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Principal's Message

I am profoundly honoured to address the esteemed readers of this journal, emphasising our firm commitment to upholding the highest standards of excellence in nurturing a culture of sustainability that aligns seamlessly with the Sustainable Development Goals. In standardising the methodology for charting the future growth path of an educational institution deeply entrenched in the domain of higher education, fortified by years of accrued experience and expertise, it becomes essential to engage in addressing formidable global challenges that possess the capacity to significantly impact humanity on a global scale. St. Aloysius College (Autonomous) is resolute in its dedication to cultivating a generation empowered to enact viable solutions by confronting pivotal global concerns like natural degradation, resource overexploitation, pollution, and climate change, all of which stand as existential threats. Through comprehensive study and practical exposure facilitated by esteemed faculty and industry luminaries, the college maintains an unwavering dedication to shaping the next generation.

In the symphony of sustainable development, embodied within the overarching sentiment, lies the insightful recognition that every stride toward sustainability demands a harmonious blend of cooperation, ingenuity, and a collective dedication to crafting a brighter future for posterity. In resonance with the Sustainable Development Goals, particularly accentuating pivotal domains such as abolishing poverty (SDG 1), fostering quality education (SDG 4), advancing gender parity (SDG 5), enhancing health and well-being (SDG 3), and combating the climate crisis (SDG 13), focal challenges have been pinpointed. Action plans have been initiated by the college towards the SDGs with the aim of actively involving various sectors of society. Compact endeavours persist to propagate the message of environmental preservation and human prosperity, transcending from local enclaves to the global stage, concurrently equipping the upcoming generation with essential practical skills to ignite positive transformation.

I wish to express my sincere gratitude to the authors, reviewers, and editorial team for their resolute commitment and scholarly diligence in ensuring the successful realisation of this publication.

Rev. Dr Praveen Martis S J
Principal, St Aloysius College (Autonomous), Mangaluru.

Editorial

Once upon a time in a small village, there lived a wise old man was known for his compassion and wisdom, and the villagers often sought his advice. One day, a severe drought struck the village, leaving the crops withered and the wells dry. The villagers were worried and desperate for water. Seeing their plight, the wise old man gathered the villagers and proposed a plan to dig a canal that would divert water from a nearby river to the village. Despite the daunting task, the villagers agreed to work together. Each person contributed their time, effort, and resources to dig the canal. They worked tirelessly day and night, facing challenges and setbacks along the way. After weeks of hard work, the canal was finally completed, and water flowed into the village once again. The crops flourished, and the villagers rejoiced, grateful for their collective effort. As they celebrated their success, the wise old man addressed the villagers, "This canal is not just about bringing water to our fields. It is a symbol of what we can achieve when we come together for a common goal. We must remember that our actions affect not only ourselves but also the world around us. Let us continue to work together to create a better and more sustainable future for generations to come." The essence of this narrative lies in the reflective insight that through collaborative efforts and collective action, higher education institutions possess the capacity to surmount obstacles and encourage a world that is both sustainable and prosperous. Much like the villagers depicted in this tale, it is crucial for us to join forces in pursuit of the Sustainable Development Goals, thereby securing a brighter future for generations to come.

The current edition includes seven dynamic research papers covering various disciplines. The paper titled "The First World War: Gender and Nation in the Autobiography of Cornelia Sorabji" authored by Dr. Sylvia Rego, attempts to situate the nationalist aspirations of Cornelia Sorabji, India's first woman barrister and a Parsi convert to Christianity, within the context of the First World War as depicted in her autobiography, India Calling.

"Unveiling Sustainable Consumption: A Comprehensive Analysis of Responsible Consumption Practices", the research article by Libi K C and Dr. Vipin Chandran K P look into sustainable consumption practices within the framework of the Sustainable Development Goals, advocating for reduced consumption, the use of second-hand and sustainable goods, and community involvement. Given the urgent challenges of resource depletion, climate change, and social inequalities, promoting responsible consumption is crucial for building a resilient and equitable global society.

In their article titled "When Disaster Leads to Literature: An Ecocritical Reading of Chernobyl Narratives," Ambika J. and Dr. Alwyn V. D'Sa remind us that disasters, whether natural or anthropogenic, disrupt ecological balance and inspire a distinct genre of literature, such as Chernobyl narratives, which explore their aftermath and serve as cautionary tales about the intricate relationship between nature and human-induced catastrophes.

"Brief Study on Economic Order Quantity Model" by Mr. Vinay R A & Dr. Shubhalakshmi explores the significance of a robust inventory management system in ensuring the seamless operation of a successful business. The EOQ (Economic Order Quantity) model is a widely embraced technique aimed at identifying the optimal order quantity that minimizes overall inventory costs. This article delves into two fundamental approaches for determining the EOQ: the Trial-and-Error method and the Algebraic method, while also examining the advantages, limitations, and practical applications of the EOQ model.

In his research article, "Quality and Standards of Higher Education in India", Dr V. Basil Hans explores the current state of higher education in India, focusing on quality and standards. He emphasizes the need for collaborative efforts from various stakeholders to address challenges and drive meaningful reforms. The study provides an insightful analysis of how accreditation bodies and government policies shape educational standards. Furthermore, it examines the impact of privatization and the growing number of international collaborations on enhancing educational quality.

Vibha T & Dr. Melisa M Goveas contributed in a research article titled "Graveyard of Buried Hopes": The Indigenous Voice in Anne with Ane" is a study based on the show Anne with an E, which is an adaptation of the children's classic, Anne of Green Gables by Lucy Maud Montgomery. The storyline common to both, explores the story of a fiery redheaded girl, Anne and her adventures while also tackling sociopolitical issues. Towards the third season of the show, an indigenous family is included in the diverse plotline of this Canadian series.

The research paper "Factors Affecting Health Conditions of Police in Mangalore City" written by Mr. Mohammad Hafil & Mr. Jethin Aditya John, explain the demanding nature of police work, characterized by irregular shifts, long hours, and exposure to extreme climates, poses unique challenges that disrupt sleep patterns and eating habits, potentially leading to long-term health issues. The physical strain and stress associated with these conditions affect the overall health and well-being of the police force, highlighting the importance of understanding and addressing the various factors influencing their health to promote a better work-life balance and ensure the effective functioning of society.

I express my sincere gratitude to Rev Dr. Praveen Martis SJ, the Principal of St. Aloysius College (Autonomous), for his persistent support throughout this process. In addition, I extend my thanks to all contributors, reviewers, and esteemed members of the editorial board for their invaluable cooperation, which has greatly enriched the quality of this publication. The success of this project has been greatly influenced by the collective efforts and dedication of all involved, and I am genuinely thankful for the contributions made by each individual.

Dr P P Sajimon
Editor-in-Chief

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THE FIRST WORLD WAR- GENDER AND NATION IN THE AUTOBIOGRAPHY OF CORNELIA SORABJI

Sylvia Rego

Abstract

The idea of nationalism in the absence of a sovereign nation becomes possible in the context of an anti-colonial feeling of a subject nation that at times asserts its identity by excluding some from the idea of the nation. The exigencies of war however, serve to blur patriotic lines and bring out the inherent ideological contradictions at work within the subject nation. The dehumanising effect of the First World War, the brutality and violence it engendered, the invention of a patriotism that sought to include colonial subjects through the invocation of a hyper-masculinity - are issues that crop up in narratives in the early twentieth century and are laced with ambiguities. This paper tries to locate the nationalist aspirations of Cornelia Sorabji, a Parsi convert to Christianity, and India's first woman barrister, in the context of the First World War as reflected in her autobiography India Calling.Not many of the women's autobiographies of the times dwell on the First World War other than in a passing reference. But Cornelia Sorabji devotes several sections of her autobiography to it. How did India's participation as a subject nation in an alien war get narrated, if at all, in Sorabji's writing? How does she inscribe herself as a patriotic subject in the course of her writing about the war efforts? If she had managed to isolate herself from both the nationalists and early feminist in India, how then does she claim a unique place for herself in the context of the First World War? Some of these questions will be explored in this paper.

Keywords: *hybrid, nationalism, zenana, propaganda, empire, pioneer, patriot*

Cornelia Sorabji dedicated herself to the cause of the amelioration of the legal and financial status of orthodox Hindu women – the *purdahnashin* – and worked for the Indian government as the legal representative for the Court of Wards in Calcutta (Burton, *The Purdahnashin in her setting*, 2000). As an Indian woman her struggle against a misogynist and racist system in her quest to acquire the kind of education reserved for men was a remarkable one. A feisty woman who clawed her way up the educational and legal ladder, Sorabji regales her largely western audience with thrilling accounts of her adventures across the length and breadth of the country in the course of her work. As her nephew Richard Sorabji apologetically admitted, she was caught on the wrong side of history with her

Dr Sylvia Rego, *Professor of English, St Aloysius College (Autonomous), Mangaluru.*

unabashed Anglophile stance and denunciation of the Indian nationalists (Paranjape, Foreword, *India calling*, 2001).

While she was certainly not the only one to profess her unflinching loyalty to the British Crown, her liminal identity from the perspective of her race and religion rendered her brand of nationalism suspect, and served to isolate her from the native men and women, particularly from the Hindu community.

Her putative reader in this autobiography was the British and so the narrative often slips into a confidential mode that was meant for white readers. While offering fulsome praise for the British Sovereign in a war where other than England hardly any other nation came out economically unscathed, she is disdainful of Indian nationalists and reserves special scorn for Gandhi. The participation of tens of thousands of Indian soldiers in the First World War is glossed over in Sorabji's text. Instead, she throws the lens on her own war-efforts and also gives a vivid description of triumphant British soldiers and citizens at the close of the war. She constructs herself as a pioneer of the Swadeshi Movement even before Gandhi entered the fray. She claims credit for helping white women find employment during the First World War.

At the news of the outbreak of the First World War, the princely states in India had pledged their support in cash, kind, and manpower in a show of loyalty to the British. The stigma of the 1857 Revolt, as some scholars say, could be one reason why they were anxious to prove their allegiance. Indian nationalists too had their reasons for upholding their fealty to the British Crown. The hope for home-rule, or at least greater say in self-governance was one. Gandhi had been a part of the Ambulance Corps in England at the beginning of the war. Back home, he felt that India should participate in the war without attaching conditions at such a point in time. The Muslim princely states dispelled British fears of Muslim soldiers refusing to fight fellow Muslims, though the Ghadar group rose in revolt. As for the thousands of semi-literate men recruited into the war, the incentive for them seemed to be material in nature and had little to do with ideas of loyalty. The promise of food, clothes, money and appreciation drew them from Punjab and neighbouring places. The women however were distraught at the separation from and news of the death of their kin in a war spurred by the British 'red monkeys' (Das, *India, Empire,* 2018).

The frequent emasculation of Indians and their infantilisation under the hyper-masculine, racist and paternalist coloniser needed to be proved wrong. The essentialisation of some castes and races as naturally martial and courageous as in the case of the Jats, the Gurkhas and the Rajputs, had proved useful to the British army (Cohn, *Colonialism and its Forms of Knowledge*, 2021). The figure of constant ridicule and effeminacy was then the Bengali Babu from the *Bhadralok.* The play *Bengali Platoon* reveals how this image was sought to be countered during the war by putting together a platoon that offered to fight for the British. Thus Indian participation in and response to the war were motivated by complex factors of gender, class, sexuality, nation and race.

Thus amidst the clamour of an orthodox revivalist cultural nationalism of the late nineteenth century and the expediency of a phase of 'mendicancy' or seeking of incremental changes in the political and administrative structures by Indian nationalists in the early part of the twentieth century, the colonial regime had to devise ways of recruiting Indians in a war which was not theirs in the first place. But except for a fringe group of revolutionaries, most of the Indians were ready to support Britain in the initial years of the war. However, in the later years this loyalty turned to disenchantment with the government then having to talk more of 'responsible government'. The pre-modern notion of the dharma of the patriotic subject to help the ruler defend the kingdom against the enemy was at odds with the current need to assert the right to self-rule. Lakhs of Indians served in various capacities in combatant and non-combatant roles and as reserve personnel during the First World War with a casualty of more than a lakh, as noted by historians. Apart from reinforcing earlier stereotypes of so called martial races like the Gurkhas, the Jats and the Rajputs in the course of recruitment for the World War, the British felt compelled to raise Mahar regiments and accept a platoon from the much reviled Bengali Bhadralok. The government needed to placate aggressive nationalists through promises of constitutional reforms as in the Montague- Chelmsford Act, rope in leaders like Gandhi who gave unconditional support, and keep out men like Tilak whose support for the war came with riders. Rewards and incentives in the form of titles like Kaiser-e-Hind, Rao Bahadur, Rao Saheb, Khan Bahadur, Order of the British Empire came in handy, while gifts and mementoes like swords, khillat, sanads, turbans and lands were distributed in appreciation and to garner support

(Ganachari, *First World War*, 2005). In fact, Cornelia Sorabji herself was awarded the title of Kaiser-e-Hind, which is not so surprising given her absolute loyalty to the Crown. Meanwhile, increasing acts of terrorism and anarchism were seen in Bengal. The call for Swadeshi and boycott intensified in the post-war period.

Cornelia Sorabji's construction of her identity as a loyal British subject, an 'authentic' Indian woman, a pioneering nationalist, a universalist feminist and a thoughtful missionary is an ambivalent one with hybrid locations that become evident in her war-account as well.

Cornelia Sorabji's account of the First World War, which she refers to as 'the four grisly years', marks her own presence in England on both occasions – the beginning and the end of the war, - on sick leave. She feels 'blessed' to be in England to feel the pulse of the people who waited patiently outside Buckingham Palace at the beginning of the war for a glimpse of 'our King' while all other kings were to fall in ruins later on. She refers to the typical British reserve that gave way to friendliness all round as people prayed in St Paul's Church and were exposed to the 'icy blasts of a common hazard'. Her identification with the British is seen here as complete and natural with the empire stretching seamlessly to incorporate the subject nation and the colonising nation under one unproblematic idea of patriotism. It is interesting to note how even as she reveres 'our' king in a fit of patriotic fervour, she goes on in her memoir to ridicule Gandhi and refer to India as 'his' country in a Freudian slip, though she professes love for India and contributes to it in her own way. She rues the fact that she has to return promptly to her calling in India and cannot stay back to join the army of war-workers, though she records contributing her mite by filling in slips at Chelsea till it was time for her departure.

Back in India, she claims credit for a host of things in connection with the World War and asserts that she slogged so much in the war effort as to jeopardise her health to the point of losing her eyesight almost totally. The war is shown as bringing out the totally unselfish and dedicated side of her nature, as she would have the reader believe. For instance, she writes of her decision not to pursue matters related to her salary during the war. The nobility of this gesture is projected as a mark of patriotism. But Chandani Lokuge points to the gaps in such a narrative, since Sorabji's other writings reveal that she was quite particular about money matters (Sorabji, *India Calling*). Sorabji declares that it was the *purdahnashin* who were in a sense, responsible for the establishment of a Publicity Department during the First World War and obliquely claims credit on her own behalf too. She casts these women as helpless and ignorant beings who felt terrified and muddled at various war-related rumours doing the rounds in the local media. She accuses the vernacular press of using the same term to denote the British and the Germans which confused the *purdahnashins*and made them wonder how the British could be so kind at times and cruel at others. They also ask her why there was a war in Madras. She deduces that they were referring to the 'adventures of the *Emden* and the *Goeben*' that were 'mistranslated' in the local press. The Fifth Light Infantry of Punjab that was sent from Madras and a part of which was involved in the Ghadar Conspiracy of 1915 wherein German prisoners aboard the captured German *SMS Emden* were released by the mutineers is thus alluded to here.

Sorabji then proceeds to dispel the doubts of the *purdahnashins* and they seem relieved. She goes on to narrate how she then rushed forth to ask for two more clerks for two Vernaculars and asked the Government to print circular letters written by her for the benefit of the women in seclusion. These letters of her, she writes, were responsible for the war propaganda to be conducted on an all India level through a new Publicity Board.

She thus installs her as a veritable pioneer in this and other war-time endeavours, and the *purdahnashin* whom she calls her 'illiterate charges', as well as the British, are shown as being indebted to her. She regales the reader with the way she conducted War-Talks in her house with the help of the Magic Lantern that displayed War-Pictures for the benefit of her wards. In passing, she also mentions that the government asked for copies of her letters which were circulated and read aloud in many provinces, to be sent to Headquarters, ostensibly for approval to begin a Publicity Department for the war. That the wary Censor Board was suspicious of natives of all stripes cannot be ruled out however. The fear of yet another Mutiny, according to historians,had brought forth an almost pathological response from the British that verged on the hysterical.

Geraldine Forbes has documented the large-scale arrival of Victorian women in India who had no opportunity either in a promising career or in the marriage-market back in England and about their hope to find both in India (Forbes, *Women in Modern India,* 1996). That the First World War left many British women stranded in India and without an income is also evident in Sorabji's autobiography. She yet again claims to have obliquely helped them through the institution of a war-time necessity, the Women's Employment Bureau that later on was, in her opinion beneficial to Indian women too. Sorabji's*India Calling* also documents the scarcity of many food items during the war and how children and invalids had to bear the brunt of it owing to the unavailability of items from England, like oatmeal, cornflour, macaroni and ground rice. It also documents the shipping of some home-grown food items that were sent to England in pre-war days in order to be ground, canned, and sold again in India. She calls this an absurdity without wondering if it was not a consistent colonial economic policy that now was not a viable option thanks to the World War. Sorabji then breezily goes on to construct herself as the real pioneer of Swadeshi, in a way, much before Gandhi's call to the nation. She elaborates how with the help of two clerks she worked over-time in helping to put up an Exhibition of home-grown agricultural products that could be canned and preserved through local means. She mentions that letters were written to every Collector in India for natural-grown and manufactured food products within their jurisdiction. There is a note of pride that the sale of these items during the exhibition helped her raise ten thousand rupees for the war-fund.

Thus in all these references to the First World War, we can glean the manner in which Sorabji decries Indian nationalist leaders, and yet sees herself as one such leader endeavouring to help build the nation through her war efforts.We also get a glimpse of war propaganda and censorship seen from her perspective. However, there is no agonising or questioning of the savagery of the war. She also assumes she is in charge of seemingly ignorant, superstitious, and helpless Indian women whose fears about the war have to be allayed by her. She inserts herself as a pioneer in many of the war efforts including food. She establishes herself as the saviour of white women rendered helpless by the war. Such a self-image becomes possible in the face of her alienation from other Indian women and nationalist leadersas she perceived herself as occupying a liminal space as a Parsi Christian woman. While such a location can confer an insightful consciousness unique to her location, it also shows her accepting an idea of patriotism that never felt disturbed by questions of British control of India. While other groups like those led earlier on by Phule would also see the benefit of using the superior power of the colonial government to circumvent domination by upper caste natives, Sorabji's narrative does not exhibit such impulses, at least not overtly. But as with the rest of her autobiography, her account of the First World War seems designed to carve a niche for herself as a saviour who delights in engaging with both native women in the zenana, and the British during the war, and who tirelessly slogs in the cause of the war.

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UNVEILING SUSTAINABLE CONSUMPTION: A COMPREHENSIVE ANALYSIS OF RESPONSIBLE CONSUMPTION PRACTICES

Libi K C

Vipin Chandran K P

Abstract

In a world confronted with escalating environmental challenges and a growing awareness of the consequences of unchecked consumerism, the imperative for sustainable consumption practices has emerged as a cornerstone of global efforts towards a more responsible and balanced future. This study endeavors to unravel the intricate tapestry of sustainable consumption, meticulously dissecting the nuances of responsible consumption practices within the expansive framework of the 12th component of the Sustainable Development Goals (SDGs).The study has found that for achieving sustainable consumption, the consumption itself has to be reduced by encouraging the use of second-hand goods, repaired goods, and sustainable products, conserving natural resources, using locally produced goods, supporting firms following sustainable production practices, and promoting community involvement in sustainable consumption. As we navigate an era marked by heightened resource depletion, climate change, and social inequalities, understanding and promoting responsible consumption becomes pivotal for fostering a resilient and equitable global society.

Keywords: *Sustainable Consumption, Sustainable Development Goals, Responsible Consumption*

Introduction

In the global discourse on sustainable development, the role of consumption has ascended to a position of paramount importance. Every choice individual make regarding the goods they use, the services they engage with, and the lifestyle they adopt ripples through the fabric of society, influencing the environment, social equity, and overall societal well-being (Jackson, 2014). This acknowledgment underscores the profound impact that personal actions and decisions can have on the broader sustainability agenda.

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The recognition of consumption's pivotal role in shaping sustainable futures is a relatively recent phenomenon. Economies and policymakers have only recently begun to place significant emphasis on integrating sustainability into consumption patterns. Initiatives in this direction gained momentum following the Johannesburg summit, with the United Kingdom emerging as an early adopter of sustainability-focused policies. Since then, a paradigm shift has unfolded, as more nations globally have recognized the imperative to weave sustainability into the very fabric of consumption practices. The initiation of sustainability-focused initiatives in the UK post the Johannesburg summit marked a crucial turning point. This early commitment served as a catalyst for broader international engagement with sustainability in consumption. The effects of consumption choices on the environment, social justice, and overall societal well-being became central considerations for policymakers and global leaders.

The pinnacle of this global shift towards sustainable consumption is encapsulated in the inclusion of sustainability objectives in the United Nations' Sustainable Development Goals (SDGs) in 2015. These goals, crafted by the UNDP, serve as a comprehensive blueprint for addressing global challenges, with sustainability woven into the fabric of each objective. The recognition of consumption's impact is enshrined in the SDGs, particularly in SDG 12: 'Ensure sustainable consumption and production patterns'. As nations across the globe align with the SDGs, the integration of sustainability into consumption practices has become a common agenda. The transformative power of such integration extends beyond national borders, embodying a shared commitment to securing a more equitable, environmentally conscious, and socially responsible future. This research article embarks on a comprehensive exploration of responsible consumption practices within the framework of SDG 12, aiming to shed light on the intricacies and implications of sustainable consumption in the broader context of global development objectives. Through this lens, the study seeks to contribute valuable insights to the ongoing dialogue on sustainable development and consumption practices.

Table 1: Sustainable Development Goals

Sl No	Sustainable Development Goals
1	No Poverty
2	Zero Hunger
3	Good Health and Wellbeing
4	Quality Education
5	Gender Equality
6	Clean Water and Sanitation
7	Affordable and Clean Energy
8	Decent Work and Economic Growth
9	Industry, Innovation and Infrastructure
10	Reduced Inequalities
11	Sustainable Cities and Communities
12	Responsible Production and Consumption
13	Climate Action
14	Life Below Water
15	Life on Land
16	Peace, Justice and Strong Institutions
17	Partnerships for the goals

Source: Sustainable Development Goals, UNDP, 2015

The Review in Light

The thought of sustainability in the world of economic literature is rather new but has a far-reaching impact up on the writers and thinkers around the world. A more focused writing has come into the fore once the UNDP has published the Sustainable Development Goals in 2015. Hertwich (2005) discusses the Life Cycle Assessment (LCA) for promoting sustainable patterns of production and consumption. This includes activities moving towards cleaner production and developing sustainable consumption policies and activities. This paper examines the LCA through input-output analysis. The paper focuses on areas of sustainable consumption, policy, action and lifestyle that promote sustainable consumption. The analysis is descriptive, with inferences drawn from consumer expenditure surveys, and requires further polishing and development for application.

Liu et al. (2016), in their article, elaborated on sustainable consumption in China with the help of the Social Practices Approach (SPA) by effectively inculcating human agency and social structure. The study incorporated food, house energy, and transportation in deciding on sustainable consumption. Sustainable food production and consumption styles must be followed. In households, making biogas plants can be considered, for instance. Transportation must be made sustainable by effectively using public transport facilities and special management. The study has revealed that non-sustainable consumption is leading to pollution and climatic change, calling for technological solutions.

Spaargaren (2020), in his work, emphasised the need for a well-structured combination of sustainable production and sustainable consumption. The author points out those socio-psychological practices need to be emphasised for an environmentally friendly attitude among individuals. Utility provision must be provided to consumers to attract them to sustainable consumption in the future. Technology must be channelled for greener consumption and a green lifestyle. Moreover, the rich countries should consider the poor countries, especially in their food consumption.Wang et al. (2019) have identified that sustainable production and consumption are key to sustainable development. Due to different socio-economic factors, sustainable consumption and production differ in developed and developing nations. The methodology used by the authors is a systematic review of literature that has appeared from 1998 to 2018. Three objectives were set for the study, and the main finding is that the European countries are more focused and way ahead in sustainable production and consumption. One of the limitations of the study is that only peer-reviewed journals are included.

Mont & Plepys (2008) argue that sustainable consumption needs changes in the patterns of consumption and requires a complementary approach. This requires a shift from material-based consumption to non-material-based consumption. For this, the culture of society must change. A major chunk of sustainability has been focused on the production side, and now a major shift is required to the consumption side, and this has to start in major industrialised countries. Hertwich (2005) examined the Life Cycle Assessment (LCA) to promote sustainable production and consumption. The idea was put forward by the leaders at the 2002 World Summit for Sustainable Development held in Johannesburg. The LCA approach mainly uses input-output analysis to assist policymaking, take appropriate action, and identify lifestyle changes. Jackson (2004) asserts in his book that consumer behaviour has a key impact on the environment and society. It is influencing people both directly and indirectly. Individuals need to be motivated by sustainability in consumption to protect the environment since it is a personal choice. Policy interventions like taxes and restrictions must be enforced to avoid unsustainable consumption. Incentives, rules, and people's engagement are some of the interventions suggested by the author.

Quoquab& Mohammad (2020), in their literature review paper, reviewed the literature on sustainable consumption from the period from 2000 to 2020 to have a correct understanding of the topic. The major objectives of the study were to understand the emergence of the concept of sustainable consumption, the conceptual framework, the underlying theories, and the predictors and moderators of sustainable consumption. The study has found that there are several inconsistencies and research gaps in the area, and the studies are pooled mainly in developed countries, with less attention devoted to developing nations.

Dolan (2002) examines the limitations of the concept of sustainability in consumption in the light of socio-cultural and historical background. The consumption decisions of individuals depend on their cultural and social practices, which have historical precedence. It is a macro problem to be dealt with in a micro sense. Hanss et al. (2016), in their study, investigated the relationship between sustainable consumption and efficacy norms, attitudesand demography in their consumption of groceries. It was found out that people's perceptions of their surroundings have a direct impact on their consumption of sustainable products.

Research Gap

There is a dearth in the literature in the area of sustainable consumption since it is a new field of academic interest after the publication of the SDGs by the

UNDP in 2015. However, all the literature available to date has been reviewed to get an in-depth understanding of the subject. It has been found that very little work has been done in the area of sustainable consumption behaviour and the promotion of sustainable consumption behaviour. Therefore, the study is undertaken.

Objectives and Hypothesis of the Study

The main objectives of the study are set into three sections. The first objective is to understand the term sustainable consumption placed in the 17 Sustainable Development Goals (SDGs) by the United Nations Development Programme (UNDP) in 2015 and its relevance in the economic literature. With the accomplishment of this objective, one will be able to understand the meaning of sustainable development and the goals set for achieving them, with a special focus on sustainable consumption. Secondly, an attempt is being made to analyse how sustainable consumption can be achieved by individuals and economies and what the factors are that hold them back from achieving SDG number 12. And finally, an analysis of the achievements of sustainable development goal number 12 so far since its introduction will be carried out.

On the basis of the previous discussions and research objectives, the Null Hypothesis (H_0) is that there is no significant difference in the consumption habits that leads to the sustainability in consumption and Alternate Hypothesis (H_1) is that there is significant difference in the consumption habits that leads to sustainability in consumption.

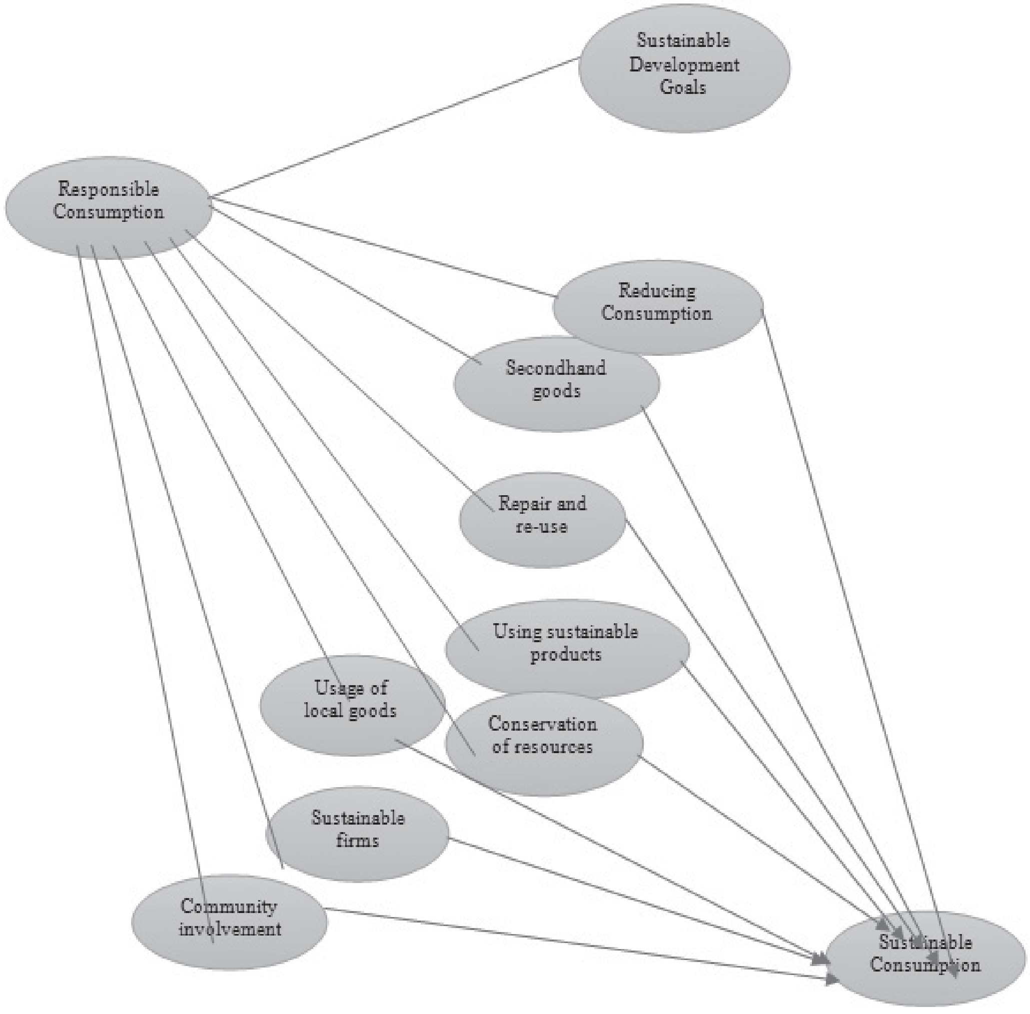
Methodology

The methodology followed for the study is the analysis of secondary data available in the public domain and other internet sources. For the secondary data, reliable sources like United Nations, Energy Institute and CSE are relied upon. A thorough review of the literature has been carried out spanning in different domains of knowledge has been carried out to understand the depth and dearth of the studies made so far on the subject. Based on the detailed and systematic review of literature, various data sources and variables have been identified for further proceeding with the work.

Conceptual Framework

The conceptual framework of sustainability in consumption with reference to the SDGs is shown below.

Figure 1: Conceptual framework of Sustainable Consumption



Sustainable consumption as a matter of global interest came into debate with the publication of sustainable development goals by the United Nations Development Programme (UNDP) in 2015. Among the 17 sustainable goals published by the UNDP, the 12th one is "Responsible Consumption and Production". Responsible consumption comes from sustainable consumption and requires some deliberate actions like reduction in consumption, usage of second-hand goods, repair and reuse, usage of sustainable products, conservation of resources, using locally produced goods, supporting firms producing sustainable goods, and encouraging community involvement in the above activities as shown in the figure above.

Discussion

Factors Deciding Sustainable Consumption

There are many factors that need to be consciously taken care of in the process of sustainable consumption. The factors that are leading to sustainable consumption are elaborated below.

1. Reducing consumption of goods, services, and energy

The first step towards responsible consumption, or sustainable consumption, is the self-restriction of the consumption of goods and services. The usage of goods and services must be restricted for personal and family use and the achievement of the zero-waste goal. A reduction of waste, especially food, drastically reduces the pressure on land and water, with scientific waste management leading to healthy biodiversity, further leading to sustainability (UN Food Waste Index Report, 2021).

Table 2: UN Food Waste Index Report

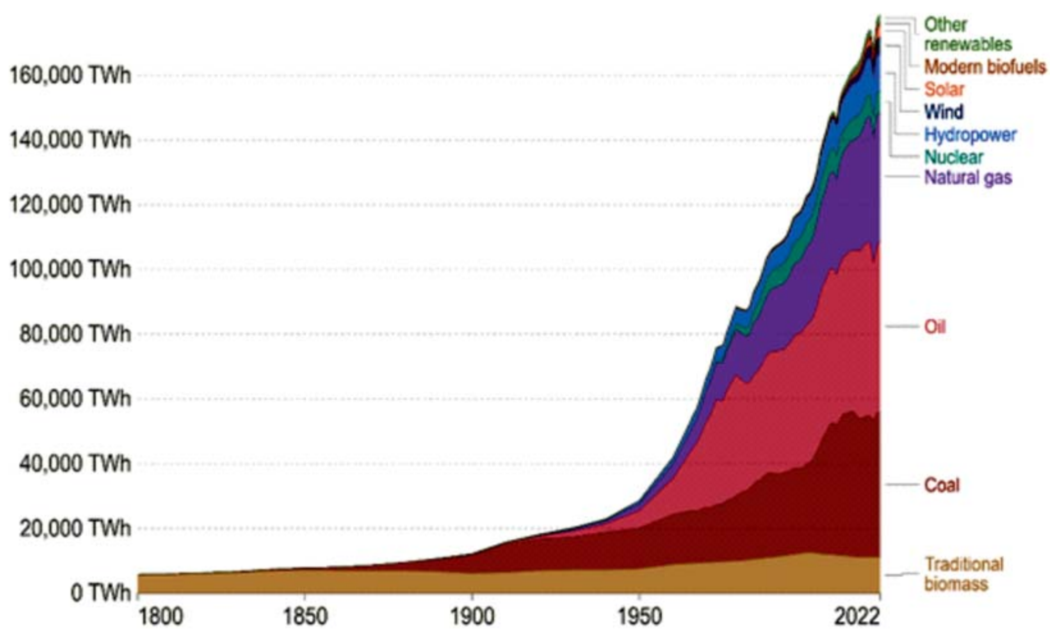
Income group	Average food waste (kg/capita/year)		
	Household	Food services	Retail
High income countries	79	26	13
Upper middle-income countries	76	Insufficient data	
Lower middle-income countries	91	Insufficient data	
Low-income countries	Insufficient data		

Source: UN food waste index report, 2021

The table 2 suggests that food waste is very high in the case of lower middle-income countries, with 91 kg per capita per year when compared to high-income countries. The lower middle-income countries are the places where there is a highly skewed distribution of food items among the population and a high amount of disparity in the distribution of income and resources. If the food waste can be managed properly, it can be channelled to the starving population there itself.

Energy consumption is also increasing alarmingly for non-renewable sources. This is highly dangerous since it is leading to depletion of energy sources on one side and increasing pollution on the other side due to the burning of fossil fuels. A graph showing energy consumption is shown below for quick reference.

Figure 2: World Energy Consumption



Source: Energy Institute Statistical Review of World Energy (2023); Vaclav Smil (2017)

OurWorldInData.org/energy

The figure 2 clearly shows that the lion's share of the energy consumption comes from oil, coal, natural gas, and biomass, which are classified as non-renewable sources of energy and whose usage leads to both depletion and environmental pollution. The usage of non-conventional renewable sources of energy is very low, and it needs to be encouraged and supported for sustainable consumption and achieving sustainable development goals.

2. Using second-hand goods

One of the most efficient methods for moving towards sustainable consumption is the promotion of the use of second-hand goods. The market for second-hand goods grows with an increase in the life time of these goods available in the market, leading to a reduction in the demand for new goods from the market and a sustainable environment (Thomas, 2003).Each one of the second hand goods put into re-use means avoiding equal amount of wastage that could have been occurred otherwise.

3. Repairing goods instead of replacing them

There are different kinds of consumers, with one group of consumers having a throwaway culture and another having a repair and reuse culture (McCullough, 2010). The European Union (EU) has launched an initiative in 2019 called "Right to Repair" to encourage consumers to repair their products instead of discarding them after use. Electronic goods with a small defect are being replaced with brand new ones, leading to a high amount of e-waste. A scenario for India is shown below.

Table 3: E waste in India

Year	E - waste generation (million metric tonnes)
2015	1.97
2016	2.22
2017	2.53
2018	2.86
2019	3.23

Source: CSE, 2020 compiled from the global e-waste Statistics Partnership

The generation of electronic waste has increased from 1.97 metric tonnes in 2015 to 3.23 metric tonnes in 2019. The table 3 shows that it is not the only material waste that is being piled up but also air and water pollution from environmentally hazardous objects.

4. Using sustainable products

One of the key challenges faced by firms in the 21st century is the design and use of sustainable products to move towards the goal of cleaner production (Maxwell & Van der Vorst 2003). Ireland is carrying out a successful Environmentally Superior Product (ESP) initiative for the development of sustainable products. Such kinds of innovative arrangements need to be initiated for encouraging the use of sustainable products.

5. Conservation of resources

The resources available to us in nature are not only for our use but also for the use of future generations as well. Therefore, while using the resources, one should be very prudent. The non-renewable resources, once depleted, will not be available for use over and over again. The use of non-conventional and renewable energy sources needs to be encouraged, and on the other hand the use of conventional and non-renewable sources needs to be discouraged.

6. Usage of locally produced goods

Purchasing and using locally produced goods results in no or less transportation that is environmentally sustainable due to reduced consumption of fuel and energy. In addition to this, locally produced goods are found to be good quality-wise, support the local economy, and provide access to healthier food with an overall reduction in transaction costs (Motta & Sharma, 2016). Consuming local food products is leading to conservation of food diversity and a drastic reduction in the consumption of fossil fuels, environmental pollution, and green gas emissions (Brain, 2012).

7. Support firms that follow sustainable production and consumption.

Institutional pressures and support are leading to the adoption of sustainable production practices and the production of sustainable goods. Sustainable production stems from the efficient consumption of raw materials, water, and land from a life cycle and recycling perspective (Zhu, 2016). Support for firms can take the form of providing subsidies and production incentives to firms that follow sustainable production practices.

8. Promoting community involvement

The conservation of resources can be done by spreading awareness within the community from a psychological perspective (Hobfoll & Jackson, 1991). The resources are meant for all individuals, and the community involvement will inculcate it into their culture. The interventions in the community should be intensive enough to make positive changes in the ecology.

In the light of the factors discussed above, the sustainable consumption is not an easy task for the policy makers to enforce up on. It needs imparting of correct level of motivation to the people, law enforcement and monitoring at different levels.

Conclusion

Sustainable development is a term that has been used widely in recent times. The term sustainable means "meeting the present requirements without compromising the requirements of future generations." Sustainable consumption is a very crucial component of sustainable development. If the consumption of goods and services is carried out in a sustainable manner or uses the resources judiciously while keeping the yet-to-be-born generation also in mind, it is called sustainable consumption. Even though generations knew about the depletion of natural resources, the initiative in the right direction started only with the publication of the Sustainable Development Goals (SDGs) by the UNDP in 2015. Sustainability in consumption can be achieved through reduction in consumption, use of second-hand goods, repair and reuse, encouraging the use of sustainable products, conservation of resources, using locally produced goods, supporting firms that follow sustainable consumption and production, and finally, promoting community involvement in sustainable consumption. The list is not exhaustive, and a lot of further research needs to be done in the area of sustainable production and consumption for the existence of the 'Spaceship Earth' (Boulding, 2013).

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WHEN DISASTER LEADS TO LITERATURE; AN ECOCRITICAL READING OF CHERNOBYL NARRATIVES

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Abstract

A disaster is a sudden accident or catastrophe that causes significant damage or loss of life. Disasters always affect ecological balance irrespective of whether they are natural or anthropogenic in origin. From time immemorial, disasters have stirred the imagination of creative authors to produce art and literature. As a result, Disaster literature came into existence as a literary genre. Moreover, they are part of environmental literature where the destructive nature becomes the motive rather than the idyllic nature. The worst disaster ever happened in history is considered the Chernobyl nuclear disaster, and it led to the birth of Chernobyl literature. Chernobyl narratives can also be read as environmental literature as they depict the aftermaths of the disaster and its impact on living things, including flora, fauna, and humans. Chernobyl literature includes not only environmental apocalypses but also environmental thrillers that display a warning message. This paper studies the inevitable role of nature in disaster literature in light of the Chernobyl disaster.

Keywords: *Chernobyl, Disaster, Ecocriticism, Ecology, Literature, Nature.*

Introduction

A disaster is a sudden, catastrophic event that substantially impairs a community or society's ability to operate. It results in losses to people, property, and the environment more than society may reasonably expect from its available resources. Disasters can have human causes, even if they are frequently brought on by nature. Disasters that are caused by humans or technology are called human-instigated disasters. Examples include nuclear explosions, radioactive radiation, transport accidents, industrial accidents, oil spills, and stampedes. In the aftermath, nuclear catastrophes are always unimaginable to humans. A reactor core meltdown or significant radioactive emission into the environment that has serious adverse effects on both people and the environment constitutes a nuclear disaster.

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As disasters affect life and culture, they trigger authors' imaginations to think creatively enough to produce literature. Disaster literature, which portrays catastrophic events and their aftermath, has been a vital part of the human literary tradition. This genre, in its myriad forms, offers a window into human vulnerability, resilience, and our relationship with nature.

Objective of the study

The study tries to establish the relationship between disaster and literature and how ecocriticism perceives disaster literature in light of the Chernobyl nuclear disaster.

Methodology

Since the study tries to establish a relationship between disaster and literature, it has used a literature review research design. It has used the concepts of ecocritical theory to understand how nature and literature are related in disaster literature.

Disaster literature

Disaster literature can be defined as literature that explores, depicts, or analyses the effects of catastrophic events, whether natural or human-made, on individuals and communities. Such literature may include novels, short stories, poems, memoirs, essays, and other genres, as well as scholarly and critical works that examine the cultural, historical, and social dimensions of disaster and its representation in literature.

Disaster literature and ecocriticism

Disaster literature and ecocriticism are related in that both fields engage with the relationship between humans and the natural world, particularly in times of crisis or catastrophe. Ecocriticism is an interdisciplinary field that studies the representation and significance of nature and the environment in literature and other cultural productions. On the other hand, disaster literature deals specifically with the literary portrayal and analysis of disasters and their aftermath. Ecocriticism, according to William Ruckert, is "the application of ecology and ecological concepts to the study of literature". (Rueckert, 1978 pp.71-86)

Ecocriticism frequently questions the ethical responsibilities humans hold towards nature. Disaster literature, by portraying the dire consequences of neglecting these responsibilities, provides ample material for such explorations.

Through an ecocritical lens, these stories can be interpreted as cautionary tales about the dangers of upsetting the natural balance. In depicting disasters, these narratives often showcase societal reactions – panic, solidarity, exploitation, or adaptation. Ecocriticism delves deeper into these portrayals, exploring underlying societal values about nature and our place within it. Many works of disaster literature can be considered ecocritical in that they explore the impact of disasters on the natural environment and how humans are implicated in these events. For example, environmental disasters such as oil spills, hurricanes, and wildfires have been the subject of numerous novels, memoirs, and essays that interrogate the relationship between human activity and environmental degradation.

Moreover, ecocriticism can offer insights into disaster literature's cultural and historical contexts, shedding light on how disasters are represented and understood in different societies and historical periods. By analysing disaster literature's language, imagery, and themes through an ecocritical lens, scholars can uncover the underlying assumptions and values that shape our perceptions of environmental crises and responses to them.

As ecological concerns became more pronounced, disaster literature began to depict environmental catastrophes. Contemporary disaster literature often extends into post-apocalyptic scenarios, focusing not just on the cataclysmic event but also its long-term effects on society, culture, and individuals. Chernobyl literature is an example of this kind of disaster literature.

The Chernobyl disaster

The Chernobyl disaster of 1986 was a catastrophic nuclear accident that occurred in the No. 4 reactor of the Chernobyl Nuclear Power Plant in Ukraine, then part of the Soviet Union. The explosion and subsequent fire released massive amounts of radioactive particles into the atmosphere, contaminating large areas of Belarus, Ukraine, and Russia and spreading as far as Western Europe. The disaster had profound consequences for human health, but it also had significant ecological impacts that have been the subject of extensive literature and ecocritical analysis. This paper explores the myriad ways in which the Chernobyl disaster created a vibrant literary discourse, permeating fiction, non-fiction, and poetry susceptible to ecocritical study.

There is still discussion over the precise effects of radiation exposure on public health, but there is no denying that society was traumatised for decades. According to studies, human existence will not be possible in Chernobyl for at least another 20000 years. It will take another 50 years to remove the debris from the highly radioactive Exclusion Zone, which is 30 kilometres around the power plant. An alarmingly higher number of Ukrainian adults than those in neighbouring nations report having bad health, and individuals suffering from the Chernobyl radiation syndrome work fewer hours and have lower employment rates than the general population. The Exclusion Zone was essentially abandoned to prevent the spread of radioactivity to the next generation.

The immediate literary response to the disaster was visceral, immediate, and raw. Local writers, poets, and journalists captured the event's shock, horror, and sadness. Many journalists risked their lives to report on the immediate aftermath. Their accounts were not just informative but also profoundly reflective, questioning the societal structures and secrecy that had led to the disaster. Beyond political and systemic critiques, literature bore witness to the profound human suffering induced by the disaster. Stories of torn families, children affected by radiation, and communities displaced from their ancestral homes became central themes in literary accounts. They were poignant reminders of the disaster's lingering impact. Works like Svetlana Alexievich's "Voices from Chernobyl" provided harrowing firsthand accounts of those affected, making it an essential reading for anyone seeking to understand the human aspect of the catastrophe.

Ecocritical reading of Chernobyl literature

Since the disaster affected nature and culture, the ecocritical reading of the Chernobyl disaster comes to the forefront. An ecological insight is prevalent everywhere in post-Chernobyl literature, having its own terminologies and meanings. It pictures the effect of nuclear disaster on the life of human beings as well as that of flora and fauna, the entire ecology. Ecocriticism and disaster literature, while distinct as fields of study, share overlapping concerns, particularly in the way they explore human interaction with the environment. As our world grapples with pressing environmental challenges, the confluence of these fields offers insightful reflections on humanity's place in the ecosystem and the consequences of our actions.

In the context of the Chernobyl disaster, ecocritical analysis has focused on the ecological consequences of the disaster, including the impact on wildlife, plant life, and the broader ecosystem. Studies have shown that the Exclusion Zone around the Chernobyl power plant has become a unique ecological sanctuary, with wildlife populations, including wolves, bears, and moose, thriving in the absence of human activity. However, the long-term effects of radiation on the environment are still not fully understood, and there are concerns about the genetic impacts on wildlife and the potential for radioactive contamination to spread through the food chain. Applying the ecocritical approach to Chernobyl narratives allows us to explore how the disaster is portrayed in terms of its ecological consequences.

The Role of Literature in Ecocritical Readings of Chernobyl Narratives

Literature has played a crucial role in shaping our understanding of the Chernobyl disaster and its ecological consequences. Writers and poets have used their craft to give voice to the experiences of those affected by the accident and to explore the complex relationship between humans and the environment. The profound impact of the disaster on the natural environment is often reflected in the literary and artistic works that emerged in its aftermath. For example, in Svetlana Alexievich's book "Voices from Chernobyl," the author interviews survivors and witnesses of the disaster, giving voice to their experiences. Alexievich writes,

> "The trees were black, like burned matches. The birds were silent. The river was dead" (Alexievich, 2006, p. 56).

This vivid description highlights the devastation caused by the nuclear accident and the loss of biodiversity in the affected area.

The Ecological Impact of Chernobyl

One of the critical themes in ecocritical readings of Chernobyl narratives is the exploration of the ecological consequences of the disaster. Scholars have examined how the radioactive contamination has affected the region's biodiversity, leading to the extinction of certain species and the disruption of ecological processes. For example, studies have shown that the radiation has significantly impacted the populations of birds, insects, and mammals in the affected areas. This loss of biodiversity has disrupted the delicate balance of ecosystems and has had broader implications for the functioning of the natural world. The immediate impact was the death of plants and animals in the vicinity of the explosion. However, the long-term effects were even more devastating, as the radioactive fallout spread across Europe, affecting ecosystems far beyond the immediate locale of the accident.

Another key theme that emerges from ecocritical readings of Chernobyl narratives is the idea of nature's resilience. Despite the immense destruction caused by the nuclear meltdown, nature has shown remarkable resilience in reclaiming the contaminated land. This theme is often depicted through descriptions of the return of wildlife to the Exclusion Zone and vegetation growth in the abandoned areas. These narratives highlight the power of nature to heal and regenerate, even in the face of human-induced disasters.

Such narratives often underline the intricate links between humans, other species, and the environment, showcasing how disrupting one area can lead to cascading effects. Both fields challenge the linear notion of time, emphasising cyclical or interconnected temporalities. For instance, the effects of a disaster might be felt for generations, just as ecological changes often follow non-linear patterns. The effects of Chernobyl follow generations as Faulkner's dictum that "the past is never dead. It's not even past." (Faulkner, 1980) His remarks ring out particularly loudly in Strontium-soaked landscapes, in temporal overflow zones that evade rhetorical cleanup efforts with their orderly beginnings and ends.

Even though the world fears a lifeless, barren, radioactive future as the companions of the nuclear age, Chernobyl now shows us a different view of the future. Twenty years after the disaster, journalist Mary Mycio tours the Zone to report on its long-term effects on its human, faunal, and floral inhabitants; she meets a group of defiant local residents who have remained behind to survive and make a life in the Zone. She is shocked to discover that the area surrounding Chernobyl has become Europe's largest wildlife sanctuary, a flourishing - at times unearthly - wilderness teeming with large animals and various birds, many of them are members of rare and endangered species. The remains of Chernobyl are now situated within an exclusion zone of 1,000 square miles, where wildlife flourishes in what Higginbotham calls a 'Radioactive Eden'.

A similar aspect can be seen in books like"The Boy from Reactor 4", which says,

> "It's one of the world's best-kept secrets. The Zone is the greatest wildlife in Europe and the second best in the entire former Soviet Union". (Stelmach, 2013, p.140)

The standard theory is that the absence of man has triumphed over the presence of radioactivity. The wildlife is unafraid of human predators. The Zone has species it never had before, which the world has not seen for a century. The area near Chernobyl and Belarus has become a rich and diverse natural reserve, having certain species that have developed a natural defence mechanism against radiation.

Through an ecocritical perspective, it can be seen as a "slow violence", as Rob Nixon puts it:

> "a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all. Violence is customarily conceived as an event or action that is immediate in time, explosive and spectacular in space. As erupting into instant sensational visibility."(Nixon, 2013, p.2).

Here, the violence is against the entire ecological system and is created by humans with "the normalised quiet of unseen power", as Edward Said calls it. (Said, 2005). The Chernobyl literature focuses on the less dramatic aftermath, the creeping violence that, by the book's end, is understood to represent the event itself. This violence has not yet reached its conclusion. Tracking the spotlight of slow violence creates serious difficulties, not only because it is spectacle inefficient but also because the fallout's effects may be felt at all levels, from the cellular to the global, and they may go well beyond the horizon of conceivable time.

Human-Environment Relationships in Chernobyl Narratives

Another vital aspect of ecocritical readings of Chernobyl narratives is the exploration of the complex relationship between humans and the environment in the aftermath of the disaster. The Chernobyl accident not only had immediate health effects on the local population but also resulted in long-term social and psychological impacts. The forced abandonment of the contaminated areas has led to new narratives and identities among the displaced population. For example, some individuals have chosen to return to the exclusion zone, despite the risks, in order to reclaim their connection to the land. These narratives challenge the dominant discourse of human mastery over nature and highlight the resilience and adaptability of human communities in the face of environmental catastrophe. For instance, Marusia, in the novel "The Sky Unwashed", talks about coming back to die in her land as her roots are there. She says:

> "We are old women who have never been anywhere except on the land the government let us use to live on. For which we are grateful. We only ask that you in Soviet brotherhood and friendship continue to protect us and let us live our last few years in good citizenship ..."(Zabytko,2000,p.7)

The sense of belongingness to the land where the cultural roots are deeply anchored overcomes the fear of radiation.

Conclusion

Ecocritical readings of Chernobyl narratives have provided valuable insights into the ecological dimensions of the disaster and the complex relationship between humans and the environment. By examining the ecological impact of the accident and how it has shaped human-environment relationships, scholars have deepened our understanding of the long-term consequences of nuclear disasters. Literature has played a crucial role in this process, giving voice to the experiences of those affected by the accident and providing a platform for exploring the complex emotions and narratives that have emerged in the aftermath of the disaster. These narratives are a powerful reminder of the need to protect and preserve our environment for future generations. As we continue to grapple with the legacy of Chernobyl, this literature serves as a powerful reminder of the need to prioritize environmental protection and sustainability in all our endeavours.

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BRIEF STUDY ON ECONOMIC ORDER QUANTITY MODEL

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Abstract

A good inventory management is a vital component of any successful business operation. The EOQ (Economic Order Quantity) model is a widely used inventory management technique for determining the optimal order quantity that minimizes total inventory costs. In these articles we will discuss two basic methods of determining the EOQ: Trial and error method and algebraic method. Also advantages, limitations and applications of EOQ model have been included.

Keywords: *Economic order quantity (EOQ), Inventory.*

Introduction

Inventory management means the correct balance between meeting customer demand and minimizing inventory related costs which is crucial for maximizing profitability and maintaining a competitive edge in today's dynamic marketplace. To achieve this delicate equilibrium, organizations often turn to mathematical models to optimize their inventory control strategies. One such widely recognized and highly effective model is the Economic Order Quantity (EOQ) model. The EOQ model is a Mathematical tool first introduced by Ford W. Harris in 1913. This model is a systematic framework to analyse the trade-off between ordering costs and holding costs. In this paper, we will provide two types of EOQ model, the advantages, the limitations and applications of EOQ model.

Inventory is defined as the inventory of goods, merchandise, and economic resources that are stored or needed for the smooth and efficient operation of a business. There are four types of cost associated with inventory management in general.

1. **Purchase cost-**This is the price paid for the purchase or production of an item. It may be constant or vary with the quantity purchased or produced, depending on the need. If the cost or unit is constant, it does not affect the inventory control decision [12, 15].

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2. **Inventory carrying cost**- It arises due to the maintenance of the stocks and the interest paid on the capital that is increased with the stocks. It depends very directly on the size of the stock as well as on the time for which the item is kept in a stock. Some of the stock holding costs are, cost of money, cost of storage, depreciation cost, taxes and insurance etc [12, 15].

3. **Procurement cost**- These include the fixed costs associated with placing an order or setting up machinery before production begins. They include the chords of the purchase requisition, tracking the receipt of goods, quality control, the cost of sending telephone calls and other tracking, the salaries of the people responsible for accounting and auditing, also called order costs or replacement costs or produced costs [12, 15].

4.**Shortage cost**- Shortage costs are the costs incurred because a shortage exists and demand cannot be met from inventory. Shortages can result in the cancelation of orders and severe loss of sales, which in turn can result in a loss of goodwill, profit, and even the company itself [12, 15].

Inventory Control Problem

The inventory control problem consists of determination of three basic factors:

1. When to order (Reorder point)?

Reorder point (ROP) is the inventory level at which a new order should be placedto replenish stock before it runs out. ROP is calculated by considering factors like lead time (the time it takes for an order to be delivered), demand variability, and desired service level. Common methods for calculating ROP include the basic ROP formula, which is: ROP = (Average Demand during Lead Time) + Safety Stock, where Safety stock is a buffer to account for uncertainties in demand or lead time. The level of safety stock depends on the desired service level. A higher service level requires more safety stock [12,13].

2. How much to order?

The cost of ordering is incurred for each order. The least amount of orders necessary should be placed in order to keep expenses down, yet placing several orders would result in excessive storage costs. A balance between the cost of purchasing and the cost of storage resolves the order quantity issue. The EOQ model helps determine the optimal order quantity that minimizes total inventory costs, considering ordering costs and holding costs [12].

3. How much safety stock should be kept?

In order to prevent shortages and overstocking, this is crucial. Demand variables affect a company's inventory management strategy. Both independent and dependent demand might exist for a given good. The demand for the various components, for instance, may be quantitatively predicted from the demand for televisions, although the demand for the numerous television models manufactured by a company does not depend on the demand for any other product. Independent demand is typically calculated by projecting the historical demand range, i.e., by estimating the volume of orders that can be placed based on projections and lead time, whereas dependent demand can be calculated using straightforward mathematical competitions [12].

Economic order quantity (EOQ)

The economic order quantity (EOQ) is that size of order which minimizes total annual cost of carrying inventory and cost of ordering under the assumed conditions of certainty and that annual demands are known.[12].

Basic principles of EOQ model

1. Repetitive Ordering

The ordering decision is repeated in the sense that, it is repeated in regular fashion. For example, when a company that is ordering bearing assembly will place an order, then see its inventory depleted, then place another order and so on [10].This contrasts with one-time orders. For example, when a news paper vendor decides how many newspapers to order on Sunday, only one order for Sunday will be placed. Problems when an order is placed just once are referred to as a single period inventory problems [15].

2. Constantdemand

Demand is assumed to occur at known constant rate this implies, for example, that if demand occurs at rate of 1000 units per year the demand during any t month will be $\frac{1000t}{12}$ [15].

3. Constant lead time

The lead time for each order is known as constant *L*. By the lead time we mean the length of the time between the instant when an order is placed and the instant at which order arrives. For example, if *L* = 3 months then each order will arrive exactly 3 months after the order is placed[15].

Applications of EOQ model

The EOQ model is a widely used inventory management tool that helps businesses to determine the optimal order quantity for a product while minimizing total inventory costs. It is applicable in various industries and scenarios. Here are some key applications of the EOQ model.

1. **Retail Inventory Management:**

EOQ is commonly used by retailers to determine the optimal order quantity for products on their selves, ensuring they have enough stock to meet customer demand while minimizing holding costs. This helps in maintaining a balance between stock outs and excess inventory [5].

2. Manufacturing Inventory Control:

Manufacturing companies use the EOQ model to determine how much raw material or components to order to meet production needs efficiently. This minimizes storage costs and production interruptions [7].

3. Healthcare Inventory Management:

Hospitals and healthcare facilities use the EOQ model to optimize the stock levels of medical supplies, pharmaceuticals, and equipment, ensuring they have what they need while minimizing costs [3].

4. Automotive Industry:

Automotive manufacturers and suppliers use EOQ to determine the optimal order quantities for various parts and components, helping to maintain smooth production flows and reduce carrying costs [13].

5. Supply Chain Management:

In supply chain management, EOQ can be used to determine the order quantity and reorder points for products at different stages of the supply chain, optimizing the overall supply chain efficiency [14].

6. Food and Perishable Goods Inventory:

EOQ is used to manage inventory of perishable goods like food items, where spoilage or obsolescence is a concern. It helps strike a balance between ordering enough to meet demand and minimizing wastage [6].

7. Retail Distribution Centers:

Retail distribution centers employ the EOQ model to optimize the order quantities for products to be distributed to their stores. This ensures efficient distribution and minimizes holding costs [2].

8. E-commerce and Online Retail:

Online retailers utilize the EOQ model to determine how much of each product to stock in their warehouses, balancing inventory costs with customer demand and shipping logistics [1].

These are just a few examples of the many applications of the EOQ model across different industries. Businesses use it to strike a balance between carrying costs and ordering costs, ultimately improving their overall inventory management and operational efficiency.

EOQ models with deterministic demand

It is highly difficult to formulate a single common EOQ model which has all the variety of real situations. If in case it is developed it may not be analytically solvable.

These inventory models are developed for all specific situations [11,12].

Determination of EOQ by trial-and-error method

Three steps to determine EOQ by trail and error method,

1. Select the number of possible order size for business

2. Determine the total cost for each order choosen

3. Finally select the order quantity which minimizes total cost[12].

Example:-Annual demand equals 8000 units, ordering cost per order is 12.5 Rupees, the carrying cost of average inventory is 20 percentage per year and cost per unit is 1Rupee [12].

Solution :1000 units of order size will give the lowest price among all the lot size in the below table. We note one thing in the below table that is minimum cost will occur only when [12],

Carrying cost = Ordering cost

Table 1: Tabulation of above example [12]

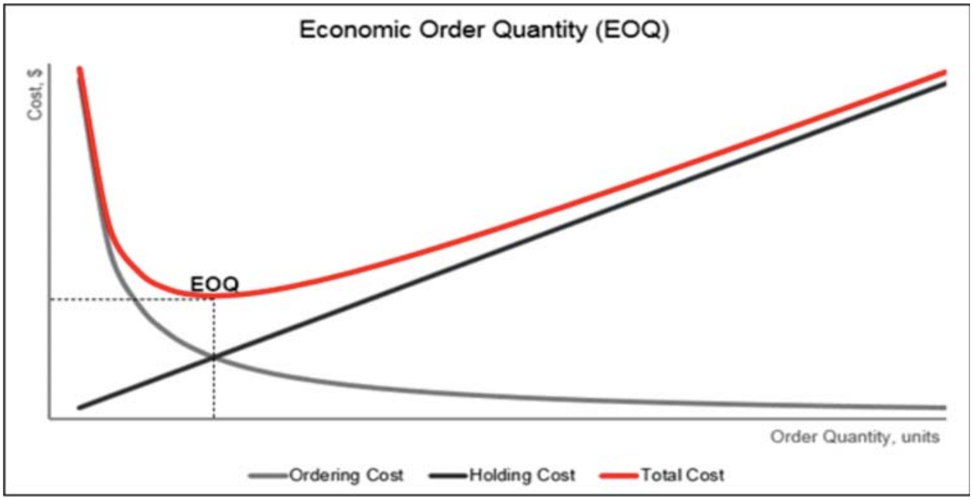
Number of orders	Lot size	Average Inventory	Carrying charges 20% per year	Ordering cost Rs. 12.5 per order	Total cost per year
1	8000	4000	800	12.5	812
2	4000	2000	400	25	425
4	2000	1000	200	50	250
8	1000	500	100	100	200
12	667	333	60	150	210
16	500	250	50	200	250
32	50	120	24	400	425

Limitations of trial-and-error method

We should compute large number of data or values to get minimum cost of the given order[12].

Graphical representation

Fig 1 : General graphical representation of the above tabulated data



Source :https://masomomsingi.com/operations-management-knec-notes/

The data which is calculated in the table can be graphed. To demonstrate the nature of the graph of order cost involved in EOQ model, a graph is plotted between total costs and number of units[10]. The graph shows that total cost, inventory carrying cost and ordering cost decreases first, reach the lowest possible point where,

Carrying cost = Ordering cost [11,12].

Derivation of EOQ formula for economic lot size with uniform demand

Algebraic method

Assumptions

1. Uniform demand
2. Lead time zero
3. Production should be instantaneous
4. No shortage allowed

C_1 – Holding cost, C_3 – Setup cost, R – Demand rate, q – EOQ or Optimal ordering quantity, C_{min} – Optimal inventory cost, t – Optimal ordering interval [11,12].

As we know that EOQ is attained when Inventory Carrying cost = Annual ordering cost

Average inventory = $\frac{1}{2}$[maximum inventory + minimum inventory]

Average inventory = $\frac{1}{2}$ [q+0]

Average inventory = $\frac{q}{2}$

Total inventory cost = total inventory carrying cost + total annual ordering cost

Total inventory carrying cost = (average no of units in inventory) x (cost of one unit) × (inventory)

Total inventory carrying cost = $\frac{q}{2}$ x C x 1 (1)

CI is written as C_1 because the carrying cost per unit for unit time,

Total annual ordering cost = (number of orders per year)×(ordering cost per year)

$$C = \frac{R}{q} \text{ x } C_3 (2)$$

Therefore total inventory cost is,

$$C(q) = \frac{1}{2} qC_1 + \frac{R}{q} C_3 \quad (3)$$

But the total inventory cost becomes zero when,

Inventory carrying cost = Total annual ordering cost

$$\frac{1}{2} qC_1 = \frac{R}{q} C_3 \quad (4)$$

$$\text{EOQ } q^* = \sqrt{\frac{(2xRxC_3)}{C_1}} \quad (5)$$

$$\text{Optimal EOQ}^* = \sqrt{\frac{(\text{2xdemand ratexsetup csot})}{\text{Carrying cost}}}$$

To get minimum total inventory cost C_{min},

Substituting equation (5) in equation (4) we get,

$C_{min} = \sqrt{2 \text{ x } C1 \text{ x } C3 \text{ x } R \ (6)}$

Optimal inventory cost $= \sqrt{2 \text{ x carrying cost x setup cost x demand rate}}$

To obtain optimal interval of ordering,

$$\text{EOQ} = \text{demand rate} \times \text{interval of ordering}$$

$$q = R \times t$$

$$t = \frac{q}{R} \quad (7)$$

Substituting equation (5) to equation (7) we get,

$$t = \sqrt{\frac{2 \text{ x } C_3}{R \text{ x } C_1}} \quad (8)$$ Optimal ordering interval (t) $= \sqrt{\frac{2 \text{ x setup cost}}{\text{demand rate x Carrying cost}}}$[12].

Example:-Annual demand equals 8000 units, ordering cost per order is Rs 12.50, carrying cost of average inventory is 20% per year Cost per unit is Rs 1[12].

Solution:-

Given, C=Rs 1 C_3=Rs 12.50 C_1=20% R=8000 units

$$q = \sqrt{\frac{2 \text{ x } R \text{ X } C_3}{C_1}}$$

$$= \sqrt{\frac{(2x8000x12.50}{0.20}} = 1000 \text{ units}$$

Average number of inventory Carrying cost is= $\frac{q}{2} CC_1$

$$= \frac{1000}{2} \text{ x } 1 \ 20\% = 100$$

Total annual cost = $\frac{R}{q} \text{ x } C_3$

$$= \frac{8000}{1000} \text{ x } 12.50 = 100$$

Number of orders = $\frac{R}{q}$

$$= \frac{8000}{1000} = 8$$

Minimum inventory cost $C_{min} = \sqrt{2 \text{ x } C_1 \text{ x } C_3 \text{ x } R}$

$$= \sqrt{2 \text{ x } 20\% \text{ x } 12.50 \text{ X } 8000}$$

= Rs 200. [12]

Corollary : In the model, if the order cost is C_3 +bq instead of being fixed, where b is the order cost per unit item, then there is no change in the optimum order [11].

Proof. The average cost per unit time is,

$$C(q) = \frac{1}{2} qC_1 + \frac{R}{q}(C_3 + bq) \text{ from equation (3)} \tag{9}$$

For minimum cost $\frac{dc\,(q)}{dq} = 0$ and $\frac{d^2c\,(q)}{dq}$ is positive

$$\text{i.e, } \frac{1}{2} C_1 - \frac{RC_3}{q^2} = 0 \tag{10}$$

$$q = \sqrt{\frac{(2RC_3)}{C_1}} \quad (11)$$

Comparing the above equation (11) with equation (5) the we can conclude that there in no change in optimal cost if order is changed[11].

Advantage of algebraic method over trial and error method

The algebraic method of finding the Economic Order Quantity (EOQ) offers several advantages over the trial and error method. Firstly, it provides a precise and efficient solution by using mathematical formulas, reducing the need for iterative guesswork. Secondly, it allows for easy sensitivity analysis by altering variables, providing insights into how changes affect the EOQ. This method is also more time-saving, as it eliminates the need for repetitive calculations, making it suitable for complex inventory management systems. Lastly, algebraic solutions are more reliable and accurate, minimizing the risk of errors inherent in trial and error approaches, which can lead to suboptimal inventory decisions [4,12].

Limitations of EOQ model

1. The requirements are not clear or inconsistent in practice. The model really works if there is a small change. However, if the volatility is large, the model loses its Effectiveness [11].

2. In the EOQ model, it is assumed that annual demand can be predicted. However, annual demand cannot be predicted exactly. For example, a weekly request may be so bad that someone is not interested in the annual forecast expected of it. In other cases, it may be a new product with no history. Therefore, it is not always possible to predict annual requirements. So the EOQ formula cannot be used for this [11].

3. In the EOQ model, inventory is assumed to peak immediately. But most of the time this will not be true because orders can be shipped on products in one go. In this case, the stock is used when new stock is taken and the inventory is not counted towards the highest level immediately to maximum level. So the EOQ model does not apply to this [11].

4. It is also included in the EOQ model, which uses estimation, accounting and other financial methods to determine appropriate holding and ordering costs. Sometimes organizations do not retain the necessary information to provide the information needed to create cost estimates [11,12].

5. In EOQ, the assumption is that the requirements are consistent. However, inequality is rarely seen in practical situations. Sometimes it will be less or more. All inventory items can be cancelled together at the beginning, at the end, or for the entire duration [9].

6. In EOQ models, the replenishment time is also assumed to be zero. But, this is not possible until and unless the supplier is nearby. In the case of the made-ins, this assumption does not hold good. Replenishment time is usually not equal to zero, and it may constitute a significant fraction of time [5].

7. If the EOQ models are applied without due regard to the possibility of a falling demand, then it can lead to high value obsolescence inventory [5].

8. The assumptions made in the EOQ formula restrict the use of the formula. In practice cost per unit of purchase of an item change time to time and lead time are also uncertain [12].

9. Lead time may not be zero unless the supplier is next door and has sufficient sock of the time, which is rare [11].

10. Price variations, quantity discounts and shortages may further invalidate the use of EOQ formula [11].

Conclusion

In conclusion, the EOQ model stands as a pivotal tool for enhancing inventory management and achieving cost efficiency within organizations. By leveraging the EOQ model, businesses can strike a harmonious balance between inventory holding costs and ordering costs, thereby working towards the goal of minimizing total inventory expenses and maximizing profitability.

The EOQ model offers a structured and systematic approach to determine the optimal order quantity and reorder point, taking into account various critical factors such as demand fluctuations, carrying costs, ordering costs, and lead time. Accurate estimation and utilization of these variables through the EOQ formula enable organizations to mitigate the risks associated with stock outs and excess inventory, leading to not only improved customer satisfaction but also substantial reductions in carrying costs.

What sets the EOQ model apart is its ability to serve as a foundational framework for inventory management optimization. When combined with other sophisticated inventory control strategies and an acknowledgment of real-world complexities, it becomes a formidable ally for organizations looking to elevate their operational efficiency and enhance customer service. This multifaceted approach creates a domino effect of advantages, ultimately leading to a competitive edge in the marketplace.

By integrating the EOQ model into their inventory management arsenal, businesses can make informed decisions, ensuring that they neither hold excessive stock, tying up valuable capital, nor face the risk of insufficient stock, which can result in lost sales and customer dissatisfaction. This optimized inventory management leads to cost savings, improved cash flow, and a more streamlined supply chain.

In today's dynamic business environment, where competition is fierce and customer expectations are ever-evolving, mastering inventory management is crucial. The EOQ model, with its ability to strike the perfect balance, provides organizations with a robust tool to navigate these challenges successfully. As a result, it empowers businesses to deliver better service, make efficient use of resources, and ultimately thrive in the competitive landscape.

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QUALITY AND STANDARDS OF HIGHER EDUCATION IN INDIA

V. Basil Hans

Abstract

This study examines the present condition of higher education in India, with a specific emphasis on the aspects of quality and standards. Although higher education has experienced fast growth and improved accessibility, it nevertheless encounters substantial obstacles that affect its overall quality. The issues encompass insufficiencies in infrastructure, a scarcity of proficient faculty, obsolete curricula, and restricted research productivity. This study analyses the influence of accreditation bodies and government policies on the development of educational standards. It specifically focuses on the National Institutional Ranking Framework (NIRF) and Rashtriya Uchchatar Shiksha Abhiyan (RUSA) as notable initiatives in this regard. In addition, the study examines the effects of privatization and the increasing number of international collaborations on improving quality. The paper seeks to analyse these concerns and propose changes and methods to enhance the quality and standards of higher education in India. The objective is to align it with global benchmarks and cater to the requirements of a dynamic and expanding economy.

Key Words: *Higher education, Quality standards, Accreditation, Infrastructure, Faculty development, Best practices, Research output*

Introduction

Higher education in India has experienced significant changes in recent decades. Since gaining independence, the country has experienced significant growth in its higher education sector. What was once a small number of universities has now expanded to include thousands of institutions, serving a large population of students. The significant expansion highlights the growing need for advanced education and its crucial contribution to the socio-economic progress of the country. Nevertheless, this growth has highlighted significant obstacles for the preservation and improvement of the calibre and benchmarks of education.

High-quality tertiary education is crucial for promoting innovation, stimulating economic development, and cultivating a proficient workforce capable of thriving

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in an interconnected global society. Although the Indian higher education system has experienced significant growth in terms of quantity, it frequently faces challenges related to the quality of education. Primary concerns encompass insufficient infrastructure, a scarcity of proficient faculty, obsolete and inflexible curricula, and inadequate emphasis on research and development. These problems combined impede the capacity of Indian higher education institutions to rival global norms and generate graduates who are adequately equipped to face modern challenges.

The National Board of Accreditation (NBA) and the National Assessment and Accreditation Council (NAAC) are important organizations that assess and guarantee the quality of higher education institutions. In addition, governmental efforts such as the National Institutional Ranking Framework (NIRF) and Rashtriya Uchchatar Shiksha Abhiyan (RUSA) have the objective of fostering excellence and facilitating enhancements in educational standards. The inclusion of privatization and the growing presence of private institutions have introduced a new aspect to the higher education environment. Although private universities frequently have superior infrastructure and resources, there are always questions over the overall quality and affordability of education. Moreover, the establishment of international collaborations and partnerships with foreign universities is increasingly being recognized as a promising means of improving quality, by incorporating global best practices and promoting academic exchanges across different cultures.

Currently, there is a far greater emphasis on "quality" in the realm of higher education compared to previous times. The concept of quality is what distinguishes higher education as being "higher". In the past, the pursuit of higher education was exclusive to a privileged few. The emphasis used to be on acquiring information purely for its own sake. However, as higher education becomes more widespread in response to the knowledge-based and technology-driven economies of today, there is a growing emphasis on the students' capacity to find employment in a quickly evolving work environment. Quality education encompasses not just providing students with the necessary knowledge and abilities for their chosen job path, but also preparing them for continuous learning throughout their lives. The purpose of training students is to cultivate their ability to think and act critically, extending beyond their university education, for the betterment of society and humanity (Gupta, A. 2021).

This study aims to examine the various complex features of higher education in India, by analysing the existing difficulties and investigating possible improvements. By scrutinizing stakeholder dynamics and initiatives, it endeavours to furnish insights into elevating the quality and standards of India's higher education system, aligning it with global standards and advancing national economic and social objectives.

Objectives of the Investigation

The main goals of this study on the quality and standards of higher education in India are to methodically analyse the current condition of the higher education system, identify significant difficulties, and suggest practical suggestions for enhancement. The stated objectives are as follows:

1. To assess the current standard of education offered by higher education institutions throughout India.
2. To examine the sufficiency of the infrastructure, resources, and facilities that are accessible to higher education institutions.
3. To assess the capacity for research and innovation in terms of the focus placed on research endeavours within institutions of higher education.

The study intends to attain these objectives in order to gain a thorough comprehension of the present condition of higher education in India and provide pragmatic measures to enhance its quality and standards to meet international benchmarks.

Methodology

This study employs a descriptive research design, focusing on observing and delineating phenomena without experimental manipulation. Secondary data from diverse sources, including published works, survey findings, and analytical research, forms the basis for data collection. This breadth of existing data allows for a thorough exploration of the research topic, development in-depth insights and informed conclusions.

Review of Existing Literature

Every academic institution contributes to the accumulation of knowledge in some manner. In order to continue growing, it is necessary to gather the acquired information and data in a centralized location and distribute it widely across society. Research indicates that the preservation and collection of knowledge generated in academic institutions is insufficient. Furthermore, it is worth noting that a significant portion of the information or expertise generated in educational institutions remains unfamiliar to the general population and is classified as a literature review. This can be valuable provided the organization maintains appropriate coding practices. Knowledge Management (KM) is the deliberate combination of persons, processes, and technology with the goal of creating, capturing, and implementing an organization's creative architecture. Knowledge Management enhances the capacity of educational institutions to obtain and disseminate information and knowledge, utilizing it for problem-solving and fostering research and ongoing growth. This paper proposes a comprehensive approach to discovering, analysing, documenting, retrieving, and disseminating all of an organization's data assets. These properties include databases, records, processes, regulations, and previously untapped knowledge and ability possessed by regular employees. Higher education institutions can utilize Knowledge Management (KM) as a proven and reliable method for addressing their challenges. Knowledge management (KM) plays a crucial role in fostering research motivation and facilitating the development of partnerships and breakthroughs in the future (Galgothia D & Nirupa Laksmi, 16 June 2022).

It has been recognized globally that the economic prosperity of nations is directly contingent upon the quality of their education systems. Education is a crucial factor in determining the strength and success of a nation. An educated nation is an unavoidable consequence of a developed nation. The Indian higher education system ranks as the third largest globally, following the United States and China. India, being a growing nation, has been steadily advancing in the sphere of education since gaining independence. Despite the numerous issues facing the higher education system in India, there are also ample chances to address these challenges and significantly improve the system. The need of greater transparency and responsibility in colleges and universities, as well as the role they play in the new millennium, cannot be overstated. Additionally, the emerging scientific research on how people learn is of highest significance. India requires individuals with advanced skills and a high level of education to propel our economy. India's ability to supply highly skilled individuals to other nations makes it very straightforward for India to transition from a developing nation to a developed nation (Sheikh, Younis Ahmad, 2017).

The expansion of higher education in India has been substantial since the nation gained independence in 1947. Commencing from a modest foundation, the rate of expansion was originally swift. At first, the rate of expansion was swift. Enrolments experienced an annual growth rate of 13 to 14 percent during the 1950s and 1960s. In recent decades, there has been a noticeable fall in the growth rate. Since then, it has maintained a steady rate of between 4 and 5 percent. The character of growth throughout the last twenty years is noticeably distinct from the growth experienced in the preceding period. This article examines the trajectory of higher education expansion in India, specifically highlighting the trends in enrolment growth and shifts in funding patterns. By examining the patterns, it recognizes the issues and constructs an argument for transforming Indian higher education to ensure the country's ongoing cycle of economic expansion, primarily driven by its abundant supply of skilled workforce, continues (Agarwal, Pawan, 20 March 2007).

While private higher education institutions in India are now more widely accepted than they were three decades ago, concerns have been raised regarding their necessity. Is the presence of the private sector in higher education unavoidable? Is it also considered desirable? What is the reason for the frequent intervention of the Supreme Court of India in situations related to private higher education? What are the matters under consideration? (Gupta, A. (2008)), This article aims to analyse the growth and inequities in India's higher education system within the framework of inclusive growth strategies. The analysis is based on extensive data from the National Sample Survey (NSS) conducted between 1983 and 2009-10 (Tilak, J. B. G, 2015).

Currently, the state of higher education in India is undergoing significant changes, both in terms of its organization and the knowledge it imparts. The traditional notion of education, both in general and higher education specifically, is gradually evolving due to the impact of globalization and advancements in information and communication technology. The financial sustainability and upward social mobility within higher education have shown improvement. Perhaps this is merely a superficially attractive display. On one side of the ocean of information, there are individuals who possess and advocate for the values of higher education. Conversely, there exists a significant portion of the population that lacks access to higher education or has experienced little benefits from investing in or innovating within the realm of higher education.

In a country as large and socially varied as India, higher education plays a crucial role in replacing physical resources with social resources, in order to achieve rapid economic growth, social unity, cultural advancement, and ethical integrity in all sectors. Although there is an increasing need for access to higher education, the obstacles in delivering high-quality higher education are significant, with a shortage of resources being the fundamental issue. Although planners and entrepreneurs in the industry prioritize size, the quality has been negatively impacted by mass production, commodification, and inadequate demonstration. Ineffective techniques and insufficient incentives persistently plague dedicated students, researchers, and teachers. Even certain educational thinkers and benefactors fail to practice what they preach. There is a discrepancy between knowledge, skills, enterprise, and equity, both before and after an event or situation. How can India, which was historically known for its educational institutions, assert itself as a leading centre of knowledge in the present day? The text is referenced by the number Hans, (V. Basil, August 6 2013).

The Government of India, through the Ministry of Education, has published the All India Survey on Higher Education (AISHE) for the year 2020-2021. Since 2011, the Ministry has been conducting the All-India Survey on Higher Education (AISHE), which includes all higher educational institutions in India and provides higher education in the country. The survey gathers comprehensive data on various aspects, including student enrolment, teacher demographics, infrastructure details, and financial information. In AISHE 2020-21, Higher Education Institutions (HEIs) utilized an online data collecting platform called Web Data Capture Format (DCF), developed by the Department of Higher Education in collaboration with the National Informatics Centre (NIC). This marked the first time that HEIs filled out their data totally online.

Data Responses

1. Enrolment of Students:

The overall enrolment in higher education has risen to approximately 4.14 crore in the academic year 2020-21, compared to 3.85 crore in the previous year 2019-20. Since the academic year 2014-15, there has been a significant rise of approximately 7.2 million in the number of students enrolled, representing a growth of 21%. The number of female enrolments has risen to 2.01 crore from 1.88 crore in the year 2019-20. There has been a rise of approximately 4.4 million (28%) from the fiscal year 2014-15. The proportion of female enrolment out of the overall enrolment has risen from 45% in the academic year 2014-15 to about 49% in the academic year 2020-21. According to the 2011 demographic forecasts for the age group of 18-23 years, the Gross Enrolment Ratio (GER) has risen from 25.6 in 2019-20 to 27.3. A significant rise of 1.9 points can be noted in the Gross Enrolment Ratio (GER) of students from Scheduled Tribes (ST) in the academic year 2020-21, as comparison to the previous year 2019-20. The female gross enrolment rate (GER) has surpassed the male GER since the academic year 2017-18. The Gender Parity Index (GPI), which measures the ratio of female Gross Enrolment Ratio (GER) to male GER, has risen from 1 in the academic year 2017-18 to 1.05 in the academic year 2020-21. The number of SC students enrolled is 58.95 Lakh, which is higher than the 56.57 Lakh in 2019-20 and the 46.06 Lakh in 2014-15.

The number of ST students enrolled has risen to 24.1 Lakh in the academic year 2020-21, compared to 21.6 Lakh in 2019-20 and 16.41 Lakh in 2014-15. The average yearly enrolment of ST students has risen to over 100,000 between 2014-15 and 2020-21, up from around 75,000 between 2007-08 and 2014-15. The number of OBC students enrolled has risen by 6 lakh to reach 1.48 crore in the academic year 2020-21, compared to 1.42 crore in the previous year 2019-20. Since the academic year 2014-15, there has been a significant rise in the number of OBC students enrolling, amounting to over 3.6 million, which represents a growth of 32%.

In 2020-21, the total student enrolment in the North East states was 12.06 lakh, which is an increase from 9.36 lakh in 2014-15. In the year 2020-21, the number of female students enrolled in the North East States was 6.14 lakh, which is greater than the number of male students enrolled, which was 5.92 lakh. This means that for every 100 male students, there were 104 female students in the North East States. In the academic year 2018-19, the number of female students surpassed that of male students for the first time, and this trend has persisted.

The enrolment in Distance Education is 45.71 million (with 20.9 million females), representing a growth of approximately 7% during 2019-20 and 20% since 2014-15. Uttar Pradesh, Maharashtra, Tamil Nadu, Madhya Pradesh, Karnataka, and Rajasthan are the six states with the highest number of enrolled students. According to the data from AISHE 2020-21, approximately 79.06% of all students are now pursuing undergraduate level courses, while 11.5% are enrolled in postgraduate level courses. The discipline with the highest undergraduate enrolment is Arts, with a percentage of 33.5%. Science follows with 15.5%, Commerce with 13.9%, and Engineering & Technology with 11.9%. The majority of postgraduate students are enrolled in the field of Social Science, accounting for 20.56% of the total, followed by Science with 14.83% (AISHE, 2020-2021).

Out of the entire enrolment, 55.5 lakh students are enrolled in the Science Stream, with female students (29.5 lakh) surpassing male students (26 lakh) in number. Government universities, which make up 59% of the overall number of universities, account for 73.1% of the total student enrolment. Government colleges, which make up 21.4% of the overall number of colleges, account for 34.5% of the total student enrolment. The enrolment at Institute of National Importance (INIs) has witnessed a substantial growth of approximately 61% from 2014-15 to 2020-21. Enrolment in specialized universities related to defence, Sanskrit, biotechnology, forensics, design, sports, etc. has shown a growth in the 2020-21 academic year as compared to 2014-15. In the year 2020-21, the total number of individuals who have successfully completed a program of study has risen to 95.4 Lakh, compared to 94 Lakh in the previous year of 2019-20.

2. Infrastructure Facilities at Higher Education Institutions (HEIs) in 2020-21:

Libraries make up 97% of the subject matter. There are 88 laboratories. The percentage of computer centres has increased from 86% in 2019-20 to 91%. The Skill Development Centre achieved a 61% success rate in the year 2019-20, which is an improvement from the previous year's rate of 58%. The connectivity to the National Knowledge Network has increased from 34% in 2019-20 to 56%.

3. Total Count of Establishments:

There are a total of 1,113 registered Universities or University-like institutions, 43,796 Colleges, and 11,296 Standalone Institutions. In the period of 2020-21, there has been a rise of 70 in the count of universities, while the count of colleges has climbed by 1,453. Since the academic year 2014-15, there has been a significant rise of 353 universities, representing a growth rate of 46.4%. The number of Institutes of National Importance (INIs) has nearly doubled, increasing from 75 in 2014-15 to 149 in 2020-21. Since 2014-15, a total of 191 new Higher Education Institutions have been built in the North Eastern States. Rajasthan has the most number of universities, with a total of 92. Uttar Pradesh follows closely with 84 universities, while Gujarat has 83 universities. From 2014-15 to 2020-21, an average of 59 universities have been added each year. The value remained approximately 50 units throughout the years 2007-08 and 2014-15.

There are a total of 17 universities, with 14 of them being state public universities, and 4,375 colleges that are entirely for women. The College Density, which is calculated as the number of colleges per one hundred thousand eligible people (population in the age-group 18-23 years), is currently 31. This had a value of 27 in the year 2014-15. The states with the highest density of colleges are Karnataka (62), Telangana (53), Kerala (50), Himachal Pradesh (50), Andhra Pradesh (49), Uttarakhand (40), Rajasthan (40), and Tamil Nadu (40). The following are the top 8 districts with the highest number of colleges: Bangalore Urban (1058), Jaipur (671), Hyderabad (488), Pune (466), Prayagraj (374), Rangareddy (345), Bhopal (327), and Nagpur (318). Uttar Pradesh, Maharashtra, Karnataka, Rajasthan, Tamil Nadu, Madhya Pradesh, Andhra Pradesh, and Gujarat are the eight states with the highest number of colleges. 43% of universities and 61.4% of colleges are situated in rural areas.

4. Academic Staff

The overall number of faculty/teachers is 1,551,070, with approximately 57.1% being male and 42.9% being female. The female-to-male faculty ratio has increased to 75 per 100 males in the academic year 2020-21, compared to 74 in 2019-20 and 63 in 2014-15 [8]. The overall enrolment in higher education has risen to around 4.33 crore in the academic year 2021-22, compared to 4.14 crore in the previous academic year 2020-21. The enrolment has experienced a growth of around 9.1 million, from 34.2 million (26.5%) in 2014-15. The number of female enrolments has risen to 2.07 crore in the academic year 2021-22, up from 2.01 crore in the previous year (AISHE, 2021-2022).

Neglected Research Frontiers

Identifying research gaps is essential for emphasizing areas that want additional exploration and comprehension. Several research gaps can be discovered in the context of the quality and standards of higher education in India.

1. Research Conducted on the Long-term Effects of Policies: Longitudinal studies evaluating the enduring effects of governmental efforts and policies such as the National Institutional Ranking Framework (NIRF) and Rashtriya Uchchatar Shiksha Abhiyan (RUSA) on the educational quality are currently insufficient. The long-term efficacy of certification agencies such as NBA and NAAC have not been thoroughly investigated.
2. Research and Innovation Quality: Comprehensive research is required to assess the determinants that impact research productivity and innovation in Indian higher education institutions. The documentation regarding the impact of multidisciplinary research and collaboration on research quality is insufficient.
3. Enhancing the Growth and Retention of Faculty Members: Insufficient research exists regarding techniques for faculty growth, retention, and the influence of instructor quality on student outcomes. Additional study is required to examine the correlation between faculty workload, research expectations, and teaching quality.
4. Curriculum Relevance and Adaptability: There is a scarcity of studies that examine the significance and flexibility of curriculum in relation to current industrial requirements and worldwide benchmarks. There is a lack of research on how effective curriculum revisions are in improving employability and developing skills.
5. The Effects of Incorporating Technology: Further investigation is required to examine the influence of digital infrastructure and online learning platforms on the quality and accessibility of education. Further investigation is needed to determine the efficacy of blended learning approaches in the Indian context.
6. Student Support Systems and Outcomes: There is a scarcity of research on the

efficacy of student support services, including as counselling, career assistance, and mentorship. The documentation regarding the influence of these services on student retention, graduation rates, and general satisfaction is insufficient.

7. Equality and Inclusiveness: There is a lack of research that specifically examines methods to tackle the gaps in access to high-quality higher education based on socio-economic status, gender, and regional factors. Further research is required to determine the efficacy of affirmative action policies and financial aid programs in fostering inclusion.

8. Global Partnerships and Universal Standards: The extent to which international collaborations affect institutional quality and student results has not been thoroughly investigated. There is a lack of extensive research on the implementation of global best practices in Indian higher education institutions.

9. Quality Assessment Metrics: There is a requirement to create and verify extensive measurements for evaluating the excellence and influence of higher education institutions that go beyond conventional rankings. There is a lack of study on combining qualitative indicators with quantitative metrics to comprehensively evaluate the quality of education.

10. The Influence of Educational Reforms on Employability: Further investigation is required to determine the specific effects of educational reforms on the capacity of graduates to find employment and how well their skills match the requirements of the sector. Further investigation is needed to determine the efficacy of skill development programs and industry partnerships in enhancing the job readiness of graduates.

11. Effective Strategies for Long-Term Financial Support: There is a scarcity of research on sustainable finance strategies for higher education that effectively address the goals of maintaining quality, ensuring accessibility, and promoting affordability. Further research is required to examine the influence of various funding sources (public, private, foreign) on both the quality of education and the level of institutional autonomy.

By investigating these areas of research that have not yet been explored, future studies can offer a more thorough and subtle comprehension of the factors that impact the excellence and criteria of higher education in India. This will result in the development of more efficient policies and practices that improve educational achievements.

Factors Related to Institutions

Infrastructure refers to the assessment of the tangible and technological assets that institutions possess, such as buildings, labs, libraries, and digital systems. Other than that, importantly, following factors responsible for the institution's growth.

1. Faculty Quality: Evaluates the expertise, background, and instructional abilities of the faculty, together with the ratio of faculty members to students. The study of curriculum and pedagogy emphasizes the importance of up-to-date and adaptable curricula, as well as the efficacy of teaching techniques. The evaluation focuses on research activities, availability of financing, publication output, and the innovation ecosystem in institutions.
2. Policy and governance: This examines the function and influence of accreditation bodies such as the National Board of Accreditation (NBA) and the National Assessment and Accreditation Council (NAAC) in upholding and improving the quality of education. The government undertakes initiatives to evaluate and assess policies and programs, such as the National Institutional Ranking Framework (NIRF) and Rashtriya Uchchatar Shiksha Abhiyan (RUSA), with the goal of enhancing standards and ensuring accountability.
3. Regulatory Environment: Observes the whole regulatory structure that governs higher education, encompassing laws, rules, and supervision systems.
4. Funding and Resources: Evaluates the sufficiency and distribution of monetary resources to institutions of higher education, encompassing government funding, private capital, and global grants. The Employment and Industry Linkages effort examines the correlation between educational programs and the demands of the labour market. This includes establishing relationships with industries, assessing the employability of graduates, and implementing skill development activities.
5. International Collaborations: Examines alliances with overseas universities, initiatives for the exchange of students and teachers, and global research

partnerships. The evaluation assesses the degree to which global educational standards and best practices are incorporated into the Indian higher education system.

The Process of Privatization and its Consequences

This analysis focuses on the role and influence of private higher education institutions in terms of their quality, accessibility, and innovation.

a. Quality Assurance: Evaluates the systems implemented to guarantee that private institutions comply with rigorous educational requirements.

b. Evaluation Criteria: Student Outcomes encompass various measures, such as graduation rates, employment, and student satisfaction.

c. Institutional Performance: Takes into account institutional rankings, accreditation status, and the influence of research.

d. Societal Impact: Assesses the wider influence of higher education on the ability of individuals to move up in society, the growth of the economy, and the capacity for creativity.

e. Interconnections and Interactions: Enhancements in the calibre of faculty and infrastructure can augment research productivity and student achievements. Efficient policy and governance may establish a favourable atmosphere for institutions to thrive, while sufficient finance and fair access guarantee that the advantages of higher education are spread widely. International collaborations and the implementation of optimal methods can improve local benchmarks, and a well-rounded strategy for privatization can encourage rivalry and ingenuity while upholding excellence.

Out of the numerous pupils who graduate from the 12th standard in India each year, approximately 2 million possess proficient to satisfactory abilities in English, science, and maths. Approximately 75 percent of these individuals ultimately enrol in subpar universities, vocational schools, and engineering colleges. Nasscom reports that out of the 3 million students graduating from Indian universities annually, only 25 percent of engineering graduates and 10-15 percent of general college graduates are deemed eligible for employment in the offshore IT industry. By 2010, the Indian IT sector will experience a deficit of 500,000 professionals. Despite barely 10 percent of the estimated $300 billion global off-shoring market being utilized, shortages are already occurring.

Only a fraction of India's college-going population, specifically less than 8 percent, is currently enrolled in the college and university system. The enrolment percentage in underdeveloped nations globally stands at 11 percent, but in developed ones it is 37 percent. India's working age population is projected to grow by 71 million over the next five years, reaching a total of 762 million from the current 691 million. India possesses a sizable academic community of five million individuals, yet a significant portion of it is considered dysfunctional based on conventional criteria such as research output, published articles, and earned doctorates. Just three Indian higher education institutions are included in the top 500 rankings worldwide. Prominent Indian educational institutes such as the IITs and Delhi School of Economics are grappling with a scarcity of faculty members, with a deficit of up to 40 percent. India has transitioned into a country that primarily consumes higher education, allocating over $3 billion annually to educate its students overseas. However, the Indian education system lacks the ability to generate financial resources from domestic students. Indian students, whose tuition fees are covered by their parents, now serve as net contributors to British higher education.

India is the country that sends the greatest number of international students to American institutions, with over 80,000 students. It is appropriate for sectors and communities with sufficient financial means to bear the expenses of education. Autonomous institutions should have the freedom to determine fees based on the willingness of students and parents to pay. The government should address the needs of the economically disadvantaged, vulnerable, underprivileged, and disabled populations by offering free or subsidized education from pre-primary to postgraduate levels. The change should be guided by deregulation and the establishment of public-private partnerships. The government should promote and assist the involvement of private companies in the education sector through measures such as providing discounted land, offering favourable financing terms for constructing facilities and acquiring equipment, granting autonomy in operations and management, and officially acknowledging their contributions. Currently, educational institutions have minimal or non-existent autonomy. The excessive interference of both the central and state governments in matters such as fee regulation, seat distribution, and quotas is a concern. There is no necessity to provide financial assistance to IITs and IIMs. The annual tuition fee for a place at the IIMs is approximately Rs 5 lakh. By setting the fees at Rs 5 lakhs, the Indian Institutes of Management (IIMs) can generate an additional revenue of Rs. 30 crore per year. This surplus can then be allocated towards establishing new IIMs on a yearly basis.

Institutions operate for a total of 200 days each year, with a daily schedule of six hours. This is an egregious misallocation of resources. This will autonomously increase the capacity twofold. Parents are not always able to consistently generate exceptionally talented children who belong to the highest group. An enlightened society should ensure that high-quality educational institutions are accessible to all candidates, including those belonging to B, C, and D categories. An authoritative body with a high degree of accreditation should be established to suggest accreditation or disqualification for all institutions, both public and private. The current procedure is inefficient and unwieldy.

The workloads in IIMs and post-graduate institutes in universities are significantly lower as compared to Western standards. The majority of teachers work fewer than 100 hours year, which is absurd. Some teachers engage in extensive study and produce papers. They require instruction for a little 100 hours. However, a significant proportion of faculty members do not engage in research or produce publications. They should increase the amount of time spent in the classes. Education is the process of developing one's character. There is a lack of focus on instilling ethical ideals. India's rich legacy in science, mathematics, culture, music, dance, yoga, meditation, philosophy, and spirituality is not well represented in modern schooling. Students should be provided with resources to promote national integration, inter-religious and inter-caste harmony, pluralistic human ideals, civic consciousness, and environmental awareness.

An open system should replace the current inflexible curriculum. Not all students are required to adhere to a two-year or four-year program. Modules and credit courses can introduce flexibility. This will allow students to enrol in courses and progress at their preferred speed. Some individuals have the ability to handle little amounts of weight, while others have the capacity to handle larger amounts. Teachers should be permitted to pursue employment in the industry and thereafter return to their teaching positions. The inflexible system of government employment, which includes fixed pay scales, yearly increments, several types of allowances, pensions, and so on, should be substituted with a more adaptable structure. Furthermore, it's crucial to reconsider the current examination system, which predominantly emphasizes rote memorization and the repetition of information. This approach discourages critical thinking. Instead, the system should be replaced with a more comprehensive assessment strategy that includes classroom participation, extracurricular activities, social work, and similar methods, complemented by a final examination.

Constraints of the Current Investigation

This study seeks to conduct a thorough examination of the quality and standards of higher education in India. However, it is important to recognize that there are several limitations associated with this study.

1. Data availability and reliability: The analysis is based on data obtained from official and institutional records, which may not consistently reflect the most current information or be entirely precise.
2. Institutions Covered: Due to the extensive number of higher education institutions in India, the study may not provide a full analysis of every institution, especially smaller or lesser-known colleges.
3. Geographical Differences: India's higher education sector is characterized by its diversity, with notable disparities in quality and standards across different regions. The study may not comprehensively capture these geographical inequalities.
4. Subjectivity in Quality Assessment: Evaluating the quality of education requires making subjective assessments, particularly when it comes to factors such as the effectiveness of teaching and the relevance of the curriculum.
5. Effects of External Factors: The study may not comprehensively consider exogenous variables such as economic volatility, political shifts, and global occurrences (e.g., the COVID-19 pandemic) that can have a substantial influence on higher education.
6. Generalizability of Results: The study's findings and recommendations may not be universally relevant to all categories of higher education institutions, including vocational schools, technical institutes, and specialized colleges.

Conclusion

Ultimately, the calibre and benchmarks of tertiary education in India play a crucial role in the country's socio-economic progress and international competitiveness. Although there has been notable advancement in increasing the availability of higher education, there are still several obstacles that hinder the achievement of high-quality education for everyone. The results of this study emphasize the necessity for collaborative actions from different parties to tackle these difficulties and implement significant changes. Policy interventions should give priority to investing in infrastructure, enhancing faculty development, and strengthening research capacity. Additionally, they should encourage the use of innovative teaching approaches and the design of curriculum. Enhancing quality assurance methods is necessary to ensure accountability and ongoing enhancement, with a specific emphasis on transparency and including stakeholders. Moreover, it is imperative to make concerted endeavours to improve fairness and inclusiveness in higher education in order to tackle socio-economic inequalities and foster a sense of variety. International collaborations and partnerships can enhance the sharing of knowledge, promote cultural diversity, and facilitate the comparison of educational standards on a worldwide scale.

To progress, it is crucial for policymakers, educational institutions, and stakeholders to work together closely to put into action initiatives that are based on research and that encourage educational excellence, fairness, and significance. Policy formation and institutional practices in higher education in India should be informed by longitudinal studies, multidisciplinary research, and stakeholder engagements. This would ensure that the education system evolves dynamically to meet the demands of the 21st-century knowledge economy. In essence, India can greatly contribute to national growth and global success by placing a strong emphasis on quality and standards in higher education. This approach will help cultivate a highly trained workforce, promote innovation and entrepreneurship. The realization of a high-quality, inclusive, and internationally competitive higher education system in India can be achieved via focused endeavours and a steadfast dedication to ongoing enhancement.

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"GRAVEYARD OF BURIED HOPES": THE INDIGENOUS VOICE IN ANNE WITH AN E

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Abstract

The paper is a study based on the show Anne with an E, which is an adaptation of the children's classic, Anne of Green Gables by Lucy Maud Montgomery. The storyline common to both, explores the story of a fiery redheaded girl, Anne and her adventures while also tackling sociopolitical issues. Towards the third season of the show, an indigenous family is included in the diverse plotline of this Canadian series. The paper attempts to work on the comparative study of indigenous history and its representation in the show.

Key words: *Colonialism, Genocide, Hollywood,Indigenous, Residential schools.*

Introduction

With a creative depiction of the morally responsible journey of a little girl and her boundless imagination, the show released in 2017, called *Anne with an E*, encourages one to delve into the depths of mundanity, to halt, realize, and embrace the things we perhaps have stranded away from, while also addressing pertinently significant topics. Adapted from the renowned children's classic *Anne of Green Gables*, this show of 2016 employs a serious approach to the nuances in life, inclusiveness and the representation of history. The study delves deep into the CBC adaptation of the novel, *Anne with an E* which waslater distributed by *Netflix,* and how the indigenous story has been played out in the show.

Historically speaking the Dominion of Canada had established itself as a self-governing country, within the clutches of British Empire around the period of 1867, July 1. The country saw some revolutionary changes throughout its history. Akin to the theme song of the show, *Ahead by a Century* by the band Tragically Hip, and its visuals, the thematically and socially rich storytelling of the show represents a Canada, historically faithful to its era and events. The song

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signifies the identity of Canada and the politics of hope, childhood, memories, loss, desire and a future of hopes much like how the series have presented itself.

The plot of the show scatters around different places in Canada including Nova Scotia, Charlette Town, and Quebec, but mostly in the familiarity of fictional Avonlea and the tranquility it offers. The makers of the show effectively engages its audience with reliable bits from history and later expands it, preferably for a modern audience to view. This television series has had diverse characters and inclusion that the childhood favorite of a bygone generation, *Anne of Green Gables* never had. Moira Walley Beckett, the creator of the show says "When I was first conceiving *Anne with an E,* I was troubled by the lack of diversity in the book, especially since Canada is such a diverse nation, both then and now" according to an article named *Anne with an E: A Reflection on Representation* by Cambridge Editors Blog (Cambridge Editors,2020). This sentence is important, especially the "then" in the sentence because often at times, critics or fans consider diversity as just a tool for the show runners to use out of obligation. In the rising trend of "including diverse characters" in period dramas, the backlash from people and fans affected by the loss of its "essence" and "historical accuracy" fail to recall their history lessons. If racism was apparent and horrible in the past, today it is more pretentiously subtle, and even "cool" in uprisings like these on social media platforms. Resisting inclusion or diversity in historical shows is denying history itself.

The plot of the book, *Anne of Green Gables* is based on an orphan little girl Anne, who after years of belonging nowhere, finds a home in the beautiful lands of Avonlea.And the story proceeds in such a fashion that Anne evolves against her oppositions with all her unique characteristics, which is seemingly "violent" and "unexpected"of a woman, in her new home. The development in the show doesn't limit itself to just the characters but the whole town of Avonlea after Anne.

With all the historically relevant stories in the show, this study examines the story of Ka'kwet and her indigenous family at the end of season three. Belonging to the community of Mi'kmaq, Ka'kwet and her family live outside the P.E.I community of the fictional Avonlea. They are the First Nations People of the Atlantic provinces in Canada. Today a majority of Mi'kmaq villages are found in

Nova Scotia and New Brunswick, but there are also sizable populations in Quebec, Newfoundland, Maine, and the Boston region. The Mi'kmaq language has been recently acknowledged as Nova Scotia's official first language in July 2022.

The storyline of Ka'kwetin the third season of the show exposes the truth of their colonial history and oppression, through the residential schools, even when Canada was a self-governing country. Even though the world claims to be redeemed and 'woke' with amendments and reparations, prejudice and bullying always recurs throughout history, even in the 21st century. The show delves into several themes connected to the indigenous life of Canada back in the day. Starting from representing almost accurately the cultural side of the Mi'kmaq tribe, to bringing out the residential schools and the dark side of Canadian history.The colonial strategy, the subjugation, decades of abuse, and thestories untold are all well explored within the limits of the show.

Indian residential schools

Home is where the heart is, where we belong. The concept of home varies from person to person, but ultimately, it symbolizes comfort and belonging. We have come across atrocities that question our hope in humanity, even recently, in which these homes are destroyed, taken over, and eradicated. One such atrocity is the indigenous story of Canada. Here, when their home was taken over, it was along with their culture, language, pride, and most importantly the 'children' of their community."Imagine being an adult in a community where there are no kids. That's what it looks like. Imagine that happening for a hundred years to your kids"recalls Cindy Blackstock, ex-director of First Nations Child and Family Caring Society.

The kids were taken away in masses, in boats, wide-eyed and unaware of the danger that loomed over them, to aplace that was about to change the whole trajectory of their lives. The sheer cruelty of this concept may hold us back from believing the history that harmed many. Because believing this means believing in the worst of humanity. So, what were the Indian residential schools? Their intent? How did a project, introduced for the education and betterment of a group result in genocide?

The Indian residential schools were first established in the US. Intrigued by the idea, the conquerors of Canada, were ready to reform the people they took the land from. It has been stained in history how the European presence over the globe managed to ruin, destroy, and unabashedly loot from the innocent, all under the pretense of "civilizing them". Yet again, the Canadian story of struggle proves to be no different. The system of 'assimilating' groups of children to reform or civilize them is not far from the typical colonial concept. Suppose we trace the history behind this struggle that lasted over 150 years. In that case, it can be calculated back to when the Canadian prime minister, John A Macdonald sent the journalist and politician Nicholas Flood Davin to study the school system of the US residential schools. In the report he writes back, named *Report on Industrial Schools for Indians and Half Breeds* to the prime minister, he informs about the US Industrial school system.

> "From 1869 vigorous efforts in an educational direction were put forward. But it was found that the day school did not work, because the influence of the wigwam was greater than the influence of the school. Industrial boarding schools were thus established, and these are now numerous and will soon be universal. The cry from the agencies where no boarding industrial schools have been established is persistent and earnest to have the want supplied. The experience of the US is the same as our own as far as the adult Indian is concerned. Little can be done with him. He can be taught to do a little at farming, and stock-raising, and to dress in a more civilized manner, but that is all. The child, again, who goes to day school learns little, and what little he learns is soon forgotten, while his tastes are fashioned at home, and his inherited aversion to toil is in no way combated."(Canadian Adaptations of the Shakespeare Project,2010).

Davin's report is an important historical document as it brings to light how the oppressors viewed their 'Indian problem'.

The show incorporates this indigenous struggle through Ka'kwet and her family who belong to the Mi'kmaq community. The third season of the show is set in the early 1900s. Interestingly,the crew doesn't shy away from revealing the intricacies of relevant issues of the time. Furthermore, most episodes of the season are co-written by an indigenous scriptwriter, Tracy Deer. The script of the show doesn't merely hint at the existence of the school system, on the contrary, with high responsibility and vigor they lay it out to the audience, through the lens of the Mi'kmaq community. To be precise, the story is told through the lens of Anne, the protagonist of the show. Through Anne, the audience is first met withKa'kwet and her family, settled in the wilds of Avonlea, anIndigenous community that prepared hockey sticks for the kids to play.

Upon meeting Ka'kwet and her father who were handing out hockey sticks to the boys, an enthralled Anne, curious to learn more about them, runs upto them. Now, to let the audience feel what the indigenous children and families have for decades is rather Herculean. How the writers succeeded in establishing it is, by structuring the story of the community. Not by othering them, but by counting on the connections and emotions every human being is bound to feel. They use it later in the show in an instance when Marilla, Anne's caretaker and mother figure refuses to help the 'Indians'. They bring in the universal language of motherhood to convince Marilla, through Ka'kwet's mother, Okwatnuq, which dismantles years of bigotry and prejudice.

Now, Anne's excitement in getting to know the culture of the community could've easily been confused with the 'curiosity in the exotic', a common trope among the colonizers, which requires evident othering. However, what makes her approach different is her sincerity and the fact that Anne has spent her time, less ignorantly, learning more about the community. There is an immediate sense of connection.

The community throughout the series is called names like "savages, stupid Indians, brutes, heathens," and more. They are also named "Indians", which helps in painting a clearer picture of how the people of the First Nations were regarded. From back when Columbus perceived the Native Americans as "Red Indians" to White people unabashedly continuing the legacy of negligence, White supremacy, and the tendency to view anything other than themselves homogeneously, is reflected well in the show as well. This generalization reinforces the ignorance of thesenarcissistic former oppressors.

On visiting their settlement Anne learns about their way of living, which includes hunting, making baskets, and other things. Anne is the window through which the audience bonds with the community.She acquaints with the family and befriends Ka'kwet who feels excited about her new White friend. In a display of their newly formed friendship and curiosity towards their culture Anne gets her braid done by Ka'kwet, in their cultural style. Many indigenous fans of the show respect for how the creators put in effort for authentic casting, accurate representation in the use of their language, its natural flow, clothing including Oqwatnuk's, Ka'kwet's mother's, peaked cap, hunting eels, the use of the indigenous anthem, *The Honor song*, and other instances from their culture.

Regardless,the Avonlea community holds high intolerance towards the community. Characters like Rachel Lynde arrive with her husband to right the wrong, to 'save the Indian'. Yet again, this is what makes the issue a grey area to think over. The 'villains' in these stories are not necessarily the bigoted and racist community who are unaware and ignorant. Proof of that would be how in Davin's report to the prime minister he mentions;

> "the industrial school is the principal feature of the policy known as that of "aggressive civilization". This policy was inaugurated by President Grant in 1869…Acting on the suggestion of the president, Congress passed a law early in 1869, providing for the appointment of the Peace Commission. This commission recommended that the Indians should, as far as practicable, be consolidated on few reservations, and provided with "permanent individual homes"; that the tribal relation should be abolished;…..that the Indian should speedily become a citizen of the United States, enjoy the protection of the law.." (Canadian Adaptations of the Shakespeare Project,2010).

Although Davin's report here mentions the situations present in the US, the primary motive of the residential school system is based on this concept. They believed strongly in reforming the citizens and protecting them under the law, with other secondary motives as well, which included the students of the school being forced to work rather than be educated half the time. Thus the white savior complex in characters like Rachel Lynde is thrilled to carry out Ka'kwet's journey to the said residential schools. The sad reality of these stories is the fact that most of the White people, like the characters of Rachel and even Anne and Gilbert, believed in them doing the "right thing". According to Ashish Nandy,

> "For the rulers, colonial exploitation was an incidental and regrettable byproduct of a philosophy of life that was in harmony with the superior forms of political and economic organization. This was the consensus the rulers of India sought, consciously or unconsciously. They could not successfully rule a continent-sized polity while believing themselves to be moral cripples. They had to build bulwarks against a possible sense of guilt.." (Nandy, 1983).

And believing in that cause, for the so-called "greater good", committing genocide and other inhumane doings seemed ethical and even, spiritual to them.

The crisis thus arrives, with which the character of Ka'kwet like the meaning of her name, a brilliant foreshadowing, has to be resilient about. With the help of Rachel Lynd, who presumes this as her Christian duty, Ka'kwet, and her mother are made to believe the schooling would aid in a change, for being at the receiving end of respect, through learning the ways of the White. But what they never imagined was that learning the ways of the whites would mean destroying their sense of self, instigating trauma for generations. The Indian residential school in the show is an eye-opening reality check for many viewers who neglected or were unaware of the dark side of residential schoolsin Canada. The mind-numbing truth to this underrepresented traumatic past of the indigenous people is that it was disturbingly real. Though the show held back from making it graphic, instances of abuse are visibly portrayed in scenes of Ka'kwet during her time in the residential.

While Anne is in search of her real identity and lineage, we're taken into the new 'reformed' life of Ka'kwet, stripped away of her identity, name, culture, her braids, and life. The truth about schools like Fort Albany R. school, the Mohawk Institute Residential School, Shubencadie Residential School, and so many others are that they were government-funded, meaning a sanction for their atrocities from the people in power. Bravely enough the adult survivors of these residentials came forward to recount their traumatic past in those residentials that promised them hope and future, only to take them away.

Numerous Mi'kmaq, Wolastoqiyik, and other indigenous children were compelled to attend these residential schools. It was part of a national, colonial strategy that the Canadian government established and was administrated by the Church to assimilate students by forbidding their culture and language. The Truth and Reconciliation Commission in 2015 went on to call the policy a cultural genocide, something that the survivors agreed on.

Even though the debates regarding calling it a genocide are still prominent, this one quote by one of the scariest dictators of all times, the instigator of a ruthless genocide, as he remarked on the Canadian invasion is important; "I don't see why a German who eats a piece of bread should torment himself with the idea that the soil which produced this bread has been won by the sword. When we eat wheat from Canada, we don't think about the despoiled Indians."(TableTalk, Hitler 2000 75)

If a merciless dictator uses the indigenous issue to justify his mass genocide, then several things should be unpacked in addition to this. The truth that remains is that mass murders, which the government still can't account for, have taken place. The intent was not far from slow destruction when even the architecture of these schools stood for it. Director of Sto. Lo Research and Resource MGMT Center, David Schafpe revealed his opinions on the matter in the earlier mentioned *Al Jazeera* documentary when he said: "Literally the architecture tells a significant part of the narrative, about the attitude, the mental constructs of the minds of the people who created the institution and how they were designed, implemented."

Now a historic site, the school of Shubenacadie has a lot more dark and deep history along with it. In recent news, the site was supervised in light of the discovery of remains of almost 215 children in Kamloops. A survivor of the Shubenacadie residential school, Lottie May Johnson recounts her memory from the school; "I went in when I was 10 years old. I said I could have been one of those kids, probably. I was choked until I was unconscious by a nun and for a long time I couldn't speak, I was afraid" in article named *Former site of Shubenacadie Residential School scanned for human remains* published in the CBC News. The grave danger the students were put under low maintenance, poor construction, and overcrowding came in addition to the horror they faced along with the abusive nature of the authorities. More graphic accounts of the life of the

Indigenous in such schools from the book *Up Ghost River: A Chief's Journey Through the Turbulent Waters of Native History* by Alexander Shimo and Edmund Metatawabin construct a deeply disturbing and necessary understanding of the First Nations People. According to historical records, the Shubenacadie residential school in Canada wasn't established until 1930, which is 31 years after the events of *Anne with an E*, season three with Ka'kwet. However, residential schools run by the federal government were prominent from the period of 1867 to 1996. If not perfectly accurate historically, the show represents history in ways not many shows, literary works, or other coming-of-age movies discuss. The abuse the children underwent inside the closed doors of the schools is a different story, they were severely punished for using their mother tongue, which is effectively captured in the show as well. In the award-winning movie *Taare Zameen Par* directed by Aamir Khan, in a powerful scene where he mentions how people can be created or destroyed with the power of words, he uses a story of the tribes of Solomon Islands and how a tree could be destroyed without cutting it, but by the power of words. Even if in any fictional circumstances the children who lived in these schools didn't go through physical abuse, they were subjected to verbal and mental abuse. They entered these schools with a head held high and walked out ashamed and lost. Hence tragically, the genocide here isn't just reduced to physical damages, but hugely psychological as well.

After attempting to rescue Ka'kwet and failing, Anne and Mathew exit the scene leaving with the promise of writing to the Canadian government about it. However, both parents of Ka'kwet are seen settling beside the residential school, in hopes of rescuing their child from the missionary prison. Their story, unfortunately, ends with Ka'kwet yearningly staring through her window, from her prison to the distance view of her parents, her hope. While the shot expands, a cross from the next room becomes visible. This symbolizes what fell upon Ka'kwet and her life. Because of how the show got canceled Ka'kwet's story remains incomplete and that scene remains the last memory of her, engraved in the minds of the audience. Whatever befell Ka'kwet and her family was tragic, but the healing that her character was denied in the show is perhaps the story of many indigenous children who struggled in these schools and their families who had to give up on them forcibly.

Aftermath

Childhood is considered a crucial period in one's life. One wrong move and the child is scarred for life. Many 'could've been's and 'would've been's about questionable adults today roots back to their childhood. The right guidance can promote children into kind and better human beings as adults. Hence, at a defining age, when children are taken away in herds, away from the nurture of family, parenthood, and sense of community, many things can go wrong. Moreover, this happens to a community that had to submit itself to a foreign force for decades, for no reasonable explanation. When deprived of one's own culture, family, and conscience, it is a given that it effectively crumbles one's idea of self. But the truth is that the struggle doesn't stop here. The misery of the indigenous story doesn't cease with the end of residential schools. The survivors, the parents, as well as the growing generation are under the threat of intense traumatic experiences. Trauma,

"according to American Psychological Association (APA), trauma is an emotional response to a terrible event like an accident, rape, or natural disaster. However, a person may experience trauma as a response to any event they find physically or emotionally threatening or harmful. A traumatized person can feel a range of emotions both immediately after the event and in the long term. They may feel overwhelmed, helpless, shocked, or have difficulty processing their experiences.Trauma can have long-term effects on the person's well-being. If symptoms persist and do not decrease in severity, it can indicate that the trauma has developed into a mental health disorder called post-traumatic stress disorder (PTSD)." Reviews Jayne Leonard in his article about trauma in *Medical News Today.*(Burgess, 2021).

When Ka'kwet from the show briefly escapes the prison of residential schools, the writers touch upon this experience of trauma. In real life, the survivor's side of the traumatic experience and PTSD is a hundred times more intense than what they could show in the series. Yet, even in the brief time allowed, the show was able to compel the audience's attention and do justice to the mental conditions and struggle of the community. Ka'kwet, now renamed Hannah, manages to escape with the very same qualities she developed from her culture and community. However, when she's finally home overcoming hazards of different kinds, the happily ever after is nowhere to be seen. The girl is seen struggling with PTSD, trying to apply her convent-taught lessons. A one-minute interaction between her siblings and her develops into an intense scenario that reflects her mental state. She is unable to weave her baskets like before, an indication of losing her 'Indian ways' or the slow death of the Indian in her (like the government intended it to be), her siblings make fun of her and she says, "Say it in English. Say it. stop behaving like a stupid Indian!"(00:52,S3E09).

Here, it should also be taken into consideration that what upset Ka'kwet was not the fact that they made fun of her. Normally, a sibling fight would bud from that, and yet, to the contrary, what irritated her the most was the use of her mother tongue and the potential it has to harm her siblings the same way it did for her. It can be viewed as an act of her trying to protect her brothers from the torture she goes through for speaking her tongue. She develops a sense of insecurity and sees her culture as a threat to move forward.

When a frustrated Ka'kwet says this to her siblings, her mother intervenes and the audience is given a glimpse into the abandonment and betrayal Ka'kwet felt as a child towards her parents. Ka'kwet questions them for abandoning her there, something she might have thought to herself for months knowing that her family never came to her rescue.In a documentary named *Canada's Shame: Residential Schools, Unmarked Graves, and Search for Justice* by Al-Jazeera,Beatrice Silver, a survivor from St Mary Residential School speaks up about how she had to face loneliness, abandonment, and mistreatment as a child. "We were taught that we were stupid, ignorant, and had nothing to offer within society. Today a lot of our people still suffer from that."

Back to the story, the school authorities have begun their search for the 12-year-old, 'armed'. And just when Ka'kwet slowly is healing herself, she is taken away, right from her mother's lap. When these people intrude on the place the community inhabits, the initial thought is to grab as many children as they can. They see the group of children as a 'problem' that needs solving. Something as normal as 'children',in one community is an immediate threat when it comes to another, especially when the former is perceived as inferior. One of the capturers while negotiating the idea of taking them to the school, says "Can't solve the Indian problem as long as they are raised like this" (10:56, S3E9). The community is seen as parasites that spread, growing up the ‘wrong way’, which is just, different from their own.

And most importantly, the phrase ‘Indian problem’ mentioned in the show is nothing fabricated, but a usage common in the dictionary of these reformists. Duncan Campbell Scott, the deputy superintendent of Indian Affairs remarked on the Indian Residential School death situation like this: “ Indian children in the residential schools die at a much higher rate than in their villages. But this does not justify a change in the policy of this department, which is geared towards a final solution to our Indian problem”. The statement itself describes how even their deaths were viewed as trivial. In a documentary conducted on the Indians called *Canada’s Dark Secret* by Al Jazeera, a survivor named Alice Littledeer shares an experience of a six-year-old girl dying beside her, with no one to come look for her. The school refused even the death of their children to the community, now exceeding the threshold of emotional torture. The story of survivors includes people who couldn’t even stand themselves after they returned to the real world once sixteen, leading them to go back to these schools due to the severe identity crisis they faced.

The PTSD that the survivors developed from these schools had them submit to substance abuse, alcohol addiction, and much worse. The community is said to have fifteen years less life expectancy than a normal Canadian today. Three times more suicide rates, alcohol addiction, and a higher ratio of drug addiction and homelessness. Eva Jewell, an Assistant Professor at Toronto Metropolitan University, and a member of the community recalls; “ we are some of the poorest people in the country and we actually should be the richest, because all of the resources that are extracted from our lands contribute incredible wealth to this country.” This doesn’t move so further away from what Dr. Shashi Tharoor said in his work *An Era of Darkness: The British Empire in India*about the white colonizers. “we were one of the richest countries in the world when the British came in but when they left us, we were one of the poorest.” (Tharoor, 2016). In India, some of our problems might have ended when the Britishers left us despite the haunting colonial mindset they instilled. But the Canadian struggle is that the natives still have to witness their colonizers in power, succeeding, while they still suffer from the aftermath of their brutality.

TW: SA. Carl San, a survivor and a sculptor today talks about the sexual abuse he had to face in those schools by the caretakers and the priests. They were asked to line up to the bedrooms of these officials every night and had to face assault which encouraged them to find solace in alcohol and other forms of addiction growing up. In an interview with one of the survivor's daughters, it is revealed how she had to face sexual abuse from her family members. She later learned the truth of how most of her family members faced abuse in these schools and how it got embedded in their system. She recalls her community to be not abusive by trait, but as something that was passed on from the torment of their residential education. Michael Loft, a son of another survivor recounts how as a child he had to remain wary of his father. The unpredictability of the authorities his father had to experience in those schools was brought home by his father.

Devoid of parental connection and love, a whole generation and more were forced into abusive parenting resulting in intergenerational trauma. An article named *The Residential School System* written by Eric Hanson studies that;" According to the Report of the Aboriginal Justice Inquiry of Manitoba, several generations of Indigenous Peoples were denied the development of parenting skills not only through their removal from communities and families but also from the severe lack of attention paid to the issue by school officials.[5] In addition, children were taught that their traditional ways were inferior, including their languages and cultures. The residential schools were operational through several generations of Indigenous Peoples so the process of healing from these damages will also take several generations- a process that has already begun, but has not been easy nor has it been simple."The show with its limited amount of time was able to recreate the mental state of these survivors through Ka'kwet and hint at the potential of a trauma-ridden life with a two-minute interaction. In the appearance and the demeanor of Ka'kwet, a striking difference is established, from back when she was happy and home to when she is stripped away of herself. An escaped Ka'kwet who with sheer "resilience" returns home, is depicted with PTSD and differences in her approach towards her siblings. This shows how realistically speaking, escaping from scenarios is not the end of it. It haunts Ka'kwet, affects her relationship with her family, and culture, creates constant fear in her, and hints at the situation of identity crisis.

Yet again, it does not end with that. The authorities of the school recapture Ka'kwet, renamed Hana by them, from her own community by shooting her father in the process. The fact that they chose to be armed to bring back a child, forcibly, makes us wonder who should be afraid of whom when characters like Marilla ask Anne "Indians, did they threaten you?" (13:49, S3E01). Instances where Moody, Anne's classmate cuts his leg open and the same "threat" or the indigenous people coming for rescue, stitching up the wound using natural techniques gives an insight to the oblivious White minds about cultures different from theirs and their own scopes that were limited to Allopathy.

Anne and Ka'kwet

Anne Shirley Cuthbert, the main lead of the show, as mentioned prior, has established herself as a quirky and empathetic girl, different from her crowd. What makes her different is her imminent love for nature, the ability to appreciate, and see the beauty in things different from herself. All of which makes Anne different from others is what makes Ka'kwet and her alike, makes them connect.

From the very first episode of the season, they both develop a unique bond. Anne connects to the indigenous way of life. Ka'kwet instructs Anne on the pathway to her home through riddles interconnected with nature. Anne passing the test itself is proof of how much they have in common. But then again there is more to it.

Anne appreciates how the indigenous community has names that describe the bearer's characteristics and Ka'kwetproceeds to name Anne as Melkita Ulamun, which means strong and brave heart. Ka'kwet's explanation of this is the most pleasing. " when your eyes seek and your heart is open, it is true brave".(10:11 S3E01). Ka'kwet might have just described Anne as a person within minutes into the episode, or their meeting. Contrastingly, when Ka'kwet is imprisoned in the residential school, her name is changed to Hannah, forcibly. While there is friendship and meaning involved in the former case, there is monopoly and injustice in the latter.One of Anne's biggest insecurities, her hair is complemented and compared to soil and fire by the indigenous, and heartwarming is the only sentence one can use to describe the scene. Anne asks what name is used for the word family in their language and Ka'kwet answers this by saying that their language is about what they see and observe, so for her family means 'Wula Na Mikamaq', which translates to 'this is whom I am connected to because we are alike'. Later in the show, this is the exact sense of self that is destroyed by the Indian Residential Schools.

Another instance of their connection is when Anne is in search of her identity and travels back to her orphanage with Cole, they identify a story she wrote with the name she used to call herself, Princess Cordelia. " the air was damp where Princess Cordelia was held captive. The constant dark made her lose sight of her senses. The threat to her sanity and personage loomed large but so did the surety that she would be rescued from this horrid place. princess Cordelia with raven hair that once had been the color of carrots, laughed as she escaped through the haunted woods. Captive once more, she stole the tower to write her take, knowing that once again they'd not be able to hide her long." (21:14, S3E02). Now this is Anne's story, but it is also the story of Ka'kwet.

She was captured, and if we examine, the darkness and dampness of Anne's orphanage and earlier life is what Ka'kwet experienced in the school. The carrot-colored hair Anne lost if observed enough can be compared to Ka'kwet's natural hair which is now cut and fashioned by the school authorities into a bowl cut, akin to every other child there. When Princess Cordelia, also known as Anne, got rid of the hair she was ashamed of, Ka'kwet lost the hair she was proud of. Princess Cordelia escaping through the woods and being recaptured is precisely what happens with Ka'kwet as well. The end of the story is in a sense, a layer of hope for Ka'kwet.Ka'kwet undergoes the same struggle Anne did, yet the difference is that, as Anne mentions, she has people who love her, waiting for her and yet she is taken away from them. These overlapping images are the brilliance of the show which got lost in the unfair ending of its production.

Conclusion

The Hollywood representation of the indigenous story has often resulted in problematic stereotypes. Ironically, the community became represented as villains in earlier films, a colonial coping mechanism. The Cowboys vs Indians trope was common back then until the revisionist Westerns came by. The Indigenous representation in Hollywood falters in movies like *Peter Pan* by Disney. Many famous movies, even though sympathetic in representation, "rely heavily on stereotypes"(The Queen's Journal, n.d.) as observed in the article *The History of Indigenous Representation in Film* and Television by Kirby Harris. The incident of many indigenous actors walking out of the set of *The Ridiculous Six* is not as ridiculous as it gets. The First Nations people have always been reduced to their hunting skills and "exotic" way of life in Hollywood.

> "I have personally experienced the level of ignorance that results from one's only exposure to a culture is what one sees in movies. During my orientation week..many of my classmates, when they discovered my Navajo heritage, seemed to think I lived in a teepee and hunted buffalo in the plains on horseback. (For the record, Navajos are primarily farmers and shepherds. Our traditional houses, hogans, are used mainly for ceremonial purposes. We drive cars to get to places. So, no.)….Further, they wanted to know why I didn't wear any feathers or have long, black hair. I was shocked by how little my fellow students knew about Native Americans, and how much they based their perception of me and my heritage on what they had seen in westerns." (Lewis,2015) shares Brian Young in the article called Why I Won't Wear War Paint and Feathers in a Movie Againpublished by Zocalo Public Magazine.

Media representation fails to overcome the comfort of stereotypes in many scenarios. But with a show that attempts its best to evade these stereotypes, and talk about what needs to be addressed, hope seems viable. Even then there have been big-budget movies like *Wonder Woman* of 2017 that succeeded in casting indigenous actors like Eugene Brave Rock to play the chief. However, the abrupt end of the Ka'kwet's story and the show doesn't bring comfort in any sense to the community. If anything, it adds to the unresolved disturbing stories of the indigenous. Even when the show attempts to provide justice to the unfair lives of the First Nations, it is forced to fail due to the cancellation. Nevertheless, screenwriters, filmmakers, and other indigenous artists have been paving the way for authentic representation. Books written by indigenous writers about residential school horrors and other stories are historical because the need for their stories to be told is more important than ever. The government has acknowledged the discrimination the community faced, and many high-profile figures like even the Pope have apologized on behalf of the oppressors.

However, the necessity of stories like this being out in the open is that, the bigger the platform, the bigger the audience. The larger the amount of people who learn,thescope for justice thrives.In regards to this, the story of this community, even though half said, has reached to audience that needs to hear it.The History of Canada during the time that the show was set is faithfully represented to a certain degree in the show.The time limit and the storyline of the show might have come in the way, but several issues with historical relevance were tackled fairly in the show. The diversity and inclusion along with its historical accuracy gained recognition and admiration worldwide.

The number of indigenous viewers feeling recognized despite the unresolved ending and foreigners and others being conscious about the community and their story reinforces the idea that yes, representation matters. Stories from the indigenous past are horrifying for the community to revisit, which included even, the sterilization of women of their kind, so their culture meets an end. Consequently, the right representation matters, and *Anne with an E* attempts its best in it.

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FACTORS AFFECTING HEALTH CONDITIONS OF POLICE IN MANGALORE CITY

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Abstract

The police workforceofa societyfaces unique challenges stemming from the demanding nature of their job.This includes irregular shifts, long work hours and continuous exposure to climatic extremes. These challenging work conditionsresult in the disruption in sleep patterns and food habits of the personnel that can have detrimental long-term effects on their health. The physical strain associated with these conditions as well as work related stress affects the overall health and well-being of the police force.Understanding the various factors that constitute the determinants of health among the police personnel and taking appropriate measures to improve the quality of their work life is crucial to improve the health of the workforce and ensure the smooth functioning of the society at large.

Keywords: *Health, Nutrition, Police, Sleep, Well-Being.*

1. Introduction

One of the most demanding jobs is law enforcement, which has been linked to noticeably higher risks of stress-related illnesses (Dantzer, 1987). In addition to job-related stressors like dealing with unlawful and often dangerous actions of citizens, there is abusive treatment in the workplace (Hart, Wearing & Headley, 1995). Further, organizational and inherent stressors nullify the distress-reducing potential of increased job satisfaction. (Violanti, 1993). Trying work hours, irregular shifts, disrupted sleep patterns, and continuous exposure to harsh climatic conditions and uncomfortable work situations make police personnel especially vulnerable to work-related stress-induced health concerns. The fundamentals of the job give rise to unique health challenges faced by these personnel who are indispensable for the smooth functioning of society. Thus, it becomes necessary to comprehend the variables affecting their health to develop efficient policy interventions that would enhance these people's quality of work life.

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In an economy, the working population's health and well-being are crucial. As well-being has matured as a statistical and measurement agenda, it has become increasingly relevant as a "compass" for policy, with a growing number of countries using well-being metrics to guide decision-making and inform budgetary processes (Llena-Nozal et al. 2019).

It is high time that this compass be directed towards the law enforcement agencies of our society who, owing to their organizational structure, have remained neglected concerning healthy working conditions and well-being.

2. Literature Review

A pre-experimental methodology was used by Kapil (2013) to assess the efficacy of a self-instructional module on varicose vein prevention among traffic police officers. Data were gathered from 40 traffic police officers both before and after the self-instructional module was administered using a purposeful random sample technique. It was also investigated if there was any correlation between pre-test knowledge scores and certain demographic factors, such as age, gender, work experience, number of hours worked each day, and educational attainment. It was shown that the majority of traffic police officers—nearly 90% of them—had a mediocre understanding of how to prevent varicose veins.

A study was carried out by Kulkarni et al. (2019) to determine the stress level of traffic police officers working at two different Mangalore police stations. They set up a camp to gather data using a systematic questionnaire on habits, demographics, and current comorbid conditions. They discovered that traffic police officers under 30 years old had greater stress levels, and there was a statistically significant correlation between stress levels, personal behaviour's like drinking and smoking, and the location of posting. Their recommendations include making infrastructural improvements to reduce traffic jams and installing density-based automated traffic signal controllers in all places that are prone to congestion to reduce the effort required of traffic officers.

Paul et al. (2021) studied 100 traffic cops and 100 controls in a cross-sectional manner. A questionnaire was used to gather data on demographics, socioeconomic status, and past medical history of respiratory conditions to determine how differently traffic police officers' lungs functioned. They discovered that traffic police officers' long-term exposure to vehicle pollution lowers their lung function and increases the risk of restrictive airway disorders. Additionally, they advise implementing tactics including wearing protective gear, modifying work schedules, and raising staff awareness of the dangers posed by vehicle pollution.

Sarath (2023) conducted research on the police officers' quality of life at work in the state of Karnataka. In order to collect information on a variety of aspects, such as workload factors, working environment, working circumstances, occupational stress, and psychological and physiological stress, a sample of 374 police personnel was chosen using a simple random sampling procedure. To lessen the workload stress experienced by traffic police officers, he suggests setting up more traffic signal locations, hiring more people, lowering work hours, providing basic amenities like drinking water and portable restrooms, among other things.

3. Objectives

Following are the objectives set for the study.

1. To examine the health conditions of police personnel in Mangalore city.
2. To Suggests measures to improve work protocols conducive to creating a healthy lifestyle.

4. Methodology

The study's data was gathered in Mangalore City, Karnataka. Random sampling was used to choose the Kadri Traffic Police Station andUrwa Law & Order (L&O) police station. A total of 30 police personnel were included in the study, with 15 respondents from each group (Traffic police and L&O Police), in which consisted of 5 female and 25 male police personnel. The respondents consisted of 6 Head Constable (HC) and 24 Civil Police Constable (CPC). Within each selected police station, answers from the relevant persons were gathered using a straightforward random sampling technique.

Qualitative data was gathered through in-person interviews with the police personnel. These interviews were semi-structured to allow for flexibility in exploring their experiences and health challenges. Open-ended questions were used to encourage detailed responses. Quantitative data was gathered through the administration of a structured schedule, which consisted of closed-ended questions and rating scales. The structured schedule aimed to collect data on various health and lifestyle factors, such as sleep patterns, dietary habits, and exposure to adverse weather conditions.

5. Health condition of police personnel in Mangalore city.

The WHO constitution states: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". Promoting health and well-being encompasses a holistic approach that addresses physical, mental, and social dimensions. For police personnel in Mangalore, maintaining optimal health is crucial not only for their personal well-being but also for their effectiveness in ensuring public safety and security. There are various variables in terms of the health condition of police personnel in Mangalore city, but due to time constraints, the researcher considered the following important variables taken into consideration.

5.1 Food and Nutrition:

Health, food, and nutrition are interconnected elements crucial for maintaining overall well-being and vitality. Every meal presents an opportunity to nourish the body with essential nutrients, supporting various bodily functions such as metabolism, immunity, and cognitive function. Additionally, food provides enjoyment, satisfaction, and cultural significance, contributing to emotional well-being and social connections.

Table: 1: Number of Foods a Day

Sl.no	Meals Per day	Responses	Percentage
1	One Meal	2	7%
2	Two Meals	8	27%
3	Three Meals	7	23%
4	Varies	13	43%

In table: 1 a substantial proportion of respondents, 43% reported having in the amount of food they consume. This variation can be attributed to the demanding nature of their work, characterized by long hours and irregular shifts which make it difficult to maintain consistent meal schedules. Such irregular meal patterns can potentially impact the overall nutrition and health of the personnel. A notable 27% of respondents reported consuming only two meals per day. While 23% of respondents indicated that they manage to maintain a three-meal-a-day routine, it is still a relatively low percentage. This suggests that a significant portion of the police force struggles to maintain a standard meal schedule. Moreover, the irregularity in shifts further impacts the quality and timing of their meals. A concerning finding is that 7% of respondents reported having only one meal per day. This is a relatively small but significant percentage, as it suggests a severe lack of food intake for this group.

5.2 Sleep and Rest:

A healthy sleep schedule is essential to overall well-being. Sleeping well and at the appropriate periods is beneficial for both physical and mental well-being. Sleep deprivation impacts safety, quality of life, and performance during the day. What occurs in a person's sleep affects how that person feels when they are awake. The body works to sustain normal brain function and preserve physical health while you sleep. Sleep promotes growth and development in kids and teenagers.

Table 2: Average Hours of Sleep

Sl.no	Average Hours of Sleep	Responses	Percentage
1	4	4	13%
2	5	16	55%
3	6	6	19%
4	7	3	10%
5	8	1	3%

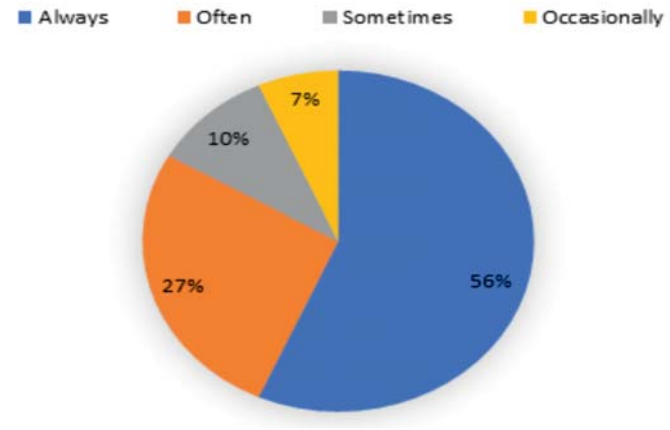
In Table:2, the data on the average hours of sleep among police personnel in Mangalore City reveals concerning trends. A substantial 55% of respondents reported getting only 5 hours of sleep, while 19% managed to sleep for 6 hours, and 13% had just 4 hours of sleep. Only 10% attained 7 hours, and a mere 3% enjoyed a recommended 8 hours of sleep. These findings illustrate the adverse impact of the stressful nature of the job including irregular work shifts and the piling of workload due to a shortage of workforce, on the sleep patterns of the police. Inadequate sleep can lead to various health and well-being issues, indicating a critical need for interventions and support in this area.

5.3 Outside Food:

Outside food, often convenient and tempting, can have significant impacts on health. High in calories, salt, sugar, and saturated fats, it contributes to obesity, heart disease, and other chronic conditions. Additionally, poor food safety standards may lead to foodborne illnesses. Making informed choices is vital for maintaining optimal health.

Chart:1 explains the majority of 56.67% reported 'always' having food from outside, 26.67% 'often' did so,10% 'sometimes 'and 6.67% 'occasionally' had food from outside. No respondents reported 'never' having food from outside sources. The primary reason for this prevalent pattern is the acute shortage of time and the compulsion to opt for outside food. Many police personnel are often faced with long and irregular work shifts, making it impractical to return home for meals. Furthermore, the fact that a substantial portion of these officers reside away from their families amplifies the challenge of preparing food at home. This reliance on outside food sources, while understandable given their circumstances, raises concerns about the nutritional quality and overall health implications of such dietary choices. It underscores the importance of addressing the unique dietary needs of police personnel, possibly through measures like providing healthier meal options within or near their workplaces.

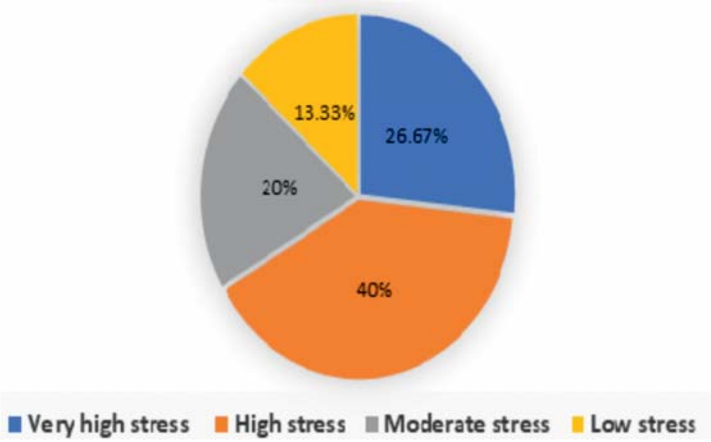
Chart: 1 Preference of Outside Food



5.4 Mental Well-being and Stress:

Mental well-being is essential for leading a balanced and fulfilling life, influencing our emotional resilience, productivity, and overall health. Managing stress effectively is crucial, as chronic stress can adversely affect mental well-being, leading to anxiety, depression, and other health issues.

Chart: 2 Mental Well-being and Stress:



In Chart:2 the data regarding the mental well-being and stress levels among police personnel in Mangalore City highlights a significant prevalence of stress within this population. Notably, 26.67% of respondents reported experiencing very high-stress levels, while a substantial 40% indicated high stress levels. An additional 20% reported moderate stress, and 13.33% reported low stress. Importantly, no respondents reported experiencing very low-stress levels. These findings underscore the intense psychological burden faced by police personnel in the line of duty. Addressing the mental well-being of these officers is crucial. Programs like stress management, counselling, and routine mental health check-ins are essential to supporting this committed group's mental health, since they are regularly placed in difficult and stressful situations while upholding law and order.

6. Measures to improve work protocols conducive to creating a healthy lifestyle

The study's findings highlight the difficult and frequently unfavourable circumstances that Mangalore City police officers deal with, which have a big impact on their health and wellbeing.

6.1 Dietary Challenges:

A substantial proportion of police personnel reported having variations in their daily meal intake due to the demanding nature of their work. Irregular shifts, long hours, and the lack of proper time intervals for meals often result in the inability to have three proper meals a day. With breakfast and lunch often occurring late in the day (around 11 am and 3 pm), officers may not be receiving the necessary nutrients at the appropriate times. This irregular eating pattern can lead to nutritional deficiencies and negatively impact overall health. Since many respondents do not live with their families and work long hours, they often resort to having at least one meal from outside sources. There are questions regarding the caliber and healthfulness of their diet because these outside meals might not be nutrient-dense.

6.2 Sleep Patterns and Sleep Quality:

The data revealed that a significant portion of police personnel, 55%, reported getting only 5 hours of sleep while 13% had just 4 hours of sleep. These findings indicate that a considerable number of officers are not meeting the recommended hours of sleep. Some respondents admitted to using alcohol as a sleep aid on occasion, which significantly throws off their regular sleep schedule and may be harmful to their health. This is often attributed to their irregular work hours and the difficulty they face in achieving restful sleep. On average, officers work for 12 hours a day, which is a physically and mentally demanding schedule. These long work hours can preventfrom getting enough sleep, which can have serious health consequences.

6.3 Exposure to Climatic Conditions:

Traffic personnel are constantly exposed to extreme climatic conditions, such as heat and pollution. These conditions can be detrimental to their health, leading to heat-related illnesses and respiratory problems. Despite these challenges, officers have limited options for protection or relief from these conditions, as they are required to carry out their duties regardless of the weather. Rain is not a sustainable solution, even though it could offer momentary protection from pollution. The fact that they require such assistance emphasizes the struggles they deal with regularly at work.

6.4 Inadequate Rest and Time Off:

The respondents' limited time off, particularly when it comes to week offs, contributes to an imbalance between work and personal life. This imbalance can lead to stress and burnout.It's noteworthy that week offs are distinct from leave, indicating that even on their designated time off, officers might still be on call or engaged in other work-related responsibilities, further reducing their opportunities for rest, relaxation, and leisure activities.

6.5 High Levels of Stress:

The data showed that a significant percentage of police personnel experience high levels of stress. Notably, 26.67% reported very high stress levels, and 40% reported high stress levels. The absence of respondents reporting very low-stress levels suggests that stress is a pervasive and persistent concern among police personnel in Mangalore City.The demanding nature of their job, political and public pressure, and the position they often find themselves in amid conflicts can contribute to the high-stress levels experienced by these officers.

7. Suggestions

- Recruiting a sufficient number of police personnel at all levels is a critical recommendation to alleviate the burden of workload stress and improve the overall well-being of the police force.
- Traffic personnel at the traffic points must be provided with basic facilities like drinking water and mobile toilets, which would help to reduce the psychological and physiological problems of the traffic police.
- Improving infrastructure for traffic police and increasing the deployment of surveillance cameras can significantly benefit law enforcement efforts and reduce the workload of traffic personnel.
- Having kitchen facilities within police stations can have several positive effects, including the preparation of nutritious meals and reducing the need to rely on outside food sources. A kitchen within the police station allows for control over the quality and choice of ingredients used in meals. This means that officers can prepare balanced and nutritious meals that meet their dietary needs.

8. Conclusion

Maintaining the health of the working population is a matter of utmost importance in an economy. This is particularly true for police officers who face trying work hours, irregular shifts, constant exposure to harsh climatic conditions, dietary challenges, sleep deprivation, inadequate rest, and high levels of stress are among the many issues that the police force grapples with on a daily basis. These challenges, in turn, have implications for their physical and mental health.

It is imperative that the welfare and well-being of the police force are prioritized, as they play a pivotal role in maintaining law and order in the city. By implementing the recommendations and supporting the mental and physical health of these officers, we not only enhance their quality of life but also fortify the effectiveness of law enforcement in the society. This commitment to the well-being of the police force is a testament to our dedication to a safer, healthier, and more resilient community. It is our collective responsibility to ensure that those who protect and serve are themselves protected and supported in their challenging roles.

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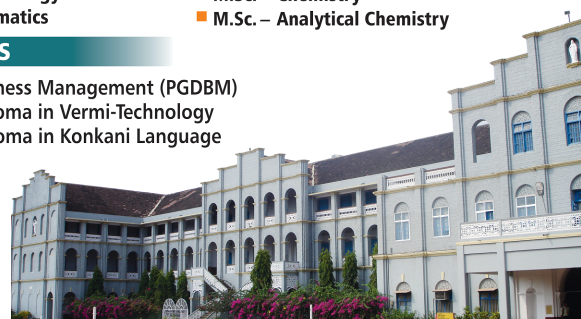

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