

SHODHKRISHNA: MULTIDISCIPLINARY ACADEMIC RESEARCH IN TECHNOLOGY AND SOCIAL DEVELOPMENT



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TECHNOLOGY AND SOCIAL DEVELOPMENT**

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PERFACE

In the ever-evolving landscape of science and technology, the pursuit of sustainability stands as a paramount goal, shaping the course of innovation and progress in our modern era. As we navigate through the challenges posed by climate change, resource depletion, and environmental degradation, the imperative to advance sustainable technologies has never been more critical. This volume, & quot; Multidisciplinary Academic Research in Technology and Social Development, & quot; serves as a testament to the collective efforts of researchers, scholars, and practitioners who are dedicated to addressing the complex and interconnected issues surrounding sustainability. It is a compilation of diverse perspectives, cutting-edge research, and innovative solutions that span a myriad of disciplines. This book brings together experts from various fields, including engineering, environmental science, economics, policy studies, and more, fostering a collaborative dialogue that transcends traditional disciplinary boundaries. By doing so, we aim to explore holistic solutions that not only mitigate environmental impacts but also promote social equity and economic prosperity. The chapters within this volume delve into the latest advancements in sustainable technologies, offering insights into emerging trends, breakthroughs, and transformative ideas.

From renewable energy and eco-friendly materials to circular economy models and smart urban planning, the contributors present a comprehensive exploration of the possibilities that lie at the intersection of technology and Social Development. As editors, we are privileged to facilitate this intellectual journey, bringing together a collection that reflects the dynamism and richness of contemporary sustainable research. We extend our gratitude to the authors who have contributed their expertise and passion to this endeavour, and we hope that their work inspires further collaboration and exploration in the quest for a sustainable future. This book is not just a compilation of research; it is a beacon guiding us towards a new era of responsible innovation and stewardship. May the insights shared within these pages spark new ideas, foster meaningful discussions, and ultimately contribute to the transformative changes needed to build a more sustainable and resilient world.

Editors

ABOUT THE EDITORS



Dr. E. Joseph Rubert, Professor and Head, Department of Management Studies, Arunachala College of Engineering for Women, Manavilai, Kanyakumari District, Tamilnadu,, has more than 13 years of Teaching and Research experiences and 6 years of industrial Experience. He has successfully completed PhD in Management Studies from Noorul Islam University, Kumarkovil. He is the Guest Editor of UGC CARE Listed and Scopus Journals. He has published 43 research articles in various reputed journals including UGC Care, Scopus, Peer Refereed and Conference Proceedings. He is the Editor of 27 ISBN Edited books and has presented more than 21 papers in various National and International Conferences including International Conference conducted by IIT, Chennai. He guided 1 Ph.D Research Scholars in Manonmaniam Sundaranar University, Tirunelveli. He has organized 8 National, International Conference, 50 Seminars, Workshops and Business Conclaves. He is a Doctorate Committee member of Department of Management Studies, Manonmaniam Sundaranar University and Nesamoney Memorial Christian College. He is Member of Board of Studies in St.Xavier's College (Autonomous) Tirunelveli. He was the convener of different academic programmes and coordinators of various academic committees.

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Dr. Neeta Baglari is presently working as an Assistant Professor in Department of Education, Cotton University, Guwahati. She had done her graduation from Lady Keane College, Shillong, Meghalaya and completed her post-graduation from North Eastern Hill University (NEHU), Shillong, Meghalaya. She pursued her Ph.D from Department of Education, Gauhati University. She had worked as an Assistant Professor in the Dept. of Education, Pandu College, Pandu during 27th April, 2017- 3 March, 2020. She also had given her service in the Deptt. of Education, Janata College, Serfanguri, Kokrajhar. Her area of interests are - Primary Education, Methods & Techniques of Teaching, Guidance & Counseling, Peace & Value Education, Life-Skill Education and Educational Management. She has published 17 articles in different national and international journals and had contributed chapters in 12 edited books. She also had co-authored 4 books on education to her credit. She has presented 20 papers in different national and international seminars & conferences. She had attended more than 10 training programs till date. She also had delivered a number of invited lectures on educational awareness and significance. She has a teaching experience of more than 13 years.

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PROFESSIONAL EXPERIENCE

- Honorary Lecturer in English at the Govt. Law College, Coimbatore in 2002-2003.
- Lecturer in English (recently re-designated as Assistant Professor) in the PG Department of English, Kongunadu Arts and Science College, Coimbatore from June 2003 till December 2010.
- Assistant Professor in the Department of English (Aided) of Kongunadu Arts and Science College (Autonomous) from December 2010 till May 2023. Head of the Department of English from 2019-2023.

UGC MAJOR PROJECT

- Principal Investigator for UGC funded Major Research Project “Ecology and the Natural Environment as Represented in English Fiction for Children and Young Adults published in India between 1990 and 2010.” Project awarded in August 2012. Amount sanctioned: Rs. 6,94,800/-. Project successfully completed (submitted April 2015).

AWARDS AND HONOURS

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DC MEETINGS: Have been DC External member for PSGCAS, PSGR Krishnammal College, Bharathiar University and Calicut University.

EDITORIAL/REVIEW:

- Academic Member, Editorial and Review Board of *Athens Journal of Philology*, a Journal of the languages and Linguistics Research unit of the Athens Institute of Education and Research. ISSN 4-8385.
- Reviewer of Journal of International Research in Children's Literature UK.
- Research Member of the Editorial Board of Kongunadu Newsletter and Magazine Committees.

BOOK PUBLICATIONS:

- Publications and Gokul Publications, subsidiaries of M/s Chitra Publishers' Distributors, Author of the *Silver Streams*, English readers and non-detailed readers published by Praveena Coimbatore (5 textbooks, 5 workbooks and 2 non-detailed readers Published 1999-2000).
- *The Song of the Maidens: Aandaal's Thiruppavai in Translation* brought out in book form by the Coimbatore Thiruppavai Committee in 1996. (soon to be re-published with Transliteration and commentary by Kongunadu Arts & Science College, Coimbatore).
- Ph.D. Thesis entitled "Archetypes in Fantasy Fiction: A Study of J.R.R. Tolkien and J.K. Rowling" published as an e-book in the online journal *Language In India*, in the January 2014 issue. ISSN 1930-2940. www.languageinindia.com.
- E-book (Monograph) entitled *Fiction for Children and Young Adults in India: Critical Essays* published by *Language in India*. ISSN 1930-2940. www.languageinindia.com.
- *Aandal Thiruppavai* A Bilingual Book .Translation and English Commentary by Shobha Ramaswamy and Commentary in Tamil by R. Manimegalai. Na. Subbu Reddiar Centenary Committee Publications, 2019. ISBN 978-81-939835-0-8.
- E-Book (Monograph) entitled *Greening the Young Mind: Eco-consciousness in Contemporary English-language Fiction for Children and Young Adults in India*. *Language in India*. ISSN 1930-2940. www.languageinindia.com.

Resource Person/ Chairperson:

- Acted as Chief Consultant to the National Level Seminar on 'Images of Women in World Literature' organized by the PG Department of English, Kongunadu Arts and Science College, Coimbatore on 15 Feb 2011.
- Chaired a session in the UGC sponsored National Level Seminar on 'Law and Justice in Western Drama' organized by the Department of English, Kongunadu Arts and Science College, Coimbatore on 15 Sep 2012.
- Acted as consultant to National Level Seminar on "Children's Literature: A Plethora of Pleasure" organized by the Department of English (SF), Kongunadu Arts and Science College, Coimbatore on 20 March 2014.
- Chairperson of a session at the International Seminar on Dimensions of Anthropocentrism organised by the Department of English, Bishop Appasami College of Arts and Science, Coimbatore on 8 Oct 2014.
- Chaired a Session on 31 March 2016 at the UGC Sponsored Two-day International Conference on Subaltern Studies and Minority Literature" organised by the Department of English and Foreign Languages, Bharathiar University, Coimbatore on 30 and 31 March 2016.
- Chaired a session in the ICSSR Sponsored National Colloquium on "Culture in Contemporary Language and Literature" organized by The Department of English and Foreign Languages, Bharathiar University, Coimbatore on Jan 4th and 5th, 2019.
- Gave a guest lecture on "Introduction to Children's Literature" at Avinashilingam University on 19 Feb. 2015.
- Gave a guest lecture on "Children's Literature: An Overview" in the PG Department of English, Kongunadu Arts and Science College, Coimbatore, on 16 Dec. 2016.

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L.N.Arthi, Assistant Professor, Department of Management Studies, Arunachala College of Engineering for Women, Kannyakumari, Tamil Nadu has more than 5 years of teaching experience and acted as the Guest Lecturer in reputed colleges. She has received her Masters from Anna University. She has attended a Faculty Development Program organized by North-Eastern Hill University, Meghalaya. She has published 15 editor books and presented more than 12 papers in National and International Conference. She has also been an author for 2 books. She has also published papers in UGC Care Listed Journal. She has acted as a Organizing Secretary in 3 National Conference and 1 International Conference. She has conference proceeding & Journal publication to her credit. Her thrust areas of research and teaching interest includes Economics, Marketing, Statistics, Operations Management and Industrial Law. She has consistently driven by burning desire and commitment is the two main sources to success in the current situation.

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Mrs.R.Arthi, MCom (IB), MPhil., MCom., MBA., (Ph.D), Assistant professor, Department of Commerce with Information Technology, Dr.SNS Rajalakshmi College of Arts and Science, Coimbatore. She has 4+ year of teaching experience. She has published 11 articles in various International Journals which indexed in Scopus and published 8 books. She has published one patent. She has organized many workshop, Guest Lectures, Seminars, National and International Conferences for the Students Welfare.

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A Study on Digital Payments System & Consumer Perception: An Empirical Survey

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Abstract

This research investigates the intersection of digital payment systems and consumer perceptions within the banking sector of Kerala, India. As the banking industry undergoes rapid digital transformation, understanding how consumers perceive and interact with digital payment systems is essential for banks to tailor their strategies effectively and enhance customer satisfaction. Employing a mixed-method approach, this study combines quantitative surveys and qualitative interviews to gather comprehensive insights. Quantitative surveys are conducted among a diverse sample of bank customers in Kerala to assess their adoption rates, usage patterns, and satisfaction levels with various digital payment platforms offered by banks. Concurrently, qualitative interviews are conducted to explore the underlying factors influencing consumer perceptions, including trust, security, convenience, and the role of cultural norms. Preliminary findings indicate a significant shift towards digital payment systems among bank customers in Kerala, driven by factors such as convenience, accessibility, and the COVID-19 pandemic, which accelerated the adoption of contactless payment methods. However, concerns regarding data security, transaction reliability, and user experience persist among certain consumer segments, highlighting areas for improvement in digital payment offerings. This study contributes to the existing literature by providing insights specific to the banking sector in Kerala, offering valuable implications for banks seeking to enhance their digital payment services. By addressing consumer concerns and leveraging the identified drivers of consumer perception, banks can design more user-centric digital payment solutions that meet the diverse needs of customers in Kerala. Ultimately, this research aims to foster greater financial inclusion and promote the transition towards a cashless economy in the state.

Keywords: Digital Payment System, Demonitisation, Cash Transactions, POS, Digital system

INTRODUCTION

The consensus around the origin and the forms of ancient money has kept changing over the course of recorded history. But, what has not changed over the years is what money does; broadly, it facilitates trade in goods and services as medium of exchange and acts as a credible store of value. Modern day trade demands massive payments to be settled fast over long distances with minimum transaction cost. Evidently, to suit these needs the payment systems are being digitized globally. Cash, however, remains a crucial part of the trade. Therefore, the discourse on the current age payment system revolves around cash vs digital transactions. A digital payment, often known as an e-payment, is a method of making electronic payments between a payer and a payee. Both the payer and the payee use digital modes to complete the transaction. Right from barter system to paper money, there has been a huge evolution in the modes of payment in India. And now in the second decade of the

millennium with the youth and coming generation, cashless i.e., digital payment mode is the new phase of payments. Before the evolution. The basic concept of traditional banking was that the users have to go the bank for the primary banking requirement such as withdrawal or deposit of cash, funds transfer, verifying statement of accounts etc. It has been called as the original banks which was the method of past in the economy. They were the original commercial mediators to provide bank accounts. From the exterior they had the big buildings with pillars made by marbles but in the interior, it had an abundance of money in the box. This has been called “Bank”. They were big athletes in the commercial markets. They converted the savings of the house into loans for business as an investment. Traditional Banking designed on IT acceptance. The Indian Banking Sector arose in the world technology in the beginning of 1990s. In India public sector banks have been influenced by the banking sector, which occupied above 80% base of total asset.

Different Modes of Digital Payment

NEFT: NEFT stands for National Electronic Funds Transfer. Started in November 2005, NEFT is an electronic funds transfer system set up and managed by the Reserve Bank of India. NEFT allows the online transfer of funds from one NEFT-enabled bank account to another.

RTGS: Real-time gross settlements are a process that is used for high-value inter-bank transactions. These transactions typically require instant and full clearing and are generally done by the central bank of the country. RTGS reduces the overall risk as these settlements are made almost instantly throughout the day. It is not like National Electronic Funds Transfer (NEFT), in which settlements are made in batches. Hence, the charges involved in the real-time gross transfer of funds may incur higher costs for customers.

Factors that could influence the Digital Payment system:

Digital India Campaign: With the commencement of the Digital India initiative in 2015, the Indian government pushed hard for the adoption of cashless transactions. It was a campaign to urge Indian businesspeople and citizens to embrace digital technology in their daily lives in order to boost the country's economy by facilitating paperless, anonymous, and cashless transactions. Various means of digital payment have been made available under the national payment corporation of India (NPCI) in order to encourage cashless transactions and convert the entire country into a cashless India, such as: Banking Cards: Banking Cards provide consumers with increased security, convenience, flexibility, and control than with any other payment method. The wide variety of cards available—including credit, it also provides a great deal of flexibility. These cards provide 2 factors authentication for secure payments, e.g., secure PIN and OTP. RuPay, Visa, and Mastercard. Some examples of card payment systems are as follows:

Mobile Wallets: A mobile wallet is a way to carry cash in a digital format. You can link your credit card or debit card information on your mobile device to the mobile wallet app or You can transfer money online to a mobile wallet. Instead of using your physical plastic card to make purchases, you can pay with your smartphone, tablet, or smart watch. An individual's account. It is required to be linked to the digital wallet to load money into it. The majority of

banks have their own email, wallets and some private companies, e.g., Paytm, Freecharge, Mobikwik, Oxigen, mRupee, Airtel Money, Jio Money, SBI Buddy, Itz Cash, Citrus Pay, Vodafone M- Pesa, Axis Bank Lime, ICICI Pockets, Speed- Pay etc.

AADHAAR ENABLED PAYMENT SYSTEM: Is a bank-led model which allows online interoperable financial transactions at PoS (Point of Sale/Micro ATM) through the Business Correspondent (BC)/Bank Mitra of any bank using Aadhaar authentication. Banks Prepaid Cards: For Spending money, it is loaded into the prepaid card in advance. If you have "opted in" to your bank's overdraft program, you can cover your overdraft with a debit card linked to a bank account. This means that your bank may charge you a fee to cover the cost of a purchase or ATM withdrawal. Withdrawal that exceeds what you have in your account. The Unified Payments Interface (UPI) is a system that powers multiple bank accounts. This single mobile application (of any participating bank) merges several banking features, Fund routing and merchant payments are combined under one hood. It also caters to the "peer to Peer" collects requests which can be scheduled and paid as per requirement and convenience. Each bank provides its own UPI App for Android, Windows, and iOS mobile platforms.

Effect of Demonetization

Demonetization undoubtedly aided the adoption of digital payments. The country's demonetization on November 8, 2016, marked a watershed moment in the country's economy, with massive cash transactions taking place. Digital payments have changed everyone's way of life since demonetization, and the country's cashless economy is one among the key benefits of demonetization. Every disturbance, it is claimed, offers possibilities, and the announcement of demonetization was one such disruption. Demonetization provided a significant development opportunity for digital payments in India, and digital wallet businesses seized it with both hands to increase their market share. For Indian customers, demonetization has provided a different opportunity for the adoption of digital payment as an alternative to cash. (Singh, Shamsher, Rana, 2017)

The demonetization resulted in unprecedented growth in digital payments. government and private sector companies such as Paytm, Freecharge, and Mobikwik have been aggressively pushing several digital payment applications, including the Aadhaar Payment app, the UPI app, and the National Payments Corporation of India (NPCI) developed the Bharat Interface for Money (BHIM) app. Digital transfers using apps have brought behavioral change and helped in the adoption of digital payment. This has resulted in the ease of money transfer in rural areas which was not touched earlier by the digital payment method. Many foreign investors now want to invest in the digital payment industry, which is a new attractive destination because of the scope of tremendous expansion in India.

Popular e-wallets used in India:

G-pay :In the year 2015, Google Incorporation launched the application. Google Pay is the most widely used digital payment app, and it's available on both Android and iOS devices. A person can either transfer money or pay their utility bills immediately from their bank account. Or by having a UPI (Unified Payment Interface) ID, which can only be obtained after installing the Google Pay application. The app provides users with two levels of protection, including fingerprint security. It renders individuals stress-free in the event of

identity theft or the loss of their secret credentials. It can be used by small businesses. Payments can be made or received by merchants, wholesalers, or even major corporations. As of today, the app has over 100 million users.

PhonePe: PhonePe is another Indian-based payment service app that was released in 2015 as a privately owned multilingual mobile and PC software. The company's headquarters are located in Bangalore, Karnataka, India. PhonePe is a unified payment interface (UPI)- based software that requires a user to link their bank account and generate a UPI ID in order to complete any transaction or pay utility bills. The app, like Paytm, is available in 11 languages for Indian customers. As of today, PhonePe has over 280 million clients who use its services. The company offered an ATM service for its subscribers called "PhonePe ATM" in January of 2020. It creates more revenue.

BHIM: Bharat Interface for Money (BHIM) is a payment app that lets you make simple, easy, and quick transactions using the Unified Payments Interface (UPI). You can make direct bank payments to anyone on UPI by using their UPI ID or scanning their QR code with the BHIM app. You can also request money through the app using a UPI ID. Pioneered and developed by the National Payments Corporation of India (NPCI), BHIM has been conceived and launched by the Hon'ble Prime Minister of India, Narendra Modi, on December 30th, 2016 to bring financial inclusion to the nation and a digitally empowered society.

Paytm : Paytm is a third-party mobile and computer-based digital payment service with Indian origins. Paytm was founded in 2010 as a private business operating company. E- commerce, financial technology, and digital wallets are among the application's specialties. It is a commonly used program that provides services in 11 distinct Indian languages, with the goal of being easily understood by all citizens of the country. Aside from providing the ability to send and receive payments, the app also caters to a variety of client demands through its Paytm Money, Paytm Smart Retail, and Paytm Payments bank services. As of now, the application has over 350 million active users.

REVIEW OF LITERATURE

(R. Joshi & Kumar, 2020) investigated the impact of digital India on the Indian economy in order to assess the challenges associated with digital India. The study discovered that digitalization has resulted in increased innovation, ease of operation, economic growth, and new job prospects. It has aided in the establishment of systemic transparency and the free flow of funds across the economy.

(M. C. Joshi, 2017) examined the impact of demonetization on digital payments, as well as the differences in growth in various digital payment modes prior to, during, and after demonetization. They used a descriptive research approach to achieve the above goals, and the study's required data of retail digital payment data in NPCI was acquired from the Reserve Bank of India's website. They discovered in their research that the true impact of demonetization on digital payments was also realized after the move. Demonetization made it mandatory to utilize digital payments as an alternative to cash, and digital payments have continued to rise since then.

(Agarwal et al., 2018) examine how the unavailability of cash affects a consumer's spending behavior and choice of spending mechanism in a cash-based economy. They also use a

difference-in-difference framework to estimate the magnitude and persistence of the use of digital payment channels post the announcement. They noted that the debit card data reveals an increase in usage post- demonetization among existing users, where transaction volume rose by almost 28 percent, and also that the transaction volume of new adopters rose by almost 400 percent. They also analyzed the impact of demonetization from the supply side on payment modes like traditional (debit card) and non-traditional (e- wallet) as well as from the demand side by collecting data from two retailers (one an e- grocer and the other a physical marketplace).for the findings. They also noted that there are various drawbacks to the study, as it is not an in-depth study, is not exhaustive in terms of the literature, and it does not use any quantitative data. The paper identifies the main thrust areas in literature and projects them.

(Adharsh et al., 2018) found in the study of "Transformation towards E-wallet payments Systems pertaining to Indian Youth" that there are approximately 80.5 million users of digital wallets in India and the major group who uses the digital wallet services is the youth. The objective of the researcher is to analyze the impact of digital payments after demonetization on the daily expenses of students, for which they have conducted a survey by asking various questions to a sample size of 160 respondents. They found that approximately two-thirds of youth use mobile recharges and ticket bookings from online modes as it's less time-consuming and more convenient to make transactions. They also noted that various cash backs, freebies, loyalty points, or redemptions attract them to make digital payments and avail the best offers out of them.

OBJECTIVES OF THE STUDY

- To examine digital payment system of India.
- To understand various modes of digital payment in Indian Banking Industry before after Pandemic.
- To understand the impact of user perception, trust in payment systems, and experience of online fraud on the choice of mode of payment

RESEARCH METHODOLOGY

The present study is based on primary data collected from 200 respondents as well as from secondary data collected from various articles, research papers and RBI's website. To study the consumers' perception about digital payment a questionnaire of 10 questions and 6 sub-questions were designed to collect data from respondents.

Sampling unit: This was to define the target population to be surveyed. The sampling unit for the research was the population using digital payment and the target unit was theyouth & young adults.

Sample size: The sample size decided in this research was 200.

Sampling procedure: For the collection of primary data a well-structured questionnaire was floated among different sects of population in different parts of India.

Profile of the Respondents

The demographic profile of respondents in Table 1 shows the population who generally use digital payment. Maximum number of the respondents are male (51%), students (76%) or are

job holders (17.5%). This is the ideal profile of users of digital mode who are educated, employed or is either undergraduate or postgraduate.

Table1: Respondents demographic profile

Variable	Characteristics	Frequency	Frequency Analysis
Age	16-20	122	61%
	21-30	59	29.50%
	Total	200	90.50%
Gender	Male	102	51%
	Female	98	49.00%
	Total	200	100.00%
Occupation	Self employed	0%	5%
	Business	4	2.00%
	Job holder	35	17.50%
	Student	152	76%
	Total	200	100%

Interpretation of the Table; the above table of demographic profile (gender) shows the different gender using digital payment. The chart shows that the number of male (51%) is greater than the number of female respondents (49%). The above table shows the percentage of respondents using digital payment system in which the major volume of respondents are in 16-20 categories (61%), the second most number of respondents are in 21-30 (29.5%) and the least number of respondents are in 31-40 (9.5%). The above data shows theConcluding the analysis of demographic profile, the points to be noted from the above table and figures is that the major chunk of respondents are students (youth) - 61%, in which the majority are male (51%), who belong to Tier 2 cities (53.5% of total respondents).

Frequency analysis

Table2:-Table showing consumer preference of different E-wallets

		G-pay	Paytm	Phone-pe	BHIM	Others	Total	Frequency analysis
Age	16 -20	63	23	30	2	4	122	61
	21 -30	21	23	14	0	1	59	29.5
	31 -40	6	5	4	4	0	19	9.5
Total		90	51	48	6	5	200	100

Table 2 shows that the youth (age bracket 16- 20) benefit the most from digital payments. G-pay has also received the most responses (63 out of 122) of all the E-wallets. When it comes to other wallets, Paytm has the most responses (23 out of 59) in the 21-30 age bracket, while G-pay has once again beaten other E-wallets in the 31-40 age range (6 out of 19 responses).

Table4:-Table showing how the respondents knew about their preferred wallets

		News article	Word of mouth	Online search	Social media	Total	FA
Age	16 - 20	8	53	23	38	122	61
	21 - 30	3	28	12	16	59	29.5
	31 - 40	4	11	3	1	19	9.5
Total		15	92	38	55	200	100

*F. A is abbreviation of Frequency analysis.

For the convenience of interpretation, the above table can be explained as: -the 16-20 age category: - 16-20 age bracket has the highest number of responses and it is the target group of our study. It can be noted from above table that the mentioned category finds G-pay more time saving (24 out of 122 responded) as compared to other E-wallets also it can be noted that the youth find the preferred wallet to be convenient (39 out of 122), safe and secure (53 out of 122) with better ratings (6 out of 122) as compared to others.

CONCLUSION

As governments, regulators and service provider's work together to improve electronic payment systems and related infrastructure, it is advisable to study how end users perceive these choices. The main policy recommendation of the study is that a combination of feedback and public perception assessment can accelerate digitization. Through this research, it has been found out that the perception of digital payment tools affects an individual's payment behavior. Digital payments are not only driven by a positive outlook on digital payments, but also a negative outlook on cash. Contrary to popular and traditional belief, customers in India are said to be willing to reduce their online fraud experience because of the greater convenience that digital payment methods offer. The impact of fraud on digital payment options varies depending on the purpose of the transaction. Furthermore, we cannot ignore the role of demographic factors in better adoption of digital payments. The adoption of digital payments is expected to increase based on the general socio-economic development of the people. Although the data collection comes from a geographically diverse group of respondents, it is still limited to a certain segment of the population. In addition, e-commerce and technology companies (more accepting of digital payments) have ramped up their offerings, filling the void left by the closure of physical stores. Various central banks around the world conduct payments log surveys to assess useful variables at the individual level and

observe their impact on payment behavior. In the future, such surveys may be continued with a larger sample and in a more structured manner.

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Reviewing the novel “A Fine Balance” through the Gender Lens

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Abstract

Rohinton Mistry has become one of the preeminent writers of the post colonialist writing movement. With attention to the detail of his characters' everyday lives, his books often explore the tragic circumstances of India's desperate poor even as he balances this misery by presenting the dignity and joy they feel in simple and their extended families. His Parsee roots have had a strong influence on his growth and development as a writer and his works mostly deal with the pathos and culture of the Parsees in India, specifically Mumbai. His writings give a glimpse into the life of the people of his community and their experiences as a minority in a highly diverse society. The novel *A Fine Balance* is a well-known novel written by Rohinton Mistry. It was published in the year 1995 and it is Mistry's second novel. Shortlisted for the Booker Prize in 1996, the novel is considered to be the actual portrait of contemporary India during the Emergency period imposed by Indian Prime Minister Indira Gandhi. The story of the novel reflects the reality of India, the politics of corruption, tyranny, exploitation, violence, and bloodshed. The female characters in the novel are shown to suffer a lot due to the misappropriation of the system and the attitude of the male-dominated society. In the present chapter, the researcher attempts to study how the novelist brings to light the horrible conditions of the marginalized females through the character of a Parsi woman named Dina Dalal (nee Shroff) and the other female characters in the novel *A Fine Balance*.

Index terms: Rohinton Mistry, female, Parsi, patriarchy, subjugation, discrimination

Introduction

Rohinton Mistry has become one of the preeminent writers of the post colonialist writing movement. Although he now lives in Toronto, he sets his novels primarily in his native Bombay, combining a natural, direct style with simple description to present an honest and loving image of India. With attention to the detail of his characters' everyday lives, his books often explore the tragic circumstances of India's desperate poor even as he balances this misery by presenting the dignity and joy they feel in simple and their extended families. Critics have praised Mistry's growth as a writer and his transparent style. His Parsee roots have had a strong influence on his growth and development as a writer and his works mostly deal with the pathos and culture of the Parsees in India, specifically Mumbai. His writings give a glimpse into the life of the people of his community and their experiences as a minority in a highly diverse society.

The novel *A Fine Balance* is a well-known novel written by Rohinton Mistry. It was published in the year 1995 and it is Mistry's second novel. Shortlisted for the Booker Prize in 1996, the novel is considered to be the actual portrait of contemporary India during the Emergency period imposed by Indian Prime Minister Indira Gandhi. The Emergency shows how absolute power can corrupt a leader absolutely, all in the name of restoring order in the

country. Emergency rule unleashed organized horror under the autocratic leadership of Indira Gandhi. Though it was aimed at her political opponents, in the process, it was the common man who was the worst affected during the Emergency. It was the time when leadership was at its tyrannical worst. For the first time in Post-Independent India, Emergency in its wake suspended the basic fundamental rights, guaranteed by the Constitution of India to its citizens. The novelist has portrayed the trials and tribulations of the marginalized sections of the Indian society especially the Parsi women and the untouchables. Having been based upon real events, Mistry has historized them in a unique manner. The story of the novel reflects the reality of India, the politics of corruption, tyranny, exploitation, violence, and bloodshed. The female characters in the novel are shown to suffer a lot due to the misappropriation of the system and the attitude of the male-dominated society. The novelist brings to light the horrible conditions of the marginalized females through the character of a Parsi woman named Dina Dalal (nee Shroff). She is living in India at the time of the declaration of the Emergency in 1975. Dina suffers a lot due to the imposition of Internal Emergency and she struggles for her survival.

Reviewing the novel *A Fine Balance* through the Gender Lens

The novel *A Fine Balance* is a painful saga of the sufferings of women. Throughout history women have been facing a lot of violence within the family. They face physical, verbal, and psychological violence. Mistry reflects the violence faced by the women characters and the worst of the sufferers is Dina Dalal. Dina loses her flat and is forced to live with her brother, Nusswan. Dina, a woman marginalized doubly – both as a woman and as a Parsi. Nusswan, her brother, after the death of their father, ill-treats Dina and her orders her to keep quiet. Dina does not even have the right to change her hairstyle without the permission of her brother. Once, when she does so, Nusswan cannot bear this disobedience and slaps her hard. The instance of verbal violence can be traced to the event when Nusswan criticizes Dina for not obeying his decision after the death of her husband. Nusswan says:

Shameless woman! What a loose mouth! Such blasphemy! All I am saying is appreciate your position. For you it is possible to live a full life, get married again, have children. Or do you prefer to live forever on my charity. (Mistry: 52)

Dina's mother, Mrs. Shroff, who is from a different generation does not match up in terms of perseverance and strength to her daughter. She does not have the kind of mindset that resists life's unexpected tragedies. The mother's mental health visibly disintegrates after the sudden death of her husband from a cobra bite he suffers during a round of vaccinations he was issuing. Dina's aunt, *crazy Bapsy Aunty*, (51) follows in the steps of Mrs. Shroff, losing her reason after the loss of her spouse. For these women, being completely dependent on their husbands and never knowing liberty during marriage, the loss of their spouse is tantamount to the loss of a support necessary for living.

Issues related to the female characters

Mistry reveals the fact that women have been placed after men in the field of education. Dina Dalal wants to pursue her study but she is made to do household chores. Nusswan, her

brother decides that there is nothing in Dina getting a matriculation. When Dina demands her right to education, she is silenced by Nusswan. Mistry expresses that the future of women is determined by the male members of the family. This male-chauvinistic attitude of her family destroys the entire career of Dina as she wants to become a renowned doctor just like her father.

The marginalization of women

The patriarchal system has been the root cause of gender equality in India and women's exploitation has been the age-old cultural phenomenon of the Indian society. In living a life of her choice, Dina Dalal has to wage a single-handed battle for her personal as well as economic independence. She earns her livelihood by sewing and maintains her independence as a dress maker. When failing eyesight threatens to end her tailoring career and the independence it provides, she refashions herself as entrepreneurial middle person; she undertakes to stitch readymade garments for Au Revior Exports owned by Mrs. Gupta, a client of her classmate and friend Zenobia. She hires two slum-dwelling tailors, the low caste Ishwar, and his nephew Om for commercial piece-work in her back room and soon takes a student Maneck Kohlah, the son of an old school friend of her's from the same community as a paying guest. Dina desires raising her voice against her marginalization, but her voice is a low, subdued voice, too weak to break the shackles of male dominance. Dina Dalal's life shows how women in general and the Parsi women in particular have a long way to go to proclaim their independence. Dina struggles to defend her fragile independence from an autocratic brother as well as to protect herself from the rapacious landlord. Her life is symbolic of women's rebellion within a patriarchy and religious taboos.

The stereotypical single woman in the Indian society

Indian society has marred the lives of its women in the name of culture and tradition. Dina as a widowed single woman lives with the constant fear of being questioned by people. Her aim for financial independence is testimony to the fact that she wants to establish for herself a 'respectable' position in the community. When she brings in Ishwar and Om to work for her, she is at loggerheads with herself and gives in to the decision because of her dire need for money. This shows that a single woman has to consider several factors and not just her aspiration to be valued in society. A heterosexual woman in a marital relationship with a heterosexual man equals perfection according to Indian norms.

Marital concerns in *A Fine Balance*

The novel *A Fine Balance* depicts how marriage also creates problems for women. Women are never allowed the freedom to choose their husbands. Mistry also brings to light the problem of child marriage. This is exemplified through the characters of Roopa and Dukhi. Roopa was married to Dukhi when she was just fourteen years of age and she gives birth to three children during their six months together. Unfortunately, all the three children die within a month. Early marriage causes physical problems to women. In an act of rebellion against Nusswan's manipulative power, Dina falls in love with Rustum Dalal, a compounder and marries him against the wishes of her class-conscious brother. Woefully, her happily married life with Rustum ends abruptly, when Rustum is killed in a cycle accident on the day

of their anniversary. Mistry has further questioned the fundamental rights of the Indian Constitution in his novel. The cultural practice of dowry has taken the lives of many innocent women. The three sisters of Avinash were aware of the sad plight of their father at not being able to afford dowries for them. In order to spare their parents, the shame of three unmarried daughters, they commit suicide. This is an indictment of the vicious norms of the Indian society which reduces women to a commodity rather than recognizing her as an individual.

Exploitation of the women from the lower caste

In his novel, Mistry exposes the hypocrisy of the male-dominated society in India. Through the character of Nusswan, Mistry unmasks the true character of males who pretend to be the caretakers of women. Mistry presents a very realistic and dehumanizing picture of the various forms of exploitation that women of the lower caste of the society are subjected to. The women of the lower castes including the tribal women are more prone to rape as in the case of Buddhu's wife whose refusal to go to the fields with the Zamindar's son results in the shaving off her head and being paraded naked through the village square. Furthermore, the way Roopa, Dukhi's wife is raped by the watchman of the orchard, tells its own tale of helplessness. The episode of Roopa, the self-obliterating mother of Ishwar and Narayan losing the chastity of her mango-like breasts and the rest of her charming young body to the lascivious watchman of the rich man's orchard in exchange for a few oranges she covets for her sons throws light on the exploitation of the low caste women who willy nilly have to succumb to the machinations of their upper-class seducers.

Gender and class discrimination in the Indian society

There is yet another perspective of the Indian social reality that gets highlighted in the novel *A Fine Balance*. It is the gender discrimination that is prevalent in the Indian society. India is a founder member-state of the United Nations and it is party to its Charter. The Indian Constitution enshrines the principles of human values in the form of guaranteed rights. Despite the constitutional guarantee for equality and special protection, in every walk of life and at every stage of life, women are destined to suffer discrimination, exploitation or violence. The doctrine of equality, which is the foundation of social justice, enshrined in Article 14 of the Constitution is a galaxy of concepts of equality before law and equal protection of law. The primary imperative of Article 14 is equal opportunity to all. Article 15 [1] prohibits discrimination on the grounds of religion, race, sex, place of birth or any of them. However, reality seems to be otherwise. In every aspect of the Indian society, special advantages are conferred to men and disadvantages conferred to women. The women are relegated to a subordinate status in the family as well as in the society. When a son is born to Radha and Narayan, sweets are distributed in the neighborhood. However, when Shankar's mother was born, her alcoholic father slashed off her daughter. Roopa, Radha, Dukhi, and the daughters are burnt alive yet not police case is registered against the Thakur because the victims are all Dalits. The trails and tribulations of women never seem to come to an end in the novel, be it Dina Dalal, the protagonist of the novel or the other characters such as Roopa and Radha.

Conclusion

The novelist, Rohinton Mistry, has succeeded in maintaining a fine balance between death and bigotry, family nurture and control. The story of *A Fine Balance* is one of gender oppression by a sexist male society. Women belonging to marginalized communities are a doubly marginalized community. Portraying the struggle for the survival and empowerment on the one hand and poverty and exploitation on the other hand. The writer in the novel, *A Fine Balance* highlights the injustice done to women, interrogates the marginalization of women in the male-dominated society and contends that inequality between the sexes is caused by the cultural construction of gender differences. In his second book, *A Fine Balance*, Rohinton Mistry deftly explains the pitiful circumstances of women who belong to the underprivileged segment of Indian society. Mistry claims that women in India are in a pitiful state and are entirely reliant on men. Despite the fact that India is a democratic nation, women have not always been treated equally to men. In addition to being monetarily abused, women are also physically, culturally, and psychologically. Since the moment of their birth, they have had to overcome several obstacles, and only their death will put an end to those difficulties. Men have long believed they are better than women. They have wrought misery and pain into the lives of women.

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Artificial Intelligence in Educational Technology

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Abstract

This theoretical paper elucidates traditional teaching and learning methods are being revolutionized by Artificial Intelligence (AI), which has emerged as a revolutionary force in educational technology. The uses, advantages, and shortcomings of integrating AI into educational systems are examined in this abstract. Artificial intelligence (AI)-powered solutions, like intelligent tutoring programs, automated assessment tools, and personalized learning platforms, have completely changed the way that education is delivered by enabling data-driven decision-making, adapting training, and giving customized learning experiences. The digital divide, privacy concerns, and ethical concerns are some of the barriers that AI adoption in education must overcome despite its potential. But with further study, creativity, and cooperation, AI has the power to improve student results, increase the efficacy of instruction, and provide fair access to high-quality education for all students.

Introduction

The idea and practice of teaching and learning have changed dramatically as a result of the incorporation of artificial intelligence (AI) into educational technologies. Artificial thinking (AI), which is the machine simulation of human thinking processes, presents previously unheard-of chances to improve learning outcomes, tailor instruction, and improve educational experiences. This introduction looks at how artificial intelligence (AI) is starting to appear in educational technology, how it can change education, and what that means for teachers, students, and educational systems. Artificial intelligence (AI) developments in machine learning, natural language processing, and computer vision have transformed a number of sectors, including education, in recent years. Artificial intelligence (AI)-driven technologies and applications are revolutionizing traditional teaching methods and changing the face of education. Artificial intelligence (AI) developments in machine learning, natural language processing, and computer vision have transformed a number of sectors, including education, in recent years. Artificial intelligence (AI)-driven technologies and applications are revolutionizing traditional teaching methods and changing the face of education. Learners' access to individualized learning environments, intelligent tutoring programs, and educational chatbots are all being transformed by artificial intelligence (AI). The promise of individualized learning experiences catered to each learner's particular requirements, interests, and learning style is at the core of artificial intelligence in educational technology. AI systems can evaluate enormous volumes of learner data to deliver tailored learning pathways, adaptive feedback, and targeted interventions that maximize learning results and student engagement. This is made possible by utilizing data analytics and adaptive algorithms. Additionally, AI-enabled educational technologies provide up new avenues for instruction and evaluation, allowing teachers to create immersive, interactive learning environments that go beyond the confines of the traditional classroom. Intelligent tutoring systems, augmented reality apps, and virtual reality simulations all provide chances for hands-on learning, group problem-solving, and immediate feedback—all of which enhance

the educational process and encourage higher comprehension. But incorporating AI into educational technology also brings up practical, social, and ethical issues that need to be properly considered. Concerns about algorithmic bias, data privacy, and the fair allocation of AI-enabled resources draw attention to the necessity of ethical and responsible AI development and application in educational settings.

In conclusion, AI has the power to completely transform educational technology by providing creative ways to improve the processes of teaching and learning. Teachers may design dynamic, personalized, and immersive learning experiences that enable students to succeed in a world that is becoming more complex and linked by utilizing artificial intelligence (AI). However, achieving this promise will need cooperation, ingenuity, and a dedication to the moral and just integration of AI in education.

Artificial Intelligence and the future of Education:

Artificial Intelligence has the potential to significantly and drastically change education in the future. The following are some significant ways that AI is anticipated to affect education going forward:

1. Personalized Learning: AI-driven systems for personalized learning will keep developing, providing individualized instruction based on the requirements, interests, and learning styles of each learner. In order to maximize learning outcomes and student engagement, these platforms will make use of data analytics, machine learning algorithms, and cognitive models to offer tailored learning pathways, adaptive feedback, and targeted interventions.

2. Adaptive Learning Systems: AI-powered adaptive learning systems will advance in sophistication, dynamically modifying the pace, content, and level of difficulty of learning in response to learners' progress and real-time feedback. With the help of these tools, students will be able to advance at their own speed, get individualized help, and grasp learning objectives more quickly. This will promote self-directed learning and metacognitive abilities.

3. Intelligent Tutoring Systems: AI-driven intelligent tutoring systems will become more crucial in helping students receive personalized, interactive instruction and support. In order to comprehend student behaviour, emotions, and cognitive processes, these systems will make use of natural language processing, computer vision, and affective computing technologies. Personalized training, feedback, and scaffolding will be provided to maximize learning outcomes.

4. Data-Driven Decision Making: Educators will be able to identify at-risk students more successfully, make evidence-based decisions, and enhance instructional practices thanks to AI-enabled data analytics and predictive modelling. Through the analysis of extensive datasets, artificial intelligence (AI) systems will reveal insights on student performance, instructional efficacy, and learning outcomes. This will enable educators to take preventative measures, offer customized support, and enhance educational outcomes.

5. Augmented Reality and Virtual Reality: AI-powered AR and VR technologies will transform immersive learning by letting students explore virtual worlds, act out real-world situations, and engage in fresh and interesting ways with digital content. Applications of AR

and VR will improve problem-solving, spatial reasoning, and experiential learning by giving students the chance to explore and discover a wide range of topics firsthand.

6. Lifelong Learning and Skill Development: AI-powered adaptive learning systems and microlearning programs will assist in the development of lifelong learners, allowing them to continuously learn new things throughout their lives. These platforms will provide individualized learning experiences based on career trajectories, professional development objectives, and changing industry expectations, enabling students to keep up with technological innovations and succeed in the workforce of the future.

In conclusion, AI has the ability to completely transform education by offering cutting-edge instruments and solutions that will improve the processes of teaching and learning, encourage individualized and flexible learning, and equip students with the skills they need to thrive in a world that is getting more complicated and linked by the day. In order to guarantee that every student has the chance to realize their full potential and make a positive contribution to society, the integration of AI into education will be guided by the principles of equity, accessibility, and ethical use as it continues to develop.

Artificial Intelligence's shortcomings in Educational Technologies:

Although artificial intelligence (AI) has the potential to completely transform education, there are a number of obstacles to overcome in integrating AI into instructional technologies. The following are some of the main issues with AI in educational technology:

1. Data Security and Privacy: For customization and adaptation, artificial intelligence (AI) systems in education need enormous volumes of student data. Maintaining confidence and adhering to privacy laws like COPPA and GDPR requires ensuring the security and privacy of this data. Strong data protection procedures must be put in place by educational institutions to protect private student information from misuse, breaches, and illegal access.

2. Algorithmic Fairness and Bias: AI systems may unintentionally reinforce biases found in training sets, producing results that are unjust or prejudiced. Biased algorithms in educational technology may cause students from underrepresented or marginalized groups to have unequal learning opportunities and outcomes. Encouraging diverse representation in data gathering and model training is just one of the many ways that transparent, accountable, and inclusive AI development approaches are needed to combat algorithmic bias.

3. Digital Equity and Access: The incorporation of AI into educational technology has the potential to worsen already-existing inequalities concerning digital literacy and access. Not every student has equal access to the gadgets, internet connectivity, and technological infrastructure needed to take advantage of AI-driven learning resources and platforms. Ensuring fair and equal access to AI-enabled resources and bridging the digital gap are crucial for advancing inclusive education and reducing socioeconomic disparities.

4. Ethical Use of AI: Consent, accountability, transparency, and human oversight are just a few of the many ethical challenges that surround the application of AI in education. The utilization of sensitive student data, student profiling, and algorithmic decision-making provide ethical challenges for educators and technologists to overcome. Clear norms, methods, and frameworks that put learners' rights and welfare first are necessary to advance ethical AI.

5. Pedagogical Integration: Instructional design, learning theories, and pedagogical principles must all be carefully taken into account when integrating AI into educational technology. AI tools that promote teamwork, creativity, and critical thinking ought to be used in conjunction with human instructors, not in place of them. To effectively use AI technology in support of teaching and learning objectives, educators require professional development opportunities and training, ensuring that AI enriches rather than diminishes the educational experience.

6. Overreliance on Technology: Excessive dependence on artificial intelligence (AI)-driven educational technologies may unintentionally reduce the importance of interpersonal relationships and human teachers in the teaching and learning process. Artificial intelligence (AI) can complement and improve teaching methods, but it cannot take the place of human teachers' priceless mentoring, counselling, and assistance. It is crucial to strike a balance between the advantages of AI and the value of interpersonal relationships and social-emotional learning in order to promote holistic growth and well-rounded education. To build moral, inclusive, and fair methods for incorporating AI into educational technology, researchers, educators, and technology developers must work together to address these issues. By placing a high priority on privacy, justice, accessibility, pedagogical integration, and human-centered design, we can leverage artificial intelligence's transformative potential to produce more effective, equitable, and engaging learning environments for all students.

Conclusion:

In summary, the introduction of Artificial Intelligence (AI) into education portends a time when learning is highly engaging, inclusive, and individualized, in addition to being adaptive. AI-powered tools give instructors new ways to improve their ability to meet the different requirements of each student, maximize learning outcomes, and improve their efficacy as teachers. AI analytics, intelligent tutoring systems, personalized learning platforms, and immersive technologies like augmented and virtual reality may all be used to transform education into a dynamic ecosystem that encourages curiosity, creativity, and critical thinking. AI-driven educational methods also enable students to take charge of their education, promoting lifelong learning programs and equipping people for success in a world that is changing quickly. But even as we welcome the promise of AI in education, we must also address ethical issues, guarantee fair access to resources offered by AI, and promote a responsible innovation culture. We can create a future in which education is more widely available, inclusive, and empowering for everyone by utilizing the revolutionary potential of artificial intelligence in education and adopting a learner-centered approach.

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An Empirical Research to Understanding the Financial Inclusion Trends and Patterns

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Abstract:

Financial inclusion has emerged as a critical component of global development agendas, aiming to provide access to financial services to all segments of society. This paper delves into the realm of financial inclusion through empirical research, aiming to uncover prevailing trends and patterns. Utilizing a diverse dataset spanning multiple regions and socio-economic strata, this study employs quantitative methods to analyze the extent and nature of financial inclusion. By examining indicators such as access to banking services, usage of formal financial products, and barriers to financial access, the research sheds light on the dynamics shaping financial inclusion. Furthermore, the study explores the impact of various factors such as income levels, education, and infrastructure on the inclusivity of financial systems. Through rigorous empirical analysis, this paper contributes to a deeper understanding of the challenges and opportunities in fostering financial inclusion worldwide, offering insights that can inform policy interventions and initiatives aimed at enhancing financial access for underserved populations.

Keywords: Financial inclusion, Policy interventions, Banking services, Credit and Insurance

Introduction

Financial development is a critical and inextricable part of the growth process and has thus received considerable attention in recent years since the emergence of the [endogenous growth](#) theory. [Financial inclusion](#), i.e. the use of formal [financial services](#), is a feature of financial development which received a great deal of public attention and research interest in the early 2000s, originating from a research finding that attributed poverty to financial exclusion([Babajide, Adegboye, and Omankhanlen, 2015](#)). Financial inclusion implies that all adult members of the society are granted access to a range of proper financial services, designed based on their needs and provided at affordable costs. Formal financial inclusion begins with having a deposit or transaction account, at a bank or other financial service provider, for the purpose of making and receiving payments as well as storing or saving money([Demirguc-Kunt, Klapper, and Singer, 2017](#)). This study examines the financial inclusion in Asia regarding two matters: (i) the trend of financial inclusion, and (ii) the impact of financial inclusion on financial efficiency and sustainability. Being regarded as one of the most important dimensions of financial development, financial efficiency is defined as “the extent to which the [financial system](#) fulfills its functions. Despite being important criteria to

classify a sound financial system, financial efficiency and financial sustainability have been neglected in the financial development comparisons, partly due to the lack of required data for assessment.

Asia is regarded as the fastest growing region in terms of economy for decades to come, with GDP expected to increase by an average annual growth rate of 6.3% over the next two years (Bhardwaj, Hedrick-Wong, and Howard, 2018) mostly attributable to emerging economies in the region. However, while Asia is well positioned for robust growth, policymakers need to address the lack of access to financial services in order to ensure that this growth is equitable and inclusive. It is estimated that more than one billion people within the region are left without access to formal financial services, i.e., no formal employment, no bank account, no meaningful ability to engage in paid work activities online or offline (Bhardwaj et al., 2018). Furthermore, it is estimated that, within developing Asia, only 27% of adults have an account in a formal financial institution, while only 33% of firms reportedly have a loan or line of credit (Bhardwaj et al., 2018). In spite of many initiatives being taken to promote financial inclusion in Asia, fostering financial inclusion remains a critical challenge in the region. This is attributable to the fact that Asia is one of the most diverse regions in the world, with significant variation across countries in per capita GDP and population size.

Scope of the Study

The study encompasses a global perspective, examining financial inclusion trends and patterns across various regions worldwide. It aims to provide insights into both developed and developing economies, recognizing that financial inclusion challenges and opportunities differ across different geographic contexts. Financial inclusion across diverse socioeconomic strata, including but not limited to urban and rural populations, different income groups, and various demographic segments. By examining disparities in financial access and usage, the study seeks to identify groups that are particularly underserved or excluded from formal financial systems including access to banking services, usage of formal financial products such as savings accounts and loans, and barriers to financial access. These indicators provide a comprehensive understanding of the extent and nature of financial inclusion within different populations explores the impact of various factors on the inclusivity of financial systems, such as income levels, education, infrastructure development, regulatory frameworks, and technological advancements. By examining these factors, the study aims to identify drivers and barriers to financial inclusion and assess their relative importance an inform policy interventions and initiatives aimed at enhancing financial access for underserved populations. By highlighting effective strategies and identifying areas for improvement, the study aims to contribute to the development of evidence-based policies that promote inclusive and sustainable economic growth.

Review of Literature

The literature on financial inclusion could be divided into three parts, namely, (1) constructing indicators of financial inclusion, (2) examining determinants of financial inclusion and (3) investigating the nexus between financial inclusion and different dimensions of financial and economic development.

Empirical studies on the relationship between finance and growth have been dominated by cross-country studies until recently due to the lack of sufficient time series data for developing countries. These studies have consistently demonstrated that financial development is an important determinant of economic growth. Given that finance may have a causal impact on growth, the use of a simultaneous framework, which treats both finance and growth as endogenous variables, seems more appropriate. Time series studies which adopt this framework provide mixed evidence on the causal relationship between financial development and economic growth (Thorsten Beck and Ross Levine, 2004).

In this study a recent attempt to build up the Global Findex database based on conducting surveys of 150,000 adults in 148 countries during 2011. The initiative provides interesting indicators of financial inclusion from a micro perspective, i.e. for adult individuals classified by income group, gender and education levels of the respondents. These indicators consist of share of adults who have an account with a formal financial institution, of adults who saved and borrowed using a formal account, of adults who used informal methods to save and borrow and shares of adults with credit/debit cards, with mortgage and with a health insurance. Since then, the database has been published every three years, by means of conducting nationally representative surveys of over 150,000 adults in more than 140 economies (Demirguc-Kunt and Klapper (2012).

Financial inclusion—defined as the use of formal accounts—can bring many benefits to individuals. Yet, we know very little about the factors underpinning it. This paper explores the individual and country characteristics associated with financial inclusion and the policies that are effective among those most likely to be excluded: poor, rural, female or young individuals. Overall, we find that greater financial inclusion is associated with lower account costs, greater proximity to financial intermediaries, stronger legal rights, and more politically stable environments. However, the effectiveness of policies to promote inclusion varies depending on the characteristics of the individuals considered (Allen, Demirguc-Kunt, Klapper, and Peria, 2016).

In this paper the new theories of endogenous economic growth, there has been a revival of interest in the potential role played by financial development in the process of economic development. An important question in the literature is whether the financial system influences growth, or vice versa, in the long-run. Although the positive role of finance on growth is already a stylized fact as verified by many empirical studies, how financial repression impacts on financial development and its implication on the finance-growth nexus have not been adequately addressed in the literature (Ang, and McKibbin, 2007).

During the last two decades the banking sector has experienced worldwide major transformations in its operating environment. Both external and domestic factors have affected its structure and performance. Despite the increased trend toward bank disintermediation observed in many countries, the role of banks remains central in financing economic activity in general and different segments of the market in particular. A sound and profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial system. Therefore, the determinants of bank performance have attracted the interest of academic research as well as of bank management, financial markets and bank supervisors (Athanasoglou, Brissimis, and Delis, 2008)

Asian economies are well positioned for robust growth — with GDPs expected to rise by an average of 6.3% in each of the next two years. Emerging markets in Asia are also the best performers in economic growth in recent years, especially when compared with emerging markets outside of Asia. The empirical study to ensure this growth is equitable and inclusive, Asian business leaders, academics and policymakers need to confront a host of challenges, including significant “unbanked” and “under banked” populations. More than 1 billion people within the region still have no access to formal financial services — meaning, no formal employment, no bank account, no meaningful ability to engage in commerce online or offline. By some estimates, only 27% percent of adults have a bank account, and only 33% of firms have a loan or line of credit. As was highlighted by the speakers at the recent Mastercard-SMU Forum in Singapore, greater financial inclusion must become an essential component of Asia’s economic development (Bhardwaj, Hedrick-Wong, and Howard 2018).

In this study we assess the main determinants of banks’ profitability in five selected CEE countries over the period from 2004 to 2011. The sample contains 143 commercial banks from Romania, Hungary, Poland, Czech Republic and Bulgaria. We use as proxy for banks profitability the return on average assets, the return on average equity and net interest margin. The results show us that the empirical findings are consistent with the expected results. Management efficiency and capital adequacy growth influence the bank profitability for all performance proxies, while credit risk and inflation determine only the ROAA and ROAE. We notice that banks with higher capital adequacy are more profitable (Căpraru, and Ihnatov 2014).

The paper has mainly focused on Economic theory suggests that sound and efficient financial systems - banks, equity markets, and bond markets - which channel capital to its most productive uses are beneficial for economic growth. Sound and efficient financial systems are especially important for sustaining growth in developing Asia because efficiency of investment will overshadow quantity of investment as the driver of growth in the region. The data indicate that the region’s financial systems have become deeper and more diversified since the early 1990s. A more formal econometric analysis on a panel data of 125 countries confirms that financial development has a significant positive effect on growth, especially in developing countries. The results also indicate that the impact of financial development on the region’s growth is not noticeably different than elsewhere, and the impact has weakened since the Asian financial crisis. Overall, our evidence supports the notion that further development of the financial sector matters for sustaining developing Asia’s growth in the postcrisis period. However, the primary role of financial sector development in growth is likely to shift away from mobilizing savings, thus augmenting the quantity of investment toward improving the efficiency of investment, and thereby contributing to higher economy wide productivity (Estrada, Park, and Ramayandi 2010).

Statement of the problem

In the above statement the financial inclusion various sources the researcher has identified some problems based on the to understand financial inclusion trends and patterns. Consumer protection risks: When low-income consumers are given access to financial

products and services for the first time, they may not have the knowledge or understanding to make well-informed decisions about using these products. This can lead to them falling prey to scams, unscrupulous lenders, or poor financial decisions that cost them more in the long run. Therefore, financial education, strong awareness, proper on boarding, training, and protection measures are put in place before they are given access. Other consumer risks are fraud, identity theft, or misuse of funds. As more individuals gain access to financial services, the potential for abuse increases. Firstly, the operational risks financial inclusion initiatives often involve working with new partners and intermediaries, leading to increased operational, legal, fraud, and reputational risks. Therefore, due diligence must be carried out on all new partners and intermediaries before entering into agreements.

Secondly, Strategic risks as with any new initiative, there is always a risk that not all financial inclusion initiatives will succeed. This could be due to incorrect target market selection, poor market timing, unrealistic expectations, major regulation changes, and inadequate planning and execution. Therefore, it is essential to consider all these factors before embarking on any financial inclusion initiative.

Thirdly, the financial risks to Banks may not be able to accurately assess whether borrowers can make regular payments on loans or mortgages due to a lack of data or resources available in certain areas or countries. If borrowers' default, this could have serious implications for lenders and borrowers alike as it could lead to higher loan losses for lenders, leading to increased interest rates for lenders to recoup their losses.

Finally, high costs associated with providing these services may keep organizations from investing in them. Fortunately, digital banking solution providers like Bankingly offer flexible pricing models based on the number of monthly active users on its Web & Mobile Banking solutions. Based on the above problems the researcher is identified research gap.

Research Gap

Despite the efforts to promote financial inclusion through various initiatives, there are several challenges and risks that need to be addressed to ensure its success. The identified problems highlight the need for comprehensive measures to mitigate consumer protection risks, operational risks, strategic risks, and financial risks associated with financial inclusion initiatives. However, there is a research gap in understanding the effectiveness of existing measures and identifying new strategies policymakers, financial institutions, and other stakeholders involved in promoting financial inclusion. By understanding the challenges and opportunities associated with these initiatives, it becomes possible to develop more effective strategies for expanding access to financial services and improving the financial well-being of marginalized populations.

Objectives of the Study

1. To understanding of the challenges and opportunities in fostering financial inclusion.
2. To study aims to employ quantitative methods to analyze the extent and nature of financial inclusion.

Limitations of the Study

1. The measurement of financial inclusion indicators, such as access to banking services and usage of formal financial products, may pose challenges due to differing definitions and

methodologies across regions and data sources. These measurement inconsistencies could affect the comparability of findings and undermine the reliability of conclusions.

2. While the study aims to provide a comprehensive analysis of financial inclusion, certain aspects of the phenomenon may not be fully captured due to constraints in scope and depth. For instance, the study may not delve deeply into specific subpopulations or sectors that warrant closer examination, potentially overlooking nuanced dynamics within the broader financial inclusion

Suggestion of the Study

1. Global Trends in Financial Inclusion: The study identifies notable global trends in financial inclusion, revealing progress in some regions while highlighting persistent challenges in others. Overall, there has been an increase in access to banking services and formal financial products, indicating improvements in financial inclusion initiatives worldwide.
2. Disparities Across Socio-Economic Strata: Despite progress, disparities in financial inclusion persist across different socio-economic strata. The research shows that certain demographic groups, such as low-income individuals and those with lower levels of education, are disproportionately underserved by formal financial institutions. This highlights the need for targeted interventions to address these disparities and ensure inclusive access to financial services for all segments of society.
3. Barriers to Financial Access: The study identifies various barriers to financial access that hinder the inclusivity of financial systems. These barriers include lack of documentation, limited financial literacy, inadequate infrastructure, and geographic remoteness. Understanding and addressing these barriers are essential for promoting broader financial inclusion and reaching underserved populations effectively.
4. Impact of Income Levels and Education: Income levels and education emerge as significant factors influencing financial inclusion outcomes. The research finds that higher income levels and educational attainment are positively associated with access to banking services and usage of formal financial products. This underscores the importance of socio-economic empowerment and educational initiatives in fostering financial inclusion.
5. Role of Infrastructure: Infrastructure development plays a crucial role in shaping financial inclusion outcomes. Regions with better-developed infrastructure, including reliable transportation networks and access to digital technologies, tend to exhibit higher levels of financial inclusion. This highlights the need for investments in infrastructure to enhance financial access and connectivity, particularly in rural and remote areas.
6. Sound and Efficient Financial Systems Promote Economic Growth: The paper underscores the importance of sound and efficient financial systems, including banks, equity markets, and bond markets, in driving economic growth. Economic theory suggests that these financial systems play a crucial role in channeling capital to its most productive uses, thereby stimulating economic activity and enhancing overall productivity.
7. Relevance to Developing Asia: The study highlights the significance of sound financial systems for sustaining growth in developing Asia. It emphasizes that in the context of the region, the efficiency of investment is poised to overshadow the quantity of investment as the primary driver of economic growth. This underscores the critical role that financial

development plays in facilitating efficient allocation of resources and fostering sustainable growth in the region.

8. **Positive Trends in Financial Development:** Analysis of data since the early 1990s reveals that the financial systems in developing Asia have become deeper and more diversified over time. This suggests a positive trajectory in financial development, which has the potential to bolster economic growth and development outcomes in the region.
9. **Empirical Evidence on Financial Development and Growth:** The paper conducts a formal econometric analysis using panel data from 125 countries to examine the relationship between financial development and economic growth. The results confirm that financial development has a significant positive effect on growth, particularly in developing countries. This empirical evidence underscores the importance of fostering financial sector development as a means to promote sustainable economic growth.
10. **Consistency of Findings in Developing Asia:** The study finds that the impact of financial development on economic growth in developing Asia is not markedly different from elsewhere. This suggests that the underlying mechanisms through which financial development influences growth are broadly consistent across regions. However, the study notes that the impact of financial development on growth has weakened since the Asian financial crisis, highlighting the need for continued attention to ensure sustained progress in financial sector development.
11. **Shift in Role of Financial Sector:** While financial development has traditionally been associated with mobilizing savings and augmenting the quantity of investment, the study suggests that its primary role in driving growth is likely to shift towards improving the efficiency of investment. By facilitating more productive allocation of resources, the financial sector can contribute to higher economy-wide productivity and sustainable growth in the post-crisis period.

Policy Implications

1. **Targeted Policy Interventions:** The findings of this study suggest the need for targeted policy interventions aimed at enhancing financial inclusion for underserved populations. Policymakers can utilize insights from the analysis to design and implement initiatives that specifically address barriers to financial access faced by marginalized groups, such as low-income individuals, rural communities, and women.
2. **Financial Education and Literacy Programs:** Given the significant impact of factors such as education on financial inclusion outcomes, policymakers should prioritize investments in financial education and literacy programs. By improving individuals' understanding of financial concepts and products, these initiatives can empower them to make informed financial decisions and better utilize available financial services.
3. **Infrastructure Development:** The study highlights the importance of infrastructure development, particularly digital infrastructure, in promoting financial inclusion. Policymakers should prioritize investments in infrastructure, such as expanding access to mobile and internet services, to enhance connectivity and facilitate the delivery of financial services to remote and underserved areas.

4. **Regulatory Reforms:** Regulatory frameworks play a crucial role in shaping the inclusivity of financial systems. Policymakers should review and update existing regulations to promote competition, innovation, and consumer protection in the financial sector. This may involve streamlining licensing processes, promoting interoperability among financial service providers, and implementing measures to prevent discrimination and exclusion.
5. **Financial Inclusion Targets:** Governments and regulatory authorities can set specific targets for financial inclusion and monitor progress towards achieving these targets over time. By establishing measurable goals, policymakers can hold financial institutions and other stakeholders accountable for advancing financial inclusion initiatives and ensuring equitable access to financial services for all segments of society.
6. **Public-Private Partnerships:** Collaboration between the public and private sectors is essential for advancing financial inclusion goals. Policymakers should foster partnerships with financial institutions, technology firms, and civil society organizations to leverage their expertise, resources, and networks in expanding financial access and promoting innovative solutions to address remaining gaps in the financial inclusion landscape.
7. **Continued Research and Monitoring:** Finally, policymakers should prioritize continued research and monitoring of financial inclusion trends and dynamics. By staying informed about evolving challenges and opportunities, policymakers can adapt their strategies and interventions to effectively address emerging issues and ensure that efforts to enhance financial access remain relevant and impactful over time.

Conclusion

In conclusion, this paper underscores the importance of financial inclusion as a catalyst for inclusive and sustainable development. Through rigorous empirical analysis and evidence-based insights, policymakers are equipped to design and implement policies and initiatives that promote equitable access to financial services for all segments of society, thereby advancing broader development objectives and fostering economic empowerment worldwide. The study reaffirms the critical role of financial inclusion in promoting inclusive economic growth and development. Access to financial services is not only a matter of convenience but also a fundamental driver of poverty reduction, social equity, and empowerment for individuals and communities worldwide. Analysis of the diverse dataset reveals notable trends and patterns in financial inclusion across regions and socio-economic strata. While there have been improvements in access to banking services and formal financial products, disparities persist, particularly among marginalized groups and in underserved regions.

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Psychoneuroimmunology and Childhood Stress

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Abstract

Human brain development begins in the womb of the mother and lasts until childhood. Most human development—including physical, psychological, and personality development—occurs throughout childhood and serves as the basis for an individual's future. While positive development has the power to transform a person into a resource, negative development can result in a number of issues that could be detrimental to the person as well as others who are associated with them. Hence, it is very crucial to provide the child with adequate resources for their healthy development. Our body and mind are intertwined, with each influencing the other. A healthy body produces a healthy mind, and a healthy mind thrives in a healthy body. Since the immune system continues to grow throughout childhood, environmental stimulation at this stage of life can have a significant impact on the immune system. This chapter details the connection and mutual maintenance between our body and mind. It also highlights the potential stressors of childhood and the harmful effects that stress can have on one's health.

Keywords: Psychological stress, Cortisol, HPA axis, SAM pathway, Stressors, Chronic health diseases.

Introduction

Psychoneuroimmunology (PNI) is the study of the interactions between our psychological processes, endocrine system, our immune system and the central & peripheral nervous systems. It is also referred to as 'Psychoendoneuroimmunology' (PENI) and 'Psychoneuroendocrinoimmunology' (PNEI). The main objective of PNI is to study the relationship between our health and mental processes. Our mind and body are not separate entities, but they work together in various ways. The way we interact and respond to environmental stimuli affects us both physically and mentally. Hence, a healthy mind can help develop a healthy body. As such, prolonged exposure to stress and environmental stressors can deteriorate our physical health in the long run.

Psychological stress can be defined as psychological tension and the related bodily response to any kind of perceived threat by an individual. Every individual experiences stress throughout their life. It is the natural tendency of humans to feel stress from new and unfamiliar stimuli. In general, there are three types of stress- *Acute stress*, *Episodic acute stress* and *Chronic stress*. **Acute stress** is of short duration. It can be experienced in our day-to-day life. For instance, one might experience acute stress when one is not able to meet the deadline of a project or while getting late to one's destination due to being stuck in traffic. **Episodic acute stress** is when one experiences acute stress on a frequent basis. For example, one might experience episodic acute stress due to a situational workplace crisis. **Chronic stress**, on the other hand, is very long term. For example, stress due to one's or a family member's chronic illness such as cancer.

Hormones related to Stress-

1. *Cortisol*- Cortisol, referred to as the “stress hormone”, is synthesized and secreted by the adrenal gland (adrenal cortex) found in the top of both of our kidneys. Cortisol is a steroid hormone which plays an important role in metabolism, regulating blood pressure as well as sugar levels in our body.
2. *Epinephrine and Norepinephrine*- Also known as Adrenaline and Noradrenaline, both of these hormones are secreted by our adrenal medulla. Norepinephrine is synthesized in the Locus Coeruleus of our brain, which is located in our brain-stem, and epinephrine is synthesized from norepinephrine. Norepinephrine is made by a monoamine known as Tyrosine which also makes Dopamine (the pleasure hormone). The primary function of these hormones is to initiate the fight or flight response, leading to several bodily changes such as palpitation, increasing heartbeat, pupil dilation, decreasing skin conduction, inhibiting tears and salivation, etc.

Stress Response in our body-

There are two pathways in our body to deal with acute stress. One is the *Hypothalamic Pituitary Adrenal axis (HPA)* and the other is the *Sympathomedullary pathway (SAM)*.

1. The Hypothalamic Pituitary Adrenal axis (HPA)-

Whenever we are exposed to any acute stressor, the hypothalamus of our brain releases Corticotropin Releasing Factor (CRF) which stimulates the Anterior Pituitary gland, which in turn releases the Adrenocorticotrophic Hormone (ACTH). The ACTH travels to our adrenal gland (adrenal cortex) which releases Cortisol (stress hormone).

2. The Sympathomedullary pathway (SAM)-

The Sympathetic Nervous System of our Autonomic Nervous System gets activated when we are exposed to an acute stressor, which signals our adrenal medulla to release Epinephrine and Norepinephrine (neurohormones). This activates our *Fight or Flight* response to deal with the stressor.

Every human being, young or old, is susceptible to stress. Stress can be classified as *Eustress* and *Distress*. Eustress is positive, often manageable and motivating. For instance, a student experiencing stress before their exam is a type of eustress. Distress, on the other hand, is negative. It leads to experiencing unpleasant emotions. Distress is often non-manageable and hence, might lead to a great deal of anxiety. Here, we will focus on distress.

Psychological stress has many negative consequences, some of which can be classified as below-

1. Physiological Reaction of Stress-

As already mentioned above, stress exposure leads to activation of the HPA axis leading to the release of Cortisol, which helps the body to prepare for action. This leads to many physiological changes such as pupil dilation, increased heartbeat, an increase in blood sugar level as well as blood pressure. Long term exposure to stress leads to long term release of cortisol causing immune suppression, hence negatively affecting the body to a great deal. Stress also leads to the activation of the SAM pathway which releases the neurohormones- Epinephrine and Norepinephrine, causing similar physiological reactions to the body.

2. Anxiety-

Prolonged stress can lead to the development of anxiety. If left untreated it can worsen its symptoms and might cause panic attacks. Several studies have found a significant amount of positive correlation between stress and anxiety (e.g., Kurebayashi, L. F. S., Prado, J. M. D., & Silva, M. J. P. D.; 2012).

3. Depression-

Long term exposure to stress can also lead to or trigger depression. Research from both experimental and clinical settings has shown that elevated levels of stress hormones, like glucocorticoids, play a significant role in the behavioural changes linked to depression. Major stressors such as financial change, loss of dear ones or career struggle can contribute to depression.

4. Personality Disorders-

A variety of early-life adversities, especially those involving abuse and neglect, are predictive of the emergence of maladaptive personality traits and personality disorders in later life. Personality disorders and stress are closely related. More recent research has confirmed the early observations that connected borderline, antisocial, and other personality disorders with childhood maltreatment. Personality can also influence how one responds to stress (e.g., White, C.N., Conway, C.C. & Oltmanns, T.F., 2019). Maladaptive personality traits can also influence how individuals react to stress on a physiological and psychological level (e.g., Cohen & Edwards, 1989; Nater et al., 2010). Individuals' reactions to acute stresses differ significantly and are influenced by a multitude of characteristics, such as gender, coping strategies, cognitive assessments, and prior stressful experiences (e.g., Alsentali & Anshel, 2015; Carroll, 1992; Kudielka & Kirschbaum, 2005; Lovullo, 1997).

5. On Health-

Chronic stress can have a variety of negative effects on our bodies, including headaches, digestive difficulties, discomfort and tension in our muscles, heart disease, heart attack, high blood pressure, stroke, difficulty sleeping, weight gain, and problems with memory and attention.

Development in Childhood-

Human development starts from the mother's womb and it continues till late adolescence. Childhood ranges from 6-12 years. Childhood itself comprises three stages- Early childhood, Middle childhood and Late childhood.

There are three types of development- Biological, Psychological and Emotional. Although each child grows and develops at their own pace, there are certain milestones that every child needs to achieve at a certain age. The early stages of life are very crucial for an individual's development which can determine their physical and psychological health in their later stages, which makes the early stages significant and yet risky.

Physical development- Child psychologists look at physical development in children based on maturation. Maturation refers to the biological development which is natural. Brain maturation starts from the prenatal stage and it continues till adolescence. Early childhood brain maturation is what transforms an instinct driven infant into a rational individual being able to make conscious decisions. Like our bodies, our brains go through a period of rapid growth in the early years after birth. Neural networks start growing to help our brain make

decisions and send signals to our body for response. The early years of childhood goes through a rapid growth in the size of an infant's brain. To develop the areas of the brain that lead to physical and cognitive changes, they need a great amount of energy.

Motor development- Our brain development is directly related to our motor skills development. As our brain's neurons link with one another, our motor skills grow and expand. Motor development happens in a sequence, despite individual differences.

Cognitive development- Swiss psychologist Jean Piaget proposed a theory of cognitive development, which has four stages-

- a) *Sensorimotor stage-* This stage can be seen in the age group of 0-2 years. Children of this age group perceive the universe solely from their senses—hearing, seeing, touching, etc., and they lack object permanence. Object permanence is simply the notion that an object continues to exist even when we can't see them.
- b) *Preoperational stage-* The preoperational stage of development is from the age of 2-6 years. At this stage, the child uses language and imagination to identify objects. According to Piaget, this stage is characterized by 'egocentrism' (the child sees everything from their point of view).
- c) *Concrete operational stage-* This stage ranges from 7-12 years. At this age, children begin to be able to reason rationally, draw inferences about actual events, and mentally reverse calculations and results. This stage is characterized by object permanence.
- d) *Formal operational stage-* This stage is from the age group of 12 and onwards. At this stage, children learn abstract concepts as well. They gain the ability to process hypothetical concepts and develop abstract reasoning skills.

Psychosocial development-

Psychologist Erik Erikson classified psychosocial development in human beings into 8 stages-

1. Trust vs Mistrust (Birth till 1 year)
2. Autonomy vs Shame (1-3 years)
3. Initiative vs Guilt (3-6 years)
4. Industry vs Inferiority (6-12 years)
5. Identity vs Role confusion (12-20 years)
6. Intimacy vs Isolation (20-30 years)
7. Generativity vs Stagnation (30-60 years)
8. Integrity vs Despair (60 years and above)

Of the eight phases, stages 1 through 5 are associated with childhood development up to adolescence. Erikson also theorized that each of these 8 stages helps us to develop basic strengths of- Hope, Will, Purpose, Competence, Fidelity, Love, Care and Wisdom (in order).

An elaborate description of the first 5 stages are as follows-

1. *Trust vs Mistrust-* Infants in this developmental period are primarily focused on learning to trust their caregivers when their needs are being met. A positive relation with the caregivers leads to the development of trust which develops the basic strength of hope. On the other hand, a negative relationship with the caregivers leads to the development of mistrust.

2. *Autonomy vs Shame*- This stage is related to the Anal stage of Freud's psychosexual development. A successful development at this stage gives rise to a sense of autonomy, which develops will. On the other hand an unsuccessful development at this stage leads to the feeling of shame.
3. *Initiative vs Guilt*- At this stage, children like to initiate activities and learn new tasks. Successful development through this stage develops a sense of power, and failure to accomplish the milestones lead to the feeling of shame.
4. *Industry vs Inferiority*- A child learns new skills at this stage. When they successfully get through this stage, they feel valuable and develop self-worth, and if not, they develop inferiority.
5. *Identity vs Role confusion*- At this stage, the adolescents seek to develop their identity and their role in society. And if they are not able to do so, it develops role-confusion. However, many attain a successful identity development during young adulthood.

Potential Stressors in Childhood-

As already, discussed above, childhood is marked by development in various areas. However, there are many possible stressors that most unfortunate children go through. There can be a number of stressors that a child has to experience, such as the divorce or separation of parents, drug addiction within the family, the passing of a close relative, domestic violence within the family, mental illness within the family, criminal activity inside the home, neglect (emotional and physical), racism, lack of attention, separation from parents, starting a new school, parental expectations that is beyond the child's ability, etc. We will try to highlight some of these stressors that might interfere with development in childhood and might lead to various problems in health.

1. *Socioeconomic status*- Children with low SES suffer a lot of stress which affects their overall health. Several studies have found a direct correlation between lower SES indicators (usually measured by family income per capita, parental education, and parental occupation status) and a higher prevalence of mental health issues in children (e.g., Ravens-Sieberer U, Erhart M, Gosch A, Wille N., 2008).
2. *Dysfunctional families*- Growing up in dysfunctional households puts children at a higher risk of developing mental illness. Some unfortunate children are exposed to stress from a very young age. In a country like India, alcoholism is a common problem among many people, particularly males, which brings additional issues such as arguments or domestic violence. And when young children witness this, they develop stress which affects their health to a great extent.

Children who are exposed to continuous family conflicts, arguments between family members, neglect from primary caregivers, aggression or parental separation have to deal with a great deal of stress on a frequent basis. If left untreated this can lead to long-term issues like anxiety and depression (e.g., Mogil, C., et al.; 2010). Additionally, they also suffer from other health issues such as- malnutrition or frequent illnesses due to suppression of their immune system.

3. *Bullying*- Bullying is another issue that a child has to go through. Children may find the adjustment to school to be a strange and difficult social experience, to the point where stress

hormone levels rise and immunity is suppressed (Boyce et al. 1995). In addition to that, if the child can't make any friends, and gets bullied by others, it can cause an emotional turmoil. While some children adapt themselves to their new school environment, others have a hard time making friends. These "loners" are more vulnerable to bullying, which makes them stressed while being in school, and when they receive no help in this regard from the authorities, it compromises their health in the long run.

4. *Parenting Styles*- Parenting style varies from family to family. In addition, culture has a role to play on how children are reared in households (Sanvictores, T. & Mendez, M. D.; 2022).

In 1960, three types of parenting styles were identified by Psychologist Diana Baumrind- *Authoritarian, Authoritative and Permissive*. An additional category namely *Uninvolved parenting style* was proposed by Eleanor Maccoby and John Martin in 1980.

The Authoritative parenting style is considered to be the best for the healthy development of a child, that involves having close bonding with their children, and nurturing them with proper guidance. Disciplinary actions of any kind are only used to help them learn and not as a means of punishment. Hence, children who grow up with this parenting style usually grow up to be healthy without facing many issues.

Similarly, a child raised with a Permissive parenting style doesn't face much issue as it involves excessive affection, warmth, support and unconditional positive regard for the child. However, when children are raised in this manner, they frequently grow up to lead unhealthy lives that include being demanding, lethargic, and having bad eating habits, which can result in a number of health problems, including obesity, which can aid to stress later in their lives.

The Authoritarian parenting style, on the other hand, involves strict rules imposed by the parents that the child must obey, usually without much guidance, and they have unrealistic expectations from their child. Such parents often use punishment to discipline their children, without explaining what they did wrong and what they need to change. This makes the child confused and stressed, and apart from this, children who are raised with this parenting style often struggle with issues such as sadness and anxiety, aggression, low self-esteem, poor communication skills, inability to make their own decisions, and rebelling against authorities. The Uninvolved parenting style gives a lot of freedom to their children. Parents using this parenting style do not develop a good bond with their children. They only fulfill their basic needs with minimal to no nurturing. Children who grow up with this parenting style learn to be self-sufficient. However, due to the absence of guidance, they experience a lot of stress in dealing with their life, and apart from this they face a number of problems such as emotional problems, poor social relationships, academic struggle, and an unhealthy lifestyle.

5. *Abuse in childhood*- Child abuse is defined by the Federal Child Abuse Prevention and Treatment Act (CAPTA) as any act that causes physical, sexual, or emotional harm to a person under the age of eighteen, including neglect. Children are the most vulnerable people in society in terms of abuse. Mostly the perpetrators of child abuse are the parents themselves, but it can also be caused by others especially someone known to them. In most cases, when parents are not ready to be parents, they end up abusing or neglecting their children or taking out their frustrations on them. There have been many such reported cases where the children are abused by their own parents (biological or adoptive), and many of such cases included fatal injuries of the child victim. The NCRB data from 2020 indicates

that 26% of child abuse case has increased in India over the last two years (Ravishankar, R. 2023).

Children who experience any form of abuse go through a lot of stress, especially when they don't have support. Toxic stress brought on by ongoing abuse may alter brain development and raise the possibility of issues like PTSD and trouble with learning, focus, and memory. Other issues include- anxiety, aggression, substance abuse, personality disorders (e.g., Grover, K. E., et al; 2007).

Childhood Stress and its impact of health-

When we experience stress, our body's homeostasis gets disturbed until the stressor has ended. Exposure to chronic stress in childhood has lifelong consequences, affecting the overall development process of the child. It can also cause permanent changes in brain structure as well as function. Early stressors may affect the development of crucial brain connections because in early childhood brain circuits are vulnerable. Severe exposure to toxic stress can make the stress response system more sensitive to stressful situations, which can lead to an overstimulation of the stress response and more physical system wear and tear. Later on, this wear and tear raises the chance of developing a number of physical and mental disorders.

Children's immune systems are underdeveloped at birth, and they build memory and become more mature as they become older (Simon, A. K., et al; 2015). Hence, stress exposure at childhood has detrimental effects on the child's immune system which can impair his overall health. As mentioned earlier, stress exposure activates the HPA axis in our body, which leads to the secretion of cortisol. While short-term release of cortisol is necessary as it increases wakefulness and vigilance and helps us deal with stressors, long-term release due to prolonged stress can deteriorate our immune system.

Similarly, the SAM pathway is also activated as a stress response in our body, which releases epinephrine and norepinephrine. The short-term release of these neurohormones is a natural response. However, long-term activation of the fight-or-flight response can be harmful to our bodies, leading to immunosuppression. There are a number of studies detailing the negative impact of stress experienced in childhood on long-term health.

Certain aspects of the immune response are suppressed by cortisol, and immunological function is generally dysregulated (Kirschbaum & Hellhammer, 1989; 1994). It is important to remember that there is evidence of an acute stress-induced elevation of immune function and that the link between stress, cortisol, and immune function is not necessarily linear (Dhabar & McEwen, 1997). The detrimental effects of "risky" family situations, which are marked by violence and social conflict, on mental and physical health have also lately been examined, and a thorough explanatory model has been proposed in the literature (Repetti et. al., 2002).

Long-term exposure to stress in childhood can adversely affect the overall development of the brain, creating a weak foundation for later learning, behaviour, and health. A large number of glucocorticoid receptors have been found in the amygdala, hippocampus, and prefrontal cortex (PFC). Research has found that exposure to stressful events can change the size and neuronal architecture of these regions and cause differences in learning, memory,

and executive functioning. There are significant potential effects of toxic stress in early childhood on the pathophysiology of adult disease (Shonkoff, J. P. & Garner, A. S., 2012).

Chronic stress exposure will deteriorate physical health and make people more prone to illness. Stress can increase the body's vulnerability to viruses, gastrointestinal issues, obesity, cardiovascular issues like high blood pressure and heart disease, infections, and delayed healing (Middlebrooks, J. S., Audage, N. C.;2008). Childhood stress can cause the child to have frequent illnesses. It can cause rashes on the skin and skin conditions like eczema, acne, and hair loss. It can also exacerbate asthma, cause insomnia or hypersomnia, cause frequent headaches, muscle aches, vomiting, constipation, and diarrhoea, or even ulcers.

Thus, it can be concluded that early exposure to stress can cause a child to have lifelong impairments affecting their neural, behavioural, and psychological development. Consequences of the prolonged or recurrent physiologic stress reaction may raise the likelihood of physical and mental health issues in the future.

Conclusion

Children are the future of the world. Hence, they need to be protected at all costs. With proper nurturing, they would flourish into resources. On the contrary, bad nurture might hamper this development process impacting the child in several aspects of their lives. Unfortunately, stressors cannot be totally removed from one's life. However, the children can be taught to deal with the stressors. As adults, the parents, family, school, and the society should help the children to deal with stressors. Society has a responsibility to watch out for the kids and report any incidents of crime or hate involving them. Every school should appoint a counselor to whom the children can go in times of need. They should be given an open space where they can share their problems. Parents should be more involved with their children, and make them feel safe, loved, and cared for. Parents should not have unrealistic expectations of their children; instead they should nurture them and let them grow and develop at their own pace. Parents should avoid arguing in the presence of their children. Schools should impose strict rules against bullying and take necessary actions against offenders. Schools should also avoid corporal punishment.

Research has consistently proved that early life stress exposure alters brain function and plasticity, with long-term consequences for children's mental and physical health. However, it needs to be considered that not all children who experience early life stress develop the same problems. Hence, the role of individual differences and genetics need to be considered in this regard.

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**Effective Classroom Management Strategies in the Context of Teacher-Student
Engagement**

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Abstract

Classroom management refers to the wide variety of skills and techniques that teachers use to keep the students focused, organized, attentive, orderly, and academically productive during a class. The present paper attempts to show classroom management as one of the foundations of the educational system. The main purpose is to enhance pro-social behavior and increase student academic engagement. Effective classroom management establishes and sustains an orderly environment in the classroom, increases meaningful academic learning and facilitates social and emotional growth, and decreases negative behaviors and increases time spent academically engaged. The growing emphasis on classroom management is based on the general recognition that effective instruction requires effective classroom management, and that strong management skills are the foundations of strong teaching. The paper also focuses on the effective classroom management principles that work across almost all subject areas and grade levels. Hence, classroom management is a concept that is closely related to the mobilization of all available learning facilities and resources including the teacher and the students to maximize learning.

Keywords: Academic, engagement, instruction, learning, management.

“Education is the kindling of a flame, not the filling of a vessel” – Socrates.

Classroom management is the integration of the principles of management related to instruction, classroom environment, facilities available, discipline, and other activities. It refers to the wide variety of skills and techniques that teachers use to keep the students focused, organized, attentive, orderly, and academically productive during a class. The term – ‘classroom management’ – is used by the teachers to describe the process of ensuring that classroom lessons run smoothly despite the disruptive behavior by students.

In the *Handbook of Classroom Management: Research, Practice and Contemporary Issues*(2006), Evertson and Weinstein characterize classroom management as the actions taken to create an environment that supports and facilitates academic and social-emotional learning. Classroom management is considered to be one of the foundations of the educational system. The right classroom management plan provides opportunities for academic, social and emotional learning. A well-managed classroom has three important elements- efficient use of time and space, strategies that empower the students to make good choices instead of controlling their behaviour, and effective implementation of instructional strategies.

Therefore, teachers need to develop a strong classroom management plan to ensure that the strategies are laid out and implemented properly. It combines rules, guidelines, layouts, plans, procedures and more for most scenarios that the teacher and the students may experience in the classroom. It allows the teacher to understand the overall learning goals, how it translates to the classroom environment, and how students can understand and follow the guidelines. The teacher is mainly responsible for the classroom management. The advice, guidance, and

care of the teacher as a leader of the classroom are mainly responsible for the classroom management.

The teacher should use different strategies to manage the classroom. The use of strategies depends on the academic and behaviour problems of the students. The most important classroom management is to keep every student engaged in the curriculum with the help of student-centred curriculum. Ignoring and approving is also an effective classroom management strategy. This involves ignoring students when they behave undesirably and approving their behaviour when it is desirable. Some of the other important classroom management strategies are as follows:

- **Entry Routine:** Entry Routine is a technique which teachers establish a daily and a consistent routine that begins as soon as students enter the classroom. This includes preparing learning materials, making seat assignments, doing a brief physical warm-up activity, or passing in homework. It can be avoid the disorder and squandered time at the beginning of a class period.
- **Do Now:** Do Now is a brief written activity that students are given as soon as they arrive in the classroom. This technique intends to get the students focused, settled, productive, and prepared for instruction as early as possible.
- **Tight Transitions:** Tight Transitions is a technique in which teachers establish transition routines that students learn and can execute quickly and repeatedly without much direction from a teacher. It helps to maximize instructional time by reducing the delay that might accompany transitions between activities,
- **Seat Signals:** Seat Signals is a technique in which students use non-verbal signals while seated to indicate that they need something or help with a problem. It establishes expectations for appropriate communication and helps to minimize the disruptions during class.
- **Props:** Props is the act of publicly recognizing and praising students who have done something good. It is done by the whole class and is typically a short movement or spoken phrase intended to establish a group culture in which learning accomplishments and positive actions are socially valued and rewarded.
- **Non-Verbal Intervention:** Non-Verbal Intervention is when teachers establish eye contact or make gestures that let students know that they are not paying attention. It helps teachers efficiently and silently manages student behaviour without disrupting a lesson.
- **Positive Group Correction:** Positive Group Correction is a quick and affirming verbal reminder that lets a group of students know what they should be doing. Some other related techniques are– Anonymous Individual Correction, Private Individual Correction, and Lightning-Quick Public Correction.
- **Do It Again:** Do It Again is used when students do not perform a basic task correctly and the teacher asks them to do it again in the right way. It establishes and reinforces consistent expectations for quality work.
- **Classroom Culture:** Classroom Culture refers to a classroom situation where the students feel secure, relax, and satisfaction. In such a classroom, every student collaborates in doing an activity. The teacher must guide, encourage, and create an environment of joy and freedom in

the classroom so that co-operative learning takes place among the students in a cultured classroom.

- **Self-Management:** Self-learning and self-evaluation are fundamental for effective self-management. The teacher should encourage the students to form the habit of self-learning and self-evaluation which will develop the power to control their own behavior.

Classroom management strategies can help to set the tone for positive interactions, co-operative learning and to provide a plan ensuring the lesson runs smoothly regardless of any disrupting behaviours by students. When classroom management strategies are executed effectively, teachers minimize the behaviours that impede learning for both individual students and groups of students, while maximizing the behaviours that facilitate or enhance learning. Classroom management strategies need to be planned, thought, and in line with curriculum fidelity. It is equally important to prioritize curriculum fidelity when selecting classroom management strategies. While some classroom management strategies focus more on setting clear rules and some focus more on transitions, the strategies should not change how the lesson is taught. Classroom management strategies should add organization for the students and classroom, but not change the content of the lessons or the fidelity of the curriculum. Thus, classroom management is how the teacher delivers the curriculum, as well as the environment in which students will learn. Teachers with the best classroom management usually have their class working and learning seamlessly. Classroom management includes elements of classroom discipline, but focuses more on creating a peaceful learning environment that is comfortable, organized, engaging, and respectful for both the teacher and the students. The main purpose of classroom management is to enhance pro-social behaviour and increase student academic engagement. Effective classroom management is very essential for good teaching and its principles work across almost all subject areas and grade levels. The growing emphasis on classroom management is based on the general recognition that effective instruction requires effective classroom management, and that strong management skills are the foundations of strong teaching. Classroom management is closely linked to issues of motivation, discipline, and respect. It relies upon creating an environment where the students are successful as a result of their own efforts. Hence, classroom management is a concept that is closely related to the mobilisation of all available learning facilities and resources including the teacher and the students to maximize the teaching-learning process.

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Mental Health of Students in Higher Education

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Abstract

Mental health is a comprehensive concept that encompasses various aspects of our well-being, including our emotional, psychological, and social dimensions. It plays a significant role in shaping how we perceive the world, manage our emotions, and interact with others. In recent years, there has been growing recognition of the importance of mental health of students in higher education settings. It is imperative to acknowledge and cater to the mental health needs of students in higher education to promote academic success, personal growth, and overall well-being. While progress has been made in reducing the stigma surrounding mental health and expanding support services, there remains a considerable gap in promoting mental health awareness, facilitating access to counseling services, and fostering an inclusive learning environment. By prioritizing mental health initiatives in higher education policies and practices, institutions can empower students to excel academically, emotionally, and socially, thereby contributing to a brighter future for both individuals and society at large. Research consistently shows high prevalence rates of mental health issues among college students, including depression, anxiety, and substance abuse. Despite this, many higher educational institutions in India and globally lack the necessary infrastructure to adequately address these challenges. It is crucial for all higher educational institutions to establish accessible and culturally sensitive mental health support systems. Failing to do so may result in long-term negative consequences on personal, social, academic, and occupational levels. Drawing on existing research and literature, this article talks about the importance of mental health of students in higher education, factors affecting student's mental health and the strategies needed to address them effectively. By addressing mental health challenges proactively, colleges and universities can create environments that empower students to thrive academically, emotionally, and socially.

Keywords: Mental health, higher education, mental health promotion

Introduction

In recent years, there has been a significant increase in interest surrounding mental health and well-being, likely attributed to rising levels of stress, anxiety, and depression experienced by individuals. These concerns are prevalent across various sectors, including education. The World Health Organization (WHO) defines mental health as “a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community”. Mental health encompasses fulfilling relationships, adaptive thinking and behaviours, high self-esteem and coping strategies (Santor, Short & Ferguson, 2009). Student mental health includes the overall well-being of students, including their emotional, physical, and psychological health, particularly within educational environments such as schools, colleges, and universities.

Maintaining good mental health is crucial for students' academic achievements, personal growth, and overall happiness and satisfaction in life. According to reports from the Indian Union Ministry of Health and Family Welfare, the country needs around 13,000 psychiatrists. To achieve an ideal ratio of psychiatrists to population is about 1: 8000 to 10,000 but currently has just about 3,500 which is about one psychiatrist for over 2 lakh people. With regard to other mental health professionals the ratio is even worse. The need of Clinical Psychologists is 20,000 and there are only 1000 available; for Psychiatric Social Workers, the requirement is 35,000, but only 900 are available, for Psychiatric Nurses, we need 30,000 and only 1500 are available. India has one of the largest higher education systems globally, as well as a high proportion of youth, demographically. Over the past few decades, the Government of India has made it a priority to make higher education more accessible. As a result, the number of young adults enrolled in colleges has increased significantly. For example, in 2004-2005, only 10% of 18-23-year-olds were enrolled in higher education, but by 2020, this number had jumped to 27.1%, totaling around 38.5 million students. India's new educational policy, introduced in 2020, aims to increase this enrollment rate to 50% by 2035.

The path of higher education is critical in every student's life, as it determines their future. According to UNICEF's survey findings for 21 countries in *The State of the World's Children 2021* report, every one in seven youngsters between 15 and 24 years in India reported some form of poor mental health such as feelings of depression or disinterest. and only 41% felt there was a need to reach out for support when people experienced mental health issues. This was the lowest across the 21 countries surveyed.

Mental health issues are becoming increasingly prevalent among college students, affecting their academic performance and overall well-being. Research by Velagapaly et al. (2023) found a significant positive relationship between mental health and academic performance. This highlights the importance of supporting students' mental health as it can have a positive impact on their academic performance and overall well-being. Mental health issues significantly affect college students, leading to consequences like dropping out, struggling academically, and facing challenges in finding employment, maintaining social connections, and staying healthy. There is a crucial need for advocacy and sensitizing stakeholders in the higher education system in India for implementing comprehensive mental health support systems for students in higher education.

Importance of mental health among students

Mental health issues significantly affect college students, leading to consequences like dropping out, struggling academically, and facing challenges in finding employment, maintaining social connections, and staying healthy in the long term. There is a crucial need for advocacy and sensitizing stakeholders in the higher education system in India for implementing comprehensive mental health support systems for students in higher education. Studies report that a substantial number of students in higher education are dealing with well-being issues such as psychological and emotional distress, feelings of anxiety and depression, and an increased risk of burnout (Backhaus et al., 2020; Baik et al., 2019; Dopmeijer, 2021)

There is a clear relationship between mental health and wellbeing. Students who are well-adjusted and mentally healthy are generally better off in other areas of life. They're better able to cope better with academic requirements and maintain a work-life balance that allows them To fully enjoy their college experience. Suicide is the second major cause of death among college students. Since the majority of these students leave home to attend universities, colleges are in a unique position to provide them with mental health and support. According to World Health Organisation (WHO) the self-harm rates in the adolescent age group are found in the highest numbers at a global level. Emotional stress and other concerns are a major contributing factor for most of the physical illnesses. Mental healthcare providers like psychiatrists, clinical psychologists, counsellors and allied professionals agree that early intervention can prevent many future mental health conditions. Research shows that high levels of mental health are associated with increased learning, creativity and productivity, more pro-social behaviour and positive social relationships, and With improved physical health and life expectancy.

Factors that can contribute to poor mental health in higher education

Several factors can contribute to poor mental health among students in higher education

1. **Academic stress:** Academic stress is a significant contributor to poor mental health among students. The immense academic demands placed on students, combined with the challenge of adapting to a new environment and navigating changes in family and social dynamics, can lead to feelings of anxiety and depression. High expectations from parents to excel academically further exacerbate this pressure, negatively impacting students' psychological wellbeing. Additionally, competition among peers, strained relationships, and lack of social support all contribute to the burden of academic stress on students' mental health.
2. **Lack of mental health support services:** In many colleges and universities in India, there are not enough counselors or therapists available for students. This means that the number of students who need help is much higher than the number of professionals available to support them. As a result, students may struggle to get the help they need for their mental health issues. The UGC recommended establishing student counseling centers, but there have been shortcomings in putting these policies and programs into practice. There is a lack of data regarding consistent implementation of such guidelines across higher education institutions. Although some institutes have incorporated counseling services to some extent, there is a lack of mechanisms to consistently monitor the type and standard of services provided. Additionally, there is no system in place to collect and evaluate student feedback on the accessibility and usefulness of these services. In many cases, even when counseling services are offered, they are not utilized to their full potential.
3. **Personal factors:** Several factors can contribute to poor mental health among students in higher education. These include physical health issues, diminished self-esteem and confidence, challenges in academic performance, excessive use of social media, lack of physical activity, limited participation in extracurricular activities, fear of judgment from peers, and reluctance to openly express emotions. It has been seen as an addiction to the consumption of alcohol, drugs, smoke, and various harmful products that worsens their mental and physical well-being (Agarwal et al.,) (Vidourek et al.,2014)

Various research studies found that LGBTQ students were at significantly greater risk of mental health problems including depression, anxiety, suicidal behaviour, self harm, and low levels of wellbeing. The risk of mental health problems are higher in these students compared with heterosexual students commonly because of the stigma and discrimination experienced by these group of students.

4. **Family factors:** Several factors contribute to students' behavior and decision-making abilities in higher education. These include socio-economic status, family upbringing, and the structure of the family unit. Adolescents raised in low socio-economic environments or by divorced parents may face challenges in their development due to exposure to domestic violence, negativity, and disharmony within the family. Additionally, the authoritative parenting style adopted by some parents may pose constraints on adolescents' autonomy and psychological adjustment. (Gulliver et al., 2010)(Vidourek et al., 2014). Research by Lloyd et al. (2014) indicates that perceived parental acceptance correlates positively with students' psychological adjustment, with paternal acceptance showing a stronger influence.
5. **Uncertainty about the Future:** College is a time of transition and exploration, but it can also be a period of uncertainty about future career paths, relationships, and personal identity. Students pursuing higher education frequently encounter the challenge of making significant decisions that can shape their future, such as choosing a major and preparing for life after graduation. The stress of selecting the right path that aligns with their career goals can sometimes feel daunting. Moreover, the uncertainty surrounding job opportunities, shifts in industries, can intensify worries about what lies ahead and the likelihood of realizing their aspirations.

Strategies for promoting mental health among students

1. **Raising Awareness:** Despite efforts to reduce stigma surrounding mental health, it remains a significant barrier for students seeking help. Many students are reluctant to reach out for support due to fears of being judged, facing social consequences, or being labelled as weak. This hesitancy can lead to delays in accessing necessary interventions and prevent individuals from receiving the assistance they require. Educational campaigns and workshops have been shown to effectively increase mental health literacy and reduce stigma surrounding mental illness (Pinfold et al., 2003).
2. **More availability of counsellors:** In higher education in India, there is a pressing need for more counselors to support students' mental health and well-being. Currently, the ratio of counselors to students is often inadequate, resulting in limited access to mental health support services. This shortage of counselors contributes to various challenges faced by students, including academic stress, anxiety, depression, and adjustment difficulties. With a higher number of counselors, colleges and universities can provide adequate support to students experiencing mental health issues. These professionals can offer individual counseling sessions, group therapy, crisis intervention, and psycho education programs created to meet students' diverse needs.
3. **Creating safe space:** Every student brings their own unique background, experiences, and identity to the classroom, and it's essential that all students feel valued and included. By fostering a culture of diversity, self expression, inclusion, and belonging in the classroom,

educators can empower every student to thrive. Recognizing and celebrating the diversity of perspectives, cultures, and accomplishments within the classroom creates an environment where all students feel supported and encouraged to succeed. Safe spaces on campus have been found to enhance students' sense of belonging and well-being, particularly among marginalized or minority student populations (Garcia et al., 2018).

- 4. Promoting psychosocial competence:** Psychosocial competence is a person's ability to deal effectively with the demands and challenges of everyday life. Variety of topics like health education, peace education, drug abuse prevention, stress management education prevention of bullying, self-identity and gender etc will be covered in these programmes that will indirectly help solve a lot of intermediate problems. According to Tyler, those who are psychosocially competent have an internal locus of control and they see themselves as responsible for all that happens in their lives with quite a favourable self-evaluation; they trust others and can build good relations; and cope actively in any given situation while learning and building from both failure and success. Research done in the subsequent years showed that the attributes mentioned in this model were present in children, high-school students, college students as well as in adults who have demonstrated competent functioning particularly in terms of having a mastery-oriented problem-solving approach to life's events (Tyler 1981, 1988, 1991).

Mental health literacy among educators: Educators play a crucial role in promoting mental health literacy among students. By equipping themselves with knowledge and understanding of mental health issues, educators can effectively implement policies and create a supportive environment for students. Sensitizing and training teachers and to recognize and address student's mental health challenges not only enables early identification of issues but also fosters supportive relationships. This supportive environment can significantly reduce barriers to seeking help and contribute to better mental health outcomes for students. Faculty and staff training programs have been found to improve their ability to recognize and respond to students' mental health needs, ultimately enhancing support within the academic environment (Mishara et al. 2006)

Conclusion

Addressing the mental health needs of students in higher education is essential for fostering academic success, personal development, and overall well-being. While there have been strides in destigmatizing mental health issues and expanding support services, there is still a lot of work to be done to promote mental health literacy, enhance access to counseling and support resources, and create a culture of inclusivity and support on college/university campuses. By prioritizing mental health in higher education policies and practices, institutions can empower students to thrive academically, emotionally, and socially, ultimately shaping a brighter future for individuals and society as a whole.

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Emerging Technology Artificial Intelligence and its impact on Social Development

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Abstract

Human society has entered the era of intellectualization and use artificial intelligence to lead innovations and development. After several decades of accession artificial intelligence start to enter the dividend period of its exponential growth, which is expected to last for quite a long time. This article explores the types and history of AI and also attempts to discuss the impact of AI in social development, advantages, disadvantages of AI ,its future challenges are also presented in the paper. Artificial intelligence can support and create innovations in many ways and can contribute to solving social challenges, however, it can always be controlled to avoid the crisis of human society .

Keywords: Crisis, Accession, Innovations ,challenges, Intellectualization.

Introduction

The word Artificial defines ‘man made’ and Intelligence defines ‘Thinking power’. It is a branch of computer science by which we can create intelligent machines which can believe like a human and able to make decisions. According to the John McCarthy , the father of Artificial Intelligence -It is the science and engineering of making intelligent machines ,specially intelligent computer programmers. So ,as per above definition we can say that AI way of making a computer, a computer control robot or software thing intelligently in the similar manner the intelligent human think. AI is how Human brain thinks and human learn, decide and work while trying to solve problem and thing using the outcomes of this study as a basis of developing intelligent software and systems. It is related to the similar task of using computer to understand human intelligence ,but AI does not have to confine itself to methods that are biological observable. Emerging Technologies refer to technical innovations which represent progressive development within a field for competitive advantage. Artificial Intelligence deals with developing machines and software with human like intelligence .Such as

Expert system:- Computers have been programmed to make decisions based on information they are given . As in medical expert system. Patients can be diagnosed based on symptoms input.

Robotics :- Technologies that deal with automated machines that can be programmed to take the place of humans in danger our environment or manufacturing process or resemble humans in appearance in behavior.

Languages:- Computers are programmed to give interpretation of different human languages as they are spoken to them.

Game playing:- Computers are developed to play games against human players.

History of Artificial Intelligence:-

In 1950 Alan Turing published his work “Computer Machinery and Intelligence” .In the paper of Turing- famous for breaking the Nazi’s ENIGMA , code during World War ii and

propose to answer the question “ can machine think?” which eventually became the Turing Test , which experts used to measure computer intelligence. In 1956 John McCarthy came to the term Artificial Intelligence at the first ever AI conference at Dartmouth College . Later that year, Allen Newell, J.C Shaw and Herbert Simon create the Logic Thrust, the first ever running AI software programme.

Types :- Artificial intelligence based on capabilities are :-

1. Reactive Machines: These are the oldest forms of AI systems that have extremely limited capability. They emulate the human mind’s ability to respond to different kinds of stimuli. These machines do not have memory-based functionality. These machines do not have the ability to “learn”. These machines could only be used for automatically responding to a limited set or combination of inputs. Best example of a reactive AI machine is IBM’s Deep Blue, a machine that beat chess Grandmaster Garry Kasparov in 1997.

2. Limited Memory: These are the machines that, in addition to having the capabilities of purely reactive machines, are also capable of learning from historical data to make decisions. All present-day AI systems, such as those using deep learning, are trained by large volumes of training data that they store in their memory to form a reference model for solving future problems. For instance, an image recognition AI is trained using thousands of pictures and their labels to teach it to name objects it scans. When an image is scanned by such an AI, it uses the training images as references to understand the contents of the image presented to it and based on its “learning experience” it labels new images with increasing accuracy. Almost all present-day AI applications, from catboat’s and virtual assistants to self-driving vehicles are all driven by limited memory AI.

3. Theory of Mind: Theory of mind AI is the next level of AI systems that researchers are currently engaged in innovating. A theory of mind level AI will be able to better understand the entities it is interacting with by discerning their needs, emotions, beliefs, and thought processes.

4. Self-Aware: This is the final stage of AI development which currently exists only hypothetically. Self-aware AI, which, self explanatorily, is an AI that has evolved to be so akin to the human brain that it has developed self-awareness

5. Artificial Narrow Intelligence (ANI) :- It is designed to perform a single task or a set of related activities. It is used for instance, analyzing images, searching through large chunks of information to find some insight, speech recognition or providing recommendations. Almost all AI systems as of today, can be classified under this type. Apple’s Siri virtual assistant as Netflix video recommendations are good examples of Artificial Narrow Intelligence.

6. Artificial General Intelligence(AGI) :- It is a level of AI that can perform intellectual and creative tasks with human like capabilities .This type of intelligence supposed to make informed decisions based on previous experience and knowledge in related areas. Although there have been some attempts ,this type of AI has not yet been fully developed .

7. Artificial Super Intelligence (ASI):- This type meant to surpass human abilities in analytical thinking , creativity and performance of completing task. There is still a long way from implementing these types of computer system.

Impact of Artificial Intelligence on social development

As with the most changes in life, there will be positive and negative impacts on society as artificial intelligence continues to transform the world we live in. How that will balance out is anyone's guess and will end up for much debate and for many people to examine. Here are some of the challenges that might be faced as well as several of the positive impacts artificial intelligence will have on society.

The influence of AI on society is unavoidable and the advances can generate great opportunities for innovation and new jobs, but in the medium term it is necessary to adequately face this conversion, setting regulations and reviewing the challenges of ethics and responsibility.

Negative impact of Artificial Intelligence on Society:-

- It can be said that AI will definitely cause our workforce to expand. The insurgent headlines emphasize the loss of jobs to machine, but the real challenges are for humans to find their passion with new responsibilities that require their uniquely human abilities. According to a report by Microsoft, as much as 74% of Indian workers say they are worried that Artificial Intelligence (AI) might replace them from jobs. But in order to reduce their workloads, 83% of workers said they would delegate as much work as possible to AI.
- The transformative impact of artificial intelligence on our society will have far-reaching economic, legal, political and regulatory implications that we need to be discussing and preparing for. Determining who is at fault if an autonomous vehicle hurts a pedestrian or how to manage a global autonomous arms race are just a couple of examples of the challenges to be faced.
- Another issue is ensuring that AI doesn't become so proficient at doing the job it was designed to do that it crosses over ethical or legal boundaries. While the original intent and goal of the AI is to benefit humanity, if it chooses to go about achieving the desired goal in a destructive way it would negatively impact society. The AI algorithms must be built to align with the overarching goals of humans.
- Artificial intelligence algorithms are powered by data. As more and more data is collected about every single minute of every person's day, our privacy gets compromised. If businesses and governments decide to make decisions based on the intelligence they gather about you like China is doing with its social credit system, it could devolve into social oppression.

Positive Impacts of Artificial Intelligence on Society

- Artificial intelligence can dramatically improve the efficiencies of our workplaces and can augment the work humans can do. When AI takes over repetitive or dangerous tasks, it frees up the human workforce to do work they are better equipped for—tasks that involve creativity and empathy among others. If people are doing work that is more engaging for them, it could increase happiness and job satisfaction.
- With better monitoring and diagnostic capabilities, artificial intelligence can dramatically influence healthcare. By improving the operations of healthcare facilities and medical organizations, AI can reduce operating costs and save money. One estimate from McKinsey predicts big data could save medicine and pharma up to \$100B annually. The true impact will

be in the care of patients. Potential for personalized treatment plans and drug protocols as well as giving providers better access to information across medical facilities to help inform patient care will be life-changing.

- Our society will gain countless hours of productivity with just the introduction of autonomous transportation and AI influencing our traffic congestion issues not to mention the other ways it will improve on-the-job productivity. Freed up from stressful commutes, humans will be able to spend their time in a variety of other ways.
- The way we uncover criminal activity and solve crimes will be enhanced with artificial intelligence. Facial recognition technology is becoming just as common as fingerprints. The use of AI in the justice system also presents many opportunities to figure out how to effectively use the technology without crossing an individual's privacy.
- Unless you choose to live remotely and never plan to interact with the modern world, your life will be significantly impacted by artificial intelligence. While there will be many learning experiences and challenges to be faced as the technology rolls out into new applications, the expectation will be that artificial intelligence will generally have a more positive than negative impact on society.
- AI is also playing a pivotal role in addressing social challenges and promoting inclusivity. Through data analysis, AI can identify patterns of discrimination and bias in various domains, such as hiring practices and criminal justice systems. By highlighting these issues, AI can help policymakers and organizations implement honest practices and reduce societal inequalities. Additionally, AI-powered language translation tools are breaking down barriers by enabling real-time multilingual communication. This has immense implications for global collaboration, cultural exchange, and fostering understanding among diverse communities. However, as AI continues to advance, it is important to address potential ethical concerns. Bias in AI algorithms and data sets remains a significant challenge that needs to be overcome. Unchecked utilization of AI systems can louden existing societal inequalities if not properly regulated and monitored. Transparency, accountability, and inclusivity should be at the forefront of AI development to ensure that it benefits all members of society.

Conclusion: In conclusion, As long as ethical economic and social concerns are addressed ,trust in AI will continue to rise. AI can become the biggest tool in the development of the 21st century .AI is revolutionizing social development by enhancing communication, improving healthcare, and addressing social challenges. Its transformative power is evident in various domains, from customer service and healthcare to promoting inclusivity and equality. However, responsible and ethical AI deployment is crucial to alleviate possible risks and ensure that AI continues to lead positive social change. By utilize the potential of AI while upholding ethical principles, we can create a future where technology empowers individual. strengthens communities, and fosters a more inclusive and equitable society.

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**IMPACT OF INFORMATION SYSTEMS ON INDIAN SUPPLY CHAIN AND
LOGISTICS INDUSTRY**

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ABSTRACT

In today's fiercely competitive global marketplace, companies face mounting pressure to create novel techniques for value creation and customer fulfillment. To maintain their competitiveness in the worldwide market, companies must offer products that are superior in terms of cost, quality, and customer service. This has made it necessary to replace the current, ineffective logistical methods with new, creative ones, effective logistical coordination across the entire organization. It has become clearer how crucial effective logistics management is to reaching goals like cutting expenses and raising service quality throughout an organization and its supply chain. Supply chain management (SCM) impacted by information systems (IS) on a variety of tasks, from tactical operations to organizational strategy, including planning, sourcing, and delivery. The vast scope of interconnections between IS and SCM has resulted in a variety of scattered studies on the topic. This paper provides a comprehensive literature analysis at the interface of information systems and supply chains (SCIS), with the goal of classifying current research areas.

Key Words: Supply Chain Management, Information Systems, Logistics

INTRODUCTION

In the real world, businesses have been using ICT for decades to boost their performance in the areas of cost reduction, customer service, speed of delivery, and dependability. The interdependence between information and communication technology (ICT) and operations/supply chain management has also been the subject of academic inquiry. For this reason, there are several publications discussing the interplay between MIS and SCM. It is now time for a systematic analysis to be done to provide a thorough framework for researching the two topics and major inter-disciplinary areas.

Gunasekaran and Ngai (2004) and Büyüközkan and Göçer (2018) both note the importance of ICT in SCM for managing transactions, communicating with stakeholders, gaining managerial insight, and sharing data.

Since the advent of ICT technologies, SCM has been the subject of increased interest and has been brought to the forefront of the research community (Alfalla-Luque and MedinaLopez 2009). The first widespread implementation of information and communication technology (ICT) tools for supply chain management occurred in the 1960s with the advent of electronic

data interchange (EDI) systems. This was followed by the development of material requirements planning (MRP) solutions in the 1970s, MRP II in the 1980s, and ERP in the 1990s (Lavassani, Movahedi, and Kumar 2008; Alfalla-Luque and Medina-Lopez 2009). To keep up with the ever-growing complexity of supply chains, several ICT technologies have been created and used during the last few decades (Jacobs 2007; Lavassani, Movahedi, and Kumar 2018).

Researchers recognized the value of ICT for SCM and responded by producing a growing body of academic articles for publication in peer-reviewed journals across a range of scientific fields. Because of its breadth, this body of study needs a unified taxonomy and a consolidated overview of the present state of research to facilitate dialogue among experts from other fields and foretell future developments in the field. Information systems scholars study the rise of information and communication technologies and its effects on businesses (IS).

When it comes to ICT, information system research not only delves into the technical elements, but also explores how people and businesses interact with the development, deployment, and acceptance of these systems. Therefore, the authors categorize the available literature on supply chain information systems (SCIS), a crucial component of SCM (McLaren, Head, and Yuan, 2004), to provide an integrated picture of the present status of SCIS and to propose probable future directions for SCIS. When it comes to supply chain management, SCIS is "created to offer information and information processing capabilities in support of the strategy, operations, management analysis, and decision-making tasks" (Tarokh and Soroor 2016).

Meaning of Logistics

Logistics, as defined by the Council of Logistics Management, "is a part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, services, and related information from the point of origin to the point of consumption in order to meet customers' requirements"

Meaning of Supply Chain Management

According to Simchas-Levi, Kaminski, and Simchas-Levi (2000), "Supply Chain Management is a set of approaches utilised to efficiently integrate suppliers, manufactures, warehouses, and stores, so that merchandise is produced and distributed at the right quantities, to the right locations, and at the right time to minimise system wide costs while satisfying service level requirements." These concepts were also stated by Johnson. They said, "Logistics describe the whole process.

The logistics of a country's economy may make or break it. Logistics refers to the overarching process of managing the acquisition, storage, and distribution of goods. Logistics management includes identifying reliable and easily accessible distributors and suppliers. Assuming a strong logistics industry, it is a distinguishing sector that may significantly affect any country's exports, giving it a major competitive advantage. All facets of the supply chain are included in the logistics industry, including but not limited to data administration, stock control, transportation, and customer service. It has a significant impact on the effectiveness

of the supply chain both locally and globally. Businesses' ability to meet customer demand is primarily reliant on the effectiveness of their logistical systems.

A Glance into India's Supply Chain Industry

About 14.4% of India's GDP is anticipated to come from the logistics sector. It is the main source of income for more than 22 million people. The Commerce Department established the Logistics Division for India on July 7, 2017, with the aim of overseeing the Integrated Development of the Logistics Sector. The Special Secretary to the Government of India, who oversees the division, is tasked with developing a plan to improve India's logistics system overall by enacting new laws, strengthening current ones, closing loopholes, and utilizing innovative technology. 37 export promotion councils, 40 PGAs, 20 government agencies, 10,000 commodities, and 500 certifications make up the whole Indian logistics sector.

In 2019, the Indian logistics sector was valued at Rs. 15.1 lakh crore, or \$190 billion. The 99% of the logistics sector that is unorganized consists of freight forwarders, brokers or affiliates of transport companies, small-scale warehouse owners, operators of fewer than five vehicles, and customs brokers. Global indexes show how trade-related logistics have changed and improved over time. India's impressive improvement from the country's 2019 score of 78.5% in the United UNESCAP Global Survey on Digital and Sustainable Trade Facilitation to 90.3% in 2021 reflects the country's progress in the logistics sector. This increase is the consequence of increases in the scores of five key indicators. It increased steadily between 2015 and 2017, going from 63.4% to 67.7%.

Progress in the Logistics Industry and the Government's Part in

Following are some of the actions the government has done to boost the logistics sector: The National Logistics Policy is expected to be unveiled shortly by the administration. The strategy employs a macro perspective to establish micro-level action items across all key sectors. It produced following extensive consultations on the supply and demand sides with all central ministries. By creating a logistics network that is integrated, seamless, dependable, green, sustainable, and cost-effective using best-in-class tools, techniques, and skilled workers, the suggested strategy seeks to increase corporate competitiveness and the economy. Among the objectives of the policy is a reduction of the logistics cost, which currently accounts for 14% of GDP, to between 9 and 10%. The proposal aims to establish a centralized e-logistics marketplace with a focus on assisting MSMEs (micro, small, and medium-sized enterprises) in enhancing their capacities, competitiveness, and employment prospects.

LITERATURE REVIEW

- Poirier (2018) asserts that company owners view the supply chain as a tool for increasing the efficiency and adaptability of their operations in response to shifting market conditions.
- The importance of logistics was recognized in 1962. According to a 2016 Fortune magazine article by management guru Peter Drucker, more than half of every dollar that the average American spends on goods is allocated to post-manufacturing activities. To get the product to the customer, Drucker claims that the distribution process is where the material's physical qualities are converted into its monetary value.

- Grange (2018) defines the supply chain as the management of all commodities and resources inside the supply chain, which lends further credence to the contingency positions. Every step, no matter how little at first, affects the others, and the supply chain needs to be considered.

OBJECTIVES OF THE STUDY

- Improving service to customers is the top priority in logistics.
- Improving service to customers is the top priority in logistics management.

RESEARCH METHODOLOGY

Methods for data collection are Primary Data, where primary source of data was collected by questionnaire and Secondary Data, where Secondary source of data was collected from Books Journals Magazines Web's logistics es.

CONCLUSION

Supply chain logistics management has several positive effects, including less waste, lower costs, and happier customers. But this approach is a difficult and important responsibility for businesses, decision-makers, consultants, and researchers. It has been established that developing and maintaining integrated logistics is a challenging task. We have covered some ground on the logistics of a supply chain and the connections between various processes. Due to the ever-evolving nature of this field and the resulting proliferation of new questions and problems, the article does not attempt to address all of them. We are certain that recent advances in the field of metaheuristics approaches will propel them to the forefront of the conversation around the resolution of both long-standing LM issues and the emergence of new, complicated issues brought on by the absence of unified management. When used in tandem with simulation systems and DSS, their modular design, low barrier to entry, rapid iteration, and flexibility to adapt to new circumstances all contribute to a significant beneficial influence on the LM decision-making process.

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Navigating through Narration: Literary Techniques in John Green's *Turtles All the Way Down*

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John Green is renowned for his distinctive storytelling style and examination of challenging subjects. He normally uses short sentences in the novel and focuses on his topic when it comes to word selection. He uses easy sentences and vocabulary for his readers to understand. He is descriptive when it comes to his characters and their background. The language is primarily informal, utilizing the local dialects. This adds reality to the text which helps connect the reader to the novel. His novels embody a world of characters who are filled with enthusiasm and zeal for writing. He uses a unique composing style that imitates the considerations and sentiments of a withering young character through catastrophe. Green gives the physical and mental stature of every character. Green uses a variety of narrative techniques to hold the reader's attention to tell stories. The novel is told in first person narrative, the narrator is Aza herself. The readers can learn more about Aza's thoughts and concerns because of this narrative decision. It fosters a potent sense of intimacy and empathy with her character. The readers get the sense that they are trapped in Aza's head, the same way she feels trapped by her thoughts. The narrative proceeds from her point of view, giving readers an understanding of the difficulties, she has as she deals with high school, friendship, love, and a mystery surrounding a missing billionaire. The symbols and metaphors in the novel enrich the narration and help the readers better understand the characters' experiences, relationships, and the overarching themes of the novel.

The stream of consciousness technique entails mirroring the way thoughts naturally occur in the mind by presenting a character's thoughts and inner monologue in a continuous, uninterrupted flow. The novel *Turtles All the Way Down* depicts the inner workings of Aza's mind, particularly about her struggles with OCD. Readers are engrossed in Aza's continual, frequently invasive stream of ideas. She presents her worries and compulsive thoughts in a continuous stream of thought. This method successfully conveys the cyclical and unrelenting character of her mental state. Green pays special attention to Aza's thought spirals without getting impatient as her thoughts take interesting tangents and eloquently captures how Aza's anxieties become fixated on, spiral into worry, and come back to the same issues constantly, mimicking the experience of those who have OCD. Readers get a close-up view of Aza's situation due to her inner monologues. They develop an understanding of her fears, obsessions, and attempts to manage and keep some control over her thoughts. This in-depth look inside her thinking encourages sympathy and empathy for her persona.

The stream of consciousness technique helps reinforce the metaphor in the phrase “Turtles All the Way Down” as Aza repeatedly contemplates the idea throughout the story. It accurately portrays the thought patterns and challenges faced by individuals with OCD and the realism contributes to the authenticity of the novel's portrayal of mental health. This technique captures the rapid and often tumultuous thought patterns of adolescents, making the narrative feel genuine and relatable to his target audience. Green writes words and paragraphs that easily flow from one idea to the next, giving his work a rhythmic and poetic feel. The reading experience is improved, and his narration is made more engaging by this artistry. He uses this technique to thoroughly immerse readers in Aza's mind. In addition to being an effective literary device, this technique gives depth to the narrative, fosters empathy, and promotes awareness of mental health issues. It enables the readers to get an accurate and emotionally impactful sense of Aza's reality. “I have these thoughts that Dr. Karen Singh calls “intrusives,” but the first time she said it, I heard “invasives,” which I like better, because, like invasive weeds, these thoughts seem to arrive at my biosphere from some faraway land, and then they spread out of control” (47).

Metaphors play a vital role in the novel, there are various metaphors in the novel. The title itself is a metaphorical reference to an ancient cosmological myth. The phrase “Turtles all the way down” describes the issue of infinite regress, which is a philosophical idea that occurs when a certain form of justification or explanation results in an indefinite number of justifications or explanations with no foundational or final reasons. The saying makes reference to a mythical World where a turtle holds the flat Earth upright on its back. It implies that this turtle is supported by an even larger turtle, which is itself a part of an endless column of turtles getting bigger and bigger. The exact origin of the phrase is uncertain. It signifies the notion that there is neither a beginning nor a conclusion to the infinite regress of queries or issues. It serves as a metaphor for Aza's compulsive thought spirals and her continuous struggle with intrusive thoughts that never seem to end in the novel. Aza uses metaphors to describe her pain. Her sessions with Dr. Singh show Aza grappling with words to describe how she feels and her way of describing her pain through metaphors. “Thoughts are just a different kind of bacteria, colonizing you. I thought about the gut-brain information axis. Maybe you're already gone. The prisoners run the jail now. Not a person so much as a swarm. Not a bee, but the hive” (227).

The metaphors she uses to describe her mental pain give clear ideas even to people who have no prior experience with mental illness. This idea of using metaphors to describe pain is found in Elaine Scarry's book, *The Body in Pain: The Making and Unmaking of the World*. This influential book, which was first published in 1985, explores the intricate and diverse experience of pain and its far-reaching effects on human existence, society, and culture. Scarry emphasizes the challenge of describing pain through language as one of her main arguments in the book. She argues that pain is intrinsically indescribable and that this inexpressibility contributes to feelings of isolation and alienation in those who suffer. Scarry argues that pain is the most absolute definer of reality, and for the person in pain, there is no reality besides pain.

The word spiral is a recurring symbol in the novel and is mentioned in several instances. Aza frequently thinks about spirals, which stand for the repetitive and

cyclic quality of her obsessions and thoughts. The spiral serves as a symbolic reflection of the emotional and mental upheaval she goes through. The words spirals and circles describe Aza's thought process. She starts naming her thoughts to make sense of her mind and the world around her.

The quote "But the really scary thing is not turning and turning in the widening gyre; it's turning and turning in the tightening gyre" (33) emphasizes that while a sense of disorder or turmoil is uncomfortable, it is even more terrifying when that instability is tightening and oppressing making people feel trapped and helpless. It exemplifies what it is like to become trapped inside her spiraling thoughts. In addition to having the audience read about Aza's self-destructive, spiraling anxiety, Green also allows them to visualize it themselves through the narration.

The relationship between Aza and Davis Pickett is a central plot in the novel. As the narrative progresses, their relationship goes through various phases and becomes more complex. Davis and Aza are childhood friends and are reconnected when Aza and her best friend Daisy start to look into Davis's father, the missing billionaire Russell Pickett. As they collaborate to look into the disappearance of Russell Pickett, Aza's relationship with Davis becomes more important, because they both have suffered significant losses in their lives. Davis experiences conflicting emotions and has to deal with various other issues due to the disappearance of his father, and Aza struggles with her mental health. Their relationship is strengthened by their shared experience with grief and loss. Aza and Davis's relationship develops romantic overtones as they spend more time together. Their feelings for one another develop as they share intimate and vulnerable moments. The narration presents a blooming love story but like other lovers, this pair of lovers have their own conflicts, during their time together they provide each other comfort but it does not last, they have their own share of problems that keep them apart. Aza struggles to communicate her feelings and anxieties to Davis, which causes misunderstandings in their relationship. The way these issues are resolved ultimately affects their relationship. Aza and Davis have a complicated relationship that is distinguished by their sincere bond. Despite their genuine bond, the characters never take their relationship to the next level due to various reasons stemming from Aza's anxiety to Davis's complicated life and sudden responsibilities. The difficulties and rewards of managing a romantic relationship when one partner is coping with mental health issues are depicted through their relationship.

Aza's mother is shown to be a positive and supportive influence on her life. She is committed to assisting her daughter in overcoming her difficulties and is deeply worried for Aza's well-being, particularly her mental health. She tries to comprehend Aza's OCD and the intrusive thought spirals. She makes an effort to create a welcoming environment where Aza can express her ideas and emotions. The difficulties of dealing with a mental illness and its effects on family dynamics are reflected in the nuanced and complex way that their relationship is portrayed.

Aza's mother is protective and frequently worries about Aza's well-being. This protectiveness results from a genuine concern for Aza's well-being and the difficulties she encounters. Even though Aza's mother is encouraging, she occasionally feels frustrated and powerless in the face of Aza's issues with mental health which is out of control most of the

time. Aza's mother is a little overprotective due to her constant worries about losing Aza like she lost her husband. These situations highlight the challenges of living with a loved one who suffers from a mental condition. Communication is hampered between Aza and her mother as a result of her mental health concerns, which makes it difficult for her to articulate her thoughts and emotions. These obstacles cause miscommunications and tense situations. Aza's mother wants her to live a happy life despite the difficulties caused by her mental health issues. She gains knowledge about Aza's illness and how to best support her daughter throughout the novel. This illustrates her dedication to her daughter's well-being. Aza and her mother have a generally kind and caring connection that is characterized by their shared journey of managing Aza's mental health. The difficulties that occur as people and families learn to manage the complexity of living with mental health disorders are highlighted, along with the significance of family support in dealing with mental illness. The novel's treatment of mental health themes gains depth and realism through the representation of this connection.

Aza's thoughts are insightful and thought-provoking, and her conversations with her therapist Dr. Karen Singh show wisdom. Her sessions with Dr. Singh give Aza a space free of judgement and allow her to share her thoughts without fearing criticism. Dr. Singh provides direction, coping mechanisms, and therapeutic approaches throughout their sessions to assist Aza in comprehending and controlling her OCD. She urges Aza to face her emotions and fears healthily and productively. Medication is part of Aza's treatment strategy, according to Dr. Singh. This suggestion is in line with how therapy and medication management are portrayed in the book as crucial elements of Aza's rehabilitation from mental illness. Aza goes to see Dr. Singh for talk therapy to help her deal with her condition and her intrusive thoughts. Dr. Singh has a very clear vision of how language can be utilized to heal, provide closure, and comfort. She frequently points out Aza's word choice when Aza discusses her mental illness and prods her to use words that portray her as stronger than the condition. Dr. Singh makes it quite apparent to Aza that language is incredibly crucial in this approach. Power can be given or taken away through language. In this regard, Dr. Singh argues that language has the power to alter a person's reality in addition to aiding in understanding it. Importantly, Dr Singh is a major guiding figure in Aza's life. She shares her knowledge with Aza and the narrative shows her wisdom. The narrative presents Dr Singh as a woman of great wisdom and understanding, she is patient and wholeheartedly supports Aza's recovery. "You're right that self isn't simple, Aza. Maybe it's not even singular. Self is a plurality, but pluralities can also be integrated, right? Think of a rainbow. It's one arc of light, but also seven differently colored arcs of light" (87). Green has a way of articulating complex emotions into simple words that turn out to be profound. The title itself denotes the idea of the infinite regress: a mythological idea that the world is carried on the back of turtles that stand on the back of another turtle and there is no end to the turtles which describes Aza's situation in just five words, its turtles all the way down.

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Stress management through ‘yoga practices’ in Healthy Adults: A Systematic Review

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ABSTRACT

Yoga encourages mental and physical relaxation, which helps reduce stress and anxiety. The physical postures promote flexibility, relieve tension, and alleviate pain. Yoga poses may help you release physical blockages like muscle knots, helping release emotions and tension. They also promote the release of mood-boosting endorphins, which are the feel-good hormones that can positively affect how you handle stress. Focusing on the present moment during your yoga practice enhances your awareness, boosts your concentration, and centers your mind. According to a 2018 study, yoga had a positive result on women who practiced Hatha yoga 3 times a week for 4 weeks. After 12 sessions, they experienced significant reductions in stress, depression, and anxiety (Shohani M, 2018). These results suggest that yoga can be a complementary medicine and may decrease the need for prescription drugs. More in-depth studies are required to investigate the long-term role of yoga in treating stress, depression, and anxiety. A small 2020 study in adult men suggested that yoga stretches reduce cortisol levels and have a positive effect on parasympathetic nerve activity, which encourages relaxation (Eda N, 2020).

Key word: *Stress Management, yoga practices, healthy adults, improved performance*

1. Introduction

Stress has become a pervasive issue in modern society, affecting individuals across various demographic groups and geographical regions. The detrimental effects of stress on physical health, mental well-being, and overall quality of life are well-documented. Chronic stress has been associated with an increased risk of various health conditions, including cardiovascular disease, anxiety disorders, and depression (Cohen et al., 2007; McEwen, 2007). Given the significant impact of stress on public health, there is a growing interest in exploring effective strategies for stress management and prevention.

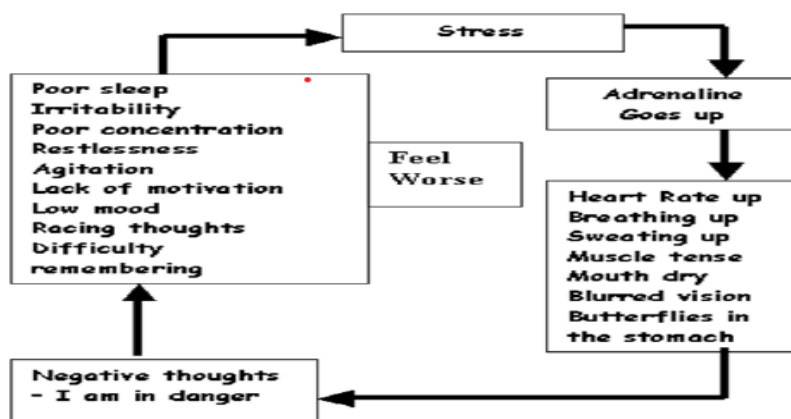


Figure 1. The stress cycle.

Yoga, an ancient practice that originated in India over 5,000 years ago, has gained popularity in recent decades as a holistic approach to promoting health and well-being. The term "yoga" encompasses a diverse range of practices, including physical postures (asanas), breathing exercises (pranayama), meditation, and relaxation techniques. Yoga is grounded in the principle of integrating the mind, body, and spirit to achieve harmony and balance. Several studies have suggested that yoga may be an effective tool for managing stress and improving resilience to stressors. Yoga practices have been shown to activate the body's relaxation response, reduce physiological arousal, and enhance emotional regulation (Gard et al., 2014; Cramer et al., 2016). However, the evidence base supporting the efficacy of yoga for stress management in healthy adults remains heterogeneous, with variations in study designs, populations, and outcome measures. This systematic review aims to critically evaluate the existing literature on the effectiveness of yoga practices in managing stress among healthy adults. By synthesizing the findings of relevant studies, this review seeks to provide insights into the potential mechanisms underlying the stress-reducing effects of yoga and identify areas for future research.

2. Material & Methods:

Maia (2004) in his paper had concluded in-depth interviews, which were conducted with 79 people who have founded or lead organizations where contemplative practices play a key role. In a number of interviews, contemplative practices were introduced into the workplace not only as ancillary stress- reduction techniques for individuals, but as a core part of the organization's structure. Rees (1997) explains why managerial stress is likely to be on the increase. The increased attention to managerial stress, for example attempts to measure stress and relaxation techniques. According to Sonja (2004) managers can be trained to identify the beginnings of mental stress among their workers. The report says that mental stress is the number one workplace injury and disease in terms of lost production. It warns managers that stress issues must be addressed if they do not want to face workers' compensation claims. The report includes six case studies, which illustrate managerial intervention in stress problems.

Objectives of the study

- (1) To study the reasons behind stress in working professionals.
- (2) To analyze how yoga helps in handling stress and enhancing performance of working professionals.

Research Design

An exploratory research design was used which emphasized on the discovery of new ideas or developing new insights. Data collection techniques

Primary data

Data was collected through administering structured questionnaire to the respondents by survey. The questionnaire consisted of 10 closed ended questions and two open ended question.

Sampling technique

Sampling is the process of obtaining information about an entire population.

Sampling: healthy adults Healthy adults (aged 18 years and above) without any diagnosed medical or psychiatric conditions who are working professionals.

Sample size: 50 healthy adults .

Sampling method: In the aforementioned study the convenience & non probability sampling design was used.

3. Results & Discussion:

Research found that maximum percentage of respondents, 49% strongly agree that yoga helps healthy adults to deal with stress. Yoga is the answer for healing stress among working professionals. The techniques of yoga comprise physical postures (asanas), breath expansion and enhancement (pranayama), relaxation techniques, meditation, lifestyle management and philosophies to live a positive life. Research found that maximum percentage of respondents 52% disagree that yoga helps in solving the basic problems at work place as because basic problem might relate to their personnel life which could not be solved through yoga. Research found that maximum percentage of respondents 52% agree that yoga helps in unraveling the hidden dimensions of human potential. As one regularly practices yoga, the person becomes mentally, physically fit and alert, his thought process is activated and consequently he becomes innovative and works with a positive frame of mind. Research found that maximum percentage of respondents, 50% agree that yoga helps in personality development. Yoga gradually removes the faults of mind, body and soul. It makes him disciplined and develops a positive attitude in life. It keeps people healthy and controls negative thoughts. Thus with the help of yoga regularly it can enhance ones personality. Yoga is gaining acceptance as an effective tool, for controlling stress which can well be the beginning of a health revolution and leads to personality development.

Research found that maximum percentage of respondents 66% strongly agree that Yoga therapy helps for curing several kinds of ailments related to posture and psycho-somatic disorders. Research found that maximum percentage of respondents, 69% strongly agree that yoga must be a part of every corporate sector to overcome stress as because unlike other exercise routines yoga is low impact, improves strength and flexibility, builds concentration, and reduces mental and physical stress and tension. Research found that maximum percentage of respondents, 43% can't say that Yoga helps in determining the weakness of working professional as because yoga is known to eradicate fatigue and generate energy, all of which lead to increased productivity and morale - perfection for the corporate environment but not determining the weakness of employees working in corporate sector. Research found that maximum percentage of respondents, 63% strongly agree that Yoga is beneficial for performance enhancement in corporate sector as high levels of stress due to extreme pressure give rise to sleep disorders, digestive, eyesight and spinal problems. Thus, yoga offers flexible options which will energize the staff, increase their efficiency and help them overcome the stress and fatigue. Research found that maximum percentage of respondents, 56% agree that Yoga acts as a motivator and improves the work efficiency of working professional. It comprises of simple asana (poses) and breathing techniques, which if practiced properly can yield wonderful and fast results it will energize the staff, increase their efficiency and help them overcome the stress and can also prove beneficial for performance

enhancement which could help them to concentrate better. Research found that maximum percentage of respondents, 58% strongly agree that yoga can affect human relationships, and help to cope up with striking balance between work and family, because relaxation techniques like yoga activate a state of restfulness that is opposite of stress response.

It also increases the ability to stay calm and keep free from all kinds of pressure.

The causes of stress specified by the respondents were:

- (1) Staff ineffectiveness and staff not dedicated to work
- (2) Work flow deficit
- (3) Self indiscipline
- (4) Relationship problems
- (5) Workload
- (6) Demanding deadlines
- (7) Extending working hours
- (8) Imbalance in work and family life leads to stress
- (9) No recognition on reward of a good performance
- (10) Lack of clear job description
- (11) Individual personality factors
- (12) Faulty dietary habits

4. Conclusion

Research concluded that yoga is a very important therapy in managing stress. As yoga is the solution for curing stress among working men and women. This all-in-one formula that is acting as a relaxing mediator for the stressed outworking professionals. Yoga means different things to different people because it incorporates different aspects that have emotional impact on an individual's life. The techniques of yoga comprise physical postures (asanas), breath expansion and enhancement (pranayama), relaxation techniques, meditation, lifestyle management and attitudes to live a positive life and which if performed properly can yield wonderful and fast results.

5. Recommendations

The recommendations to enhance performance in spite of the stress of the employees are as follows:

- (1) Seminars and presentations should be conducted to generate awareness among the working professionals to improve strength and flexibility, build concentration, and reduce mental and physical stress and tension.
- (2) There should be face to face communication between yoga instructor and employees so that the employees can express their views freely about stress and hence practicing of yoga will become more effective.
- (3) Management should periodically review whether there are any stress management needs for working professionals or not, this will enhance their performance

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Integrating Essential 21ST Century Skills in Schools

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ABSTRACT:

The 21st century presents a unique landscape of challenges and opportunities. To flourish in this dynamic environment, individuals must cultivate a specific toolbox of skills. This article delves into these essential competencies and skills, unpacking the importance of critical thinking for analysing information and solving problems effectively. It explores the power of communication in fostering collaboration and connection-building. Furthermore, the article emphasises the growing necessity of digital literacy in navigating the ever-expanding technological landscape. Finally, it highlights the significance of lifelong learning and adaptability as crucial tools for navigating change and achieving success in the 21st century.

INTRODUCTION:

The world has undergone a dramatic transformation in the past five decades. The pace of change has been phenomenal, revolutionizing how we access information and communicate. Imagine life without instant communication, constant access to information, or the vast array of technology that shapes our daily lives. These advancements are not just fancy gadgets; they have fundamentally reshaped the very fabric of our lives and the nature of work. These advancements have fundamentally altered the way we work, learn, and interact. The skills that ensured success 50 years ago may not be enough to navigate the complexities of the 21st century. To flourish in today's dynamic environment, we need a new breed of skills - the ability to think critically and solve problems creatively, to navigate the ever-expanding digital landscape, and to collaborate effectively in a globalised world. These essential 21st century skills are the new tools for success, empowering us to not only keep up with the changing world, but to actively shape it. Mastering the essential skills of the 21st century will eventually help the learner in unlocking his/her potentialities and capabilities. These skills empower one to approach challenges with critical thinking, analyse information effectively and develop creative solutions. This problem-solving skill equips one to tackle any goal, big or small, with a strategic and adaptable mindset. The same skills are a game changer for students. Effective communication and collaboration, fostered through these essential competencies allow for richer learning experiences. Students can learn from each other's perspective, and work together to solve problems. This collaborative approach depends on understanding, fosters a sense of community and shared purpose. Furthermore, learning and accessing information effectively translates into efficient learning. Finally, in a world characterised by constant change, these essential skills are the key to adaptability. The ability to think critically, learn new things quickly and collaborate effectively allows one to embrace change as an opportunity for growth. In essence, these 21st century skills are more than just tools; they are investment in the future, empowering one to achieve one's goal, become a more efficient learner and thrive in a dynamic world.

ESSENTIAL SKILLS: Critical Thinking: Critical thinking skill equips an individual to analyse and evaluate information effectively. When faced with challenges, he/she can explore

different angles, consider all viewpoints, and identify the root cause of the problem. Critical thinking develops creative solutions that are not just effective, but also efficient. Critical thinking helps an individual to make well informed decisions.

1. **Creativity:** Creativity is like a spark that ignites innovation. It allows an individual to come up with fresh and original ideas, helping them to stand out from the crowd. By looking at the world with a creative lens, one can spot new opportunities, and develop unique solutions.
2. **Communication:** Communication skill allows an individual to articulate their ideas and thoughts effectively and efficiently. Being an active listener allows an individual to pay close attention to others, understand their perspectives and respond thoughtfully. Effective communication helps bridge gaps between individuals.
3. **Collaboration:** Collaboration skill is about working effectively with others towards a common goal. When people collaborate effectively, the whole becomes greater than the sum of its parts. An individual can generate creative solution, and learn from diverse perspectives. This skill equips one to navigate disagreements respectfully and find common ground and reach solutions that benefit everyone.
4. **Digital Literacy:** Digital literacy enables an individual to make use of internet safely and wisely. An individual will learn to search effectively, find reliable sources and distinguish trustworthy websites from misleading ones. With this skill, one can use technology responsibly and efficiently for communication, learning and solving problems.
5. **Adaptability:** The world is constantly changing, and new challenges will inevitably arise. Adaptability equips an individual to learn new things quickly, embrace new technologies and adjust their approach as needed. An individual can identify new possibilities in unexpected situations and develop innovative solutions to emerging problems.

IMPORTANCE OF SKILLS FOR STUDENTS IN 21ST CENTURY:

The 21st century is a world bursting with innovation, constant change and information at our fingertips. To thrive in this exciting and yet sometimes overwhelming environment, students need a special toolkit- a set of essential skills that go beyond memorising facts and getting good grades. These skills are like superpowers, equipping one to succeed in school, future career and life in general. Here is why mastering these essential skills is crucial for students –

1. **Problem-Solving:** Problem solving is a fundamental skill crucial for success in every phase of life, from academic careers to personal endeavours. It is the cognitive process of identifying a problem, analysing its root cause, and developing effective solutions. The world throws a variety of challenges our way, some simple and others may be more intricate. Problem solving equips an individual with the tools to dissect complex situations, break them into manageable parts and identify the core issue.
2. **Teamwork:** Effective teamwork, characterized by the ability to work cohesively towards a common goal, is a cornerstone skill for navigating the complexities of the modern world. Through open communication, students develop the ability to express themselves effectively, value diverse perspectives, and navigate disagreements respectfully. Group projects become a platform for shared learning, where students can build upon one another's strengths and achieve more than they could individually.

3. **Building Resilience:** Challenges are inevitable in life, and problem solving equips students with a resilience to navigate them effectively. Students learn to approach setbacks, not as roadblocks, but as opportunities to develop new skills and refine their approach. This fosters perseverance and a growth mindset, allowing one to learn from mistakes and bounce back stronger.
4. **Power Of Effective Decision Making:** Problem solving is intricately linked to decision making. Through a process of critical analysis, students can weigh various solutions and their potential consequences, leading to well-informed decisions with a higher chance of success and growth.
5. **Lifelong Learning:** Student develops a passion for continuous learning, understanding that knowledge acquisition is a life long journey. This fosters intellectual curiosity, a willingness to explore new ideas and a commitment to personal and professional development. Students become self-directed learners, capable of independently seeking new knowledge, expanding their skill set and adapting to the ever-changing demands of the future.
6. **Adaptability:** Essential skills foster adaptability, the capacity to adjust to new situations, embrace new technologies, and learn new things quickly. Students develops a mindset, adeptly navigating challenges and accepting opportunities for personal and intellectual advancement. In a dynamic job market that demands continuous learning and adaptability, these essential skills prepare students to navigate the changing professional landscape.

INITIATIVE TAKEN BY SCHOOLS TO DEVELOP THE SKILLS:

Schools are recognizing the importance of essential skills for student success in the 21st century. Here's how they are taking action –

1. **Project based learning:** Instead of just memorizing facts, schools are incorporating more project-based learning. This allows students to work together, solve problems creatively and apply their knowledge to real world scenarios. For example: building a miniature solar system for a science project will build teamwork, research skills, critical thinking as students plan create and present their model.
2. **Collaborative Classrooms:** Schools are creating collaborative learning environments where students can discuss ideas, learn from each other and develop strong communication skills. This could involve group discussion, debates or even presentations where students share their research findings with the class.
3. **Technology based learning:** Schools are integrating technology strategically, not just for fun and games. Students learn to use digital tools for research, communication, and creating presentations. This equips them with digital literacy skills essential for navigating to the online world effectively. They can also learn better and more effectively through this technology.
4. **Building Social-Emotional Skills:** Schools are understanding the importance of social-emotional learning. Programmes might focus on topics like self-awareness, empathy and relationship building. These skills help students navigate social situations effectively, manage their emotions and build strong relationship with others.
5. **Beyond the textbook:** Schools are going beyond traditional subjects and method of teaching and incorporating programmes that nurture essential skills among the students. These might

include workshops on critical thinking, conflict resolution, and all- round development of the learner.

6. **Personalized Learning For Students:** School are moving towards personalised learning approaches that cater to individual student needs and learning styles. This might involve offering different learning materials, allowing for flexible pacing or providing targeted support for students who need it.

CONCLUSION:

The world keeps changing faster than ever before. The things that work for our parents or grandparents might not be the best tools for navigating the 21st century. This is where essential skills come in. Students need these skills to succeed, not just in school, but also in life. By learning to think critically, work together, navigate the vast information, and adapt to new things with ease, students become unstoppable learners, ready to tackle any challenge that comes their way. Schools are taking initiative to develop the essential skills among the students. Schools are abandoning the use of old -fashioned way of learning. They're making use of projects for the students to work together to build amazing things, classrooms where everyone gets to share their ideas, and even learning how to use digital media. This makes learning exciting and helps students develop those essential skills in a natural way. By equipping them with these essential skills, we are setting them up for a bright and successful journey in the 21st century and beyond. The future is full of possibilities and with the right tool students can achieve success in any field.

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Unlocking the Potential of Web 2.0 Tools for Enhanced E-Learning Experiences: A Comprehensive Approach

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Abstract

The integration of Web 2.0 tools into e-learning has transformed educational landscapes, offering dynamic, interactive, and personalized learning experiences. This article explores the characteristics of Web 2.0 tools, their differentiation from traditional e-learning tools, and implementation strategies for enhancing e-learning environments. Selection criteria for appropriate tools emphasize alignment with learning objectives, user-friendliness, compatibility, collaboration features, accessibility, and security. Integration strategies focus on conducting needs assessments, providing training and support, customizing integration, promoting adoption, and monitoring effectiveness. Training and support for educators and learners involve comprehensive programs, user guides, support channels, fostering communities of practice, and continuous improvement based on feedback. Future trends highlight innovations such as VR, AR, AI, ML, gamification, and personalized learning pathways. Collaboration and social learning are expected to thrive, supporting lifelong learning and continuous education. Success in navigating these trends requires continuous learning, professional development, networking, collaboration, experimentation, strategic planning, and user feedback loops. Ultimately, the evolution of Web 2.0 technologies promises to further enhance e-learning experiences, inspiring curiosity, empowering learners, and cultivating lifelong learning skills in the digital age.

Keywords: Web 2.0 tools, E-learning, Integration strategies, Personalized learning, Future trend

Introduction:

E-Learning has redefined the landscape of education, offering unprecedented flexibility, accessibility, and convenience to learners worldwide. In its essence, E-Learning encompasses the delivery of educational content and activities through electronic media, typically over the internet. From formal education settings like schools and universities to informal learning platforms and professional development initiatives, E-Learning has become an integral part of modern education systems. Central to the evolution of E-Learning is the emergence of Web 2.0 tools, which have revolutionized the way people interact with digital content and each other online. Unlike the static web pages of the past, Web 2.0 fosters dynamic, participatory, and collaborative experiences, allowing users to create, share, and interact with content in real-time. This paradigm shift has opened up new possibilities for

enhancing E-Learning experiences, empowering educators and learners to engage with course materials in innovative ways. The importance of enhancing E-Learning experiences cannot be overstated in today's fast-paced and interconnected world. Traditional educational methods often struggle to capture the attention and interest of digital-native learners who are accustomed to interactive and multimedia-rich environments. Hence, there is a pressing need to adapt E-Learning practices to meet the evolving needs and preferences of learners.

Web 2.0 tools offer a myriad of opportunities to enrich E-Learning environments by fostering interactivity, collaboration, and personalization¹. These tools encompass a diverse range of applications and platforms, including social media, blogs, wikis, podcasts, and collaborative editing tools. By integrating these tools into E-Learning platforms, educators can create immersive and engaging learning experiences that cater to diverse learning styles and preferences. One of the key benefits of Web 2.0 tools in E-Learning is the enhancement of interactivity. Unlike traditional static content, Web 2.0 tools enable learners to actively engage with course materials through interactive exercises, simulations, and multimedia content. This interactivity not only enhances learner engagement but also facilitates deeper understanding and retention of concepts. Moreover, Web 2.0 tools facilitate collaboration among learners, allowing them to connect with peers, share ideas, and collaborate on projects regardless of geographical constraints. Collaborative activities such as group discussions, peer reviews, and joint projects foster social learning experiences, promoting knowledge construction and critical thinking skills. In this article, we delve into the potential of Web 2.0 tools for enhancing E-Learning experiences, exploring their benefits, implementation strategies, and future trends. By harnessing the power of Web 2.0 tools, educators can transform traditional E-Learning environments into dynamic and interactive spaces that inspire curiosity, creativity, and lifelong learning.

Characteristics of Web 2.0:

The term Web 2.0 was coined by Tim O'Reilly in 2004 which represents a shift in the way people interact with the internet. Unlike its predecessor, Web 1.0, which was characterized by static web pages and limited user interaction, Web 2.0 emphasizes user-generated content, collaboration, and social networking. At its core, Web 2.0 is about empowering users to create, share, and interact with digital content in real-time. One of the defining characteristics of Web 2.0 is its focus on user participation and collaboration. Instead of passively consuming content, users are actively engaged in creating and sharing content with others². Social media platforms like Facebook, Twitter, and Instagram exemplify this aspect of Web 2.0, allowing users to share photos, videos, and status updates with their friends and followers. Another key feature of Web 2.0 is the emphasis on user-generated content. Platforms like Wikipedia, YouTube, and Word Press rely on contributions from users to create and curate content. This democratization of content creation has led to the emergence of online communities where users can collaborate and share their knowledge and expertise on diverse topics.

Furthermore, Web 2.0 is characterized by its use of technologies such as AJAX (Asynchronous JavaScript and XML), which enables the creation of dynamic and interactive

web applications. This technology allows for seamless updates and interactions without the need to reload the entire web page, enhancing the user experience and enabling real-time collaboration. By harnessing the collective intelligence and creativity of users, Web 2.0 has transformed the internet into a vibrant ecosystem of knowledge sharing, collaboration, and social interaction.

Examples of Popular Web 2.0 Tools:

The diverse array of Web 2.0 tools that have revolutionized the landscape of education, offering innovative ways to engage learners, foster collaboration, and personalize learning experiences. Each tool discussed below represents a unique opportunity to leverage the power of technology to enhance teaching and learning in the digital age.

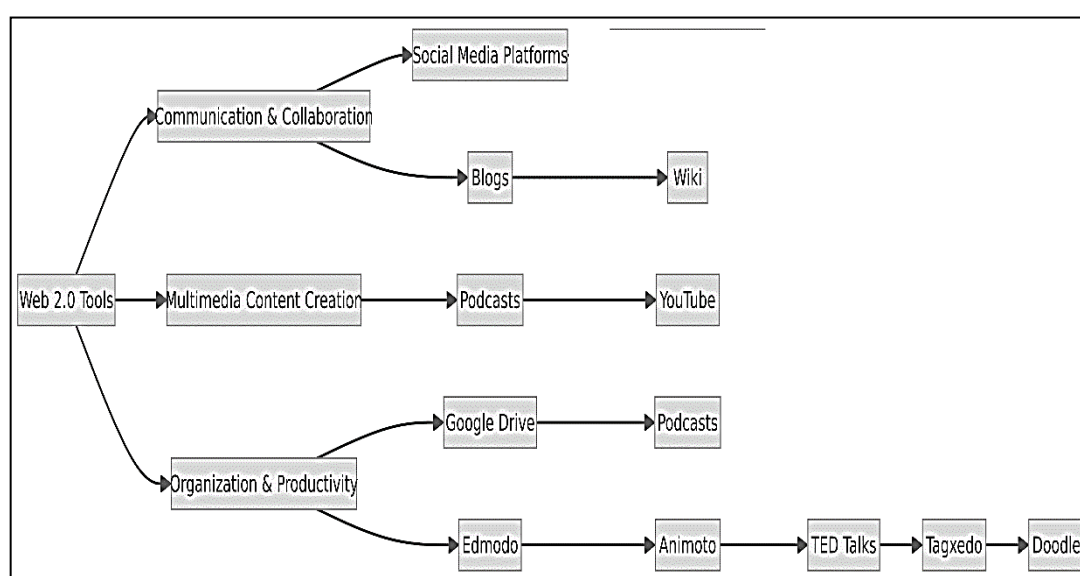


Fig. 1: Web 2.0 Tools

1. Social Media Platforms

Social media platforms such as Facebook, LinkedIn, Instagram and many more have become integral to modern communication and networking. In an educational context, these platforms offer valuable opportunities for connecting with students, sharing resources, and facilitating discussions. Educators can create dedicated groups or pages for their classes, where they can post announcements, share relevant articles or videos, and encourage student participation through comments and discussions. Additionally, social media can be used to showcase student work, provide feedback, and foster a sense of community among learners.

2. Blogs

Blogs have emerged as powerful tools for sharing knowledge, expressing ideas, and fostering dialogue. Platforms like WordPress, Blogger, and Medium provide intuitive interfaces for creating and publishing blog posts, making it easy for educators to share

insights, reflections, and resources with their students. Blogs can serve as digital portfolios, allowing students to showcase their work and reflect on their learning journey. They also provide opportunities for asynchronous communication, enabling students to engage with course materials and discussions at their own pace.

3. Wikis

Wikis are collaborative websites that allow multiple users to create, edit, and organize content collaboratively. Wikipedia, the largest and most well-known wiki, exemplifies the power of collaborative knowledge creation, with millions of articles contributed by volunteers from around the world. In an educational setting, wikis can be used to facilitate group projects, collaborative research, and knowledge sharing. Educators can create wikis for specific topics or assignments, where students can contribute their research, insights, and perspectives, fostering a sense of ownership and collaboration among learners.

4. Podcasts

Podcasts have surged in popularity as a convenient and accessible medium for sharing audio content on a wide range of topics. Platforms like Apple Podcasts, Spotify, and Google Podcasts provide users with access to a vast library of podcasts on subjects ranging from education and technology to entertainment and news. In education, podcasts can be used to deliver supplemental content, provide audio feedback on assignments, or facilitate discussions. Educators can create their own podcasts to share lectures, interviews, or discussions with their students, providing an alternative mode of content delivery that appeal to auditory learners.

5. Google Drive

Google Drive is a cloud-based file storage and collaboration platform that offers a suite of productivity tools, including Docs, Sheets, Slides, and Forms. With Google Drive, users can create, share, and collaborate on documents, spreadsheets, presentations, and forms in real-time. Educators can use Google Drive to distribute assignments, collect student work, and provide feedback. The collaborative features of Google Docs and Google Slides make it easy for students to work together on group projects or presentations, regardless of their physical location. Additionally, Google Forms can be used to create quizzes, surveys, and assessments, with responses automatically collected and organized in Google Sheets.

6. Edmodo

Edmodo is a social learning platform designed specifically for educators and students. It provides a secure online space where teachers can create classes, share resources, and facilitate discussions. Students can access assignments, participate in class discussions, and collaborate on projects within the Edmodo environment. Educators can use Edmodo to distribute assignments, provide feedback, and track student progress. The

platform also offers a variety of educational apps and resources that can be integrated seamlessly into the learning experience.

7. YouTube

Founded in February 2005, YouTube has become the go-to platform for watching and sharing videos on just about any topic you can imagine. Whether you're looking for tutorials, inspiring talks, or just some entertainment, YouTube has got you covered. In education, YouTube can be a valuable resource for supplementing course materials, providing visual demonstrations, and facilitating discussions. Educators can curate playlists of relevant videos, create their own instructional videos, or use existing content to spark classroom discussions and engage students.

8. TED Talks

TED Talks are short, powerful talks delivered by experts and thought leaders on topics ranging from technology and entertainment to design and global issues. These talks are designed to inspire, educate, and provoke thought, making them ideal for stimulating classroom discussions and sparking curiosity. Educators can incorporate TED Talks into their lessons to introduce new concepts, provoke critical thinking, and inspire creativity. The TED website offers a vast library of talks that can be filtered by topic, duration, and language, making it easy to find relevant content for any subject area.

9. Animoto

Animoto is a web-based video creation tool that allows users to turn photos, video clips, and music into stunning video presentations. With Animoto, educators can create dynamic and engaging multimedia presentations to complement their lessons, showcase student work, or promote class projects. The platform offers a variety of customizable templates, styles, and music tracks, making it easy to create professional-looking videos in minutes. Animoto videos can be shared online or downloaded for offline viewing, providing a versatile and accessible tool for enhancing learning experiences.

10. Tagxedo

Tagxedo is a web-based word cloud generator that allows users to create visually stunning word clouds from text. Users can customize the shape, colour and font of their word clouds, as well as adjust the frequency of words to highlight key themes or concepts. In education, Tagxedo can be used to visualize text-based data, analyze literature or speeches, or summarize key points. Educators can use Tagxedo to create interactive word clouds for classroom activities, presentations, or assignments, providing a visually engaging way to explore language and content.

11. Doodle

Doodle is a web-based scheduling tool that simplifies the process of planning events and coordinating availability. With Doodle, users can create polls to propose multiple date and time options for an event and invite participants to indicate their availability. The platform

automatically calculates the best time based on participant responses, making it easy to find a date and time that works for everyone. In education, Doodle can be used to schedule meetings, organize field trips, or plan collaborative projects, saving time and reducing scheduling conflicts for educators and students alike.

Web 2.0 tools offer a wealth of opportunities for enhancing teaching and learning in the digital age. From social media platforms and blogs to wikis and podcasts, these tools provide innovative ways to engage learners, foster collaboration, and personalize learning experiences. By incorporating Web 2.0 tools into their teaching practice, educators can create a dynamic and interactive learning environment that inspires curiosity, creativity, and lifelong learning.

How Web 2.0 Tools Differ from Traditional E-Learning Tools:

Web 2.0 tools differ from traditional E-Learning tools in several keyways, primarily in their emphasis on interactivity, collaboration, and user-generated content. Unlike traditional E-Learning tools, which often focus on delivering content in a linear and one-way manner, Web 2.0 tools empower users to actively engage with course materials, collaborate with peers, and create and share their own content.

Traditional E-Learning tools typically consist of Learning Management Systems (LMS) that deliver pre-packaged content such as text-based lectures, quizzes, and assignments. While these tools are effective for delivering structured content, they lack the interactivity and flexibility of Web 2.0 tools. In contrast, Web 2.0 tools allow for more dynamic and interactive learning experiences, enabling learners to explore content at their own pace, engage in discussions and collaborative activities, and create multimedia-rich presentations and projects³. Moreover, Web 2.0 tools facilitate social learning experiences by connecting learners with peers and experts from around the world. Through features such as social networking, discussion forums, and collaborative editing tools, learners can interact with others, share ideas, and collaborate on projects in real-time. This social aspect of learning fosters a sense of community and encourages active participation and knowledge sharing among learners. Overall, Web 2.0 tools offer a more dynamic, interactive, and collaborative approach to E-Learning compared to traditional E-Learning tools. By leveraging the power of Web 2.0 technologies, educators can create engaging and personalized learning experiences that inspire curiosity, creativity, and lifelong learning⁴.

Implementation of Web 2.0 Tools in E-Learning:

Integrating Web 2.0 tools into e-learning environments, focusing on selection criteria, integration strategies, and training and support for educators and learners.

A. Selection Criteria for Appropriate Tools:

Selecting the right Web 2.0 tools is crucial for enhancing e-learning experiences. Several criteria should be considered when evaluating tools for integration:

1. **Alignment with Learning Objectives:** The selected tools should align with the learning objectives and outcomes of the course or curriculum. They should support the educational goals and enhance the learning experience for students.
2. **User-Friendliness:** The tools should be user-friendly and easy to navigate for both educators and learners. Intuitive interfaces and simple workflows can minimize the learning curve and promote adoption.
3. **Compatibility and Integration:** Compatibility with existing e-learning platforms and technologies is essential for seamless integration. Tools should integrate smoothly with Learning Management Systems (LMS) and other educational software.
4. **Collaboration Features:** Look for tools that facilitate collaboration and interaction among students and between students and educators. Features such as real-time editing, commenting, and discussion forums can enhance engagement and learning outcomes.
5. **Accessibility and Usability:** Ensure that the tools are accessible to all learners, including those with disabilities. They should comply with accessibility standards and provide features for customization and personalization.
6. **Security and Privacy:** Consider the security and privacy features of the tools, especially when handling sensitive student data. Choose tools that prioritize data security and offer robust privacy controls.

B. Integration Strategies into Existing E-Learning Platforms:

Integrating Web 2.0 tools into existing e-learning platforms requires careful planning and execution. Here are some strategies for successful integration:

1. **Conduct a Needs Assessment:** Assess the needs and preferences of educators and learners to identify which tools will best support their requirements.
2. **Provide Training and Support:** Offer training sessions and resources to familiarize educators and learners with the selected tools. Provide ongoing support to address any questions or challenges that arise.
3. **Customize Integration:** Customize the integration of Web 2.0 tools with existing e-learning platforms to ensure a seamless user experience. This may involve custom development or configuration settings within the LMS.
4. **Promote Adoption and Engagement:** Encourage educators to incorporate the use of Web 2.0 tools into their teaching practices. Highlight the benefits of using these tools and provide examples of successful implementations.
5. **Monitor and Evaluate:** Continuously monitor the usage and effectiveness of the integrated tools. Gather feedback from educators and learners to identify areas for improvement and make adjustments as needed.

C. Training and Support for Educators and Learners:

Effective training and support are essential for ensuring that educators and learners can fully leverage the potential of Web 2.0 tools. Some strategies for providing training and support:

- 1. Offer Comprehensive Training Programs:** Develop comprehensive training programs that cover the features, functionalities, and best practices for using Web 2.0 tools in e-learning environments. Offer both in-person and online training sessions to accommodate different learning preferences.
- 2. Create User Guides and Tutorials:** Develop user guides, tutorials, and instructional videos to help educators and learners get started with the tools. Provide step-by-step instructions and troubleshooting tips for common issues.
- 3. Establish Support Channels:** Set up support channels, such as help desks or online forums, where educators and learners can seek assistance and guidance. Assign dedicated support staff to respond to inquiries and provide personalized support.
- 4. Foster a Community of Practice:** Encourage collaboration and knowledge sharing among educators through communities of practice. Provide opportunities for educators to exchange ideas, share resources, and learn from each other's experiences.
- 5. Solicit Feedback and Continuous Improvement:** Regularly solicit feedback from educators and learners about their experiences with the tools and the support provided. Use this feedback to identify areas for improvement and make adjustments to training and support programs accordingly.

Future Trends and Innovations of Web 2.0 tools for promoting E-learning:

The promotion of enhanced e-learning experience is marked by an array of emerging Web 2.0 tools and technologies poised to reshape the educational landscape. Among these innovations are Virtual Reality (VR) and Augmented Reality (AR), offering immersive learning experiences, and Artificial Intelligence (AI) and Machine Learning (ML), driving personalized learning pathways and real-time feedback mechanisms. Additionally, gamification and game-based learning platforms are gaining traction, leveraging game mechanics to foster engagement and motivation among learners. Looking ahead, predictions for the future of e-learning with Web 2.0 foresee a shift towards highly personalized learning experiences tailored to individual learner needs and preferences⁵. Collaborative and social learning will continue to thrive, facilitated by Web 2.0 tools that connect learners and enable knowledge sharing in virtual spaces. Lifelong learning and continuous education are expected to become more prevalent as the demand for up skilling and reskilling grows amidst technological advancements. To navigate these evolving trends successfully, educators and e-learning practitioners must adopt strategies for staying updated and adapting to new technologies. Continuous learning and professional development are essential, as is networking and collaboration within the e-learning community to share insights and best practices⁶. Embracing experimentation, strategic planning, and user feedback loops will enable practitioners to innovate effectively and create impactful learning experiences for learners in the dynamic landscape of e-learning with Web 2.0.

Conclusion:

In conclusion, the integration of Web 2.0 tools into e-learning environments has revolutionized the way educators engage learners and deliver content. By leveraging the

dynamic and interactive nature of these tools, educators can create personalized learning experiences that foster collaboration, creativity, and critical thinking. The selection of appropriate tools, thoughtful integration strategies, and comprehensive training and support are key to maximizing the benefits of Web 2.0 tools in e-learning. As we look to the future, the continued evolution of Web 2.0 technologies promises to further enhance e-learning experiences, offering new opportunities for personalized, collaborative, and engaging learning environments. By staying updated on emerging trends and adopting innovative practices, educators can continue to inspire curiosity, empower learners, and cultivate lifelong learning skills in the digital age.

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Relevance of Gandhian Philosophy in Contemporary Society:-

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ABSTRACT

Today majority of the countries across the world happen to be under the democratic system of government. Theoretically, this system is considered to be the best so far. It is the best because people are connected with it directly or indirectly at every level and it ensures popular participation horizontally and vertically. Due to the advancement of science & technology, the human society is undergoing rapid transformation. It is anticipated that the rate of progress in scientific knowledge will result in an improvement in the overall quality of life regrettably still suffer an overwhelming number of problems on numerous fronts i.e. political, social, economic, cultural and other levels.

Nowadays people are more aware of their rights than ever before. Considering through birds eye view we can say that, Indian society is known for its social hierarchy, divide and rule and inequality. In this context we can easily highlight the philosophy of Gandhism. Mahatma Gandhi always respect and accept everyone without any discrimination of caste, creed, sex and religion. In the 21st century, society is going through a dangerous phase which must be reformed so that humanity and peace will be sustained. The present study deals with the study of the relevance of Gandhian philosophy in contemporary society. As we know that Mahatma Gandhi was a great social reformer and people call him "The Father of the Nation". When we use the term Gandhian philosophy we mostly focus on the line 'simple living and high thinking,' the line actually denotes the Gandhian philosophy of leading a life in a simpler manner. Gandhian philosophy follows truth, non-violence, peace and sustainability, secularism, decentralisation, social justice, and specially citizenship training. For that, Gandhianism is much more significance in today's world as society is degrading its values day by day and the reason is none other than increasing population, needs and demands of the society and the nation as a whole.

KEY WORDS:- Society, relevance, peace, Mahatma Gandhi.

INTRODUCTION:-

As we navigate the complexities of the 21st century, Mahatma Gandhi's principles of non-violence, truthfulness, simplicity, self-reliance and compassion remain not only relevant but also essential in every way of life. The term Gandhism refers to a collection of concepts that attempt to capture Mohandas Gandhi's motivations, objectives and life's work. Truth, non-violence, renunciation, humility, equanimity and many other virtues make up the Gandhian values. The principles of Gandhianism offer our nation a blueprint towards a more peaceful, sustainable and harmonious world. Mahatma Gandhi is well known as a freedom fighter and father of our nation. Mahatma Gandhi byname of Mohandas Karamchand Gandhi. He was born on October 2, 1869, Porbandar, India. He was a lawyer,

great politician, social activist, and writer who became the leader of nationalist movement against the British rule of India. He was highly influenced by Thoreau, Tolstoy, Ruskin and, above all, the life of Jesus Christ. The term Mahatma means 'great soul'.

FUNDAMENTAL POSTULATES OF GANDHI'S PHILOSOPHY:-

Since the initial period of our life we have been following a famous quote of Gandhi i.e. always speak the truth which is literally derived from the Buddha's ideals of life and when we pronounce the word 'Gandhianism' we are undoubtedly familiar with the line – simple living and high thinking and the main goal is to mobilise or transform the society as well as the people of that society. In today's fast-paced and ever-changing world, the relevance of timeless wisdom often gets lost in the shuffle. However, the principles advocated by Mahatma Gandhi, also known as the father of Indian nation, continue to shine as hope and wisdom in the 21st century. Before going to discuss about the relevance of Gandhian Philosophy in contemporary society we should know about the main essential of Gandhian principles— so, the postulates of Gandhian philosophy is discussed below:-

1. Truth (Satya):-

“Truth stands, even if there be no public support. It is self-sustained”

Gandhi was a strong believer of truthfulness. The acts of civil disobedience, Salt March (1930) is the main example of truthfulness.

Considering the relevance of the 21st century we can say that, the social platforms provide us with continuous misinformation, at that time truth is much more important than others. The role of social media, and other sources of information should be based on regular fact-checking standards which must convey proper information to the greater nation. Truth and non-violence are the key aspects of Gandhian philosophy. According to Gandhi, truth is the relative truthfulness in word and deed, and the absolute truth the ultimate reality. This ultimate truth is God and morality, and the moral laws and code its basis.

2. Non-violence (Ahimsa):-

“In a gentle way, you can shake the world” (Mahatma Gandhi)

By considering the relevance of contemporary society, we can easily consider that non-violence is a prime concern of today's world. According to Martin Luther King, “Darkness cannot drive out darkness, only love can do that”.

Non-violence, which means free from all kinds of unhealthy attitudes which can harm people and society. It is totally free from using any armaments or absence of overt violence. Gandhi believed that love is the people's opposite of violence in every sense.

Today, the world is totally craving for peace and social justice, these words are only printed in different pages but there is no practical application, people are protesting for peace and social justice, peaceful existence is the prime concern for humans only because of the violence they have faced for a long time.

3. Satyagraha:-

Satyagraha is one of the crucial methods which was applied by Gandhi during the freedom movement of India. This method is especially based on securing rights by personal suffering and not inflicting injury on others. It is totally free from injustice,

oppression, and exploitation.

4.Sarvodaya:-

The term sarvodaya meaning welfare of all. The term was first coined by Gandhiji as the title of his translation of John Ruskin's tract on political economy "unto this last".

5.Swaraj :-

The term Swaraj itself conveys its meaning that Swa+raj. Swaraj means own and raj means self rule. Through swaraj Gandhi explained the totality of all peoples self rule, which is free from others rule or it manifests the freedom of the countrymen.

6.Trusteeship:-

Trusteeship is a socio-economic philosophy that was propounded by Mahatma Gandhi. It provides a means by which the wealthy people would be the trustees of trusts that looked after the welfare of the people in general.

7.Simplicity:-

“Live simply so that others may simply live”

Gandhi was a strong believer of simple life, according to him, “Simple living and high thinking should be the main focus of life and wearing local products to promote self sufficiency in life is also the prime concern of Gandhi's philosophy. Considering the relevance of Gandhian Philosophy we can easily consider that, now a days, the developmental needs of people are not met but Gandhi's belief in living with only what is essential. So, the ideals of simplicity can remove unethical attitudes of people and lead to a more sustainable and less consumer driven society.

8.Self-Reliance (Swaraj):-

“Freedom is not worth having if it doesn't include the freedom to make mistakes”.

Globalisation and technological advancements, Gandhi's principle of self-reliance takes on new meaning. The open source software movement, with its emphasis on collaboration and community driven development, reflects the spirit of self-reliance. It's a modern echo of Gandhi's call for individuals and communities to be self-sufficient.

9.Compassion and service(Seva):-

“The simplest act of kindness is by far more powerful than a thousand heads bowing in prayer”.

Nowadays, the entire world is fully marked by social inequality and injustice and division, and that time, sympathy, kindness, empathy and unity can change the world.

Now, we come to the major points which highlight the relevance of Gandhian philosophy in contemporary society. Before going to discuss the relevance first we should know the meaning of society.

The word '**society**' is derived from the latin word '**societus**'. In broader sense society can be viewed from two angles, on the one hand, society is a structure and on the other hand, society is a process. The family, other institutions, customs and traditions, values and beliefs, ideals and superstitions make up a society, this is called the structure of a society. On the other hand there are constant interactions among different institutions,

these interactions constitute the process of a society.

Man's developmental trend always remains alive and active. The trend of new thoughts and ideas are always haunting in the mind of modern man. He is never satisfied with what he has at present. This tendency has led to certain kinds of issues like frustration, stress, anxiety and most probably the feeling of inferiority and most important concern is corruption of today's society, issues related to constitutional rights, democracy, nation building, absence of harmony, happiness, peaceful co-existence, absence of secular attitude. Absence of integrity and social harmony often leads social disorganisation. Now, we highlight some major points which clarify the concept more efficiently:-

1. Peace and Stability:-

Peace is a state of mind. The major component of non-violence is peaceful coexistence. According to him peace and stability require a great level of courage and patience. Now a days people are facing number of problem— war, violence, injustice, terrorism for that the significance of peace and stability is more and more today than the earlier decades.

2. Creation of casteless society:-

The concept of social stratification and social mobility introduce different caste, class, race, discrimination in society. In that case Gandhian philosophy is the best way to create a casteless society where everyone is treated equally irrespective of their caste.

3. Decentralization:-

Decentralisation means distribution of power. Now a days maximum countries of the world and most importantly in contemporary Indian society prefer Gandhian decentralisation to give maximum facility in the hands of local self government to solve the problem from grass root level.

4. Secularism:-

In this present age 'absence of secular attitude' is a controversial topic. Each and every we hear the incidents caused because of the dirty attitude towards religion. In that case Gandhian ideology of 'secularism' develops a tolerant attitude towards a religion and more religious people in the society and country as well.

5. Citizenship training:-

Gandhiji wanted that the one main aim of basic education was also citizenship training. And in our contemporary society, the main concern of education is to train the citizen, and it is important that the child learn the responsibilities and rights of an ideal citizen.

6. Social relevance:-

According to Gandhi education should be a social process and in our contemporary society education is organised in such a way which leads to greater social implications.

Conclusion:-

Society is a system of usages and procedures of authority, mutual aid of many groupings and divisions of controls of human behaviour and liberties. This ever changing complex system we call society. It is the web of social relationships and it is always changing. This is the age of the 21st century, in this age people are moving through the

phases of war, marred by violence and terrorism. When we traced back to the history of India and among all the nationalist or social philosopher 'Mahatmas Political contributions offered us independence and also his ideologies enlighten India as well as the world even today after so many years. For that in the present time the world is grappled with so many problems, so it is necessary to apply Gandhian philosophy in various facets of life and governance.

According to Mahatma Gandhi,

“Be the change that you wish to see in the world”.

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**Intersection of Health and Illness amongst the Adivasi People: A
Sociological Perspective**

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Abstract

The abstract explores the intersection of health and illness among the Adivasi people from a sociological perspective. The Adivasi, a marginalized indigenous community in India, face unique challenges in accessing healthcare services and maintaining their well-being. This study aims to examine the social factors that influence the health status of Adivasi communities and the socio-cultural contexts surrounding their experiences with illness. This paper analyzes the structural and systemic barriers that prevent the Adivasi people from receiving adequate healthcare. Factors such as geographic remoteness, inadequate infrastructure, limited availability of healthcare providers, and discrimination contribute to the disparities in health outcomes within these communities. Further socio-economic factors, cultural beliefs, and traditional healing practices influence the Adivasi's perceptions of health and illness, shaping their healthcare-seeking behaviours. Using a sociological lens, this study aims to understand how social determinants, cultural practices, and inequitable systems interact to impact the health and well-being of the Adivasi people. It also explores the role of social movements, community organizations, and government policies in addressing the health disparities faced by these communities.

Keywords: Cultural Beliefs, Discrimination, Health outcomes, Marginalization, Social Movements

Adivasi tribes in India, representing indigenous and marginalized communities with unique cultural identities, face distinctive health challenges that are shaped by social, economic, and historical factors. The health and illness of Adivasi tribes reflect a complex interplay of traditional beliefs, limited access to healthcare services, and the impact of social determinants on their well-being. It explores the health disparities faced by Adivasi tribes in India and highlights the need for culturally sensitive healthcare approaches to address their health needs effectively. Adivasi communities often experience higher rates of malnutrition, infectious diseases, maternal and child mortality, and limited access to essential healthcare services compared to the general population. Factors such as geographical remoteness, lack of healthcare infrastructure, socio-economic disparities, and cultural barriers contribute to the health challenges faced by Adivasi tribes in India. The health status of Adivasi tribes is significantly influenced by social determinants such as poverty, lack of education, inadequate sanitation, and limited access to clean water. These factors contribute to the prevalence of communicable diseases, malnutrition, and high infant mortality rates within Adivasi communities. Addressing social determinants is crucial for improving the overall health and well-being of Adivasi tribes. Adivasi tribes have rich cultural traditions and beliefs related to health and illness. Traditional healing practices, herbal remedies, and spiritual rituals play a significant role in the healthcare systems of Adivasi communities. Integrating traditional knowledge with modern healthcare approaches can improve health outcomes and promote

culturally sensitive care for Adivasi tribes.

Gender Disparities in Health:

Gender disparities in health outcomes are prevalent within Adivasi communities, with women and children being particularly vulnerable. Maternal and child health issues, lack of access to reproductive healthcare services, and gender-based violence contribute to poor health outcomes among Adivasi women. Gender-sensitive healthcare interventions and empowerment programs are essential to address these disparities.

Health Challenges Faced by Adivasi Communities:

- **Limited Access to Healthcare:** Understanding the barriers to healthcare access, including geographic remoteness, inadequate infrastructure, shortage of medical personnel, and language barriers.
- **Health Infrastructure and Resource Allocation:** Examining the disparities in healthcare facilities, equipment, and resources between urban and rural areas, and their impact on Adivasi health outcomes.
- **Traditional Healing Practices:** Analysing the coexistence of traditional healing systems alongside modern medicine and its implications for Adivasi healthcare-seeking behaviours.
- **Environmental Factors:** Discussing the impact of environmental degradation, deforestation, and displacement on the health and well-being of Adivasi communities.
- **Social Stigma and Discrimination:** Exploring the experiences of stigmatization and discrimination faced by Adivasi people and their consequences on mental and physical health.
- **Anaemia prevalence:** Discussing the high occurrence of anaemia among Adivasi women and children and the associated health consequences.
- **Malnutrition and under nutrition:** Exploring the factors leading to malnutrition, such as food insecurity, limited dietary diversity, and insufficient access to healthcare and proper sanitation facilities.
- **Communicable diseases:** Highlighting the increased susceptibility of Adivasi communities to communicable diseases due to limited healthcare access, poor sanitary conditions, and malnutrition.
- **Maternal and child health:** Discussing the challenges in accessing quality healthcare during pregnancy, childbirth, and infancy, leading to higher maternal and infant mortality rates.
- **Mental health issues:** Examining the psychological challenges faced by Adivasi communities due to cultural dislocation, socio-economic inequalities, and discrimination.

Government Schemes to Mitigate Anaemia and Health Challenges:

- **National Iron+ Initiative:** Discussing the government initiative aimed at addressing the prevalence of anaemia by providing iron and folic acid supplements to vulnerable groups.
- **Integrated Child Development Services (ICDS) scheme:** Analysing the government's flagship program that focuses on the health and nutrition needs of pregnant women and children through the provision of nutritious meals, growth monitoring, and counselling.
- **National Nutrition Mission (Poshan Abhiyan):** Examining the multi-sectoral approach to address malnutrition by integrating healthcare, nutrition, and women empowerment

initiatives.

- Pradhan Mantri Matru Vandana Yojana (PMMVY): Exploring the financial support scheme for pregnant women aimed at ensuring good health and proper nutrition during pregnancy and lactation.
- National Mental Health Program: Discussing mental health initiatives aimed at promoting awareness, providing psychological support, and implementing community-based mental healthcare services.

Policy Implications and Interventions:

- Strengthening Primary Healthcare: Discussing the need to improve the availability, accessibility, and quality of primary healthcare services in Adivasi regions.
- Community Empowerment and Participation: Analysing the importance of involving Adivasi communities in the decision-making processes concerning their health and well-being.
- Culturally Sensitive Healthcare Delivery: Emphasizing the significance of cultural competence and sensitization in healthcare services to address the specific needs of Adivasi populations.
- Land and Resource Rights: Highlighting the role of land and resource rights in improving the socio-economic conditions and health outcomes of Adivasi communities.
- Social Welfare and Development Policies: Discussing the importance of comprehensive social welfare policies targeting education, housing, sanitation, and employment to improve the overall health status of Adivasi populations.

The health issues faced by Adivasi communities, including anemia, malnutrition, and limited healthcare access, underscore the need for comprehensive interventions. Assessing the government schemes targeting these challenges reveals a multi-faceted approach that combines healthcare, nutrition, and community empowerment. However, sustained implementation, monitoring, and increased resource allocation are keys to addressing the health disparities faced by the Adivasi people. By recognizing their unique needs within a broader socio-economic and cultural context, we can work towards improving the overall health outcomes and well-being of Adivasi communities.

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**Exploring the Role of Technology in Fostering Social Development: Insights from
Research**

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ABSTRACT

Research in technology and social development examines how technological advancements intersect with societal progress, aiming to address social challenges and enhance human well-being. It involves assessing the impact of technology on various aspects of society, ensuring inclusivity in innovation, engaging communities in technology design, and considering ethical implications. Researchers also focus on building capacity for technology use, analyzing policy frameworks, and promoting sustainability and resilience. By exploring these areas, the research seeks to foster equitable access to technology, encourage responsible innovation, and inform evidence-based policymaking for sustainable development. Ultimately, the goal is to advance inclusive, sustainable, and human-centered development outcomes through the thoughtful integration of technology into social contexts. Rapid economic growth and technological progress are juxtaposed with a persistent digital divide. Social innovation, driven by collaboration among government, private sector, and social organizations, emerges as a crucial tool. Bridging the digital gap is essential for inclusive progress, requiring concerted efforts and investment in rural areas.

Keywords- *Research, technology, social development, economic development, sustainability, advancement.*

INTRODUCTION:

The turn of the millennium marks a significant historical transformation across various dimensions, including technology, economy, society, culture, politics, and geopolitics. This transformation prompts a critical examination of its implications for social development and individual well-being. One central question revolves around whether there exists a shared meaning of this extraordinary mutation for everyone or if differentiation based on specific relationships to the process of social change is necessary. This differentiation prompts consideration of criteria for categorizing individuals amidst this transformation. Debates rage globally over the mixed outcomes of the information technology revolution and globalization, especially regarding their social dimensions on a planetary scale. These debates often adopt ideological frameworks, simplifying complex issues. Proponents of technology and market faith believe in the inherent benefits of innovation and competition, advocating for minimal regulatory interventions to foster hyper-modernity. Conversely, skeptics view globalization as a rehashed form of traditional capitalist ideology, citing issues like job displacement, poverty, environmental degradation, and privacy concerns as evidence of its negative

impacts. However, the real challenges lie beyond these polarized viewpoints. Social development today hinges on achieving synergistic interactions between technological innovation and human values. This synergy should pave the way for new organizational structures and institutions fostering positive feedback loops between productivity, flexibility, solidarity, safety, participation, and accountability. Such a model of development holds the promise of being socially and environmentally sustainable. While agreement on these overarching goals is attainable, developing policies and strategies to realize them proves challenging. Conflicting interests, values, and priorities contribute to this difficulty. Moreover, a significant barrier to effective policymaking arises from a lack of common understanding regarding the ongoing transformation's processes, origins, and implications. This paper aims to clarify the meaning of this transformation by focusing on two pivotal processes: the technology revolution and globalization. These processes intertwine with others in intricate ways, providing a lens to explore the relationship between the emerging socio-economic system and the amplification of inequality and social exclusion on an unprecedented, planetary scale. Through this examination, insights can be gained into how to navigate the complexities of our evolving world and foster inclusive, sustainable development for all. In the landscape of India's dynamic economic growth and technological advancement, a new wave of entrepreneurship, microenterprises, and microfinancing is reshaping the socio-economic fabric. This transformation, fueled by digital and mobile technologies, is propelling India towards global prominence. However, amidst this progress, there exists a stark digital disparity that impedes inclusive development. While India aligns its development agenda with the Sustainable Development Goals (SDGs), bridging this digital gap becomes imperative for ensuring that the benefits of technology reach every corner of society. Social innovation emerges as a crucial tool in this pursuit, with social innovators, the private sector, and government playing pivotal roles as equalizers, bridging the divide between cutting-edge solutions and underserved communities. This paper examines the landscape of social innovation in India, highlighting the challenges, initiatives, and collaborative efforts aimed at fostering inclusive progress and achieving the SDGs by 2030. Through a lens of technological empowerment, collaboration, and the imperative of equitable access, it explores the transformative potential of social innovation in driving India's digital transition and enhancing the welfare of its citizens.

RESEARCH AND TYPES OF RESEARCH:

Research is a structured investigation aimed at generating new knowledge, validating theories, or solving problems. Integral to various disciplines, research contributes to advancing understanding, innovation, and informed decision-making across diverse fields and industries. It involves systematic data collection, analysis, interpretation, and dissemination of findings.

Generally, research is classified into three types: basic, applied, and action research. This classification is again based on the objectives or purposes of the research that the researcher intends to accomplish.

I. Basic Research:

Basic research, also known as fundamental research, aims to expand understanding by analyzing properties, structures, and relationships to formulate and test hypotheses, theories,

or laws. This type of research addresses "what," "why," and "how" questions and is performed without a specific application in mind. Examples include studying the impact of long-term smoking on skin, remote work on mental health, and micro-mobility devices on urban congestion.

Universities primarily conduct basic research, although businesses also invest in it through partnerships with academic institutions. The results of basic research, focused on gaining knowledge rather than meeting business goals, are typically made public in scientific journals rather than being available for purchase. This collaborative approach contributes to the collective advancement of scientific knowledge.

II. Applied Research:

Applied research is directed towards the solution of immediate, specific, and practical problems. It is performed in relation to actual problems and under the conditions in which they are found in practice. In both basic and applied research, the primary goal is to discover new knowledge, but the distinction lies in applied research's focus on solving specific problems and implementing solutions.

In the business sector, companies differentiate between basic and applied research, often initiating projects to explore the outcomes of basic research. Results from applied research can lead to applications protected by intellectual property laws.

Examples of applied research include developing a new vaccine for a specific strain of virus, designing more efficient solar panels for renewable energy production, and creating software to optimize supply chain logistics for a manufacturing company.

III. Action Research:

Action research, a dynamic and collaborative methodology, finds extensive application in diverse fields such as education, social work, and organizational development. Characterized by iterative cycles of planning, acting, observing, and reflecting, its primary aim is to address real-world challenges and devise practical solutions to enhance developmental processes. A key strength of action research lies in its emphasis on participation, actively involving stakeholders and empowering them in decision-making processes. This participatory approach fosters a sense of ownership among stakeholders and ensures the relevance and effectiveness of interventions. Moreover, action research facilitates continuous improvement through its iterative nature, allowing for adjustments based on ongoing feedback. This iterative process fosters a culture of learning and adaptation, driving innovation and enhancing the efficacy of development initiatives over time.

Furthermore, action research is instrumental in building local capacity by engaging communities or organizations in the research process. By involving stakeholders in problem-solving activities, action research enhances their analytical skills and empowers them to address challenges autonomously, thereby promoting sustainable development outcomes.

Emphasizing experiential learning, action research encourages practitioners to learn through doing, facilitating a deeper understanding of complex issues and fostering a culture of reflection and adaptability. This reflective approach enables practitioners to refine their strategies and interventions in response to evolving contexts, ultimately contributing to the generation of context-specific and sustainable development solutions.

STEPS OF RESEARCH METHODOLOGY:

Research is a systematic process aimed at achieving objectivity by gathering a wealth of information for analysis, enabling the researcher to draw conclusions. This process is integral to all research and evaluation endeavours, irrespective of the research methodology employed, whether it be the scientific method of inquiry, evaluation research, or action research. It revolves around systematically testing hypotheses or ideas within a park and recreation setting and documenting the study in a manner that allows for replication by others. The following steps outline a typical research process:

- a) **Problem Identification:** Clearly define the issue at hand and articulate the question that the researcher aims to explore.
- b) **Literature Review:** Assess existing research and literature relevant to the problem to grasp previous findings and identify any gaps.
- c) **Hypothesis Formation:** Develop testable hypotheses or research questions based on the identified problem and literature review.
- d) **Research Design:** Determine the methodology and approach to data collection and analysis, including the choice between qualitative or quantitative methods, study design selection, and variable identification.
- e) **Population Description:** Define the population or sample to be studied, specifying demographic characteristics or inclusion criteria.
- f) **Data Collection:** Collect data as per the research design, which may involve conducting experiments, surveys, interviews, observations, or other methods.
- g) **Data Analysis:** Analyse the collected data using appropriate statistical or qualitative techniques to test hypotheses or address research questions.
- h) **Report Writing:** Communicate the findings through a research report or paper, encompassing sections such as introduction, methods, results, discussion, and conclusion. Ensure clarity, conciseness, and accuracy in presenting the research process and findings.

TECHNOLOGY:

Technology refers to the application of scientific knowledge for practical purposes, especially in industry, engineering, and commerce. It encompasses a wide range of tools, systems, methods, and processes used to solve problems, improve efficiency, enhance communication, and advance human capabilities. Technology can include physical devices such as computers, smartphones, and machinery, as well as intangible systems like software, algorithms, and networks. It plays a crucial role in shaping society, driving innovation, and influencing various aspects of human life, from healthcare and transportation to entertainment and education.

Two decades ago, technology was characterized by limited connectivity and relatively primitive devices. Mobile phones were primarily used for calls and texts, lacking the advanced capabilities of modern smartphones. Internet access was slow and often achieved through dial-up connections, with websites being simpler and less interactive. Entertainment relied on physical media like DVDs and CDs, as streaming services were not yet prevalent. Transportation was dominated by traditional gasoline-powered cars, with electric vehicles

and self-driving technology still in their infancy. Medical technology was less advanced, with limited imaging capabilities and treatment options.

Fast forward to the present, and technology has undergone a profound transformation. Smartphones are now ubiquitous, offering high-speed internet access, video calls, and a myriad of apps for various purposes. Broadband and fiber-optic internet provide lightning-fast connectivity, enabling the rise of social media, streaming platforms, and e-commerce. Computers and laptops have become more powerful, while tablets and 2-in-1 devices offer versatility and portability. Electric vehicles have gained popularity, and self-driving technology is being developed. In healthcare, medical imaging technologies have revolutionized diagnosis and treatment, while telemedicine allows for remote consultations. Overall, technology has significantly enhanced communication, entertainment, transportation, and healthcare, shaping the way we live and interact with the world around us.

In today's generation, technology is no longer viewed as an option but a necessity for leisure, entertainment, learning, and socializing (Uhls, Michikyan, Morris, Garcia, & Small, 2014). Due to the accessibility of mobile technology, children are constantly engaging with screens (e.g. video games, tablets, and computers) throughout the day in restaurants, in bed, and even during vacations (Giedd, 2012). Research indicates that media exposure begins as early as 2 years of age and approximately 82% of children are online by the 7th grade (Giedd, 2012).

SOCIAL DEVELOPMENT:

Social development refers to the process of improving the well-being, quality of life, and overall functioning of individuals and communities within society. It encompasses various aspects of human interaction, relationships, and societal structures aimed at fostering positive changes and addressing challenges. This includes promoting social inclusion, equity, justice, and cohesion, as well as enhancing individuals' capabilities and opportunities for meaningful participation in social, cultural, economic, and political spheres. Social development initiatives often focus on empowering marginalized groups, reducing inequalities, promoting social mobility, and fostering a sense of belonging and community solidarity. Key components of social development may include education, healthcare, housing, employment opportunities, social safety nets, civic engagement, and cultural enrichment. Ultimately, social development aims to create a more just, equitable, and cohesive society where all individuals have the opportunity to reach their full potential and contribute to the common good.

IMPACT OF TECHNOLOGY IN SOCIAL CHANGE:

Technology and human societies have grown closely intertwined, as technical systems like mobile phones, computers, and TVs, which are produced by humans, reflect the very basis of a population's needs and lifestyle. While technology enhances human life, it raises concerns for future generations. Excessive usage reduces physical activity, impacting health. Cybercrimes like identity theft and hacking exploit vulnerabilities, threatening security and financial well-being. Technology's impact hinges on usage; it's integral in communication, education, work, and exploration. Increased reliance necessitates careful consideration to ensure benefits outweigh drawbacks.

A) Positive impacts of technology in the society:

Technology undoubtedly has a predominantly positive impact on both individuals and society. It simplifies our lives and rewards us with resources and tools that enhance our quality of life. Here are some positive changes that technology brings in the society:

- I. **Improved Communication:** Technology has revolutionized communication, making it faster, more efficient, and more accessible. From traditional methods like letters carried by pigeons to modern tools like mobile phones and social media platforms, communication has become instant and effortless. People can connect with loved ones or share information regardless of distance, fostering stronger relationships and facilitating global connectivity.
- II. **Improved Education and Learning:** Technology has transformed the education sector, providing access to a wealth of knowledge and resources through the internet. Learning has become more interactive and engaging with the availability of online courses, educational videos, and interactive learning platforms. This accessibility democratizes education, allowing people to enhance their knowledge and skills anytime, anywhere, often at no cost.
- III. **Mechanized Agriculture:** Technological advancements have revolutionized agriculture, introducing machinery and technical instruments that streamline farming processes. From automated irrigation systems to precision farming techniques, technology has increased productivity, efficiency, and sustainability in agriculture. Farmers can now optimize resource usage, minimize waste, and maximize yields, contributing to food security and economic growth.
- IV. **Easy Access to Information:** The internet has made information readily accessible to anyone with an internet connection. Most information available online is free, empowering individuals to expand their knowledge, learn new skills, and stay informed on various topics. Whether it's researching for academic purposes, accessing news and current events, or learning DIY skills, technology has made information ubiquitous and easily attainable. Overall, the positive impacts of technology, such as improved communication, enhanced education, mechanized agriculture, and easy access to information, contribute to societal progress, economic development, and individual empowerment.
- V. **Technology and environment:** Technology offers positive environmental impacts through renewable energy advancements, energy efficiency improvements, and precision agriculture. Renewable sources like solar and wind power reduce emissions, while energy-efficient practices cut consumption. Precision agriculture optimizes farming, conserving resources and maximizing yields. Additionally, technology aids in environmental monitoring and pollution control, using sensors and remote sensing for hazard detection. Smart infrastructure enhances resource usage efficiency, mitigating urbanization impacts. Overall, technology fosters innovation and responsible resource management, driving towards a more sustainable future.

- VI. **Technology and Infrastructure:** Science and technology enhance infrastructure through innovative materials, construction methods, and project management systems, improving durability, efficiency, and sustainability. Transportation and communication benefit from advancements in high-speed rail, traffic management, and telecommunications, while energy infrastructure gains sustainability through technology-driven solutions. Our country is also moving towards a big change in the form of infrastructure and it has covered almost all the necessary requirements of society such as roads, flyovers, bridges, hospitals, education institutions, proper housing colonies, public parks, play grounds, public toilets, airports, railway tracks, shopping malls, vehicle parking zones, proper arrangement of domestic garbage, plantation around the roads, national parks, etc for the public welfare.

B) Negative impacts of technology in the society:

Indeed, while technology brings numerous benefits, it also poses certain drawbacks and negative impacts on society:

- I. **Increase in Unemployment:** The adoption of machinery and technical equipment in businesses, while increasing efficiency and reducing costs, often leads to job displacement. This contributes to a rise in unemployment rates as manual labour is replaced by automated processes.
- II. **Increase in Pollution:** Technology, particularly in the form of vehicles and industrial machinery, significantly contributes to environmental pollution. Emissions from vehicles and factories contribute to air and water pollution, leading to adverse effects such as global warming, climate change, and degradation of ecosystems.
- III. **Increase in Health and Mental Concerns:** The sedentary lifestyle encouraged by technology contributes to various health issues, including obesity, cardiovascular diseases, and musculoskeletal problems. Additionally, excessive screen time and social media usage can have detrimental effects on mental health, leading to issues such as depression, anxiety, and sleep disorders. Furthermore, technology often leads to reduced face-to-face interactions, weakening social bonds and increasing feelings of isolation.
- IV. **Increase in Cybercrimes:** The widespread use of the internet has led to a rise in cybercrimes, including identity theft, hacking, phishing, and online scams. These cybercrimes pose significant threats to individuals' privacy, financial security, and overall well-being, highlighting the dark side of technology's interconnectedness.

Despite these negative impacts, it's essential to recognize that technology also presents opportunities for addressing these challenges through innovation, regulation, and responsible usage. By acknowledging and addressing these drawbacks, we can strive to harness technology's potential for the betterment of society while mitigating its adverse effects.

SOCIAL INNOVATION TO BRIDGE THE TECHNOLOGICAL GAP IN INDIA:

India's burgeoning economy and remarkable technological innovations are propelling it towards global prominence. The emergence of a new personal sector, characterized by individual entrepreneurship, microenterprises, and microfinancing, harnesses the potential of digital and mobile technologies. While India's development agenda resonates with the Sustainable Development Goals (SDGs), it's imperative to acknowledge the digital disparity

persisting among a sizable portion of the population, who have yet to benefit from these advancements. Addressing this digital gap is paramount to achieving inclusive progress and ensuring that the benefits of technology reach every segment of society. The pursuit of global sustainable development is a cornerstone of 21st-century objectives, with social innovation serving as a vital tool in its attainment. The Sustainable Development Goals (SDGs) articulate a universal agenda aimed at eradicating poverty, bridging inequalities, combating climate change and environmental degradation, and fostering peace, justice, and prosperity worldwide. Adhering to the SDGs and other global strategies not only provides a roadmap for effecting societal transformations but also enables us to gauge our progress and identify areas requiring further attention and intervention.

In this landscape, social innovators, the private sector, and government emerge as crucial actors. They serve as equalizers, bridging the gap between high-tech solutions and underserved rural communities, ensuring that even the most remote areas benefit from technological advancements. Government participation in social innovation movements is essential, and providing incentives for investments in social innovation can encourage private sector involvement. By offering tax breaks, grants, or other financial benefits to businesses and individuals engaged in social innovation projects, the government can stimulate interest and commitment from the private sector. Aligning government policies with social innovation goals further motivates and legitimizes efforts, creating a collaborative ecosystem to address existing challenges effectively. However, for it to be truly effective, it must be implemented at scale. Social innovation in India is characterized by pioneering initiatives driven by social organizations to address unmet social needs. The process begins with identifying these needs, followed by devising innovative solutions through multidisciplinary teams. Indian social innovators often employ open innovation frameworks, facilitating the replication and scalability of their solutions. This approach has fuelled significant growth within the realm of social innovation in the country, reflecting a dynamic and adaptive response to pressing challenges. In rural India, social innovation empowers farmers and rural communities through organizations like Digital Green and SEWA. Meanwhile, initiatives such as the Atal Innovation Mission, under NITI Aayog foster innovation among youth through programs like Atal Tinkering Labs and World Class Incubators, extending beyond traditional business domains. India's social innovation growth is hindered by a significant digital literacy gap, with only 38% of households being digitally literate. Rural areas suffer from poor connectivity, with over 60% lacking internet access, underscoring the urgent need for bridging the digital divide. Social innovation is pivotal in India's digital transition, aiming to enhance welfare and community wellbeing. Private entities must step up to address funding gaps, especially in early-stage projects, and rethink CSR structures to support long-term innovation programs. Blended finance is crucial for achieving SDGs by 2030, bridging the funding divide for social enterprises.

- Technology plays a vital role, making information and education accessible, particularly in marginalized communities. Initiatives like Digital India and Bharat Net have improved internet accessibility, empowering rural residents with online education opportunities.
- Collaboration is key, as companies should partner with nonprofits, research institutions, and social enterprises to leverage collective expertise. This collaborative approach fosters

innovative solutions and scalability, magnifying overall impact. While India progresses as a tech powerhouse, ensuring equitable access to digital resources is vital. All stakeholders, including social innovators, organizations, and the government, must collaborate to bridge the tech gap, particularly in rural areas with low digital literacy.

THE IMPORTANCE OF TECHNOLOGY IN ECONOMIC AND SOCIAL DEVELOPMENT:

Technological innovation, particularly in Information Communication Technologies (ICTs), serves as a catalyst for economic development and societal advancement in developing nations. Entrepreneurship, crucial for global economic growth, is particularly significant in countries like Nigeria, Egypt, and Indonesia, where micro-entrepreneurs contribute significantly to the GDP and job creation.

The development of wireless technology and ICT infrastructure is paramount for fostering entrepreneurship and small business growth, especially in regions facing challenges such as limited access to capital and market information. Sub-Saharan Africa and countries like Indonesia struggle with poor infrastructure and widespread poverty, hindering entrepreneurs' access to resources and information.

However, basic technologies like mobile phones have proven instrumental in addressing these challenges. Examples from India, Ethiopia, and Kenya showcase how mobile technology empowers individuals and communities. For instance, organizations like the Self-Employed Women's Association (Sewa) in India utilize SMS to disseminate market information to farmers, enabling them to make informed decisions and increase their incomes.

Similarly, initiatives like the Ethiopia Commodity Exchange Program (ECEP) have expanded market opportunities for entrepreneurs, leading to better prices and improved quality of products. In addition, mobile-based platforms like the Hand in Hand Partnership (HIHP) in India and the Farmers Helpful Network (FHN) in Kenya provide training, mentorship, and access to resources, empowering women and farmers to start businesses and enhance their agricultural practices.

Access to mobile technology is particularly crucial for women, as there is a significant gender gap in mobile phone ownership globally. Mobile technology also plays a vital role in education and training, as seen in programs like the Global Ready e-Training Centre in Indonesia, which has helped students acquire valuable skills and increase their income prospects. Moreover, mobile payment systems offer a convenient and efficient way for entrepreneurs to conduct financial transactions, thereby reducing barriers to market participation and fostering economic growth. Overall, mobile technology facilitates access to information, capital, and markets, empowering individuals and driving social and economic development in developing nations.

CONCLUSION:

In India's journey towards global prominence, addressing the digital disparity is paramount. Social innovation, driven by collaboration among social innovators, the private sector, and government, is pivotal. Government incentives can stimulate private sector involvement, while initiatives like Digital India improve internet accessibility. Collaboration magnifies impact, fostering innovative solutions to bridge the tech gap, particularly in rural areas.

Ensuring equitable access to digital resources is crucial for inclusive progress and achieving sustainable development goals. Together, stakeholders must commit to bridging the divide, empowering all segments of society and propelling India towards a future of comprehensive prosperity. In developing nations like Nigeria, Egypt, and Indonesia, ICT innovation, particularly mobile technology, fuels economic growth and societal progress. Despite infrastructure challenges, initiatives like mobile-based market information dissemination and training programs empower entrepreneurs, especially women, to thrive. Mobile payment systems further reduce barriers to market participation, fostering inclusive development. Overall, mobile technology plays a pivotal role in bridging socioeconomic gaps, enhancing access to information, capital, and markets, thereby driving sustainable development and prosperity in these regions.

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National Education Policy 2020: A Theoretical Analysis

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Abstract

True education is that which leads to the full development of human potential, society and the nation. Education plays the most important role in shaping the future of a nation. Education gives human the power to think positively and work productively. Without education it is impossible to think about the progress of a country. Therefore every country has their certain education policies to maintain the education system properly. Similarly India has adopted the 'National Education Policy' after independence and it's being modified time to time as required.

Keywords: Education, Development, Progress, National Education Policy.

Introduction

Change is the law of nature. It is a natural and irresistible process that occurs with the change of time. Society as a part of nature also changes with time. Social change is the nature of society. Indian society is also no exception to this. Indian society has evolved socially, economically, politically and in other ways from the primitive era to the present era. These changes are seen mainly in two ways. First one is the natural changes and the other one is the changes that are done by the human beings. Natural changes cannot be controlled but with the help of human changes one can bring new innovations to the society. In current scenario if we want to bring the changes in the society for its development then first we need to change the education system and the policies of the society. The picture of education in any country shows the priority it gives to its education system. After independence in 1947 the government of India has launched a variety of programmes to address the problem of illiteracy in the country in both rural and urban areas. The Union government established the University Education Commission (1948–1949), the Secondary Education Commission (1952–1953), University Grants Commission and the Kothari Commission (1964–66) to develop proposals to improve the education system in the country. Based on the report and recommendations of the Kothari Commission (1964–1966), under the leadership of Prime Minister Indira Gandhi, the government of India announced the first National Policy on Education in 1968. The second education policy was formulated by the Rajiv Gandhi government in 1986, with some amendments by the Narasimha Rao government in 1992. Over these years the society has evolved in so many ways so does the education, so there was a need for a new education policy. Therefore in 2019 the Ministry of Human Resource Development has drafted a new policy and sought advice from the public and in the year 2020 the third National Education Policy was introduced by the government headed by the Prime Minister Narendra Modi.

National Education Policy, 2020

The National Education Policy 2020 (NEP 2020), which was approved by the Union Cabinet of India on 29 July 2020, outlines the vision of India's new education system. The policy is a comprehensive framework for elementary education to higher education as well

as vocational training in India. It aims at transforming the entire education system of India by the year 2021.

Under this new education policy the education system has been fixed by 2030. According to NEP, 2020 the curriculum to be divided on the basis of the new educational system of 5+4+4+3 in place of previously running 10+20 model. NEP 2020 aims to increase Gross Enrolment Ratio (GER) in preschool to secondary level to 100% by 2030 and in higher education to 50% by 2035. It focuses on promoting multilingualism, and using the mother tongue as a medium of instruction. NEP, 2020 gives emphasis on the importance of vocational education, teacher training, and quality academic research. It also highlights the importance of practical learning, equal education opportunities regardless of socio-economic background. NEP 2020 aims to make India a global superpower of knowledge by providing inclusive, quality education to all learners.

Phases of NEP 2020

The National Education Policy (NEP) 2020 introduces a new 5+3+3+4 system of education in India, dividing education into four distinct phases:

- **Foundational Stage:** Children from 3 to 8 years of age are included in the foundational stage of NEP 2020. This phase is fixed for 5 years in which 3 years of pre-schooling to be done in Anganwadi and class 1 and 2 are included. In this stage education is mainly play based and this stage focuses on the language development of the students.
- **Preparatory Stage:** Preparatory stage includes children from 8 to 11 years encompassing classes 3 to 5. In this stage special attention is given on strengthening language skill and numerical skill. Along with this children will be taught science, art, mathematics etc. through experiments.
- **Middle Stage:** Middle stage includes students aged 11 to 14 years old covering the classes 6 to 8. At this stage the curriculum will be subject based and coding will also be taught from the 6th grade. At this stage all the children will be given opportunity for vocational training as well as vocational internship. More emphasis is given on critical learning and experimental learning in various subjects in this stage.
- **Secondary Stage:** The period of this stage is 4 years covering students of age group 14 to 18 years, spanning classes 9 to 12. At this stage a new multidisciplinary course is introduced where students can choose subjects according to their choice, not within a specified stream. Additionally, the secondary stage aims to develop students' critical thinking skills, adaptability, and offers a variety of subjects including science, humanities, languages, arts, and vocational subjects.

NEP 2020 and its Provision Related to Higher Education

The National Education Policy 2020 introduces significant provisions for higher education in India. It emphasizes the establishment of large, multidisciplinary universities and colleges, aiming for at least one such institution in all over the country. The policy

focuses on various aspects of higher education including, multidisciplinary education, institutional restructuring, optimal learning environments for students, motivated faculty, teacher education, vocational education enhancement, equity and inclusion and the promotion of quality academic research through a new National Research Foundation.

The gross enrolment ratio in higher educational institutions has been targeted to increase from 26.3 percent (the year 2018) to 50 percent under NEP 2020. Also 3.5 crores new seat to be added in higher educational institutions.

NEP 2020 proposes significant changes for the regulatory body of higher education in India. The policy suggests the establishment of a single regulator for higher education, called the Higher Education Commission of India (HECI), to replace multiple regulatory bodies. The HECI will have four verticals to oversee various aspects of higher education. These are:

- **National Higher Education Regulatory Council (NHERC):** It will act as a regulator for the higher education sector including teacher education.
- **General Education Council (GEC):** This will create the framework of expected learning outcomes for higher education programs, that is, their standardization work.
- **National Accreditation Council (NAC):** These institutions are accredited, Will function primarily based on basic criteria; public self-disclosure, good governance and results.
- **Higher Education Grants Council (HGFC):** This body financing work for colleges and universities.

Currently, higher education bodies are regulated through bodies like University Grants Commission (UGC), All India Council for Technical Education (AICTE) and National Council for Teacher Education (NCTE). A multidisciplinary education and research university equivalent to IITs and IIMs will be made. For admission in these, there will be a general entrance test, which will be conducted by the National Testing Agency.

Multiple entries and exit in the undergraduate curriculum in the National Education Policy 2020. The system has been adopted under this, in a three or four year undergraduate program, students will be able to leave the course at different levels and they will be awarded degrees or certificates accordingly. Like, Certificate after one year, Advanced Diploma after two years, and Bachelor's degree after three years after four years, Graduate Certificate with research. Students doing four years degree will be able to do Ph.D. with MA in one year. MPhil program has been abolished in the new education policy. The Academic Bank of Credit will be formed through this policy. In this, the digit or credit received by the students will be preserved digitally.

Provision Related to Digital Education

Under NEP 2020 a National Educational Technological to be formed to promote digital education to carry out the work of coordination for digital infrastructure,

materials, and capacity building. NEP 2020 emphasizes the use of technology to provide high-quality education to students, regardless of their geographical location, aiming to bridge the digital divide and enhance personalized learning experiences. The policy advocates for the development of digital infrastructure in schools, teacher training in digital pedagogy, and the promotion of digital citizenship among students.

Provision to Linguistic Diversity

The National Education Policy 2020 emphasizes the importance of mother tongue in education. The policy advocates for using the mother tongue or local language or regional language until at least Grade 5, preferably until Grade 8 and beyond in both public and private sector schools. The Three-Language Formula in the National Education Policy (NEP) 2020 advocates for students in India to learn three languages with at least two being native Indian languages, including one that is the mother tongue or regional language. It also highlights the need for flexibility in language choices, the training of language teachers, and the evaluation of students' proficiency in all three languages, including English.

Provision to Physical Education

NEP 2020 highlights the significance of physical education in promoting healthy, active lifestyles, improving motor skills, and fostering emotional intelligence among students. The policy envisions a comprehensive educational system that integrates physical education to contribute to the overall well-being and development of students. By emphasizing skill development, proficiency, and overall health through physical education, the policy aims to create a balanced educational environment that nurtures students' physical, intellectual, and moral powers.

Funding Education

The estimated budget for education funding under the National Education Policy 2020 has seen an increase in allocation over the years. In the fiscal year 2023-24, the Finance Ministry allocated 1.12 lakh crore to the education sector, with the Department of Higher Education receiving 44,095 crore. The policy envisions a substantial increase in budgetary allocation for education, aiming to raise it from 2.9% to 6% of the GDP to achieve national objectives and global leadership in education.

Provision for Differently-abled Children

The NEP 2020 includes several provisions to support differently-abled children. These provisions aim to create an inclusive educational environment. NEP 2020 emphasizes the integration of children with disabilities in schools through resources, special educators, and resource centres. NEP 2020 aligns with the Rights of Persons with Disabilities Act, sets up a National Assessment Centre for learning disabilities, and promotes the use of Indian Sign Language and Braille.

Financial Aid to Students

Financial aid to students under the NEP 2020 includes scholarships, interest subsidies on education loans, and credit guarantees for education loans. The Department of Higher

Education (DHE) offers financial assistance to economically weak students, ensuring no one is denied higher education due to financial constraints. Under the umbrella scheme “Pradhan Mantri Uchchatar Shiksha Protsahan Yojana,” various component schemes like scholarships for college and university students, interest subsidy schemes, and credit guarantee funds for education loans are provided.

Recommendations Related To The Educational System

- Teachers’ promotion will be arranged based on performance from time to time through the new education policy.
- The National Council for Teacher Education will develop a professional standard for teachers by the year 2022.
- National level educational for teacher’s education on the advice of NCERT Course content of the course will be prepared.
- Four-year B.Ed. degree for teaching in the new education policy by 2030 will be made mandatory.

Challenges Related to NEP 2020

The implementation of the NEP 2020 in India faces several significant challenges:

- **Funding:** NEP 2020 requires a substantial increase in education spending, aiming to raise it from 4.6% to 6% of GDP, which poses a financial challenge, especially in the current economic climate.
- **Cooperation:** Education of states is a concurrent subject. This is why most states have their school boards. Therefore, the State Governments have to come forward for the actual implementation of this decision. Also, the idea of bringing a National Higher Education Regulatory Campus as the top controlling organization can be opposed by the states.
- **Quality:** Another significant challenge is enhancing the quality of teaching, research, and innovation in higher education demands improvements in teacher training, assessment standards, and promoting research and innovation.
- **Lack of human resources:** There’s a lack of skilled teachers in elementary education. In such a situation, the implementation of the system made for elementary education under the NEP 2020.

Suggestions for the New Education Policy 2020

To enhance the National Education Policy (NEP) 2020, several suggestions have been proposed:

- **Concern for Capacity Building in Higher Education:** Emphasize improving across all domains by redesigning research processes and focusing on capacity building.

- **More Importance on Vocational Education:** Introduce exit points in degree courses to cater to students who want to discontinue studies, promoting vocational education and addressing underemployment issues.
- **Encourage Entrepreneurship and Skill Development:** Increase the encouragement of entrepreneurial activities, more focus on skill development and revive polytechnics to align with industrial demands.
- **Increase Budgetary Allocation on Education:** Enhance the budgetary allocations for education by the government to improve the schooling system and ensure quality education accessibility for all among the country.
- **Increase the Gross Educational Ratio:** To increase the Gross Enrolment Ratio, the Central and State Governments should equally provide special packages to all the institutions.

Conclusion

The National Education Policy 2020 in India brings a significant shift to the education system where more focus is given on all-round development of the students. This policy aims at transforming education by nurturing creativity, critical thinking, and problem-solving skills in students, promoting a multidisciplinary approach, providing freedom to the students in selecting subjects of their choices, integrating technology in education, empowering teachers, and promoting inclusive education for all students. By embracing the changes brought by NEP 2020, India is moving towards a student-centered, inclusive and future-ready education system, equipping learners with essential skills for a rapidly evolving world.

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Graphic Depictions: Exploring the Narrative Potency of Trauma in Marjane

Satrapi's *Persepolis*

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Abstract

Graphic novels have become increasingly popular because of their blend of text and images to tell stories. This study explores how graphic novels vividly portray suffering as a visual phenomenon and how visual narration can offer nuanced perspectives on historical and cultural events. *Persepolis* by Marjane Satrapi is an excellent example of how trauma and suffering may be depicted in graphic novels. The visual narrative enriches the story's depth and profundity, making it more engaging and thought provoking. It also demonstrates the potency of visuals, on conveying deep and memorable narratives.

Keywords: graphic novels, trauma, visual storytelling, narrative, historical trauma, comics

The popularity of graphic novels has grown dramatically in recent years. Combining text and visuals to tell stories is a defining feature of graphic novels. The phrase "graphic novel" was first used in the 1970s by Will Eisner. Comic strips from the early 20th century are the source of graphic novels. The medium has developed from its modest beginnings in serialised newspaper comics, and the comic book boom brought with it an abundance of superhero characters and storylines. In his book *Men of Tomorrow: Geeks, Gangsters, and the Birth of the Comic Book*, Gerald Jones pointed out that this kind of narrative has been crucial in offering fresh viewpoints and social commentary. Later in the 20th century, there was a change towards larger-scale, more intricate works that were later identified as graphic novels. Through this change, the medium has started to explore a wide range of topics and intricacies shaping the modern understanding of what constitute a graphic novel: a coherent narrative piece with sophisticated character development and plots presented in book form. The graphic form is no longer limited to the comic book genre.

The profound emotional and psychological implications of trauma and emotional anguish are particularly well-portrayed in graphic novels. Graphic novels have the ability to depict suffering in a visceral and compelling way that captivates readers on an emotional and visual level through the use of sequential art. Graphic novels employ a variety of visual languages, such as harsh contrasts, disjointed panel layouts, and exaggerated face emotions. These methods are employed to illustrate how traumatic experiences are unusual, disorganised, and fragmented. For instance, shadowy figures can stand in for overwhelming horror or recollections, while crimson hues can be employed to symbolise bloodshed or sorrow. By using time as a broken or looping concept, the comic page itself can also be utilised to illustrate the cyclical nature of traumatic past events or flashbacks. Graphic novelists can also delicately portray characters' conflicts with past events through the use of metaphors or



symbolically rich imagery. The primary focus of this paper is to examine the portrayal of suffering as a visual phenomenon and how visual storytelling can provide nuanced perspectives on historical and cultural events.

Trauma is a very upsetting experience that can negatively affect a person's physical, mental, and emotional health in a significant and long-lasting way. It frequently results from circumstances that are too much for one person to handle, like natural disasters, disputes, abuse, or the death of a loved one. Trauma's after effects can last longer than the actual incident and cause symptoms like anxiety, mood swings, flashbacks, and other problems that make it hard to go about everyday tasks and

keep up relationships. Trauma can impede survivors' memory and capacity to describe what happened to them, making it impossible to tell the whole story. Since painful memories go beyond the bounds of traditional communication, language is frequently unable to adequately capture their depth. It can be difficult for survivors to put their emotional and sensory experiences into words. Graphic novels are important because sometimes strong emotions can be efficiently represented through graphics.

Many graphic writers utilize this medium to recount their traumatic past. Art Spiegelman's *Maus* series was instrumental in popularizing the concept of using comics to narrate poignant and insightful stories. Writers like Marjane Satrapi have followed this tradition by depicting childhood trauma in her four volumes personal memoir, *Persepolis*. Satrapi is a French-Iranian filmmaker, illustrator, and graphic novelist who has gained international acclaim for her work. *Persepolis* was adapted into an animated film in 2003 and has been praised for its powerful depiction of the writer's experiences growing up in Iran. Satrapi has authored several additional graphic novels in addition to *Persepolis*, such as *Embroideries* (2006), *Chicken with Plums* (2006), *Monsters are Afraid of the Moon* (2006), and *The Sigh* (2011).

Persepolis is about Marjane's childhood and adolescence in Iran, both before and after the Islamic Revolution. The title of the work, which is derived from the name of the ancient Persian capital, represents the rich cultural history that provides the backdrop for Satrapi's personal experience. When the book began, Marji, the central character was ten years old. It was the year following Iran's revolution. Despite her family's secular background, Marji was compelled to wear a veil and attend girls-only schools. The book offers a unique child's perspective on Iran's history, tracing its illustrious past as the Persian capital of Persepolis to the turbulent events that have shaped the country's present.

Figure 1: *Persepolis* 1 p.1

In graphic novels, the emotional and physical dimensions of pain are often communicated through visuals, portraying suffering as a visual reality. As Hilary Chute remarked,

Graphic narratives draw trauma—a phenomenon characterized by its unspeakability, invisibility, and silence—out into the open spaces of the comic page. Furthermore,

graphic narrative represents unseen wounds in a readable form of visually; a combination of words and pictures linked graphically in sequence provides an alternate means of depicting trauma's ineffable and disorienting nature. (Chute 3)

Throughout *Persepolis*, Satrapi uses visual imagery to illustrate the various ways in which sorrow can take on different forms. She employs stark black and white illustrations in the novel to narrate suffering. Her visuals are simple, yet poignant, often using strong contrast and minimalistic details to convey complex emotions and oppressive atmosphere of the time. In a moving sequence, she portrays the bombing of her neighborhood, showcasing buildings collapsing and people fleeing for their lives. The striking contrast between the black and white hues emphasizes the horrific nature of the violence, providing readers with a visual representation of the devastating impact of war on both individuals and communities. The monochromatic colour scheme symbolises the loss of happiness and innocence in a country gripped by political unrest. Characters are usually depicted in confined spaces or as silhouettes against large, blank backgrounds, which symbolises how personal wants are imprisoned within a more oppressive socio-political setting. Satrapi also employs metaphors and symbols in her graphic novel to illustrate the psychological and emotional toll that pain takes. She illustrates the harsh nature of the Islamic regime and its effects on women in Iranian society by using recurring motifs, such as the veil. It is possible to interpret the visual motif of the veil as a metaphor for women's forced identities and lack of personal autonomy. The combination of visual symbolism and panel structure, layout and rhythm heightens readers' comprehension of pain as a lived experience. The narrative's pacing and panel arrangement are purposefully designed to convey a sense of unease and urgency while also echoing the turbulent and erratic times that the book describes.

Graphic narratives provide a more profound understanding of cultural and historical themes by utilizing visual elements, such as photographs, images, and panels, to create a multifaceted experience that goes beyond words alone. By fusing historical events with her personal experiences, Satrapi offered a distinctive viewpoint on Iranian history and culture in her work. The Iranian community's life was completely transformed by the Islamic Revolution. For a period of two years, all multilingual colleges and universities were shut down. One of the religious leaders defended this by declaring, "The education system and what is written in school books...are decadent. To make sure that our kids are not misled from the genuine path of Islam, everything needs to be changed" (Satrapi 77). When Marji got home from abroad, she saw that the streets had been renamed after martyrs. Guardians of Revolution were stationed in the streets, where they "arrest women who are improperly veiled" (Satrapi 136). In addition, the devaluation of the Iranian currency caused the Iranian economy to start to waver, which made life even worse for people. All forms of freedom are being strangled by various forms of oppression.

A recurring theme in *Persepolis* is the lasting impact of childhood trauma. Throughout the book, Satrapi depicts the effects of various traumatic incidents on Marji, as she grows up and reaches adolescence in Iran during the Islamic Revolution. One illustration of *Persepolis'*

portrayal of childhood trauma is Marji's account of witnessing the revolution's cruelty and violence. This harrowing experience significantly alters Marji's future and leaves a profound impression on her mind. Marji's journey to Europe alone at the age of fourteen, after being forcefully separated from her parents, is another example of childhood trauma in *Persepolis*. Marji struggles to comprehend why children in Europe talk so much about sex or disrespect their parents, leaving her feeling perplexed by their customs. As Marji matures into a young woman, she becomes involved in drug deals and sexual experimentation. After her lover Markus betrays her, Marji turns to homelessness out of desperation. She is hospitalized with bronchitis for two months before contacting her parents, who arrange for her return home. Through this tragic incident, Marji learns about the harsh realities of war and displacement,



matures rapidly, and is forced to take on adult responsibilities at a young age. These horrifying events in *Persepolis* show how early trauma may have a long-lasting effect on an individual's emotional and mental well-being.

At home, Marji had to start her life once again. Marji no longer fits in the society and thus she tried to commit suicide. After surviving, Marji transforms into a new person: new clothes, a new hairstyle, and a new perspective. She starts dating Reza, began to work as an aerobics instructor and also enrolls at an art school. Marji and Reza encounter moral police on multiple occasions during this time, and they are subject to being whipped or fined for being spotted together without marriage. Marji and Reza eventually decide to get divorced due to their unhappy

marriage. Throughout this difficult time, Marji's grandmother, who has experienced divorce in the past, provides her with support and encouragement. Ultimately, Marji realizes that she must leave her family in order to live the life she desires. In a scene repeated from when she departed for Austria at the age of 14, she bids her parents farewell at the airport. Even though Marji is now an accomplished artist and adult, parting is still emotional. She states in the last paragraph, "Freedom had a price" (Satrapi 344).

Figure 2: *Persepolis* 2 Skiing p.120

Persepolis demonstrates how pain can be passed down through generations, as evidenced by Marji's relationships with her parents and grandparents. The traumatic experiences that Marji's family members endured during the Iran-Iraq War significantly impacted their parenting styles and interactions with one another. This illustrates the profound influence of trauma on successive generations and highlights its manifestation in familial interactions. In *Persepolis*, Satrapi deftly employs the graphic novel medium to translate her collective and personal trauma in to

a visual language that is both emotionally resonant and easily comprehensible, portraying not just the events but also the inner turmoil they cause.

Marjane Satrapi's *Persepolis* serves as a compelling example of how graphic novels can effectively depict suffering and trauma. Satrapi's use of visual storytelling let readers to become fully immersed in the cultural and emotional aspects of her story, in addition to understanding the events that moulded Iran during her upbringing. The characters' body language and facial expressions are visible to readers, which deepens their comprehension and feelings. Satrapi conveys difficult concepts and subjects through artistic iconography. She portrayed the juxtaposition between political persecution and the Iranian people's tenacity through inventive pictures. The story is made more intriguing and thought-provoking by the visual storytelling, which further enhances the story's depth and complexity. Visual elements can provide a universal language that transcends language and cultural barriers, making the experiences portrayed in the book more relatable and understandable to a larger readership. The way in which Satrapi skillfully employs visual storytelling in *Persepolis* emphasises the significance of this medium in shaping cultural and historical narratives. It also shows how effective images can be in telling complex and memorable stories.

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**Trend analysis of rainfall and change point detection in Barpeta district of Lower
Brahmaputra Valley (LBV) zone of Assam**

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ABSTARCT

Analysing rainfall trends is important for understanding climate patterns, managing water resources, and planning agriculture practices. Rainfall trends indicate changes in climate conditions, including increases, decreases, and fluctuations over time. The present study analyses the seasonal and annual rainfall trends in Barpeta district of Assam from 1970 to 2023. Parametric and non-parametric test like Linear regression, Mann-Kendall (MK) test and Sen's slope estimator were used to understand the trend pattern in rainfall time-series data which indicated no statistically significant trend in both annual and seasonal rainfall distribution. Pettitt's test based statistical non-parametric test which was employed to detect change point in time series dataset indicated that there was only one statistically non-significant change point in the year 1999 and no other change point were determined during the rest of the years and in seasonal rainfall analysis over the given period.

Keyword: Rainfall; Trend Analysis; Linear Regression; Mann-Kendall test; Pettitt's test.

INTRODUCTION

Rainfall is an important part of the hydrological cycle, and changes in its pattern directly affect water availability. As a result, these changes had a wide-ranging impact on water resources, the environment, terrestrial ecosystems, the ocean, biodiversity, agriculture, and food security. Rainfall has a significant impact on the Indian economy, and understanding precipitation patterns is critical for the country's economic development, effective disaster management, and strategic water resource planning (Yadav *et al.*, 2014). As a result, it is important to determine whether there is a trend in rainfall or a pattern in variability. Vegetation is an important component of the terrestrial ecosystem, contributing to the carbon cycle, energy transfer, climate regulation, and water balance. The response to climate change has been identified as one of the key features of ecological research. Gross primary productivity (GPP) has been identified as an important indicator for monitoring the effects of climate change (Wang *et al.*, 2016). Climate conditions, geochemical characteristics, human activity, and ecosystem attributes are the primary factors that influence GPP. Climate conditions have been shown to be the most important factor among those mentioned (Nemani *et al.* 2003). Sridhara and Gopakkali (2021) used a non-parametric test to analyze rainfall trends in 18 Taluks in south Karnataka, whereas Waghaye *et al.* (2018) investigated rainfall trend and change point detection in Andhra Pradesh and Telangana. Building upon the existing research, our study aims to further explore the trends in annual and seasonal rainfall, with a specific focus on detecting change points. By doing so, we hope to contribute to a deeper understanding of how rainfall variability impacts various facets of

our environment and economy, thus aiding in more informed decision-making and resource management strategies.

MATERIALS AND METHODS

Study area

Barpeta district which is situated in the Lower Brahmaputra Valley zone of Assam lies between 26°19'49.52" to 26°33'04.21" North latitude and 91°00'14.6" to 91°00'40.55" East longitude. The Net cropped area of the district is about 115978 ha and gross cropped area is 194843 ha with cropping intensity of 168 per cent. Fig. 1 depicts the study area map of Barpeta district, Assam. The river Brahmaputra flows from east to west across the Southern part and the tributaries of these river that flows through the district are Beki, Manah, Pohumara, Kaldia, Palla, Nakhanda, Marachaulkhowa and Bhelengi flowing from North to South. The convergence of these rivers creates flood-like situations annually, impacting the agricultural activities and livelihoods of the people in the region.

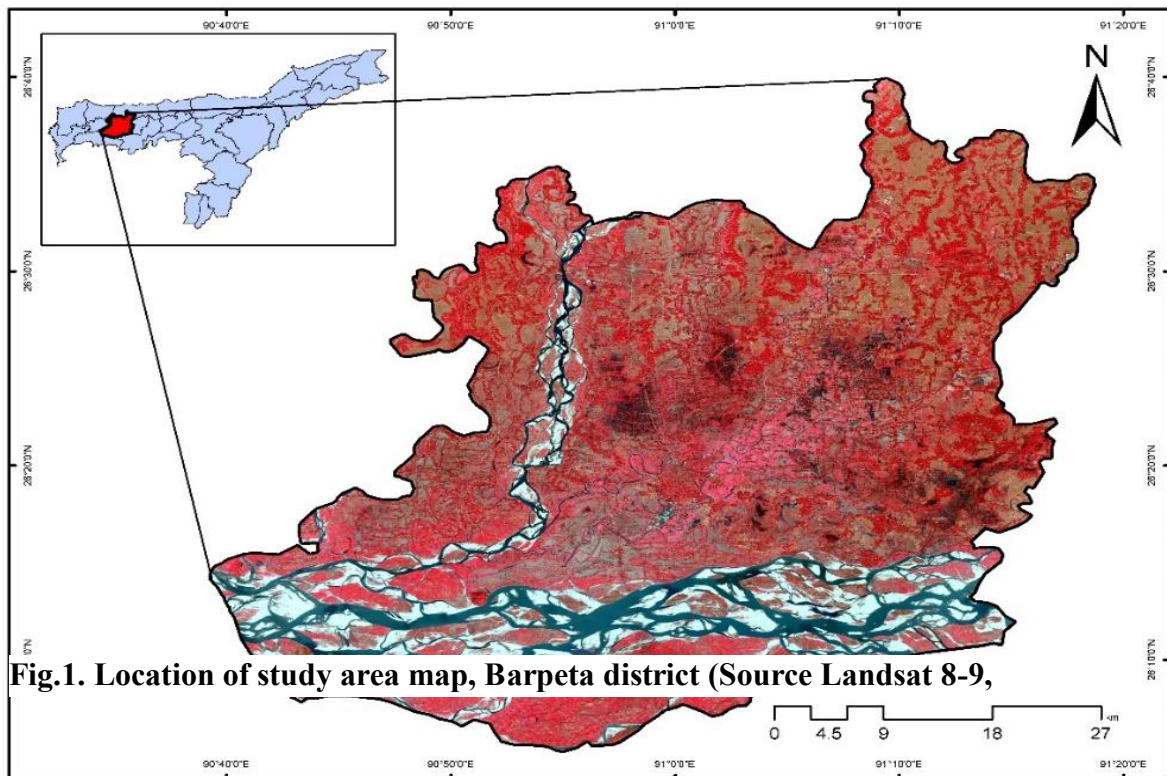


Fig.1. Location of study area map, Barpeta district (Source Landsat 8-9,

Data used

For the study daily rainfall data for 53 years (1970 – 2023) was obtained from gridded data at 0.25 x 0.25 degree spatial resolution provided by India Meteorological Department (IMD), Pune. For analysis of variability in rainfall distribution pattern, various trend analysis methods have been applied to the obtained rainfall data. The analysis aims to elucidate the trend pattern of annual mean rainfall and seasonal rainfall

viz., pre-monsoon (March-May), monsoon (June- September), post-monsoon (October-December) and winter (January-February).

Linear regression

The linear regression analysis is one of the most often used parametric models for detecting trends in data series. This model defines a relationship between the two variables, dependent and independent, by applying a linear equation to the collected data. The linear regression model is broadly defined by the equation:

$$Y = a + mX$$

Where, Y is the dependent variable, X is the independent variable, m is the slope of the line, a is the intercept constant.

Mann-Kendall (MK) test

Mann-Kendall trend (MK) test is a non-parametric test, which is an alternative method to the parametric method of trend analysis. It is the most suitable test for detecting the trend for rainfall data. The Mann-Kendal statistic (S) is given in the following equation:

$$S = \sum_{i=1}^{n-1} \sum_{j=i+1}^n \text{sign}(x_j - x_i)$$

Where, x_j and x_i are the annual values in years j and i , $j > i$ respectively. The values of $\text{sign}(x_j - x_i) = 0$. This statistic represents the number of positive differences minus number of negative differences for all the differences considered. For large samples ($N > 10$), the test is conducted using Z statistic with the following mean and variances:

$$E(S) = 0$$

$$\text{Var}(S) = \frac{1}{18} n(n-1)(2n+5) - \sum_{i=1}^n t_i(i-1)(2i+5)$$

Computing the MK test statistic, Z_{MK} , is performed as follows:

$$Z_{MK} = \frac{S-1}{\sqrt{\text{Var}(S)}} \text{ if } S > 0,$$

$$0 \text{ if } S = 0,$$

$$S \frac{S+1}{\sqrt{\text{Var}(S)}} \text{ if } S < 0$$

A positive and negative value of Z indicate that the data tend to increase or decrease with time, respectively. To test either an upward or downward monotonic trend at α level of significance H_0 is rejected if $|Z_{MK}| \geq z_{1-\alpha/2}$

Sen's slope estimator

Sen's slope estimator has been widely used for determining the magnitude of a trend. The Sen's slope estimator is a linear slope estimator that works most effectively on monotonic data. Unlike linear regression, it is not greatly affected by data errors, outliers, or missing data. Here, the slope (T_i) of all data pairs can be computed by:

$$T_i = \frac{x_j - x_i}{j - i} \text{ for } i = 1, 2, \dots, n$$

Where, x_j and x_i are considered as data values at time j and i ($j > i$) correspondingly. The median of these n values of T_i is represented as Sen's estimator of the slope, which is given as:

$$Q_{Med} = \frac{T_{N+1}}{2} \text{ if } N \text{ is odd}$$

$$\frac{1}{2} (T_{\frac{N}{2}} + T_{\frac{N+2}{2}}) \text{ if } N \text{ is even}$$

Sen's estimator is computed as $Q_{Med} = \frac{T_{N+1}}{2}$ if N appears odd, and it is considered as $Q_{Med} = \frac{1}{2} (T_{\frac{N}{2}} + T_{\frac{N+2}{2}})$ if N appears even. In the end, T_{med} is computed by a two-sided test at $100(1 - \alpha) \%$ confidence interval and then a true slope can be obtained by this non-parametric test.

Pettitt's test

It is used for detection of change point. The nonparametric test makes no assumptions regarding the distribution of the data. Pettitt's test modifies the Mann-Whitney test based on ranks to determine the shift's time of occurrence (Pettitt, 1979). The null hypotheses under the test are no change in distribution of time series.

$$\text{Test Statistic: } U_i = \sum_{i=1}^t \sum_{j=t+1}^n \text{sign}(x_i - x_j)$$

$$\text{Sign}(x_i - x_j) = -1 \text{ if } (x_i - x_j) > 0$$

$$0 \text{ if } (x_i - x_j) = 0$$

$$+1 \text{ if } (x_i - x_j) < 0$$

The most significant change point selected using test statistic K_T is given by $K_T = \text{Max}|U_t|$.

RESULT AND DISCUSSION

The present section describes the results obtained from descriptive analysis of daily rainfall for the period of 53 years (1970 – 2023) is presented in Table 1 and depicted in Figure 2 and 3. The observed annual mean rainfall of the district during the was about 2205.1 mm with coefficient of variation value 18 per cent. Monsoon season contributed highest (64 per cent) to the total annual rainfall followed by pre-monsoon season which contributed about 28 per cent. The contribution of post-monsoon and winter season was less about 7 per cent and 1 per cent respectively as compared to other two seasons.

Table 1. Descriptive statistics of rainfall (1970 – 2023):

Station/ District	Barpeta
<i>Annual rainfall</i>	2205.1 mm
C.V (%)	18 %

Seasonal rainfall

Pre-Monsoon	609.3 mm
C.V (%)	8 %
Monsoon	1410.6 mm
C.V (%)	11 %
Post-Monsoon	150.8
C.V (%)	5 %
Winter	34.1
C.V (%)	2 %

(C.V: Coefficient of variation)

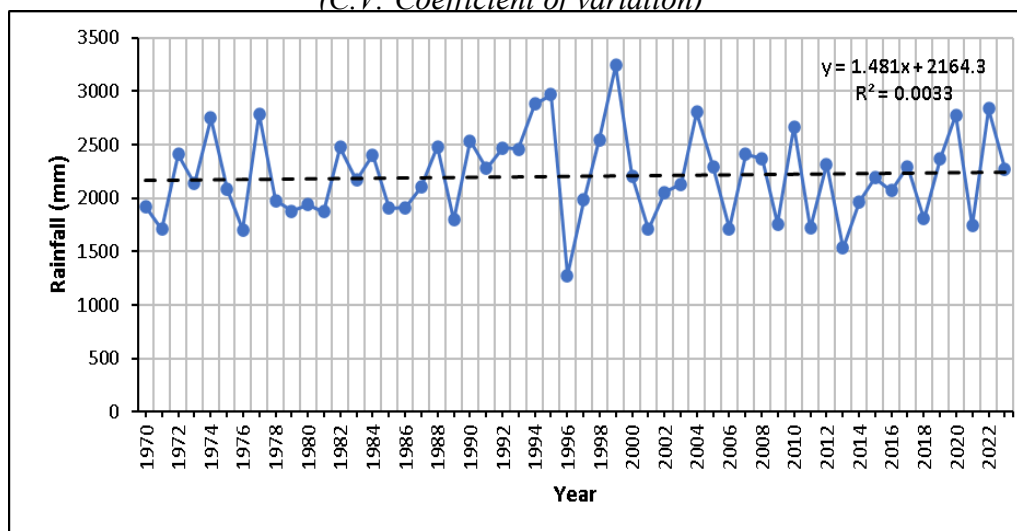
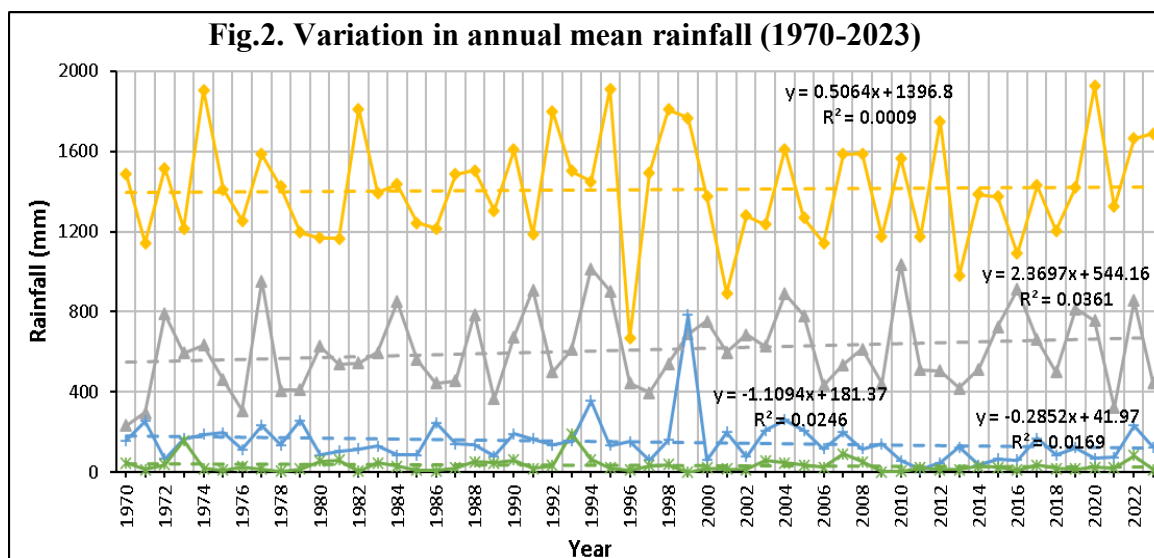


Fig.2. Variation in annual mean rainfall (1970-2023)

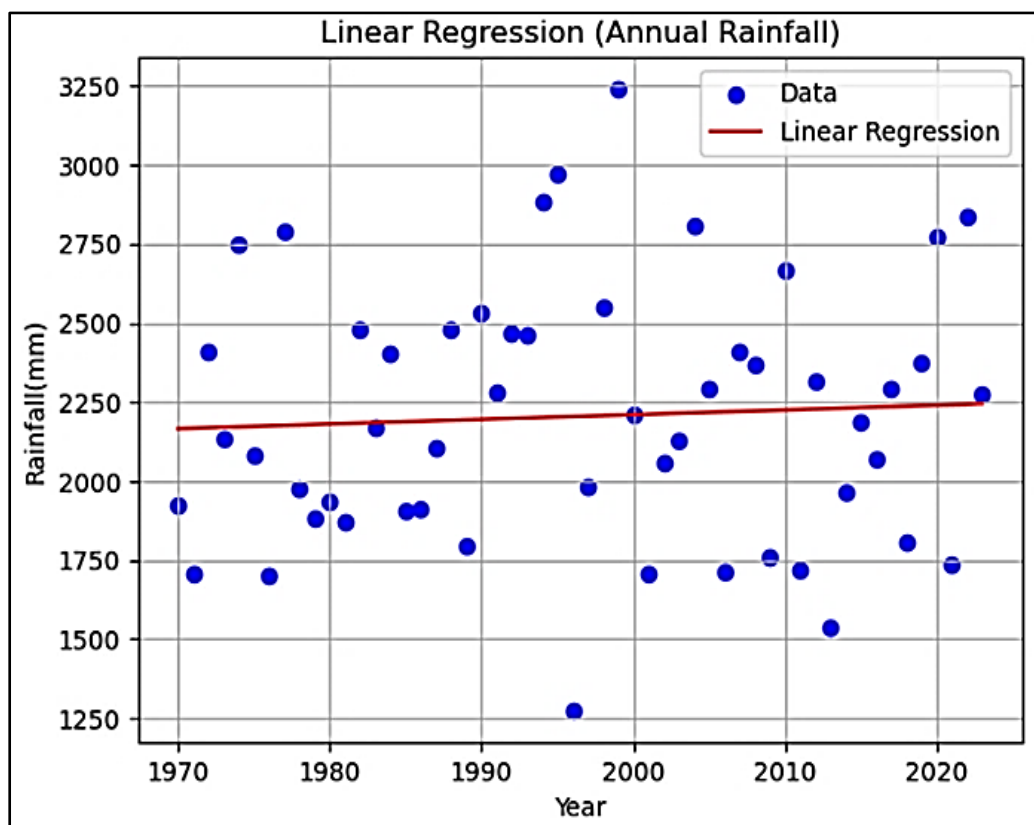


Linear regression trend

Fig.3. Variation in seasonal rainfall distribution pattern (1970-2023)

The annual and seasonal rainfall in Barpeta district of Assam is depicted in Fig. 2 and 3. Annual rainfall is subjected to non-parametric linear regression test. Figure 4 and 5, shows a lineartrend line falling over the annual and seasonal rainfall time series from

1970 to 2023. The annual rainfall of the district exhibited non-significant upward trend through out the years. Monsoon season rainfall which contributed highest to the total annual rainfall showed a non- significant upward trend. Likewise, pre-monsoon rainfall also showed a non-significant upward trend in the study area. The post-monsoon and winter rainfall displayed non-significant downward trends. The coefficient of determination (R^2) value was found to be lower in magnitude in case of winter and post-monsoonal rainfall, which indicates that linear regression method is not a better fit for the data under consideration (Table 2).



Ta Fig.4. Linear regression trend of annual time-series rainfall data (1970-2023)

ble 2. Linear regression analysis of annual and seasonal rainfall (1970-2023):

Parameter	R^2 value	Intercept	Trend	p-value
Pre-Monsoon	2.36	-4121.6	NS	>0.05
Monsoon	0.50	399.7	NS	>0.05
Post-Monsoon	-1.10	2365.8	NS	>0.05
Winter	-0.28	603.5	NS	>0.05
Annual	1.48	-751.8	NS	>0.05

(NS: Non-significant trend)

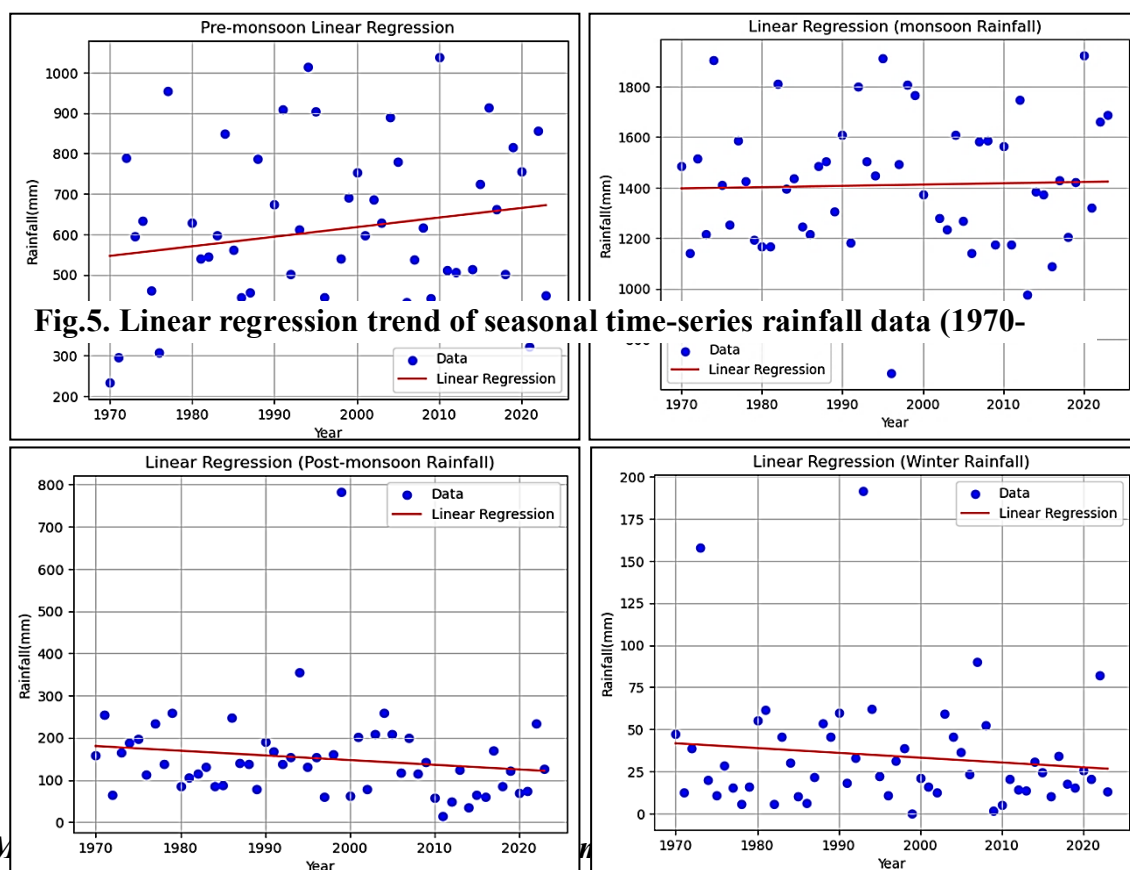


Fig.5. Linear regression trend of seasonal time-series rainfall data (1970-

Table 3 shows the findings of MK trend analysis for annual and seasonal rainfall in Barpeta district during 1970 to 2023. A non-significant increasing trend of 2.6 mm/year and 0.71 mm/year was observed in pre-monsoon and monsoon season respectively. Post-monsoon and winter season rainfall showed a non-significant decreasing trend of -1.22 mm/year and -0.11 mm/year in both the seasons respectively. Overall, the annual rainfall over the study area showed a non-significant increasing trend of 1.84 mm/year throughout the period of study.

Table 3. Mann-Kendall (MK) test and Sen's slope estimator of annual and seasonal rainfall (1970 – 2023):

Season	z-value	p-value	Tau value	Trend	Sen's slope
Pre-Monsoon	1.31	1.19	0.12	NS	2.6
Monsoon	0.31	0.39	0.03	NS	0.71
Post-Monsoon	-0.48	0.564	-0.175	NS	-1.22
Winter	-0.164	0.22	-0.06	NS	-0.11
Annual	0.57	0.65	0.053	NS	1.84

(NS: Non-significant trend)

Change point detection-Pettitt's test

The change detection analysis of seasonal and annual rainfall (mm) has been conceded using Pettitt's test, and the results are shown in Table 4 and depicted in Figure 6. The results indicated that only one non-significant change point was observed in the year 1999, and all other remaining years were found to be non-significant, indicating absence of change point for rainfall data in the remaining time-series data. Similarly, non-significant result for pre-monsoon, monsoon, post-monsoon, winter and annual rainfall also indicates the absence of change point in seasonal rainfall.

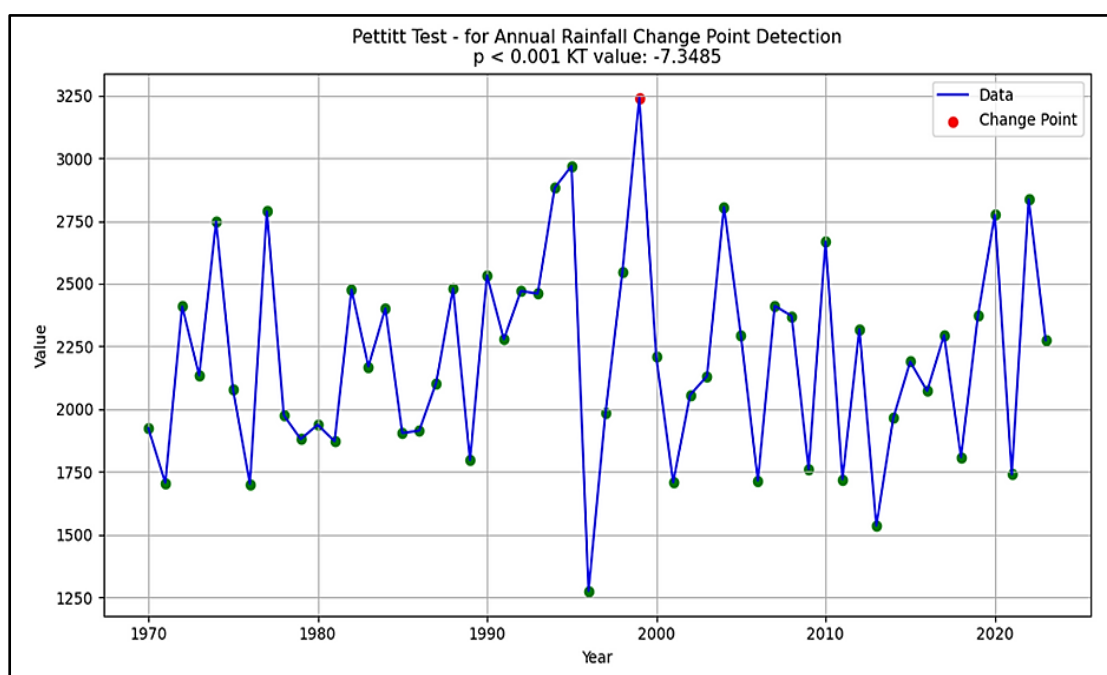


Fig.6.Pettitt's test change point analysis of annual rainfall (1970-2023)

Table 4. Detection of change in point by using Pettitt's test of annual and seasonal rainfall 1970-2023

Parameter	KT-value	p-value
Pre-monsoon	-7.345	<0.001
Monsoon	-7.345	<0.001
Post-monsoon	-7.345	<0.001
Winter	-7.345	<0.001
Annual	-7.345	<0.001

CONCLUSION

The study investigated the seasonal and annual trends in rainfall at Barpeta district of Lower Brahmaputra Valley zone of Assam from 1970 to 2023. To find long-

term trends in the time-series data, the parametric method, namely, linear regression trend, and non-parametric tests, such as Mann Kendall (MK) test and Sen's slope were utilized. The linear regression trend results indicated that there was increasing trend in annual rainfall data and both increasing and decreasing trend patterns in the seasonal rainfall data. The MK test found a non-significant increasing (1.84 mm/year) trend of annual rainfall. Furthermore, we observed no statistically significant trend in the seasonal rainfall distribution. The Pettitt's test revealed the presence of only one statistically non-significant change point in the year 1999, whereas, all other years, seasons showed no change in distribution of time series. The fluctuation of rainfall is a big issue, given that the study area susceptibility to flood issue and the critical importance of water management for agriculture and livelihoods, our findings hold significant implications. By providing insights into long-term rainfall trends and distribution patterns, the study will help to equip the decision-makers with valuable information to mitigate future climate risks effectively. Understanding the seasonal water budget is crucial for crop planning, ensuring water security, and safeguarding the overall livelihoods of farmers in the region. Therefore, the present study will serve as a valuable resource for policymakers in formulating strategies to address the challenges posed by fluctuating rainfall and flood risks in the Barpeta district and similar regions.

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Exploring the Challenges Faced by Adolescents

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Adolescence is a crucial period in a person's life. It is a pivotal period in a person's life that has a significant impact on human's development and future trajectory. The word "adolescence" is derived from the Latin word "Adolescere", which means "to grow up" or "to mature". This period typically starts around the onset of puberty, which generally occurs between the ages of 12/13 and lasts until the late teens or early twenties. However, the exact beginning of adolescence can vary from person to person. This period is considered as a transitional period of human life because it marks the transition from childhood to adulthood. It is a phase of life of a person when he or she is no more a child and not yet adult. During this stage, the life is full of tremendous energy. Many thinkers, philosophers and sociologists have commented on adolescence since the early history of mankind. Aristotle (4th century BC) commented that adolescents think that they know everything and are quite sure of it! The French philosopher Rousseau (16th Century) thought that reasoning develops in adolescence. World Health Organization(WHO) defines adolescence as a phase of life between 10-19 years of age characterized by physical growth, emotional, psychological and behavioural changes, thus, bringing about transformation from childhood to adulthood. These changes usually occur a year or two earlier in girls than boys. Some of the changes are externally visible and some are internal. These changes are normal and natural and are due to release of various hormones in both boys and girls. G. Stanley Hall (1844-1924) is regarded as the Father of scientific research in adolescence. He coined the term "storm and stress" to describe this crucial stage of adolescence. He devised the concept that adolescence is a turbulent time charged with conflict and mood swings. G. Stanley Hall described adolescence period as storm and stress based on his research. He argued that during this pivotal stage, adolescents experience significant turmoil and conflict as they navigate physical, emotional, and social changes. They go through a state of great disturbance, confusion, or uncertainty. Hall's concept of adolescence as a turbulent period of development remains influential in the field of psychology.

An adolescent is a young person who is in the stage of adolescence. They go through a lot of changes in terms of rapid physical, psychological, emotional, social changes as they transition from childhood to adulthood. Adolescents also face numerous challenges that can significantly impact an individual's well-being. Understanding this problems and challenges is crucial for supporting adolescents as they navigate this complex phase of life. The following points will highlight the problems and challenges faced by adolescents in the crucial phase of adolescence:

1. **Rapid physical changes:** One of the significant aspects of adolescence period is the onset of puberty, accompanied by significant physical changes. Physical changes in boys include shoulders broaden, muscles develop, voice deepens, growth of moustaches and beard, growth of underarm, chest and genital hair, penis enlarge, sperm production begins etc. While,

physical changes in girls include breasts develop, skin becomes oily, hips widen, growth of underarm and genital hair, uterus and ovaries enlarge, menstruation begins, etc. These changes can be both thrilling and intimidating for adolescents. Body image concerns may occur as they compare themselves to societal ideals which may lead to feelings of insecurity.

2. Emotional and Social Changes: There are certain changes which are not observable as physical but definitely the behaviour of adolescents changes due to emotional and social changes. These changes include emotional instability, preoccupied with body image, frequent mood changes, self-exploration, conflicts with family, attraction towards opposite sex, etc. Parents and guardians respond according to their own values and traditions to the changes in adolescents.

3. Academic Pressure: Academic pressure contributes high levels of pressure, stress, anxiety among the adolescents. The academic demands have increased in recent years. The fear of failure and uncertainty about the future can lead to mental health issues such as depression and anxiety disorders.

4. Identity Formation: Adolescence is considered as a period of self-discovery and identity formation as individuals explore their values, beliefs, and sense of purpose. However, this can be challenging as adolescents grapple with questions of identity, sexuality, and belonging.

5. Peer Relationships: During the period of adolescence of adolescents, peer relationships play a tremendous role. Peer influences adolescents' social, emotional, and cognitive development. Friendships provide support, validation, and companionship during this crucial phase of adolescents. At the same time, they can also be sources of conflict and peer pressure. Bullying, peer rejection, and social exclusion are common experiences among them, which can have a lasting effect on the mental health of the adolescents.

6. Family Conflicts: The environment of the family where an adolescent grows significantly influences adolescents' lives. The family environment shapes adolescents' values, beliefs, and interpersonal relationships. Conflicts within the family, parents' expectations, and communication breakdown can create stress and depression among adolescents. Some other family issues like divorce, parental substance abuse, affect the mental well-being of an adolescent.

7. Risk-taking Behaviour: Adolescents are often engaging in risky behaviour due to their still-developing brains. Experimentation with drugs, alcohol, and sexual activity can have serious impact for adolescents' health and well-being.

Therefore, understanding these changes and challenges is crucial because healthy behaviours and practices adopted during this phase tend to last a lifetime. Adolescence is a period of immense change, growth and exploration, but it is also fraught with challenges and obstacles. These changes in this stage often overlap with each other. So, they face a number of challenges and so does the society. The world of adolescents is entirely different from us. Hormonal influence causing emotional instability, curiosity, experimentation like unsafe sex etc are some of the factors which determine the flow of adolescent life. Society needs to

understand the world of adolescence to avoid conflicts with them, nurture them and harness their energy and potential. Parents and teachers play a crucial role in supporting adolescents by providing necessary guidance. Their involvement and guidance can significantly influence adolescents' ability to navigate challenges and build resilience.

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**TRANSCENDING ADVERSITY: LOVE AS A CATALYST FOR EXISTENTIAL
MEANING IN *THE PLUM TREE***

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ABSTRACT

Existential frustration is an inherent part in every individual's life. It is critical to recognise the significance of one's existence at some point in life. More often, pain and suffering in life prompts people to consider the purpose of their existence. Humans are social beings who nurture when surrounded by the right people. Viktor Frankl in his *Man's Search for Meaning* explains that doing the things one loves or having someone to love plays an integral part in finding meaning in one's life. The purpose of this paper is to discuss the value of developing meaningful connections that could act as a possible anchor in life when an individual confronts adversity that causes them to doubt their existence. For the foretold purpose, the researcher uses the characters of Christine and Isaac from Ellen Marie Wiseman's novel, *The Plum Tree* (2012), under the lens of logotherapy.

KEYWORDS: logotherapy, freedom of will, wiseman, survival, determination, love

Ellen Marie Wiseman is a contemporary American novelist known for her historical fictions set in the background of the twentieth century. Her novels revolve around the types of people who are usually under-represented in a society. She has penned six novels including *Coal River* (2015), *The Orphan Collector* (2020) and *Lost Girls of Willowbrook* (2022), all of which are listed in the New York Best Sellers list. Wiseman's first novel, *The Plum Tree* was published in 2012. She depicts how the life of a German girl changes drastically because of her love for a Jewish boy under Hitler's siege. The novel is set in Germany during World War II, where Christine, a nineteen-year-old German girl, falls in love with Isaac, who is from a wealthy Jewish family. Under the Nazi rule, Isaac and his family are captured and imprisoned in the concentration camp. The novel revolves around how Chris and Isaac find their will to survive even in such adverse conditions without succumbing to life. This novel portrays the importance of choosing life over and over again even when death seems easier than living. It emphasises on the importance of having meaningful relationships that serve as an anchor to hold onto life in adverse times. This paper is an attempt to emphasise that it is essential for human beings to nurture and value relationships as it plays an integral part in providing hope in dire circumstances.

Viktor Frankl's Theory of Logotherapy implies that it is essential for humans to understand their purpose of existence. In his *Man's Search for Meaning* he gives three ways in which one can find their meaning in life: "by creating a work or doing a deed; by experiencing something or encountering someone; and by the attitude we take toward unavoidable suffering" (Frankl, 2013, p. 99). While the first and last ways make the individual deal with it by themselves in an individual manner, the second way of "experiencing something or encountering someone" brings out the need for humans to rely on someone other than oneself. Frankl further explains that "Love is the only way to grasp another human being in the innermost core of his personality" (Frankl, 2013, p. 100). Love and companionship have the power to soothe restless souls. Like Yusra Mardini says, "It's just easier to laugh than to cry. If I cry, I'll cry alone. But if you laugh, we can do it together. I guess no one knows how strong they can be until it's their turn to deal with tragedy" (Mardini, 2018). Likewise, Chris's restless soul finds solace in her love for Isaac. Even though Chris loves to go to school and wants to become a teacher, she starts working to support her family. It can also be seen as a way for her to cope with the fact that her life is forced down a path that she did not pave. She is not allowed to continue with her education, because her family could not afford to pay for it. Her grandmother always says, "Bloom where you're planted... But Christine's roots were restless, wondering what it would be like in more fertile soil" (Wiseman, 2013, p. 10). Therefore, her relationship with Isaac not only provides her with warmth and comfort but also gives her a sense of belonging. Chris's whole life revolves around her family and the village. She is so accustomed to every aspect of her life in a small village that she feels a "mixture of resentment and love" (Wiseman, 2013, p. 8) towards it. Though she loves her life there, she finds it "boring and predictable" (Wiseman, 2013, p. 8). This is a major reason for her to deviate from that path of hers and do things that she feels is significant. For the first time in her life, she wants something that she did not have to share or work hard for. In the beginning of the novel, she is afraid to be in a relationship with Isaac and even pushes him away when he proposes to her. However, slowly she understands that her feelings towards Isaac are the only thing that truly belongs to her. It is this realisation that brings her to the point of accepting the relationship with Isaac, which in the later part of the novel makes her endure all the hardship in Nazi camp to not only survive but also search for and find Isaac in the camp. Wiseman's portrayal of Chris as a character who carefully uses her freedom of will and when she does, she sticks to her choices and works hard to retain them through all the hardship.

The feeling of being wanted and being prioritised by someone is a much-needed motivation in life to keep going. Veronica Roth wrote, "I fell in love with him. But I don't just stay with him by default, as if there's no one else available to me. I stay with him because I choose to, every day that I wake up, every day that we fight, lie to each other, or disappoint each other. I choose him over and over again, and he chooses me" (Roth, 2013, p. 771). Similarly, Chris's love for Isaac is partly based on his attention and care for her. It is essential to note that being the eldest daughter in a family of eight, one can understand that Chris could not find a space for her own, both physically and especially mentally in her house, which creates a sense of unbelongingness in her. Therefore, through Isaac's love, she finds herself a place to call

‘home’. By proving so, it is once again confirmed that it is a conscious choice of Chris and Isaac to fall in love with each other. This plays as a driving factor for Chris to not lose hope in her love that she goes to great lengths to protect Isaac from the Nazi soldiers. She does this because losing Isaac means not just losing her boyfriend but also the one person who puts her needs above everyone else’s, someone who made her feel at home. She comes to understand that her love for Isaac is what keeps her going even when they are separated, even when she does not know if he is alright or not. She perseveres through her struggles because she believes she will have a happy life with him in the future. Because her ultimate goal is to find a home in the person who puts her first and lives happily, she bears whatever misfortune life throws at her.

Every facet of life needs effort to continue, and so does loving someone. It is true that loving someone entails desiring and prioritising them, but it also entails the efforts one should put into making it a possibility. The efforts that Chris puts into prioritising her relationship are implausible. Efforts consist only of consistent and constant work towards a certain goal. Thus, loving someone itself is work. Here, the term ‘work’ is used more philosophically than in the usual sense and accepting that love is the "moving force of nature" (Abdullahin, 2010, p. 84) implies that they inevitably agree to the fact that the aspect of work is also an integral component of life and an important aspect of living life to the fullest. In a relationship, it takes the efforts of both parties to sustain and flourish the relationship. In the novel, both Chris and Isaac make it a point to make consistent efforts to meet each other, even when the social situation is against their relationship. The Nazi rules not only prevented Germans from having a relationship with Jews but also sternly imposed regulations upon the individual and their family for breaking the law. At times, they even kill them or send them to a concentration camp for the mere act of associating with a Jewish person. In such times, Chris works towards sustaining her relationship with Isaac, fully aware that she puts not only herself but also her family in jeopardy. And despite everything going on around her, she continues to choose her love. And the same goes with Isaac as well. Even though he tries to distance himself from Chris after the rules were imposed, eventually he gives in to Chris’s wishes to meet secretly. He knows that he will be killed if he is caught, but his time with Chris and respecting her efforts to meet him in such dire circumstances matter to him more. He makes it a priority to reassure Chris that they will be alright, when she fears the worst. When Chris asks, "Will we ever be allowed to be together, to live like everyone else, happily married, with a house and children, to enjoy the most basic human rights?" (Wiseman, 2013, p. 54), he tries to calm her down and reassure her at every chance he gets. Even when his own life is in jeopardy, as his family loses all their wealth and feeds on potato peels every day, he never stops visiting Chris. He believes that this will give her the mental strength to carry on with her everyday life without worrying about him. Even at such times, Isaac comforts her that they will be “together again soon... when it’s safe” (Wiseman, 2013, p. 59). It is their mutual effort towards building their relationship, even in difficult times, that keeps them going in their day-to-day lives.

The efforts of both the individuals play a vital role in building that relationship. Nonetheless, there could be circumstances where neither of the individuals is in a position where they are unable to contribute to that relationship. In such instances, a crisis arises that questions the existence of the relationship itself. In a similar vein, Chris and Isaac's relationship is tested when Isaac and his family are captured by Nazi soldiers and imprisoned. Prior to this incident, Isaac and Chris decide to lay low for some time and not meet until the situation becomes better again. But before they know it, four years pass by and their situation only seems to worsen. They refrain from meeting each other for four years and as a result, Chris does not know about the state of Isaac or that he is imprisoned. She carries on with her daily life in the meantime, hoping that he is well somewhere. But the thought of him lingers in her mind all the time. She frequently recalls her memories as follows:

It seemed like just yesterday her mother had been reassuring her about Isaac, and now Christine hadn't seen him in how long? Had it really been years? To her, it felt like last week. She hoped it felt the same for him. But now, she didn't even know if he was still in Germany, let alone alive. And the longer this insane war went on, the less hope she had that she'd ever see him again. Was this what was going to happen with her father? Was she going to struggle with opposing bouts of grief and optimism, week after week and month after month, only to wear down until she had to say good-bye forever? (Wiseman, 2013, p. 130)

As a matter of fact, when Chris tries to help the prisoners by offering food, she remembers Isaac. Even though she did not know that he is captured, she likes to think that her help to strangers could someday, perhaps, return to Isaac when he is in need. Even though Wiseman tries to portray Chris as an empathetic character who helps people in need, one cannot ignore the fact that she does it as an act of hope that somewhere someone will be feeding her love, Isaac, like she is helping others. Her actions and efforts are therefore an act of hope in this particular situation.

Later, when she finds Isaac again after years of uncertainty about his existence, she decides to hold onto him no matter what. When she learns that captives are being taken to camps in Dachau, she is determined to meet Isaac and make sure that he is safe. But to her horror, she finds him in his worst state possible as a prisoner amidst a long line of other people, people she knew, who are also captured as prisoners. But then, she somehow helps Isaac escape before he is sent to the concentration camp and hides him in her attic. She realises that if they get caught, they both will "be sent to Dachau" (Wiseman, 2013, p. 172) and her family will be punished as well for helping a Jew. However, she is determined to save him even if it means putting her own life at risk.

Eventually, when they get caught by the soldiers, they both are being taken to the concentration camp where Chris is separated from Isaac. Her hopes diminish when the soldiers separate men and women in the camp. Her unwavering belief that she could overcome any difficulty that life throws at her trembles from this point forward. But then she remembers Isaac's words:

You'll survive this too. You're young and strong. Tell them you're not Jewish. Tell them you worked as a cook. That will save you. I need you to survive. Someday when this is over, you and I will be together. We'll find each other. We'll get married and have babies (Wiseman, 2013, p. 229)

It is his motivation that keeps Chris to go through her hardships amid her captivity. She realises that she is the source of Isaac's optimism after observing how hopeful he has become since making his escape. It is after his reencounter with Chris that Isaac finds the will to fight again and survive. And this time, he gives Chris hope the same way she gave him when he needed it the most. Thus, Isaac's words stick with her as a string of hope that someday in the future they will meet again and get to start a family of their own.

It is essential that all human beings have someone or something that holds onto them as a life anchor, so that when time becomes difficult, their anchor holds them down until a better future is seen. The significance of having a life anchor is emphasised by Isaac's character. In the beginning of the novel, Wiseman depicts the class struggle between Isaac and Chris, which does not define their relationship but poses a potential threat to it in the long run. She portrays Chris as being lucky to find someone as perfect as Isaac. But later, after Isaac's escape from the camp, it is evident that in their relationship, it is Chris who holds his back each time. Mellyberry's novel *I Won't Break* mentions how finding someone can help you heal as follows: "Because when you finally find the one against all odds, you give him your best and let the magic of the world carry the rest" (Mellyberry, 2016, p. 115). Likewise, Chris's presence in Isaac's life provides him with purpose and hope for the future. This serves as strength for him to overcome all the obstacles he faces, even in the face of death.

When he recalls his father's death to Chris, he says, "I was standing there, my father's blood all over my hands and face, and I didn't do anything. I just kept thinking, I have to survive, my mother and sister need me" (Wiseman, 2013, p. 172). Even when he knows nothing about their state or if they are still alive, Isaac believes that he must go to his mother and sister because it is his responsibility now to take care of them since his father is gone. Wiseman portrays the importance of having someone to love when she explains how Isaac feels when he is captured. He tells Chris after she helps him escape, that "it was thoughts of you that kept me from going insane. I never stopped loving you. Not for an instant" (Wiseman, 2013, p. 180). He accepts that it is his love for Chris that keeps him going even when he is being tortured by the soldiers and loses his parents. The thought that he could someday live a normal life with Chris motivates him to cross each day until he gets out of the camp. Thus, Isaac faces significant hardships, including the loss of loved ones, discrimination, fear and physical danger. Despite these challenges, he always finds a way to carry on and maintain his determination to survive because of his hope that Christine will be rooting for his survival. Similarly, Christine faces her life boldly and goes on to extreme situations to help the love of her life, because she sees him as a source of her existence. Therefore, with the characters of Christine and Isaac, Wiseman brings out how crucial it is for an individual to have someone to hold onto especially when life puts one in adverse situations.

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Women, Nature and Culture: An Eco-feminist Study of Anita Desai's Narratives

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ABSTRACT

Feminism is a common theme in most of Anita Desai's novels. Her characters depict the universal crisis of women delving deep into their psyche which is shaped by a variety of factors, particularly social. In the hue and cry of change, women often feel stuck in different worlds which creates friction and lack of understanding with people around them. That is when they look around them and find nature ever extending its arms where they seek solace from the weariness. Nature has also been a victim of man's dominant tendency where profit flows from the exploitation of the 'other'. Both the sub-ordination of Nature and Women by the so-called seemingly more powerful gave birth to the concept of Eco-feminism in the work of French writer Françoise d'Eaubonne. This paper is an extension of this analysis concerning the works of Anita Desai who provides a canvas to encompass the numerous aspects of women's roles amidst which they often lose themselves, through her popular works 'Fire On The Mountain', 'Cry, The Peacock' and 'Where Shall We Go This Summer'.

Keywords: Nature, Feminism, patriarchy, stereotype, resistance, culture.

INTRODUCTION

Anita Desai has created a plethora of characters living amidst a variety of struggles which range from marginalization to crisis of middle-class lives in navigating through the rough waters of Indian societal norms. Her very first novel 'Cry, the Peacock' (1963) brings forth a variety of issues related to the female psyche and the dire consequences of human alienation. Desai's narratives deftly interweave the human with the non-human world and throw light on how nature acts as a catalyst in times of despair. From time immemorial, the interlinkage between women and nature has been inevitable. Women depended on nature around them to tend to the needs of the family and during times of emotional turmoil. Carolyn Merchant has studied the historical traces of the connection of women to nature in her important work "The Death of Nature: Women, Ecology and the Scientific Revolution" (1980).

This paper aims to analyse three works of Anita Desai namely 'Cry, The Peacock', 'Fire on the Mountain' and 'Where Shall We Go This Summer' in the light of eco-feminist strands and its contemporary implications of Transformative Ecofeminism. Eco-feminism is an aspect that studies the parallel between the struggles of women and nature in a patriarchal and capitalistic society that pushes them to the bottom of the value hierarchy. Nature is treated as the 'other' much like women by the patriarchal and so-called rational. In this tug-of-war of the value binaries, both nature and women are dominated and exploited. As Karren Warren states in her notable work 'Power and Promise of Ecological Feminism' (1990), "The problem is not simply that value-hierarchical thinking and value dualisms are used, but the way in which each has been used in oppressive conceptual frameworks to establish inferiority and to justify subordination." (Warren 2) As a theoretical framework, eco-feminism moves on to combine, re-examine and augment the environmental and feminist movements. It further

intertwines the liberation of women with the liberation of the environment from human destruction.

The strands of eco-feminism have undergone many shifts. Its roots focused on creating consciousness about environment depletion and women's condition which led to environmental movements all over the world riddled with concepts like Deep Ecology, Gaia Theory, and Ecosophy, and alongside, various strands of eco-feminism evolved like Nature Eco-feminism, Cultural ecofeminism, spiritual eco-feminism and transformative ecofeminism. We shall look into the cultural patriarchal constructs of society, one among which is based on the observation of the similarity between a nurturing nature and nurturing women which seems to subordinate both. Patriarchal beliefs have created values that negatively impact women's lives and impose certain conditions that are grim for them. Eco-feminism talks about human beings going back to nature and regaining their roots set by nature in a manner of co-dependence. Sunaina Jain in 'The Routledge Handbook of Ecofeminism and Literature' states that "The multi-pronged nature of the wrongs done towards women and earth calls for an intersectional and holistic approach to counter the hegemonic apparatuses and structural hierarchies" (Jain 271)

FINDINGS & ANALYSIS

Anita Desai's *'Fire on the Mountain'* has three major female characters, Nanda Kaul, Ila Das, and Raka. Each one of them has been victimized physically and emotionally by the patriarchal system. The protagonist Nanda Kaul retires to the mountains and lives in solitude after a life of unappreciated service to her family despite which her husband was unfaithful to her. Her reclusion to a secluded life shows her resistance to the stereotypical life of a woman and her close proximity to nature on whose lap she finds solace. She transcends to the mountain of Kasauli which was a largely British settlement during the colonial times. Nanda Kaul is drawn to the grey mountains and hostile landscape as much as she is drawn to its scenic beauty. She harbours a dense pain in her heart from years of dejection and remorse caused by the discord within herself as a result of social hypocrisy so much so that she develops a habit of laying absolutely still, almost death-like. "She would be a charred tree trunk in a forest, a broken pillar of marble in a desert, a lizard on a stone wall. A tree trunk couldn't harbour irritation, nor a pillar annoyance." (Desai 24)

As a young married woman, she continually looked after the domestic affairs of the family like hosting regular parties for her husband's colleagues who looked down upon her and whom she detested "Her eyes had flashed when she heard, like a pair of black blades, wanting to cut them, despising them crawling grey bugs about her fastidious feet" (Desai 19). She always met the whimsical needs of the people around her. She lived in a space from which she was deeply alienated. "She had suffered from the nimiety, the disorder, the fluctuating and unpredictable excess." (Desai 32) Society has always positioned men's professions above women, women are tied to their domestic roles and are expected to be silent about their feelings. She ironically bowed down to her duties which are represented as a "noose that keeps slipping down her neck" (Desai 20) throughout her life and strangled her. She envisioned the same horrific "noose slip through her neck" once again at the prospect of

sharing her beloved space at Carignano with the arrival of her grandchild Raka who in the end burns down her world both literally and metaphorically. The terrible fire at the end of the novel symbolizes both the psychological anguish of Nanda Kaul and the literal forest fires in the mountains of Kasauli due to man's negligence. She represents the collective emotional turmoil of women in a society run by stereotypes surrounding women from dawn to dusk of life.

Throughout the three works, we see the interdependence of the psychological with the physical. The human mind progresses right after birth and depends on how it is conditioned. In a patriarchal world, a woman is under constant scrutiny right from childhood. These boundaries are oftentimes harsh on her psyche. All three works of Anita Desai are replete with symbolism that mirrors the psychic women's condition. Amidst turmoil, they seek a connection to their natural environment. The seasons and their myriad mysteries act as a catalyst for the deep void in them. It shows their emotional longing for understanding and human kindness. All these three works of Anita Desai bear nature symbolism in the titles. "Fire In the Mountain" and "Cry, the Peacock" suggest dualistic patterns of destruction and dejection against nature and women who are constantly victimized. "Where Shall We Go This Summer" is symbolic and suggestive of a woman's memory of her touch with the natural environment as a child. She nurtures her connection to the Island and her childhood and develops a dependence on it. Her love is questioned and met with cold retorts by her husband who is rational and bound to a life of system and logic. From a macrocosmic viewpoint, Sita's perspective is reduced because it doesn't fit within the ratiocinations of the consumerist society around her. She is a small component against a great mechanistic system and is seen as a creative misfit who is misunderstood as sensitive and too emotional. The heinous consequences of 'Reductionism' are not only limited to scientific agendas but it is interconnected with capitalism. In the foreword to "Ecofeminism" by Maria Mies and Vandana Shiva written by Ariel Salleh, she called it a "dogma that is deeply, informed by old patriarchal motivations" (Salleh 8)

Maya, the protagonist of 'Cry, The Peacock' much like Nanda Kaul suffers the marital anguish but on a much higher level. Her dependence on her father for love and comfort leads her to a life of deep psychosis when her cold and practical husband Gautama is indifferent towards her. He shatters her sensitive world of emotions with the battering rod of reality. Maya creates a world of her own and deals with her psychosis with a sensitive view of life. She finds comfort in the aspects of nature around her. The author presents a picture of Maya's world with utter transparency. She draws realistic images of Maya's illness through strong natural symbolism. The story of Maya starts on a bleak note with the death of her beloved dog Toto at which she is heartbroken. This incident itself can be studied as a zoological imagery of death and decay which makes Maya's feelings of terror and rejection evident to the readers. The elements of nature which are otherwise very appealing to people are haunting to Maya like the moon "It rose out of the churn of my frenzy, vast and ghost-white, written over with dim, torturous sips...for it was not the moon of love ballads and fairy revels...but a demonic creature"(Desai 26). Maya's neurosis begins with an ominous prediction of her or her husband's death by an astrologer when she was a mere child. The

prediction much like the albino astrologer himself is amorous and engulfs Maya's life from a tender age. She feels her world being violated by her husband's ideologies and she ventilates her fear through nature. She finds her solace in nature and also finds herself drowning in it. "Anita Desai unravels the tortuous involutions of sensibility with subtlety and grace and her ability to evoke the changing aspects of Nature matched with human moods is another of her assets" (Padmavathi5)

The immense burden within these women somehow finds its escape through nature where they feel most at home. Desai makes use of the immensity of this natural environment very deftly. After a day's hardship, Nanda Kaul retreats to the darkness of her garden where she finds the required solace just like she retreats to the lap of the mountains after being beaten down by life. Nature plays a vital role in balancing pain and desire. Both are beaten down by patriarchy's hunger to dominate the other in order to make progress at the cost of the other's survival. This viewpoint is voiced in eco-feminist studies which was first formulated by Francois De Eaubonne in her groundbreaking work 'La Feminisme ou la Mort' or 'Feminism or Death'. She has argued that feminism moves beyond equality and it engulfs the co-existence of the planet earth and human beings dismissing the concept of power. Eco-feminism calls for co-dependence by means of understanding, inclusive of all differences in the existence of natural beings particularly man to nature and men to women. This has been opined by Karren J Warren as she states "Ecofeminism takes a central place for values of care, love, friendship, trust, and appropriate reciprocity – values that presuppose that our relationships to others are central to our understanding of who we are. It thereby gives voice to the sensitivity that in climbing a mountain, one is doing something in relationship with an 'other', an 'other' whom one can come to care about and treat respectfully" (Warren 11)

Nestled in the quaint village island of Manori lies the vivid memories of another important character in Anita Desai's novel "Where Shall I Go This Summer". Sita is a young pregnant wife who cherishes her childhood days in the beaches of Manori with her father and she longs to go back to the island to escape from the dense industrialization of the city and its hypocrisy. She wishes to give her children along with the newborn the taste of freedom amidst nature and simple village lifestyle and culture. Once more Sita sees nature as a saviour to release her burden. The family buys a small apartment with a balcony that faces the sea where Sita hopes to find her lost inspiration by looking at the immensity of the sea and that the sea waves would somehow wash away the shadow of the city from her mind. Instead, she was distressed at the junk that the sea threw up with each wave which intensified her terror of chaos and destruction. Here, the sea symbolizes the filth lurking in the shadows of instrumental rationality and capitalization in big cities. "Throwing them up at her, the sea ran out, hissing, fold upon fold drawn back, drawn back till she shuddered to think what else it might reveal" (Desai 50) There is no place for creativity both inside and outside human minds. Sita is dismayed at the thought of the hypocritical chaotic influence of the big city on her young children and she desperately flees to Nature at Manori. The sea, its beaches, and the palm groves all hold her memories as a young child and she also hopes that it will relieve the traces of chaos from the minds of her young children.

Like the women of these novels, nature has its own immaculate ways of dealing with the turmoil and destruction that man has created. Nature is an embodiment of creation and strength. It is the primordial force of human existence, to see it as the other and exploit it for human demands shows a degradation of human values and blindness in their quest for power. Nature is placed at the other end of the power struggle much like women. Western views of a dichotomy between man and nature and men and women have seeped globally creating a marginalized space for the supposed less powerful wherein they are dominated, exploited, and annihilated. Vandana Shiva in her “Staying Alive: Women, ecology and gender” states “Every form of creation bears the sign of diversity within a unifying principle, and this dialectical harmony between the male and female principles, and between nature and man becomes the basis of ecological thought” (Shiva77)

CONCLUSION

Much like the rational tendencies of the age, the men in these novels are blind to the emotional worlds of the women thereby creating a marital rift. They turn their backs on the delicate feminine tendencies which create hue and cry within the female. The fact that women’s needs lie beyond the worldly and mundane is evident in the characters. They crave understanding and cooperation in a world full of oppression. Maya was always adored by her father as a child. She is creative and builds her own world of beauty and love. Her husband rather than nurturing her world, questions it, threatens it, and rejects it. When she is distressed at his bleak ideologies, he is indifferent to her trauma and pays the least attention to her degrading psychological condition. Here Gautama the husband is the light bearer of a society that is fuelled by the non-creative and non-imaginative, the worldly and the reasonable. Unlike Maya, he grew up in a household that “...did not speak of love, far less of affection. One spoke – they spoke of discussions in parliament, of cases of bribery and corruption... Sometimes in order to relax, they played games of cards, so swiftly, so nervously, so intently ... and would begin to talk again, of political scandal and intellectual dissent” (Desai 42). This marital change of environment is harsh on Maya. She turns to nature for healing but the intensity of her psychosis creates hallucinations that bring back her fears with a force beyond her ken. The author lays bare Maya’s festering mental wound with a plethora of natural images like the death dance of the peacocks, slithering snakes, whimpering pigeons, etc. She also shows all the natural spaces where Maya lounges in with comfort like the spring season which comes with a multitude of colours, and her fond memories of another spring with her beloved father which was “a far more idyllic one, for it is at home, in Lucknow” (Desai 33).

All these narratives of women speak for millions of women across the world whose voices go unheard in a society built by men, for men. Nanda Kaul and Raka though years apart have been victimised by men and both are resistant in their own ways. Nanda Kaul, strong and grounded and Raka, rebellious who represents the women of today stare at threat directly in the eye. The implications of eco-feminism are transformative in contemporary times. Women can help transform the meaning of their connection to both nature and culture. The age-old reliance on nature is a productive relationship, that results in growth and sustenance of the women folk. This organic relationship has been mentioned in “Staying Alive” as “Their

interaction with nature, with their own nature, as well as the external environment was a reciprocal process. They conceived as their own bodies as being productive in the same way as they conceived of external nature being so. Although they appropriate nature their relation doesn't constitute a relationship of dominance or a property relation"(Shiva 80)This connection is a strength that is at the disposal of the female only. Eco-feminism is grounded in women's traditional feminine virtues, and maternal roles and it can be revolutionary rather than reactionary. It can motivate women to be involved in geo-political actions, to stand up for their cause, and to resist any norm that limits their potentialities.

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Psychopathological Afflictions in Kate Chopin's *The Awakening*

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Abstract:

Kate Chopin, (1851-1904) an America writer best known for her controversial work *The Awakening*. This novel explores themes of female sexuality, independence, and societal constraints, focusing on the protagonist, Edna Pontellier, and her journey toward self-discovery and liberation. *The Awakening* is often analysed for its portrayal of mental and emotional turmoil, sometimes interpreted as a reflection of mental illness. Chopin's work is considered a pioneering piece of feminist literature, challenging traditional gender roles and exploring female autonomy and desire. Throughout the novel, Edna gradually awakens to her own desires, navigating her identity outside of societal expectations for women during the 19th century.

Keywords: Constraints, Turmoil, Pioneering, Autonomy, Interpreted.

Feminism fights for women's equal rights and opportunities across politics, society, economics, and personal spheres, aiming to dismantle discrimination and achieve gender equality. This novel *The Awakening* points out the figures of women self-identity.

Edna Pontellier, a controversial character in literature, challenges traditional gender roles by denying her role as a mother and wife. Despite her privileged status as a white, upper-class Southern American woman, she seeks autonomy and self-discovery. Described as beautiful with quick, bright eyes, yellowish-brown hair, and a French dialect, she possesses artistic talent and a longing for liberation from societal expectations. Mrs. Pontellier's background includes an army father and an engaged sister, reflecting a familial context that likely influenced her upbringing and societal expectations. Mr. Pontellier, Edna's husband a man of forty with medium height, is characterized by his brown, straight hair and neatly trimmed beard. Robert is a significant character in *The Awakening*, portrayed as a good man with intentions of traveling to Mexico. His relationship with Edna Pontellier plays a central role in the novel's exploration of themes such as desire, societal constraints, and personal autonomy. "Mrs. Pontellier was beginning to realize her position in the universe as a human being and to recognize her relations as an individual to the world within and about her" (AW 21). Robert who teaches swimming to Edna, whenever she swims she got a new strength to face this world. These lines are taken from the article "The Wonders of Water: How the Sea and Water Awaken Kate Chopin's Edna Pontellier's Sense of Self in *The Awakening*" by Rosario Vital Jarrell says that "She does not, however, have a sense of self, for she is not content with living a domestic life. What she does have is a close proximity to the sea, and the sea awakens Edna to new prospects for her life because each time that she returns from being in the sea's transformative waters" (Vital 2021). Humans are closely connected with universe. Edna while swimming she felt sense of relief from her depression.

Edna initially lacks confidence, leading a small life within herself since childhood. However, her time in Grand Isle during the summer opens her up to others, marking a shift in her character and beginning her journey toward self-discovery and independence. “At a very early period she had apprehended instinctively the dual life that outward existence which conforms, the inward life which questions” (AW 23) Mr. Pontellier attempted to share his experience at Klein's hotel with Edna, but she only half-listened, preoccupied with her thoughts. When he mentioned their son Raoul having a fever, she dismissed it, convinced he was fine. “If it was not a mother's place to look after children, who's on earth was it? (AW 9). Sitting alone on the porch, Edna felt intensely lonely and emotionally numb, unable to confide in anyone about her inner turmoil. “It would have a difficult matter for Mr. Pontellier to define to his own satisfaction or anyone else's wherein his wife failed in her duty towards their children” (AW 12). Mrs. Pontellier's children seem indifferent to her, showing little longing for her comfort as they play independently. This lack of maternal connection suggests Edna may not have been a nurturing mother figure. Edna herself is depicted as reserved and not very talkative. She reminisces about her past loves, including a cavalry officer named Napoleon and an unattainable young man who was already married, leading her to feel insignificant. Her marriage to Pontellier seems more like a result of fate or circumstance rather than a deliberate choice. Edna's dissatisfaction with her marriage to her husband grows over time, leading her to occasionally forget her love for her children. She develops a strong infatuation with Robert, drawn to his appearance, voice, and gentlemanly demeanour. His caring nature towards her and her children further deepens her feelings for him, making her feel comfortable and understood. Their companionship, especially in activities like swimming, strengthens her affection for him. Robert's understanding and empathy contrast with her husband's behaviour, making her feel more connected to him emotionally. Edna's mental stability fluctuates throughout the story, influenced by interactions with friends like Madame Lebrun and Reisz. At times, she finds amusement and distraction in their company, but other times she distances herself from everyone, reflecting her inner turmoil and the complexity of her emotional journey. “Edna is fighting against the societal and natural structures of motherhood that force her to be defined by her title as wife of Leonce Pontellier and mother of Raoul and Etienne Pontellier” (Kaplon 1) is quoted in Kate Chopin's the struggle against Society and Nature by Megan P. Kaplon. Edna finds herself more comfortable with Robert compared to her husband, and her love for him deepens over time. When Robert mentions his plan to move to Mexico, Edna experiences a profound sense of loneliness and falls into depression at the thought of losing him. This highlights the intensity of her emotional attachment to Robert and the impact his departure has on her mental well-being. After returning from Grand Isle, Edna's feelings towards Robert have intensified, causing her to miss him deeply. She loses interest in everything else and isolates herself from others. Her mental imbalance worsens as she longs for Robert more intensely. With her husband away for work and her children at her mother's, Edna feels a slight relief and decides to leave her husband's house. This decision marks her desire for independence and self-discovery as she seeks to define her own identity. “The house, the money that provides for it, are not mine” (AW 125).

Edna finds solace and comfort in being alone and independent. However, Alcee Arobin, a friend of Edna's, takes advantage of her vulnerable state and manipulates her into succumbing to his seductive advances, exploiting her mental instability for his own gratification. This exploitation further complicates Edna's journey towards self-discovery and independence. Upon hearing of Robert's return from Mexico through letters, Edna experiences a surge of confidence and happiness. His return fills her with strength and hope, rejuvenating her outlook on life and giving her the courage to continue her journey of self-discovery and independence. "A hundred times Edna had pictured Robert's return and imagined their first meeting" (AW 156). Edna, deeply in love with Robert, reveals her feelings to him, but he, despite reciprocating her love, rejects her because she is Mr. Pontellier's wife. He feels a sense of duty and social responsibility, refusing to pursue a relationship with a married woman and mother. This decision reflects his integrity and moral principles, even though it causes them both emotional pains.

Because, you were not free; you were Leonce Pontellier's wife. I couldn't help loving you if you were ten times his wife, but so long as I went away from you and kept away I could help telling you so. (AW 170)

Edna is devastated to discover that Robert has left her, which prompts her to reflect on her roles as a mother and her pursuit of personal fulfilment. She grapples with feelings of guilt and selfishness for prioritizing her own desires over her responsibilities. "Edna, A woman who never cared about her needs and desires she wants was now turning into a lady that wants her desires and needs fulfilled" is highlighted in the article of Abhilasha 's "A Marxist and Feminist analysis"(Abhilasha 2016) . Ultimately, feeling trapped by societal expectations and unable to reconcile her desires with the constraints of patriarchy, she chooses to end her life, sparking controversy and criticism of *The Awakening* for its portrayal of female agency and the consequences of challenging societal norms.

Good-by-because, I love you. He did not know; he did not understand. How would never understand. Perhaps Doctor Mandelet would have understood if she had seen him-but it was too late; the shore was far behind her, and her strength was gone. (AW 183)

The novel concludes with a tragic outcome for the protagonist, Edna, whose suicide leaves a negative impression on readers. Some interpret her actions as a result of her selfishness and inability to appreciate what she already has a loving husband, a good background, and children. Her failure to recognize the value of her blessings leads her to despair. Her mental struggles contribute to her decision to take her own life. The story serves as a cautionary tale, reminding us to find contentment in our current circumstances and not to pursue desires that may lead to destruction. Edna's experience serves as a stark reminder of the importance of appreciating and cherishing what we already have, including our relationships and commitments.

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**"Exploring Yogic Practices: Unveiling India's Rich Heritage for Holistic Wellness
through Ayurveda, Dravyaguna, and Panchakarma"**

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ABSTRACT

This research paper delves into the profound realm of yogic practices within India's rich heritage, focusing on their pivotal role in promoting holistic wellness. It navigates through the ancient wisdom of Ayurveda, Dravyaguna, and Panchakarma, elucidating their synergistic relationship with yogic principles for optimal health and well-being. Ayurveda, the holistic system of medicine originating in ancient India, is the foundational pillar for understanding the intricate connection between the mind, body, and spirit. Through its emphasis on personalized wellness regimens tailored to individual constitutions (doshas), Ayurveda provides a comprehensive framework for integrating yogic practices into daily life to achieve harmony and balance. Furthermore, the study explores the concept of Dravyaguna, which entails the classification and therapeutic use of medicinal herbs and substances. Dravyaguna not only complements yogic practices but also amplifies their efficacy by harnessing the healing potential of nature's bounty. Additionally, Panchakarma, a purification and detoxification therapy in Ayurveda, emerges as a transformative tool for restoring equilibrium and vitality. By elucidating the intricate interplay between yogic practices, Ayurveda, Dravyaguna, and Panchakarma, this paper aims to shed light on India's timeless wisdom for fostering holistic wellness in the modern world.

Keywords: - Yogic Practices, India's Rich Heritage, Holistic Wellness, Ayurveda, Dravyaguna, Panchakarma.

INTRODUCTION: -

Yogic practices, deeply rooted in India's rich cultural and philosophical heritage, offer a holistic approach to wellness that encompasses the physical, mental, and spiritual dimensions of human health. In this exploration, we delve into the profound wisdom of Ayurveda, Dravyaguna, and Panchakarma, three pillars of traditional Indian medicine and healing that have stood the test of time. Ayurveda, often referred to as the "science of life," is a comprehensive system of healthcare that dates back thousands of years. It is based on the fundamental principle of balancing the three doshas—Vata, Pitta, and Kapha—to achieve optimal health. Ayurveda encompasses a wide range of practices, including herbal medicine, dietary guidelines, yoga, meditation, and therapeutic treatments like Panchakarma.

Dravya Guna, the study of medicinal plants and their properties, forms the foundation of Ayurvedic pharmacology. It involves the classification of herbs based on their taste (rasa), quality (guna), potency (virya), post-digestive effect (vipaka), and special effect (prabhava).

his knowledge is crucial in formulating herbal remedies for various health conditions and promoting wellness in a natural and holistic manner.

Panchakarma, a set of detoxification and rejuvenation therapies, is another cornerstone of Ayurveda. It consists of five purificatory procedures—Vamana (therapeutic emesis), Virechana (purgation), Basti (enema), Nasya (nasal administration), and RaktaMokshana (bloodletting)—aimed at cleansing the body of toxins, restoring balance, and enhancing vitality.

In this research endeavour, we aim to unravel the depths of India's ancient heritage of Yogic Practices and their profound implications for holistic wellness. By examining the principles, practices, therapeutic applications, and modern relevance of Ayurveda, Dravya Guna, and Panchakarma, we seek to highlight the enduring wisdom that can guide individuals and healthcare systems towards a more integrated and comprehensive approach to well-being.

LITERATURE REVIEW: -

(Woodyard, 2011) has observed that Yoga is increasingly recognized in the Western world for integrating mind and body, enhancing physical, mental, and spiritual health while effectively managing stress, anxiety, and depression. It's considered a complementary therapy, promoting well-being, relaxation, self-confidence, and interpersonal harmony. Although no strict guidelines exist for practice frequency, regularity benefits individuals, especially in the beginning. Yoga's holistic approach complements modern medicine, offering a timeless path to healing by addressing emotional, intellectual, and personality layers for inner peace and overall well-being.

(Verma, 2023) has evaluated the effectiveness of basic yoga exercises for insomnia compared to ayurveda and standard care. Yoga intervention led to improved sleep quality, reduced stress, enhanced cognitive function, and better quality of life. Ayurveda also showed improvement in sleep and stress levels compared to standard therapy but not as significantly as yoga. Both yoga and ayurveda offer potential benefits for managing insomnia and improving overall well-being.

(Dr. Pradyumna M. Pasarkar, 2021) researched on Dravya Guna in Ayurveda refers to the properties of substances, including taste (Rasa), qualities (Guna), potency (Virya), post-digestive effect (Vipak), and special effect (Prabhav). These properties are intrinsic to Ayurvedic drugs and play a crucial role in their therapeutic actions. Ayurveda emphasizes that natural drugs exert their effects based on their taste, qualities, potency, active metabolites, and specific actions, highlighting the pharmacological significance of these aspects in drug substances.

(Atul Jadhav, 2022) has explored Dravya Guna in Ayurveda the properties of substances, including drugs and food, impacting the body through qualities (Guna), taste (Rasa), post-digestive effect (Vipak), potency (Virya), and special effect (Prabhav). These properties determine the biological actions and therapeutic responses of substances, affecting Doshas, Dhatus, Agni, and Strotas in the body.

(Harish Deshpande, 2016) researched on Ayurvedic management significantly improved the quality of life for patients, as evidenced by statistically significant improvements in emotions, functioning, and symptoms domains. This improvement was observed from the day of arrival to the day of departure and further at follow-up, indicating the efficacy of Ayurvedic bio purificatory measures in enhancing quality of life, particularly for patients with skin diseases in developing countries.

(Anita Verma, 2017) researched on Yoga and panchakarma therapy at Kaivalyadhama Yoga Institute have shown significant effectiveness in enhancing quality of life, cardiovascular health, and reducing body fat. For substantial positive changes in psycho-physiological variables, it is recommended to follow this integrative therapy for at least 2 weeks or more.

(L.A. Conboy, 2009) studied the challenges faces in assessing a cleansing program due to initial discomfort attributed to the body's healing process, with minimal serious side effects but increased mild ones like gastrointestinal upset. Although there were no significant changes in overall symptoms, anxiety decreased significantly post-treatment, highlighting potential benefits in promoting healthier behaviours and enhancing self-efficacy, potentially influenced by perceived social support in this holistic approach.

(HARI SHARMA, 2007) identified in his research that the increasing costs and limited effectiveness of Western allopathic medicine highlight the need for a holistic healthcare system like Ayurveda, which has been used in India for centuries. Research on Ayurveda has shown promising results, especially in treating chronic disorders, focusing on prevention rather than just treatment. Investigating Ayurveda's multi-strategy approach through clinical trials comparing it with allopathic treatment could provide valuable insights into its effectiveness and potential integration into modern healthcare systems.

RESEARCH METHODOLOGY: -

This study employs a methodological approach centered on the analysis of secondary data to investigate the principles and yogic practices. Drawing from a diverse array of reputable sources including academic journals, industry reports, and governmental publications, this research undertakes a systematic review of existing literature. By synthesizing insights from these secondary data sources, the study aims to learn about yogic practices through panchkarma, Dravyagyan and aayurveda. The utilization of secondary data obviates the need for primary data collection, allowing for a comprehensive exploration of the subject matter. Moreover, rigorous adherence to citation protocols and proper referencing is maintained throughout the research process to ensure the integrity and authenticity of the findings, guarding against plagiarism concerns while upholding academic standards.

OBJECTIVE: -

- To explore the profound realm of yogic practices within India's heritage and their role in promoting holistic wellness.
- To examine the synergistic relationship between Ayurveda, Dravyaguna, Panchakarma, and yogic principles for optimal health and well-being.

- To understand Ayurveda's foundational principles in connecting the mind, body, and spirit and its personalized approach to wellness based on individual constitutions (doshas).
- To highlight the concept of Dravyaguna and its therapeutic use of medicinal herbs and substances in complementing yogic practices and enhancing their effectiveness.
- To analyze Panchakarma as a transformative therapy for purification, detoxification, and restoring equilibrium, contributing to holistic wellness.
- To elucidate the intricate interplay between yogic practices, Ayurveda, Dravyaguna, and Panchakarma, showcasing India's timeless wisdom for fostering holistic well-being in modern times.

RESULT AND DISCUSSION: -

The findings of this research paper highlight the profound role of yogic practices, Ayurveda, Dravyaguna, and Panchakarma in promoting holistic wellness. The study emphasizes the synergistic relationship between these ancient traditions and their ability to enhance optimal health and well-being.

Holistic Wellness Promotion: The research underscores the pivotal role of yogic practices in India's heritage, emphasizing their holistic approach to wellness encompassing the mind, body, and spirit.

Synergistic Relationship: It elucidates the synergistic relationship between Ayurveda, Dravyaguna, Panchakarma, and yogic principles, showcasing how these systems complement each other to achieve harmony and balance in health.

Personalized Wellness Regimens: Ayurveda's emphasis on personalized wellness regimens based on individual constitutions (doshas) is highlighted as a comprehensive framework for integrating yogic practices into daily life, promoting holistic well-being.

Therapeutic Potential of Dravyaguna: The concept of Dravyaguna, focusing on the therapeutic use of medicinal herbs and substances, is explored as a complementary aspect to yogic practices, amplifying their efficacy and harnessing nature's healing potential.

Transformative Nature of Panchakarma: Panchakarma, known for its purification and detoxification benefits in Ayurveda, emerges as a transformative tool for restoring equilibrium, vitality, and overall well-being. **Timeless Wisdom for Modern Wellness:** The paper concludes by highlighting India's timeless wisdom encapsulated in these ancient traditions, offering valuable insights and practices for fostering holistic wellness in the modern world, where holistic approaches to health are increasingly valued and sought after.

CONCLUSION: -

This research paper has delved into the profound realm of yogic practices and ancient Indian wisdom, focusing on their pivotal role in promoting holistic wellness. Through an exploration of Ayurveda, Dravyaguna, and Panchakarma, this study has elucidated their synergistic

relationship with yogic principles, highlighting their collective ability to enhance optimal health and well-being. Ayurveda, as a holistic system of medicine, serves as the foundational pillar for understanding the intricate connection between the mind, body, and spirit. Its emphasis on personalized wellness regimens tailored to individual constitutions provides a comprehensive framework for integrating yogic practices into daily life, fostering harmony and balance. The concept of Dravyaguna further enhances this synergy by emphasizing the therapeutic use of medicinal herbs and substances, amplifying the efficacy of yogic practices through nature's healing potential. Panchakarma, as a transformative therapy in Ayurveda, offers a pathway to restore equilibrium and vitality, contributing significantly to holistic wellness. By elucidating the intricate interplay between yogic practices, Ayurveda, Dravyaguna, and Panchakarma, this paper has shed light on India's timeless wisdom, offering valuable insights and practices for fostering holistic wellness in the modern world. It emphasizes the importance of integrating these ancient traditions into contemporary healthcare approaches to promote holistic well-being across various aspects of life.

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Problems and Challenges faced by Women during Flood in Assam

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Abstract

The present study will try to focus the problems and challenges faced by women during flood in the state. There are many factors which make women more prone to the severe effects of catastrophes. Women who are impoverished and disadvantaged are more vulnerable to disaster than men. One of the most serious concerns for women during flooding is that there is lack of sufficient sanitation and hygiene services in relief camps. Due to security issue they become subject to violence during the situation. Therefore, the investigator along with the identification of problems faced by women during flood will also try to suggest measures that might help women in situations of flooding.

Key Words: Problems, Challenges, Women, Flood

Introduction

In Assam, the frequency and intensity of floods is seen growing very fast during the past few decades. The occurrence of this natural disaster can be attributed to both natural and anthropogenic elements. Millions of people are affected annually by floods in places like Assam claiming several lives and causing ruin and relocation. Every year, floods cause death, destruction and displacement. Floods have become a typical occurrence in the state, causing many people to be affected annually. The majority of people in Assam are dependent on agriculture. For the past few decades, the state has witnessed river erosion which is strongly linked to flooding issues. Flooding lowers the agricultural output causing rise in the commodities. The daily regular routine of the affected areas are thrown for a halt, resulting in a confused situation causing the loss of human life, livestock, animals and other natural resources. Floods on their own have the power to completely destroy properties, crops, cattle, environment, homes, buildings, communication, infrastructure and thousand people's way of life in the society. During such crisis both men and women suffer greatly but it is seen that women are more susceptible than men in any situation caused by a natural disaster. It is true that climate change and disasters impact all demographic groups but we cannot deny the fact that there are gender differences in terms of adaptability, susceptibility, vulnerability, competence and resilience. Even in unfavorable circumstances, women are seen performing their daily tasks and obligations without any support system. Therefore this study aims to shed light on the difficulties faced by women during floods, with a particular focus on Assam.

Significance

The northern regions of India are particularly vulnerable to flooding with Assam being one of the most affected states. The population of the state has suffered massively for the occurrence of floods, although women are more vulnerable than males to any catastrophic event. Because of the differences in social conditions between men and women, women are more at risk to disasters than men. This makes women more vulnerable than men. During times of

crisis there is often an increase in violence against women. Because of security concerns many women refuse to take shelters in relief camps. “In rural areas they have to experience severe risk in their pregnancies, ill health, unhygienic camp, shortage of food and pure drinking water, poor sanitation facilities, dropout of girls from schools, forced marriage etc. all together made women life worst”. (Begum, 2020). Although it is not possible to completely eradicate the problems during crisis, at least the percentage of sufferings and miseries experienced by women can be reduced by making the right decisions and policies. It is therefore essential that the problems women face during floods in Assam be identified and suitable steps should be taken to tackle the situation accordingly.

Objectives

1. To study the constraints women encountered during the flood in Assam.
2. To suggest measures that can help women in situations of flooding.

AN OVERVIEW OF THE SITUATION OF ASSAM DURING FLOODING:

Every year flooding has a terrible impact on the people of Assam. People of all ages and genders are badly affected by the terrible devastation caused by the disaster. The most effective way to understand the consequences caused by flood is to study the impact that the floods have on the different aspects during crisis.

IMPACT ON POLITICAL ASPECTS:

Natural disasters, such as floods, frequently occur in the state. In any kind of emergency in the state, the government plays an important role. During flood, the government may encounter challenges if it fails to provide the affected population with basic necessities such as food, clothing, shelter, clean water, medical facilities, relief camps, and other necessities on time.

IMPACT ON PSYCHOLOGICAL ASPECTS:

During floods, affected people witness the loss of their homes, property, financial position, and lives, which has a significant psychological impact. The psychological toll on the affected population is significant. There is a negative impact on their mental health like fear, worry, sadness, hostility, irritability, emotional anguish and so on from the time the flood occurs until the damage is repaired.

IMPACT ON SOCIAL ASPECTS:

During flooding, affected people are driven away from their homes and are placed in relief camps, which are usually limited and densely populated. The chaotic situation and mass migration cause an identity crisis among those impacted. People become more vulnerable to anti social activities. They are also vulnerable to water-borne diseases such as cholera, malaria, and tuberculosis. It is also seen that educational institutions are changed into relief camps in order to meet the needs. As a whole the social order of the society is disrupted by the disaster.

IMPACT ON ECONOMIC ASPECTS:

Flooding causes a major economic imbalance in the affected area. The majority of the afflicted areas are rural and they are basically dependent on agriculture. Their primary sources of earning are their crops and livestock. Agriculture is the foundation of the economy in the state and loss of crops and animals has an impact on farmers in particular and state in general. The loss of their possessions and lower production causes poverty, debt for farmers, and a rise in the price of commodities, among other things.

IMPACT ON ENVIRONMENTAL ASPECTS:

Flooding has an adverse effect on the environment, resulting in deforestation, soil erosion, road damage, relocation, and the death of species, which are forced to leave their natural habitat in search of a safer area. Flooding has an immense impact on the ecosystem causing contamination of the water, increasing the prevalence of water-borne ailments, affecting the economy and so on and so forth.

PROBLEMS AND CHALLENGES FACED BY WOMEN DURING FLOOD IN ASSAM

The Problems and Challenges faced by Women during Flood in Assam are discussed below:

- 1) Water is essential to all living beings. During flood, it is seen that there is insufficient water supply for daily use at the relief camps. There is also lack of bathing facilities, forcing women to share it with their male counterparts. Because of this, women find it difficult to bathe and may go without, resulting in skin diseases and other prominent infections.
- 2) The elderly women are also at risk during floods because they are slow and less alert of risks, they take longer to register everything that happens around them and require extra precautions.
- 3) Again for pregnant women and lactating mothers facing flood situation during this crucial phase of their lives is enough to traumatize them. There is lack of proper health care facilities for pregnant women and lactating mothers in the relief camps. The chance of acquiring water-borne infections is high during flood and a lack of sufficient diet, lack of privacy, taking care of themselves and their new born, breastfeeding their children etc. worsens the distress.
- 4) The relief camps are congested as well as overcrowded, with no separate toilet facilities for women. Taking care of their menstrual hygiene is a challenge for women during the situation.
- 5) During such crisis it is seen that education of girls becomes the least priority of all because they had to shoulder the responsibilities with their parents in looking after the household chores, taking care of the younger siblings and other responsibilities.
- 6) Women are unaware of their own rights owing to illiteracy and ignorance, and they are unable to advocate for their needs during the period of crisis.
- 7) Another issue that women face during flooding is that they are burdened with familial responsibilities. They had to go to gather clear drinking water for the family, find food, take care of children and the livestock etc.

- 8) Violence against women also takes place in the relief camps because it fails to guarantee women's safety.
- 9) Flooding disrupts economic stability in affected areas. Therefore the parents to do away with the responsibility and expenses of their daughters marry them off early.
- 10) One of the issues for women during flooding is that there is lack of sufficient sanitation and hygiene services in relief camps. It is always densely populated, making it difficult for women to maintain good sanitary practices.

THE FOLLOWING ARE SUGGESTIONS THAT MAY HELP WOMEN DURING FLOODING.

- 1) Crime against women becomes more prevalent in such conditions, thus rigorous vigilance should be maintained to prevent violence and crimes against women.
- 2) It is obvious that natural disasters such as floods occurs every year, therefore sufficient relief camps must be built rather than focusing on educational institutions with a special emphasis on the needs of women.
- 3) Planning of educational programs is important in the impacted areas so that children, particularly females, can continue their education during and after the crisis.
- 4) There should be proactive policy initiatives that focus on women.
- 5) The government should take initiatives to raise awareness of women's mental and physical health during disasters and provide counseling as required.
- 6) Women should have access to better health care facilities in relief camps and they should be made aware of and informed about menstrual hygiene and infection risks.
- 7) Women should be made aware about the policies, relief funds, and other services provided for the impacted communities. It is essential that women participate in large numbers in disaster management planning so that they are aware of the information or know what to do during and after the disaster.
- 8) Skill development programs should be offered to help women reach financial goals. They will benefit from this type of support in the long run just as much as they did during the disaster.
- 9) Instead of focusing on short-term solutions to the flooding problem, the administration should place more emphasis on long-term ones.
- 10) The organization responsible for providing assistance in relief camps must ensure that the items necessary for women like sanitary pads, portable toilets, washrooms etc. reach them in sufficient amount on time.

Conclusion

Assam is considered as one of the most vulnerable states in India in case of flooding. Along with the state the women community is also equally vulnerable during the situation of crisis. They had to fight for their survival. Displaced women had to stay at insecure relief camps where availability of food, drinking water and hygiene is a challenge for them. It is not easy for the pregnant ladies and lactating mothers to look after themselves and their babies in such time of crisis with limited accessibilities. The women

communities are traumatized because they had to face many unseen problems and circumstances in such situations of emergency. Therefore it is important that the relief providers should take special measures according to the needs of the affected women.

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**BARRIERS IN EFFECTIVE IMPLEMENTATION OF HUMAN RESOURCE
INFORMATION SYSTEM**

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Abstract

This study analysed the barriers in the implementation of the Human Resource Information system in organisations. Data were collected from 100 respondents from the oil industry, banking and telecommunication sectors. Questionnaires will be distributed personally to all the target samples. Based on the results of the study, out of all the firms, banking organisations' usage is limited to very few areas as compared to the oil industry and the telecommunication industry in Assam. The areas that use HRIS most are recruitment and payroll. It was identified that the use of HRIS is very limited to daily routine work and not to strategic ones. The study reviewed that high maintenance costs and lack of cooperation are the two factors that are indicated as the major barriers in the implementation process.

Keywords: Human Resource Information System, Human resource, Human resource functions.

Introduction

Globalisation has changed the organisation's pattern of working. Various innovations in technology have introduced new ways of managing businesses. Nowadays managers face challenges in dealing with the diverse workforce. Technological innovations have made the process effortless by managing the workforce with automatic data recording, storing and analysing. This change increases the capabilities of the organisation. Visualising this change has clarified that the Human Resource Information System would be the need of tomorrow's Human Resource Management gamut (Hyde and Shafritz, 1977 as cited in Qadir and Agarwal, 2017). To manage HR data and service the HR needs, there is a strong need for human factors that could integrate the HR process and policies into the system and then manage and deliver HR operations efficiently (Qadir, 2019). The Human Resource Information System provides several benefits to the organisation for efficient utilisation of the available human resources (Ankur, 2022). A Human Resource Information System has been defined as a systematised procedure for storage, retrieving and collecting main data required by the organisation about its human resources. It helps the organisation to bring the mission of the organisation towards the desired goals. Human resource terms have been defined as an information technology update system that helps in the sharing of information related to various policies and practices of human resource management within the organisation (Gartner, 2018 as stated in Ankur, 2022). The Human Resource Information System is very safe as it is protected through a password. It is used by the organisation in recruitment processes also where all the information is recorded and it keeps track of information of all the employees of the organisation. Further, this information can be used to decide on training & development, promotions, retirement plans etc. It helps to evaluate the employee's performance and maintain necessary improvements. It makes the whole system

very reliable for keeping the exact statistics. Human Resource Information System helps organisations to provide a better service by making the working of the organisation smooth.

Features of Human Resource Information System:

Cost-effective: Human Resource Information System helps in the financial management and financial planning of the organisation in the best possible way.

Saves time: Human Resource Information System helps to save time in its various HR processes. It simplifies the processes and makes it a less time-consuming one.

E-record keeping: It records the complete information about the employee's performance. It is difficult for the organisation to keep a manual record of the performances; thus, it helps in an effective appraisal system.

Accessibility: The Human Resource Information System is easily accessible. It is a cloud-based system and is easily accessible from any location in the world.

Barriers / Challenges in the adoption of Human Resource Information System:

Despite the growing need and potential benefits of the Human Resource Information System, not all companies are using the Human Resource Information System to its core or even if it is used, it is not used optimally to its potential (Abdul, 2019). Despite the undoubted benefits of the technology, various enterprises, especially small & medium are not capable of exploiting the full benefit of it (David et al., 2015). There are various defects in the implementations of the Human Resource Information System, which are highlighted in the study. A few of the identified barriers are High maintenance costs and lack of cooperation. While a Human Resource Information System needs to have a technical background, many managers agree that with adequate training, current employees with the right aptitude from human resources, information systems or other departments can make the transition to the Human Resource Information System (Robert, 1999 as stated in Khatei and Raheja, 2013). As a whole HR department must play a very important role in implementing the system without any shortfall.

Literature Review:

Manivannan and Rajkumar (2016) have analysed the benefits and barriers of the Human Resource Information System in BHEL Tiruchy, Tamil Nadu state. Factors like lack of funds, lack of cooperation, lack of expertise, lack of staff, network problems, technical problems, inadequate knowledge and time consumption were considered for the study. Out of all, lack of expertise is identified as the biggest obstacle in the implementation stage followed by lack of funds and time consumption and so on. A few other factors that were identified are- Poor need assessment, change management, selection of vendors, fit between organisational policies and migration, availability of internal user support, level of cooperation, management commitment, human capability and privacy issues (Khatei & Raheja, 2013). David et al., 2015 in their study, barriers in implementing the Human Resource Information System in organisations are studied. It was seen that perceptions of males and females on all the factors

are the same. Factors that are taken are lack of funds, inadequate knowledge, lack of expertise, lack of cooperation, network problems, technical problems, lack of staff, time consumption and decreased paperwork. Few studies have proven that top management's reluctance to implement a Human Resource Information System is the most influential behavioural issue faced by organisations nowadays (Ferdous et al.,2015). It was also noticed that users do not perceive the Human Resource Information System as a tool to maximise efficiency and add to potential value addition. Education and training may change users' perceptions towards it. Demonstrating sessions on the Human Resource Information System can bring change in the entire process (Bamel et al., 2014). Besides other factors, internal social influence can have a positive effect on the adoption of the Human Resource Information System (Noutsand Wamba, 2019).

OBJECTIVES OF THE STUDY

- To explore the problems and challenges that interrupt the effective implementation of the Human Resource Information System in the organisation.

RESEARCH METHODOLOGY

Sources of Data

Both primary and secondary data were used in this study. Primary data were collected through a self-structured mailed questionnaire to HR executives engaged in the selected companies. A questionnaire comprising different aspects of HRIS was used to collect data related to HRIS. The secondary data were collected from journal articles, thesis papers, magazines, annual reports, websites and other published and unpublished sources.

Population frame

The sample framework of this study was 100 participants from around 8 firms in Assam including the oil industry, banking and telecommunication. The participants were selected from both the officer and clerical levels of the unit.

Sampling method

The study followed a probability sampling technique to select the sample companies. A simple random sampling technique was employed in the selection of the sample respondents. Questionnaires will be distributed personally to all the target samples.

Normality test

Table 1. Normality test of Variables of HR functions

	Kolmogorov - Smirnov		
	Statistics	df	Sig.
High Maintenance cost	0.081	100	0.071
Lack of technological knowledge	0.080	100	0.70
Lack of management support	0.081	100	0.80
Privacy issues	0.081	100	0.070

Lack of IT Infrastructure	0.080	100	0.081
Lack of Cooperation	0.081	100	0.71

Reliability test

Table 2. Reliability test of variables of HR functions

Construct	Number of items	Alpha (α)
High Maintenance cost	07	0.701
Lack of technological knowledge	06	0.760
Lack of management support	05	0.741
Privacy issues	05	0.916
Lack of IT Infrastructure	07	0.702
Lack of Cooperation	05	0.704

Demographic profile of the respondents

Table: Profile of the respondents

Demographic profile		Percent
Gender:	Male	74
	Female	26
Age:	20-30 years	36
	30-40 years	22
	40-50 years	20
	50-60 years	22
	60-70 years	20
Annual Income:	5-10 Lakhs	32
	10-15 Lakhs	25
	15-20 Lakhs	20
	20 Lakhs and more	23
	25 Lakhs and more	20
Number of years:	1-5 Years	34
	5-10 Years	30
	10-15 Years	14
	15 years and more	22

Table: The frequency table shows barriers to the implementation of the Human Resource Information System.

Factors	Mean	Rank
High Maintenance cost	3.1655	I
Lack of technological knowledge	3.0397	IV
Lack of management support	2.9989	V
Privacy issues	2.8864	VI
Lack of IT Infrastructure	3.1127	III
Lack of Cooperation	3.1566	II

FINDINGS OF THE STUDY:

The study reviewed that high maintenance costs and lack of cooperation are the two factors that are indicated as the major barriers in the implementation process. Based on the results of the study, out of all the firms, banking organisations' usage is limited to very few areas as compared to the oil industry and the IT industry in Assam. The areas that use HRIS most are recruitment and payroll. It was identified that the use of HRIS is very limited to daily routine work and not to strategic ones.

IMPLICATION OF THE STUDY:

The most arousing issues in the implementation of the system are high maintenance costs and lack of cooperation. If the firm does not get proper financial support to manage the maintenance cost, it will be quite burdensome on the part of the manager to implement proper use of the Human Resource Information System. Lack of cooperation also makes the implementation process a difficult one. Top management support is very important along with maintaining data privacy. Further researchers can research various other factors leading to barriers in HRIS.

CONCLUSION OF THE STUDY:

The way of conducting business changed after the emergence of technology. In recent times, the Human Resource Information system has played a very important role in the organisation. With time, its strategic use is increased. Barriers in the implementation of HRIS include high maintenance costs, lack of technological knowledge, lack of management support, privacy issues, lack of IT infrastructure and lack of cooperation. Out of all, high maintenance costs and lack of cooperation are looked at as the major obstacles in the execution of the HRIS. The study highlighted that HRIS is not fully utilised in the organisation. Proper training may help the users to accept HRIS. Apart from the given obstacles, various others are also identified during the research. Factors like poor network conditions to operate the system are also identified. The availability of infrastructure is another important factor for the proper functioning of the system. It was identified in various studies that ensuring top management awareness, suitable infrastructural development, availability of IT experts, training people with IT knowledge, protecting privacy issues and ensuring security from external threats are a few of the remedies that organisations can execute. (Ferdous et al.,2015)

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**A Descriptive Study on the Customer Satisfaction among the Beneficiaries of Mobile
Payment System in Mylaudy, Nagercoil**

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Abstract

The advent of mobile payment technologies has fundamentally transformed the banking sector, offering unprecedented convenience, accessibility and security to consumers. This paper presents a comparative study on the customer satisfaction among the beneficiaries of mobile payment system. It analysis a key factors driving the adoption of mobile payment solutions and shifting consumer preferences. This study is systematically analysed and data collected from the 50 respondents towards customer satisfaction and trust worthy of mobile payment systems.

Keywords: Mobile Payment, NPCI, UPI, Customer Satisfaction.

Introduction:

A Mobile Payment is a process of monetary transactions through a portable electronic devices such as smart phones or tablets. Using the mobile payment applications the financial transactions are made convenient, fast, reliable, secure and contactless options through highly-advanced techniques of encryption and tokenization. To ensure a security of private information, an encryption is used as a secret key which is only accessible to sending and receiving parties.

To develop the digital progress of India, the Reserve Bank of India has played a significant role in the country's digital payment boom. The Reserve Bank of India (RBI) controls and protects the digital payment systems in India. It also enhances the safety and security of digital transactions of users by implementing OTPs (One Time Password) for new payees, high-value transactions, encryptions and authentication technologies.

On April 2009, the National Payment Corporation of India (NPCI) was formed to regulate the mechanisms of retail pay in India. The NPCI launched the Immediate Payment Services (IMPS) on 22nd November, 2010 to minimize the formal banking services and to provide instant, 24*7 services, interbank electronic fund transfer through portable mobile phones, it requires Bank account number, IFSC code and checking process it has some TAT issues. It is also referred to as emphatic services.

On 11th April 2016, the UPI (Unified Payment Interface) was launched for the public use by DR. Raghuram G. Rajan, Governor of RBI at Mumbai. The launch of UPI paves the way to the banks to upload their UPI enabled mobile payment Apps on Google Play Store from 25th August 2016 onwards. Followed by India the UPI was also launched in Sri Lanka and Mauritius. The UPI transactions are accepted in the countries like France, UAE, Singapore,

Bhutan and Nepal. From 1st January 2024, the UPI increased its daily payment limit as 1 lakh rupees for a normal transactions and the limit of 5 lakh rupees for medical and educational purposes.

In 2024, the popularly used mobile payment applications of India are Google Pay, Phone Pay, Cred, BHIM Axis Pay, Paytm, Mobi Kwik, Airtel Thanks, Bharat Pay, HDFC Payzapp, Amazon Pay. As the payments are made “Faceless, Cashless, Contactless” with the safe, secure and less time consuming, the customer’s satisfactory level and a quality of life has been improved.

Statement of the Problem:

The act of paying something to someone is payment. The traditional method of payment is in terms of monetary payments only. The monetary payments includes traditional and digital options. Traditional payments are in the terms of exchange of physical currency, bank notes, cheques and promissory notes.

The digital payments are the electronic systems of payment made through digital wallets of Google Pay, Phonepe, Paytm, Cred, Amazon Pay, Mobikwik that allow the users to make electronic payments through mobile devices or computers.

Customer satisfaction is a measure that determines how happy the customers with a service or capabilities. It helps to identify the changes that can be made for improvement. It is a tool that provides detailed insight into customer needs, desires or wallets. Money is the life blood of monetary exchange & the payment systems are the circulation systems. Payment systems are indispensable to our lives for the smooth flow functions in our day to day life.

The digital payment methods play a crucial or vital role in recurring bills, credit or debit function, bank transfers, automated payments & all types of monetary transactions using current technologies to safeguard the customer data. In the present day life the payment gateways that promote online services. The customers can manage their payments, updating of billing information, view their payment history that enhances customer experience and provides a way for the customer to feel connected to various parties.

Digital payment system that supports for the payment related enquiries, issues & disputes essential for maintaining customer satisfaction & resolving payment related problems. There are so many effective digital payment channels that are most common and easy method of e-payment systems. It is a simple method of meeting the transactions with paperless trading. The most common digital payment options include the services of Google Pay, Phonepe, Cred, Mobikwik, Amazon Pay, Paytm.

Even though, the services offered by various digital payments are one and the same, the customer attitude, perception towards the satisfaction of service providers differs, the researcher interested to have a study on the title “A Descriptive Study on Customer Satisfaction Among the Beneficiaries of Mobile Payment System with special reference to Mylaudy, Nagercoil” has been selected for the present study.

Review of Literature:

Rihana R. & DR. S. Meena (2023) studied the effectiveness of online payment system evolved from the barter system and progressing to coins and virtual payment technologies. The usage of Smart phones in the digital payment systems and to analyse the level of customer's satisfaction towards online payment apps. To examine the problems faced by the people while using online payment applications.

M. Deepa (2021) concluded that most of the respondents are having more awareness about digital payments and also satisfied with the online payment. The growth of the users of smart phones and internet penetration in such area also facilitated the adoption of digital payment.

Tien Thao Cong Phan¹, Tri Quan Dang¹, Nguyen Than Luan¹ (2023) the study insights the theoretical and practical implications for the field of mobile payment services. However, in the increasingly competitive advantage, a model has been researched on the views of customer payment applications.

Riya Gowsami¹, Sheraya Gowsami², DR. Pushp Kant Shakdwipee³ (2023) studied the digital innovations and government initiatives such as paperless and cashless transactions have facilitated the e-banking products like UPI and the customer's satisfaction in the UPI transactions.

Mukesh Srivastava & Sandhya Sinha (2023) on their research studied the perception towards e-payment system and its impact and considerations. The study revealed that in an online business e-payment take the form of money exchange and also concluded that it is quite difficult to suggest which payment system is best.

Scope of the Study:

The study is planned to know what percentage of sample population is using the e-payment services, over last two decades, e-payment has tremendously changed the way we do business. By doing this comparative study, we get the level of satisfaction achieved by customers, using different e-payment portals.

Objectives of the Study:

- To study the awareness on payment for transactions through electronic media.
- To study the usage of e-payment systems for business transactions in the sample population.
- To identify the satisfaction level of customers, using e-payment systems.
- To identify the reasons for preference of e-payment system over traditional payment method.
- To examine the reason for the selection of particular mode of e-payment system.

Methodology:

On the basis of random sampling method, the data has been obtained from 50 respondents. This study is mainly based on both the primary and secondary data. In primary data,

questions were designed in a systematic manner, covering adequate and relevant aspects of the study and the secondary data was collected from book, journal and websites.

Tools for Analysis:

The primary data were analysed with the help of simple percentage method, pie chart, bar diagram, weighted average ranking method, chi-square method.

Limitations of the Study:

- This study is confined in a shorter period of time.
- Total number of respondents is limited.
- Some of the respondents did not response to the queries accurately with interest.
- For a facility like e-payment services, the sample size should have been larger to get a more accurate findings.
- For this study the scope of analysis was limited, the research could have been in more depth.

Analysis and Interpretation:

General Profile of the Respondents

Factors	Classification	No. of respondents	Percentage
Age	20 or less	9	18%
	21-40	27	54%
	41-60	14	28%
Sex	Male	21	42%
	Female	29	58%
Educational Qualification	Up to H.S.C	4	8%
	Graduate	23	46%
	Post Graduate	10	20%
	Others	13	26%
Marital Status	Married	34	68%
	Unmarried	16	32%
Occupation	Student	11	22%
	Professional	5	10%
	Business	2	4%
	Employee	20	40%
	Housewife	12	24%
Family Income	Below 50000	14	28%

	50000 to 100000	29	58%
	100000 to 200000	5	10%
	Above 200000	2	4%
Method of Payment	Google Pay	20	40%
	Phonepe	8	16%
	Cred	4	8%
	BHIM Axis Pay	2	4%
	Paytm	9	18%
	Mobi Kwik	2	4%
	Airtel Thanks	1	2%
	Bharat Pay	1	2%
	HDFC Payzapp	1	2%
	Amazon Pay	2	4%

Source: Primary Data

Inference

The above table shows that 54% of the respondents having the age group of above 21-40 years, 58% of the respondents are female, 46% of the respondents are graduate, 68% of the respondents are married, 40% of the respondents are an employee, 58% of them under the income group of Rs.50000 to 100000 and the last one regarding the method of payment 40% of the respondents were using Google Pay.

Application of chi-square test on mobile payment systems:

Gender*Employment:

Hypothesis:

H₀: There is significant association between employment and sex with regard to mobile payment systems in Mylaudy, Nagercoil.

H_a: There is no significant association between employment and sex with regard to mobile payment systems in Mylaudy, Nagercoil.

Chi-square Analysis Gender*Employment cross Tabulation

	Employed	Unemployed	Total
Male	16	5	21
Female	8	21	29
Total	24	26	50

Source: Computed Data

We take the hypothesis that there is no distinction in appointment on the basis of sex.

The expected frequencies are:

10	11	21
14	15	29
24	26	50

Applying X^2 test

O	E	O-E	$(O-E)^2$	$(O-E)^2/E$
16	10	6	36	3.6
8	14	-6	36	2.57
5	11	-6	36	3.27
21	15	6	36	2.4

Calculated value of chi-square = 11.84

Table value of Degrees of Freedom = $(c-1)(r-1)$

$$= (2-1)(2-1)$$

$$= 1 \times 1$$

The value of chi-square at 5% for 1 degree of freedom is 3.84

Decision:

Since, the calculated value of chi-square 11.84 which is greater than the table value (3.84) it falls on the rejection region and hence the hypothesis is to be rejected, and it can be concluded that there is no significant association between employment and sex with regard to mobile payment systems.

Weighted Average Ranking Analysis:

Weighted Average Rank has been applied to analyse the factors motivate customers to use the mobile payment systems. Following factors taken into consideration for weighted average ranking analysis.

- Bank
- Friends & Relatives
- Surroundings
- Advertisement
- Others

Ranking on the factors motivate customers to use the mobile payment systems

Sl.no.	Category	I	II	III	IV	V	Total	Average	Rank
1	Bank	<div>75 15</div>	<div>48 12</div>	<div>30 10</div>	<div>16 8</div>	<div>5 5</div>	174	34.8	I
2	Friends & Relatives	<div>60 12</div>	<div>40 10</div>	<div>24 8</div>	<div>28 14</div>	<div>6 6</div>	158	31.6	III
3	Surroundings	<div>70 14</div>	<div>72 18</div>	<div>12 4</div>	<div>8 4</div>	<div>10 10</div>	172	34.4	II
4	Advertisement	<div>25 5</div>	<div>32 8</div>	<div>36 12</div>	<div>22 11</div>	<div>14 14</div>	129	25.8	IV
5	Others	<div>20 4</div>	<div>8 2</div>	<div>48 16</div>	<div>26 13</div>	<div>15 15</div>	117	23.4	V

Source: Computed Data

The table shows that Bank got first rank, motivation by surroundings obtained second, friends & relatives obtained third, advertisements scored fourth and other factors placed last.

Inference:

The bank factors motivate the customers to use mobile payment systems.

Reasons for the selection of mobile payment systems:

Sl.no.	Category	I	II	III	IV	V	Total	Average	Rank
1	Transfer of money	<div>70 14</div>	<div>48 12</div>	<div>30 10</div>	<div>16 8</div>	<div>6 6</div>	170	34	I
2	To pay bills	<div>50 10</div>	<div>64 16</div>	<div>12 4</div>	<div>24 12</div>	<div>8 8</div>	158	31.6	III
3	For online shopping	<div>60 12</div>	<div>32 8</div>	<div>48 16</div>	<div>20 10</div>	<div>4 4</div>	164	32.8	II
4	To buy tickets	<div>60 12</div>	<div>8 2</div>	<div>18 6</div>	<div>24 12</div>	<div>18 18</div>	128	25.6	V
5	Payment in stores	<div>10 2</div>	<div>48 12</div>	<div>42 14</div>	<div>16 8</div>	<div>14 14</div>	130	26	IV

Source: Computed Data

From the table it is evident that to transfer of money scored first place, For online shopping hold second, To pay bills got third place, Payment in stores obtained fourth, To buy tickets stand last place.

Inference: Transfer of money is the major reason for the selection of mobile payment systems by customers.

Satisfactory opinion on e-payment application:

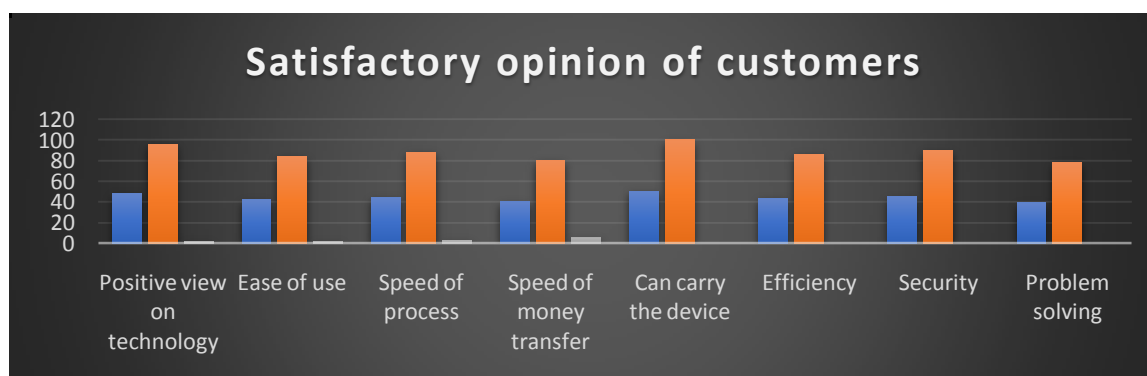
To check reasons for satisfaction among the respondents, those who answered strongly agree or somewhat agree for the questions was taken as 'Agree'. The following table shows the satisfactory opinion on the respondents.

Satisfactory opinion

Sl.no.	Satisfactory opinion	Agree	Percentage
1	Positive view on technology	48	96%
2	Ease of use	42	84%
3	Speed of process	44	88%
4	Speed of money transfer	40	80%
5	Can carry the device	50	100%
6	Efficiency	43	86%
7	Security	45	90%
8	Problem solving	39	78%

Source: Primary Data

Inference: Among the respondents, reasons for satisfaction with the mobile payment system, those with positive view on technology were 48 (96 percent), ease of use were 42 (84 percent), speed of process were 44 (88 percent), speed of money transfer were 40 (80 percent), regarding portability of the device were 50 (100 percent), efficiency were 43 (86 percent), security were 45 (90 percent) and problem solving were 39 (78 percent).



Dissatisfactory opinion on e-payment application:

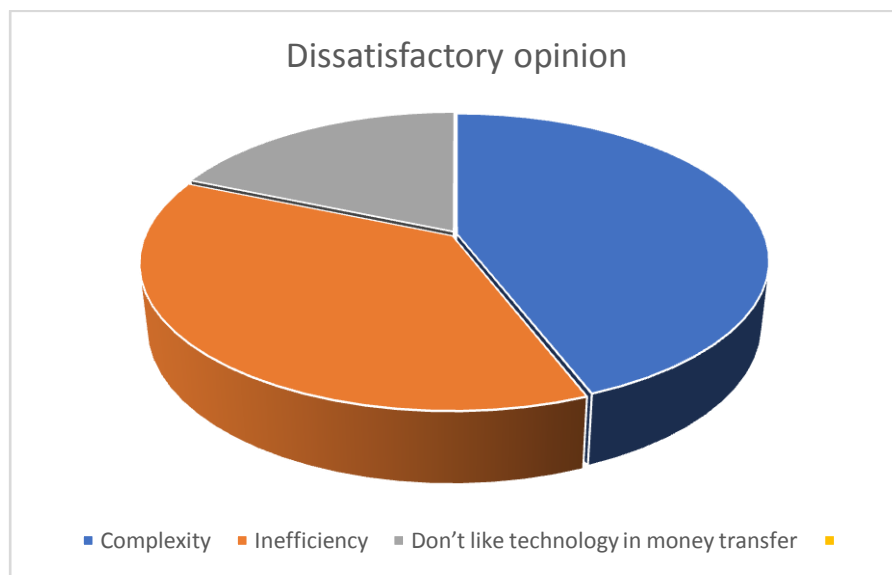
To check the reasons for the dissatisfaction among the respondents, those who answered somewhat disagree or strongly disagree was taken as 'Disagree'. The reasons for dissatisfaction among mobile payment users were tabulated as follows.

Sl.no.	Dissatisfactory opinion	Disagree	Percentage
1	Complexity	26	52%
2	Inefficiency	22	44%
3	Don't like technology in money transfer	11	22%

Source: Primary Data

Inference:

Among the respondents, the main reasons for dissatisfaction of the respondents were complexity of the system 26 (52 percent), inefficiency 22 (44 percent), don't like technology in money transfer 11 (22 percent).



Findings:

- The respondents 27 (54 percent) under the age group of 21-40 were using mobile payment.
- Majority of the respondents 29 (58 percent) were Female.
- Most of the respondents 23 (46 percent) were graduates.
- The marital status of the major respondents 34 (68 percent) were married.
- The major users of online payment applications 20 (40 percent) were employees.

- The majority of the respondents family income was 50000-100000 were 29 (58 percent).
- In this study the major customers are using Google Pay as a method of payment were 20 (40 percent).
- There is no significant relationship between gender and employment in chi-square analysis.
- The bank factors motivate the customers to use mobile payment system is analysed by weighted average ranking analysis.
- Transfer of money is the major reason for the selection of mobile payment system.
- Majority 50 (100 percent) of the respondents viewed that they can carry the device.
- Majority 26 (52 percent) of the respondents viewed that they felt it difficult to handle e-payment applications.

Suggestions:

The important suggestions given by the researcher for the descriptive study on the customer satisfaction among the beneficiaries of mobile payment system in Mylaudy, Nagercoil area are as given below.

- Understanding how users perceive current mobile payments and knowing what drives their satisfaction and dissatisfaction is clearly defined.
- Understanding the users satisfaction can help mobile payment providers to develop more successful future applications.
- The study should be done on a larger population which gives more accurate results.
- It is advisable to conduct studies in each category of payment like money transfer, online payments, payment in stores to get more realistic view on satisfaction and dissatisfaction among the users of the mobile payment applications.
- Research also need to be done on merchants perspective to get different angle of views on the payment portals.

Conclusion:

The study on customer satisfaction of mobile payment users showed some interesting findings. As the respondents were mostly in the age group of 21 to 40, they are mostly technology driven. Around 80% of the study population had a positive view on various parameters of customer satisfaction. Sources of dissatisfaction are mostly because of feeling of complexity in the system and inefficient. As far as the government and central banks are concerned, with the new technology, there is less requirement for printing currency and also currency in circulation. As the transactions are easy, secure, convenient and speed of money from one account to another or online shopping, more and more people will use the technology for money transfers. At present people in different way of life whether rich or poor, young or old are using smart phones, online payment system has to come to stay and is bound to improve the quality of life of future generations.

ROLE OF ICT IN TEACHER EDUCATION

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ABSTRACT

Information and Communication Technology is a major factor in producing rapid changes in the society. It has become the main source of gathering correct information. ICT is the full range of a device and application that plays a very important role in digital communication. Today education and technology are inseparable. ICT has become an integral part of whole system of education. Teachers play an important role in helping students to develop their full potential. Development of skills and competencies in teachers require knowledge of ICT. It is the teachers who help the students in making effective adjustment in the changing society. Therefore, the teachers need to be well acquainted with the use of ICT. The knowledge and application of ICT is very much needed for teacher education programme as this will prepare the teacher to perform his classroom teaching more effectively. The Pre-service and In-service teacher education programmes should be aimed to train the prospective teachers to use ICT competently.

KEY WORDS: Teacher Education, ICT, Pre-service and In-service Teacher Education.

INTRODUCTION

Teachers are the backbone of education system. The quality of education depends on the quality of teachers which in turn depends on the quality of teacher education. Teacher education is an important training program in any educational setup. Teacher education helps the teachers to learn how to deal with the students and make them learn effectively. It is an ongoing process as the program is always evolving and new effective ways of teaching keep emerging. Teacher education refers to the policies and programs designed to equip the prospective teachers with right knowledge, skills, attitudes, competencies and behaviours they requires to perform their tasks effectively. According to National Council for Teacher Education Act (NCTE 1993) “Teacher education means programmes of education, research or training of persons for equipping them to teach at primary, pre-primary, secondary and senior secondary stages in schools, and includes non-formal education, part-time education, adult education and correspondence education through distance mode”. Education system around the world are in the pressure of incorporating ICT for teaching students the skills and the knowledge they need to adjust in 21st century. In modern era of science and technology, it is very much essential for the students to acquire knowledge of information and communication technology. It is through education, the students receive knowledge and skills needed for living a healthy life. And the teachers are the most important element in any educational programs. He plays central role imparting right knowledge to students. The success of students largely depends upon the teacher. For making the child able to meet the challenges of 21st century, it is very much important to make them well equipped with the use

of new ICT tools and devices. Therefore, the teacher education program should be aimed at making the prospective teachers competent in using ICT.

According to UNESCO (2002), “ICT is a scientific, technological and engineering discipline and management technique used in handling information, its application and association with social, economic and cultural matters”. Within very short period Information and Communication Technology becomes one of the basic building blocks of modern society. The dream of digital India would be only possible if all the people are able to use the new ICT devices appropriately in their day to day life. So ICT has become an integral part in school curriculum as it provides both the teachers and the students opportunities to update their knowledge. In school curriculum ICT is introduced as a compulsory subject. It is important to note that due to increasing importance of digital education today, teacher education has become more important especially in ensuring that teachers today have the required knowledge and skills to manage digital tools. It has been found that most of the educational institutions today incorporate artificial intelligence and augmented learning processes in the curriculum to enhance the ability of the students for facing the challenges of 21st century. It is because of this reason that teachers are required to improve their knowledge about the use of digital tools and devices through continuous education. Through teacher education, teachers can be trained on current concepts and ideas to expand their knowledge and adapt to the changing learning environment. With the advancement of modern science and technologies, teachers are trained in e-teaching and virtual learning methods by teaching them how to handle the digital tools and technologies for effective teaching. Therefore the role of ICT in teacher education is also significant.

NEED OF ICT IN TEACHER EDUCATION PROGRAMME

Teacher education is a program that is related to the development of teachers' proficiency and competence that would enable them to meet and face the challenges in teaching profession. Teacher education encompasses teaching skills, sound pedagogical theory and professional skills. ICT acts as a gateway of knowledge and information that help the teachers as well as the students to be updated. Teachers need to be trained in accordance with the needs of the society, the globalization scenario and the advancement of modern science and technology. In preparing the teachers for 21st century, the inclusion of ICT in teacher education is very much essential. These technologies will help the teachers feel comfortable in the classroom and teach efficiently. The classroom interaction situation is changed from one way to two way communication. The teachers need to be well equipped with the use of ICT for making the classroom interaction interesting. ICT provides a platform for transforming teachers centred and textbook oriented classroom into a rich, student centred and interactive classroom.

Implementation of ICT in teacher education is found beneficial. Now almost each and every teacher has good command over ICT devices. Earlier the teaching was mainly classroom based but COVID has changed this perspective. Now the students are learning from a remote area without any face-to-face connection with the teachers. The teachers are taking classes through online mode. So ICT has become an integral part of the whole system of education.

For making the teachers a competent one, ICT is of great importance in teacher education programs.

ROLE OF ICT IN TEACHER EDUCATION PROGRAMME

- ICT helps teachers in making classroom teaching interesting.
- ICT keeps teachers updated with new knowledge.
- Helps teachers make teaching-learning efficient.
- Helps in preparing lesson plans.
- ICT expands the need for on-going professional development of teachers.
- Provides better educational contents and helps the teachers in routine administrative tasks.
- Enable teachers to use multimedia content for teaching more efficiently.
- Helps the teachers in keeping students motivated by making the classroom interesting.
- Help teachers in assessing students' performance.
- The student-teachers prepares teaching models, various diagrams and PPTs etc. with the help of ICT.
- Enable teacher self-learning in his/her subject area by providing updated learning sources.
- Helps in creating more student centric learning environment.
- Helps teachers in using various hardware and software technologies efficiently in the classroom.
- ICT help teachers in their professional as well as personal development.

CONCLUSION

Educational institutions performs important function in providing learning experiences to the students for leading them from the darkness of ignorance to the light of knowledge and the key personnel who plays significant role in bringing this transformation are teachers. Teachers are responsible for implementing educational processes at any stages. The quality and the success of learners are determined primarily by the teacher's knowledge, competence and motivation. This shows that it is important to invest in the preparation of teachers as they are called the torchbearer of the society. In the modern scenario of science and technology, the teacher education evolved by means of ICTs. ICT help teachers to update their teaching strategies, techniques, skills and teaches them how to use new tools and resources in classroom. ICT enables the facilitators to use new digital devices in the classroom. Laptops, LCD projector, iPads, computers, tablets, smart classes etc. becomes common media for teacher education institutions. The use of ICT in teacher education institutions help the prospective teachers in creating bright future of the students in 21st century.

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Child Marriage in Assam: An Analysis

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Abstract:

For developing country or a healthy nation requires healthy educated citizens. When we talk about healthy and educated citizens, we think of mothers, because only mothers can make their children healthy, educated and developing citizens. So we can hope for a developed country if every mother is educated. The famous philosopher Napoleon Bonaparte said "Give me an educated mother, I shall promise you the birth of a civilized, educated nation." A.P.J. Abdul Kalam said, 'When women are empowered, society with stability gets assured.' But in our country India, most women are still deprived of education, mainly due to child marriage. Child marriage is a barrier to the healthy growth of future generations and the development of good citizens. Child marriage is the marriage of a minor girl to an adult or minor man under the age of 18 in different societies in different parts of India. It is a violation of the fundamental human rights and it impacts all aspects of a girl's life. These marriages deny a girl of her childhood, disrupts her education, limits her opportunities, increases her risk of violence and abuse, and jeopardizes her health. The article presents data about the contributing factors and recommends action for prevention.

Keywords: Child Marriage, Causes, Education, Suggestions, Assam.

Introduction:

Child marriage, defined as a formal marriage or informal union before age 18, is a reality for both boys and girls; however girls are disproportionately the most affected. Globally nearly one in three girls are married before the age of 18, and one in seven is married before the age of 15. An estimated 10 million child marriages occur every year. According to Juvenile Justice Act, 2006 a child means a person who has not completed eighteen years of age. As per The Prohibition of Child Marriage Act, 2006 a child is a person who has not completed 21 years in case of male and 18 years in case of females. However, the UNICEF defines child marriage as marriage before 18 years of age and considers this practice as a violation of human rights. The operational definition used in this study is child marriage is any marriage, which is below the age of 18 years.

The issue of child marriage is one of the most emerging concerns among the developing countries. There are many factors which contribute to the high prevalence of child marriage in India. Child marriage is a major social problem, which has socio-economic, social practices and traditions, cultural and regional factors responsible for its existence and continuity. It not only affects the persons involved in it, but also affects the society and nation as well as a globally. Child marriage has both sociological and psychological affect on boys and girls. But the affect on girls is far larger and more intensity because when a girl lives with a man and takes on the role of caregiver for him. Child marriage is a prescribed religious

practice among some of the Muslim population in Dhubri and Nagaon. In those areas, it is common for a girl to marry at the age of 14 or 15. Dhubri district is one of the highest child marriage prevalence districts of Assam. This study of try to explore that – Big family size, Social norms and customs, Lower educational level of parents and Poor economic condition of the family leads to higher incidence of child marriage. Because of increasing misuse of modern technologies like-- mobile phone, TV etc. leading to love and elopement type of child marriages.

Objectives of Study:

The present study has been done with following three main objectives—

1. To prevent child marriage to boost human development.
2. To create awareness to the evil which result from child marriage.
3. To find out the causes or factors of child marriage in Assam.

Methodology:

The present study is descriptive in nature and this paper is entirely based on primary and secondary sources of data, which include research paper, journals, articles, books, newspapers and internet websites.

Review of Literature:

According to Hemanta Mudoi (2020) Child marriage remains a significant issue in developing countries, including India. Early marriage is associated with health risks, including infant and maternal mortality due to advanced pregnancies. Young brides often experience symptoms of sexual abuse and stress. Despite awareness of the negative outcomes, child marriage persists in society, affecting women's conditions and hindering development. Based on interviews with young girls, pregnant women, local NGOs, police, and ASHA workers, this research sheds light on the prevalence of child marriage in Assam. The team conducted case studies to gather necessary insights into the problem Human Rights Law Network (2015)

According to Saraswat (2006) Child Marriages exist in feudal societies where the Nagnika concept was prevalent. Parents were made to believe that if they did not get their daughters married off before puberty, they would go to hell. Indian tradition places a high premium on virginity before marriage. This applies to women and to some extent men too. In a culture where premarital chastity is valued, one of the easiest ways of achieving this is to get the young girls married in their childhood.

A number of social, health and economic disadvantages are associated with early marriage. While existing data do not draw conclusions regarding whether early marriage alone causes these adverse outcomes, it is likely that the links between early marriage, poverty, low educational attainment and other variables in diverse settings have found that married girls are likely to have frequent unprotected sexual relationships.

According to Miller and Lester, (2003), Marriage dramatically increases the likelihood and pressures of childbearing. The first-time mothers below the age 16, in addition to the normal

risks and responsibilities of child bearing, face an increased risk of maternal and infant mortality.

Married girls typically have low levels of educational attainment, limited or even absent peer networks, restricted mobility and less access to mass media such as T.V., Radio and Newspapers as compared to boys or unmarried girls Haberland & Bracken, (2004).

Despite laws to the contrary it is seen early marriage continues to be the norm and once married there is a tremendous pressure on young wives to bear a child. Early sexual activity also exposes adolescents to a greater risk of contracting Sexually Transmitted Diseases (STDs), including HIV/AIDS. Early marriage and pregnancy is one of the major causes of maternal mortality in India Yadav, (2006).

As a result of child marriage, the girl child's reproductive and sexual health is affected the most. These girls suffer from high rates of obstetric complications, intrauterine growth retardation, pregnancy induced hypertension, premature deliver, higher mortality rates, high incidence of RTIs and STI and fetal wastage (miscarriages or still births). The neonatal and infant mortality rates are also high along with incidences of premature delivery and low birth weight of the newborn child Bhat, (2005).

The risks of early marriage are not just limited to the girl child alone, but also to the child that is born to her as a result of an early pregnancy. One in 15 children in India dies before their first birthday as compared to 1 in 200 children across the industrialized world Agrawal & Mehra, (2004).

According to a recent report by UNICEF (2005), almost 50% of women aged 20-24 are married by 18 years in India. Child marriages have been a practice since centuries and people practice it strictly. In India, pre-adolescent and adolescent girls who constitute a sizable segment of its population constitute a vulnerable group on account of practice of early marriages, potential exposure to a greater risk of morbidity and mortality Verma, (2004).

High fertility rate is attributed to an early marriage i.e. child marriage. The earlier a time a woman marries the more likely she is to give birth to a larger number of children, consequently placing a high demand on her health Bhat, (2005).

These studies collectively emphasize the urgent need to address child marriage in Assam and promote inclusive development for all. It is observed that early marriages tend to place the woman under male control with no choice over birth control, education, and health leading to a life of domestic and economic subservience.

Causes of child marriage:

The practice of Child marriage seems to be guided by variety of socio-cultural, religious and economic factors. In Assam, Child marriage is influenced by several factors, and

understanding these reasons is crucial for addressing this issue. There are some key causes of child marriage-

1. **Persistent Poverty and Gender Inequality:** Poverty remains a dominant and overarching reason for child marriages in Assam. Economic hardship often leads families to marry off their daughters at a young age. Additionally, gender inequality perpetuates this practice, as girls are disproportionately affected by early marriages.
2. **Lack of Education and Job Opportunities:** Limited access to education and employment opportunities contributes to child marriages. When families face financial constraints and lack awareness about the importance of education, they may prioritize early marriage for their daughters.
3. **Cultural Norms and Traditions:** Social customs and traditions play a significant role. In some communities, child marriage is considered a norm, and families adhere to these practices without questioning their impact on the well-being of young girls.
4. **Maternal and Infant Mortality Rates:** Assam has high rates of maternal and infant mortality. Child marriage is a primary cause of these alarming rates. Early motherhood poses health risks for young girls, affecting both their well-being and that of their infants.
5. **Dowry:** Dowry concerns may also contribute to child marriage. Although dowry is not traditionally practiced in Assam, it has become more common for a groom's family to demand dowry after marriage.

Finding and discussion:

According to the Annual Health Survey report of 2010-11, 10 districts in Assam have underage marriage rates higher than the state and national averages, which stand at 21 and 22 percent respectively. Besides, among the married women in the age group of 20-24, the state average of those who were married before they were 18 is as high as 39.4 percent.

According to a 2018 report, the rate of child marriage among poor families in rural areas of Dhubri, Bangagaon, Goalpara, Barpeta, Chirang, Dhemaji, Lakhimpur and other districts of Assam has increased abnormally. These districts have the highest marriage rates of girls under 18 years and adolescents under 21. The child marriage rates in Dhubri, Barpeta and Bongaigaon districts are 48.3 percent, 46.9 percent and 42.5 percent respectively. The increase in child marriage, which is a concern for the state, has led to a parallel increase in the rate of malnourished children and maternal mortality due to premature motherhood.

The National Family Health Survey-5 (NFHS-5) 2019-21 reports that in Assam 31.8 percent of women were married before the age of eighteen and nationally 23.3 percent women between age group of 20-24 were married.

The below table data show that a total of 706 cases have been filed against the accused with the highest number of arrests occurring in Dhubri district, where 192 individuals were taken into custody. Barpeta district closely followed with 142 arrests, while Hailakandi district reported 59 detentions. In a district-wise breakdown of Arrests, it is evident that child marriage is a wide spread issues in the state.

Total: 706 cases registered, 1041 accused, 916 arrested

S/No	District	Cases Registered	Accused	Arrested
1	Bajali	18	18	18
2	Baksa	33	33	33
3	Barpeta	85	244	142
4	Biswanath	5	9	9
5	Bongaigaon	23	53	40
6	Cachar	22	34	34
7	Charaideo	5	5	5
8	Chirang	10	10	10
9	Darrang	7	9	9
10	Dhemaji	9	9	9
11	Dhubri	125	125	192
12	Dibrugarh	3	3	3
13	Dima-Hasao	1	1	1
14	Goalpara	22	66	28
15	Golaghat	9	11	11
16	Hailakandi	45	59	59
17	Hojai	36	53	31
18	Jorhat	4	4	4
19	Kamrup Metro	4	4	4
20	Kamrup	39	50	50
21	Karimganj	40	47	47
22	Kokrajhar	20	24	24
23	Lakhimpur	14	14	10
24	Morigaon	26	35	35
25	Nagaon	32	32	30
26	Nalbari	8	10	10
27	Sivasagar	4	4	4
28	Sonitpur	9	6	6
29	South Salmara	50	50	39
30	Tinsukia	4	7	7
31	Tamulpur	4	7	7
32	Udalguri	5	5	5

Source: INDIA TODAY NE (Published on: 03october, 2023)

Child marriage in Assam is a deeply concerning issue with far-reaching consequences. In February, 2024 the Assam government launched an unprecedented campaign to combat child marriage within the state. Over the course of a month, 3,141 individuals faced arrest as part of this initiative. These arrests included not only men who married underage girls but also

family members and religious leaders who facilitated such unions. The crackdown was carried out invoking both the Prohibition of Child Marriage Act, 2006 (PCMA) and the Protection of Children from Sexual Offences Act, 2012 (POCSO). Assam Chief Minister Himanta Biswa Sarma emphasized the severe repercussions of child marriage, stating that it violates the fundamental rights of girl children and poses health risks to them. In the most recent wave of arrests, an additional 916 individuals were apprehended overnight on Gandhi Jayanti. Among those arrested, 62% were of Muslim faith, while the remainder belonged to the Hindu or other communities. The highest numbers of arrests occurred in districts like Dhubri, Barpeta, Hailakandi, Kamrup, and Karimganj. Child marriage negatively affects girls' privileges, perpetuates gender inequality, and restricts their participation in decision-making processes. Data shows that 32% of girls aged 20-24 in Assam were married before 18 years of age (2019-21 data).

Suggestions and conclusion:

Stopping child marriage is not a small task, but elimination of early marriage is a clear starting point and small actions can create a big change. From this study, some suggestions can be highlighted in below:

- (i) Gender sensitization training programmes should be spread all across the district for the police, NGOs and other stakeholders alike. They should be trained about the risks and disadvantage of child marriages and also through such trainings the primary and secondary education of girls should be promoted.
- (ii) Programs should aim to retain girls in school for longer periods with an ultimate goal of overall social development of Assam.
- (iii) Rectifying the loopholes in the law is a significant way to control child marriages. This loophole must be corrected to strengthen the document against those who break the law.
- (iv) In the district level, special cells must be set up which will work specially on cases of child marriages. Keeping a check on the marriages taking place in the villages may bring down the number of child marriages in the area.
- (v) All stakeholders, including parents, relatives, panchayat members, the police, NGOs, social workers, district magistrates, etc, should be sensitized and convinced about the negative impact of child marriage on children.
- (vi) Registration facilities should be provided at the lowest rung of our administrative structures in the rural areas and in the urban slum dwellings.
- (vii) NGOs should be given the authority to report and intervene with the help of district magistrates, police or other social workers in the cases of child marriage.
- (viii) Intervention programs should aim to increase total food intake, provide education and health care for girls aged 10-15, promote the use of contraception, register marriages and provide family life education, and involve boys in the education process.
- (ix) A safety net must be created for girls and young women who escape a forced and often violent marriage. In such cases, the girls and even boys should be given security by the police of the district so that no harm is done to these children by their own family members.
- (x) Media can play a major role in creating awareness regarding child marriages in the district level. They can broadcast child marriages taking place in the villages so that action can be

taken by NGOs, district magistrates. They can even report such cases to the local police authorities as a preventive gesture.

(xi) Along with formal education, women should be educated informally re-garding the risks and adverse outcomes of child marriage and teenage pregnancy.

(xii) Ending child marriage would require the consent of all those involved, including fathers and religious, community, and tribal leaders.

(xiii) Improved family planning education, access, and support are urgently needed for women married as children, their husbands, and their families to reduce the high fertility and poor fertility-control outcomes of this practice.

In summary, addressing child marriage requires sustained efforts, legal enforcement, and awareness campaigns to protect the rights and well-being of young girls in Assam. Overall, participation from every level of community is vital to end this social epidemic of child marriage from Assam as well as from this green planet.

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Strategic Intellectual Property Rights Management in Pharmaceutical Companies: Navigating Innovation and Regulation

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Introduction:

In the realm of pharmaceuticals, Intellectual Property Rights (IPR) are not merely legal safeguards but critical strategic assets. The dynamic landscape of drug development, characterized by extensive research, stringent regulations, and intense competition, underscores the paramount importance of effective IPR management. This article explores the significance of IPR in pharmaceutical companies, strategies for their management, and the evolving challenges and opportunities in this domain.

Importance of IPR in Pharmaceutical Companies:

Intellectual Property (IP) encompasses patents, trademarks, copyrights, and trade secrets, among others. In the pharmaceutical sector, patents play a central role in protecting innovations, including novel drugs, formulations, manufacturing processes, and therapeutic uses. Securing patents grants companies exclusive rights to commercialize their inventions, enabling them to recoup investments and incentivizing further innovation.

Strategies for IPR Management:

Early and Comprehensive Patenting: Pharmaceutical companies must initiate patent filings early in the drug development process to establish priority and protect key innovations. Comprehensive patent portfolios cover various aspects of drug development, including composition of matter, formulations, methods of use, and manufacturing processes.

Strategic Partnerships and Licensing: Collaborations with research institutions, universities, and other industry players facilitate access to complementary technologies and expertise. Licensing agreements allow companies to leverage their IP assets by granting others rights to use, develop, or commercialize patented inventions in exchange for royalties or upfront payments.

Defensive Patenting and Freedom to Operate (FTO) Analysis: Defensive patenting involves acquiring patents not for commercialization but to deter competitors and safeguard market share. FTO analysis assesses whether a product or technology infringes upon existing patents, mitigating legal risks and ensuring the freedom to operate without encumbrances.

Lifecycle Management: Pharmaceutical companies employ lifecycle management strategies to extend the exclusivity of their products beyond the expiration of primary patents. This may involve obtaining secondary patents covering new formulations, dosage forms, indications, or methods of administration, thereby delaying generic competition.

Regulatory Strategies: Regulatory exclusivities, such as data exclusivity and market exclusivity, complement patent protection by providing additional periods of market

exclusivity upon regulatory approval. Understanding and leveraging these regulatory pathways are integral to maximizing the commercial potential of pharmaceutical products.

Challenges and Opportunities:

Regulatory Hurdles: Stringent regulatory requirements, particularly in the areas of patentability and data exclusivity, pose challenges to obtaining and enforcing patents. Companies must navigate complex regulatory landscapes while ensuring compliance with evolving legal standards and guidelines.

Emerging Technologies: Advances in biotechnology, genomics, and personalized medicine are reshaping the pharmaceutical industry and challenging traditional notions of patentability. Companies must adapt their IPR strategies to encompass emerging technologies and navigate ethical, legal, and social implications.

Globalization and Enforcement: Pharmaceutical companies operate in a global marketplace characterized by diverse legal frameworks and enforcement mechanisms. Harmonizing IPR protection across jurisdictions, combating counterfeit products, and enforcing IP rights in emerging markets present complex challenges requiring international cooperation and coordination.

Conclusion:

Effective management of Intellectual Property Rights is indispensable to the success and sustainability of pharmaceutical companies. By strategically leveraging patents, partnerships, regulatory pathways, and lifecycle management strategies, companies can safeguard their innovations, mitigate risks, and maximize the value of their intellectual assets. In an era of rapid technological advancements and evolving regulatory landscapes, proactive and adaptable IPR management is essential for maintaining competitiveness and driving innovation in the pharmaceutical industry.

**Navigating Supply Chain Challenges and Seizing Opportunities in Pharmaceutical
Companies**

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Introduction:

The pharmaceutical industry operates within a complex global supply chain, characterized by intricate logistics, stringent regulations, and evolving market dynamics. As pharmaceutical companies strive to meet growing demand, ensure product quality, and optimize costs, they encounter a myriad of challenges and opportunities in managing their supply chains. This article explores the key challenges facing pharmaceutical supply chains and outlines strategies to leverage emerging opportunities in this dynamic landscape.

Challenges in Pharmaceutical Supply Chains:

Regulatory Compliance: Pharmaceutical supply chains are subject to stringent regulatory requirements governing the manufacture, distribution, and storage of drugs. Compliance with diverse regulations, including Good Manufacturing Practices (GMP), Good Distribution Practices (GDP), and serialization mandates, poses significant challenges, particularly for companies operating across multiple jurisdictions.

Quality Control and Assurance: Maintaining product quality and integrity throughout the supply chain is paramount in the pharmaceutical industry. Challenges such as temperature excursions, contamination risks, and counterfeit drugs jeopardize patient safety and regulatory compliance, necessitating robust quality control measures and stringent supplier qualification processes.

Demand Forecasting and Inventory Management: Accurate demand forecasting is critical to ensuring product availability while minimizing excess inventory and stockouts. However, pharmaceutical companies face challenges in predicting demand due to factors such as market volatility, changing patient demographics, and regulatory uncertainties, leading to inventory imbalances and supply disruptions.

Supply Chain Visibility and Traceability: Lack of visibility into the supply chain hampers timely decision-making and increases the risk of counterfeit or substandard products entering the market. Establishing end-to-end traceability through technologies like blockchain, RFID, and track-and-trace systems enhances transparency and enables rapid identification and mitigation of supply chain risks.

Globalization and Outsourcing Risks: Pharmaceutical supply chains are increasingly globalized, with components sourced from diverse suppliers and contract manufacturers worldwide. While outsourcing offers cost efficiencies and access to specialized capabilities, it also introduces risks related to geopolitical instability, trade barriers, intellectual property protection, and supply chain disruptions.

Opportunities for Improvement:

Digitalization and Advanced Analytics: Embracing digital technologies and analytics-driven insights enhances supply chain agility, efficiency, and resilience. Predictive analytics, AI-driven demand forecasting, and real-time monitoring enable proactive risk management, optimized inventory levels, and responsive supply chain orchestration.

Collaborative Partnerships: Collaborative partnerships with suppliers, contract manufacturers, logistics providers, and regulatory authorities foster innovation, knowledge sharing, and risk mitigation. Building strong relationships based on trust, transparency, and mutual value creation enables companies to address common challenges and capitalize on shared opportunities.

Supply Chain Agility and Flexibility: Agile supply chains are better equipped to respond to unforeseen disruptions and market shifts. Implementing agile principles, such as modular manufacturing, flexible sourcing strategies, and dynamic inventory optimization, enhances responsiveness and resilience while reducing lead times and costs.

Sustainability and Responsible Sourcing: Increasing emphasis on sustainability and ethical sourcing practices presents opportunities for pharmaceutical companies to differentiate themselves and enhance brand reputation. Adopting environmentally friendly packaging, reducing waste, and promoting fair labor practices across the supply chain contribute to long-term sustainability goals and stakeholder engagement.

Innovative Distribution Models: Leveraging innovative distribution models, such as direct-to-patient delivery, telepharmacy services, and decentralized distribution networks, enhances accessibility, convenience, and patient adherence. Embracing digital health technologies and leveraging data analytics enable personalized healthcare solutions and value-added services along the supply chain.

Conclusion:

Pharmaceutical supply chains face a myriad of challenges, ranging from regulatory compliance and quality control to demand forecasting and globalization risks. However, amidst these challenges lie opportunities for innovation, collaboration, and transformation. By embracing digitalization, fostering collaborative partnerships, enhancing supply chain agility, and embracing sustainability, pharmaceutical companies can navigate supply chain complexities, mitigate risks, and capitalize on emerging opportunities to deliver safe, effective, and accessible healthcare solutions to patients worldwide.

**A THEORETICAL STUDY ON THE IMPACT OF ARTIFICIAL INTELLIGENCE
ON HR PRACTICES**

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Abstract

This study aims to investigate the significant effects of artificial intelligence (AI) on talent management and human resources (HR) procedures. An overview of AI technologies and their uses in HR is provided in this article, with a focus on how they might enhance strategic decision-making, expedite the hiring and selection process, and boost employee engagement and productivity. Also discussed are the challenges and moral dilemmas related to AI's use in HR. This study concludes by demonstrating how the HR AI revolution might result in workplaces that are more inclusive, data-driven, and productive.

Key Words: - Artificial Intelligence, Human Resources, Talent Management, Employee Engagement, Productivity

INTRODUCTION

“Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think and act like humans. It involves the development of algorithms and computer programs that can perform tasks that typically require human intelligence such as visual perception, speech recognition, decision-making, and language translation. AI has the potential to revolutionize many industries and has a wide range of applications, from virtual personal assistants to self-driving cars. Many tools are used in AI, including versions of search and mathematical optimization, logic, and methods based on probability and economics. The AI field draws upon computer science, mathematics, psychology, linguistics, philosophy, neuroscience, artificial psychology, and many others.

The main focus of artificial intelligence is towards understanding human behavior and performance. This can be done by creating computers with human-like intelligence and capabilities. This includes natural language processing, facial analysis and robotics. The main applications of AI are in military, healthcare, and computing; however, it's expected that these applications will start soon and become part of our everyday lives.

Many theorists believe that computers will one day surpass human intelligence; they'll be able to learn faster, process information more effectively and make decisions faster than

humans. However, it's still a work in progress as there are many limitations to how much artificial intelligence is achieved.

NEEDS FOR ARTIFICIAL INTELLIGENCE

1. To create expert systems that exhibit intelligent behaviour with the capability to learn, demonstrate, explain, and advise its users.
2. Helping machines find solutions to complex problems like humans do and applying them as algorithms in a computer-friendly manner.
3. Improved efficiency: Artificial intelligence can automate tasks and processes that are time-consuming and require a lot of human effort. This can help improve efficiency and productivity, allowing humans to focus on more creative and high-level tasks.
4. Better decision-making: Artificial intelligence can analyse large amounts of data and provide insights that can aid in decision-making. This can be especially useful in domains like finance, healthcare, and logistics, where decisions can have significant impacts on outcomes.
5. Enhanced accuracy: Artificial intelligence algorithms can process data quickly and accurately, reducing the risk of errors that can occur in manual processes. This can improve the reliability and quality of results.
6. Personalization: Artificial intelligence can be used to personalize experiences for users, tailoring recommendations, and interactions based on individual preferences and behaviours. This can improve customer satisfaction and loyalty.
7. Exploration of new frontiers: Artificial intelligence can be used to explore new frontiers and discover new knowledge that is difficult or impossible for humans to access. This can lead to new breakthroughs in fields like astronomy, genetics, and drug discovery.

OBJECTIVES OF THE STUDY

More specifically the study makes an earnest attempt by having the following as its objectives:

1. To know the Concept of Artificial Intelligence in HR.
2. To study the application of Artificial Intelligence and its impact on HR department.
3. To study the challenges of application of Artificial intelligence.

REVIEWS OF LITERATURE

S.N. Premnath and A. Arun(2019) highlighted other themes, including the typical difficulties HRs may encounter when integrating AI and HR and how these difficulties could be overcome, the current limitations of the technology, and most importantly, the advantages of applying such a technology to the HR function. In order to assist future HR professionals in adjusting to a more technologically advanced HR function, the study sought to learn more about the application of artificial intelligence to the human resources function in the Indian setting Peigong Li et al (2022) stated how digital innovation and technological advancements

in the HR of the healthcare industry would enable firms to obtain better financial and economic results while raising productivity, employee retention, and general satisfaction. The creation of employee compensation and benefits plans, which hitherto took up the majority of the work of HR personnel and required the use of rudimentary methods, will take much less time with the deployment of digital HR systems run by AI tools. By implementing AI tools, procedures were transformed and HR employees had more time to concentrate on more strategic issues.

Abhilasha Singh & Apurva Shaurya (2021) Demonstrated that the main advantages of AI were the elimination of repetitive jobs and accelerated quality. Similarly, to that, the biggest problems were a lack of training and technological readiness. Due to restrictions, AI is less able to be implemented in the overall hiring process and can produce results that are problematic in terms of their authenticity. AI is expected to take the position of administrative chores in both the hiring process and hiring activities, interfering with aspects that are relevant to certain jobs and recruitment outcomes. The traditional hiring procedure would be extended by AI, which is capable of providing candidates for jobs with a wider range of possibilities.

Ginu George & Mary Rani Thomas (2019) stated that AI is replacing many HR functions, but this does not imply that HR positions are being replaced by AI, which is untrue. For HR professionals, there is a ton of administrative work that is important and repetitious, like posting jobs, sourcing candidates, screening them, organizing meetings and interviews, creating timesheets, documenting and verifying accounts, and tracking other expenses. Of course, if this can be totally automated through AI, it will be to the HRs' great advantage as it will free them up from these menial jobs and allow them to spend more time on strategic thinking, creativity, relationship-building, emotional intelligence, and better problem-solving.

Xiaoyu Huang et al (2023) concluded that the next generation of HRM, known as personalized HRM, is characterized by the use of advanced HR analytics and AI to maximize both the quality and ROI of HRM. By establishing a conceptual framework for personalized HRM and exploring its theoretical and managerial consequences, this research enriches the strategic HRM literature overall. A two-level causal conceptual framework that explains the causal mechanisms connecting personalized HRM and a firm's financial success has been introduced. We have proposed and explained why personalized HRM outperforms traditional HRM approaches in terms of improving employee ability and motivation, productivity, the HR climate, flexibility, the ROI of HRM, and subsequently, the firm's financial performance. Our arguments are based on the theories of individual differences and person-organization fit.

Andy Charlwood & Nigel Guenole (2021) emphasized that The next generation of HRM, known as personalized HRM, is characterized by the use of advanced HR analytics and AI to maximize both the quality and ROI of HRM. By establishing a conceptual framework for personalized HRM and exploring its theoretical and managerial consequences, this research enriches the strategic HRM literature overall. A two-level causal conceptual framework that explains the causal mechanisms connecting personalized HRM and a firm's financial success has been introduced. We have proposed and explained why personalized HRM outperforms

traditional HRM approaches in terms of improving employee ability and motivation, productivity, the HR climate, flexibility, the ROI of HRM, and subsequently, the firm's financial performance. Our arguments are based on the theories of individual differences and person-organization fit.

RESEARCH METHODOLOGY

This research is based on secondary sources of data, which include Articles, Journals and Books.

DATA INTERPRETATION

ARTIFICIAL INTELLIGENCE IN HUMAN RESOURCE MANAGEMENT:

AI technologies offer significant opportunities to improve HR functions, such as self-service transactions, recruiting and talent acquisition, payroll, reporting, access policies and procedures. We are living in an era in which AI capabilities are reaching new heights and have a major impact on how we operate our business. Human resources executives have faith that merging AI into HR administration functions will benefit and improve the overall employee experience. This will provide more capacity, more time and budget, and more accurate information for decisive people management. According to Nilsson (2005) machines should be able to do most of the jobs that human intelligence demands, which he calls for human-level AI. Humans and learning machines are working together to produce an ever-increasing amount of HR data in the cloud, and the use of artificial intelligence analyses offer better insight into how to execute and operate. The success of any organization depends on how effectively it combines people, process and technology intelligently to deliver transformational value at optimized cost. AI will help to efficiently automate many back-office functions for reliable HR transactions and service delivery. This document is focused on conversational AI capabilities for HR transactions and provides insight about intelligent automation via the technology-agnostic chatbot. The adoption of AI in HRM and in recruiting can be called as 'the new age of HR', since AI changes the recruitment industry by replacing routine tasks that have been conducted by human recruiters.

IMPACT OF ARTIFICIAL INTELLIGENCE

AI has become increasingly pervasive in human resource management. AI-driven solutions are being used to streamline many of the traditional processes associated with HR such as recruitment, on boarding, performance management, and learning and development initiatives.

Below is a list of six ways that AI plays a role in human resource management:

1. Streamlining recruitment and selection

AI can help streamline the recruitment and selection process in human resources management. AI-driven solutions are used to quickly identify potential candidates who have the skills and experience needed for a job. It can also be used to make sure that companies hire the most qualified candidates by screening out any applicants who don't meet certain

requirements. This helps save time and money while ensuring that only the best people are hired for each position. Artificial intelligence has the ability to analyze candidate data quickly and accurately using advanced algorithms and machine learning capabilities. This allows it to identify the top candidates faster than recruiters. AI can provide valuable insights into a candidate's workplace behavior and personality using factors such as language analysis, tone of voice, and facial expressions that a regular recruiter may not be able to recognize through a CV. Additionally, AI is helpful for recruiters in analyzing present and future workforce requirements, considering organizational strategy, performance data, and market trends. AI can also assist in creating precise and realistic job descriptions based on the competencies, and behaviors required for each position.

2. Onboarding

Employee onboarding can be streamlined by automating manual, time-consuming activities with AI. Automation technology frees up time for onboarding teams to focus on the human side of bringing on a new team member. Onboarding automation tasks can involve updating databases, implementing training programs, and reducing FAQs. By automating administrative chores like filling out paperwork, setting up accounts, and delivering training, AI can assist to speed the onboarding process. This allows HR professionals to focus on more strategic parts of the onboarding process, such as developing connections with new workers and assimilating them into the organization's culture.

3. Learning and Development (L&D)

AI plays an important role in helping companies constantly teach their employees new skills and knowledge. AI can help find the best ways to learn and understand things, as well as suggest activities that are tailored to each person's individual needs. This helps employees stay up-to-date with the ever-changing business environment. Artificial intelligence is revolutionizing the entire learning and development process and can help L&D professionals deliver better and more engaging learning. With AI, organizations can save time and money while ensuring the most effective learning outcomes for their employees.

4. Increasing performance management

There comes that time again when every employee walks into a conference room to take part in the performance review meeting. It is critical for any firm to have a well-defined performance management system in place. A solid performance management structure can measure employees' impact on the job. With this system in place, the impact of the organization's training may also be tracked. This framework will assist employees in aligning their job performance with the corporate goals and objectives.

5. Employee engagement

The use of Artificial Intelligence can improve the way businesses and employees interact. AI can be utilized for various employee engagement tasks like conducting intelligent surveys, providing real-time feedback, and offering rewards and recognition.

- **Personalization:** AI-powered tools can improve the employee experience by customizing learning and development programs and HR processes to meet the individual needs and preferences of every employee. This can increase employee satisfaction and engagement.
- **Responsiveness:** The use of AI-powered chatbots and virtual assistants can offer around-the-clock assistance to employees by promptly answering their queries and providing feedback. This can result in better employee engagement by fostering a responsive and encouraging work atmosphere.
- **Data-driven insights:** With the help of AI, HR professionals can evaluate employee data such as engagement surveys and performance metrics. They can then use this data to identify any potential issues and gain insights into the workforce. The findings can be used to develop targeted engagement programs and initiatives that cater to the specific needs and concerns of employees.

6. Employee retention

Retaining talents serves to be one of the greatest challenges in the industry globally. Organizations are constantly experimenting with new strategies and methods to keep their employees for as long as possible. Retention of employees is primarily the responsibility of human resource professionals. In this competitive environment, it can be challenging for HR professionals to keep their employees in the organization. HR attempts to address this issue by introducing several techniques inside the company. Therefore, AI can help with career progression planning by monitoring and evaluating employees' performance to identify any signs of stagnation or depression.

7 Career planning

One of the main reasons employees choose to stay at a company is the potential for career progression and new opportunities. AI can help with this by monitoring employee performance to identify when they may be getting stuck and not growing. With this information, managers can introduce new learning and development programs and identify new areas for growth.

- **Identifying opportunities for growth:** AI has various applications for employee assessment, including evaluation of engagement and work performance. It can also notify managers when an employee needs a new challenge or has outgrown their current role. Furthermore, AI-based performance management tools can suggest training opportunities for employees. Employers can also use AI-assisted approaches for employee development and retention of talent at risk of leaving the company.
- **Better work-life balance:** Employee satisfaction heavily relies on work-life balance, in which employees now seek more control over their work schedule and time. Utilizing AI can provide employees with the desired autonomy, while also meeting work requirements and needs. AI does this by helping employees automate repetitive and mundane tasks that can be completed much faster, giving employees the time to work on other tasks that require their own critical thinking and creativity whilst still getting their other tasks done on time.

- **Achievable Equitable compensation:** In today's economy, businesses are aiming to stay competitive and prioritize equal pay for equal work. This raises the question of how to compensate employees effectively. Artificial Intelligence (AI) has the capability to analyze extensive data sets, recognize patterns and assist employers in offering fair and personalized compensation packages to their employees. The solutions mentioned are capable of evaluating market conditions, employee performance, and business outcomes to enhance compensation and rewards. With the help of these solutions, companies can establish clearer objectives, monitor employee progress, and suggest new methods to achieve better outcomes. AI, therefore, plays a role in helping employers create more favorable working conditions for their employees, which would be beneficial for everyone.
- **Improving productivity:** Using AI can boost productivity, which in turn can improve employee retention. This can be achieved by automating tasks that are repetitive and consume a lot of time, offering employees real-time feedback and coaching, and pinpointing areas that can from process improvement. AI also enhances job satisfaction and retention of top talent by improving employee efficiency, reducing errors, and optimizing operations, ultimately leading to a more fulfilling and rewarding work environment while maximizing workforce potential.

CHALLENGES OF ARTIFICIAL INTELLIGENCE

1. Lack of skilled employees: Implementation of artificial intelligence in human resource department is not an easy task. As it is new technology it requires skilled and trained personnel in HR department for the effective result and for better performance. So, organizations must consider this factor at the time of implementation of Artificial Intelligence in HR.

2. Financial barrier: Another challenge in implementation of artificial intelligence is finance. For effective implementation of AI, an organization needs large amount of funds for its implementation and for effective operation in HR and its possible only in medium and large-scale companies. In case of small-scale business its highly impossible due lack of finance.

3. Data privacy: Another challenge of adoption of AI is data Privacy. HR professionals must pay utmost attentions towards maintaining secrecy or privacy of data of the employees. A small amount of negligence in marinating secrecy of data may cause massive damages. Hence an organization recruits a person one who has very good experience with technical skills.

4. Legal restrictions: One cannot adopt artificial intelligence very easily. It requires to meet some of legal conditions before implementation of artificial intelligence and it must follow the ethics also.

CONCLUSION

Artificial intelligence (AI) is the intelligence of machines and the branch of computer science that aims to create it. AI is today's dominant technology and will continue to be a significant

factor in various industries for years to come. As AI systems become more advanced, they are not only poised to disrupt multiple industries with their impact but also raise concerns about how we should handle such incredible power. There's no doubt that AI is having a huge impact on HR. From automating routine tasks to delivering data-rich insights for more objective decision-making, AI continues to enhance how companies attract, develop and retain talent. However, it's important for HR professionals to realize that AI shouldn't replace the human touch in HR. Companies should be able to strike a balance between technology and human involvement to gain the greatest benefits.

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A Comparative Study of Culture in the community life of Jokha Alharthi's *The Celestial Bodies* and Kristin Hannah's *Between Sisters*

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Abstract

Culture is the mode of life shared by a set of folks and in general refers to the shared beliefs, manners and values that bind a society together. This paper aims at centralizing the cultural variations prevail in the community of both the novels *The Celestial Bodies* and *Between Sisters*. The authors' perspective towards their own culture is reflected in the novels are brought out in this paper. It also focuses the difference and similarities of cultural aspects in both the novels under structural outlook. *Celestial Bodies* and *Between Sisters* exhibit a traditional aspect and modern phase of cultural society which tend to follow the study of structural aspects that include culture, behaviour and cognition. Some similar practices and changes followed by both the folks in the novels, though they possess different nationality give a wide range of Oman and American outlook.

Key words: Culture, tradition, communities, Marriage, struggle and hardships.

Culture is the mode of life shared by a set of folks and in general refers to the shared beliefs, manners and values that bind a society together. So, culture is very diverse and it may include various fields like artwork, language and literature. A society cannot function without its culture as it refers to the ideas and things that are passed on from one generation to the next. Culture encompasses many different areas and these can include attitudes towards education, work ethic and time orientation, religious belief and preferences about things like food, art, entertainment, celebrations and etiquette.

Culture is the vital spark of an energetic society, conveyed in the form of stories, celebrations and memories of the past. "In addition to its intrinsic value, culture provides important social and economic benefits. With improved learning and health, increased tolerance, and opportunities to come together with others, culture enhances our quality of life and increases over well-being for both individuals and communities" (The importance of culture).

Emmanuel Terray in his text on Claude Levi-Strauss's world view describes two propositions. The second proposition tells cultural diversity is the source of all creation and progress. It explains,

...the diversity of cultures is necessary for the very existence of humankind, and it is in certain respects consubstantial with human nature...Levi-Strauss himself did, from the classic definition of culture proposed by Edward B. Taylor: culture is “that complex whole which include knowledge, beliefs, arts, morals, law, customs, and any other capabilities and habits acquired by man as a member of society (1958, 1). Levi – Strauss (1983, 39) simply added to this definition that the constituent elements of a culture are not a non-cohesive aggregation that comes about through circumstance. They form a system, and their association benefits from a relative stability in time. (Terry 9)

American culture and lifestyles are quite different from those of other nations around the world. Since the United States is a diverse nation which has been influenced by many different cultures, acceptance of cultural and individual differences is itself a core values that weaves the nation together. The culture encourages a community to commit themselves into marriage which stresses primarily its personal emotional satisfactions.

In Ancient time, American women raised children and managed their families and homes without the current amenities of today and in some way scheduled time for their writings. Lauter states,

“Women writers have been subject to cruel and degrading remarks for centuries, even before Ane Bradstreet responded to the male suggestion that women are more suitable holding a “needle” than a “pen”....Although women writers have gained more respect and acknowledgement since the 19th century, they still experience hardship against the disrespect they receive from male writers, readers and critics. Modern women writers face the challenges of being unaccepted in the literary world, often having to prove the worthiness and importance of their works, being categorized in ways different to men, still have been subject to unethical remarks. Such struggles not only reside in women writers in America, but also in China and Greece, where the literary art still remains a male practice. Although women now have more freedom to write, many of their struggles are similar to those of the 19th century women writers. Fanny Fern was an American novelist and columnist who attacked issues of women’s rights, domesticity, and the male dominated society with humour. Fern was one of the most well-known authors of the 19th century, and was the most highly paid author in America at the time. (Howell 23)

Two hundred and thirty-one years ago Hannah Adams became the first American woman to be a professional writer. She was largely self-taught and self-made she earned money and respect by writing historical and religious books. A study on “The History and Importance of Women’s Literature says,

The tradition of women writing has been much ignored due to the inferior position women have held in male-dominated societies. It is still not unheard of to see literature classes or anthologies in which women are greatly outnumbered by male writers or even entirely absent. The onus of women’s literature, then, is to categorize

and create an area of study for a group of people marginalized by history and to explore through their writing their lives as they were while occupying such a unique socio-political space within their culture. (Rivera)

Nearly every region of the world has influenced American culture, most notably the English who colonized the country beginning in the early 1600s. U.S. culture has also been shaped by the cultures of Native Americans, Latin Americans (people from South America, Central America and Mexico), Africans and Asians. The culture of the United States of America is primarily of Western origin, but is influenced by a multicultural ethos that includes African, Native American people and their cultures. The culture of America has its own distinct social and cultural characteristics, such as dialect music, arts, social habits, cuisine and folklore.

The culture of Oman is steeped in the religion of Islam. Oman has developed its own subsect of Islam, known as Ibadhism, however other strands of Islam such as Sunni and Shi'a are practiced. With this in Mind, the Islamic month of fasting, Ramadan, and other Islamic festivities are very important events in the Omanis culture. Oman has the most diverse culture in the Gulf Cooperation Council.

American and Oman culture differ prominently in many ways. Comparing American and Oman, there is a vast difference in their food and culture. The life span of Oman is higher than that of an American but they make less money than the American. There might be unemployment but the Oman spends less money on health care as they intake healthy foods properly. An e-journal of StudiaLitteraria explains,

Omanis identify themselves with poetry and thoughts. Omani writers through a modern look at the past yearn to enrich national culture, for revitalising history is for them reaching for one's own roots. Different, even chronologically removed events unite the similarity of human attitudes. They are equally interested in religious problems, the mutual influence of different cultures, the relations between the individual and society at various times and in various parts of the world. (Pikulska 144, 151)

Oman Literature or Arab Literature is rising in popularity with a novel named *Celestial Bodies* which have won the Man Booker Prize In 2019. As this novel serves as an introduction to Arab Literature and explore its riches. *Celestial Bodies* revolves around a family in the Omani village of al-Awafi. The focus in on three sisters named Mayya, Asma and Khawla growing up, falling in and out of love and raising children in a time of great cultural, economic and political shifts of Oman.

Culture is most important because the cultural values give a community, an identity of its own. A community gains a character and a personality of its own, because of the culture of its people. Both the novel *Celestial bodies* and *Between Sisters* display their own culture and the cultural values that are being followed. These novels are woven around a particular time in which the characters are adapted with the culture of their nations. Hannah's *Between*

Sisters reflects perfect American life style through its characters, an independent life mixed with emotions, love, loss, marriage and miseries.

The characters in both the novels though struggle and suffer, they relish their culture too. They live in a confined situation by constraining their minds to move the life as it is. Culture in each community differs, as one community holds strict order to value human values and another accepts independent values of an individual. As a result, the change comes from a culture which moulds and changes a person from his childhood.

Celestial Bodies showcase an upper-class Omani family whose members are expected to maintain traditional ways with only a tentative embrace of minimally modified social behaviour. Three daughters exemplify diverse reactions to the society's notion of ideal womanhood in a time of rapid socioeconomic transition.

Since 1970 political and economic changes have brought about great improvements in health and education in Oman, and the government has focused thoroughly on education especially for women. This laid foundation to empower women for greater achievements and not as a child-bearing machine. A unique character Asma shines like a morning star in the novel, as her character is wittily woven as an Arab Muslim woman.

Arab Muslims give importance to prayers as well as healthy food in their spiritual life. They love books and make reading as their part of life. There were several Arabic words used as it is in the English translation to highlight their culture more specific. In her prayer, Mayya prays for the return of her lover, so that she can marry him soon. To express her innocence, Mayya says that "...A girl who doesn't know anything except how to sew" (Alharthi 5). This conveys either women will be taught self-employment or will be given education. Asma is given education, and the eldest girl in the family has to marry first, Mayya is skilled in sewing rather than education.

Americans have their breakfast foods such as Cap'n Crunch, Raisin Bran etc which are notable breakfast cereals. For instance, the sisters discuss of Claire and Bobby's marriage, Claire tells Meghann not to think of hot dogs for the fest like the simple American marriages. Meghann often asks for the cocktail, Margarita in this novel. Christmas is the religious and cultural celebration commonly celebrated in the United States of America. Consumption of alcohols and smoking cigarette is casual there. When Meghann feels tired of loneliness she searches for a guy in a tavern. "She saw the people clustered along the bar, seated on wooden stools. The pitchers outnumbered the people, and there was a lit cigarette in every hand" (Hannah 207).

Celestial Bodies describes about Arab Muslims and their fasting on Ramadan, a common religious and cultural festival celebrated there. It is given in the novel that the women of Muscat wish to give birth to their son or daughter in the Islamic hospital and the nursing women should be an 'Islamic woman' too. "These days you all go the hospitals in Maskad, where those Indian women and those daughters of the Christians see every inch of you....you'd have my slide out right into the hands of the Christians?" (Alharthi 6, 7). When Mayya named her daughter "London", it became a great issue in their culture. They accuse

her of giving her daughter, “the land of the Christians”, and she became weak and fragile of having the baby, so they ask time to think about it. Not like others, Arab Muslims consider girls are blessing. They believe that a girl will help her mother and raises her younger brothers and sisters, which is completely a different view, comparing to the other nations. Naming the children with Arab names is important for them. Wife of Abdallah’s uncle asks him, “You can’t even raise a finger to name your own daughter, huh? Loondoon! This name – what is it? I don’t seem to recall seeing anyone naming his girl baby al-Awafi or Matrah or Nizwa or WadiAday.” (Alharthi 91). Mayya stitches her daughter London’s clothes that will not look like anyone else like her name which no girls has.

In contrast, *Between Sisters* has two sisters who grew up with a mother who drank too much and cared about herself, not her daughters. Meghann the oldest, take care of Claire when their mother was more interested in dating and later on acting than taking care of the baby. Meghann did everything for Claire but later, they don’t even talk much to each other. The occasional phone calls always seem to be forced. “Meghann was the one Claire remembered. The older sister who took care of everything...and then walked away one day, leaving Claire behind” (Hannah 8).

Celestial Bodies narrates the story of three sisters who had grown up in traditional way of living, with different tastes. *Between Sisters* describes the life of two sisters who had brought up in western culture. At the beginning Meg and Claire are affectionate sisters, but eventually their relationships breaks and their taste differs, due to busy schedule of their life, they didn’t find time to talk to each other. Meg says, “My sister and I have problems, I’ll admit it, But nothing major. We’re just too busy to get together” (Hannah 4).

Claire wishes to be a friend as well as a sister to Meghann, but Meg didn’t want that and goes in her way. They behave like polite strangers who share a blood type and an ugly childhood. For a lot of years, Claire has been more of a daughter to Meghann than a sister. Meg has been more of a mother to Claire than her mother ever had. This portrays the culture of America, at a stage parents leave their children to take decision on their way. It seems that the parents are irresponsible when their children cross childhood, allow them to perform independently.

In al-Awafi, a school was opened but girls older than ten were not allowed in. they would only be admitted to the basic adult literacy classes and those who were able to write their first names were allowed directly into the third grade, irrespective of their age.

People of slave origins and Shaykh clan’s root spread wider. The novel mentions that the slave families inhabit the household of Abdallah’s father. Slave women quarrelling inside the house and the slave men’s jokes were heard often. Mayya was paid two thousand riyals as dowry to betroth Abdallah. In an instant he says that “...Masouda and their daughter Shanna, plus Hazifa and her mother Saada and her three daughters whose paternal lineage is not known. All of them slaves, or at least somehow my father’s inherited property” (Alharthi 51).

The community believed jinndjinn guarding the basil bush will take away a person after his death. People of al-Awafi said a woman like Abdallah’s mother Fatima who was

strong and young could not possibly die in a matter of two or three days when she was giving birth. Ankabuta, mother of Zarifa carried the special childbirth food regularly to the jinn-woman Baqiia so that the jinni would not harm Fatima or baby Abdallah. People then said that she was the sort of woman who couldn't escape being the target of someone's sorcery. It is a mystery about Abdallah's mother death. People talk of witchery and jinn as reason but it remained unanswered.

Azzan, father of Mayya informs his wife Salima that he has accepted the request made by Khalid, son of Emigrant Issa, to marry his daughter Asma. He says that he has excused himself to the Emigrant's family for not accepting Khalid's brother for Khawla, telling them that she had already been reserved for her cousin. This explains that giving the girl to their relatives still followed there.

Boys too had the same rules as girls as they should stay in bed at night. Abdallah's father scolds and beat him when he did this mistake and left him bleeding in front of the gate. When he kicked Abdallah, he screamed in rage against his father that he will go out at night to have some fun, like the other boys of his same age do. Years later, he realises that the culture and generation has changed according to the time.

Party culture is common in foreign nations. In America, every occasion will ends with a party or they visit clubs. They have no day or night time to work or enjoy party as they run hurry for their lifetime.

A patriarch's love for a Bedouin woman tears apart his marital relationship in this novel. Bedouin means a nomadic Arab of the desert, it refers to Najiya in the *Celestial Bodies*. Azzan, Mayya's father seeks the love of Qamar, the moon woman, Najiya. People were whispering about the relationship between Mayya's father and an enticing Bedouin Woman. He explains about his family and sufferings to Najiya. He tells in grief that he lost his first baby Muhammad, who had died before he was even two months old. They struggled hard to save the second baby Hamad. Everyone thought the boy would be Azzan's successor and carry out his father's legacy, his name and property. This was the boy on whom Azzan would depend in his old age. Hamad's mother left his hair alone to grow long like a girl's, hoping to fool the jinn, to evade the destructive envy that might target her son. They used leather and silver amulets which were concealed under his clothing, until he reached the age of eight and died. It shows their cultural belief on jinn and amulets.

In *Between Sisters*, Meghann is determined to persuade Claire's mind when she falls very suddenly in love with a musician. However events beyond their control change more than just the relationship between sisters. Claire has never been married and has five-year old daughter, Alison or Ali-Cat as her mother likes to call her. She meets an aspiring country-western singer who she falls promptly in love with. He in turn falls for her. They get married just a few weeks after their meeting. Thus, love is common in both the novels, but the tinge of westernization is more in the culture of American. Love is often expressed in both the novels to highlight the type of cultures. Most of the characters described in the novel are from slave origin. The following lines shows it evidently,

Your ancestors aren't from here. They were as black as you are, they were from Africa, from the lands from where they stole you, all of you, and sold you. It's useless, Zarifa, to try telling this man that no one stole you. That you were born a slave because your mother was a slave and that's the way life is. That slavery passes to you from your mother. That no one stole you, and al-Awafi is your place, its people are yours. (Alharthi 123)

When Asma's family are preparing themselves for the wedding, Azzan refused to set a dowry payment for the bridegroom. He questions whether her daughter a piece of merchandise to be sold. Her dowry will be the same as anyone give is the statement revealed by the bride. Asma's fiancé only paid two thousand riyals, since he wasn't asked to come up with any more than that. This shows that their community people are strict in dowry issues.

Slaves were sold for money. Shaykh bought Zarifa as a new born girl and sixteen years later, he sold her to Merchant Sulayman. Thus, she became a slave worker and a concubine. She would be his beloved, and the only woman who was ever close to him, while he was the only man she would love and respect, and that until the day of her death. This is the condition of slaves in their culture.

Education was given important and most of the people from various countries come to India to continue their studies in Muscat. In the 1940s the mere idea of educating Omanis terrified the rulers. Meanwhile, ShaykhMasoud, Asma's grandfather educates himself with library and reading books in Muscat.

Mayya's mother Salima was not a slave or servant. She didn't allow going near kitchen but she felt pangs of her from her childhood. She couldn't leave the confines of the walled compound or play with the girls who lived nearby. She didn't have a part in the shared laughter and play when women and girls were bathing in the falaj, nor in the dancing at weddings like the girls from slave families did. She grew up at the foot of the kitchen wall, always hungry and observing the slave women's freedom to live and dance, and mistress women's freedom to command others. These restrictions and freedom were hold by the families of master and slave girls respectively.

On those days, slaves are only permitted on the roof to sleep in the open air. Senghor, father of Ankabuta worked in the shaykh's house and farm and he married one of the shaykh's slave women. He died at the age of forty of tuberculosis and then Ankabuta's brothers are sold away as an orphan in the home of Shaykh who had inherited shaykhly position from his father.

Reciting and singing the verses of songs can be seen in *Celestial Bodies*. Giving importance to songs as well as in the life of Arab Muslims is clearly explained in Alharthi's writing. Some people in al-Awafi sing to fill up the hallow spaces in their mind that is occupied with rage. Habib, Zarifa husband told her that songs were the only thing left in his memory to keep his language alive for him. This portrays how they give importance to songs in their culture. Asma and her friends used to go out for singing to the harvest games. After her grown up, she does not go out for the first day of the month of Dhu al-Hijja (a month in

Islamic calendar) to sing with her friends. The following verses are the voices of women who have come to carry Asma's bridal goods to the groom's house. This signifies that the life of people in al-Awafi is blended with songs.

Without songs, an occasion becomes incomplete in American life. Even a child likes to hear a song while travelling in a car. Songs grows up with the kids in the form of fairy tale and rhymes. Alison, the daughter of Claire loves to hear her favourite theme music and story *The Little Mermaid*. She likes both the story form and film form. When Meghann sees Joe in a tavern, she hears the song "Lookin' for Love" on the juke box which symbolises their initiation of love. Before the wedding day, a party is conducted by Bobby and Claire and their friends join them. There played a World War II love song in soft, haunting tones.

Americans give importance to material things than the Arabs as they always have busy schedule. The protagonists of the novel have their Mother actress who is very busy as an actress and money-making. She goes dating with so many men as their culture allows and makes dating common. Her children have not seen their daddy and her younger daughter is always confused with the term 'Daddy', because their mom never brings home the same men she brought earlier. After they grew, the girls get separated from their mother having contact only through phone. Claire tries to call her mother over phone to announce about her wedding with Bobby Austin. This fragment tells the busy schedule of Americans.

Most importantly, the people of Omans and America call their mother as "Mama", for them the word is filled with emotions and love. Sometimes it varies in American culture. The mother of Claire and Meg is an actress and she wants everyone to call by her name. She asks his son-in-law to call by her name and that makes her to feel so young, also to keep up her fame among people.

There is a vast difference in the culture of Americans and Arabs. American men and women smoke cigarettes, intake alcohol, goes for party and clubs, involve in living together relationships, consider marriage and divorces as common, illegal relationships, give importance to sex and other material things. Arabs give importance to spiritual activities, consider in taking alcohol and having illegal relationships as Haram, avoid parties and clubs, divorce their partner by saying Talaq, prefers to stay in their native land, less preference for female education and consumption of healthy foods. It is common that Islamic men have many wives but Islamic women should not marry twice.

The similarities between both Arabs and Americans are that they give importance to familial relationships and prefer to follow their cultural values. Culture is adapted according to the place they live. It is hard to separate a person from their culture as they lose identity. People prefer to live with their community and stay in touch with their culture wherever they move.

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Social Media Utilisation among Students.

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Abstract

The purpose of this paper is to give a general overview of how the growing usage of the internet is affecting the way that students and teachers teach and learn in the modern era. Social media is a new pedagogical tool that may be used to engage both inside and outside of the classroom. As everyone is aware, the COVID-19 pandemic has significantly altered the educational landscape. The study gives a picture of how students use social media in their day to day life for educational purpose and offers the required recommendations for reducing harmful effects social media use. The study focuses on how social networking sites affect students' general well-being and academic performance. The study will look into how often people use social media and for how long. It also discusses the popularity of different websites among students that they use for educational purpose. The findings of this research will provide insights into the role of social media in the lives of students, inform educational institutions about the implications of social media use on student outcomes, and offer recommendations for promoting responsible and effective use of social media among this demographic.

Keywords-Social media, Affect, Teachers, Students, Education

Introduction

Nowadays, the most popular social networking sites among young people are YouTube, Facebook, and Instagram. This is not where it ends, as adults also find it appealing. The rapid expansion of the internet has had a significant impact on students' social and interactional development. India ranks third globally in terms of the number of internet users. It is also evident that students get distracted from their schoolwork by social media platforms like Facebook, YouTube, and other websites. However, as many students rely on the accessibility of information from various websites, it has both beneficial and negative effects. Social media is a collective term for websites and applications that focus on communication community based input, interaction, content sharing etc. It allows individuals to keep in touch with friends and family .It also facilitate sharing of ideas and information. Whereas education is the act or process of imparting or acquiring general knowledge, developing the power of reasoning and judgement and generally preparing oneself or others intellectually for a mature life .It focuses on the all round development of the individuals.

In recent years, social media sites have become more and more popular. Currently, over 70% of individuals who use the internet use social networking sites like Facebook, Twitter, LinkedIn, etc. Globally, 4.95 billion people use social media today, more than twice as many as 2.07 billion did in 2015. An average social media user interacts on 6.7 different social media channels. 61.4% of people worldwide use social media, with 80.8% of

audiences over the age of 18 using it as well. Around the world, people use social media for two hours and twenty-four minutes per day on average. Facebook has more monthly active users than any other social network, with 3.03 billion. It is followed by WeChat (1.33 billion), YouTube (2.49 billion), WhatsApp (2 billion), Instagram (2 billion), and Facebook(www.backlinko.com) . An growing interest in utilising social media to enhance teaching and learning processes has resulted from the extensive use of social media among students, teachers, and researchers. Any digital tool that lets users express their ideas, knowledge, and thoughts through online networks and communities is referred to as social media. Considering its rising popularity and educational potential of social media, it has not been set, and there is currently a lack of information about its uses and limitations. The use of social networking in education, coupled with face-to-face engagement, can enable greater learners, although inclusive. The role of teachers needs to be well supported to develop successful digital pedagogies.

Objectives

- 1.To study the implications of social media in education.
- 2.To provide necessary suggestions for preventing the uses of social media in a negative way.

Methodology

The approach of this study is analytical descriptive in nature. In this study, only secondary sources such as books ,journals, magazines, newspaper, existing literature etc were used.

Objective 1-This section analysis information regarding the utilizations' of social media in education by the students.

Social media can be used as an educational tool, despite the fact that many people just see it as a means of communication and amusement. Both educators and students have recently started to investigate how social media might be used to improve the educational process and open up new avenues for interaction and collaboration. Study shows majority of the students of today's generation agree that they use social media to communicate with their teachers. They also agree that social media was useful mostly during Covid times. The ability of social media to promote student collaboration and communication is one of the main advantages of using it in the classroom which initially supports the development of a collaborative and peer-to-peer learning culture. Students can present their work and interact with a larger audience and can connect across geographic boundaries on social media. It can also help the students to instantly interact with their teachers at anytime with the help of various online platforms. Even the workload of teachers can decrease with the use of Google classroom, WhatsApp group, Google meet etc. Students may become more motivated and engaged as a result of the information they get within a fraction of a second. Furthermore, social media may provide students with a wealth of knowledge and resources. Professionals from a variety of fields exchange news, research, and views on platforms like LinkedIn and Twitter, giving students access to a plethora of information and experience. Students can stay up to date on advancements in their profession and obtain insightful knowledge that can improve their

learning experience . Hence ,students' motivation and engagement may rise as a result of seeing how their work is applied in the real world.

Along with these it enhances personalized learning .It can be used to adapt learning experiences to individual interest. Algorithms and user data analysis enable the distribution of information that matches students interest and learning styles ,supporting learning pathways .There are also different websites useful for students assignment purpose such as -All assignment help, talktyper, grammarly, studyfy, wolfram Alpha, write monkey etc. It is also important to note that there are different online educational platforms which are useful and beneficial for students better learning experiences and skill development such platforms are EdX, eTutor World, Khan academy, Cosmo Learning, Academic Earth etc. Thus, use the different study websites for students offer learning opportunities and information that makes the learning process more interesting and easy for everyone.

Objective 2-This section identifies the necessary suggestions for preventing the uses of social media in a negative way.

Everything in this universe has both beneficial and detrimental effects. While it is evident that using the internet may completely alter the nature of the conventional teaching and learning process, there are drawbacks as well. Distraction risk is one of the main issues with social media use in the classroom. The continuous barrage of alerts and updates may make it difficult for pupils to concentrate on their academics. Furthermore, it can be seen that youngsters today misuse the availability of educational content on the internet, using it only for entertainment purposes and by squandering their valuable study time. Therefore some of the ways for preventing the negative use of social media are as follows –

- i)Social media tools should be regulated according to the age and capacity of the students .Along with that teachers and parents should strictly inform the students about the negative as well as positive aspects of using social media.
- ii)A strategy should be prepared to activate students use of social media sites for academic purpose by registering and participating in closed educational groups.
- iii) Teachers and parents both should be aware of how different sites work and what different settings are available to see.So that they can keep an eye on their students activities and the websites they visit regularly
- iv)Screen time of the students should be checked as we know adoption of the social media sites with slight carelessness can have mental and physical effects one health. Parents and teacher should let them know the negative effects of using phone or laptop for a longer period of time.
- v) Students are more dependent to obtain data from online mode as it can be easily accessible. Due to which books are being neglected. Therefore the institutions should also take measures so that both online and offline materials can go hand in hand.

vi)Conducting experiments for and in education through social media and generalizing them in understanding the problems and challenges faced by the teachers, students and the institutions due to lack of knowledge about the use of social media in education.

Conclusion

Thus, from the above study we came to know that the most popular and newest type of media is social media. It has become an integral part in our daily lives, offering new opportunities which can be addictive and it's important to balance online activity with other aspects of life .There are also concerns with privacy and security ,as well as the potential for cyberbullying and harassment .But the youth find social media to be a valuable resource ,so it is important that they use it to acquire knowledge and information for educational purpose. However, when they connect, they should remember that the information or links they share or get are not just for their own interest and satisfaction but also for the benefit of their contacts and community. Hence, it has various positive and negative impacts on the students and also it is essential for students to use social media mindfully and strike a balance between it's benefits and drawbacks .Most of the negative aspects can be overcome by reducing the amount of time spent on social networking sites. Along with that educators and parents can also play a role in guiding students to make responsible and healthy choices regarding the use of social media .Social media will therefore have the greatest impact on education, which is a fundamental aspect of life. Better educational research needs to be conducted in order to guarantee the benefits of these effects. Lastly, the government should have to make specific rules and regulations on social media and it's uses. It is suggested that the authority should take necessary control on the malicious and vulnerable contents which are exchanged through social media sites and apps.

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Central Bank Digital Currencies (CBDCs): Assessing Opportunities and Challenges

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Abstract

This chapter provides an in-depth examination of Central Bank Digital Currencies (CBDCs), highlighting their significance in monetary policy and financial innovation. It discusses the potential benefits of CBDCs, such as improved payment efficiency and financial inclusion, while also addressing challenges like their impact on monetary policy tools and financial stability. Additionally, it explores the complexities of CBDCs in cross-border transactions, emphasizing the need for regulatory alignment and addressing exchange rate volatility. The chapter emphasizes the importance of understanding both the opportunities and challenges of CBDCs for policymakers to effectively leverage their transformative potential while mitigating risks.

Keywords : Central bank digital currencies (CBDCs), financial innovation, central banks

Introduction

Central Bank Digital Currencies (CBDCs) have emerged as a focal point in contemporary discussions surrounding monetary policy and financial innovation. As digital technologies continue to revolutionize the global financial landscape, central banks around the world are exploring the potential benefits and challenges associated with the adoption of CBDCs. This introduction serves to provide an overview of the multifaceted nature of CBDCs, contextualizing their significance within the broader framework of monetary policy and financial stability. The advent of CBDCs represents a paradigm shift in the way money is conceptualized, issued, and transacted. Unlike traditional forms of currency, which are physical in nature, CBDCs exist solely in digital form and are issued directly by central banks. This digitization of currency has the potential to enhance payment efficiency, reduce transaction costs, and promote financial inclusion by providing a secure and accessible medium for financial transactions, particularly for underserved populations (Barrdear & Kumhof, 2016).

However, the introduction of CBDCs also brings forth a host of challenges and considerations that must be carefully addressed. One of the primary areas of concern pertains to the implications of CBDCs for monetary policy. The effectiveness of traditional monetary policy tools, such as interest rates and reserve requirements, may be influenced by the introduction of CBDCs, necessitating a re-evaluation of existing policy frameworks (Kumhof & Noone, 2018). Moreover, the potential impact of CBDCs on financial stability remains a subject of intense debate, with concerns ranging from bank disintermediation to systemic risk (Frost et al., 2020). In addition to domestic considerations, the advent of CBDCs also introduces complexities in the realm of cross-border transactions. While CBDCs hold the promise of facilitating faster and cheaper cross-border payments, challenges such as regulatory harmonization, interoperability, and exchange rate volatility must be carefully navigated to realize this potential (Boar & Wehrli, 2020).

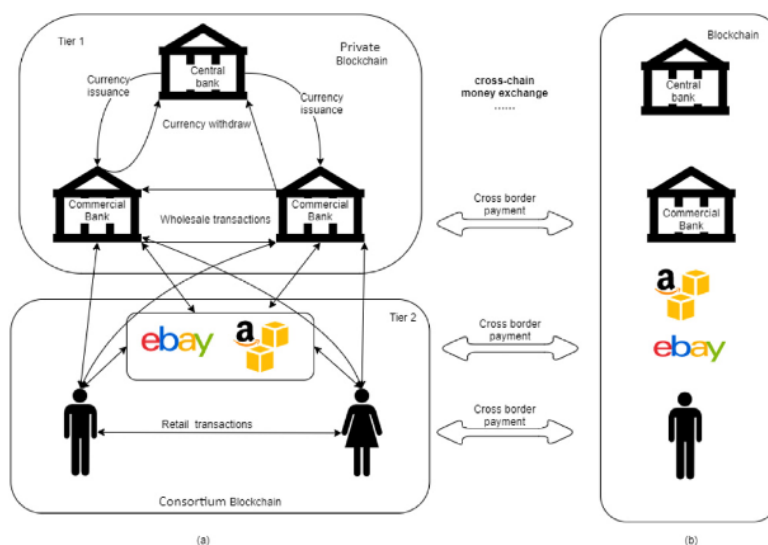


Fig 1: Block chain based CBDC design.

Literature Review

The studies carried out by Han, Yuan, et.al.(2019) address the evolving landscape of cryptocurrencies and block chain technologies, emphasizing the disparity between decentralized cryptocurrencies and central bank digital currencies (CBDCs) in terms of monetary governance and circulation. They propose the function and security requirements of CBDCs through an analysis of existing cryptocurrencies and CBDC prototypes. The authors present a block chain-based framework for CBDCs with three layers—supervisory, network, and user—and detail the key business processes of CBDCs' lifecycle. By using cross-border payments as an example, they elucidate the transaction process of CBDCs, aiming to offer theoretical guidance for CBDC design.

Nurjannah Ahmat,et. al(2017) discussed the rising interest in private digital currencies such as Bitcoin prompts the question of whether central banks should issue official digital currencies, termed central bank digital currencies (CBDCs). Global research is underway to evaluate the impact of CBDC issuance on monetary and financial stability, currency issuance, and payment systems. While potential benefits to monetary policy transmission are recognized, research remains in its infancy and requires further analysis. It is unlikely that cryptocurrencies will imminently replace cash transactions; instead, CBDCs are seen as complementary to cash and bank deposits. Technological challenges must be addressed, and central bank credibility prioritized, amid concerns regarding market expertise and the reliability of underlying technology. The bedrock of currencies lies in the trust people have in central banks to preserve the value of money, raising questions about the technological capabilities of CBDCs in ensuring this trust.

Young Sik Kim et.al (2023) Central banks worldwide are actively considering the introduction of sovereign digital currencies known as central bank digital currency (CBDC). CBDCs represent a national currency-denominated, potentially interest-bearing, and account-based claim on the central bank, accessible to the general public through commercial banks or direct deposit at the central bank. They have the potential to compete with bank deposits as a medium of exchange and store of value. However, a significant concern is the potential

financial stability issue arising from a widespread shift of funds from bank deposits to CBDCs, leading to liquidity shortages within the banking system. This risk is particularly pronounced in countries where highly leveraged banks play a central role in the financial system, relying on fractional reserve banking. Such banks are vulnerable to liquidity crises, necessitating regulatory measures, deposit insurance, and policy interventions to mitigate the risk of bank panics and their adverse economic consequences.

Tao Zhang et.al (2022) highlighted the rapid evolution of block chain technology and digital currencies has spurred central banks worldwide to expedite the development of central bank digital currencies (CBDCs). The paper explores the debate surrounding the integration of block chain technology into CBDC design. Analysing both functional and non-functional requirements, the study reviews existing block chain-based CBDC schemes and concludes that permissioned block chains are better suited for CBDCs than permission less ones. However, challenges remain, including performance, scalability, and cross-chain interoperability. As governments transition toward digital fiat money, CBDCs emerge as a viable solution to enhance payment safety, efficiency, and convenience. Yet, the integration of block chain technology poses both opportunities and challenges in realizing these goals, necessitating careful consideration and ongoing research in CBDC design.

Potential benefits and drawbacks of central bank digital Currencies

Benefits:

1. Improved Payment Efficiency: CBDCs can streamline payment processes, reducing transaction times and costs compared to traditional methods.
2. Financial Inclusion: CBDCs can provide access to financial services for underserved populations, including those without bank accounts, thus promoting financial inclusion.
3. Enhanced Monetary Policy Tools: CBDCs offer central banks new tools for implementing monetary policy, such as direct control over money supply and interest rates.
4. Reduced Counterparty Risk: Transactions with CBDCs can mitigate counterparty risk, as they are settled directly between parties without intermediaries.
5. Increased Transparency and Traceability: The use of block chain technology in CBDCs can enhance transparency and traceability of transactions, reducing the risk of fraud and illicit activities.

Drawbacks:

1. Disintermediation of Banks: CBDCs may reduce the role of commercial banks in the financial system, potentially leading to disintermediation and impacting banks' profitability.
2. Privacy Concerns: CBDCs raise concerns about privacy, as central banks may have access to detailed transaction data, raising questions about individual privacy rights.
3. Technological Challenges: Implementing CBDCs on a large scale requires robust technological infrastructure, which may pose challenges such as scalability, security, and interoperability.

4. **Impact on Monetary Policy Transmission:** CBDCs may alter the transmission mechanism of monetary policy, potentially affecting interest rates, money supply, and inflation dynamics.
5. **Cross-Border Regulatory Challenges:** CBDCs raise regulatory challenges, particularly in cross-border transactions, including issues related to jurisdiction, compliance, and regulatory harmonization.

Implications for Monetary Policy:




Enhanced Control: CBDCs provide central banks with unprecedented control over the money supply and monetary policy transmission. Central banks can directly issue and manage CBDCs, allowing for more precise adjustments to interest rates and money supply in response to economic conditions.

Real-Time Monitoring: CBDCs enable central banks to monitor economic activity in real-time, providing valuable insights into consumer spending patterns, inflation dynamics, and overall economic health. This real-time data can enhance the effectiveness of monetary policy decisions.

Transmission Mechanism: The introduction of CBDCs may alter the transmission mechanism of monetary policy. Changes in the demand for CBDCs could influence interest rates, money supply dynamics, and the effectiveness of traditional monetary policy tools.

Potential Challenges: While CBDCs offer opportunities for more effective monetary policy, they also pose challenges. Central banks must carefully manage the introduction of CBDCs to minimize disruptions to financial markets and ensure the stability of the monetary system.

Comparison of Private Digital Currencies, CBDC and e-Money

	Private digital currencies / Virtual currencies	Central bank digital currencies	E-money / mobile money
Definition	<ul style="list-style-type: none"> Digital representation of value, not issued by a central bank, credit institution or e-money institution, which, in some circumstances, can be used as an alternative to money Cryptocurrencies are a subset of private digital currencies, which uses cryptographic proof for its verification process 	<ul style="list-style-type: none"> Monetary value stored electronically that is a liability of the central bank and can be used to make payments 	<ul style="list-style-type: none"> Actual monetary value stored in an electronic device that can be used to make payments across retailers and purposes
Key aspects	<ul style="list-style-type: none"> New currency New payment system (DLT) 	<ul style="list-style-type: none"> New currency New payment system (DLT) 	<ul style="list-style-type: none"> A form of cashless retail payment system
Examples	<ul style="list-style-type: none"> Bitcoin Ripple <div style="text-align: center;">  </div>	<ul style="list-style-type: none"> Dinero Electronico (Ecuador) <div style="text-align: center;">  </div>	<ul style="list-style-type: none"> Touch'n'Go card (Malaysia) Octopus card (Hong Kong) <div style="text-align: center;">  </div>

Implications for Financial Stability:

Disintermediation Risk: CBDCs have the potential to disrupt the traditional banking system by reducing the role of commercial banks as intermediaries. If depositors prefer to hold CBDCs directly with the central bank, commercial banks may face a reduction in deposits, impacting their profitability and stability.

Systemic Risks: The widespread adoption of CBDCs could introduce new systemic risks to the financial system. These risks may include cyber threats, operational failures, and increased volatility in asset prices. Central banks must carefully assess and address these risks to maintain financial stability.

Regulatory Challenges: CBDCs raise regulatory challenges for central banks and regulatory authorities. These challenges include issues related to cybersecurity, data privacy, anti-money laundering (AML) compliance, and cross-border regulatory coordination. Regulatory frameworks must be adapted to address these challenges effectively.

Implications for Cross-Border Transactions:

Efficiency Gains: CBDCs have the potential to streamline cross-border transactions by providing a more efficient and cost-effective means of payment. The use of CBDCs could reduce transaction costs, settlement times, and counterparty risks associated with cross-border payments.

Regulatory Harmonization: CBDCs raise challenges related to regulatory harmonization in cross-border transactions. Different jurisdictions may have varying regulatory frameworks for CBDCs, leading to potential conflicts and compliance issues. International cooperation and coordination are essential to address these challenges and ensure the smooth functioning of cross-border CBDC transactions.

Exchange Rate Volatility: The introduction of CBDCs may impact exchange rate dynamics, particularly in countries with significant cross-border trade. Central banks must carefully manage exchange rate risks associated with CBDCs to maintain currency stability and support economic growth.

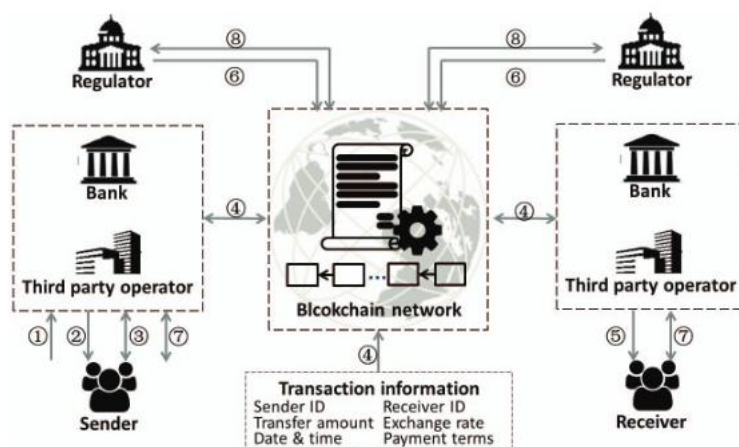


Fig 2: Cross-border payment process in CBDC

CBDCs offer significant potential benefits for monetary policy, financial stability, and cross-border transactions. However, their introduction also poses challenges that require careful consideration and coordinated policy responses from central banks and regulatory authorities.

By addressing these challenges effectively, CBDCs have the potential to enhance the efficiency, transparency, and resilience of the global financial system.

Conclusion

In conclusion, Central Bank Digital Currencies (CBDCs) represent a significant evolution in the realm of monetary policy, financial stability, and cross-border transactions. The introduction of CBDCs offers central banks unprecedented control over monetary policy, enabling more precise adjustments to interest rates and money supply dynamics. Real-time monitoring capabilities afforded by CBDCs provide valuable insights into economic activity, enhancing the effectiveness of policy decisions. However, the widespread adoption of CBDCs also raises concerns about potential disruptions to the traditional banking system, systemic risks, and regulatory challenges. It is imperative for central banks and regulatory authorities to carefully manage the introduction of CBDCs, addressing these challenges while maximizing the benefits of this innovative technology. Through international cooperation and coordination, policymakers can navigate the complexities of CBDC implementation, ensuring the stability, efficiency, and integrity of the global financial system in the digital age. The Reserve Bank of India (RBI) had been actively exploring the possibility of introducing a Central Bank Digital Currency (CBDC) for India. In August 2021, the RBI had released a report detailing its intentions to study and potentially issue a digital version of the Indian Rupee.

The RBI has emphasized the need to carefully consider various aspects of CBDC implementation, including technology infrastructure, regulatory frameworks, data privacy, and cybersecurity. The central bank has conducted pilot projects and engaged in consultations with stakeholders to assess the feasibility and implications of introducing a CBDC in India. While there has been significant interest and discussion surrounding CBDCs in India, including proposals for a "digital rupee," as of my last update, no official decision had been made regarding the issuance of a CBDC. It's worth noting that the landscape of CBDCs and digital currencies is continually evolving, so I would recommend checking more recent sources or updates from the Reserve Bank of India for the latest developments regarding CBDCs in India.

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**A POST PANDEMIC IMPACT OF FINANCIAL INCENTIVES ON
EMPLOYEE PERFORMANCE IN IT SECTOR**

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Abstract

In the current competitive business environment, organizations must devise the best market strategy to boost performance and find a means of maintaining employee motivation at the highest levels to enable them to outperform the competition. An analysis of financial incentives is a popular means of employee motivation within organizations has been attempted in this study. An employee may receive a financial incentive in the form of an award or incentive based on their performance; the higher the employee's performance, the boost the incentive that the staff's receive. Thus, this research focuses on how the company's performance may be impacted by financial incentives, and whether this an incentive program consistently has an impact on an employee's performance. Therefore, the purpose of this study is to determine whether financial incentives always have an impact on employee performance and how they can affect the company's performance.

Key Words: Employee Performance, Financial Incentives, Employee Motivation

Introduction

Motivating staff members to increase performance is one of the main problems that most employers, both in the public and private sectors, face. Most of economics assumes that financial rewards enhance output. Financial inducements or financial incentives for worker performance have a vital role in encouraging workers in a competitive work setting. The economic report states that financial incentives are a popular way for businesses to improve employee performance or company through monetary compensation. Monetary benefits are crucial to enhance worker performance for a few reasons. Financial incentives are based on money that is directly measurable in terms of money. In the current socioeconomic environment, money has become an essential part of our lives in both urban and rural areas. Money can buy almost anything, so it can satisfy most of our needs. Thus, worldwide, financial incentives and promotions have a positive effect on employee loyalty and engagement.

Financial incentives and benefits that are essential to an organization's strategy include salaries, stock ownership, retirement benefits, promotions, and medical reimbursement. Any organization's management must enhance these financial incentives if

it hopes to attract and keep workers. Employees can receive financial incentives in the form of individual or group payments to meet their present and future security needs.

Theoretical Background

Workers are compelled to put in more time at work certainly more than the standard 40 hours per week but staying later at the work does not translate into more productivity. Instead, businesses should work to improve employee productivity, which will foster both personal development and business growth (Makad, 2015). Given the pressure on many businesses' profits, it's critical that staff complete the right tasks in the right manner. Working efficiently allows for the creation of more with the same input (resources), which results in more for less money, a higher return, and less strain (Noordzij, 2013). Efficiency, in the words of Drucker (1974), is "doing things in the right way." Moreover, employee efficiency is a quality that pertains to how quickly and accurately a worker completes a task on the job. Businesses cannot sustain institutional performance without offering incentives to their staff based on their productive and efficient work, given the numerous challenges they face in both the internal and external work environments. Anything that can grab an employee's interest and spur them on to work is considered an incentive. Variable 2 awards are given to employees based on fluctuations in their performance. The goal of an incentive is to raise an organization's general performance (Malhotra, 2017). Financial rewards given to employees whose output surpasses a set threshold are known as incentives.

Review of Literature

- Anything that aims to ignite someone or requires more effort to act in a certain way is referred to as an incentive. A common definition of an incentive is a reward provided to staff members with the intention of inspiring, promoting, and upholding a desired behaviour (Allen, 2001).
- Incentives, according to Hicks (2003), are tools used to accomplish a particular behavioural change. Performance is the degree to which a worker applies effort and skill to complete a task assigned to them, whereas an incentive is a means of encouraging a desired behaviour. Employees receive incentive pay when they meet certain performance goals related to their jobs (Armstrong, 2009). Therefore, encouraging performance is the primary goal of incentive programs. When it comes to performance, team-directed incentives outperform individually-directed ones by a significant margin.
- Armstrong contends that money is a very concrete form of appreciation and a powerful tool for fostering a sense of worth in others. He continues by saying that money is a strong force that is either directly or indirectly related to the fulfilment of a wide range of needs and abstract objectives (Armstrong M., 2009). It has been discovered that financial incentives yield better results than non-financial ones, and that long-term programs outperform short-term ones in terms of performance. Tangible incentives like gifts, trips, etc. The trend towards quality improvement teams and employee commitment programmes may be linked to the shift towards a range of employee-focused incentive schemes, including skill-based payment plans and

performance-linked rewards. Armstrong emphasizes the importance of these incentive programs by pointing out that their primary goal is to treat staff members as partners and encourage them to view the company and its goals as their own.

- According to Bay Jordan, the principal goals of the financial incentive are to: (1) provide the employee with some control over their income, since their income will be determined by their performance; (2) increase their sense of job responsibility; and (3) encourage them to work more than they typically do (Bay, 2011).
- Financial incentives have been shown to improve employee performance by favorably influencing employees' perspectives on their jobs and accomplishments in general, according to Diana L. Deadrick and K Dow Scott's research at Scott (2012).
- Financial incentives are designed to meet people's basic needs, motivate them to give their best effort at work, and raise their level of competency. They are intended to be used as a form of payment to raise staff motivation, job satisfaction.
- According to Wallace and Zeffane (Harunavamwe & Kanengoni, 2013), management focuses on rewards like money because, according to Abraham Maslow's Need Hierarchy Theory, money is the primary driver of motivation. As a special kind of compensation, money can be used to fulfill a variety of human needs, including the physiological need for food. In his well-known theory of acquired needs, David McClelland argued that money is the primary factor influencing how well an active high-need person performs. Money is viewed as a report card that allows workers to readily evaluate their contributions and the value that the company offers in comparison to it; as such, it is a valuable resource that also boosts worker motivation (Loureiro, 2016). As a result, money is crucial for promoting motivation at work since it gives workers the means to fulfill many of their wants for basic necessities (Murphy, 2015).
- An individual is only motivated when there is a pay gap between an average performer and a good performer, according to Langton and Robbins (Loureiro, 2016).
- Motivation and workplace perception were linked by Kanfer et al. (Kanfer, 2012), who described it as a sequence of activities that essentially serve as a person's motivation and guide the actions they will use to achieve the intended result. This cognitive method assesses a person's ability to make a move with intense fervor and perseverance in the correct direction.

Methodology

A financial reward system and monetary incentives offer an active means of incentivizing staff members according to their productivity and business performance. Enhancing the incentive or reward system for employees' performance is a great way to inspire them. This entire study is an analysis paper on financial incentives and the significance of incentives to improve employee performance. The primary instruments or procedures for critical analysis to obtain the appropriate results are described in the methodology section (Cao et al. 2019). The importance of financial incentives to boost employee performance in a company can be examined using a variety of methods, including financial ratio or survey analysis, vertical analysis, and horizontal analysis.

Horizontal Analysis

The foundation of this study is the knowledge that financial incentives play a significant role in raising employee performance in the workplace. An analysis system based on past data and financial reports is known as a horizontal analysis method. This paper's methodology outlines the steps involved in determining how important financial rewards are to employees. By keeping an eye on employee incentives, researchers demonstrate how changes have occurred in an active organization through the use of horizontal analysis. Additionally, this analysis process yields real performance improvement data.

Vertical Analysis

One way to examine financial reports and incentives within an organization is through vertical analysis. This kind of business statistic gives accurate information on the proportion of employees' business performance and is based on incentive opportunities for staff members.

Financial Survey for Employee performance based on incentives

According to Greimel et al. (2018), a financial report of an organization evaluates employee performance quality using monetary incentive programs or financial rewards. This report offers accurate information of the business, employee performance, and overall performance-based incentive programs. This kind of financial survey can determine the connection between high performers' efforts or output to advance the company's operations.

Objectives of the study

- Boost corporate productivity and work quality by implementing an incentive program.
- Foster positive relationships with co-workers and clients in order to boost output within the business.
- The incentive approach encourages staff members to view their performance favourably.
- The company's productivity is raised by the employees' proactive mindset thanks to the incentive system.

Statement of Problem

The amount of financial incentives that employees receive from the company determines how well they perform. Without appropriate incentives and rewards, workers lose motivation to perform better.

Data Collection

This involves conducting a cross-sectional study to obtain data from workers and Basic random sampling technique.

Limitation of the study

The survey's conclusions are predicated on the idea that the participants provided accurate information. It is necessary to consider the possibility of inaccurate or incomplete information, factual errors, misunderstandings of terms and expressions, etc. The study's scope is restricted to the effects of monetary incentives. This study does not account for other nonfinancial incentives or variables that impact employee motivation and performance. There is no geographical or regional representation for the data.

Scope of the Study

This study contributes to the understanding of the extent to which financial incentives can enhance employees' performance within the organization. It will examine how

financial incentives and employee performance relate to each other in terms of productivity, quality of work, and employee satisfaction. In order to effectively motivate employees for higher performance, the study will also examine the superiority of group-directed incentive programs over individually-directed incentive programs as well as the effectiveness of long-term financial incentives over short-term incentives.

Conclusion

Financial incentives are the most effective way to encourage exceptional performance from staff members and have a big impact on their motivation levels. Increases in salary have been found to be the most motivating incentive factor for employees, followed by healthcare, promotion leave, and recognition. For employees over the age of 35, performance-related pay is the most important incentive factor. Just a small percentage of workers concur that their work and degree of responsibility within the company are appropriately and fairly compensated. Compared to small and medium enterprises, large business enterprises offer a wider range of reward and incentive programs. Financial incentive programs with a longer duration have greater efficacy than those with a shorter duration. Financial incentives directed towards groups are more effective than those directed towards individuals. Employee performance is negatively impacted and de-motivated to a great extent when financial incentives are absent. It is imperative for organizations to offer sufficient financial incentives to enhance employee performance.

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Impact of Food and Nutrients in Mood Cognition and Behaviour among College Students

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ABSTRACT

This abstract explores the impact of food and nutrients on the mood, cognition, and behaviour of college students. It synthesizes current research findings to highlight key dietary factors that influence mental well-being and academic performance among this population. Mood Regulation: Nutrients such as omega-3 fatty acids, found in fish oil, have been associated with improved mood regulation and reduced symptoms of depression and anxiety. Tryptophan-rich foods, such as turkey and dairy products, contribute to serotonin production, promoting a positive mood. Cognition and Academic Performance: Omega-3 fatty acids are also linked to enhanced cognitive function, memory, and attention, potentially benefiting college students' academic performance. Antioxidant-rich foods like berries and nuts protect brain cells, while B vitamins support neurotransmitter synthesis and cognitive processes. Adequate protein intake, magnesium from sources like leafy greens, and moderation of caffeine and sugar can positively impact behaviour and mental health. Hydration is crucial for cognitive function, concentration, and overall well-being among college students. A balanced diet rich in omega-3 fatty acids, antioxidants, B vitamins, protein, magnesium, and adequate hydration plays a vital role in promoting positive mood, enhanced cognition, and improved behavior among college students. Strategies focusing on nutrition education and dietary interventions can optimize mental well-being and academic success in this population.

Key Words: Foods, Vitamins, Balanced Diet, College Students, Cognition, Behaviour

INTRODUCTION

In the dynamic environment of college life, students face numerous challenges, including academic pressures, social obligations, and lifestyle choices. Among these, nutrition plays a crucial role in influencing cognitive function and behaviour. This essay explores the intricate relationship between nutrients, dietary patterns, and their effects on cognition and behaviour among college students. Nutrients are essential for optimal brain function, impacting various cognitive processes such as memory, attention, and learning. For

instance, omega-3 fatty acids found in fish have been linked to improved cognitive function and academic performance. Additionally, vitamins and minerals like vitamin B12, folate, and iron play vital roles in neurotransmitter synthesis and neuronal communication, thereby affecting cognitive abilities. Furthermore, studies suggest that antioxidants found in fruits and vegetables can protect the brain from oxidative stress and inflammation, consequently preserving cognitive function. Conversely, deficiencies in key nutrients may impair cognitive performance and increase the risk of mental health disorders among college students. Beyond individual nutrients, dietary patterns also influence behaviour and mental well-being. The Western diet, characterized by high intake of processed foods, sugar, and saturated fats, has been associated with poor cognitive function, mood disturbances, and increased risk of depression and anxiety among college students. In contrast, the Mediterranean diet, rich in fruits, vegetables, whole grains, and healthy fats, has been linked to better cognitive performance, mood stability, and overall well-being. This dietary pattern provides essential nutrients and phytochemicals that support brain health and promote positive mental states.

In addition to diet, other lifestyle factors such as sleep, exercise, and stress management interact with nutrient intake to influence cognition and behaviour. Adequate sleep is crucial for memory consolidation and cognitive function, while regular physical activity enhances mood, cognitive flexibility, and stress resilience among college students. Moreover, chronic stress can disrupt nutrient absorption and metabolism, exacerbating cognitive deficits and emotional disturbances. Therefore, adopting a holistic approach that encompasses healthy dietary habits, adequate sleep, regular exercise, and stress reduction techniques is paramount for optimizing cognitive function and behaviour in college students. The food habits of college students can vary widely based on factors such as personal preferences, cultural backgrounds, availability of resources, and lifestyle choices.

FOOD HABITS AMONG COLLEGE STUDENTS:

Here are some common aspects of food habits among college students:

Convenience Foods: Due to busy schedules and limited time, many college students opt for convenient and easily accessible foods such as fast food, frozen meals, instant noodles, and packaged snacks.

On-the-Go Eating: With classes, assignments, and extracurricular activities, students often eat on the go, grabbing quick bites between classes or opting for portable snacks that require minimal preparation.

Budget Constraints: Financial considerations can influence food choices, leading some students to prioritize cost-effective options like inexpensive groceries, affordable takeout meals, or campus dining hall offerings.

Social Eating: Eating habits are often influenced by social factors, such as dining with friends, participating in group meals, and sharing food during study sessions or social gatherings.

Variety of Diets: College campuses often accommodate diverse dietary preferences and restrictions, with students following vegetarian, vegan, gluten-free, or other specialized diets based on personal, cultural, or health-related reasons.

Meal Skipping: Busy schedules and irregular eating patterns can contribute to meal skipping or irregular meal timings among college students, impacting nutrient intake and overall eating habits.

Snacking Culture: Snacking is common among college students, with snacks like chips, cookies, fruit, yogurt, granola bars, and smoothies being popular choices for between-meal cravings or quick energy boosts.

Late-Night Eating: Late-night studying or socializing may lead to late-night eating habits, including consumption of snacks, fast food, or delivery meals, which can affect sleep patterns and overall health.

Home Cooking vs. Dining Out: Some students prefer cooking meals at home to have more control over ingredients and nutrition, while others rely on dining out, ordering delivery, or eating at campus cafeterias and restaurants.

Awareness of Nutrition: Increasingly, college students are becoming more aware of nutrition and health, leading to a growing interest in balanced meals, mindful eating, and incorporating fruits, vegetables, whole grains, and lean proteins into their diets. These food habits reflect the diverse and dynamic eating behaviour observed among college students, highlighting the importance of promoting nutrition education, access to healthy food options, and support for developing sustainable and balanced eating habits during the college years.

IMPORTANCE OF NUTRIENTS

Nutrients are essential for the proper functioning of the human body as they provide energy, support growth and development, and help maintain overall health. They are classified into macronutrients (carbohydrates, proteins, and fats) and micronutrients (vitamins and minerals). Each nutrient serves a specific purpose:

Carbohydrates: Provide energy for daily activities and are essential for brain function.

Proteins: Build and repair tissues, support immune function, and act as enzymes and hormones.

Fats: Provide energy, help absorb fat-soluble vitamins, and are crucial for cell structure and function.

Vitamins: Support various biochemical reactions in the body, such as immune function, vision, and bone health.

Minerals: Necessary for bone health, fluid balance, nerve function, and muscle contraction.

Balanced intake of these nutrients is vital for overall health, growth, and disease prevention. Deficiencies or excesses of certain nutrients can lead to various health problems, including malnutrition, obesity, and chronic diseases like diabetes and heart disease. Therefore, maintaining a balanced diet rich in diverse nutrients is crucial for optimal health and well-being.

EFFECT OF FAST FOODS ON COLLEGE STUDENTS:

Nutritional deficiencies: Regular consumption of fast food often leads to a diet high in calories, unhealthy fats, and sugars, but low in essential nutrients like vitamins and minerals.

Weight gain and obesity: Fast food tends to be calorie-dense and can contribute to weight gain and obesity, which are risk factors for various health problems such as heart disease, diabetes, and hypertension.

Decreased academic performance: Poor nutrition can impact cognitive function and concentration, potentially leading to decreased academic performance in college students.

Increased risk of chronic diseases: The high levels of sodium, trans fats, and sugars in fast food are associated with an increased risk of chronic diseases such as cardiovascular disease, type 2 diabetes, and certain types of cancer.

Financial strain: Regularly eating fast food can be expensive, especially for college students on a tight budget, leading to financial strain and potentially impacting other areas of life such as housing and education expenses.

Overall, while fast food may be convenient and appealing to college students, its consumption should be moderated to mitigate these negative effects on health and well-being. The effect of nutrients and food style on cognition and behaviour among college students is a topic of significant interest and research. Nutrient-rich diets, including those high in fruits, vegetables, whole grains, and lean proteins, have been associated with improved cognitive function and academic performance. Conversely, diets high in processed foods, sugar, and saturated fats may impair cognitive abilities and contribute to mood fluctuations and decreased concentration.

Specific nutrients such as omega-3 fatty acids, antioxidants, vitamins (particularly B vitamins), and minerals like iron and zinc have been linked to better cognitive function and mood regulation. For example, omega-3 fatty acids found in fish oil have been associated with improved attention and memory. Food styles that promote regular, balanced meals with adequate hydration are generally beneficial for cognitive function. Additionally, meal timing and consistency may impact energy levels and cognitive performance throughout the day. However, it's essential to recognize individual differences in how nutrients and dietary patterns affect cognition and behaviour. Factors such as genetics, lifestyle, sleep habits, stress levels, and overall health can influence the relationship between nutrition and cognitive function among college students. Therefore, personalized approaches to nutrition and lifestyle management are crucial for optimizing cognitive performance and well-being in this population.

CONCLUSION:

In conclusion, the effect of nutrients and dietary patterns on cognition and behaviour among college students is profound and multifaceted. Nutrient-rich diets, such as the Mediterranean diet, support optimal brain function and mental well-being, while poor dietary choices can impair cognitive performance and increase vulnerability to mental health disorders. By prioritizing healthy eating habits, adequate sleep, regular exercise, and stress management strategies, college students can optimize their cognitive abilities and enhance their overall academic and personal success. In conclusion, the impact of food and nutrients on cognition and behaviour is profound, with evidence highlighting the crucial role of a balanced diet in supporting optimal brain function. Nutrient-rich foods, such as fruits, vegetables, whole grains, and healthy fats, provide essential vitamins, minerals, and

antioxidants necessary for cognitive processes and mood regulation. Conversely, diets high in processed foods, sugar, and unhealthy fats have been linked to cognitive decline and behavioural disturbances. Embracing a diverse and nutritious diet is essential for promoting cognitive health and fostering positive behaviours throughout life.

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**UNDERSTANDING AND CONFRONTING POWER HARASSMENT IN
PROFESSIONAL ENVIRONMENTS**

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ABSTRACT

Power harassment is the abuse of authority by individuals in positions of authority to intimidate, manipulate, or mistreat others in the workplace. It can take various forms, including verbal abuse, threats, exclusion, and unfair treatment. This can lead to increased stress, anxiety, and decreased job satisfaction, creating a toxic work environment characterized by fear, distrust, and low morale. Recognizing power harassment is crucial for creating a safe and inclusive workplace culture. Employees should be educated on the signs and behaviours associated with power harassment and encouraged to speak up if they witness such behaviour. Organizations can address power harassment by implementing clear policies, providing training, and fostering a culture of respect and accountability. Leaders must lead by example and ensure fair treatment. Power harassment is a widespread issue in various industries and organizational settings, affecting employees at all levels. It can occur in corporate settings, healthcare settings, educational institutions, and non-profit organizations. In finance, law, and consulting, it manifests through abusive behaviour from supervisors or senior executives towards subordinates. In healthcare, it affects patient care and staff morale. Educational institutions often witness power harassment among faculty, administrators, and students. In the tech industry, it leads to gender-based discrimination and exclusion. Non-profit organizations, government agencies, and small businesses also face power differentials. Power harassment significantly impacts individuals' well-being, job satisfaction, and organizational culture, erodes trust, undermines productivity, and can result in high turnover rates and reputational damage. Addressing power harassment requires a comprehensive approach that includes implementing policies and procedures, fostering a culture of respect, accountability, and equality, and recognizing the importance of preventing and addressing power harassment to create safe and inclusive work environments.

Keywords: workplace harassment, signs and red flags, strategies for confronting,legals and ethicallaws, power dynamics.

OBJECTIVES:

The chapter aims to educate readers about power harassment, its prevalence, and its detrimental effects on individuals, teams, and organizational culture. It provides guidance on recognizing signs and red flags of power harassment, offers strategies for confronting and addressing it effectively, and emphasizes the role of organizations in preventing power harassment and fostering a safe and inclusive workplace culture. Addressing power harassment is crucial for fostering a culture of trust, respect, employee well-being, productivity, morale, legal and reputational risks, and demonstrating an organization's commitment to diversity and inclusion. It also helps protect employees' mental and emotional well-being, enhance productivity and morale, mitigate legal liabilities, and demonstrate an organization's commitment to diversity, equity, and inclusion. By addressing power harassment, organizations can create a healthier work environment, protect their employees' mental and emotional well-being, and demonstrate a commitment to diversity, equity, and inclusion.

POWER HARASSMENT:

Power harassment, also known as abuse of power or workplace bullying, is the misuse of authority or position to intimidate, manipulate, or mistreat others in a professional setting. It involves behaviours and actions aimed at exerting control or dominance over individuals in a subordinate or vulnerable position within an organization.

Power harassment can take various forms, including verbal abuse, non-verbal behaviour, manipulative tactics, abuse of authority, and isolation and exclusion.

Verbal abuse involves using derogatory language, insults, threats, or aggressive communication to belittle or intimidate others.

Non-verbal behaviour includes hostile body language, intimidating gestures, and exclusionary actions.

Manipulative tactics involve gaslighting, coercion, or micromanagement to exert control over others and undermine their autonomy or confidence.

Abuse of authority occurs when individuals misuse their position of authority to unfairly influence decisions, allocate resources, or assign tasks.

Isolation and exclusion are also forms of power harassment. Power harassment can occur in various professional contexts, including hierarchical organizations, team dynamics, client relationships, and interactions between colleagues.

Recognizing and addressing power harassment is essential for creating a safe, respectful, and inclusive work environment where all individuals can thrive.

Understanding Power Dynamics:

Power dynamics in professional environments are complex and multifaceted, often influenced by hierarchies, organizational structures, and interpersonal relationships. These dynamics can contribute to workplace harassment by creating unequal power dynamics, with those in higher positions exerting influence over those in lower positions. Authority and control, such as managers, supervisors, or senior executives, can be misused to intimidate, manipulate, or mistreat subordinates. Perceived threats to power can further complicate power dynamics, leading to individuals resorting to harassment as a means of asserting dominance or preserving their authority. Group dynamics and peer pressure can also manifest in team-

based environments, leading to a culture of silence and complicity that perpetuates abusive behaviour.

Organizational culture plays a significant role in shaping power dynamics and influencing behaviours within the workplace. Cultures that prioritize competitiveness, aggression, or authoritarianism may inadvertently foster an environment where harassment is tolerated or encouraged, while cultures that prioritize collaboration, respect, and transparency are more likely to discourage harassment and promote respectful interactions among employees.

Traditional hierarchies can lead to abuse of power by those in power, while decentralized authority structures can create checks and balances and foster accountability.

IMPACT OF POWER HARASSMENT:

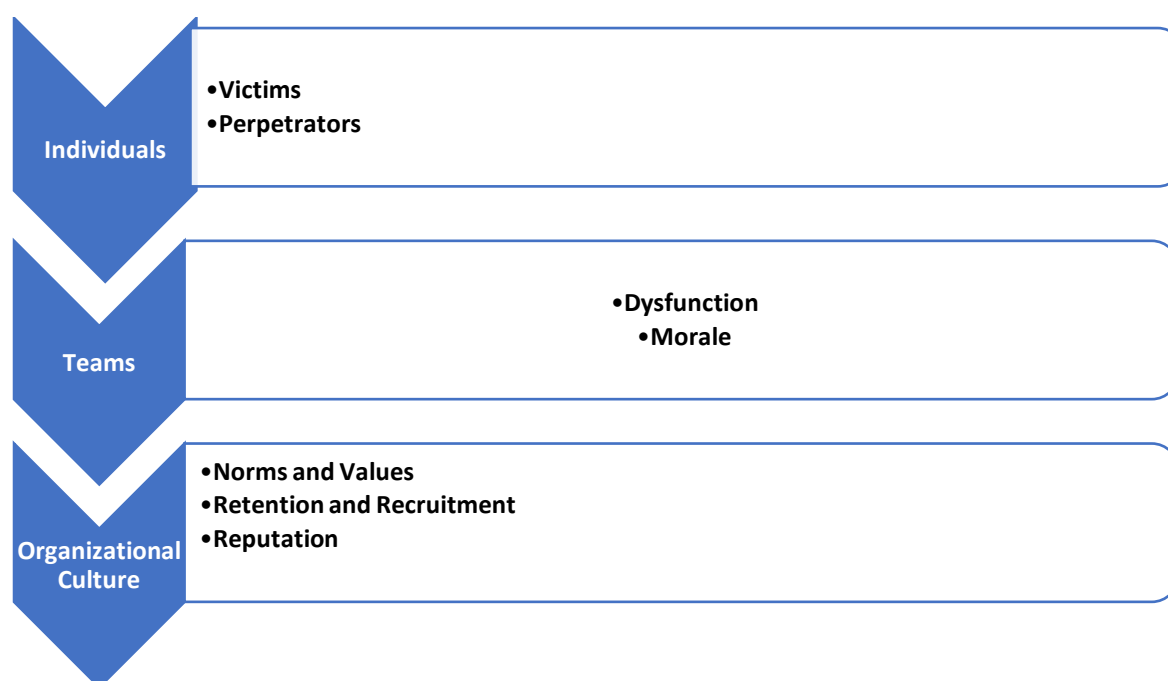


Fig:1 negative consequence across various levels of the workplace

Power harassment is a harmful behaviour that can have significant effects on individuals, teams, and organizational culture. Victims may suffer physical, emotional, and psychological harm, including stress, anxiety, depression, and decreased self-esteem. Perpetrators may also face negative consequences, such as damage to their reputation, disciplinary actions, legal consequences, and hindered career advancement. Teams can experience dysfunction due to power harassment, leading to fear, mistrust, and dysfunction. This can hinder collaboration, communication, and teamwork, ultimately impairing the team's ability to achieve its goals. Additionally, power harassment can significantly impact team morale, leading to decreased motivation, engagement, and job satisfaction, leading to higher turnover rates, decreased productivity, and increased absenteeism.

Organizational culture can also be affected by power harassment. Tolerance or overlooking of harassment can send a message that abusive behaviour is acceptable, erode trust and integrity within the organization. A culture that tolerates power harassment can negatively affect the ability to attract and retain top talent, while existing employees may seek opportunities elsewhere.

WITNESSING POWER HARASSMENT:

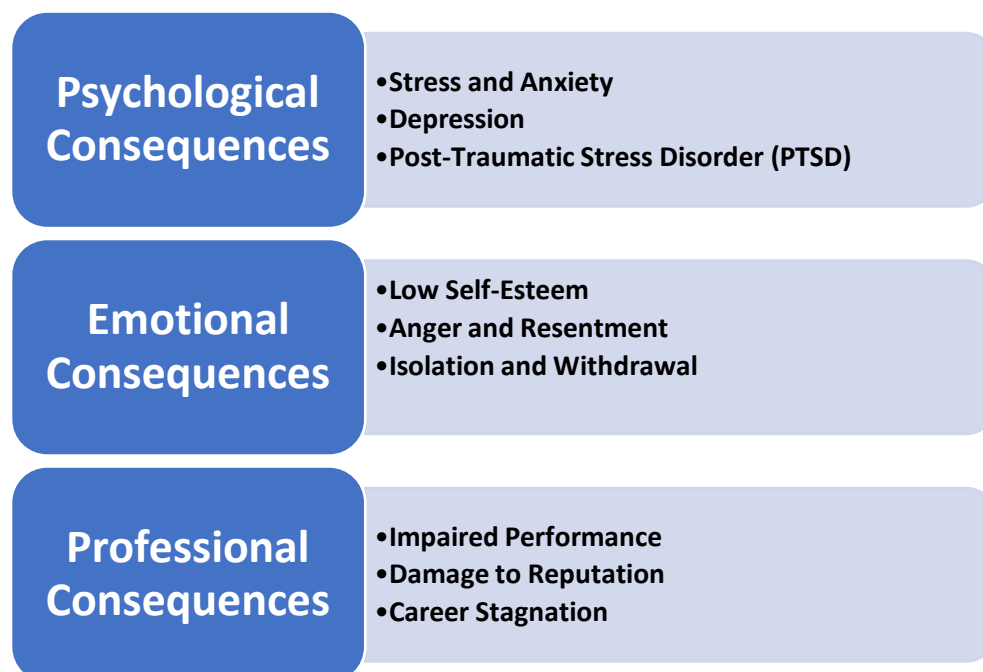


Fig : 2 Experiencing or witnessing power harassment

Power harassment can have significant psychological, emotional, and professional consequences for individuals involved. These consequences include increased stress and anxiety, depression, and post-traumatic stress disorder (PTSD). Victims may experience heightened fear of interactions with the perpetrator, leading to a sense of unease and hypervigilance.

Emotionally, power harassment can lead to low self-esteem, anger, resentment, isolation, and withdrawal from colleagues and workplace activities. This can further deteriorate mental well-being. Professionally, power harassment can impair an individual's ability to perform their job effectively, hinder career progression, and damage their reputation. Perpetrators may face reputational damage if their abusive behaviour is known to colleagues, clients, or industry peers.

Unwarranted criticism or blame can occur when individuals are excessively criticized, blamed, or singled out for mistakes. Micromanagement can be a form of power harassment where individuals are excessively monitored or controlled in their work tasks, with little trust

or autonomy granted to them. Threats and intimidation can also occur when individuals use threats, intimidation, or coercion to exert power or influence over others.

Isolation and exclusion can occur when certain individuals are consistently excluded from meetings, decision-making processes, or social activities within the workplace. Unwanted advances or comments directed towards individuals should be aware of, especially if it occurs repeatedly or creates a hostile work environment. Unequal treatment based on factors such as gender, race, ethnicity, age, or other protected characteristics can also be observed.

Lack of accountability is another issue where individuals in positions of power are not held accountable for their actions or behaviour. Physical or emotional reactions, gossip, and rumours circulating within the workplace can be indicators of power harassment. Trusting instincts and reporting concerns to appropriate channels within the organization can help prevent power harassment from occurring.

RECOGNIZING SIGNS AND RED FLAGS:

Individuals can play a crucial role in identifying and addressing power harassment in the workplace by being vigilant and attentive to signs and red flags, contributing to a culture of respect, fairness, and inclusivity.

SIGNS AND RED FLAGS	SCENARIOS
Micromanagement	Sarah, a manager, constantly scrutinizes Tom's work, dictating his tasks and checking in multiple times a day. She criticizes even minor details, leading to Tom feeling suffocated and demoralized by Sarah's constant micromanagement.
Unwarranted Criticism	Alex, a senior team member, consistently criticizes and belittles Sam, a junior colleague, in team meetings, dismissing their suggestions without consideration and publicly mocking their work, thereby undermining Sam's confidence and morale.
Isolation and Exclusion	Emily, a manager, consistently excludes Laura from team outings and social events, despite her efforts to engage with her colleagues. This leaves Laura feeling ostracized and isolated from the rest of the team, despite Emily's regular organizing of these activities.

Threats and Intimidation	Mark, a department head, uses threats and intimidation to maintain control over his team, threatening termination if unrealistic expectations are not met. This aggressive behaviour fosters fear and anxiety, hindering creativity and innovation.
Unequal Treatment	During a performance review meeting, Lisa, a female employee, discovers she is being paid significantly less than her male counterparts, despite her exemplary performance and contributions to the organization, highlighting the unfair discrimination against her based on her gender.
Unwanted Advances or Comments	David, a senior executive, consistently makes inappropriate comments about Maria's appearance and personal life during team meetings, despite Maria's attempts to redirect the conversation and create a hostile work environment.
Lack of Accountability	Rachel reports harassment from her supervisor to HR, but her complaints are dismissed and she is told to deal with it. HR takes no action, indicating that power harassment is tolerated and will not be addressed within the organization.
Gossip and Rumors	Rumours circulate within the office about John, a new employee, receiving preferential treatment due to his personal relationship with the CEO. Despite his qualifications and skills, his colleagues question his competence and credibility, undermining his reputation within the organization.

The examples demonstrate various forms of power harassment in the workplace, demonstrating that recognizing these signs can help individuals take proactive steps to prevent and foster a culture of respect, fairness, and inclusivity.

PREVENTING AND ADDRESSING POWER HARASSMENT

Organizations play a critical role in preventing and addressing power harassment within the workplace. Here's how they can effectively fulfil this responsibility:

Establish Clear Policies and Procedures	Organizations should have clear policies outlining power harassment definitions, reporting mechanisms, and consequences for engaging in or tolerating harassment, which should be communicated to all employees and regularly reviewed and updated.
Provide Training and Education	Organizations should provide regular training programs on harassment prevention, diversity, inclusion, and bystander intervention, mandatory for all employees, including managers and supervisors, covering topics like harassment recognition, complaint response, and promoting a respectful work culture.
Promote a Culture of Respect and Inclusivity	Organizations should promote a culture that values respect, dignity, and inclusivity, fostering diversity, equity, and inclusion initiatives, celebrating differences, and fostering open dialogue and collaboration among employees.
Lead by Example	Organizational leaders and managers should set an example of zero tolerance for harassment, exhibiting respectful behavior, actively listening to employee concerns, and promptly addressing any harassment incidents.
Provide Multiple Avenues for Reporting	Organizations should provide employees with various reporting channels, including formal channels, anonymous hotlines, and trusted contacts, to ensure accessibility, confidentiality, and retaliation-free reporting.
Conduct Prompt and Impartial Investigations	Organizations should conduct thorough, impartial investigations into harassment reports, involving trained professionals to ensure procedural fairness and prompt resolution for all parties involved.
Take Swift and Appropriate Action	Organizations should promptly address harassment reports, implementing disciplinary actions, counselling, training, or other corrective measures to prevent recurrence and ensure the well-being of affected individuals.

Provide Support for Victims	Organizations should offer support and resources to harassment victims, including counselling, legal assistance, and accommodations, to ensure their safety and well-being in the workplace, and protect them from retaliation.
Monitor and Evaluate Effectiveness	Organizations should regularly assess and improve their harassment prevention strategies by collecting data on complaints, conducting employee surveys, and soliciting feedback to identify areas for improvement and track progress.
Hold Perpetrators Accountable	Harassment perpetrators should be held accountable and disciplinary measures taken to address misconduct, as this sends a strong message that harassment will not be tolerated and reinforces the organization's commitment to creating a safe and respectful work environment.

FUNDAMENTAL ASPECTS OF CREATING A SAFE AND INCLUSIVE WORK ENVIRONMENT:



Fig 3: Fundamental aspects of creating a safe and inclusive work environment

1. **Clear Policies:** Clear policies in the workplace define acceptable behaviour, including harassment, discrimination, and retaliation. They set expectations for employees and provide a framework for addressing and preventing misconduct, creating a culture where harassment is not tolerated and employees feel empowered to report incidents.
2. **Training:** Training programs on harassment prevention, diversity, inclusion, and bystander intervention are crucial for raising awareness, building skills, and promoting a culture of respect and inclusivity. These programs help employees recognize harassment signs, understand their rights, and respond effectively to misconduct incidents, fostering a harassment-free workplace.
3. **Culture of Respect and Accountability:** A culture of respect and accountability is crucial for an organization's success. Leaders and managers should model respectful behaviour, communicate expectations clearly, and hold themselves accountable. This fosters an environment where employees feel valued, supported, and respected, preventing harassment and contributing to employee engagement and morale.

SUPPORT SERVICES AND RESOURCES:

Support services and resources are available to individuals who have experienced power harassment in the workplace, offering assistance, guidance, and advocacy.

Human Resources (HR)	Many organizations have dedicated HR departments to handle employee concerns, including harassment complaints. Employees can report incidents of power harassment to HR for guidance on available resources and next steps.
Employee Assistance Program (EAP)	Employee Assistance Programs (EAP) are confidential counselling services provided by employers as part of their benefits package, addressing personal and work-related issues, including harassment, and are accessible at no cost to employees and their families
Legal Aid Organizations	Legal aid organizations and clinics offer free or low-cost legal assistance to individuals who have experienced harassment or discrimination in the workplace, providing advice, representation, and advocacy to help victims navigate their rights.
Labor Unions	If a victim is a labor union member, they can seek support from their union representative, who can advocate for them in addressing workplace issues like harassment, filing grievances, or pursuing legal action.
Nonprofit Organizations and Advocacy	Nonprofit organizations and advocacy groups

Groups	are dedicated to assisting victims of harassment and promoting workplace equality and justice by providing resources, education, support groups, and legal assistance.
Legal Services Organizations	Legal services organizations offer legal assistance to individuals with limited financial means who have experienced workplace harassment or discrimination, providing advice, representation, and advocacy to navigate the legal system and protect their rights.
Hotlines and Helplines	Hotlines and helplines provide confidential assistance to victims of harassment, offering support and guidance on available resources, often operated by government agencies, nonprofits, or legal aid organizations.
Therapy and Counselling Services	Obtaining therapy or counselling from licensed mental health professionals can be beneficial for individuals who have experienced power harassment, offering emotional support, coping strategies, and trauma-informed care to help them process their experiences.

Power harassment victims should explore support services and resources to effectively address their concerns and navigate the aftermath. This helps them access necessary resources and assistance to protect their rights, well-being, and dignity in the workplace.

LEGAL AND ETHICAL CONSIDERATIONS:

Legal and ethical considerations are crucial in professional settings to protect individuals from abuse and discrimination, and organizations must uphold their obligations to provide a safe and respectful workplace.

1. **Legal Obligations:** Organizations are legally obligated to prevent and address power harassment in the workplace under various laws and regulations.

- **Title VII of the Civil Rights Act:** The law prohibits discrimination based on race, color, religion, sex, or national origin, including harassment.

- **Equal Employment Opportunity Commission (EEOC) Guidelines:** Provides guidelines on the definition of harassment and the responsibilities of employers to prevent and address it.

- **State and Local Anti-Discrimination Laws:** States and localities often have additional laws prohibiting harassment and discrimination based on protected characteristics like sexual orientation, gender identity, age, and disability.

- **Occupational Safety and Health Administration (OSHA):** The law mandates employers to ensure a safe work environment free from recognized hazards, such as harassment and violence.

- **Other Federal Laws:** The Americans with Disabilities Act (ADA) and the Age Discrimination in Employment Act (ADEA) are federal laws that prohibit harassment and discrimination based on specific characteristics.

2. **Legal Liability:** Organizations can face legal liability for power harassment, including lawsuits, fines, and reputational damage, if they fail to prevent or address such harassment by employees, supervisors, or third parties, if they knew or should have known about it.

3. **Ethical Responsibilities:** Organizations are obligated to create a safe, respectful, and inclusive work environment for all employees, fostering a culture of fairness, dignity, and diversity. This includes treating all individuals with respect, empathy, and fairness, regardless of their position or status.

4. **Protection of Human Rights:** Power harassment violates human rights such as dignity, equality, and freedom from discrimination, and organizations have a moral and ethical obligation to uphold these rights and ensure fair treatment of employees.

5. **Promotion of Organizational Values:** Addressing power harassment is a legal and ethical obligation that aligns with organizational values. Organizations that prioritize respect, integrity, and accountability foster a positive work culture where harassment is not tolerated, and employees feel valued and empowered.

6. **Prevention and Intervention:** Organizations should invest in training, education, and resources to prevent power harassment, promote bystander intervention, and effectively support victims, adhering to ethical considerations for a proactive and harm-reducing approach.

LAWS, REGULATIONS, AND ETHICAL GUIDELINES:

This summary provides an overview of laws, regulations, and ethical guidelines pertaining to harassment and discrimination in professional settings.

1. **Title VII of the Civil Rights Act of 1964:** Title VII prohibits discrimination in employment based on race, color, religion, sex, or national origin, including harassment based on these protected characteristics.

2. **Equal Employment Opportunity Commission (EEOC) Guidelines:**The EEOC enforces federal employment discrimination laws, providing guidelines for their application, including definitions of harassment and employer responsibilities.
3. **Americans with Disabilities Act (ADA):**The ADA prohibits discrimination against individuals with disabilities in all public life, including employment, requiring employers to provide reasonable accommodations and refrain from harassing them based on their disability status.
4. **Age Discrimination in Employment Act (ADEA):**The ADEA prohibits age discrimination, harassment based on age, and imposes obligations on employers to treat older workers fairly and equally in the workplace.
5. **Sexual Harassment Guidelines:**The EEOC and state laws outline sexual harassment, including unwanted advances, requests for favors, and other sexual conduct, and employers are obligated to prevent and address such incidents in the workplace.
6. **State and Local Anti-Discrimination Laws:**States and localities often have their own anti-discrimination laws, providing additional protections beyond federal law, including protections for sexual orientation, gender identity, and marital status.
7. **Occupational Safety and Health Administration (OSHA):** OSHA mandates employers to create a safe, healthy work environment free from recognized hazards like harassment and violence, and to address psychological hazards like harassment and bullying.
8. **Ethical Guidelines and Codes of Conduct:**Professional organizations and industry groups often establish ethical guidelines and codes of conduct, outlining expected behaviors and standards, including provisions on harassment, discrimination, and fostering a respectful and inclusive workplace culture.
9. **Corporate Policies and Procedures:**Organizations often have their own policies and procedures in place to prevent and address workplace harassment and discrimination, outlining reporting procedures, investigation protocols, and disciplinary measures for policy violations.

CONCLUSION:

Addressing power harassment is crucial for creating a safe, respectful, and inclusive workplace. It undermines equality, dignity, and fairness, leading to a toxic culture that erodes trust, damages morale, and hinders organizational effectiveness. By prioritizing awareness, accountability, and action, organizations can foster a culture where power harassment is not tolerated and all individuals are treated with dignity and respect. Recognizing the signs and consequences of power harassment empowers individuals to identify and confront abusive behaviors, creating a workplace where everyone feels empowered to speak up and seek support without fear of retaliation. Proactive measures to prevent and address power harassment include implementing clear policies, providing training and education, fostering a culture of respect and accountability, offering support services for victims, and promoting

reporting and intervention efforts. By prioritizing these efforts, organizations can create environments where all individuals feel valued, respected, and empowered to thrive, contributing to a more positive and productive workplace culture. To address power harassment in professional environments, educate yourself and peers about the issue, advocate for clear policies and procedures, foster a culture of respect, empathy, and accountability, and lead by example by treating everyone with dignity and professionalism. By taking proactive steps, organizations can create a workplace where everyone feels valued, respected, and empowered to succeed.

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