസ്മരണങ്ങളാകാം. ഓർക്കുക; 'വിശ്വാസം, പ്രത്യാശ, സ്നേഹം ഇവ മൂന്നും നിലനില്ക്കുന്നു. എന്നാൽ സ്നേഹം ആണ് സർവ്വോത്കൃഷ്ടം' (1 കോറി 13:12-13). അതിനാൽ 'കുഞ്ഞുമക്കളേ, വാക്കിലും സംസാരത്തിലുമല്ല നാം സ്നേഹിക്കേണ്ടത്;

പ്രവൃത്തിയിലും സത്യത്തിലുമാണ്' (1 യോഹ.3:18).

സഹായകഗ്രന്ഥസൂചി

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Solid Dispersions in Drug Delivery

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Abstract

Drug formulation is critical in pharmaceutical development, comprising active pharmaceutical ingredients (APIs), excipients, and dosage forms. Solid dispersions are vital for enhancing the solubility and bioavailability of poorly water-soluble drugs. This review deals with various methods, including fusion, solvent evaporation, hot melt extrusion, spray drying, co-precipitation, and melt agglomeration, which are employed to prepare solid dispersions, improving drug delivery and patient outcomes.

Keywords: Drug delivery, Solid dispersions, Excipient

Introduction

The drug is essentially composed of two components namely the excipient and the Active Pharmaceutical Ingredient (API). According to World Health Organization (WHO), API is "a substance used in a finished pharmaceutical product (FPP), intended to furnish pharmacological activity or to otherwise have direct effect in the diagnosis, cure, mitigation, treatment or prevention of disease, or to have direct effect in restoring, correcting or modifying physiological functions in human beings". There are also cases like multiple therapies, wherein more than one API is present, to treat different symptoms and act in different ways. The excipient is defined as a "substance(s) other than the API which has been appropriately evaluated for safety and is included in a drug delivery system to either aid processing of the system during manufacturing or protect, support or enhance stability, bioavailability or patients compliances or assist in product identification and enhance any other attributes of overall safety and effectiveness of drug product during storage or use", by the International Pharmaceutical Excipients Council. Rarely, the excipients also possess pharmacological activity. Excipients are also classified as binders, fillers, lubricants, glidants, compression aids, colors, sweeteners etc., based on their functions.

Amorphous Solid Dispersions

Oral drug delivery is regarded as the easiest, simple and widely accepted method for drug administration. However, in many cases, this method is found to be inefficient for several reasons, such as poor bioavailability of drugs. The most important problem in a drug formulation is the poor bioavailability and dissolution rate of poorly water-soluble drugs. Several approaches have been employed to overcome these issues, such as the preparation of solid dispersions, crystallization, nanosuspensions, lipid-based drug delivery systems etc. Among these, solid dispersions have gained considerable interest as the most effective approach for improving the bioavailability and the dissolution rate. Sekiguchi and Obi were the first ones to describe solid dispersion in the year 1961. In general solid dispersions can be defined as the dispersion of one or more pharmaceutical ingredients in a carrier or matrix in a solid state. The matrix can be amorphous or crystalline. Based on the arrangement, solid dispersions can be broadly classified into three categories viz. eutectics, amorphous precipitations in the crystalline matrix and solid solutions. Eutectic mixtures are composed of two components that are completely miscible in the liquid state and also, often, to a lesser extent, in the solid state. They are generally prepared by the melt fusion method. The second category, is similar to an eutectic mixture and the only difference is that the drug is precipitated in the amorphous state. In solid solutions, both components crystallize together in a single-phase system and are generally prepared by solvent evaporation or co-precipitation methodologies.

With reference to the Biopharmaceutical Classification System (BCS), drugs are classified into four categories. Solid dispersion strategy is the most promising technology being

employed for BCS class II drugs, i.e. drugs with high permeability and low aqueous solubility. Drug delivery involves many important aspects such as delivery to a specific target size, fast release of low-solubility drugs, and sustained release of drugs that are soluble in aqueous solutions. According to the fundamental principle of general oral drug formulation, an ideal drug delivery system should deliver the API to the required site in a controlled manner, which in turn, reduces the frequency of dosage.

Different methods for the preparation of solid dispersions

Melting and solvent evaporation methods are the most commonly used methods for the preparation of solid dispersions.

Melting method

The melting method also known as the fusion method was first proposed by Sekiguchi and Obi. In this method, the physical mixture of the drug and the excipient is directly heated until melting occurs. The mixture is then rapidly cooled in an ice bath with vigorous stirring and solidified. The final product obtained is then crushed, pulverized and finally sieved. Although this technique is easier and simpler, still there exist serious concerns associated with this technique. Firstly, there are chances for the drug or the carrier to decompose or evaporate at the higher temperature employed. Secondly, the drug and the carrier may be immiscible, resulting in inhomogeneity or separation between the drug and the excipient. These limitations were overcome to a great extent by modified melt methods such as the hot melt extrusion method, melt agglomeration method, etc.

The hot Melt Extrusion (HME) method is highly similar to the melting method except that the mixing of the components is induced with the aid of an extruder. Herein, the drug-carrier powder blend is introduced into a heated barrel provided with a rotating screw via a hopper. Inside this barrel, the components are mixed in the liquid state and moved towards a die, which shapes the blend according to our requirements as pellets, tablets, films etc. In this case, too, the miscibility of the drug and the carrier is a matter of serious concern. Also, the amount of heat and the high shear forces applied are an issue for heat-sensitive substances. Unlike the melting method, this method suggests the opportunity for continuous production. Again, this method is disadvantageous for thermally labile materials, which cannot withstand high temperatures and works have been carried out in this line wherein a reduction in processing temperature was achieved with the use of CO₂.

MeltrexTM is a patented method for the preparation of solid dispersion and is also considered a modified melting method, just like HME. The major aids included in the MeltrexTM manufacturing setup are the use of a twin screw extruder and two independent hoppers to provide a broad temperature range. In this setup, the residence time of the components in the extruder is lowered, ensuring continuous mass flow, and thereby reducing thermal stress experienced by the drug and the carrier.

Melt agglomeration is yet another modified melting method, wherein the solid dispersions are prepared in conventional high-shear mixers. In this method, the mixture containing the drug, carrier and excipient is heated to a temperature within or above the melting point of the carrier. This method offers stable solid dispersions, when prepared in a rotary processor. The binder type, manufacturing method and particle size are the major parameters that decide the final nature of solid dispersions prepared via melt agglomeration method.

This technique is the most commonly used one for the preparation of solid dispersions. In this method, the physical mixture of the drug and the carrier is dissolved in a common solvent and later evaporated. As already mentioned, one of the major limitations faced by the melting method namely, the degradation of the drug or the carrier, can be prevented by adopting this technique, since only low temperatures are required for the evaporation of organic solvents. One of the major drawbacks of this technique is the difficulty associated with the complete removal of the solvent, negatively affecting the chemical stability of the drug. The use of

organic solvents and higher cost of preparation are also known to be its demerits. Based on the method adopted for the evaporation of the solvent, this technique can be classified into different classes such as vacuum drying, slow evaporation of the solvent at low temperatures, use of rotary evaporators, a stream of nitrogen, freeze-drying, spray-drying, heating of the mixture on a hot plate etc. Among those listed, spray-drying and freeze-drying are the most common ones and herein spray-drying the physical mixture of drug and the carrier dissolved in the solvent is sprayed into a stream of heated airflow. In the freeze-drying method, the physical mixture of the drug and carrier solubilized in the solvent is immersed in liquid nitrogen until completely frozen and later this solution is lyophilized.

Conclusion

In conclusion, understanding the basic drug formulation components and the significance of solid dispersions is crucial for pharmaceutical development. Solid dispersions play a pivotal role in addressing the solubility and bioavailability challenges associated with poorly water-soluble drugs. The choice of preparation method depends on drug characteristics and desired outcomes, highlighting the importance of tailored formulation strategies to enhance drug delivery and ultimately improve therapeutic effectiveness for patients.

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Controlled Release Urea Fertilizers

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Abstract

This review highlights the vital role of urea fertilizer in global agriculture while emphasizing the need for controlled release mechanisms to optimize its efficacy. Controlled-release urea fertilizers, including polymer-coated, encapsulated, and sulphur-coated variants, are explored in detail. These innovative formulations offer sustained nutrient release, minimizing environmental impacts and enhancing crop yields.

Keywords: Urea, Fertilizer, Controlled

Introduction

Urea is probably the most vital and widely used fertilizer due to its high nitrogen content (46%), ease of application, and low cost of production. The major drawback associated with the application of urea is the fast and premature decomposition, disabling the efficient absorption of nitrogen by the plant. Before the plant absorbs the nutrient, the evolution of ammonia occurs via the action of water, volatilization, urease enzyme etc. Urea undergoes various physico-chemical and biological transformations when applied to soil and produces various plant-available nutrients. Plants require very small amounts of nutrients in their initial stages and higher amounts for their upcoming stages of growth. Also, higher chances for leaching, surface run and vaporization of urea need to be considered. Consequently, major amounts of the nutrient will be absorbed by the plant at its initial stage of growth. Approximately, 40 to 70% of nitrogen escapes to the environment and only the remaining nitrogen uptake takes place. Globally, the current scenario is to go in tune with the rising agricultural production and over the years, research efforts were focused in this direction and their paramount aim was to develop highly efficient, biodegradable and low-cost cost-fertilizers. This issue is addressed by the development of CRFs and SRFs.

Controlled Release Urea Fertilizers

The first and foremost method adopted for the controlled release of urea was sulphur-coating. In one of the adopted procedures, urea was initially coated using wax which acts as a sub-coating, followed by spraying with sulfur and finally, plasticizers (such as polyethylene) were adhered to the sulfur surface to prevent cracking of the coated surface. In another procedure, urea was coated with molten sulfur using a spouted fluidized bed under temperature-pressure conditions. Urea was also coated using an outer polymer coating and an inner sulfur coating. This double coating provided more resistance to abrasion and cracks while handling it. A three-layer method of urea coating using sulfur is also reported. All these sulfur coated urea showed significantly good results with respect to controlled release. However, the major disadvantage associated with the use of sulfur is that it is prone to brittleness and the formation of microscopic pores due to the crystalline nature of sulfur. Also, it takes much time for the disintegration of sulfur into the soil and may end up in the acidification of the soil. On account of these, researchers began to investigate the viability of using polymer-based coatings for urea. The use of solvents for spray-coating of polymer on urea was too hazardous and this was replaced with aqueous polymer solutions. Also, urea was coated with polyurethane. Although expensive, the coating was observed to be very thin, and these thin coatings are reported to be superior and the entire urea was released in forty to fifty days.

Certain polymers with excellent swelling capacity and the ability to withstand high osmotic pressure were also used as coating materials for urea. Han et al. developed three different coatings for urea namely Ca-Mg Phosphate, polyolefin, polyolefin plus dicyanamide. All three

were observed to act as good CRFs. The feasibility of using poly(lactic acid-co-ethylene terephthalate) as a coating material for urea was investigated and the research group concluded that morphology played a vital role in deciding the extent of controlled release. Coating of urea granules using polyhydroxy butyrate and ethyl cellulose combination shows the fast release of urea, in approximately five minutes, which is too low for its application in the agricultural sector.

Polymer-based coatings, despite their ability to supply nutrients with respect to the plant needs and being inert against microorganisms, their usage has been reduced due to the continuous use of solvents and the complications in the coating methods. Super-absorbent polymer materials, known for their ability to absorb water, were used for the preparation of controlled-release urea. Double-coated urea such as inner coating of starch and outer coating of acrylic acid and acrylamide, inner coating of urea-formaldehyde and outer coating of cross-linked poly(acrylic acid)/organo-attapulgitite composite, inner layer of polystyrene and outer layer of cross-linked poly(acrylic acid), all these were identified to act as moderately good controlled release urea fertilizers. Triple-layer polymer coatings of urea using polyethylene, poly(acrylic acid-co-acrylamide), and poly (butyl methacrylate) were also studied and good results were observed.

However, upon realizing the importance of environment conservation together with stringent environmental protection rules, the use of all the above-mentioned CRFs reduced tremendously since most of them were observed to be non-biodegradable, toxic and highly expensive. This was followed by the discovery of a large number of environmentally friendly coatings. Even today, some of the commercially available fertilizers have coatings made from polyurethane, alkyl resin etc, which are highly non-biodegradable and may adversely affect the soil properties. Therefore, utmost attention must be kept while choosing coating materials for fertilizers and must ensure that the coating material applied is environmentally benign in all aspects.

Starch being inexpensive, abundant and biodegradable, is a choice for the design of CRFs. The hydrophilic nature of starch limits its application, but upon pertinently modifying starch with various materials, it may be used for this purpose. Different starch-based coatings discussed are dual coating using starch and isobutylidendiurea, coating using a solution of starch, polyethylene glycol and acrylic acid etc. These starch-based coatings couldn't gain much attention in this sector since it was not found to be compatible with the plant's needs. Controlled release of urea using lignin was also investigated. Neem and neem oil-based controlled urea fertilizer has gained considerable interest in recent years since it was scientifically proven that neem is an effective nitrification inhibitor. Neem-coated urea is one of the widely used commercial urea fertilizers. Likewise, still researchers are in search of suitable green coatings for urea.

Conclusion

In conclusion, urea fertilizer holds immense importance in agriculture, yet its conventional application can lead to nutrient loss and environmental issues. Controlled-release urea fertilizers, such as polymer-coated and encapsulated forms, offer a promising solution by ensuring gradual nutrient release, reducing wastage, and mitigating environmental impacts. Adoption of these advanced formulations can enhance crop productivity while promoting sustainable and responsible farming practices in the face of increasing global food demand and environmental concern.

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Solvent Attributes of Carbon Dioxide

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Abstract

The use of liquid and supercritical carbon dioxide (CO₂) as an eco-friendly solvent platform has been a cornerstone of green chemistry. This approach has spawned numerous inventive industrial techniques, harnessing CO₂'s innate properties like straightforward solvent removal and customizable solvent characteristics. To harness CO₂ effectively as a solvent, it is crucial to comprehensively evaluate its solvent attributes. This chapter focuses on a detailed discussion of CO₂'s solvent attributes, shedding light on its pivotal role as a green and versatile solvent in various applications, thus contributing to sustainable and environmentally conscious industrial processes.

Keywords: Carbon dioxide, Supercritical, Polar

Introduction

To effectively utilize CO₂ as a solvent, one needs to examine the solvent attributes of CO₂. Generally, scCO₂ is considered a feeble solvent for ionic, highly polar, and high molecular weight compounds because of its low dielectric constant.

CO₂ is a linear triatomic molecule belonging to the D_{∞h} point group and is thus considered a non-polar solvent. The zero dipole moment of CO₂, arising directly as a consequence of the shape of the molecule is responsible for its very low dielectric constant. The rule of thumb for solvation is “like dissolves like”. So, normally one would expect that the non-polar hydrocarbons and amphiphilic systems will be soluble in the “non-polar CO₂”. The dielectric constant of liquid/scCO₂ is even lower than that of hydrocarbons and so it was expected that CO₂ could be a good replacement for the hydrocarbon solvents. Contrary to these expectations, Consani and Smith showed that many of the hydrocarbon-based molecular systems are insoluble in CO₂. This led researchers to examine the microscopic aspects of solvation in more detail.

Despite the net dipole moment of the CO₂ molecule being zero, it has a significant quadrupole moment associated with it and on that account, CO₂ was often referred to as a quadrupolar solvent. Dipole-quadrupole interactions were used to explain the anomalous solvent attributes of CO₂. The idea of more site-specific interactions was also evoked to explain solvation in scCO₂. One important study that sheds more light on this is the comparison between the solvation of CO and CO₂ in H₂O. CO being a smaller molecule than CO₂ and a molecule having a non-zero dipole moment, one would expect CO to show high solubility in H₂O. But contrary to these expectations, CO₂ shows high solubility in H₂O. This may be attributed to a profound, specific, solute-solvent interaction arising because of hydrogen bonding between the oxygen atom of CO₂ and the hydrogen atom of H₂O since charge separation in CO₂ is on par with the H₂O molecule. Sato et al. have provided evidence for the solute-solvent interaction in the solvation of CO₂ by H₂O with the aid of a molecular dynamics study. Such site-specific, solute-solvent interactions are less important between CO and H₂O molecules. It was concluded that CO₂ can be considered a non-polar solvent with polar attributes.

1.4.2. Solvation of fluorocarbons in CO₂

By the late 1980's the use of scCO₂ as an alternative solvent was almost dismissed by researchers due to the poor CO₂-philicity of most common molecular systems. This made researchers think of identifying CO₂-philic molecular systems that can be attached to enhance the solubility of otherwise CO₂-insoluble molecules. Interestingly, in 1992, for the first time,

DeSimone et al. reported the solubility of poly(perfluoroalkyl acrylate) (Poly(FOA)) with a larger number of repeating units in CO_2 and accordingly suggested the synthesis of polymers and copolymers using fluorinated monomers. It was also demonstrated that the fluorocarbon systems have high solubility in CO_2 while the corresponding non-fluorinated counterparts were completely insoluble in CO_2 . Thereupon, a lot of research was focused on explaining the CO_2 -philic nature of fluoro compounds to investigate if there are any site-specific interactions existing between CO_2 and the fluorinated compounds with the aid of FT-IR, ^1H , and ^{19}F NMR, etc. A research team led by Yee et al. investigated the CO_2 -philic nature of these compounds using FT-IR spectroscopy, but couldn't observe any interactions rather could conclude that the high repulsive nature of fluorocarbon-fluorocarbon interactions is responsible for its high solubility. Later, Dardin et al. examined the solubility of n-hexane (C_6H_{14}) and perfluoro-n-hexane (C_6F_{14}) in CO_2 with the aid of ^1H and ^{19}F NMR technique, although they could not observe any specific interaction between C_6H_{14} and CO_2 , but could observe a chemical shift in C_6F_{14} spectra, which they attributed to van der Waals interactions between C_6F_{14} and CO_2 . Kazarian et al. also investigated the interactions between poly(vinyl fluoride) and CO_2 and observed a small splitting in the CO_2 bending mode of vibration and hence concluded that weak CO_2 -F interactions are responsible for its solubility in CO_2 . The discrepancies in NMR results for different compounds compared were reported to be due to structural and electronic differences between these molecules. Even now, there are conflicting views among researchers regarding the solvation dynamics of fluorinated compounds in scCO_2 . It is that the non-directional, dispersive interactions are largely responsible for the high miscibility of fluoro compounds in liquid and scCO_2 .

1.4.3 Polar attributes of scCO_2

Previous studies indicated that one needs to have a detailed, microscopic understanding of the solvation phenomena in CO_2 to enable the utilization of scCO_2 as an alternative solvent. CO_2 is a charge-separated molecule with a partial negative charge on the electronegative oxygen atoms and a partial positive charge on the carbon atom. Thus the carbon atom can act as a weak Lewis Acid (LA) and the oxygen atoms as a weak Lewis Base (LB) making it a solvent system wherein LA-LB type interactions can govern the solvation in it. A comparison of the atomic charges and bond dipoles on individual atoms of H_2O and CO_2 was reported by Raveendran et al. and is shown in Figure 1. It reveals that the charge separations in both molecules resemble very closely. It must be borne in mind that charges are only an abstract representation of the electron density distribution in the molecule. One observes a significant difference in the solvent behaviour of CO_2 and water. Water, with its extensive networks of cooperative hydrogen bonds, can act as an excellent solvent for polar units. These hydrogen bond networks break down when water is brought to supercritical conditions leading to a low dielectric constant. A faster, intra-chain, proton transfer mechanism was suggested in such situations to explain the observed reaction selectivity and enhanced reaction rates in such situations.

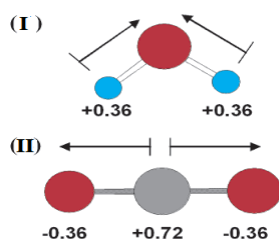


Figure I Illustration of bond dipoles and atomic charges on atoms of (I) H_2O and (II) CO_2

Based on the ab initio quantum chemical calculations on several carbonyl-containing prototype molecules, Raveendran et al suggested that carbonyl-containing compounds may be solvated in CO₂.

Interactions between CO₂ and sp³ C atoms of methanol and dimethyl ether were also reported. Forester groups, both ether oxygen and the carbonyl group contribute to the solvation in CO₂. The same was responsible for the solubility of certain polymers in liquid/scCO₂. Raveendran et al. also demonstrated that for systems such as methyl acetate, the oxygen atom in CO₂ can also form a cooperative C–H···O hydrogen bond with electron-deficient hydrogen atoms attached to the α -carbon atom attached to the carbonyl group.

Conclusion

In conclusion, the exceptional solvent attributes of carbon dioxide, particularly in its supercritical state are discussed in this review. Its environmentally friendly and versatile nature makes it a compelling choice for processes ranging from extraction and purification to green chemistry solutions, paving the way for innovative and sustainable advancements.

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A Review of Controlled Release Fertilizers

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Abstract

The escalating global food demand, driven by population growth, has outpaced food production. Consequently, the agricultural sector has intensified fertilizer use, posing environmental and health concerns. In response, researchers have explored controlled-release fertilizers, a novel category that enhances agricultural productivity while mitigating ecological and environmental impacts. This review focuses on controlled-release fertilizers, with an emphasis on urea, the most widely used nitrogenous fertilizer.

Keywords: Controlled release, Urea, fertilizers

Introduction

The practice of using fertilizers in agriculture has become very common due to the inadequate supply of essential nutrients in natural soils for optimal plant growth and productivity. However, the availability of cultivable land has declined due to factors such as urbanization, industrialization, and land degradation from events like heavy flooding, leading to reduced agricultural output. To address the increasing global demand for food, there has been a significant rise in fertilizer use. To ensure global food security while minimizing the environmental impact, it is imperative to explore and implement efficient and sustainable agricultural systems that boost production while mitigating environmental burdens.

6.1.1 Controlled and Slow-Release Fertilizers

Controlled and slow-release fertilizers (CRFs and SRFs) release the nutrient in a controlled, slow manner and release the nutrient as and when required by the plants. These fertilizers ensure efficient nutrient uptake by reducing the loss of nutrients via leaching, runoff, volatilization, etc. thereby improving the crop yield. The basic difference between CRFs and SRFs is that the rate, pattern, and duration of release of CRFs are well controlled and for SRFs the rate, pattern and duration of release are not controlled and these vary with the change in the climatic and soil conditions. According to the Association of American Plant Food Control Officials (AAPFCO), controlled and slow-release fertilizers contains plant nutrient that is of two forms : (a) the one that delays the availability and uptake for the plant as well as its utilization after application, (b) the one which is available to the plant for a period longer than the 'rapidly available nutrient fertilizer'. Likewise, CRFs are also described as fertilizers coated with a natural, semi-natural, and environmentally benign macromolecule material such that the nutrient is released at a slow pace such that a single uptake could meet the essential nutrient requirement for model plant growth.

6.1.2 Classification of CRFs

CRFs are broadly classified into three categories.

1. The first category (organic compounds) can further be subdivided into naturally occurring organic compounds and synthetically produced organic compounds. The latter consists of the condensation products from urea and aldehyde. This can be further divided into biologically decomposing compounds such as urea-acetaldehyde and chemically decomposing compounds such as isobutylene-diarrhea.
2. The second category consists of water-soluble fertilizers in which certain physical barriers control the nutrient release. Fertilizers coming under this class appears as granules coated with a hydrophobic polymer or as matrices in which the active water-soluble nutrient are dispersed in a continuum via hydrophobic polymers that leads to controlled nutrient dissolution and the

latter is less common compared to the former. The former one, i.e., coated CRFs are further classified into those coated with organic materials and those coated with inorganic materials. Likewise, the materials used for the preparation of matrices can be sub-categorised into hydrophobic materials and gel-forming polymers which are hydrophilic.

3. The third category includes inorganic low-solubility compounds such as metal ammonium phosphates and partially acidulated phosphate rock.

6.1.3 Advantages/disadvantages of CRFs

The use of CRFs is considered advantageous in many aspects, especially, when their use reduces toxicity due to high ionic concentrations associated with the fast dissolution of the fertilizer. Due to the reduced toxicity and salt content of fertilizers, they can be utilized for a prolonged time; thereby reducing the frequency of usage. Also, the use of CRFs meets the complete nutrient requirement of the plant. They also reduce the loss of nutrients which occurs either by evaporation, loss of ammonia, loss of nitrate nitrogen, etc. CRFs also lead to a reduction in gas emissions.

The use of CRFs is also known to have some drawbacks. The lack of a standardized method for the determination of controlled release of fertilizer is a major disadvantage. Consequently, the laboratory results and actual results upon field applications show large differences. Various coatings such as urea-formaldehyde, urea-sulfur, urea-polymer coatings, etc. possess one or the other drawbacks, say, in the case of urea-formaldehyde, it was noticed that some portion of nitrogen was getting released very slowly or sometimes not at all. Likewise, the use of urea-sulfur fertilizers resulted in increased acidity of the soil and they released the nutrient very fast at its initial stages, causing damage to the plant itself. Polymer-based coatings resulted in the deposition of undesired residues of synthetic substituents into the soil. Besides all these, the cost requirements are too high for the manufacture of CRFs.

Conclusion

This review emphasizes the critical need for controlled-release fertilizers. It delves into the various types of controlled-release fertilizers currently in use, outlining their respective advantages and disadvantages. While these fertilizers have already demonstrated their potential in enhancing nutrient efficiency and reducing environmental impact, further research in this field holds the promise of developing economically viable and environmentally friendly fertilizers.

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Advanced Drug Delivery using Supercritical Carbon Dioxide-Based Approaches: A Review

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Abstract

The use of liquid and supercritical carbon dioxide (CO₂) as an environmentally friendly solvent platform aligns with the principles of green chemistry. This approach has led to the development of novel industrial strategies, harnessing its unique properties, including facile solvent removal and adjustable solvent parameters. In the pharmaceutical sector, liquid and supercritical CO₂ present substantial advantages as a greener and safer solvent platform. This review explores various supercritical carbon dioxide-based technologies employed in drug delivery, highlighting their benefits and addressing associated challenges.

Keywords: Carbon dioxide, Drug, Supercritical

Introduction

Supercritical Fluid (SCF) technology has emerged as a promising asset in pharmaceuticals. CO₂, being low-cost, abundant, non-toxic, recyclable, and requiring low critical temperature and pressure, is predominantly employed in SCF processes. This versatile solvent offers advantages such as controlled drug release, particle formation, and efficient extraction. SCF techniques enhance drug bioavailability, ensuring precise dosage delivery. Moreover, they minimize the use of organic solvents, reducing environmental impact. SCF-based methods are pivotal in drug development, offering a sustainable and economically viable approach to pharmaceutical formulations, encapsulation, and drug delivery systems.

Supercritical fluid methods

Supercritical fluids exhibit both liquid-like and gas-like properties. This has enabled the SCF technology with notable applications in the pharmaceutical industry such as micronization to enhance the bioavailability of poorly water-soluble drugs. In this process, the average particle size of API is reduced to a micrometer or sub-micron range. Conventional methods that are being employed for this purpose are milling, bashing, and grinding. All these methods work on the phenomenon of friction and thence are energy and time-consuming ones. SCF technology has emerged as a promising one, which could overcome the curbs of conventional processing methodologies. Additionally, this technique ensures a clean or a 'solvent-free' process. Among the various supercritical fluids available in industry, SCF technology is most commonly applied with scCO₂ taking into consideration its environmentally benign features and economically promising aspects. SCF methods are primarily classified into two broad categories based on the role played by scCO₂.

(I) scCO₂ as solvent

(II) scCO₂ as antisolvent

SCF used as a solvent

In this SCF method, SCF is utilized as a solvent for both API and excipient. A typical example is the Rapid Expansion of a Supercritical Solution (RESS), demonstrated first by Hannay and Hogarth. This is a two-step process. First, the solid is dissolved in SCF under pressure. The SCF solution thus obtained is then expanded and finally suddenly depressurized. This rapid depressurization leads to supersaturation and superfluid nucleation and hence results in the generation of sub-micron or nano-sized particles.

SCF used as antisolvent

Bleich and coworkers were the first to demonstrate the use of SCF as an antisolvent and the related SCF techniques. The low solubility of most of the pharmaceutical ingredients in SCF limited the production of micro or nanosized particles using RESS and modified RESS methods. Here, SCF is regarded as an antisolvent and this must be completely miscible with the liquid solvent used. Also, the solute must be insoluble in the antisolvent.

Based on the modes of mixing between SCF and the antisolvent, antisolvent processes are classified into different categories which are briefly described in the coming sessions.

1. Gas Anti Solvent (GAS)

Here, the solute is dissolved in the solvent and the gas is flowed through this in a closed chamber. Upon increasing the pressure, the concentration of gas increases, which in turn reduces the solvation power of the solvent for the solute particles, thus leading to the precipitation of the solute particles.

2. Precipitation with Compressed Antisolvent (PCA)

This method involves the spraying of the drug/polymer solution through a nozzle into a chamber containing SCF as the antisolvent. SAS process shows higher drug loading capacity over GAS since very small particles could be achieved in this method. This may be attributed to immediate contact between solute and SCF achieved via this method, which further leads to faster nucleation.

(a) Supercritical Antisolvent Recrystallization (SAS)

The SAS method is similar to PCA. The basic difference between PCA and SAS is that PCA utilizes liquid or supercritical antisolvent whereas SAS makes use of SCF as antisolvent. Recently, many advancements have been reported for the SAS process such as supercritical-assisted injection in a liquid anti-solvent (SAILA) and expanded liquid anti-solvent (ELS) methods.

(b) Aerosol Solvent Extraction System (ASES)

ASES method was patented by Müller and Fischer in 1989. The working principle is based on the extraction properties of supercritical gases. In this method, the drug/polymer mixture and the organic solvent (soluble in scCO₂) are sprayed into a chamber containing SCF. Thereafter the organic solvent is extracted leading to the formation of particles of smaller size.

3. Solution Enhanced Dispersion by Supercritical Fluids (SEDS)

SEDS is considered a modified SAS technique with the only difference observed in the design of the nozzle. In SEDS coaxial nozzle is used and it aids the dispersion of the drug solution by SCF, thereby leading to enhanced mass transfer and formation of particles with small size and fast nucleation rate.

4. Particles from Gas Saturated Solutions (PGSS)

In the PGSS method, SCF plays the role of a co-solute. SCF is initially dissolved in a drug-solvent suspension and finally depressurized through a nozzle. This results in the formation of particles of smaller size. This method has found wide application for micronization of formulation for BCS class II drugs.

Advantages and challenges of the SCF technologies

SCF's strategy provides a promising technology platform for the design, manufacture, and modification of pharmaceutical substances. SCF-based methods have been widely explored for controlling the morphology, crystallinity, etc. of the pharmaceutical ingredients, thereby controlling the drug-release kinetics of the preparations.

Toropainen et al., studied the variation in morphology of a commonly used excipient γ -cyclodextrin (γ -CD) using the SEDS process and observed that upon increasing the processing temperature, the crystallinity of γ -CD was completely lost and got transformed into an

amorphous state. The nanosizing of Ibuprofen and Naproxen drugs via the RESOLV method has already been reported. Micronization of Cyclosporine carried out via RESS and PGSS techniques was carried out by Tandy et al. This process resulted in the formation of micron-sized cyclosporine. Generally, this drug exists as a liquid crystal and this was evidenced by DSC results too. However upon scCO₂ processing, the solid to liquid crystal transition peak vanished. Tsivintzelis et al. studied the effect of pressure, temperature, and rate of depressurization on the structure of polystyrene and poly (D, L-lactic acid).

Conclusion

In conclusion, this review underscores the significance of liquid and supercritical carbon dioxide (CO₂) as a green and safer solvent platform in the pharmaceutical industry. It provides a comprehensive overview of CO₂'s solvent properties and its diverse applications, particularly in drug delivery technologies. While highlighting the considerable advantages, this review also acknowledges the existing challenges. It advocates for continued research efforts to further harness the potential of supercritical carbon dioxide, paving the way for innovative advancements and expanding its role in pharmaceutical applications.

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Binding of Tetracycline to Human Serum Albumin Unfolded by Urea

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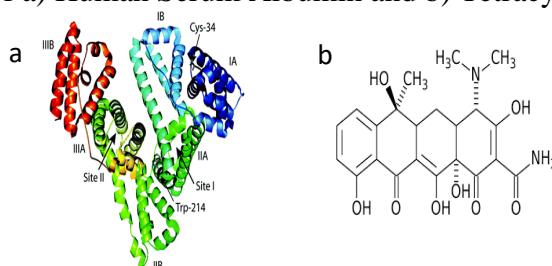
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Introduction

Human serum albumin (HSA) is the most abundant circulatory protein having 585 amino acid residues.¹ Under physiological conditions, HSA adopts a heart-shaped three-dimensional structure having three homologous domains I-III.¹⁻² Each of these three domains is further subdivided into two subdomains A and B.² The principal regions of ligand binding to HSA are located in hydrophobic cavities in subdomains IIA and IIIA.³⁻⁴ These binding sites are known as Sudlow I and Sudlow II, respectively⁵ and the sole tryptophan residue (Trp214) in HSA is located in Sudlow I.⁵ Despite the complexity in shape and size, the single Trp residue makes it very convenient to study the structure and dynamics of the protein using intrinsic fluorescence.² In general, more than 90% of the drugs used in humans are bound to this specific protein. A conformation alteration of serum albumin can result in weaker drug-protein interaction and consequently increases the drug concentration in the blood. Sometimes this effect can cause toxic poisoning or even lead to death. Therefore, studies on the binding of drug(s) with HSA in the absence and presence of chemical denaturants (like urea) can improve our interpretation regarding the metabolism and transporting process of drugs inside the human body.⁵

Tetracycline (TC) molecule is a four-ring system as shown in Scheme 1 to which a variety of functional groups are attached. TCs are a group of broad-spectrum polyketide antibiotics that act as protein synthesis inhibitors. These drugs after ingestion are solubilized inside the gut and are subsequently transported to the target sites through blood, bound to serum proteins.²

Scheme 1: Structure of a) Human Serum Albumin and b) Tetracycline



In the present work, we have investigated the interaction of TC with HSA which has been subjected to denaturation induced by various concentrations of urea. For this purpose, we have used steady-state emission spectroscopy measurements to characterize the effect of the added TC to the HSA in the presence of urea. Modified Stern-Volmer plots have been used to determine the binding constant of TC to the protein

Experimental Section:

a. Materials: HSA was purchased from Sigma-Aldrich, USA. Tetracycline hydrochloride (TC, molecular weight = 480.9) was purchased from HIMEDIA, and urea from SPECTROCHEM. For the steady-state experiments, the concentration of HSA was 5 μ M which was ascertained spectrophotometrically. The pH of the Tris buffer solution (10 mM) was adjusted to 7.4. For the denaturation of HSA, solutions of different concentrations of urea were prepared in a buffer solution which was added to 5 μ M HSA and incubated overnight.

b. Steady-State Measurements: The absorption and fluorescence emission spectra were recorded on a Cary 100 UV-vis spectrophotometer and Fluorolog 3-111 fluorometer, respectively with appropriate background corrections using freshly prepared solutions. The stock solution of TC (3 mM) was prepared in anhydrous methanol. A 2 mL solution, containing an appropriate concentration of native or denatured HSA, was titrated by successive additions of a 3 mM solution of TC. Titrations were done manually by using a micropipette. The fluorescence spectra were measured with a 10 mm path-length quartz cuvette. HSA was excited at 295 nm to minimize the contribution from tyrosine. The fluorescence emission was collected from 300 to 550 nm. The emission and the excitation slits were kept at 1 and 2 nm, respectively.

RESULTS:

The intrinsic fluorescence of HSA is mainly contributed by the Trp residue alone in the hydrophobic cavity of subdomain IIA (Sudlow I) because the Phe residue has a very low quantum yield and the fluorescence of Tyr is almost totally quenched when it is ionized or nearby an amino group, a carboxyl group, or a Trp.⁶ Fig. 1 shows the fluorescence emission spectra of native HSA (in the absence of urea) with varying concentrations of TC following an excitation at 295 nm. It could be observed that the fluorescence intensity of HSA dropped regularly with the increase in TC concentration, indicating that the drug may bind in Sudlow site I in subdomain IIA. The degree of quenching depends on the interaction between Trp214 and the drug⁶ or the degree of overlap between the fluorescence of the donor (Trp214) and absorption of the acceptor (TC).

A valuable feature of intrinsic protein fluorescence is the high sensitivity of Trp to its local environment. When HSA was subjected to chemical denaturation by urea, a distinct red shift was observed in the fluorescence emission maxima of Trp214 due to increased exposure of Trp214 to a more hydrophilic environment. The variation of emission maxima of Trp214 with increasing concentrations of urea has been pictorially represented in Fig. 2.

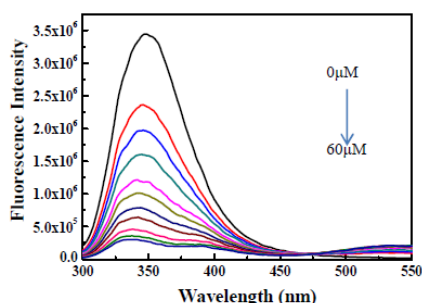


Fig 1: Fluorescence emission spectra of native HSA in the presence of various concentrations of TC

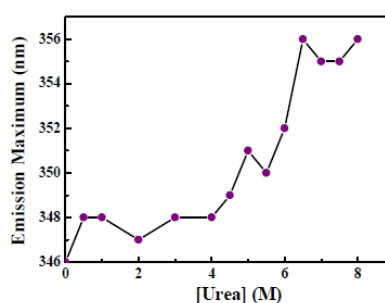


Fig 2: Variation of the emission wavelength maxima of Trp214 as a function of [Urea]

Binding of TC to HSA at Various Concentrations of urea:

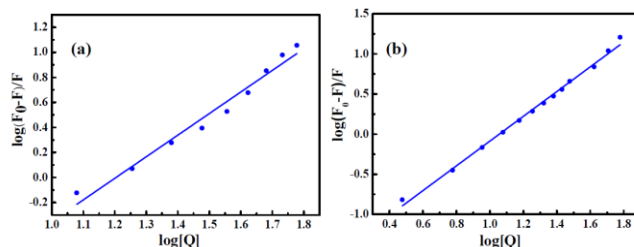
A quantitative assessment of the drug-protein binding interaction at various concentrations of HSA can be derived in terms of evaluation of the binding constant (K) for the HSA-TC interaction process. For the quenching process, the equilibrium between free and bound molecules is given by the modified Stern-Volmer equation:

$$\log\left(\frac{F_0 - F}{F}\right) = \log K + n \log [Q] \quad (1)$$

where, F and F₀ are respectively, the fluorescence intensities of HSA in the presence and absence of varying concentrations of TC, K is the binding constant, n is the binding affinity and [Q] is the quencher concentration (here TC).⁵ Fig. 3 represents a plot of log (F₀-F)/F versus log [Q] based on Eq. (1) in the absence and presence of 8 M urea and having various

concentrations of TC. The various binding parameters obtained from the intercepts and slopes of such plots are summarized in Table 1.

Fig 3: Modified Stern-Volmer plots for
(a) 0M b) 8M [urea]



[Urea] (M)	$K \times 10^{-4} (M^{-1})$	n
0	0.84	1.72
2	1.7	1.55
4	0.79	1.86
6 Table 1: Binding parameters of HSA denatured by different concentrations of 8 urea and TC		

From the values of K as seen in Table 1, we can infer that the binding of TC to HSA is not affected to a large extent due to the presence of lower concentrations of urea. Up to 4 M urea, the environment in and around Trp214 seems to be almost the same which has also been supported by our steady-state results, whereby the emission maxima shift only by ~ 2 nm. However, beyond 4 M urea, there is a drastic red shift of the emission maxima of Trp214 and the values of K change significantly. It has been documented⁷ that subdomain IIA of HSA gets unfolded beyond 4 M urea and hence the addition of TC gets more facile as seen from our results.

Conclusions

From our studies, we can conclude that the binding of TC to HSA which has been subjected to denaturation induced by various concentrations of urea was not affected greatly by the latter up to 4 M urea concentration. Beyond 4 M urea, the microenvironment of Trp214 gets altered and the binding of TC to HSA gets affected.

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2D Nanomaterials: Graphene and Beyond

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Introduction

Material science is an interdisciplinary field where scientists study existing materials and create new ones. It is a dynamic and ever-evolving field that continuously discovers new materials with unique properties and potential applications. Two-dimensional (2D) nanomaterials have fascinated material scientists since it is highly versatile and suitable for a wide range of applications in electronics, photonics, energy storage, catalysis, sensing, and beyond. 2D nanomaterials are composed of thin layers that may have a thickness of at least one atomic layer. Contrary to bulk materials, these nanomaterials have a high aspect ratio (surface-area-to-volume ratio) and therefore have many atoms on their surface. The first material in this new class is Graphene. Graphene is one of the most widely used and most important 2D materials, and has unique properties that result in its widespread use in various industries. Over time several other 2D nanomaterials with exceptional properties and applications have been added to this list. This article discusses a few important of them.

Graphene

Graphene consists of a single layer of carbon packed in a hexagonal lattice with a C–C distance of 0.142 nm.[1] Being the building block of graphite, graphene may not appear like a “new” material. But before 2004, the isolation of stable graphene sheets was considered impossible. So it was a surprise when Andre K. Geim and Konstantin S. Novoselov of Manchester University did it through mechanical exfoliation of graphite crystal using scotch tape.[1] They were awarded the Nobel Prize in Physics in 2010 for this. Several methods have been identified to produce graphene since then which include mechanical and liquid phase exfoliation, chemical vapor deposition, chemical reduction of graphene oxide, chemical synthesis from organic precursors etc.

Graphene is an incredibly strong material; 100 times stronger than steel. At the same time, it is flexible. Graphene exhibits extremely high electrical conductivity, even surpassing that of copper. Its unique electronic structure allows electrons to move through the material virtually without resistance. Graphene also possesses exceptional thermal conductivity. It can efficiently conduct heat, making it valuable in applications like thermal management and heat dissipation. Regarding transparency, graphene is nearly transparent across a broad range of the electromagnetic spectrum, including visible light. This property makes it suitable for transparent conductive films in electronic devices, such as touchscreens and displays. Graphene is also chemically stable and can withstand a wide range of chemical environments.

Being impermeable to gases and liquids, it is used to create gas barriers and membranes. [2, 3] Because of its exceptional qualities, graphene is widely employed in electronics, materials science, energy storage, sensors, medicine, water purification and more.[4]

Transition Metal Dichalcogenides (TMDs)

Transition metal dichalcogenides (TMDs) are a class of two-dimensional materials that have the chemical formula MX_2 , where M represents transition metals from groups VI, V and VI, and X represents a chalcogen such as sulfur, selenium or tellurium. Common examples of TMDs include molybdenum disulfide (MoS_2), tungsten disulfide (WS_2), molybdenum

diselenide (MoSe_2), and tungsten diselenide (WSe_2). TMDs have a layered crystal structure, similar to graphene. Single-layer TMDs often exhibit different electronic properties compared to bulk TMDs. Unlike graphene, which is a zero-band-gap material, TMDs exhibit a tuneable band gap that depends on factors such as the type of transition metal, the number of layers, and strain.[5] They are mechanically robust and flexible at the same time. Their unique properties make them suitable for applications in various fields, including electronics, photonics, energy, and catalysis.

Hexagonal Boron Nitride (h-BN)

h-BN has a similar structure to graphene with alternating boron (B) and nitrogen (N) atoms arranged in a hexagonal lattice. h-BN is often referred to as "white graphene" due to its similar hexagonal structure and its white colour in its bulk form. h-BN is a wide bandgap material with an intrinsic band gap (E_g) of 5.9 eV when compared to the highly conductive graphene. It does not conduct electricity and can be used as an insulating material in electronic applications. But at the same time it is thermally conductive and thermally stable.[6] Being chemically inert, it can withstand extreme conditions, making it useful in high-temperature and corrosive environments. It is a versatile material with applications in electronics, optics, thermal management, biomedical solid lubrication etc.

MXene

MXenes are two-dimensional (2D) transition metal carbides, nitrides and carbonitrides reported in 2011. MXenes have the general structure of $\text{M}_{n+1}\text{X}_n\text{T}_x$, where M is an early transition metal (Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W), X is a carbon and/or nitrogen and T_x stands for surface terminations, such as O, OH, F or Cl, and $n = 1-4$. Since MXenes are typically synthesized topochemical from their parent MAX phases via selective etching of the A element (Al, Si or Ga), the chemical composition and preparation protocol of the MAX affects the chemistry of the resultant MXene.[7] Furthermore, the surface chemistry (which depends on etching conditions), intercalated species and even the flake size significantly affect MXene properties. MXenes find applications in various fields like energy, storage, electronics, photocatalysis, sensing, medicine and more.

Graphitic carbon nitride (g- C_3N_4)

Graphitic carbon nitride consists of carbon and nitrogen atoms arranged in a planar, layered structure. It forms a network of hexagonal units similar to graphene but with alternating carbon and nitrogen atoms. These layers are held together by van der Waals forces and can be peeled apart to create individual g- C_3N_4 sheets.

g- C_3N_4 is a semiconductor material with a band gap in the visible light range. This property makes it suitable for various optoelectronic and photocatalytic applications. However, the band gap of g- C_3N_4 can be modified by adjusting the synthesis conditions or by introducing functional groups. g- C_3N_4 has gained attention for its photocatalytic properties, which make it useful in water splitting, pollutant degradation, and solar energy conversion.[8] It has a nanoporous structure, providing a large surface area for catalytic reactions and adsorption processes.

Conclusion

With fast advancements in novel exfoliation processes, the development of 2D framework materials is seeing a highly dynamic expansion. In addition to the above 2D materials there exists others like Borophene, Phosphorene, Silicene, Germanene, Stanene and so

forth with Molybdenene introduced very recently.[9] While the future of 2D materials is promising, it is not without challenges. Issues with stability, production scalability, and integration into existing technologies must be addressed. However, these challenges also present opportunities for innovation and discovery. As researchers and engineers worldwide continue to explore the potential of 2D materials, the coming years will undoubtedly bring exciting developments.

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The Role of Curcumin as a pH Indicator

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Introduction

Curcumin is a bright yellow chemical produced by plants of the *Curcuma longa* species. It is the principal curcuminoid of turmeric, a member of the ginger family. Chemically, curcumin is a diarylheptanoid, belonging to the group of curcuminoids, which are phenolic pigments responsible for the yellow color of turmeric. Curcumin is extracted from fresh turmeric. Fresh turmeric contains up to 5% curcumin. Curcumin is the active substance of turmeric and curcumin is known as C.I 75300 or natural yellow. Systematic chemical name is (1E,6E)-1,7-Bis(4-hydroxy-3-methoxyphenyl)-1,6-heptadiene-3,5-dione. It is extracted by dissolving in methanol and refluxing it for 3-4 hours. Curcumin can exist in tautomeric forms, keto and enol. The keto form is preferred in the solid phase and the enol form is in solution. Curcumin is a pH indicator. In acid solutions ($\text{pH} < 7.4$) it turns yellow, whereas in basic solutions ($\text{pH} 8.6$) it turns bright red.

Results and Discussion

Curcumin is a pH indicator. In acidic solution it turns yellow and in basic solution it turns bright orange red. Curcumin can be used as a pH indicator in acidimetry titrations. Also, colorimetry can be used to make this a qualitative test. The turmeric indicator changes color between roughly a pH of 7.4 and 8.6. If turmeric is exposed to neutral or acidic substances it will retain its yellow coloration. If turmeric is exposed to a more alkaline substance it becomes a dark pink/red. Because turmeric contains a yellow pigment called curcumin, which is pH sensitive.

A. Curcumin in an acidic solution ($\text{pH} 3.5$)

B. curcumin in a neutral solution ($\text{pH} 7.4$);

C. Curcumin in a basic solution



- The colour of curcumin remains yellow in neutral and acidic medium
- Colour changes in basic medium
- So basic medium affects colour of curcumin
- So basic medium affects structure of curcumin

TLC using Curcumin

Turmeric powder is used for the preparation of many curries. Turmeric powder is used for cosmetics. Since they have great demand in the market, there is a possibility of adulteration in these samples. This can be checked by thin-layer chromatography. We can use con. HCL, dil. HCL, dil. H_2SO_4 , 1% diphenylcarbazide in ethanol. We use natural homemade curcumin, Curcuma aromatic and commercially prepared curcumin. From the R_f value, we can determine the quality or adulteration.

Curcumin is almost insoluble in water and readily soluble in polar solvents like methanol, ethanol, acetonitrile, chloroform, and ethyl acetate. It is sparingly soluble in hydrocarbon solvents like cyclohexane and hexane.

The above-mentioned are the properties or applications of curcumin. The main advantage is that it is cheaper and it is also pollution free and can be obtained naturally.

50 grams of fresh turmeric is taken. It is then chopped into small pieces and kept aside. This turmeric is added with 250ml of methanol taken in a beaker. Then it is kept in methanol for 2-3 days in a 1000ml RB flask. This is refluxed for 3-4 hours. Then the solution is cooled and filtered using filter paper.

Results and Discussion

Curcumin which is used as an indicator is found to be very effective in strong acid - strong base titration and weak acid - strong base titration. It can be used as an indicator instead of phenolphthalein. Phenolphthalein shows its endpoint with a color change from pink to colorless. Curcumin shows its color change from orange-red to yellow. Phenolphthalein is a costly indicator but curcumin can be prepared very cheaply.

In strong acid - strong base titration, the endpoint in both the titration based on phenolphthalein and curcumin is the same.

Conclusion

From this project we can conclude that curcumin can be used as an indicator instead of phenolphthalein. It is an effective indicator used in strong acid - strong base titrations and weak acid-strong base titrations. Curcumin which shows a color change from orange to yellow can be used in titrations that show a color change from pink to colorless. Curcumin is a cheap indicator that can be prepared from turmeric and methanol.

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Aqueous Magnesium Ion Batteries using Tunnel Type KMnO_8 as Electrode Material

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Introduction

Electroanalytical chemistry is that branch of chemical analysis that employs electrochemical methods to obtain information related to the amounts, properties and environments of chemical species¹. Electroanalytical methods are a class of techniques in analytical chemistry that study an analyte by measuring the potential (volts) and/or current (amperes) in an electrochemical cell containing the analyte¹. Battery is an electrochemical cell collection where electrons flow by the chemical reaction in the circuit. Batteries provide a way to store electric potential in a portable container. The Sodium-ion batteries (SIBs) and potassium-ion batteries (KIBs) are then considered as the next possible alternative to LIBs due to their advantage of the abundance and relatively cheap availability of sodium and they have the same chemical properties as lithium. The main disadvantage of using them was that they had low energy density, used highly toxic and flammable electrolytes and had high operation cost and security issues². To overcome these limitations in non-aqueous batteries a new promising class of Aqueous rechargeable batteries has come into operation. They being more environmentally benign, low cost, high operational safety, and aqueous electrolytes offer 2 orders of magnitude higher ionic conductivities ($\sim 1 \text{ Scm}^{-1}$) than non-aqueous electrolytes².

Synthesis and characterization of the cathode

All chemicals were of analytical grade and were used directly without any further purification. Cryptomelane-type $\text{KMn}_8\text{O}_{16}$ was synthesized by a Combustion method. The $\text{KMn}_8\text{O}_{16}$ was synthesized by using KMnO_4 and $\text{Mn}(\text{CH}_3\text{COO})_2 \cdot 4\text{H}_2\text{O}$ as reactants. KMnO_4 and $\text{Mn}(\text{CH}_3\text{COO})_2 \cdot 4\text{H}_2\text{O}$ were mechanically mixed in the molar ratio of 2:3 in an agate mortar and an appropriate amount of water was added to obtain a rheological phase. This rheological phase mixture was heated at 150°C and an appropriate amount of water was added to obtain a rheological phase. This rheological phase mixture was heated at 150°C for 12 hours in a muffle furnace. The mixture was cooled down to room temperature then it was again mixed in an agate mortar for about 30 minutes. Mixing the mixture is very much necessary as it will help in the intercalation of ions into it. Then a precursor was obtained which was heated at 500°C for 5 hours in the furnace. Thus $\text{KMn}_8\text{O}_{16}$ was obtained.

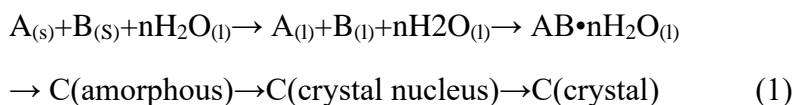
The structure and crystallinity of $\text{KMn}_8\text{O}_{16}$ were characterized using an X-ray diffractometer (XRD, PANalytical X-ray diffractometer). The cryptomelane-type $\text{KMn}_8\text{O}_{16}$ has lattice parameters $a=b=9.815 \text{ \AA}$, $c=2.847 \text{ \AA}$ and $\alpha=\beta=\gamma=90^\circ$.

Results and Discussion

Rheological Phase reaction method

The rheological phase reaction method is a process of preparing compounds or materials from solid-liquid rheological mixture. That is, the solid reactants are fully mixed in a proper molar ratio, made up by adding a proper amount of water or other solvents to a solid-liquid rheological body, in which the solid particles and liquid substance are uniformly distributed. Then after reaction under suitable conditions, the products are obtained. Under the solid-liquid rheological state, many substances will have new reaction properties. A typical rheological phase reaction must go through the following five steps: dissolution, diffusion,

reaction, nucleation, and growth. For the rheological phase reaction, reaction steps may be expressed in (1).



The crystalline structure of as-obtained products after heat treated at 500°C in air for 5 hr was analyzed by XRD. It can be observed from Fig. 4 that all the diffraction peaks of the sample at $2\theta = 12.745^\circ$, 25.651° , 37.62° , and 42.029° can be readily indexed to (110), (220), (310), and (211) which are in good agreement with the pure tetragonal cryptomelane structures of KMn_8O_{16} (JCPDS card No. 29-1020; space group: $I4/m(87)$, $a = b = 9.815 \text{ \AA}$, $c = 2.847 \text{ \AA}$, and $\alpha = \beta = \gamma = 90^\circ$).

Conclusion

KMn_8O_{16} with a tunnel-type structure is found to be a reversible intercalation cathode for aqueous magnesium batteries. The solid-state synthesised KMn_8O_{16} compound facilitates reversible magnesium intercalation with discharge and charge capacity of 81 and 73 mAh/g respectively during the initial cycle. Even though the first cycle is promising, extended cycling only can show the performance of the material. Further studies may include xrd characterization of cycled electrodes to explore structural changes in the pristine electrode. Moreover, manganese dissolution as well as plating also could be a potential problem for real applications

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Extraction and Thin Layer Chromatography of Curcumin

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Introduction

Curcumin is extracted from fresh turmeric. Fresh turmeric contains up to 5% curcumin. Curcumin is the active substance of turmeric and curcumin is known as natural yellow. Systematic chemical name is (1E, 6E)-1, 7-bis (4-hydroxy-3-methoxyphenyl)-1, 6-heptadiene-3, 5-dione. It is extracted by dissolving in methanol and refluxing it for 3-4 hr. Curcumin has the chemical formula C₂₁H₂₀O₆. Curcumin can exist in tautomeric form, keto and enol. The keto form is preferred in the solid phase and the enol form in the solution. Curcumin is a pH indicator. In acid solution (pH < 7.4) it turns yellow, whereas in basic solutions (pH 8.6) it turns bright red. Curcumin contains many functional groups in its structure. The aromatic ring system in curcumin is phenols and these phenols are connected by α,β -unsaturated carbonyl group. These natural group phenols present in curcumin are responsible for the yellow color of turmeric. Along with curcumin the plant extract also contains lesser quantities of 2-demethoxycurcumin and 3-bis-demethoxycurcumin.

Results and Discussion

Extraction of Curcumin

A clean beaker having known weight is taken. The turmeric powder is weighed on electronic balance and it is packed in filter paper like a bag. About 500ml chloroform is taken in soxhlets apparatus. Turmeric powder which is packed in the hardened filter paper is placed in the extraction tube. The flask is then heated. The vapour rises through the side tube and soaks the minimum amount of solvent that suffices for the extraction. The process is continued for 3 hours, the burner is removed from the flask and the extracted material is transferred into a 250ml beaker.

Preparation of chromatogram

Glass plates of uniform thickness are selected. These are thoroughly cleaned and all greasy matter is removed from its surface. Slurry of silica gel (chromatography grade) in water is prepared. After this, a thin coating of adsorbent is applied to the glass plate. Then it is placed in a microwave oven for 1 hour. Before sample application, mark a starting line at the height of 1-20mm from the bottom of the chromatate plate. It is called the base layer. Also, mark another line called the finish line about 10 cm from base line. Apply the sample on base line with fine capillary. Keep the area of application as small as possible. Immerse the chromatate plate in the tank and make it stand in the solvent leaving against the side of the tank. Apply the lid on the tank and make it stand in the solvent leaving against the side of the tank and allow the chromatogram to remain inside the tank for about 15 minutes. Remove the plate from the tank as soon as the solvent has reached the finishing line at the top end of the chromatate plate. Now let the solvent evaporate. Record the distance moved from the origin by the compound and the distance moved from the origin by the solvent. R_f value can be calculated.

The standard reference value of curcumin in 100% chloroform is 0.61. Sample 2 shows more resemblance in R_f value with standard R_f value and are of better grade than sample 1 and 3. Hence we can conclude that homemade curcumin; naturally occurring is better than the commercial sample.

Conclusion

The project is based on the extraction of curcumin from turmeric powder using the Soxhlets apparatus. By using this apparatus we can extract curcumin from commercial, natural and Kasturi Manjal. As turmeric powder undergoes several adulterations, we conducted several purification tests to find out about the presence of lead oxides in turmeric powder. There are chances of the presence of chalk powder, which increases the weight of turmeric powder. Also, there will be the presence of lead chromate, which is used as a coloring agent in turmeric powder. Thin layer chromatography of curcumin in commercial, natural and Kasturi Manjal is also conducted. It can be concluded that natural curcumin is better than commercial curcumin. From this project, we can conclude that naturally occurring curcumin (homemade) is better than commercial curcumin. The naturally occurring curcumin shows more resemblance in Rf value with standard Rf value.

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A Short Study of Electro Chemical Properties of Solgel Synthesized LiMn₂O₄

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Introduction

Electrochemistry is the study of electricity and how it relates to chemical reactions. In electrochemistry, electricity can be generated by the movements of electrons from one element to another in a reaction known as redox or oxidation-reduction reaction[1]. The reaction involves the movement of an electric charge between the electrode and an electrolyte. Thus electrochemistry is the interaction between electrical energy and chemical change. Battery is an electrochemical cell collection where electrons flow by the chemical reaction in the circuit, which stores electric potential. A battery consists of an anode a cathode and an electrolyte. The negative terminal is the anode and the positive terminal is the cathode. The electrons flow from the anode to the cathode through an external circuit. An electrolyte is a substance that reacts with anode and cathode. Basically, there are two types of batteries primary batteries and secondary batteries. Primary batteries are designed to be used once and discarded and not recharged with electricity and reused like a secondary cell. Primary batteries are predominantly zinc anode systems and some types of secondary rechargeable batteries are lead-acid, nickel-cadmium, nickel-zinc, silver-cadmium, silver-zinc etc. The increasing energy demand has transferred power generation from nuclear sources and fossil fuels to renewable energy sources. The batteries should be safe to operate, economically viable and environmentally friendly.

Synthesis and characterization of the cathode

All chemicals were of analytical grade and were used directly without any further purification. The cathode material LiMn₂O₄ was synthesized by the Sol gel method using oxalic acid as a chelating agent. At manganese, acetate was dissolved in de-ionized water to give a salt solution. To this solution, lithium carbonate is added slowly with mild stirring. Then add magnesium carbonate to this solution. A saturated aqueous solution of oxalic acid is added. The pH of the mixed solution was maintained at 7.0 by adding an ammonium hydroxide solution. Then the solution was heated to 80°C for 4hr with vigorous stirring to remove excess ammonia and water. The precipitate formed was dried in an oven for 10 hr at 400°C. After drying the precursors were decomposed at 600°C for 6hr in a muffle furnace.

Electrochemical measurements

The electrochemical performance of LiMn₂O was tested in a test cell system. The working electrode was prepared by mixing of 70 wt% LiMn₂O₄, 10 wt% polyvinylidene fluoride (PVDF) and 20 wt% % acetylene black on agate mortar for about an hour. Then being blended in N-methyl pyrrolidinone (NMP) the mixed slurry was spread uniformly on stainless steel and dried in a vacuum for 8-7 hours at 100°C.

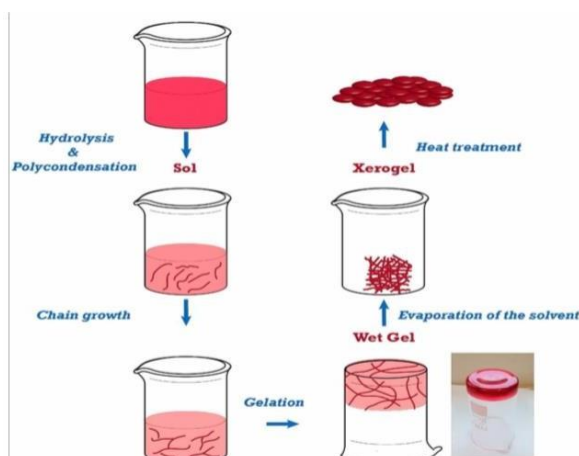
Results and Discussion

Solgel synthesis

The solgel synthesis is a wet chemical technique that use either a chemical solution or colloidal particles to produce an integrated network (gel). This chemical technique involves several steps in order, hydrolysis and poly condensation, gelation, aging, drying,

densification, and crystallisation. It is a good method to prepare novel metal oxide as well as oxide composites. The mixture of LiCO_3 , $\text{Mn}(\text{CH}_3\text{COO})_2 \cdot 4\text{H}_2\text{O}$, MgCO_3 , and were dissolved in deionized water that is the precursor underwent rapid hydrolysis to produce a metal hydroxide solution followed by immediate condensation which led to the formation of the three-dimensional gel. After, the obtained gel is subjected to a drying process around 400 oc more than 10 hr.

Different steps involved in the solgel synthesised LiMn_2O_4



Conclusion

LiMn_2O_4 is found to be a reversible intercalation cathode for aqueous lithium batteries. The sol gel synthesized LiMn_2O_4 compound facilitates reversible lithium intercalation with discharge and charge capacities of 130 mAh/and 55 mAh/g respectively during the initial cycle. Even though the first cycle is promising, extended cycling only can show the performance of the material. Sol gel synthesis is an effective method for the synthesis of LiMn_2O_4 cathode for aqueous lithium ion batteries.

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Chemistry of Composites

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Abstract

A composite material is a combination of two materials with different physical and chemical properties. When they are combined, they create a material that is specialised to do a certain job, for instance to become stronger, lighter or resistant to electricity. They can also improve strength and stiffness. This review chapter discusses the salient features of composites ranging from micro composites to nanocomposites with potential applications.

Keywords: Composites, micro composites, nanocomposites, Carbon black and Carbon nanotubes

1. Introduction

Composites (Composite materials) are natural or synthetic materials fabricated from two or more components with belongings that are different from those of individual constituents. The common day-to-day examples of composites are wood, bone, mud bricks, concrete, fiberglass, etc... Composites are a combination of materials in which one of the materials is called the reinforcing phase, is in the form of fibers, sheets, or particles and is embedded in the other material called the matrix phase. By choosing an appropriate combination of matrix and reinforcing material, a new material can be made that exactly meets the requirements of a particular application. Both components add strength to the composite and their combination often compensates for the weakness in the individual components. The concept of improved performance is broad and includes increased strength or reinforcement of one material by the addition of another material, as well as increased toughness, decreased coefficient of thermal expansion, and increased thermal or electrical conductivity.¹

Composites are generally categorized into three groups based on matrix material; (a) Metal Matrix Composites (MMC), (b) Ceramic Matrix Composites (CMC) and (c) Polymer Matrix Composites (PMC). Polymer composites are further classified into three types based on reinforcing materials (1) particle reinforced, (2) fiber reinforced, and (3) structural reinforced polymer composites.

2. Polymer Composites

The effectiveness of filler in composites depends on characteristics such as particle size, shape, size of the agglomerate, concentration and more significantly surface activity (strength of polymer–filler interaction). Increasing the area of contact between polymer matrix and filler particles seems to be the most important factor for ensuring a strong reinforcing effect and the surface area of the interface is controlled by the size of the filler particles and their volume fraction. The usage of fillers for the enhancement of polymer behaviors especially in the domain of mechanical properties has been extensively studied.² If the polymer matrix is reinforced by traditional filler particles in the micrometer range, we get polymer micro composites.⁶² The common examples of microreinforcing agents are carbon black, talc, glass fiber, calcium carbonate, etc. If at least one of the components in the polymer matrix has nanometer dimensions, these materials are termed Polymer nanocomposites.

Multiphase solid material where one of the phases has one, two or three dimensions of less than 100 nanometers (nm) are generally defined as nanocomposites. Minute amount of nanometer-sized filler with high surface area is the salient feature of a nanocomposite. High

mechanical strength and better aspect ratio are feasible for polymer nanocomposites with the incorporation of reinforcing nanofillers like clay, nanotubes, graphene, etc.

3. Polymer Micro composites and Nano Composites

Among polymer micro composites, carbon black reinforced composites are the most studied and industrially utilized polymer composites.³ Carbon nanotube-polymer nanocomposite has emerged as a hot research topic in material science and is due to its versatile applications. The effectiveness of filler in polymer micro composites and nano-composites depends on its characteristics, such as particle size, shape, size of agglomerate; concentration and most significantly the strength of polymer-filler interaction. As we went through the literature on polymer composites, we found that composites and nanocomposites using carbon black (CB) and carbon nanotube (CNT) occupied a higher position based on citation and application.

“The use of carbon black is as old as the rubber industry itself but still it is evergreen in industry and the research domain. Carbon black (CB) is a versatile reinforcing filler and is the generic term used to indicate a family of materials made up of elementary carbon. It represents a group of finely divided forms of amorphous carbon. It can be produced by the thermal decomposition of hydrocarbons in a shortage of air (pyrolysis). Furnace black and thermal black techniques are the common manufacturing process used for the synthesis of carbon black. The salient features of CB are generally summarized in three headings; particle size (size of spherical particles), structure (size of particle chain), and surface chemistry (composition of groups on the surface of CB). The incorporation of CB in elastomers and plastics not only retards the cost of the end product but also modifies the electrical and optical properties of the polymer matrix. There has been intensive research on the reinforcement of rubber by CB. The entanglement of rubber molecules on the carbon black surface has a dominant role in designing the reinforcement effect of CB in an elastomeric matrix. As the physical adsorption on the surface of CB enhances, the reinforcement effect increases. The rubber-carbon black interaction can be evaluated through bound rubber evaluation, mechanical properties, small angle X-ray scattering, and electrical conductivity measurements. This protocol of characterization supported by morphological analysis helped to fabricate material with tailored properties.

Carbon nanotubes can be visualized as cylinders consisting of a planar hexagonal arrangement of carbon-carbon bonds formed by rolling of graphene layers and as a consequence of this unique bonding arrangement, they show outstanding properties. During growth, depending on the synthesis methods, they can assemble either as concentric tubes (multiwall nanotubes, MWNTs) or as individual cylinders (single-wall nanotubes, SWNTs). The main techniques usually adopted for the synthesis of CNT are arc-discharge,⁴ laser ablation and various catalytic chemical vapour deposition (CCVD) techniques.

Applications

Carbon nanotubes (CNT) with exceptional electrical and mechanical behaviors have been successfully utilized in the fabrication of new-generation nano-composite material with ultra-lightweight, high strength and enhanced electrical conductivity.⁵ Interfacial interaction and filler dispersion are the crucial parameters for enriched properties, especially in the mechanical domain of the corresponding polymer composite. A huge number of articles were published in the field of polymer nano-composites using CNT (either single-walled -SWCNT or multi-walled MWCNT) as the efficient reinforcing agent. Different protocols have been adopted to optimize the CNT dispersion⁹¹ within the polymer matrix. The orientation of CNT in a polymer medium plays a crucial role in mechanical reinforcement. CNT reinforcement is

much more effective for ductile materials than those in brittle matrix.⁶ Poor dispersion and lack of interfacial adhesion between tubes are the major limiting factors for the complete realization of filler capability.⁷ Use of CNT in elastomeric matrix has been extensively reported. Carbon nanotube-polymer composite exhibits percolation behavior,⁸ in which the presence of an inter-connected nanotube network results in a dramatic increase of their electrical conductivity. CNT composite does not show enhancement in thermal conductivity with reference to CNT itself. Up to now, the progress in mechanical properties of the neat polymer by carbon nanotube incorporation remains modest with regard to expectations based on nanometer-scale reinforcement.

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Characterization Protocols for IPNS

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Abstract

Interpenetrating Polymers (IPNs) are a special type of polymer blends with special features. Their characterization follows special modalities. This chapter summarizes the different characterization protocols in the domain of IPNs.

Keywords: Polymer Blend, Interpenetrating polymer networks, Characterization methods

Introduction

Interpenetrating polymer networks (IPNs) are one of the most rapidly growing areas in multi-component polymeric systems. IUPAC Compendium of chemical terminology defines “IPNs as polymers. comprising two or more networks that are at least partially interlaced on a molecular scale but not covalently bonded to each other and cannot be separated unless chemical bonds are broken”.¹ IPNs are a combination of incompatible polymer networks, at least one of which is synthesized and/or cross-linked in the presence of the other. IPNs are a special class of polymer blends. The two characteristic features of IPNs that distinguish them from the other types of multiphase polymer systems are as follows: (a) IPNs swell but do not dissolve in solvents and (b) creep and flow are suppressed in IPNs.

The term “interpenetrating polymer network” had been assigned before the present interpretation of phase separation and morphology were assumed. Molecular level interpenetration is absent in almost all IPNs and usually they have finely divided domain size of nanometer range with dual phase continuity.² True interpenetration occurs only at phase boundaries and most of them are phase-separated to a certain extent. Molecular level interpenetration occurs in the case of total mutual solubility only. IPN is a polymer alloy with special features.

IPN can show the synergistic effect of their component polymers and consequently avoid their limitations to a considerable extent. Normal mixing of two or more polymers/co-polymers does not lead to the creation of an IPN.³ An IPN formation can be schematically represented in Figure 1.1.

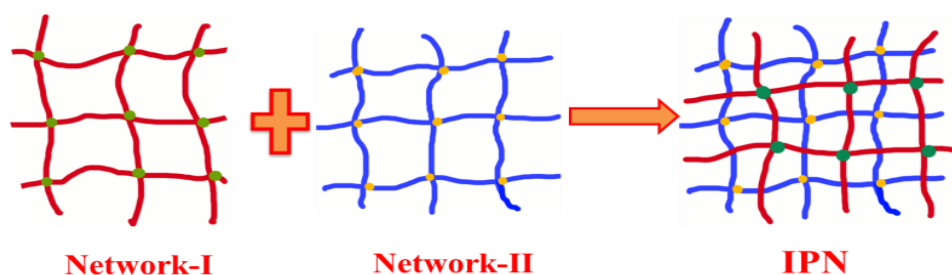


Figure 1.1: Schematic representations of component networks and IPN.

1. Characterization

IPNs represent a blend with less extensive phase separation. Reinforcement of IPN by suitable filler leads to the formation of IPN composites.⁴ The properties of IPN and IPN composites are dependent on several factors like distribution of components, filler-polymer interaction, molecular interaction at phase boundaries, phase continuity, kinetic retardation of phase separation, morphology, cross-link density, size and shape of filler, interfacial

interaction, domain size of components etc... A study of mechanical, morphological, viscoelastic, transport and free volume characterization narrates the specific properties of resultant IPN and corresponding composite systems.⁵ The properties of the IPNs fall into two categories.

The first category narrates the approximate simple averages of the properties of constituent polymeric systems. The second class of properties is those which at least in certain IPNs can show maxima or minima in those properties of component systems. In IPN composites, reinforcing effect of filler and IPN framework⁶ behaviors have their contributions. The synergistic effect between reinforcement and IPN formation is the expected outcome in this area. Blend ratio, efficiency of filler, morphological features and localization of fillers have decisive roles in the resultant behaviors of IPN composites.

Modern instrumental methods are used to characterize the interpenetration and ultimate behaviors of IPNs. Various characterization protocols are there to elucidate the morphology, thermal properties, physical properties and other characteristics of IPNs. The interpenetration in IPN may be identified by (1) Comparing the shift of dynamic glass transition temperatures of IPNs with their homo polymers. (2) Comparing the morphologies (micro- or nano-scale) and distribution of phase domains, shape and sizes. The existence of interpenetration is generally better judged through the combination of the aforementioned inferences.¹²⁶ The Reinforcement effect of filler in IPN composites can be evaluated through mechanical, thermo-mechanical and morphological analysis. Its behaviors can be compared with initial polymeric systems, reinforcing agents and also with IPNs.

2. Conclusions

The morphological properties of IPNs are best characterized by using scanning electron microscopy (SEM) and transmission electron microscopy (TEM). Differential scanning calorimetry (DSC), thermal gravimetric analysis (TGA), differential thermal analysis (DTA) and so on have been extensively used to study the thermal properties of IPN. The composition and nature of the constituent polymeric network define the mechanical properties of IPN. Common mechanical properties used to characterize IPN are tensile strength, elongation at break, Young's modulus and hardness. Mechanical properties (tensile stress-strain behavior, tensile stress relaxation and tensile creep) were extensively used to elucidate the composition of IPN. The spectroscopic methods that are widely used in structure elucidation are nuclear magnetic resonance (NMR), infrared (IR), confocal Raman, positron annihilation lifetime spectroscopy (PALS) and electron spin resonance (ESR) techniques. Dynamic mechanical analysis (DMA)⁷ is widely used for the measurement of the viscoelastic behavior of IPNs. DMA is a technique used to characterize IPN properties as a function of temperature, time, frequency, stress or a combination of these parameters.

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Morphological features of IPNS

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Abstract

Interpenetrating Polymers (IPNs) are a special type of polymer blends with special features. Their morphological characterization follows special protocols. This chapter summarizes the different morphological characterization protocols in the domain of IPNs.

Keywords

Polymer Blend, Interpenetrating polymer networks, morphology, characterization methods

Introduction

Interpenetrating Polymeric Networks (IPNs), perform a strategic role in contemporary Material science especially in the domain of polymer technology owing to the potential applications and multi-functionalities. Polymer blend (Poly blends) can be broadly defined as a mixture of at least two polymers or copolymers. They are generally categorized into two-miscible and immiscible blends.¹

The golden history of IPN began with its discovery by J.W. Aylsworth in 1914. This was an IPN (based on the language of modern concepts) of natural rubber. An interesting fact is that in 1914, the words polymer, network, IPN etc. had not yet been invented, as a result Aylsworth's patent did not mention these terms. The term interpenetrating polymeric network was introduced by J.R. Millar in 1960. He had designed an IPN consisting of Poly (styrene) as the two phases (homo-IPN) with ion exchange application.²

The morphology of IPNs is governed by chemical compatibility, interfacial tension, cross-link densities, types of components, mode and kinetics of polymerization and domain size of components. In sequential IPNs, the network first formed is most likely to be the continuous network. Its cross-link density is the controlling factor in determining the morphology of the system. Based on morphological pattern, IPNs are classified into three types; (a) with a domain size of a few microns, (b) with a domain size in the range of 1000Å, (c) with no resolvable domain structure.

1. Morphology

The morphological properties of IPNs are best characterized by using scanning electron microscopy (SEM) and transmission electron microscopy (TEM). The micrographs obtained using the SEM and TEM appears to be useful in detecting the interpenetration of phase domains, shape, and structures of the order of magnitude of a micron to a tenth of a micron and the degree of mixing. High-resolution transmission electron microscopy was successfully employed to directly probe the interphase region of IPNs. Hydrogen bonded supra molecular IPN network of 2-ureido-4-[1H]-pyrimidinone (UPy) telechelic poly (ethylene-co-1-butene) (SPEB) with hydroxyl-terminated polybutadiene (HTPB) was reported by T.J. Korely and et al.³ In this highly cited work, they employed TEM images to differentiate the interphase at different blend ratio.

The cross-linking effect in shape memory polymer systems based on the IPN format of cross-linked poly (methyl methacrylate) and poly (ethylene oxide) can be visualized through

SEM micrographs. Atomic force microscopy (AFM) analysis also provides valuable information on the IPN morphology.⁴ It helps to differentiate the continuous phase and dispersed phase in IPN. AFM is also used to identify the domain size of the components in IPN. In the characterization of polyisobutene (PIB) –PMMA IPN. Confocal laser-scanning microscopy (CLSM) also provides some useful insight into IPN morphology. It helps to identify the hydrophilic and hydrophobic regions of hydrogel-type IPN. X-ray scattering experiments are widely used for enlightening the morphology of IPN. It can be used for the visualization of interpenetrating channels in IPN. Energy dispersal X-ray analysis (EDAX) explains the distribution of dispersed phases in the IPN matrix. Raman mapping is an efficient technique to understand the phenomenon of interpenetration in IPN. Diamino-modified Graphene/ Polyaniline (PANI) Semi-interpenetrating system with high thermoelectric performance was reported by Yu-Sheng Hsiao et al.⁵

2. Conclusions

Morphological characterization provides a tool and guide for the distribution and dispersion of components in IPN. In IPN research, different innovative techniques have evolved.

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IPN Composites – Challenges and Possibilities

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Abstract

Interpenetrating Polymeric composites are a special type of polymer composite with special features. Their characterization follows special protocols. This chapter summarizes the summarizes the concept of IPN composites.

Keywords: Polymer Blend, Interpenetrating polymer networks, IPN composites

Introduction

IPN composite is an emerging field in polymer technology that utilizes the merits of IPN framework¹⁰⁶ and the flexibility of composite formation. In IPN composites, the polymer matrix is interpenetrating polymeric networks. Here materials in micro or nano form are incorporated into this IPN matrix. It utilizes the benefits of both the IPN matrix and its composite formation with improved performance. If the incorporated filler materials exist on the nanoscale, it is called IPN nanocomposite, on the other hand if the filler phase is on a micro-scale, it could be called IPN micro-composite.¹ IPN composite is an emerging field in material science especially in drug delivery systems and in hydrogels.

IPN Composites

The chemical, thermal and often electrical performance of IPN composites are controlled by the IPN matrix ² while the mechanical performance is dictated by the effectiveness of the reinforcement. Two general protocols are employed in the fabrication of IPN composite. The first protocol for the synthesis of IPN composite consists of polymer composite formation (by addition of filler into a suitable polymer matrix) followed by the creation of IPN framework (by incorporating a second polymer part). S. Amnuaypanich et al.³ utilize the above-mentioned order of preparation for the fabrication of NR/PVA semi-IPN composite reinforced by zeolite. They dissolved zeolite in a PVA solution to form a composite.⁴ NR latex is added to this composite along with a cross-linker to form an IPN framework and as a result, an IPN composite is prepared.⁵

IPN framework formation followed by reinforcing filler addition is the second protocol for IPN composite synthesis and is commonly adopted for biological IPN composite especially in drug delivery systems. This specific approach had been utilized in the first successful design of semi-IPN hydrogel–silver nanocomposites by Y. Murali Mohan and et al. In that article, acrylamide with initiator and cross-linker along with and polyvinyl pyrrolidone ((PVP) form an IPN framework. To this framework, silver nitrate is added. The reduction of silver nitrate by sodium borohydride (NaBH₄) in the IPN format produces nano-silver in the IPN framework.⁶

Conclusions

Crosslinking sequence and filler incorporation play a major role in the morphology and properties designing of resultant IPN composites. IPN composites have wide applications in the field of damping. It is clear that the range and depth of IPN composite is very high and there is enough room for research in this area.

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Applications of IPNs

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Abstract

Interpenetrating Polymeric networks (IPN) are a special type of polymer blend with special features. Their characterization follows special modalities. This chapter summarizes the important applications of IPNs.

Keywords: Polymer Blend, Interpenetrating Polymer Networks, Applications

Introduction

The central motive in material science especially in polymer technology is to fabricate a material with effective performance, excellent peculiarities, and an optimum cost-to-benefit ratio. Polymer blend (Poly blends) can be broadly defined as a mixture of at least two polymers or copolymers. Interpenetrating polymer networks (IPNs) are one of the most rapidly growing areas in multi-component polymeric systems. IUPAC Compendium of chemical terminology defines "IPNs as polymers comprising two or more networks that are at least partially interlaced on a molecular scale but not covalently bonded to each other and cannot be separated unless chemical bonds are broken".¹ IPNs are a combination of incompatible polymer networks, at least one of which is synthesized and/or cross-linked in the presence of the other.

Applications of IPNs

IPNs have a variety of applications and they are commercially successful forms of polymer blends, probably owing to the cross-linked structure that provides better thermal stability,² mechanical properties, chemical resistance, and so on. IPNs are traditionally used as damping materials, impact-resistant materials, adhesives, and so on. Their unique properties of specificity, mechanical strength, swelling capacity, nutrient and oxygen permeability, durability in the body, and sensitivity can be identified.

IPN-supported scaffold is one of the growing areas of polymer blends.³ Nanocomposite polymer IPN hydrogels are new-generation materials useful for a wide variety of applications. They are used as responsive hydrogels, medical implants, porous scaffolds or catalyst supports, self-healing materials, thermo-sensitive materials, contact lenses, and so on. The new applications of IPN are controlled drug delivery systems, energy storage materials, corneal transplantation and use in fuel cells.⁴ IPNs have immense scope in tissue engineering and as uterus stents. Thus IPN holds many advancements and future applications that will be of immense help to mankind. The literature survey of the latest works on IPN reveals that the current thrust areas of IPN are hydrogel polymer solar cells, controlled drug release, fuel cell membrane, and thermo-sensitive IPN for wound dressing. IPN hydrogels are called hungry networks or intelligent polymers due to their potential technological application in medicine, industry, biology,¹⁶⁵ and environmental clean-up. One of the shining future aspects of IPN is in the manufacture of solar cells. Here, an incoming photon from the sun creates an exciton (electron-hole pair) that travels to the interface where charge separation occurs, producing useful voltage. IPN has found immense use in various biomedical applications and biochemistry. IPN electrolyte is another thrust area in the polymer research field.⁵ IPN composite usually enhances the properties of parent IPNs. The current trends in IPN composite research include green

composite fabrication, shape-memory materials, drug-releasing agents, fibre reinforcing materials, electrolytes, and cryo composites.

Conclusions

The outlook for IPNs and IPN composites is exceedingly bright and is a hot research area. The data from the ISI Web of Science indicate that China, the United States and India are the leaders in the IPN research area, and currently about 500 papers per year are being published in this research field. Processing techniques for the synthesis of eco-friendly IPN and IPN composites and clear differentiation of physical and chemical interpenetration using characterization techniques are the remaining gaps in this field. Despite many advances, numerous challenges and opportunities remain for making an impact in the field of smart interpenetrating polymeric systems.

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A Study on Crisis Faced by Pineapple Industry with Special Reference to Vazhakulam, the Pineapple City

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Abstract

In Kerala, Vazhakulam is a village in the Muvattupuzha Taluk of the Ernakulam district. This town is known as Pineapple City due to its large-scale pineapple farms. The Vazhakulam pineapple is cultivated in an area that spreads to about 45km north, 40km west, 35km east, and 110km south of Vazhakulam, the heartland of pineapple.

Introduction

Pineapple is one of the most commercially important fruit crops in India. Total annual world production is estimated at 28.65 million metric tons of fruits. India is the fifth-largest pineapple producer in the world, producing 1.2 million metric tons of pineapple annually. 8.2% of the world's total production of pineapple is produced in India. Other leading producers are Thailand, Philippines, Brazil, China, Nigeria, Mexico, Indonesia, Colombia and U.S.A. Pineapple has been commercially grown in the Vazhakulam area for more than 50 years. It is an excellent fruit for fresh consumption. The Vazhakulam area is ideally suited for the production of pineapple. Planting is done in almost all the months. Except during the heavy monsoon days. Vazhakulam is considered the biggest pineapple market in India. From there, the fruits are transported to all the south Indian states and most of the north Indian states.

Statement of The Problem

People in the Vazhakulam area cultivate pineapple along with other crops. Most of them use pineapple cultivation as a way of life. They face many problems in this sector. A pineapple farmer faces many problems through pineapple cultivation. Scarcity of factors of production and the aids, price fluctuations of the pineapple and how this will affect the farmers, etc. The project tried to analyze the main problems faced by the pineapple industry.

Objectives of The Study

- To study the main reasons for crisis mainly faced by the pineapple farmers in workplace
- To study the development of Vazhakulam through pineapple cultivation

Source of Data

In this study, the main source of data is primary data, which is collected using a structured questionnaire. Secondary data was obtained from magazines, websites, etc.

Sampling Techniques

The convenience sampling method is used for collecting data from the population; the convenience sampling method is one of the main types of non-probability sampling methods.

Theoretical Framework

Pineapple (*Ananas comosus*) is an important fruit in India. Pineapple is cultivated in an area of 89 thousand hectares, and the total production is 1415 thousand tons. It is abundantly grown in almost the entire North East region, including West Bengal, Kerala, Karnataka, Bihar, Goa, and Maharashtra states. The major pineapple-growing countries in the world are Brazil, Thailand, the Philippines, Costa Rica, China, and India. The total area under pineapple cultivation in the world is 909.84 thousand Hectar, with production around 19412.91 thousand tons.

Data Analysis and Interpretation

Major problems of cultivators

Sl. No	Major problems	Number of respondents	Percentage
1	Price decline	26	52
2	Deformation	5	10
3	Accumulation of sludge	7	14
4	Natural calamity	12	24
5	If others	-	-
Total		50	100

Source: Primary data

Table showing development occurred in Vazhakualm after it was known as pineapple city

Sl. No	Developments	Number of respondents	Percentage
1	New industries	18	36
2	Employment opportunities	12	24
3	Advanced marketing facilities	9	18
4	Easy availability of funds	7	14
5	More government intervention	4	8
Total		50	100

Source: Primary data

Findings

- 52% of the workers respond that price decline is the major problem for cultivators.
- Through pineapple cultivation, Vazhakualm was developed by new industries, employment opportunities, advanced marketing facilities, easy availability of funds, and more government intervention.

Suggestions

- The government should ensure that providing subsidies for cultivators continues and must ensure that all cultivators are receiving the subsidy.
- Provide floor prices and cell prices for the pineapple products and reduce the problem of price fluctuation.
- The pineapple sector faces many crises during this period, so utilize maximum resources such as land, fertilizers, and government aid to overcome the situation.

Conclusion

The pineapple sector plays an important role in the economy. More than 5 lakh people in Kerala are cultivating pineapple. Most of them have been cultivating pineapple for more than 40 years; they couldn't think of another crop. While cultivators are facing a huge crisis, the government must take adequate measures to protect the pineapple

sector. The government must not hesitate to implement the national pineapple policy, which will help the pineapple sector.

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A Study on Customer Attitude towards Ecofriendly Products

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Abstract

Today, our environment faces a series of problems related to plastic. This study has been conducted to analyze customer attitudes towards eco-friendly products. For this, a structured questionnaire has been framed and has been surveyed. Data were collected on the basis of convenient sampling. The main factors that induce people to purchase eco-friendly products are quality and environmental protection.

Introduction

Eco-friendly means that the manufacturer of the particular product took the proper steps to ensure that the environment was not harmed during its manufacturing process. The raw materials used in the product were derived from sustainable sources. And the production should have a low impact on the environment regarding waste, carbon emissions, and energy use. A product is considered earth-friendly if it is biodegradable, meaning that it will pose no threat to the earth and environment when it is released into the air, water, or earth while in use or when disposed of. These types of products usually decompose much quicker in landfills than similar items that are not biodegradable. Products that are manufactured through technology and that cause no environmental hazards are called eco-friendly products. The promotion of products is necessary for the conservation of natural resources. Solar light and solar heaters make use of solar energy. Solar power products are innovative mechanisms that help conserve energy. Solar products are environment-friendly and usually cost-effective as well.

Statement of The Problem

In modern world, people are concerned about the environment. These products have a vital role in the protection of the environment as they do not have a negative impact on nature. A company can increase its competitive position by providing eco-friendly products. This study was conducted to know the attitudes of people towards products like solar power products, paper bags, handy craft items, and clay products.

Objectives of The Study

- To analyze those factors that induce people to purchase eco-friendly products.
- To study the reusable habit of eco-friendly products towards customers.

Sources of Data

The primary data used for the study was obtained from the customers. It was collected through a questionnaire given to the customers. The secondary data was collected from websites, brochures, and reference texts

Sampling Plan

The population of the study consists of customers attitudes towards eco-friendly products. The sample size used for the study is 40. A sampling method has been adopted for the study.

Theoretical Framework

According to Merriam-Webster, the official definition of eco-friendly is “**not environmentally harmful.**” When it comes to products, that means everything from production to packaging needs to be considered safe for the environment. Products that are made of environmentally friendly materials are Eco-friendly products or green products. It has qualities that will protect the environment. It has replaced artificial ingredients with natural ingredients. Green products are:

- energy-efficient, durable, and often have low maintenance requirements.
- They are free of ozone-depleting chemicals and toxic compounds and don’t produce toxic by-products.
- Often made of recycled materials or content or from renewable and sustainable sources.
- Biodegradable or easily reused, either in part or as a whole.

Solar products are innovative mechanisms that help conserve energy. Solar products are environmentally friendly and usually cost-effective as well. **Solar lights** have good demand and acceptance in the modern world. There are several companies providing solar lights. **Solar water heaters** have better acceptance because of their benefits and durability. The cheap availability and low cost of plastic bags make them popular among people. But plastic bags cause a lot of problems for our environment.

Data Analysis and Interpretation

Table showing what induces consumers to purchase these products

Interest on the purchase	Number of participants	Percentage
Quality and environmental production	20	48.8
More benefits	4	9.3
Safety	9	23.3
All	7	18.6
TOTAL	40	100

Interpretation:

Out of the total responses, 48% purchased based on quality and environmental production. 23% purchased on the basis of safety, 9% based on more benefits, and 18% of them considered all of the above.

Table showing eco-friendly products that can be reusable

Reusable	Number of participants	Percentage
Yes	32	79.1
No	8	20.9
TOTAL	40	100

Interpretation:

Out of the total responses, 79% of the products can be reusable, and 21% of them are not. Most of the products are derived from nature, so they can be easily recycled and reused without any harmful effects.

Findings

- The main factors that induce people to purchase eco-friendly products are quality and environmental protection, and these are now gaining more popularity in society.
- 65% of people have good opinion about the quality of the product, although 20% of them have excellent opinion about the quality of the product, even though 2% of them have a poor opinion.
- 98% of people believe that green products will contribute to the sustainable future.
- 80% of the purchased products can be reused, while 20% of the products cannot be reused.

Suggestions

- Consumers are to be well educated about importance of eco-friendly products like paper bags, handicraft items, and clay products.
- In order to increase the sale of paper bags, handicraft items and clay products, there is a need to undertake promotional activities
- Provide information about eco-labels to those who are not aware of them.
- Take measures to avoid the problem of unavailability of the products.

Conclusion

Eco-friendly products have a prominent role in conservation of environment. So there is a need to promote green products. From this study, it is clear that most people are in the habit of purchasing eco-friendly products like solar lights, solar heaters, paper bags, handicraft items, and clay products. Most of the customers are willing to pay higher price for these products because of their quality and environmental protection. This study reveals that people have positive opinions about paper bags and solar light. On the other hand, handicraft items, solar heaters, and clay products are not very attractive to the respondents.

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A Study on Effectiveness of Visual Media Advertisement in Building Brand Equity and Brand Motive on FMCG and Consumer Durables

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Abstract

Nowadays, the most common promotional activity is advertising. The visual advertisement is more effective than other advertisements. The main objective of this study is to measure the effectiveness of different visual media advertisements in generating brand equity and buying motives for FMCG and consumer durables.

Introduction:

Advertising is now not only an information provider but also a factor that increases the psychic value of the product and hence is considered an investment. In terms of business, an investment has to generate income in the future. The impact of advertisements may be in different segments, which start from brand awareness to sales. A good number of studies are being done in this segment to prove the impact of advertisement effectiveness at different levels.

Statement of the problem:

Advertising initially incarnated as a solution for knowledge and information. Initially, advertisement emerged in the form of non-verbal communication, then evolved through print media and now reached visual media. If India is growing at such a pace, print media advertising will become outdated and probably be extinguished, as in developed nations. Hence, the study is only confined to visual media advertisement effectiveness.

Objectives of the study

- To measure the effectiveness of different visual media advertisements in generating brand equity and buying motives for FMCG and consumer durables

Research Methodology

Tools for data collection and analysis

Primary data is collected through questionnaires, and secondary data is collected from books, other documents, websites, etc. The data collected have been classified, sorted, tabulated, and suitably condensed to facilitate ready comprehension. Tables and diagrams are used as tools for the study. Simple statistical tools such as charts, graphs, and percentages have been used to interpret data.

Theoretical Framework

This chapter is divided into three parts, in which the first segment deals with the history of advertising, the second segment pertains to brand management, and the third segment narrates buying motive, the effectiveness of advertisement in building brand equity (considered to be Sookshmastiti), and building buying motive (assumed to be Stoola stiti). Branding helps to ensure the desired quality of the product, as grading is possible through branding.

Data Analysis and Interpretation

TABLE- Classification according to the visual ad which the respondents saw most

Response	No. of Response	Percentage
Television	35	35%
Internet	60	60%
Others	5	5%
Total	100	100

(Source: Primary Data)

Interpretation: Citing the modes of advertisement, 35% of consumers prefer television, 60% prefer internet and 5% prefer other mediums, hinting that internet was the main medium where ad had to make a mark

Findings and Suggestions

- The majority of respondents are seeing advertisements through internet, i.e., 60%; 35% are seen through television; and rest of them through other modes, i.e., 5%.
- a) The majority of the respondents agree that the ad reveals durability and reliability.
- Almost all of the respondents agree that the ad reveals or communicates the safety of buying, and least of the respondents strongly disagree with it.

Suggestions

1. Brand equity is generated by all forms of advertisements on FMCG and Consumer durables in Kerala. But, Advertisement with dialogue is heavily influential in procreating brand equity in Kerala.
2. The advertisers should give due care and more importance in telecasting advertisements with dialogue, both for promoting FMCG and consumer durables.
3. Buying motive and brand equity are affected by all forms of advertisements significantly, it is evidenced that more effectiveness is visible on Consumer durables. The study recommends that heavy budget would be set aside only on consumer durables.

Conclusion

The output of the study concludes that both brand equity and buying motives are significantly generated by all types of visual media advertisements, i.e., advertisements with dialogue, advertisements without dialogue, and animated advertisements on FMCG and consumer durables in Kerala.

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A Study on Role of Strategic Human Resource Management on Organisational Effectiveness

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Abstract

Today, many companies are facing a conflict over giving their employees rightful bonuses for the hard work they produce for the welfare of the company, so the system would like to make a possible solution to this by evaluating the automation of the performance rate according to what would be stated in their automated performance rating in the system. The higher the rating of performance, the higher the possibility that certain employees would be enlisted first for a promotion that, of course, would be from the higher management of the company. The study, entitled A Study on the Role of Strategic Human Resource Management on Organizational Effectiveness, analyzes the facts relating to it.

Introduction

Human resources are regarded as one of the most important sources for today's firms. Human resource management is more important than other competitive sources because these people use other assets in organizations, create competitiveness, and realize objectives. Thus, firstly, organizations must understand the expectations of employees, which will enable the desired behavior of employees in the organization. Some of the desired outcomes of the organization in managing their workforce are: competence; cooperation of employees with managers; cooperation of employees between them; showing the capabilities of employees; motivation, commitment, and satisfaction; attitude and presence; and employee behavior.

Statement of The Problem

The human resource management system will automate the performance of employees with regard to what is monitored. The study analyzes the role of strategic human resource management practices in the organizational effectiveness of private banks and aims to understand the benefits of strategic human resource management among private banks.

Objectives of The Study

- To study the role of strategic human resources management practices in organizational effectiveness of private banks
- To understand the benefit of Strategic human resources management among private banks in Idukki

Source of Data

- Primary data were collected through questionnaire.
- The secondary data used for the study were collected from magazines and other books related to the study.

Sampling Techniques

Convenient sampling methods were used for the study. A convenience sample is obtained by selecting a convenient population. The sample size selected for the study was 60.

Theoretical Framework

Strategic human resource management (SHRM) is the main concern of managers who are expanding their businesses at a global level. It provides new avenues for the promotion of team

learning in the organization. The main purpose of this article is to explore literary facts pertaining to this key area. On the basis of a review of literature on SHRM, its importance for nurturing team learning behavior among the diverse workforce of global business organizations to develop learning organizations and sustainably intelligent knowledge workers is presented and analyzed.

Keye (1984) studied the relationship between performance appraisal and career development and showed that both performance appraisal and career development have potential for developing human resources, potential that can be increased by linking them together to meet the needs of other individual employees and organizations.

Data Analysis and Interpretation

CLASSIFICATION ON THE BASIS OF INCREASED ORGANIZATIONAL EFFECTIVENESS THROUGH SHRM

OPINION	NO. OF RESPONDENTS	PERCENTAGE
Strongly Agree	25	42%
Agree	25	42%
Neither	3	5%
Disagree	3	5%
Strongly disagree	4	6%
TOTAL	60	100%

Source: Primary Data

Interpretation:

Table 3.19 shows that TQM increased organizational effectiveness. 42% of the respondents strongly agreed. 6% of the respondents strongly disagree. 5% of the respondents are neither agreeing nor disagreeing.

Classification On The Basis Of Performance-Related Benefits

OPINION	NO. OF RESPONDENTS	PERCENTAGE
Highly satisfied	15	25%
Satisfied	36	60%
Neutral	2	3%
Highly dissatisfied	2	3%
Dissatisfied	5	9%
TOTAL	60	100%

Source: Primary Data

Interpretation:

Table 3.26 shows the performance-related benefits of the respondents. Out of the 60 respondents, 60% are satisfied. 25% of the respondents are highly satisfied. 9% of the respondents are dissatisfied. 3% of the respondents are neutral and highly dissatisfied.

Findings

- From the study, it is clear that the majority of the respondents are concerned about the

strategic human resource management effectiveness of the organization.

- The majority of the respondents agree that strategic human resource management affects the performance of the organization.

Suggestions

- To eliminate conflict between management and employees and enhance communication and relationships with them.
- To provide awareness to employees about the objectives and vision of the organization.

Conclusion

In a rapidly changing competitive environment, human resources are an important source of competitive advantage. The human resource system can contribute to sustained competitive advantage by facilitating the development of competencies that are firm-specific. This study investigates the effect of strategic human resource management on various private sector banks in Kattappana municipality. According to this study, the majority of the respondents are aware of the role of strategic sources in the effectiveness of organizations, and they are satisfied with the welfare measures implemented by the organization. The majority of respondents agree that strategic Strategic Human Resource Management affects the performance of the organization.

They clearly understand the objectives and goals of the organization and feel free to express their opinions and suggestions about the organization. This study concluded that strategic human resource management will contribute to the performance of the organization and ensure good working conditions for the employees.

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A Study on the Morale of employees at Mar Sleevea Medicity, Palai

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Abstract

This study explores the critical issues of employee morale within the context of Mar Sleevea Medicity, Palai, Kerla. With healthcare institutions facing unique challenges related to employee well-being and job satisfaction, this chapter delves into the factors affecting morale among healthcare professionals.

Introduction

Morale is the attitude, feelings, and emotions of employees that play a vital role in determining their performance and behavior. These, in turn, determine the success and growth of the organization. It is for these reasons that human resources experts as well as line managers are now paying increasing attention to the problems of motivation and morale in industry. Morale is a state of mind or willingness to work which in turn affects the individuals and organizational objectives. Morale resides in the minds, attitudes and emotions of individuals themselves and in the reactions of their group. It affects the employees and executives in their interactions. Ultimately it affects the consumers and the community.

Statement of The Problem

It is said that satisfied employee is a productive employee, any kind of grievance relating to organizational or personal to a great extent influence on the job. So, every organization is giving higher priority to keep their employees with satisfaction by providing several facilities which improves satisfaction and which reduce dissatisfaction. If an employee is not satisfied with job there are chances for absenteeism, job turnover, lower productivity, committing mistakes etc. Purpose of this study is to describe current level of "morale of employees at Mar Sleevea Medicity, Palai."

Objectives of The Study

- To find out the level of employee morale at Mar Sleevea Medicity, Palai
- To know the level of satisfaction of the employees towards the organization.

Sources of Data

- The primary data were collected through questionnaire.
- The secondary data used in the study were collected from books, journals, magazines, articles, websites, and other publications.

Sampling Technique

Convenient sampling methods were used for the study. There are various statistical tools that are used in analyzing data. Such tools are percentage, diagrams, charts, tables etc.

Theoretical Framework

Robert Heller, founding editor of Britain's top management magazine, '*Management Today*,' has come forward with so many managerial skills and ideas on managing employees in an organization by motivating them and thereby creating a positive morale

towards the organization.

About the work place morale, he says that it is important to measure the work place morale on a regular basis to discover if and why staff are experiencing problems. If someone experiences a rise in departures, suspects that motivation is low, or finds absenteeism is increasing, employee attitude surveys give a broad indication of morale. Another method to check employee morale is to take a random opinion poll. After all, the results or findings will help us sort out the risk causing further demotivation.

Data Analysis and Interpretation

Level of Employee Morale

Department	No. of Employees (Sample)	High Morale	Moderate Morale	Low morale
Nursing	40	45%	35%	20%
Administration	10	60%	25%	15%
Physicians	20	58%	26%	16%
Support staff	15	46%	38%	16%
Technicians	15	37%	35%	28%
Total	100			

Source: Primary Data

Level of satisfaction of Employees

Department	No. of Employees	Satisfied	Nuetral	Dissatisfied
Nursing	40	50%	25%	25%
Administration	10	55%	30%	15%
Physicians	20	48%	12%	40%
Support staff	15	36%	27%	37%
Technicians	15	52%	30%	18%
Total	100			

Source: Primary Data

Findings

- The majority of the respondents agree that the institution is working with high morale
- It is observed that most of the employees are satisfied with their job and the working conditions offered to them. Also, they are satisfied to work with Mar Sleevea Medicity in Palai.

Suggestions

- Organizations should take care of the work load of employees.
- Supervisors should show appreciation to employees when they complete the work.
- Organizations should improve their feedback systems to ensure complete satisfaction because it helps to improve worker performance.

Conclusion

The study on employee morale helped to find out the morale of employees working at Mar Sleevea Medicity, Palai. It gives an opportunity to see the daily routine of an organization with mass production and helps to know the conditions of the employees working there. The morale of employees must be boosted to increase their confidence and satisfaction level. A change in the working environment can bring a change in the

attitudes of the employees towards work. Employees play an important role in the efficient management of the organization. If the employees are not efficient, then the organization will not be able to function properly. So, it is needed to motivate the employees through training and development programs and solve their problems. thus making them more competent and increasing their morale.

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A Study on the Perception of College Students towards Entrepreneurship

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Abstract

In developing economies like India, there is always a problem of unemployment. There is always a huge shortage of jobs on the job market. To address this issue, the government is making a lot of strategic plans, and one such initiative is boosting entrepreneurial intent among people. 'Entrepreneurship' can be simply defined as the intent among people to start a business. This study intends to understand the perceptions of college students towards entrepreneurship.

Introduction

The ultimate desire and aspiration of the youth in school and of their parents or sponsors is to see them gainfully employed soon after graduation. In the face of the current global economic recession and expanding population, however, opportunities for employment are becoming scarcer. This is more so as industries are shrinking in size or folding, and those that survive continuously downsize their workforce, thereby compounding the already high numbers of the unemployed. Entrepreneurship is timeless. Today, youngsters are exhibiting great intention when setting up an enterprise. It is crucial to identify these youngsters early and cultivate their entrepreneurial energy.

Statement of the Problem

Entrepreneurship is the capacity of individuals to innovate, to bear risk, to foresee the prospects of a project, and to have the confidence and competence to meet unforeseen and adverse conditions. The activities of entrepreneurs are crucial to the economic growth and prosperity of modern society. Hence, the present study attempts to know the perception of college students towards entrepreneurship and the different types of perceived barriers faced by the college students while selecting entrepreneurship as a career.

Objectives of the Study

- To study the general awareness of students regarding entrepreneurship.
- To identify the perception and attitude of students towards entrepreneurship.

Sources of Data

- Primary data is the original data collected by the researcher from the sample respondents. Here, primary data have been collected using questionnaires.
- Secondary data is gathered from published records like website, theses, etc.

Sampling Technique

Simple, convenient random sampling is used for the data analysis. 100 respondents from Nedumkandam Grama Panchayat were selected using convenient sampling.

Theoretical Framework

The framework of entrepreneurship is defined as a dynamic process of creating incremental wealth by entrepreneurs who take responsibility for the major risks in terms of equity, time, and career commitment.

E. Douglas (1999), in his study, investigated that the association between the intention of individuals to start own business and their attitude towards income independence, risk, and work effort is positively related.

Data Analysis and Interpretation

Response regarding consideration of starting own business

Response	No. of Respondents	Percentage
Yes	58	58%
No	42	42%
Total	100	100%

Source: Primary Data

Interpretation: From the above table, we can interpret that 58% of the respondents thought about starting their own business, and 42% of the respondents are not thinking about starting their own business.

Response regarding awareness about procedural formalities and regulations to start a business

Response	No. of respondents	Percentage
Aware	25	25%
Unaware	75	75%
Total	100	100%

Source: Primary Data

Interpretation: From the above table, we can interpret that 75% of the respondents are not aware of the procedural formalities and regulations for starting a business. Only 25% of the respondents are aware of the procedural formalities and regulations for starting a business.

Findings

- Most of the respondents want to start their own business to become independent.
- Most of the respondents say that lack of awareness and lack of finance are also barriers faced by students when selecting entrepreneurship as a career.

Suggestions

- This study suggest that the students need to be updated through entrepreneurial workshop and conferences in various fields to establish new ventures.
- Integrate entrepreneurship-related programs and activities into the established curriculum across different academics so that it may add value to college students.
- Entrepreneurship Development Club should enhance their activities and encourage participation from all departments in their activities.

Conclusion

The study on the perception of college students towards entrepreneurship revealed that there is a change in the attitude toward careers these days. Many of the students feel that entrepreneurship can be considered a career option in today's globalized environment and may feel that entrepreneurship is a rewarding career. The majority of the students are interested in this area. The mode of raising funds is very important in the creation of new ventures. The education system also affects entrepreneurship among students. Lack of awareness, availability of capital, fear of failure, etc. are some of the main barriers faced by students when starting a new venture. The result of the study is mainly related to the perception of college students towards entrepreneurship, and it shows a positive result in the perception of college students towards entrepreneurship. They are highly passionate about becoming entrepreneurs.

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A Study on the Wellness Programs Adopted in the IT sector

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Abstract

Employee wellness programs are those approaches taken by companies that aim at an employee's overall well-being. It can include health screenings, seminars on education, exercise, healthy eating habits, stress reduction, etc. Many companies offer a lot of wide-ranging wellness programs to employees. Yet very little research has been done on what types of initiatives have been taken by employers regarding employee wellness programs. Employee wellness programs are helpful for employers and employees to adopt and maintain healthy behaviors. It also comprises benefits like greater productivity, behavior changes, a decrease in labor turnover and absenteeism, and a healthier work environment

Keywords: Employee Wellness Program, Healthy work environment, Employee Retention

Introduction

People are becoming more conscious that health should not be viewed only through the lens of pathogenic illnesses. Individuals' health is substantially influenced by factors such as living habits and lifestyles. This new public fascination with 'Wellness' is taking on a global scale. The content of television shows, ads, popular periodicals, and daily newspapers exemplifies this. Thousands of projects and programs have been launched worldwide by governmental and non-governmental organizations and private individuals to emphasize the importance of community members adopting healthy lifestyles.

Wellness programs are designed to support employees in understanding their health risks and adopting healthy behaviors to decrease these risks. These programs can include health risk management (screening for elevated cardiovascular disease risk factors such as elevated cholesterol and blood pressure), behavioral health like smoking cessation, substance abuse, and psychological counseling, and primary care promotion and lifestyle management, especially on weight loss, fitness, and nutrition. Such programs aim for decreases in more costly health care utilization, including emergency room visits, hospitalizations, surgeries, and specialist visits, as well as reductions in absenteeism, increases in productivity, and a better quality of life.

Objectives of the study

1. To establish the factors that influence the adoption of employee wellness programs in the IT sector.
2. The study's goal is to learn more about the employee wellness initiatives that IT companies are doing.

Outcome of the Study

Employee happiness is usually a sign of a good workplace

1. Consider introducing some entertaining workplace wellness challenges if you desire this for your firm. These will motivate your staff to develop healthy habits, socialize, and become more productive and engaged as a result of them.
2. The mental health of the workers declined during the period of COVID-19 pandemic. Following its inception, it ushered in the work-from-home era, which caused a significant amount of stress among employees due to a sense of isolation.
3. The pandemic wreaked havoc on the economy, resulting in a financial crisis for many people, which had a negative impact on their mental health.

4. Wellness service providers are using virtual methods to provide services, such as sessions with psychologists and health coaches, to combat the problem.
5. Corporate wellness programs are a collection of policies, programs, and perks that target a variety of risk factors and conditions while influencing both employees and the firm as a whole.
6. According to the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP), corporate wellness and health initiatives, as well as disease prevention plans, have the potential to influence more than 150 million employees in the United States, lowering healthcare costs significantly.
7. Employees are encouraged to live a healthy lifestyle, which helps businesses increase productivity and cut costs by boosting employee wellness. In the future, the overall costs of missed productivity owing to illness-related absenteeism are predicted to exceed USD 150 billion.
8. Increased insurance costs result from the rise in obese and overweight people, putting financial strain on companies.
9. Businesses have discovered strategies to safeguard and prioritize their employees physically as a result of the COVID-19 epidemic by giving tech assistance to promote social distancing in the adoption of new leave rules.
10. Employers' priorities have switched to preventive and constructive management, which includes assisting employees in adapting to new requirements.

Conclusion

The pressing need of the hour is to primarily raise awareness about wellness in corporates, especially among the highly stressed workforce in the information technology industry. Wellness is a grossly misunderstood term and is usually perceived as a periodic master health check. Wellness goes beyond medical laboratory reports. Wellness should rather be considered a way of life where all dimensions relating to the body are held as important to foster a balanced state. This means that one should constantly monitor the mental (cognitive and intellectual), the physical, and the spiritual being in order to coexist peacefully with fellow workers, thereby establishing synergy and unity of work to eventually achieve prescribed goals.

It must be understood that the absence or indifference of any element will disturb the wellness of the employee and may lead to disastrous consequences, including conflicts, unruly behavior, digression of focus, and loss of property and life well-being, which can also contribute to their happiness

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Accessibility and Usability of Different Payment System

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Introduction

A payment system is any system used to settle financial transactions through the transfer of monetary value. This includes the institutions, instruments, people, rules, procedures, standards, and technologies that make its exchange possible. Payment systems are used in lieu of tendering cash in domestic and international transactions. This consists of a major service provided by banks and other financial institutions. Traditional payment systems include negotiable instruments such as drafts and documentary credits such as letters of credit. The term electronic payment refers to a payment made from one bank account to another using electronic methods; electronic payment refers to e-commerce, a payment for buying and selling goods or services offered through the Internet, or broadly to any type of electronic funds transfer

Statement of the Problem

Electronic payment systems are highly expensive because they include set-up costs, machine costs, management costs, etc., and this mode of payment will take more time than the physical mode of payment. This study has been conducted in order to understand how online payments have found their way into the world. It also analysis the security and safety of different payment systems

Objectives of the Study

1. To know about the Purpose of using online transactions.
2. To measure the awareness of electronic payment systems.

Sources of Data

Primary data are those that are collected from a fresh source for the first time and thus happen to be original in character. The primary data for the study was collected from 90 people residing in the Thodupuzha area through structured questionnaire.

Sampling Plan

The population of the study consists of people in Thodupuzha Taluk. The sample size used for the study is 100. A convenient sampling method has been adopted for the study.

Theoretical Framework

The 'payments system' refers to arrangements that allow consumers, businesses, and other organizations to transfer funds usually held in an account at a financial institution to one another. This includes debit cards, credit cards, electronic funds transfers, direct credits, direct debits, internet banking, and e-commerce payment systems. Payment systems may be physical or electronic, and each has its own procedures and protocols. E-payment systems have become increasingly popular due to the widespread use of internet-based shopping and banking.

Data Analysis and Interpretation

Awareness about online payment systems

Particulars	No. of respondents	Percentage
Yes	45	90%
No	5	10%
Total	50	100%

Source: primary data

Interpretation: The table shows awareness about online payment systems. 90% of respondents were aware of online payment systems, while 5% of respondents were not aware of online payment systems.

Purpose of using online transactions

Particulars	No. of respondents	percentage
Money transfer	13	20%
The utility of bill payment	6	9%
Recharge	6	9%
All of the above	41	62%
Total	50	100%

Source: primary data

INTERPRETATION: The table shows the purpose of using online transaction. 62% were using it for money transfers, bill payments, and recharge. 20% were using it for money transfer only and 9% were using it for bill payment and recharge

Findings

1. From the survey, we know that 90% of the respondents have knowledge about online payments.
2. The majority of respondents were interested in digital payments.
3. The time-saving feature of digital payment is the reason for using it
4. Majority 4. The majority says that modern payment is not so risky.
5. The most attractive feature of online payment is its easy accessibility.

Suggestions

1. In the study, whenever people use digital payment, they look for new features like premium offers and discounts; therefore, new features can be introduced among them, and more people will switch to digital payment.
2. In order to make the transactions more safe, fast, and flexible, the connection of banks with these e-payments needs to be improved a lot.

3. Increase the speed of network to avoid hindrances during online payment. Many people face network issues while making urgent payments. In rural areas, the strength of network is very weak, which will make people not use E-payment.
4. Provide purposeful guidance about usability of online payment system so that it can attract more digital payment users. Now, people are also aware of the safety and security of online payments. So they avoid digital payments.
5. Introduce online payment system for public transportation like buses, autorickshaws, and taxis, which will avoid the hassle of making liquid payments.

Conclusion

The adoption of e-payment, or digital payment, was much more than what we had anticipated at our initial assumption. Many E-payments, programs, and semesters like Paytm, Phonepe, Amazon Pay, and Google Pay were introduced and gained wide acceptance. Everyone who uses digital payment providers is satisfied with their services. From the data collected, it is clear that majority is satisfied with online payment, and people find it the easiest way of making payment. But still, many others prefer direct banking transactions due to fear of losing money, safety issues, and a lack of knowledge about internet. This study was focused on all categories of generation and therefore, the response that we had received was an overall opinion about E-payment.

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