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Students Project
On

Education and Society in 21st Century

Editors

Meghna Mehndroo

Showket Ahmad

University Institute of Teachers Training and Research
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New Delhi

STUDENTS PROJECT ON EDUCATION AND SOCIETY IN 21ST CENTURY

Editors

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Principal, University Institute of Teachers Training and Research

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Assistant Professor, University Institute of Teachers Training and Research

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ISBN: 978-81-19674-70-1

Price: Rs 800.00 INR

Published By:

National Press Associates

Head Office: *C-24, Ground Floor, Panchsheel Vihar, Malviya Nagar, New Delhi-110017, India*

Regional Office: *79, GAD Nagar, Flower Enclave, Dugri, Ludhiana, Punjab-141013, India*

Branch Office: *G-1003,Prakriti Society, Baner-Balewadi Road, Balewadi Pune, 411045 Maharashtra, India*

Email: *npapublishing@gmail.com* | *www.npapublishing.in*

Helpline: *+91-9888934889, 7986925354*

PREFACE

It is imperative for us in today's world, where societal challenges and issues are in full swing, to engage in endeavours that address social issues and contribute to positive change in the society. The diverse themes explored by the students under 'Socially relevant project' as a mandate course by Chandigarh University and published under the title of Students Project on "Education and Society in 21st Century" showcases the dedication and passion of students who aim at making a meaningful impact in various aspects of society and thereby addressing these issues in a meaningful way.

Every theme of the current volume delves into a distinct social issue, ranging from environmental sustainability to gender equality, from education accessibility to healthcare disparities. Through rigorous efforts, the students through these projects shed light on the complexities of the challenges our society faces and offer insights into potential pathways for its progress. The students having responsibility to contribute to the social change conducted research and advocated for the policy change. This endeavour can serve as the catalysts for positive transformation in our communities and beyond.

While the challenges we face appear very daunting, it is through collective awareness, action, and solidarity that we can begin to dismantle systemic barriers, challenge oppressive structures, and build a more just and equitable world. This compilation serves as a testament to the dedication, creativity, and commitment of students in tackling social challenges and issues. As readers engage with the content of this volume, I hope that they will be inspired to join in the effort to create positive social change in their own communities and beyond.

It is my hope that these projects will inspire others to take action and join the collective effort towards building a more just, equitable, and sustainable world. This book is dedicated to all those who tirelessly advocate for a better world, and to future generations who will inherit the fruits of this collective venture.

Meghna Mehndroo

Principal

UITTR

List of Contents

S. No	*Title of the Project*	*Page*
1	**The Impact of Waste Management Practices on the Environment** *Sakshi, Diya Atri, Bharman Singh, Aastha Jhagta* *Supervisor: Dr. Pooja Rani*	1
2	**The Effects of Social Media on Self Esteem Among Adolescents** *Navya Singh, Mira Pragnya Das, Ruopfuno Zashumo, Upneet kaur, Amandeep Kaur* *Supervisor: Dr. Pooja Rani*	9
03	**Empowering Youth to Fight Against Child Labor in India** *Annu Dhaka, Mehakpreet Saini, Samridhi Rawat, Lovepreet Kaur, Kanika Negi* *Supervisor: Dr. Mohammad Aarif Rather*	18
04	**Feeding India's Future: Tackling Food Security and Hunger in India** *Shivam, Elisha Joseph, Sakshi Ale, Ankita Thakur, Aarti Sharma* *Supervisor: Dr. Mohammad Aarif Rather*	26
05	**Safe Streets, Safe Cities: Combating Gender Based Violence and Ensuring Women's Safety.** *Jasleen Kaur, Tanisha, Prerna Rawat, Neha, Simranjot Kaur* *Supervisor: Dr. Showket Ahmad*	36
06	**Forest Guardians: Community led Efforts to Combat Deforestation.** *Gurleen Kaur, Pritika Sindhu, Spardha Gautam, Shreya Thakur, Navjot Kaur* *Supervisor: Dr. Showket Ahmad*	56
07	**Addressing Women's Health and Well-being: Menstrual leave for women/girls in Education Institutions.** *Shourya, Srishti Wadhawan, Vanshika* *Supervisor: Dr. Priya Sharma*	69
08	**Exploring the Effects of Bullying on Academic Performance and Student Well-being** *Omna Thakur, Sohani Dash, Khushi Singh Anamika* *Supervisor: Dr. Ranjeeta*	77
09	**Nourishing Communities: Addressing Nutritional Challenges Through Sustainable Approaches** *Ruchita Datta, Nilima Jahan Naaz, Ritika Rani, Hanshika, Poonam Goswami* *Supervisor: Dr. Rippandeep Kaur*	98
10	**Beyond The Bell: Improving Access to Education for Marginalized Children in India** *Sahil Gaur, Aashish Sandhu, Priyashu Kumar* *Supervisor: Dr. Tushar Dhar Shukla*	115
11	**Tech For Good: Leveraging Technology to Address Social Challenges in India.** *Vanita Sharma, Harhita, Riya, Bhavneet Kaur Dipali Rani* *Supervisor: Dr. Abdul Majeed*	129
12	**Impact of Poverty on Education**	144

	Mansi Jain, Pragya, Anjali Negi, Prateek Rai, Pradeep Kumar *Supervisor: Dr. Abdul Majeed*	
13	**Empowering rural women: Enhancing Livelihood and Gender Equality in Indian Villages.** *Ananya, Archita, Lavisha, Sakshi* *Supervisor: Dr. Priya Sharma*	161
14	**Sanitary Facilities in Educational Institutions for Girls and Women: Promoting Gender Equality, Dignity, and Awareness** *Saumya, Nupur, Muskaan, Muskaan, Alisha Padwal* *Supervisor: Dr. Tushar Dhar Shukla*	172

THE IMPACT OF WASTE MANAGEMENT PRACTICES ON THE ENVIRONMENT

Sakshi, Diya Atri, Bharman Singh, Aastha Jhagta

Supervisor: Dr Pooja Rani

ABSTRACT

The escalating production and improper disposal of waste pose a significant threat to the environment and human health. This paper investigates the impact of waste management practices, with a specific focus on electronic waste (e-waste), on the environment. As waste generation surges globally, there is a critical need for efficient and sustainable waste management to mitigate adverse effects. E-waste, a burgeoning concern, contains valuable materials but also hazardous substances requiring specialized handling.

The paper delves into the current state of waste management in India, emphasizing the challenges posed by the increasing volume of e-waste. The country struggles with inadequate infrastructure and insufficient e-waste recycling centers, relying heavily on manual and mechanical processes. This inefficiency results in environmental contamination and health risks, especially for workers in the informal sector.

The study analyzes data on e-waste generation globally, with a focus on India's position as the third-largest producer. Despite a significant increase in e-waste generation, a minimal fraction undergoes proper recycling. The paper underscores the urgent need for a comprehensive and legislated e-waste management system in India, drawing insights from successful models in countries like Switzerland and Germany. Furthermore, the paper reviews existing literature on e-waste management, highlighting gaps in research and advocating for eco-friendly techniques and closed-loop systems. The study outlines objectives such as raising public awareness, evaluating health hazards, and establishing efficient recycling protocols.

In conclusion, effective waste management, particularly for e-waste, is imperative for environmental preservation and human well-being. The paper recommends legislative measures, public awareness campaigns, and the adoption of best practices from successful models to address the escalating e-waste crisis in India and globally.

Keywords: Waste Management, Electronic Waste (E-Waste), Environmental Impact, Sustainable Practices, Recycling

INTRODUCTION

Waste, an ever-present byproduct of human activity, represents materials that are unwanted or no longer usable. It spans a wide range of substances that require disposal after their primary use, are devoid of value, are defective or damaged, and materials no longer suitable for their intended purpose. Waste also encompasses substances designated for recycling, reuse, or responsible disposal (https://byjus.com/free-ias-prep/electronic-waste/). It takes various forms, but it can be broadly categorized into three primary types: municipal waste, hazardous waste, and biomedical waste. Furthermore, waste can be characterized based on its origin and nature, dividing it into five distinct categories: dry waste, wet waste, solid waste, biodegradable waste, and non-biodegradable waste (https://testbook.com/ias-preparation/electronic-waste).

The problem of waste management has grown in significance due to the increasing global population and its ever-expanding production and consumption of goods. This surge in consumption leads to a corresponding increase in waste production, which can have negative repercussions on human health, the environment, and ecosystems. Consequently, efficient and sustainable waste management practices are paramount to mitigate these adverse effects. Waste management, in essence, comprises the systematic collection, transportation, and responsible disposal of waste materials. It involves a gamut of methods, such as recycling, reusing, and safely controlling the disposition of waste products.

The pervasive integration of technology in society has ushered in a new era of waste generation, particularly in the form of electronic waste, or e-waste. E-waste encompasses discarded electronic products that have reached the end of their useful life. This category of waste contains valuable and hazardous materials that necessitate specialized handling and recycling methods. Inadequate disposal of e-waste can result in the release of toxic chemicals, including lead, nitrogen, chromium, and PCBs, which pose severe risks to both human health and the environment. Thus, effective e-waste management is imperative.

E-waste management is a comprehensive process encompassing the manufacturing, collection, recycling, dismantling, and recovery of materials through safe procedures. India, like many other nations, faces significant challenges in handling e-waste due to its limited infrastructure for large-scale management. The presence of government-approved e-waste recycling centers in the country is insufficient to handle the substantial volume of e-waste generated annually, constituting

only a fraction of the total. Current e-waste recycling practices primarily rely on manual sorting and mechanical dismantling (https://hindrise.org/resources/e-waste-management-in-india/).

Furthermore, there is a shortage of industrial e-waste managers equipped with the requisite environmental controls for large-scale recovery of precious and base metals. Thus, there is an urgent need for the establishment of efficient mechanisms for safe, sustainable, and large-scale e-waste management in India (Halim & Suharyanti, 2019). Notably, e-waste is not merely a burden; it is a complex waste stream and also a repository of precious metals like gold, silver, and copper that can be recovered and reintroduced into the production cycle. Additionally, the hazardous components within e-waste, including lead, cadmium, mercury, and sulfate, necessitate proper disposal. Radioactive e-waste presents an even more delicate challenge, as the current management methods involve dumping or landfilling. There is a growing need to explore alternative, safer means of handling this category of waste.

E-waste is laden with toxic elements such as mercury, lead, and brominated flame-retardants. Prolonged exposure, especially during unsafe recycling practices, inflicts harm on crucial bodily systems including the nervous, circulatory, and respiratory systems. It can lead to damage in brain development, skin conditions, lung cancer, and harm to vital organs like the heart, liver, and spleen. This issue is particularly acute in the informal sector, where many workers lack adequate health safeguards. In India, roughly 80% of e-waste laborers suffer from respiratory ailments due to inadequate precautions, often working without protective gear. Hazardous fumes are frequently inhaled as items like tube lights, motherboards, and toner cartridges are incinerated, releasing lead, mercury, and cadmium into the atmosphere.

India grapples with a mounting waste crisis, producing over 160,000 metric tons of municipal solid waste daily. Projections estimate an annual increase of 1.33%, potentially culminating in 260 million tons of waste annually by 2047. Without systematic and scientific disposal, this may necessitate an expanse of land roughly equivalent to Delhi's size to accommodate. Furthermore, India generates approximately 100 million tons of non-hazardous solid waste annually, with more than 70 million tons originating from coal ash. Around 8 million tons of hazardous waste are produced each year, of which 60% is potentially recyclable, while the remaining 40% ends up in landfills. Only a small fraction, about 1.5%, of the total e-waste generated in India is properly recycled, with another 8% ending up as waste in landfills (Garg & Adhana 2019).

In conclusion, waste management is an essential facet of modern society, given the ever-increasing production and consumption of materials and products. The detrimental impact of unchecked waste production on human health and the environment underscores the importance of sound waste management practices. Waste encompasses various forms, including the burgeoning issue of e-waste, which requires specialized handling due to its complex nature, hazardous materials, and potential for precious metal recovery. India and other nations face the task of creating an infrastructure that can accommodate the rapid growth in e-waste generation. Through sustainable waste management practices, we can not only reduce the harm associated with waste but also unlock the potential for resource recovery and environmental preservation.

LITERATURE REVIEW

In their paper, Halim and Suharyanti (2020) discuss the current state of e-waste research and offer insights into future research directions. Their work primarily focuses on identifying eco-friendly techniques for transforming e-waste into a production resource. Notably, they highlight the limited data and research on e-waste in certain developing countries, emphasizing the need for an incentive system to promote closed-loop e-waste management.

Jugal, K. (2010) paper highlights the pressing demand for effective e-waste management in India. The research reveals that numerous workers engage in hazardous e-waste dismantling for their livelihood, jeopardizing their health. Urgent strategies are required to safeguard these workers from e-waste-related health risks in India.

Uddin, M. J. (2012) study emphasizes mitigating environmental impacts through innovative product design, extended producer responsibility (ERP), and the adoption of eco-friendly substitutes. Legal frameworks like EPR and RoHS are crucial. Utilizing eco-friendly technologies, along with EPR and RoHS, offers a viable solution for responsible e-waste management. Manufacturers and suppliers should establish waste reduction goals, promote buy-back programs, and collaborate with authorized recyclers and private developers for proper disposal of non-tradable e-waste.

As per Chowdhury & Patel (2017) most waste carries inherent dangers, potentially producing leachate and explosive lowland gas. Stringent regulations exist for lowland sites due to these risks. Many authorities prefer repurposing quarries for landscaping rather than using lowland sites. Product design should minimize waste and optimize end-of-life use. All stakeholders—manufacturers, retailers, users, and disposers—must collaborate to reduce environmental impacts, advocating a product-centered approach for environmental preservation and protection.

Kuehr and Williams (2003) noted the growing market for reused PCs in developing countries, enabling affordable access to technology. Charitable organizations, like Computer Mentor and Computer Aid, extend their reach, providing refurbished computers to global institutions. Reuse also extends the life of tech, lessening environmental impacts and

decreasing the need for new equipment.

According to Kahhat, R. et al. (2008), while some U.S. states have adopted e-waste regulations, there's currently no comprehensive federal regulation addressing e-waste across residential and non-residential sectors. Federal policies can harmonize state variations, creating an efficient national e-waste management system. The e-Market for returned deposit system could encourage recycling and reuse among residential customers.

Yoheeswaran (2013) study on e-waste management in India investigates legislation, regulation, and recycling practices in both formal and informal sectors at the national level. Conducted through a survey, the research highlights the dominance of unregulated informal sectors in managing e-waste, leading to heightened pollution. The study emphasizes the urgent requirement for legislation and oversight in informal e-waste management.

Objectives

1. To raise public awareness regarding e-waste and its management.
2. To evaluate health hazards linked with e-waste handling and disposal.
3. To focus on recycling unrecoverable components and minimizing e-waste production.
4. To establish efficient recycling protocols and effective e-waste management methods.
5. To safely manage the disposal of electronic waste containing hazardous chemicals to prevent environmental harm.

METHODOLOGY

Methodology serves as a systematic and investigative examination of the techniques employed within a specific research domain. It provides a detailed overview of the strategic steps taken by a researcher to address a research problem effectively. The methodology plays a crucial role in resolving two fundamental issues:

1. The approach to data collection.
2. The methods used for data processing and analysis.

In the current study, the research is descriptive, emphasizing qualitative data. The data collection process primarily relied on secondary sources, including journals, governmental records, newspapers, and various websites. This approach allows for a comprehensive exploration of the subject matter through existing information. By delving into diverse repositories, the researcher gains a nuanced understanding of the topic under consideration. This methodological framework ensures a thoughtful and thorough analysis, contributing to the reliability and validity of the study's findings. The utilization of qualitative data from reputable sources enhances the richness of the research, fostering a comprehensive exploration of the chosen subject.

RESULTS ANALYSIS AND VALIDATION

E-Waste

E-waste is one of the fastest growing solid waste streams in the whole world. Every year millions of electrical or electronic devices are disposed of as the products break or become outmoded and hence are thrown away. These discarded electronic devices are considered as e-waste and can become a severe threat to the environment and human health if they are not treated, disposed of, and recycled appropriately. Most Common items in e-waste streams mainly includes computers, mobile phones, and large household appliances, as well as medical equipment. Every year, millions of tonnes of e-waste are recycled using environmentally unfriendly techniques and they are more likely to be stored in homes and warehouses, dumped, exported or recycled under less suitable conditions. When e-waste is treated under those conditions, it can release as many as 1000 different chemical substances or chemicals into the environment, which includes various harmful neurotoxicants mainly lead.

The rapid expansion of information and communication technology (ICT) brings with it numerous social advantages from a sustainability perspective. Despite the continuous technological progress, the increasing acquisition of electronic devices, including computers, entertainment electronics, and mobile phones, is noticeable, even for items that may not be essential. Unfortunately, the substantial surge in electronic waste (e-waste) has not been matched by proportional advancements in the collection, recycling, and reuse processes for these devices. (Kahhat et al.2008)

Categorization of E-Waste

The e-waste can be categorised mainly into three categories:

1. Household appliances (refrigerator, air conditioner, toaster, iron, washing machine, etc.)
2. IT and telecommunications (personal computer, mobile phones, laptops, etc.)

3. The consumer equipment (television, stereo equipment etc.)

(https://www.greenit.co.in/types-of-e-waste.html)



Common items of electrical or electronic waste includes:

1. Large household appliances such as refrigerators/freezers, washing machines, dishwashers, etc.
2. Small household appliances such as toasters, coffee machines, irons, hairdryers, etc.
3. Information technology (IT) and telecommunications equipment such as personal computers (PC), telephones, mobile phones, laptops, printers, scanners, photocopy machines, etc.
4. Consumer equipment such as the televisions, stereo or radio equipment, electronic toothbrushes, etc.
5. Lighting equipment for example fluorescent lamps.



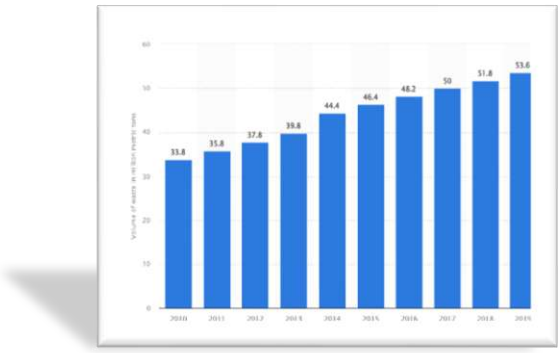
E-WASTE DATA ANALYSIS

The world produces as much as 50 million tonnes of electrical or electronic waste per year which weighs more than all of the commercial airlines ever made. Only 20 percent of the total e-waste is formally and properly recycled. (United Nations Environment Programme, 2019)

India stands as the world's third-largest producer of electronic waste, trailing behind only China and the US. The amount of e-waste generated in India has seen a notable increase, reaching a substantial volume of 1.6 million tonnes during the 2021-2022 period.

As per the data from the Central Pollution Control Board, India produced 1.71 million metric tons of electronic waste, a notable figure when compared to the global e-waste generation of 59.40 million metric tonnes. According to a study performed by KPMG and ASSOCHAM, the computer equipment stands for almost 70 % of estimated amount of e-waste in India, which is followed by telecom/phones (12%), then, electrical equipment (8%) and lastly the medical equipment (7%) (Bagwan, 2024).

57.4 Mt (Million metric tonnes) of e-waste was produced in 2021 total of which is growing by an average of 2 Mt per year globally. There is over 347 Mt (Million metric tonnes) of un-recyclable or not recycled e-waste on earth in 2023. Only 17.4% of the overall e-waste is known to be properly collected and recycled. Estonia, Norway and Iceland are known to have the highest e-waste recycling rates. Electronic Waste generated worldwide from year 2010 and 2019 (in million metric tonnes)



Since 2010, the amount of e-waste produced globally has been rising steadily. By 2019, **approximately 53.6 million metric tons** was generated. There was an increase of 44.4 million metric tons of e-waste in just five years. Of this, only 17.4 percent of the whole was documented to be properly collected and recycled (Tiseo, 2023)

China, US, and India generate the most electronic or e-waste.

The given table below shows the top 10 e-waste or electronic waste producing countries in the whole world, in terms of the total volume generated (shown in Kilotons) (Ruiz, A. 2023)

Rank	Country	E-Waste Produced (Kt)	Recycling Rate
1	China	10129	16%
2	USA	6918	15%
3	India	3230	1%
4	Japan	2569	22%
5	Brazil	2143	0%
6	Russia	1631	6%
7	Indonesia	1618	n/a
8	Germany	1607	52%
9	UK	1598	57%
10	France	1362	56%

ESTONIA, NORW

Ay, and Iceland have one of the best electronic waste or e-waste recycling rates which is in terms of the percentage of the waste produed by each of the mentioned country which is arranged according to the recent latest available data.

Rank	Country	E-Waste Recycled (Kt)	Recycling Rate
1	Estonia	13	76%
2	Norway	99	72%
3	Iceland	5	71%
4	Sweden	141	70%
5	Austria	116	69%
6	Switzerland	123	63%
7	Finland	65	61%
8	Poland	246	60%
9	Ireland	52	59%
10	UK	871	57%

The leading e-waste recycling nations are assessed based on the proportion of their waste formally gathered for appropriate recycling. Additionally, the total quantity recycled, measured in kilotons, is provided for context. The data from the Central Pollution Control Board reveals the e-waste generated in the country, encompassing twenty-one (21)

types of Electrical and Electronic Equipment (EEE) designated under the E-Waste (Management) Rules, 2016, starting from the Financial Year (FY) 2017-18.

Financial year	Generation (Tonnes)
2017-18	7,08,445.00
2018-19	7,71,215.00
2019-20	10,14,961.21
2020-21	13,46,496.31
2021-22	16,01,155.36

The above table gives an overview of the amount of e-waste or the electronic waste produced in the recent or last five or six years in India. It gives the whole estimation data of the recent financial years and the amount of e-waste generated in tonnes.

The above table also justifies the fact that the e-waste generation is showing significant increase year by year (https://pib.gov.in/PressReleasePage.aspx?PRID=1943201).

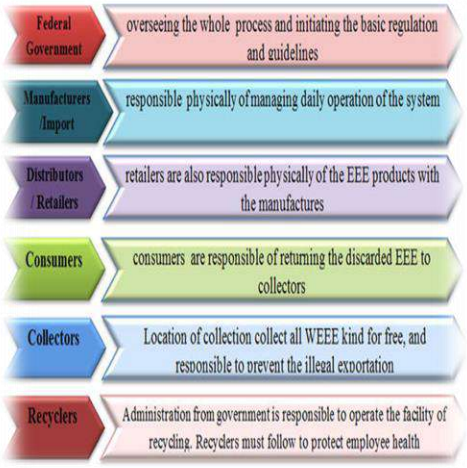
E-WASTE MANAGEMENT SYSTEM IN OTHER COUNTRIES AND IN INDIA:

The one of the top or best e-waste management technique can be seen in European union. For example, best e-waste management systems can be specially seen in Switzerland and the Netherlands.

The European Union has a law formed for the companies and the retailers to compose to disposals from e-waste by following special mechanisms. They have restricted the use of many hazardous substances used in electronic and electrical equipment.

In Switzerland, every sector or branch has their own role and responsibility to take care of which is as follows:

1. Federal government
2. Manufacturers
3. Distributors
4. Consumers
5. Collectors
6. Recyclers



The above figure depicts the various roles and responsibilities of the different sectors and the work performed by them in the e-waste management.

In Germany, strict rules have been set in a way to properly manage the e-waste. The e-waste is collected directly from many individual houses and apartments free of cost from the consumers for disposing the e-waste, and the collecting points numbers are depending on the population density and local conditions. The collection of e-waste by informal method collection is strictly prohibited. After the collection, the whole e-waste is handed over to the manufacturers (Mohammed, S. I., 2022).

While the US claims themselves to be a follower of human rights, they export most of its e-waste to break down using outdated and unsafe methods in various other countries.

The United Nations estimated that 10-40% of the total of US's e-waste is exported to the other countries, even though there are rules and laws that forbids the transnational movement or exportation of electronic or e-wastes (Singh, A., 2019)

In developing countries, there is not any kind of framework of e-waste management. Also, the e-waste management in these countries are not legislated. India is one of the countries which is undergoing through its developing stage waste recycling in India is primarily driven by informal sector activities, with numerous impoverished households sustaining themselves by scavenging materials from waste dumps. Middle-class urban households commonly engage in recycling practices, such as selling waste paper, plastic, clothing, or metal to small-scale, informal buyers known as 'kabadiwalas.' These buyers, in turn, sort and sell the materials as inputs to artisanal or industrial processors. The management of e-waste in India mirrors this informal pattern, with a sector that involves thousands of households in urban areas. These individuals are employed to collect, sort, repair, refurbish, and dismantle discarded electrical and electronic products (https://hindrise.org/resources/e-waste-management-in-india/)

The reason for poor management of E-waste in India can be understood via following diagram:



The above diagram depicts the reasons for poor management of E-waste handling in Indian. The main cause of which is the lack of awareness among people, relying on informal sectors and lack of legalization practices.

CONCLUSION AND FUTURE WORK

CONCLUSION

The E- waste is increasing significantly a year in millions of tonnes due to excessive production of various kinds of technological devices which is due to increased user demand and increased population. Many developed countries have their own system and proper legislated technique to manage the E-waste like in Switzerland, Netherland and Germany, etc. They tend to initialize the e-waste management from the initial production stage and the waste is properly managed by the formal sector completely and the whole system is legislated.

In developing countries like India, the whole waste management technique is not legislated and the whole process is mainly dependent on informal sector. Our government can set a goal to minimise the net e-waste and can learn the method or techniques from the developed countries with proper e-waste management system such as Switzerland, Germany, Japan, etc. There is also a great need to aware people about the e-waste and how the e-waste can be managed properly.

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THE EFFECTS OF SOCIAL MEDIA ON SELF ESTEEM AMONG ADOLESCENTS

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Supervisor: Dr. Pooja Rani

ABSTRACT

The research paper explores the effects of social media on self-esteem among adolescents, focusing on the age group of 12 to 19 years. Social media, particularly Instagram, plays a significant role in shaping relationships, self-perception, and overall well-being. The study acknowledges both positive and negative impacts, emphasizing the need for a nuanced understanding. Previous research is reviewed, highlighting varying perspectives and gaps in the literature.

The study's objectives include investigating the relationship between social media use and self-esteem, understanding the impact of social media on adolescents through surveys, and exploring positive facets of self-esteem. Hypotheses posit a limited relationship between social media use and self-esteem.

Methodologically, a sample of 100 students in Punjab is surveyed through a tailored questionnaire, covering various aspects of social media use, self-esteem, and perceptions. Results indicate a prevalence of social media use, particularly on Instagram, and a generally positive self-esteem among adolescents. However, notable percentages report negative impacts on self-esteem due to social media, emphasizing the need for intervention.

Discussion delves into the complex interplay between adolescents, social media, and overall well-being. Positive aspects include strengthened relationships, but mental health implications, such as depression and anxiety, are identified. The role of parental guidance is explored, revealing a need for increased awareness and support.

The conclusion underscores the multi-faceted role of social media in adolescents' lives, emphasizing the necessity for balanced usage. Recommendations for educators, parents, and policymakers are provided. Future research directions suggest investigating strategies for balanced social media use, exploring gender differences, and analyzing the impact on various age groups.

In summary, the research contributes valuable insights into the intricate relationship between adolescents, social media, and self-esteem, urging a comprehensive and informed approach to navigate the challenges and opportunities presented by the digital landscape.

Keywords*:* Social Media, Adolescents, Self-Esteem, Mental Health.

INTRODUCTION

The early 2000s marked the birth and growth of social networks around the world. Since then, these websites have become an important part of people's lives, especially young people. Many teenagers use social media, especially Instagram these days, to build relationships, connect with the world, share and gain knowledge and information, build stronger personalities and lead a better social life. Boyd & Ellison (2007) argued that young people use social networking sites to create romantic and casual online relationships. With the changing behaviour of people, it has been observed that social media has many negative effects on people. Social networking sites help people make social comparisons, which increase people's psychological distress and thus lower overall self-esteem (Chen and Lee, 2013). Many observers and researchers believe that due to the increased use of social networks, people have fallen victim to low self-esteem and self-improvement.

In order to know oneself and evaluate oneself truthfully, accept one's skills and qualities as they are, and embrace oneself, one must have the feelings of love, respect and trust towards oneself. When adolescents are trying to figure out who they are and how they feel about themselves, they utilize their self-perception as a tool and this is known as self-esteem (Colak et al., 2023)

Additionally, self-esteem is crucial to human life, particularly during adolescence. Self-image is crucial to how teenagers view themselves and, consequently, to how they develop self-esteem. Numerous research focus on adolescent subjects' self-esteem and the variables influencing it. Numerous factors, including socio demographic characteristics, family dynamics, parental views, peer interactions, perceived social support levels, academic achievement, and physical and/or mental illness have been linked to adolescent self-esteem, according to studies (Laryea et al., 2014). Self-esteem in adolescents is supposed to be impacted by social media

A structure of diverse technology social contact and content generating activities is referred to as social media. The person introduces themselves to other people in this structure, either as they are or as a different identity they desire to have and can interact (Stendberg, 2014). Using social media to gather and share information is convenient. However, if used excessively or repeatedly, it can quickly develop into an addiction. According to studies, teens in this age range use social

media the most frequently (Khan, 2018).

Numerous studies have shown that teens' academic performance, social relationships, mental health, level of life satisfaction, and self-esteem are all negatively impacted by their excessive usage of social media (Hoare et al., 2017). The majority of studies have found a link between social media use and low self-esteem. Teenagers who have low self-esteem use social media more frequently. Another significant element influencing adolescent self-esteem is body image. A person's sentiments and thoughts about their own body in relation to how others perceive them are referred to as their body image. According to studies, adolescents with a highly favourable body image have high levels of self-esteem and a positive association between their body image and self-worth.

There are research demonstrating both the good impacts of social media on adolescents as well as the detrimental effects of excessive use of social media on self-esteem. The disparities between the findings of different studies on the subject imply that some mediator variables might be involved in the connection between adolescent social media use and self-esteem.

LITERATURE REVIEW

Nazari et al. (2023) investigated the impact of social media on the mental health of students during the COVID-19 pandemic. They found that social media use was associated with depression, anxiety, and mental health decline. Interestingly, the study focused on a region with traditional values and high social support, suggesting that social media's effects might vary across different contexts. The research emphasized the challenges brought by the sudden shift to e-learning during the pandemic and highlighted the importance of considering factors like age, gender, income, marital status, and employment in understanding the relationship between social media use and mental health among students.

Marquez & Karling (2022) conducted a study exploring the impact of social media on the mental health of adolescents, with a specific focus on the Millennial generation. The study found limitations related to participants' tendencies to respond in socially desirable ways, potentially affecting the findings. Additionally, it noted that many studies tend to concentrate on Generation Z, making the results less generalizable. Future research was recommended to encompass a broader age range. The study also identified various reasons for social media use, including social interaction, self-presentation, information seeking, relaxation, and entertainment, and linked them to stress, depression, and anxiety. Another study highlighted how self-objectification and social comparison mediate the relationship between Facebook use and psychological well-being among young adults.

Bottaro and Faraci (2022) explored the Impact of Social Networking on Adolescent Emotional Well-Being. Their study found both positive and negative effects on emotions, influenced by factors like time spent, active vs. passive use, and emotional skills. The study underscores the importance of social support in both offline and online interactions, calling for further research to comprehensively understand the psychological aspects of adolescent SNS use.

Talawar and Kumar (2020) examined the impact of Social Media on Youth Self-Esteem. They aimed to explore the relationship between social media and young people's self-esteem. The study revealed that social media, in the 21st century, offers a platform for knowledge, self-expression, and skill showcasing, with no significant detrimental effects. The authors suggest the need for parental and teacher guidance in balancing internet and social media usage while nurturing children's self-esteem.

Deepa and Priya (2020) study examines the detrimental impact of excessive social media usage on students' mental health, particularly regarding depression and anxiety. With a sample of 90 participants, the research highlights a significant association between prolonged social media use, increased use of social networking sites, and heightened symptoms of depression and anxiety, emphasizing the need for more mindful and balanced digital engagement among students.

Taylor-Jackson & Moustafa (2021) explored the Link Between Social Media Use and Depression-Related Factors. They aimed to investigate the association between social media use and depression, self-esteem, anxiety, and loneliness. Their findings revealed that social media can have both positive and negative effects on mental health, with a complex relationship. Causal links require further investigation.

RESEARCH GAPS

1. Most of the previous studies from earlier years largely excluded the adolescent age group (13-19) from their scope, whereas our research centers specifically on this pivotal age bracket.
2. Numerous research papers from various scholars have predominantly delved into the negative dimensions of self-esteem. In contrast, our research uniquely directs its attention toward the positive facets of self-esteem and explores strategies for its augmentation.

Objectives

1. To investigate the relationship between social media use and self-esteem among adolescents.
2. To understand the impact of social media on adolescents by collecting data in the form of questionnaire and surveys.

HYPOTHESES

There is less relationship between social media use and self-esteem among adolescents.

Methodology

Methodology serves as a systematic and investigative examination of the techniques employed within a specific research domain. It provides a detailed overview of the strategic steps taken by a researcher to address a research problem effectively. The methodology plays a crucial role in resolving two fundamental issues:

1. The approach to data collection.
2. The methods used for data processing and analysis.

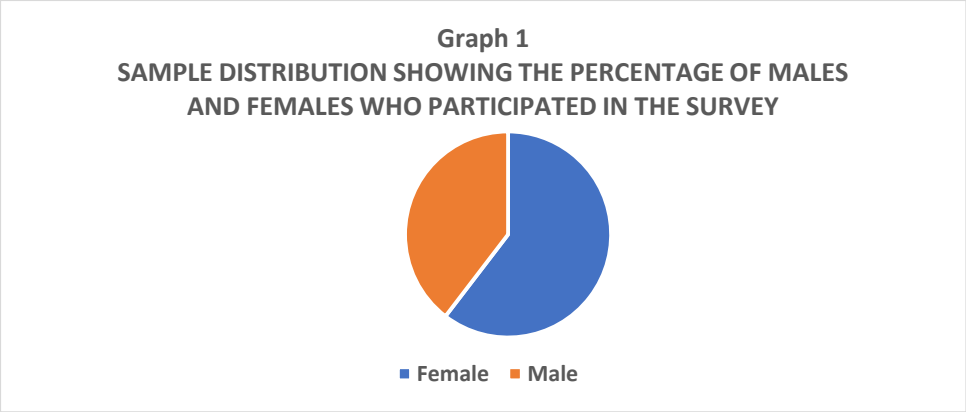
In this research initiative, a comprehensive sample of 100 students falling within the age bracket of 12 to 19 years was carefully selected from a range of educational institutions situated in Punjab. The study's methodology was primarily grounded in the application of a survey-based approach. A specifically tailored questionnaire, consisting of an array of thoughtfully curated questions, was formulated in-house to solicit relevant information from the participants. This questionnaire was meticulously designed to cover various pertinent aspects of the study, ensuring the comprehensive exploration of the targeted subject matter. By adopting this systematic approach, the research aimed to capture a holistic and multifaceted understanding of the prevailing dynamics and intricacies within the context under investigation, thereby facilitating a more nuanced analysis and interpretation of the collected data.

RESULTS ANALYSIS AND VALIDATION

On the basis of data collection, analysis of the study is hereunder:

1. Out the 100 students, the maximum number of the students who participated in the survey were of all under the age group of 19 i.e. 32.7%. Rest of the students were of the age group 17 and 18 i.e. 19.8%, age group of 20 i.e. 7.8%, age group of 14 i.e. 1%, age 21 i.e. 2%, etc.

Table No.1: Number of Platforms Ranging From 1 To 5 That Various Students Use



1	1-2	2-3	4-5
7.8%	31.1%	43.7%	17.5%

2. The graph no. 1, has demonstrated the sample distribution of the study. It shows that the percentage of women who participated in the survey were 60.4% and the percentage of men were 39.6%.

   Furthermore, people were asked about the number of social media platforms that they use and according to their responses given above, our analysis for table no. 1 was as follows:

   Majority of the people use 2-3 social media apps at most.

3. The particular social media platform which most of the adolescents tend to spend their time on was voted to be Instagram with the percentage of 77.5%.
4. Majority of the adolescent's social media usage is multiple times a day which was 60.8% while 21.6% of the users use social media platforms one or twice a day, 11.8% of the users consume social media only few times a week and the remaining 9% rarely get on social media sites.

Table no. 2: Showing the Scale Of Self Esteem Among Adolescents Which Ranges From 1 To 10

1	2	3	4	5	6	7	8	9	10
2.9%	2%	1%	2.9%	16.7%	8.8%	15.7%	20.6%	11.8%	17.6%

5. Table no. 2 shown above, describes the self-esteem scale, from which our results are as below:

   a) The highest voted scale ranging from 1 to 10 in an increasing order was 8 with the percentage of 20.6%. By this, we infer that the self-esteem level among adolescents is fairly good and they had a good amount of self confidence in themselves.

   b) The second highest voted scale is 10 with the percentage of 17.6%. This denotes a great level of self-belief which is considered at the top most level in the scale of self-esteem.

The remaining scales conclude that adolescents have fair self-esteem and believe in themselves and their actions.

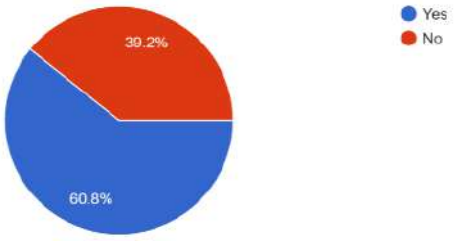
Table no. 3: Showing The Percentage Of Students Who Are Affected By Social Media

Yes, positively	Yes, Negatively	No, it doesn't have any impact	I'm not sure
37.3%	13.7%	29.4%	19.4%

6. The above table no. 3 depicts that a major percentage (37.3%) is influenced by social media in a positive way, it helps them to sustain their confidence. A percentage of 29.4% people do not any affect on their self-esteem and body image by the usage of social media, while 19.4% of the people were not sure about it.

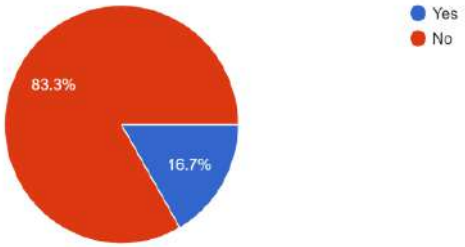
   a) On the other hand, 13.7% of the adolescents feel inferior or had their self-esteem level affected in a negative manner due to social media usa

Graph-2
SAMPLE DISTRIBUTION SHOWING RELATIONSHIP OF STUDENTS WITH OTHERS



7. By the above distribution in graph no. 2, it is vivid that 60.8% of the students voted for yes, which further explains that their peer relationships have been influenced by social media. Social media has acted as a medium for the students to strengthen their bond with their friends in one way or the other. 39.2% of the students voted for no, which tells us that social media has had made no impact on their in person relationships with other students.

Graph 3
SAMPLE DISTRIBUTION SHOWING THE PERCENTAGE OF ADOLESCENTS WHO FACE BULLYING

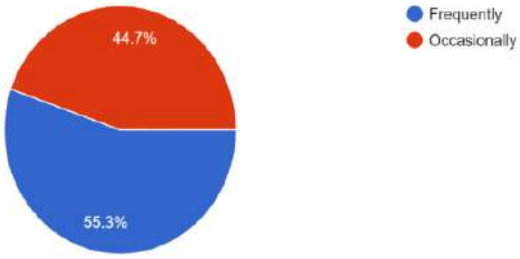


9. As described above in Graph 3, a large percentage of students i.e. 83.3% did not face any negativity or bullying regarding their looks on social media. It indicated a positive sense that when adolescents express themselves on social media, they do not feel any inferiority complex and are encouraged by their friends and peers.

16.7% stated that they receive negativity or get bullied about their appearance on social media. This instil in them a negative feeling about themselves. These effects of cyber bullying can result in enduring feelings of embarrassment. Online bullying feels more permanent, especially when it is performed through social media posts that don't immediately disappear. It can lead to overwhelming feelings of exposure and distress.

Graph 4

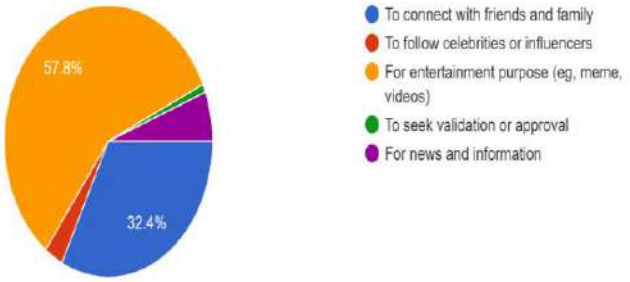
SAMPLE DISTRIBUTION DEPICTING THE PERCENTAGE OF STUDENTS RELYING ON SOCIAL MEDIA FOR CURRENT NEWS



8. Graph no. 4 unveiled that 55.3% of the students rely on social media for current news and information on a frequent basis. Social media acts as a primary platform for them to find out about various happenings around the world. 44.7% of them stated that they occasionally use social media for the purpose of gaining knowledge and knowing about the current news. There must be other sources which they rely on for this purpose.

Graph 5

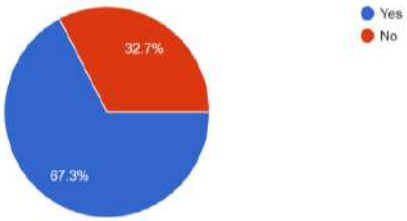
SAMPLE GRAPH SHOWING THE DESCRIPTION OF STUDENTS AND THEIR PURPOSE



9. With Graph no. 5, we infer that a major 57.8% of the students voted that their main purpose for using social media is for entertainment purposes. Their main motive is recreation and enjoyment. 32.4% of them stated that social media acts as a platform which helps them to connect with their friends and family. They keep in touch and be updated about them through various platforms like Instagram, Facebook, etc. The remaining 10% of them voted for other reasons for which they use social media

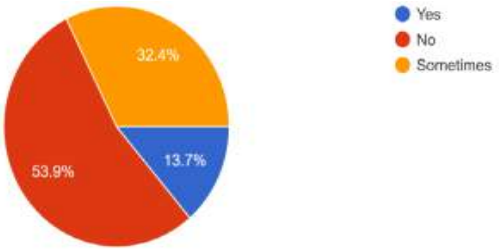
10. Platforms. Their reasons included to follow celebrities or influencers, to seek validation, for news and information etc.

Graph 6
SAMPLE DISTRIBUTION SHOWING THE PERCENTAGE OF STUDENTS WHO TAKE REGULAR BREAKS FROM SOCIAL MEDIA



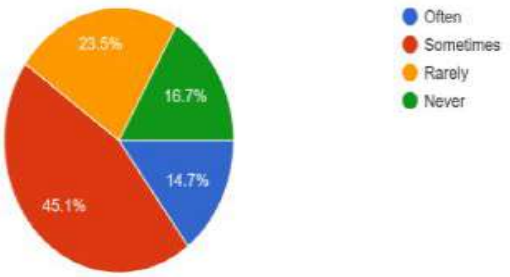
11. In graph 6, 67.3% of the students were in favour of the question that they do take breaks from social media in order to improve their mental health. It states that, using or overusing social media platforms takes a toll on their mental health and to avoid that, they take measures. On the other hand, 32.7% of the students voted for no, which stated that using different social media platforms did not get exhausting for them or they had no affect.

Graph 7
SAMPLE DESCRIPTION SHOWING THE NUMBER OF STUDENTS WHO GET SAD DUE TO SOCIAL MEDIA



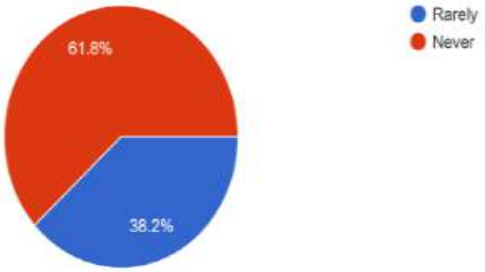
12. Through graph 7, we understand that, 53.9% of the students voted that social media has no negative impact on them and the content that they consume does not affect them in a bad sense. Hence, their response was no. 32.4% students were of the opinion that social media in some or the other way affect their mental health and they do feel sad, anxious or depressed. As much as it promotes positivity in them, it also makes them stressed. Lastly, 13.7% of them answered with a yes i.e. social media had a negative impact on their mental health and it made them feel sad, depressed and anxious about themselves.

Graph 8
SAMPLE DIAGRAM SHOWING HOW MANY PARENTS DISCUSS ABOUT SOCIAL MEDIA



13. Graph 8 illustrates that 45.1% of parents of adolescents engage in periodic discussions with their children about the potential consequences of social media usage. This suggests that a substantial portion of parents is cognizant of the impact social media can have on students, particularly adolescents. In contrast, 23.5% of parents rarely broach the subject of social media with their children, while 16.7% never address it at all. This disparity could be attributed to the parents' own limited exposure to social media from a young age, rendering them less informed about its offerings and its potential influence on their children. Notably, the remaining 14.7% of parents are both vigilant and well-informed, actively imparting knowledge to their adolescents about the effects of social media on their mental well-being.

Graph 9
SAMPLE DIAGRAM SHOWING THE PERCENTAGE WHO KEEP A CHECK ON THEIR ADOLESCENT'S SOCIAL MEDIA ACTIVITES



14. Inference drawn from Graph 9 reveals that a significant majority, approximately 61.6%, of parents of adolescents do not engage in monitoring their children's social media activities. When their children experience feelings of sadness or depression, the parents often struggle to identify the cause, with excessive social media usage frequently emerging as the root issue. On the contrary, around 38.2% of parents only occasionally pay attention to their children's online activities and the content they access. This underscores the necessity of educating parents to enhance their awareness regarding the potential impact of social media on adolescents. There is a clear need to empower parents with the knowledge and tools to better support and guide their children in navigating the digital landscape.

DISCUSSION

The findings of this study have illuminated key facets of adolescents' utilization of social media and the ramifications thereof. Notably, the prevalence of social media engagement among adolescents in Punjab has been underscored, with a majority favoring multiple platforms, notably Instagram. The substantial frequency of use, with 60.8% of participants checking social media multiple times daily, underscores the integral role these platforms play in their daily routines.

Moreover, the study elucidates a generally positive self-image among adolescents, with a significant segment demonstrating a strong sense of self-assurance. However, the impact of social media on self-esteem is a cause for concern, as a noteworthy portion reports negative repercussions, including feelings of inferiority and exposure to cyberbullying. Akram & Kumar (2017) work revealed that social media allows teenagers to craft their desired online persona and establish a distinctive virtual presence, potentially leading to increased security and confidence.

Furthermore, the study highlights the pivotal role of social media in fostering peer connections, with a majority expressing positive influences from these platforms. This suggests that, when utilized judiciously, social media can serve as a conduit for social interaction and support. Baruah (2012) unveiled the multifaceted ways in which online resources and technology have not only facilitated communication but also transformed our mode of communication and interaction.

Additionally, the study indicates that a considerable number of adolescents rely on social media as their primary source of information and news, reflecting the platform's impact on shaping their worldview. The research also reveals diverse motivations for social media usage, with entertainment as the primary driver, followed by social bonding and other purposes, highlighting the multifaceted role of these platforms in the lives of adolescents. Kuss & Griffiths (2011) stated that social networking sites offer various day to day openings for interacting with companions, schoolmates and people with common interests. Social media platforms have become their constant source for their different activities.

However, the study also points to the critical impact on mental health, with a substantial number of students acknowledging the potentially taxing nature of social media. A significant portion of the participants take breaks to safeguard their mental well-being, while others report feelings of sadness, anxiety, or depression linked to their social media use. This duality in experiences emphasizes the need for a nuanced understanding of the effects of social media on adolescent mental health. Ra et al. (2018) explained that there is debate presently going on regarding the benefits and

negative impacts of social media on mental health. Both the quantity and quantity of social relationships affect mental health, health behaviour, physical health and mortality risks.

In summary, the study contributes valuable insights into the complex interplay between adolescents, social media, and their overall well-being. The findings portray a nuanced landscape, indicating both positive and negative impacts, emphasizing the necessity for further research and interventions to foster responsible and conscientious social media usage among this demographic. Grasping these intricacies is imperative for educators, parents, and policymakers as they endeavor to assist adolescents in navigating the digital sphere effectively.

CONCLUSION AND FUTURE WORK

Conclusion

In conclusion, this study offers a comprehensive overview of adolescents' engagement with social media platforms in Punjab, highlighting a complex interplay between usage patterns, self-esteem, and the impact on mental health and relationships. Several key takeaways emerge from this research:

First and foremost, the study reveals that social media has become an integral part of the lives of adolescents in Punjab. The majority of participants actively use multiple platforms, with Instagram being the preferred choice. This widespread usage, often multiple times a day, underlines the significance of these platforms in their daily routines.

One striking finding is the generally positive self-esteem levels among adolescents. With a significant percentage displaying a strong sense of self-confidence, it's evident that these platforms can foster self-assurance. However, the study also highlights the darker side, with a portion of adolescents reporting negative impacts on their self-esteem, such as feeling inferior or experiencing cyberbullying (Martinsen, 2008). This calls for a more nuanced understanding of the effects of social media on self-esteem and the need for targeted support for those affected negatively.

The influence of social media on relationships is another noteworthy aspect. A significant majority feels that these platforms have a positive impact on peer relationships, serving as a means to strengthen bonds with friends and family. This indicates the potential of social media to foster social connections when used thoughtfully. However, it is essential to recognize that not all participants share this positive experience, as some reported no impact on their in-person relationships. This divergence underscores the complex role of social media in interpersonal dynamics.

Mental health implications are a major concern. A substantial proportion of adolescents acknowledge that social media can be mentally taxing, leading to feelings of sadness, anxiety, or depression. At the same time, a significant number of them take proactive measures, such as taking breaks, to safeguard their mental well-being. This dual response suggests the need for strategies to promote mindful and responsible social media usage and to provide support for those struggling with its negative effects (Tariq, 2020).

In summary, this study underscores the multi-faceted role of social media in the lives of adolescents in Punjab. While it offers numerous benefits, including positive self-esteem and strengthened relationships, it also carries risks to mental health and self-esteem. These findings call for a balanced approach to help adolescents harness the positive aspects of social media while mitigating the potential negatives. Educators, parents, and policymakers need to be aware of these dynamics and work together to create a supportive digital environment for adolescents as they navigate the challenges and opportunities of the online world.

FUTURE WORK

The study's Future Research Directions serve as a guiding force, spurring researchers to delve further into the relevant fields. In the context of the current research paper, several potential areas beckon for future exploration. These include a comprehensive analysis of social media's dual impact, its influence on mental health, relationships, and behavior. Moreover, investigating parental involvement in children's social media use and extending the study to encompass adults across various age groups offer promising prospects. Additionally, incorporating health advisories for promoting responsible social media usage, examining gender-based differences in self-esteem linked to social media use, and exploring the complex relationship between social networking sites, body image, self-esteem, and eating disorders present exciting research possibilities for the near future.

1. Investigating strategies to achieve a balanced utilization of social media by addressing both its positive and negative impacts.
2. Examining the utilization of social media and its potential repercussions on mental health.
3. Scrutinizing how social media influences interpersonal relationships and behavior.
4. Analyzing the role of parental involvement in guiding children's use of social media.
5. Expanding the scope to encompass adults in the study of social media effects, recognizing its widespread use across age groups.

6. Enhancing understanding of social media effects by incorporating health advisory and recommendations for fostering positive and effective platform usage.
7. Exploring the connection between social media usage, self-esteem, gender differences, and the influence of parental support.
8. Investigating the origins and outcomes of low self-esteem in children and adolescents.
9. Delving into the relationship between social networking sites, body image, self-esteem, and their potential impact on eating disorders.
10. Analyzing the impact of self-comparison on self-esteem within the realm of social media

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EMPOWERING YOUTH TO FIGHT AGAINST CHILD LABOR IN INDIA

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ABSTRACT

Economic hardships have been taking a toll on many families worldwide and often it come to the point of child's safety. In a world where we want children to be free from burden and have a healthy joyous childhood, many children are often plagued with the need to help the families financially by working. With government having strict laws on child labor, many non-registered low-profile jobs still employ children for the work for minimum wages. Child labor has heavy consequences, with bodily and mental harm, sometimes even death. It can lead to slavery and sexual or economic exploitation. And in nearly every case, it cuts children off from schooling and health care, restricting their fundamental rights. Child labor has resulted in social inequality and discrimination, while the children of well-off families enjoying the wonders of childhood, the children of families who are stuck in this financial loop have to work from a very young age to earn the bread they eat. Unlike activities that help children develop, such as contributing to light housework or taking on a job during school holidays, child labor limits access to education and harms a child's physical, mental and social growth. Especially for girls, the "triple burden" of school, work and household chores heightens their risk of falling behind, making them even more vulnerable to poverty and exclusion. In this research project the various causes of child labor and their consequences along with the solutions that can help eradicate child labor from the cities of India are discussed.

Keywords: India, Youth, Child Labour, Poverty, Social Equality

INTRODUCTION

Child labour is a term that is used to describe a condition wherein children do work which deprives them of their childhood, potential and dignity. it usually causes physical and mental harm which leads to hindrance in their overall development. It deprives them, the opportunity to learn like normal children. Children who are targeted to labour are more often than not required to leave school prematurely. They are subjected to excessive heavy load work for long hours without any reasonable compensation.

Child Labour although a small term carries heavy meaning behind it. It can have many forms ranging from light work in family businesses to worse forms where the children are forced to separate from their families, exposed to serious hazards with no guarantee of a future meal or pay. Child labour can take forms of slavery, prostitution, trafficking, pornography, sexual exploitation, drug production and other illicit activities.

According to current world census approximately 160 million (1600 lakhs) children are still engaged in child labour i.e., 1 in 10 children worldwide. Although there has been continuous steady progress in eradicating child labour, during the last few years due to pandemic there has been rise in cases of child labour. Africa amounts for the highest number of child labour cases with 72 million children. Asia and the pacific ranks 2nd highest with 62 million children followed by America with 11 million, Europe and Central Asia with 6 million children suffering from child labour. The least number of child labour cases have been reported in the Arab States with 1 million children still in the clutches of child labour.

The decline in child labor from 2001 to 2011 by 2.6 million is a positive trend, indicating efforts to combat this societal issue. However, the persisting number of 10.12 crore children engaged in forced labor underscores the continued challenges. The rural-urban disparity in this decline suggests a need for targeted interventions in urban areas where child labor cases have risen. It emphasizes the importance of ongoing initiatives to eradicate child labor and the necessity for comprehensive strategies addressing both rural and urban contexts. Despite progress, the existing numbers emphasize the urgency of sustained efforts and policies to ensure the well-being and rights of all children.

Table 1.1: Distribution of working children

Year	Percentage of working children (5-14 years)			Total number of working children (5-14 years) (in millions)		
	Rural	**Urban**	**Total**	**Rural**	**Urban**	**Total**
2001	5.9	2.1	5.0	11.4	1.3	12.7
2011	4.3	2.9	3.9	8.1	2.0	10.1

According to the estimates by International Labour Organization (ILO) it was found that 10.1 million children between the ages of 5 to 14 years are employed as child laborers in India. India has been fighting against child labour diligently but due to the Covid pandemic, during the year 2020 to 2021 child labour increased by 180 percent indicated by a survey conducted by Campaign against Child Labour (CACL). The Indian Government established The Child Labour Amendment (Prohibition and Regulation) Act of 2016, forbids child labour for anyone under the age of 14 which does not include child

artists and employes of family businesses. Even though such laws exist the law is severely violated in the country.

HISTORICAL BACKGROUND

Child labour is in no way a new concept. Historical evidence provides concrete proof of it during the 19th century but has since been declined very rapidly in 20th century. It spread from Europe to America during industrialization in western countries when the adult population was busy in world wars.

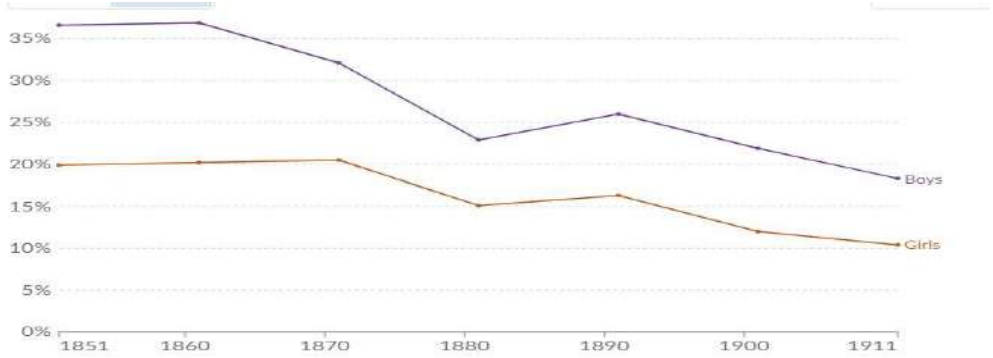


Figure: Child labour statistics in United Kingdom (1851-1911)

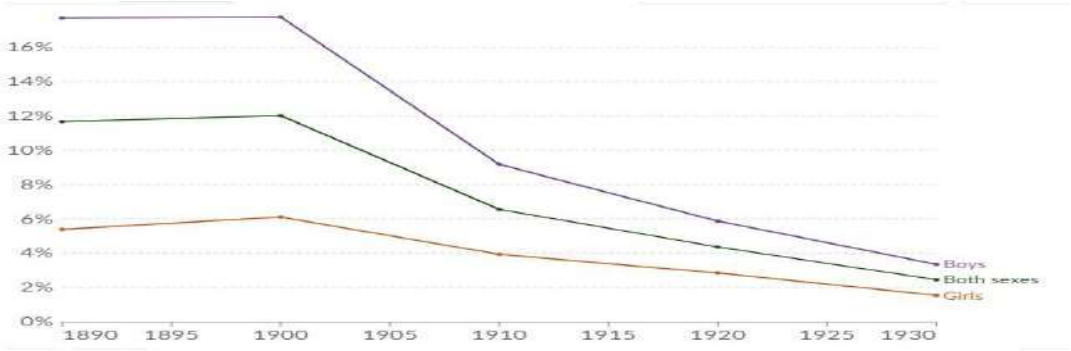


Figure: Child labour statistics in United States (1890-1930)

Child labour first started to occur in England when the household businesses emerged as local labor markets. Children were employed as they helped in producing goods out of their home. When the business turned onto markets the demand for goods increased and factories set up where children were employed. This started a trend in western counties that began to employ children because they did not know any better and worked for minimal pay and long hours.

There was no regard for their physical and mental health as people started to employ children in mines, factories, in construction sites, as household servants, shops, agriculture, textile factories, etc. During the world war the rate of child labor skyrocketed and while it helped in the industry, it caused children to lose their integrity and childhood. The Problem of child labour in India has posed a very big challenge to the nation. It has been going on in India for a lot longer than, when India became aware of it. In 1979, Government formed the first community that studied the problem of child labour within the country. The committee was formed so that it could tackle the injustice done to the children.

The true severity of child labour in India was recognized when India was under British rule. It was noticed when the number of children in British controlled factories increased drastically. It posed an issue when the literacy rate dropped when the children were forced to leave school and join these factories to provide for their families. The employment of children, in the form of slavery, has been seen in medieval period (3rd century B.C.) as well, as trainees under artisans, craftsman etc. After industrial revolution children were appointed by mill owners and factory owners. The demand for child labour increased in agricultural sector due to migration of adult men to industrial towns.

ROOTS CAUSES OF CHILD LABOUR

The recent years have witnessed a decline child labour, however, the children are still being used in some severe forms of child labour like bonded labour, trafficking and child soldiers. Across India, child labourers can be found in a variety of industries: brick kilns, carpet weaving, garment making, domestic service, food and refreshment services (such as tea stalls), agriculture, fisheries and mining. Children are also at risk of various other forms of exploitation, including sexual

exploitation and the production of child pornography, including online.

Child labour and exploitation are the results of multiple factors ranging from poverty to social norms condoning them, lack of decent work opportunities for adults and adolescents to migration and emergencies. These factors are not only the cause but also a consequence of social inequities reinforced by discrimination.

POVERTY

India's development has been very prominent in the last few decades, but some of the problems still remain the main obstacle in India's overall development. One of the obstacles is poverty which poses as the root cause for all the shortcomings in India's growth. Poverty is the main reason why children are forced into work and abandon their education. Many struggling families are forced to make their kids work so that they could afford a living.

The problem of child labour gets worse with illiteracy, lack of awareness and lack of job availability. These families therefore get stuck in the loop for survival. Central and State Government have proposed many laws and schemes to combat this problem, however poverty still remains as a weed in the mission of eradicating child labour. Children who use their income for family purposes are 3.26 times more likely to take up child labour than not.

In a study conducted to observe the relation between poverty and child labour it was noticed that 24 percent children were collecting papers from streets and garbage dumps, 21 percent were working in car workshops and learning one or other form of technical skills; 16 percent were selling newspapers and doing odd jobs. Majority of house servants or helping hands were girl child. And about 83 percent of these children belonged to poor families.

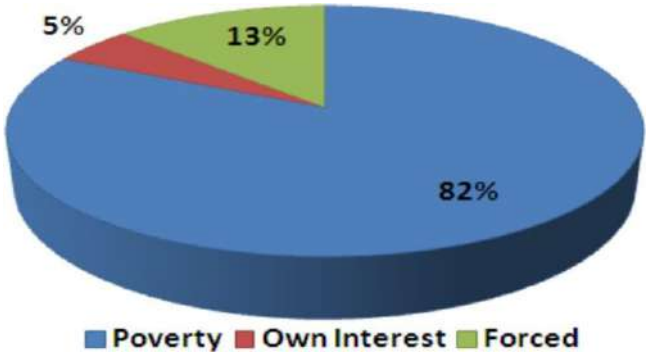


Figure: Reasons of Child Labour

LACK OF EDUCATION

Education plays a very important role in shaping the quality of life of a child. It goes hand in hand with the chances of a child getting stuck with slavery. Illiteracy is very common in our country and it affects many aspects that catalyze the growth of the country. People who are illiterate often do not send their kids to schools. This creates a cycle which results in a long chain of illiterate people. Thus, these children tend to start working at a very young age in factories, shops, construction sites, mines, mills, agricultural farms etc.

Education is the fundamental human right, lack of which causes severe incapacity of children to develop in life. Even the children in child labour who attends school struggle to manage demands of education and work. This puts strain on young minds and affects their mental health. In 2009 the Government of India passed a Right to Education bill with the incentive of eradicating child labour that has been plaguing India. It has also launched several rehabilitation programs to remove children from hazardous working conditions and further rehabilitate by appointing them to several special schools.

Child labour in rural areas has decreased by great extent however in urban areas the number has increased. In rural areas 70 percent of child workers are engaged in agricultural sectors due to low incomes and lack of employment opportunities. In urban areas the number of child workers increased during the pandemic. Migration also played a very important role in increased number of child workers in urban areas.

SOCIAL FACTORS

Factors such as poverty, lack of education, cultural and social norms, gender discrimination, weak labour laws, demand for cheap labour, poor execution of policies and schemes etc. affect child labour. Poverty is the main cause of child labour in our country. It instigates people to force their children to work for money to provide for their families. Education is the second most common cause of child labour, illiteracy bolsters lack of awareness which causes illiterate people to not send their kids to schools.

Some of the traditional beliefs and customs support work instead of education which acts as a barrier for children to get education. These cultural and social norms play a crucial role in increment of child labour in the country. The gender stereotype often limits girl child to get education in our country. They are forced to work as a domestic worker; this is seen

as their birth right. The males in the family are seen as the money makers of the family, they are sometimes obliged to earn money from a very young age.

Our government introduces many laws for the benefit of the laborers in our country, however application of these laws are not very satisfactory. Although these labour laws are meant to help laborers, they are often so weak that it does not benefit the laborers all that much. Therefore, they are forced to let their other family members such as their children to work in jobs. India has a population which majorly comprise of relatively poor people. This makes them desperate for job opportunities even if it is for a cheap price. These laborers are in great need of money for their living that they are willing to work odd jobs. Therefore, they employe children who often do not know any better and work for even cheaper price.

All these above factors contribute to increase child labour in our country. Many corrective measures have been taken by our government as well as NGO'S, not much difference has been made till yet.

POLICY AND LEGAL ANALYSIS

Some policies about child labor are the National Child Labour Policy. In this policy constitutional and legislative provisions protecting children against employment have been elaborated. This policy was introduced in 1987. This policy introduces the issues of child labor in a vast way. The action plan or the way this policy will be introduced in front of the public are legislative action plan focuses on general development programs for the families of the children that are involved in child labor and last high concentration on those areas where there is child labor is in very large amount.

Then the policy came in work in 1988 in which it brought back children from 12 different districts from across India. And presently this policy is on great progress with around 271 different districts across the country. Under this policy, children are brought back from work and are put in the specials schools and provide them with education and many more cultural, vocational, training, and health care facilities. The government is making NCLP schools across the country and with good progress making around 7000 NCLP schools and around 3 lakhs students studying in them. And from 3 lakhs, now to 9 lakhs children have been mainstreamed to the regular education from this NCLP scheme (Parvathamma 2015).

Child labor is a major issue for all and all the children who are caught under it. A lot of child laborers are denied fundamental opportunities which is a major loss for society and the children's initial growth and those who are combining school with work are neither able to do proper work nor get potential out of studies. The world is against child labor, so a day is fixed i.e. 12 June. Some initiatives have been taken such as providing necessary schooling of good quality up to the minimum age of entering employment (Pedro and Bedi 2008). Different children have different capacities and they must be helped to find them into them, to grow into their maturity and to build up themselves (Sharma 20006).

Most of the non-school going working children in the world is of India (Weiner 1991). Due to the families with low income and having less facilities and persistence of parents about weightage of learning and influence of labour on the children health are the main causes that influence child labour (Jangir 2013). There is a big challenge of child labour in international law like:

Around 200 million children can be regarded as child labourers, and about 10 million children are involved in producing either agricultural or manufactured products for export (Humbert 2009). Study of Recent International Labour Organization (ILO) child labour in four developing countries showed that an average of 25 per cent of children aged between 5 and 14 years had been engaged in economic activity during the reference week it is principle activity for third of these, it is secondary activity for two thirds in addition of school (Creighton 1996).

DIFFERENT POLICIES

International Labour Organization (ILO): ILO defines ,All economic activities that are carried by the children under the age of 15 except the household work with their parents.20% of children are engaged in child labour They are mostly concentrated in the poorest regions of the world: in Sub-Saharan Africa 29% of all children work, in Asia-Pacific 19% works , and 16% works in Latin America and the Caribbean .Children work across a range of employment sectors, including agriculture (70%), manufacturing, street trading, domestic work, and mining (Hesketh, Gamlin and Woodhead 2006)

Policy on Children's Work and Labour: It emphasises removing children from work rather than improving their well-being. Child labour is prohibited and work done by them is said to be harmful. It focuses on children well-being and protects them from harm and exploitation and benefit then to do appropriate work (Bourdillon and Carothers 2019).

A CRITICAL LEGAL ANALYSIS

Child labour is still a social issue in our country which needs serious attention of the policy makers, executive machineries, academicians, researchers in different fields which includes law to stop child labour .Child labour makes children out of schools, they work which hinders their economic development limiting their social mobility .Children work in industries in order to earn wages ,they are not allowed to go to schools because of financial issues and the critical point is the poverty (Sil 2017).

SOCIO-ECONOMIC ANALYSIS OF CHILD LABOUR

Children are full of hope, curiousness, innocent and dependent. Their life must be full of joy, happiness and peace including playing learning and growing. Child labor cannot be totally eradicated by legislation alone, unless supplemented by socioeconomic and educational upliftment of the underprivileged section of the society. Around 46.7% of labours have to work around 6 hours a day. Urge of children should be reduced to perform economic work (Agarwal and Pathak 2015).

The Employment of Children Act 1938 and the Children Act 1933 are testimony to the law's concern for child labour (Ramanathan 2010).

CULTURAL INFLUENCE ON CHILD LABOUR

In relation to this discussion and the question concerning child labor in general there is much debate among researchers about which one is more important- economic and cultural factors. Child labor is a social problem which arises out of family poverty. Child labor is cultural problem also. By the research the general assumption poverty is the main cause of child labor. And children who are less poor are also working. Most of the children maintain the schooling and working together (Rosana 2019).

It has been seen that poverty forces the parents to send their under aged child at work. Child labor can cause major effects on children as well as their family too. Not all the children work for money but for their family support. Not all the children get labor but works as slaves under other people. In addition they face many problems and their health is ignored by their parents (Idrahim 2015). India has largest child population in world. Millions of children exist below the poverty line and many of them die. India does not provide even basic facility to the children. It has been noted that cast system has rationalized. Children from lower castes have more forced toward the child labor to pay families debts.

The major contributor to child labor is the lack of education. This implies that lack of education lead to high fertility ultimately means there is high child labor. Children find their ways into low wage but very risky jobs due to their poor background. We observed that children worked because of influence by parent and parents or government did not care. Sending a child to work results in societal stigmatization and humiliation, which result in lowering down their usefulness. But the greater number of people who are breaking the rules.

Child labor in the economy has a positive correlation with societal shame associated with the quantity of child labor provided by a particular home. The model will make use of the entire quantity of child labor which comes from certain households. The effect of a single decision-maker on the overall variable is seen as unimportant by the relevant decision-maker. The waiting to see what however, the overall level will influence the appropriate amount of child labor for the maker of decisions for the family. It is unclear how inequality and child labor are related.

Furthermore, Ranjan (2001) demonstrates that credit restrictions and income disparity are the main causes of child labor. Dessy and Vencatachellum (2003) focus on the strategic complementarities between human capital and enterprises technology and come to the conclusion that only wealthy or moderately impoverished nations with low levels of wealth inequality can achieve an equilibrium free from child labor.

Tanaka (2003) explores a political economy model of child labor, positing that increasing inequality raises the likelihood of a diminished public support for education, consequently fostering child labor. As household wealth grows, there is a corresponding decrease in child labor incidence. This dynamic gives rise to two endogenously determined threshold levels of adult labor efficiency: one below which adults are inclined to have their children work extensively, and another beyond which adults refrain from sending their children to work. Children of parents with intermediate labor efficiencies engage in part-time labor. The parents decide their child's working hours by assessing the utility of sending them to work against the household income increment. The marginal utility of income exhibits an inverse relationship with parental income, and the extent of disutility is influenced by the overall prevalence of child labor in the economy. Anticipating an increase in child labor in the market, adults weigh the utility of additional income against the potential drawbacks.

SOLUTIONS AND INTERVENTIONS

Child labour is a very dangerous for our society. It is known to ruin childhood and harm the future of our nation. There are many ill effects of child labour, which the government and non-Government bodies have been trying to come up with solutions to eradicate it. Some of the solutions to child labor in India are mentioned below:

EDUCATION

Education plays an essential role in shaping a child's future; thus, it is imperative that opportunities of education should be provided to all. The Right to Education Act makes it compulsory for children to receive some or other form of education. There are many educational schemes that aim to bridge the social gaps in education and provide free schooling to under privileged children.

Awareness

Lack of awareness of different schemes and strategies provided by the Government, by the people of India has posed a

major issue in hindrance of children's education. To increase the awareness among today's youth many seminars, campaigns, educational drives, etc., are held. These aim to educate the youth the importance of education in eradicating child labor.

Laws

The Government of India has been working to eradicate child labor relentlessly. They have passed many laws that prohibit the exploitation of children's basic rights. Along with these there are laws that protect worker's rights.

Income generation

Income generation programs provide an opportunity for families to earn enough income to support livelihood so that they are not forced to send their children to work and earn.

CHILD PROTECTION SYSTEM

The Child Labor (Prohibition & Regulation) Act which was enacted in 1986, prohibits the employment of children in certain hazardous occupations and regulates the condition of their working environment. It prohibits the employment of children under the age of 14. There are many NGOs that work with the government authorities to enforce the child's protection rights. Apart from this there are authorities that encourage people to report cases of child labour and actions are taken to correct it.

Where there are always problems, there are also solutions. The only issue that arises is the implementation of these solutions and the adherence to laws implemented. If the youth is aware enough, we can tackle the problem of Child Labour and eradicate it completely from our Country.

YOUTH ADVOCACY AND ENGAGEMENT

Many villagers are poor without land laborers who have not had the benefit of a school education themselves. In large parts of Ranga Reddy district of Andhra Pradesh entire village communities are saying a firm 'no' to child labor and opting to put their children in school instead (Wazir and Rekha 2002). As we all know, children are the future of a nation and the hope for a better tomorrow. For a country to develop, the rights of a child should be of concern to the government of the nation (Adeleye 2014).

Sustainable Development Goal target 8.7 aims to eradicate child labor in all its forms by 2025. Ten years before this deadline, the objective is far from being achieved since in 2016, about one-in-ten children (152 million in total) aged 5 to 17 were engaged in child labor (Thevenon and Edmonds 2019). Children will not be heard if they do not have voice. And, if we have to fully understand child labor, youth and working children should speak out on their situation. Children's and youth organisations can support empowerment of poor and the families who are disadvantaged (Miljeteig 2000).

The main sector in which child labor is concentrated is agriculture. This type of labor can negatively affect the social and educational development of the child (Amar 2014). Since Independence, committee after high-powered committee has recommended specific measures to improve the state of education. The Indian policy environment is rife with good intentions. Official policy recognizing the existence of wide gender disparities dates to the pre-independence period (Devi 2002). Nowadays as we can see that children migration from one place to another is causing a great issue as it is leading to the major problem of human trafficking or child trafficking. Trafficked children face all forms of abuse-physical, mental, sexual and emotional problems.

First and foremost, action needs to be taken against the worst forms of child labor, that is, those which constitute an infringement of human rights, such as forced labor, debt bondage and prostitution, and those which are especially prejudicial to children's safety or health. National action should be geared to the immediate prevention of such abuses and the withdrawal of children from such work (Haspels and Jankanish 2000). In India, many labor Acts have fixed the minimum age of employment. But the definition of a child in terms of age differs from Act to Act: The Factories Act prohibits employment of children below the age of 14 in factories. The limit in the Mines Act is 15 years, whereas it is 12 in the Plantation Labour Act.

For a social change, from decades young people have come in front to fight against any wrong as it is today's youth which can change the scenario of today's generation. Although only fraction of youth people comes into "ACTIVIST" those who play an active role in bringing social change (Koffel 2003). Over past 20 years, youth and childhood is being restructured in a distinct way. It has been observed that more than 218 million children in the world today are involved in child labor, according to international labour organization. Nearly 126 million are performing hazardous work (Miller 2010).

Health issues are causing due to the hazardous work that children are doing in order to earn money, they are not going to schools and working whole day and night for their work. They are working in the industries, factories which is affecting them physically as well as mentally. Advocates of students face so much difficulty to improve conditions of the children with physical or mental disorders caused due to child labour which is causing stress to them (Johns 2002). Rights holders who are entitled to "justice" have become pervasive. Growth of children attorney has promoted objectives of children

(Appell 2005). In 21st century, children are aware of and they know that what is wrong or right for them, so if anyone is forcing them to do the work which they do not want to do or if the person is making them work for more than total working hours, then they are coming forward to speak up for themselves and to fight against the main social cause i.e, Child labour.

The Child Labour (Prohibition and Regulation) Act, 1986, defines 'child' as a person who has not completed his fourteenth year of age. Article 24 of the Constitution of India states: "no child below the age of 14 years shall be employed to work in any factory or mines or engaged in any other hazardous employment". Thus, one may broadly say that a child means a person who has not completed his fourteenth year of age (Nanjunda 2008).

India, a diverse nation with many different traditions, follows legal guidelines that are also considerate of other customs. With the aid of education, we can discern between good and bad norms. The development of different cultures should be tined as having its moots in educational cultures. The research covers every aspect of child labor, including its other problems and how education might help end it. Without educating the populace of a nation, it is challenging to challenge social taboos; nevertheless, it is much more challenging to do so with educated individuals who lack social awareness (Tiwari 2021).

TECHNOLOGY AND INNOVATION IMPACT

A few challenges that developing nations like India face in this day of globalization receive as much public attention as child labor. Poverty is the fundamental cause of this enigmatic issue. Children who work are deprived of several rights, including the ability to survive and grow up, an education, free time, and play, as well as a sufficient quality of living, the chance to explore their interests and personalities, and the ability to develop their physical and mental faculties. Farming employs the most people, followed by the service and industrial sectors, particularly mining. In the fight against this type of abuse, technology is proving to be a valuable friend. A highly developed agricultural sector would reduce the need for labour, allowing kids to return to school. It would also help families financially and create more opportunities for education, especially for women and children. It is also more profitable and productive.

For many years, the anti-child labour framework has been hampered by inadequate enforcement of monitoring, evaluation, rescue, and rehabilitation procedures. The challenge of gathering information on juvenile labour is one of the causes of this regulatory failure. The control of child work and bonded labour could benefit greatly from the advancement of technology. In order to prepare kids to be productive adults, the state may decide to refocus its attention on bolstering the health and education systems rather than the majority of the primary activities that kids participate in. In addition to collecting data, the algorithms of the next generation of intelligence systems may also sort through it using a feedback loop that combines monitoring and surveillance. This is dynamic, live data that is subject to changes over time in real time.

Aside from these issues, new fault lines have emerged as a result of the financial collapse, automation, climate change, and natural catastrophes, all of which threaten adult employment and have the potential to exacerbate the fight against child work. The digital technology has the potential to influence regulatory mechanisms of anti-child labour legislation monitoring, evaluation, rescue and rehabilitation. Digital technology has three possible benefits in the fight against child labour. The first impact is that automation has the ability to revolutionize production structures and power relations in agriculture and small enterprises, perhaps rendering child labour obsolete. Second, big data collection and processing has the potential to physically map and link obscure and remote areas into regulatory monitoring activities in a very efficient manner.

BEST PRACTICES AND LESSONS

Child labor remains a pervasive and deeply rooted issue, affecting millions of children worldwide. Its prevalence is often intertwined with complex socio-economic factors, cultural norms, and inadequate legal frameworks. Effectively combating child labor requires a multi-faceted approach that addresses its root causes, enforces stringent laws, prioritizes education, fosters collaboration among stakeholders, leverages technology, and encourages global cooperation and corporate responsibility. In this context, the following six key strategies are essential for a comprehensive and impactful effort to eradicate child labor.

Holistic Approach:

Develop comprehensive strategies that address the root causes of child labor, particularly poverty, lack of education, and cultural factors. Involve government agencies, non-governmental organizations (NGOs), and local communities in a collaborative effort. This approach should encompass economic development, education reform, and cultural awareness programs.

Strict Enforcement of Laws:

Strengthen and strictly enforce laws prohibiting child labor. This involves regular and rigorous inspections of workplaces, penalties for violators, and proactive measures to identify and rescue children engaged in labor. Creating a robust legal framework and ensuring its consistent application are crucial steps in eradicating child labor.

Education Priority:

Make education a top priority by implementing and enforcing laws that ensure compulsory and quality education for all children. Address barriers such as inadequate infrastructure, lack of teachers, and cultural biases that may prevent children, especially girls, from accessing education. Invest in educational infrastructure and create awareness campaigns emphasizing the long-term benefits of education.

NGO and Community Collaboration:

Foster collaboration between NGOs, local communities, and government agencies to implement sustainable solutions. NGOs can play a crucial role in providing support services, rehabilitation programs, and skill development initiatives. Engage communities in awareness campaigns to change attitudes towards child labor and promote alternative opportunities for children.

Technology Solutions:

Leverage technology to combat child labor. Develop mobile applications, hotlines, and online platforms that enable the reporting of child labor cases. Implement data analytics tools to identify trends and areas with a high prevalence of child labor. Technology can facilitate prompt responses, streamline reporting mechanisms, and enhance the overall efficiency of anti-child labor efforts.

GLOBAL COOPERATION AND CSR:

Encourage international cooperation to share best practices and coordinate efforts against child labor. Governments, businesses, and NGOs should collaborate on a global scale to address the complexities of child labor, particularly in global supply chains. Promote Corporate Social Responsibility (CSR) initiatives that prioritize ethical business practices, fair wages, and safe working conditions, ensuring that businesses contribute to the eradication of child labor.

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FEEDING INDIA'S FUTURE: TACKLING FOOD SECURITY AND HUNGER IN INDIA

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ABSTRACT

India grapples with the intricate challenge of food security and hunger amid a burgeoning population. Despite substantial agricultural output, uneven food distribution persists, influenced by factors such as income disparities, inadequate infrastructure and the impact of climate change. While government initiatives like the National Food Security Act aim to mitigate hunger, ensuring equitable access to nutritious food remains a significant obstacle, especially for marginalized communities. Socio-economic transitions, urbanization and evolving dietary patterns escalate the demand for resource-intensive foods, straining the agricultural sector. Simultaneously, climate change poses a threat to crop yields, exacerbating food insecurity. Key programs like the Public Distribution System and the Mid-Day Meal Scheme have made notable strides in reducing hunger and malnutrition among vulnerable groups.

Persisting challenges encompass fair food distribution, waste reduction and ensuring food quality, compounded by vulnerabilities brought to light by the COVID-19 pandemic. A comprehensive strategy involving sustainable agriculture, rural investments and targeted aid necessitates collaborative efforts among government, civil society and the private sector to address the complexities of food security in India.

In pursuit of a primary survey, the focus will be on the state of Punjab. This study aims to investigate food security issues and hunger, particularly within the regional context, unveiling specific challenges and potential solutions within the state.

Keywords: Food security, hunger, Agriculture, government, Socio-economic factors.

INTRODUCTION

Punjab, dubbed the "Granary of India," confronts a conflicting problem about hunger and food security. Even with its abundant agricultural output, some parts of the population experience food insecurity due to factors like unequal resource distribution, water scarcity, and socioeconomic disparities. The intricate interactions necessitate a more thorough investigation of the elements affecting Punjab's food availability and access. Historically, Punjab's high agricultural productivity has been primarily driven by government policies that support staple crops like rice and wheat. But this emphasis has also resulted in environmental issues, declining groundwater levels, and a narrow variety of food crops, which has an impact on the nutritional landscape as a whole.The problem is further made worse by the unequal distribution of land and resources, which makes it difficult for small and marginalized farmers to get markets and inputs. Particularly in rural areas, this discrepancy feeds the cycle of poverty and food insecurity.

In Punjab, a major threat to food production is water scarcity. The sustainability of agriculture has been impacted by the excessive extraction of groundwater for irrigation, which has resulted in a drop in water tables. An extra layer of uncertainty is added by climate change, with unpredictable. Weather patterns are impacting crop yields and putting food security at risk.

A multifaceted strategy that includes social interventions, fair resource distribution, and sustainable agricultural practices is needed to address these issues. Punjab can work to create inclusive policies, encourage water conservation, and diversify its crop base in order to provide a more resilient and food-secure future for all of its citizens.

Furthermore, Punjab's industrialization and urbanization have changed the traditional patterns of livelihood, which exacerbates the problem of food security. The people from rural areas move to cities in search of work, which frequently leads to inconsistent incomes and restricted access to wholesome food. Due to this demographic shift, cities must have comprehensive urban planning that takes vulnerable populations' welfare into account and guarantees that people have access to reasonably priced, wholesome food.

Government-funded initiatives and social safety nets are essential for reducing hunger. Immediate food-related issues can be resolved by bolstering programs like targeted welfare programs, school midday meal programs, and public distribution systems. Long-term food security can also be improved by encouraging sustainable agricultural practices and teaching farmers resilient techniques, cooperative efforts among local, state, and non-governmental organizations. Communities are essential for creating comprehensive solutions. Punjab can strive to achieve a more balanced and sustainable food landscape, guaranteeing that no one within its borders goes hungry, by raising awareness, empowering communities, and putting policies in place that address the underlying causes of food insecurity.

In essence, addressing food security and hunger in Punjab requires an all-encompassing and inclusive strategy that includes social empowerment, agricultural reforms, and policy changes. Punjab can work toward a future where every person has consistent access to wholesome food, ending the cycle of hunger and poverty, by addressing the underlying causes and promoting a cooperative and sustainable approach.

AGRICULTURE PRACTICES AND FOOD DISTRIBUTION IN PUNJAB

Renowned for its fertile soil and well-established irrigation infrastructure, Punjab has played a pivotal role in shaping the country's agrarian landscape. The region's agriculture is deeply rooted in traditional practices, blending time-honored wisdom with modern technologies to cultivate a diverse range of crops. Beyond the fields, the efficient food distribution network in Punjab ensures that the agricultural bounty reaches both domestic and international markets, contributing significantly to the nation's food security. This intricate interplay between agricultural practices and food distribution underscores Punjab's vital role in sustaining India's agricultural prowess.

CROP DISTRIBUTION

Punjab state has very intense agriculture, requiring a lot of land, money, energy, nutrients, inputs for agriculture, water, etc. Punjab, which makes up just 1.5% of the nation's total land area, produced over 22% of the nation's wheat, 10% of its rice, and 13% of its cotton production in 2001–2002.

Crops for Rabi and Kharif: The crop cycle year in agriculture in India is from July to June. There are two main seasons in the Indian farming season. The cropping season for Kharif crops, which are dependent on the monsoon, is from July to October. Rice, maize, millet, ragi, pulses, soybean, peanuts, etc. are a few examples. Rabi crops: their cropping season extends from October to April. They are sown in the winter after the monsoon rains end and harvested in the summer. Wheat, barley, mustard (rapeseed), oats, gram, linseed, etc. are a few examples.

One of the world's main food essentials, wheat and rice, are produced in second-largest quantities in India. Presently, India holds the second position globally in the production of various dry fruits, agriculturally derived textile raw materials, fish, eggs, pulses, coconut, sugarcane, and a wide variety of vegetables. In 2010, India was included among the top five global producers of more than 80% of agricultural produce, including numerous cash commodities like cotton and coffee. As of 2011, India ranked among the top five global producers of meat from cattle and poultry, and its growth rate was among the quickest.

In the height of the green revolution, Punjab was a shining example of agricultural success. Over the years 1971–72 to 1985–86, its agricultural GDP expanded at a rate of 5.7% year, more than double the growth rate of 2.31% attained at the all-India level in the observed. However, Punjab had been a shining example of agriculture during the height of the green revolution. Between 1971–1972 and 1985–1986–1986–1987, its agricultural GDP rose at a rate of 5.7% annually, more than double the 2.31% growth rate attained at the national level during that same time.

India was able to break free from food aid under the terms of the PL 480 and its accompanying political conditions because to Punjab's outstanding performance, which was first seen in significant wheat surpluses and subsequently in rice. India's excess grain, which provided much-needed food security, was symbolized by Punjab. Subsequent to 1985–86, however, the green revolution began to flag, and Punjab's agricultural growth fell to 3% annually between 1985–86 and 2004–05, which is nearly equal to what was accomplished throughout the entire country. However, Punjab's agriculture faced serious issues when its growth fell to just 1.6% annually between 2005–06 and 2016–17—less than half of the 3.6% growth in agricultural GDP for all of India during that same period.

REGIONAL FACTORS

Geographical location and natural fertility

A good soil, an ample amount of water, and a pleasant temperature make Punjab a popular place for agriculture. The flat geography of Punjab makes it perfect for mechanized agriculture, and its sophisticated irrigation system enables year-round production. Furthermore, with a long history of farming and land ownership, agriculture has played a significant role in Punjab's economy and culture for generations.

Green Revolution

The American scientist Norman Borlaug invented this HYV wheat. His successes in Mexico had attracted the attention of C. Subramanian, the Indian Minister of Food and Agriculture at the time, and M.S. Swaminathan, his advisor. After inviting Borlaug to India in 1963, American and Indian universities worked closely together to level land in Punjab, the Green Revolution's theatre, in the years that followed. During the Green Revolution, which started in the 1960s, mechanized agricultural equipment, high yielding variety (HYV) seeds, irrigation systems, fertilizers, and pesticides were used to transform Indian agriculture into a contemporary industrial system.

Impact of Green Revolution

DISTRICT	AREA	PRODUCTION	PRODUCTIVITY
Amritsar	185	753	4.07
Barnala	114	520	4.56
Bathinda	251	1013	4.03
Faridkot	117	481	4.11
Fatehgarh Sahib	85	420	4.93
Firozpur	395	1636	4.14
Gurdaspur	230	942	4.09
Hoshiarpur	153	589	3.85
Jalandhar	169	735	4.33
Kapurthala	113	457	4.12
Ludhiana	259	1200	4.63
Mansa	172	730	4.30
Moga	177	778	4.40
Mohali	53	238	4.50
Muktsar	215	954	4.63
Nawan Shahar	74	316	4.27
Patiala	235	1063	4.52
Ropar	65	277	4.26
Sangroor	287	1302	4.54
Taran Taran	186	771	4.15
PUNJAB	3539(Total)	1,315,773(Total)	4.32(Average)

Figure 2.1: Illustrating the productivity of Punjab

Punjab currently leads all states in the yield of these crops per hectare, producing 1% of the world's rice, 2% of wheat, and 2% of cotton. Its 2006 per capita income of Rs 28,605 is significantly higher than the Rs 6,929 national average. In addition, Punjab states that it has 100% rural electrification and nearly 99% road connection between villages, compared to the national average of just over 40%.

Punjab's actual GDP growth from 2007 to2008–09 has been around 14% as in contrast to Haryana, its neighbour, which expanded at a rate of almost 18% over the same time frame. It has emerged as the country's leader in the production of commodities like rice, wheat, and a wide range of general produce since the green revolution in the 1960s, a time that witnessed a tremendous increase in scientific developments and new modern agricultural practices.

A portion of western Punjab that was subjugated during the British Raj by means of canal construction and agricultural colonization is known as the Punjab Canal Colonies. Punjab saw a revolution in agriculture as large-scale production of wheat, cotton, and sugar for trade replaced arid subsistence farming. Nine canal colonies were established in the inter-fluvial areas east of the Jhelum and west of the Beas and Sutlej rivers between 1885 and 1940. The new colonies welcomed more than a million Punjabis, easing the demographic pressures in central Punjab.

For the purpose of connecting the rural areas of Punjab the state as well as the central level governments took initiatives to construct a number of interior roads in collaboration with PWD and the highway authority of India in order to give the rural sector the adequate means to further facilitate and encourage agricultural practices in a more technological and advanced manner.

GOVERNMENT INITIATIVES

Government had also taken into account even the remotest areas for the purpose. The government of India uses the *Minimum Support Price (MSP)* as a type of market intervention to protect farmers from a sudden decline in agricultural prices. The Commission for Agricultural Costs and Prices (CACP) makes recommendations, and the Government of India announces minimum support prices for a few crops at the start of the planting season. The Indian government sets the minimum support price (MSP) to shield farmers, who are the producers, from sharp price drops that may occur during years of exceptional output. Government guarantees for their produce come in the form of minimum support prices. Acquisition of food grains for public distribution and assistance to farmers in distress sales are the main goals.

A commodity reserve intended to counteract price swings and unanticipated situations is known as buffer stock. For basic needs and commodities like food grains, pulses, etc., it is often maintained for handling emergency scenarios brought on by unforeseen crop failure, natural catastrophes, etc. To increase supply in order to assist lower open market prices through price stabilization or market intervention. The government gradually distributes buffer stockpiles during budgetary shortfalls to protect consumer interests and enable them to meet their dietary needs at fair pricing. A government-approved document called a *Ration card* allows you to buy goods at discounted prices, including food, grains, fuel, and other necessities.

For people who don't have a lot of money or who are below the poverty line (BPL) and find it hard to buy food, ration cards have been incredibly useful. In addition, a ration (rashan) card serves as documentation of identification and address and can be applied for other documents like voter ID and domicile certificates.

One Nation, One Ration Card holders primarily benefit from the following: Every Fair Price Shop in the nation will

provide discounted food grains to ONORC members, greatly helping migrants who are staying around the nation. All of a state's beneficiaries can receive equitable rations in other states where their ration card was issued by using the ONORC programs. Beneficiaries can nearly instantly switch to a different FPS in the event of any wrongdoing. Social identification will be a major role in gaining access to PDS, therefore the system will help women and other underprivileged groups in society.

Socio Economic Impact of Food Security and Hunger In Punjab

Food security has a significant impact on society's finances. Sufficient availability and accessibility of food boosts economic stability by lowering medical expenses and increasing output. On the other hand, food insecurity can impede general societal well-being and result in poverty and malnutrition. Improving community well-being and promoting economic growth depend heavily on addressing food security.

It was discovered in this study that the most important socioeconomic factor influencing food security was income level. The other factors influencing food security were the number of households, education level, employment position, and gender of the head of the household.

Contribution of Punjab in food security

Punjab makes a substantial contribution to India's food security. Often referred to as the "Granary of India", Punjab is a significant agricultural center that produces a significant amount of the nation's staple grains, such as rice and wheat. The state's strong yields, which support the country's overall food supply, are a result of its sophisticated agricultural methods, irrigation infrastructure, and technological application.

Punjab's agricultural prosperity directly contributes to the country's food security by guaranteeing a steady and adequate supply of essential staples. To address long-term environmental and socioeconomic concerns, however, agricultural productivity must be balanced with sustainable methods.

Steps Taken by Government

1. Policies on Agriculture: In order to assist farmers, the state government has implemented price support measures, crop insurance, and subsidies. These steps are intended to guarantee a steady supply of food and stabilize farm profitability.
2. Irrigation Infrastructure: Punjab has made investments in this area, especially in the building of canals and tube wells. This increases the amount of water available for use in agriculture, which is essential to sustaining high crop yields.
3. Adoption of Technology: Modern agricultural technology including precision farming, efficient irrigation, and crop types with high yields are encouraged by the government. These technological advancements enhance food production and boost productivity.
4. Research and Extension Services: - It's critical to support agricultural extension and research programs.

SIGNIFICANT PROBLEM OF FOOD SECURITY IN PUNJAB

Unequal access to food is a major issue for food security. Even though there is enough food produced worldwide to meet everyone's needs, many people still struggle to get access to a sufficient and healthful diet. This problem is exacerbated by social inequalities, poverty, and income inequality, which makes some populations or areas more susceptible to food insecurity than others. Resolving these fundamental disparities is essential to attaining substantial enhancements in global food security.

Hunger stems from poverty; those with little money may find it difficult to purchase nourishing food, which can result in malnutrition and food insecurity. Like in many other regions, Punjab's income inequality is impacted by a number of variables, such as social structures, government policies, and economic activity. Despite Punjab's reputation for agricultural prosperity, the state still has unequal income distribution.

ASPECTS OF INCOME INEQUALITY

1. Differences in Agriculture: Punjab's economy is significantly influenced by the agricultural sector. Farmers do, however, differ in terms of land ownership, resource accessibility, and technological advancements. Higher incomes may be earned by larger, more technologically sophisticated farms than by smaller, more conventional ones.
2. The City-Country Divide: The income disparity between urban and rural areas is frequently quite noticeable. Compared to rural areas, where agriculture is still the main industry, urban centers typically have higher income levels due to their diverse economic opportunities.

3. Differences in Occupation: There is income inequality in a variety of vocations. Individual differences in income levels may be attributed to the higher earning potential of specific industries and professions.
4. Educational Disparities: A major contributing factor to income disparities is educational attainment. Higher educated and skilled individuals frequently have access to higher-paying jobs, while those with less education may find it difficult to find well-paying employment.
5. Differences in Gender: - Punjab is not an exception to the global problem of gender-based income inequality. When compared to men, women may experience pay disparities and restricted access to economic opportunities.
6. Government Policies: Income distribution may be impacted by government policies pertaining to social welfare programs, land reforms, and economic development projects. Proactive measures to lessen inequalities.

Social inequality in Punjab: Punjab's social inequality takes many forms, representing differences in opportunities, resources, and social privileges. Even though the state's economy has grown significantly, issues with caste, gender, healthcare, and education may still affect some social groups.

INFLUENCING FACTORS

1. Workers in Marginalized Agricultural Production: Some agricultural laborers might have trouble finding a steady job and getting enough food, especially if they don't own much land or have many resources.
2. Landless Laborers: People who don't own land but depend on farming for a living may face difficulties when the economy is unstable or when the industry is struggling.
3. Workers in Migration: Punjab is a popular destination for migrant laborers, particularly in the construction and agricultural industries. Uncertainty regarding employment security and access to sufficient food may be encountered by migrants.
4. Dalit Scheduled Castes: People from scheduled castes may continue to experience social and economic inequality despite legal actions taken to combat discrimination, which may limit their access to resources, including food.
5. Females: Women's access to resources, work opportunities, and education may be impacted by gender-based disparities. This may occasionally result in an increased susceptibility to food insecurity.
6. Countryside Areas: The capacity of some rural communities to guarantee food security may be impacted by issues with restricted access to healthcare, education, and employment opportunities.
7. Elderly Population: Making sure there is a steady supply of wholesome food can be challenging for older people, especially those who don't have enough social or financial support.
8. Young People: Children from low-income households may be more vulnerable to hunger and malnourishment, which could have an impact on their life

In Punjab, a number of socioeconomic factors influence both food security and hunger:

1. Distribution and Ownership of Land: - Inequalities in agricultural productivity and income can arise from the unequal distribution of land. Addressing the socioeconomic elements influencing food security requires land reforms and policies that support fair land distribution.
2. Farming Methodologies: -Food security may be impacted by conventional farming practices and a dependence on crops that require a lot of water. Crop diversification and sustainable farming methods can increase a region's ability to withstand environmental shocks.
3. lncome Inequality: - Differences in income have an impact on food access. Improving food security requires addressing income inequality through programs that support equitable pay, social safety nets, and inclusive economic growth.
4. Educational Attainment: - Education is correlated with the ability to earn a living and, in turn, with food security. Expanding the reach of high-quality education, can improve socioeconomic conditions and end the cycle of poverty, particularly in rural areas.
5. Access to Healthcare: - Sufficient healthcare is necessary to guarantee the welfare of both individuals and communities. Access to better healthcare can lessen vulnerabilities related to health that fuel food insecurity.
6. Opportunities for Employment: - Having access to a steady job that pays well is essential. Policies that encourage the creation of jobs, particularly in non-agricultural sectors, have the potential to improve socioeconomic circumstances and lessen dependency on precarious agricultural livelihoods.

7. Women's Empowerment: - Disparities in gender affect who can access opportunities and resources. empowering women via work, education, and involvement in decision-making
8. Poverty: - A lower standard of living is the result of poverty, which is a complicated and pervasive problem marked by a lack of resources, such as money, education, and necessities. Initiatives in the areas of economics, society, and education are frequently used to reduce poverty. Large regions of rural Punjab appear to have high levels of poverty, according to our spatial analysis. The state's highest rate of poverty is found in the Firozpur district.

CLIMATE CHANGE AND AGRICULTURAL SUSTAINABILITY

Punjab is a strategically important state in India for agriculture. But its agriculture industry is currently going through a difficult time as farm earnings are declining, harvests are stagnating, and natural resources are running out. The sustainability of Punjabi agriculture has come under scrutiny due to an excessive dependency on subterranean water resources and a persistent reliance on the cultivation of paddy and wheat. Current cropping practices, which mostly rely on wheat and rice, are extremely intensive and lack diversity, which could jeopardize the state's ability to sustain its agriculture as a whole.

1. Potassium Scarcity: Punjab's agriculture mainly depends on irrigation, which is achieved by extracting groundwater. Diminished water tables may result from climate change combined with unsustainable methods of managing water resources. Agriculture is under risk from this water shortage, particularly rice and other crops that require a lot of water.
2. Shifting Crop Cycles: The time of planting and harvesting seasons may be affected by the disruption of the conventional agricultural calendar caused by the changed environment. The incompatibility of crops and their environment can result in lower yields because the former may not be able to finish its growth cycle.
3. Pest and Disease Pressure Increased: Warmer weather can foster an environment that is conducive to the spread of illnesses and pests. Farmers must adjust as a result, employing new crop varieties, pest management strategies, and management techniques to safeguard their harvest.
4. Temperature Increases: Growing temperatures in Punjab have the potential to cause heat stress in crops, which would stunt their development. There are ideal temperature ranges for the growth of certain crops, and yields can be negatively impacted by deviations from these ranges. Pests and illnesses may spread as a result of rising temperatures.
5. Modified Rainfall Patterns: Inconsistent and erratic rainfall might result from climate change upsetting long-standing monsoon patterns. Crop productivity may be impacted by the ensuing floods and droughts. Farmers' difficulties may be exacerbated by inconsistent precipitation, which can also impact the amount of water available for irrigation.

Punjab's wheat growing is impacted by climate change in a number of ways, and resolving these issues calls for a blend of innovative technology, supporting government policies, and adaptable farming techniques.

GOVERNMENTAL INTERVENTIONS AND PROGRAM EFFICACY

The success of government initiatives to improve Punjab's food security has varied. The goal of policies like subsidized food distribution and agricultural support programs is to guarantee food availability, but their effectiveness depends on how well they are implemented and how well they can be adjusted to changing conditions. When evaluating a program's effectiveness, it's important to take the socioeconomic environment, technology advancements, and distribution efficiency into account. Continuous assessment and adaptation are essential for long-term success in tackling issues related to food security.

Various government initiatives have been put in place to address food security in Punjab, India. Among the important initiatives are:

Distribution Efficiency

1. Public Distribution System (PDS): PDS is designed to give qualified recipients subsidized food grains. Analysing coverage, distribution efficiency, and the effectiveness of reaching vulnerable populations are all important components of evaluating its efficacy.
2. Government Assistance and Support Programs for Agriculture: Crop productivity may be impacted by subsidies for irrigation, fertilizer, and seeds. The contribution of these programs to higher agricultural productivity and farmer income is a factor in determining their efficacy.

3. Crop Diversification Programs: Promoting crop diversity among farmers can help them become more resilient to changes in the market and climate. Changes in cropping patterns, income diversification, and sustainability practices are indicators of program success.
4. Adoption of Technology: Productivity can be increased by implementing contemporary agricultural technologies like precision farming and effective irrigation techniques. Analyzing technology adoption rates and their effect on yields is part of evaluating the effectiveness of a program.
5. Climate Resilience Initiatives: Promoting climate-resilient agricultural practices is essential, especially in Punjab, which is particularly vulnerable to climate change. A measure of success is the rate of adaptation and farmers' capacity to deal with climate related.
6. Water Management Programs: Punjab's agriculture depends heavily on the efficient use of water. The effects of government initiatives supporting sustainable water management techniques on groundwater levels, irrigation effectiveness, and water conservation can all be taken into consideration.

NATIONAL FOOD SECURITY ACT

The National Food Security Act (NFSA), 2013 provides for food and nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity and for matters connected therewith or incidental thereto. This Act was published in the Gazette of India on the 10th of September, 2013 but deemed to have come into force on the 5th day of July, 2013. As per the provisions under section 16 of this Act, every State Government shall, by notification, constitute a State Food Commission for the purpose of monitoring and reviewing of implementation of this Act. However, pursuant to the provisions under section 18 of the Act , the State Government may, if considers it necessary, by notification, designate any statutory commission or a body to exercise the powers and perform the functions of the State Food Commission.

In pursuance of these provisions, the Punjab State Food Commission was constituted on Adhoc basis on 27.12.2013 and on regular basis on 11.12.2015. Sh. D.S. Kalha, IAS (Retd.) was appointed the first Chairman of the Commission. Subsequently after completion of his tenure on 12.10.2018, Sh. D.P. Reddy, IAS (Retd.) has taken over charge of Chairman on 13.10.2018. After completion of his tenure of five years, he has relinquished the charge of the post of Chairman on 12.10.2023 (AN). Smt. Preety Chawla, Smt. Indra Gupta, Sh. Vijay Dutt and Sh. Chetan Prakash Dhaliwal were appointed as Members of the Commission on 04.01.2022. Sh. Anand Sagar Sharma, PCS, Additional Managing Director, PUNGRAIN has been given additional charge of Member Secretary, Punjab State Food Commission vide order dated 21.10.2023 of the Food, Civil Supplies & Consumer Affairs Department.

Policy Appertained Following Points:

1. Seventy five percent of rural and 50 percent of the urban population are entitled for three years from enactment to five kg food grains per month at 3 , 2 , 1 per kg for rice, wheat and coarse grains (millet), respectively.
2. The states are responsible for determining eligibility.
3. Pregnant women and lactating mothers are entitled to a nutritious "take home ration" of 600 Calories and a maternity benefit of at least Rs 6,000 for six months.
4. Children 6 months to 14 years of age are to receive free hot meals or "take home rations".
5. The central government will provide funds to states in case of short supplies of food grains.
6. The current food grain allocation of the states will be protected by the central government for at least six months.
7. The state governments will provide a food security allowance to the beneficiaries in case of non-supply of food grains.
8. The Public Distribution System is to be reformed.
9. The eldest woman in the household, 18 years or above, is the head of the household for the issuance of the ration card.
10. There will be state- and district-level redress mechanisms.
11. State Food Commissions will be formed for implementation and monitoring of the provisions of the Act.

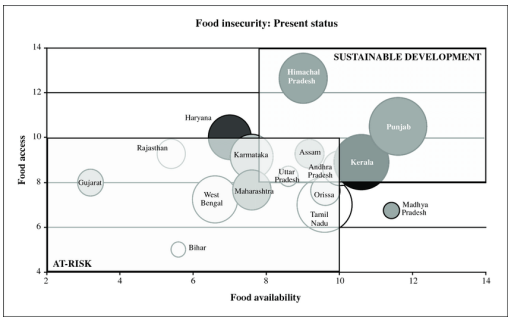


Figure 5.1: Manifesting food availability in Punjab compared to other states

The above data suggests Punjab is heading on an avenue of sustainable development and the NFSA, 2003 had significant impact yet there is a lot to be attained.

CONCLUSION

Both qualitative analyses of the socioeconomic impact of these programs and quantitative data analysis are used in their monitoring and evaluation. To ensure sustained efficacy in addressing Punjab's food security concerns, policies must be reviewed and adjusted on a regular basis in response to changing circumstances and stakeholder feedback.

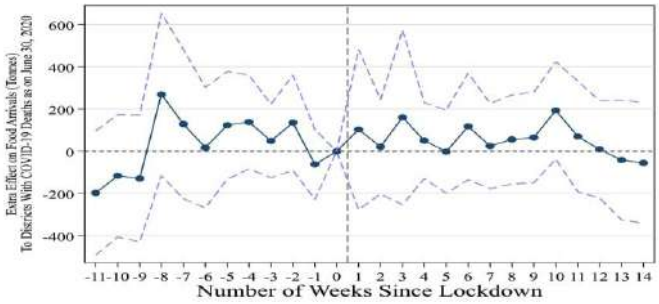
Additionally, variables like crop diversification, water management, and climate resilience are linked to the effectiveness of government interventions in Punjab's food security. Long-term objectives for food security are aided by modernizing infrastructure and using sustainable agricultural methods. Local communities, agricultural specialists, and legislators working together play a virtual role in tailoring intervention to the region's specific needs.

Nevertheless, there are still problems, such as market dynamics, excessive agrochemical use, and fragmentation of land. Achieving long-term goals like building resilience against climate-related uncertainties and short-term goals like immediate food access require striking a balance between traditional farming practices and innovative approaches.

In summary, a comprehensive strategy that incorporates community involvement, technological advancements, and adaptive strategies is necessary to ensure the effectiveness of governmental interventions in Punjab's food security. Policies must be continuously reviewed and improved in order to handle new issues and guarantee long-term gains in food security, affordability, and accessibility.

COVID-19 IMPACT ON PUNJAB'S FOOD SUPPLY CHAINS: RESILIENCE BUILDING

Punjab, had a major role in the nation's food supply prior to COVID-19. The World Health Organisation (WHO) stated that this illness is the first coronavirus-caused pandemic reported to have occurred. Punjab being the major agricultural hub produces a wide range of crops, including as wheat, rice, and pulses, and has a solid agricultural base and plays a vital role in supplying food, not only in Punjab but also to other regions and countries.



The COVID-19 pandemic has disrupted the supply chain in Punjab, making it more challenging to ensure a consistent flow of agricultural procedure. The majority of nations quickly and decisively decided to impose a national lockdown, which included closing both international and, in certain situations, internal borders in order to stop the virus's spread. Fears of humanitarian and socioeconomic crises were emphasised in nations under complete lockdown, as several sectors suffered severe consequences.

Food supply chain disruption has been emphasised as a problem among other macroeconomic effects, such as poverty and commerce, particularly for nations like India where the majority of the population is small-scale farmers. The COVID-19 pandemic led to the development of reaction plans for food workers, which serve as guidelines for maintaining operations

in food processing plants and managing coronavirus in the food sector.

LABOUR SCARCITY

Numerous causes led to a labour shortage during the lockdown. Many migrants returned to their hometowns due to quarantine regulations and health concerns, which disrupted the labour that was vital to various businesses. This had a significant effect on the supply chain, delaying the distribution, packing, and processing of the items. In addition, the scarcity of labour made it difficult for the agriculture industry to plant and harvest.

Not only was there a labour scarcity, but vital agricultural supplies like pesticides and fertilisers were also in limited supply. For areas like Punjab, where agriculture is vital to the economy, this made issues much more problematic. A number of issues were brought about by the combination of decreased labour and a lack of essential agricultural resources, which had an impact on the productivity of the agricultural sector as a whole as well as the prompt production and processing of commodities.

In conclusion, areas like Punjab faced a complex range of issues that affected several phases of production and distribution due to the lockdown-induced labour shortage, supply chain disruptions, and a shortage of agricultural inputs.

BORDER RESTRICTION

In Punjab, the transportation delays brought on by border restrictions may have serious negative effects that include economic losses, interruptions to the food supply chain, and a rise in food waste. These delays in transit not only increase mortality rates but also aggravate problems like as starvation, limited food availability, and a lack of vital nutrients, particularly during the difficult Covid-19 pandemic periods. Border restrictions during the COVID-19 epidemic caused significant delays in Punjab's transport system, which had far-reaching effects. Delayed shipments of perishable commodities are a prime example of the disruption in the food supply chain. For example, a large portion of Punjab's agricultural production is comprised of fruits and vegetables, which frequently have a short shelf life. If these products arrive at markets after their best date of freshness due to transportation delays, farmers and suppliers may suffer financial losses.

1. Agriculture is not the only industry affected economically. Affected industries included those that depended on prompt supply of finished goods or raw materials.
2. One major worry is the possibility of more food being wasted. Food waste might occur if products are not delivered to customers in a timely manner due to delays in transportation. Due in large part to the presence of food insecurity in some communities, this not only affects the agricultural sector's capacity to remain economically viable but also brings up moral dilemmas about the use of resources.
3. In addition, delays in transit might indirectly increase the death rate. For example, limited access to healthcare during a health crisis such as the pandemic might result from delays in the supply of medical supplies or medications. This increases death rates and makes health problems worse.
4. Transportation delays brought on by border restrictions in Punjab have a variety of consequences, ranging from higher death rates and nutrition-related issues to financial losses and greater food waste. The examples given show how these effects affect many facets of daily life in the area during these difficult times.
5. Farmers in Haryana suffered losses as a result of the delays caused by border restrictions in transferring crops such as rice and wheat, and people's access to these staple commodities was reduced. This had an impact on the state's overall food supply as well as farmers' profits.
6. Similar to Punjab, where a lot of wheat and paddy are grown, delays in transportation have a negative impact on farmers' incomes and slow down enterprises that depend on these products. It had a knock-on effect that affected not just the state's agricultural sector but also its general economy.
7. Delays in bringing fruits to markets resulted in losses for orchard owners and increased food waste in Himachal Pradesh, which is well-known for its apples. The state's economy, which mostly depends on the fruit sector, was negatively impacted by this.

MIGRATION

Job Loss and Disruption to Income many people in Bihar lost their employment significantly as a result of the lockdowns brought on by the epidemic, which closed down a number of industries and enterprises. Daily wage workers were especially impacted since their sources of income quickly disappeared, and they are dependent on their daily wages for survival.

The customary supply networks for food and necessities were disturbed by the restrictions on travel and transit during

lockdowns. Perishable items may have been wasted as a result of farmers' difficulties getting their harvest to markets. Workers from abroad going back home uncertainty and job losses caused many Bihari migrant labourers, who had jobs in other states like Punjab, to return home.

The abrupt flood of migrant workers back home put a strain on the area's resources and raised the need for necessities like food. Food insecurity rose as a result of rising demand, broken supply networks, and job losses. It was difficult for vulnerable groups to get inexpensive, wholesome food, such as daily wage labourers and the impoverished.

TECHNOLOGICAL ADOPTION

During the COVID-19 pandemic, technology was essential to maintaining a stable food supply chain in Punjab. Platforms that connect directly with consumers in order to sell their produce to customers directly, farmers have embraced online platforms. Reliance on conventional distribution channels was decreased by the smooth transactions made possible by websites and mobile apps. Retailers and wholesalers found it easier to reach farmers through digital marketplaces, which linked them with a wider range of buyers. A smoother flow of goods was ensured by the facilitation of transparent pricing and efficient transactions. Certainly! Technology played a vital role in stabilizing Punjab's food supply chain during the COVID-19 pandemic. Farmers embraced online platforms to sell directly to consumers, reducing reliance on traditional distribution channels. Digital marketplaces facilitated easier connections between retailers, wholesalers, and farmers, ensuring transparent pricing and efficient transactions for a smoother flow of goods. Farmers could access real-time data on weather, market prices, and optimal farming techniques through mobile applications.

Farmers were better able to make educated decisions as a result of this empowerment, which increased their capacity to withstand pandemic difficulties. Essentially, the deliberate incorporation of technology not only reduced disturbances but also promoted effectiveness and flexibility, guaranteeing Punjab's consistent and dependable food supply in hard times. Food distribution and acquisition were facilitated by technology during the COVID-19 pandemic in Punjab:

1. The deliberate incorporation of technology not only reduced disturbances but also promoted effectiveness and flexibility, guaranteeing Punjab's consistent and dependable food supply in hard times.
2. Technology facilitated the distribution and acquisition of food during the COVID-19 pandemic in Punjab.
3. Clear Supply Chains, Food quality was made evident to consumers through technology such as blockchain and tracking tools.
4. E-purchasing for necessities, Food and grocery shopping online became easier, keeping people safe.
5. Technology improved the reliability and ease of food delivery and sales in Punjab during COVID-19.

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SAFE STREETS, SAFE CITIES: COMBATING GENDER BASED VIOLENCE AND ENSURING WOMEN'S SAFETY.

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ABSTRACT

Gender-based violence (GBV) is a persistent problem in our society and it has impacted a large portion of the population directly or indirectly. The violent act against anyone is an act which punishable and need to be addressed despite the fact who was being victimized. it is quite depressing that it is women who experience the highest number of victimizations. This research is focusing on the women prospective and where is the current situation of the societies around the world? The paper describes what gender-based violence is? Why is there a is need to understand it? What are different reasons of gender-based violence? What are the various ways to combat violence against women and what challenges creates hinderances in combating the violence against women?

GBV is a pervasive and deeply rooted global issue that spans cultural, socio-economic, and geographic boundaries. This abstract provides a comprehensive overview of the multifaceted nature of gender-based violence and explores strategies for its prevention and intervention.

The first section delves into the intricacies of gender-based violence, emphasizing its diverse manifestations that extend beyond physical acts to include psychological, economic, and sexual violence. The historical context, as traced by scholars like Dobash and Dobash (1979), underscores the deeply ingrained societal norms and patriarchal structures that have perpetuated violence against marginalized groups, particularly women. Contemporary analyses, drawing on the intersectionality framework proposed by Crenshaw (1989), highlight the compounding effects of various social identities, such as race, class, and sexual orientation, on individuals' experiences of gender-based violence.

The second section shifts focus towards combating gender-based violence, recognizing the urgency of developing effective strategies for prevention and intervention. A qualitative research methodology is proposed, aiming to explore the lived experiences of survivors, identify sociocultural factors contributing to gender-based violence, assess the efficacy of existing support systems, understand the role of media, and propose evidence-based strategies for prevention. This research design, anchored in phenomenology, seeks to uncover the essence of individuals' experiences, providing a nuanced understanding of the factors that contribute to the prevalence of gender-based violence.

Aims and objectives are outlined to guide the research project. These include exploring the lived experiences of survivors through in-depth interviews, identifying sociocultural factors through focus group discussions, assessing support systems and services, understanding media influence, and proposing prevention and intervention strategies. The research design places an emphasis on inclusivity, ensuring a diverse and representative sample that considers various intersecting identities.

Ethical considerations are underscored to navigate the sensitive nature of the research, ensuring participant confidentiality, informed consent, and the right to withdraw without repercussions. The analysis, employing thematic coding, aims to identify patterns, themes, and connections within the data, enhancing the credibility and trustworthiness of the findings.

This abstract provides a roadmap for a research project that seeks not only to understand the complex nature of gender-based violence but also to contribute evidence-based strategies for combating and preventing it. By delving into the lived experiences of survivors and addressing sociocultural factors, support systems, and media influence, the study aims to foster a more comprehensive and nuanced approach to tackling this pervasive issue and fostering a more just and equitable society.

INTRODUCTION

Every corner of the world is growing in a manner or other, but it is a shameful and bitter truth that we are lacking on the very basic matter which is a necessity according to the norms of world organizations such as United Nations and many others. Alongside the wave of modernization and development, there is an undercurrent of a deepening sense of isolation and increasing vulnerability of sections of society that have traditionally been at disadvantage because of their class, gender status and sexual context1. We as members of society are unable to provide a safe and secure environment to women where they feel free to participate economically, politically and most basic socially. Women always have a sense of fear towards their safety and they are assaulted in a way or other whether it is in public or private spaces. According to a report

[1] Understanding women's safety: Towards a gender Inclusive city, Research finding. Delhi, Published in Aug 2010 by Jagori; B-114, Shivalik, Malviya Nagar, New Delhi 110017.

by United Nations, 92% of women (of Rabat, Morocco) had suggested that they had experienced some sort of sexual harassment in the life time2. There are a number of factors that are responsible for the development of the sense of fear and security in women's mind. These factors affect the movement of this section in public domain; keep them denied from accessing the resources that are meant for to be utilized by them, they are forced to negotiate and not participate in global race of growth and representation; as they experience pressures of all kinds.

The concept of gender-based violence is a broader one which comprises the concept of violence faced and experienced by any person, whatsoever they find themselves in sexual classification. The violence can be in any form; sexual, mental, emotional, physical and economic. Our research is focused on addressing gender-based violence in context with women, their safety, and measures to address it.

Gender based violence is present in at various levels, beginning at discrimination at birth, further accelerate with discrimination in education, diet, opportunity in economic aspects and direct/indirect acts of sexual aggression[3]. Various approaches can be useful to address and counter gender-based violence, which will be discussed in this research.

LITERATURE REVIEW

Gender-based violence (GBV) stands as a pervasive global issue, deeply rooted in historical inequities and entrenched power dynamics. This literature review seeks to navigate the extensive body of scholarly work surrounding GBV, providing a comprehensive synthesis that both contextualizes the phenomenon and identifies gaps in current understanding. The exploration of existing literature is crucial for informing the research project's theoretical framework, methodology, and ultimately contributing to the broader discourse on combating and preventing gender-based violence.

Jagori's research findings in "Understanding Women's Safety: Towards a Gender Inclusive City," published in August 2010, provide a comprehensive and insightful exploration into the critical issue of women's safety in the context of urban spaces, with a specific focus on Delhi. This research, emanating from B-114, Shivalik, Malviya Nagar, New Delhi 110017, represents a significant contribution to the discourse surrounding gender inclusivity and urban planning.

The strength of this publication lies in its commitment to unraveling the multifaceted challenges that women face in navigating urban environments. The research goes beyond merely documenting instances of harassment and violence; it delves into the root causes and systemic issues that perpetuate an unsafe atmosphere. By adopting a holistic approach, Jagori endeavors to bridge the gap between understanding and actionable change.

One notable aspect of the research is its empirical foundation. By grounding the findings in the experiences and narratives of women living in Delhi, the report adds a layer of authenticity that resonates with the reader. Through interviews, surveys, and case studies, the publication provides a nuanced portrayal of the lived experiences of women, bringing to light the often overlooked aspects of safety concerns that permeate various facets of daily life.

The report is particularly commendable for its emphasis on inclusivity. By framing the discussion within the context of a "gender-inclusive city," Jagori recognizes the intersectionality of women's experiences, acknowledging that safety concerns vary based on factors such as socio-economic status, caste, and geographical location. This approach adds depth to the analysis, recognizing the diverse challenges faced by women from different backgrounds.

However, it is crucial to acknowledge the temporal aspect of this publication. Originally released in 2010, the report may not fully capture the evolving dynamics of women's safety in Delhi over the subsequent years. Given the rapidly changing urban landscape and the emergence of new challenges, a more recent update or a follow-up study could provide a more accurate reflection of the current scenario.

"Understanding Women's Safety: Towards a Gender Inclusive City" is a valuable resource for scholars, policymakers, and advocates interested in the intersection of gender and urban spaces. Its emphasis on empirical evidence, inclusivity, and a holistic understanding of the challenges faced by women in Delhi makes it a seminal work in the field. However, readers should supplement their understanding with more recent research to grasp the ongoing developments in the real.

WOMEN'S SAFETY IN URBAN ENVIRONMENTS.

Safe cities and safe public spaces [global report by UN women]

This report tells us about that sexual harassment or any other form of violence is still prevalent in the society. All those places if women have threat of getting harassed in those places it will impact the social and personal life of women. According to a survey in Morocco it tells 92%of women have faced some sort of sexual harassment. This report gives us the example of various other countries in which women faced some or other form of harassment. This global report also shares us with the information about various other countries tried to combat the problem of gender-based violence against women. This report explains us that many women feel scare to travel at night. UN commission called upon the government

[2] Safe cities, safe public spaces, Global result report, UN Women, p.1
[3] UNDP, Voices and Rights, 2010 (google)

of various countries to take measures to prevent gender-based violence.

How chi Minh, a city in Vietnam has seen rising cases of gender-based violence and mistreatment of women. So, in order to combat the problem of gender-based violence Ho Chi Minh Safe City program has now decided to implement National Thematic Project on Gender Based Violence [2016-2020]. It will help to study the area of Gender Based Violence to know about its extent and by doing proper study will provide the way out of these kinds of problems.

Mexico is one the other example where the women have the sense of insecurity in the public spaces. Thus, to help women to report the incidents an app named "vive saguaro" by introduced. This helped women lot in ensuring them that there is no need to remain silent in these kinds of issues. Mexico also introduced 125 "women only" buses. Some other programs and initiatives are also taken which will provide women safety.

Winnipeg, Canada became the first city to participate in Global safe public cities and safe public spaces flagship initiatives. It conducts workshops to raise awareness among both men and women about harassments and creating safe public spaces. With the help of other such measures it is trying to develop safety in security and to promote welfare of its citizens.

In Quito Ecuador to monitor crime and violence trend municipal crime observatory which was expanded to routinely collect data of sexual violence and other forms of violence's in public spaces. It also notes the progress done by it.

Sakai, a city in Japan to reduce violence installed CCTV cameras also increased the number of street lights and also encouraging other people to participate in violence prevention measures and encourage them to self-volunteer. The limitation of this report is that it is mostly emphasizing and presenting the examples of different countries; what measures did different countries took to create safe spaces for women, but it is not suggesting the ways how they were implemented, whether they were successful or there were some challenges while implementing in other parts of the country.

Handbook for legislation on violence against women (by Department of economic and social Affairs, United Nation), 2010

Women around the globe face difficulties throughout their lives and they face violence of a form of other. These violences may be in form of domestic, sexual or physical assaults and others such as eve-teasing, stalking and even online. Many a times, it is carried by marital partners or near friends and relatives. This paper mentioned a number of legislative policies being introduced or the suggestion being discussed on international levels to combat gender-based violence, especially in respect to women. The initiatives such as Elimination of discrimination against women in 1992 were taken by International human rights treaties which focuses to ensure laws which protect women from violences such as rape, sexual assault and promotes respect, dignity and integrity of women. Other such action was taken by Fourth World Conference on Women in Beijing in 1995.

Along with these, the paper also suggest that how comprehensive legislative approaches can be helpful in combating gender-based violence. Steps such as:

1. Providing equal opportunities in legislature and economic sphere can be helpful in combating violence as it would ensure active participation of women.
2. Gender-sensitive legislatures can be helpful and it has been marked particularly in Latin America, as women who were victim feel free to talk in them and these gender sensitive legislatures pay more attention on the plea of the victims and survivors of violence.

The other suggestion being discussed are the idea of the introduction of specialized courts, police to look into the matter. The need to strengthen more laws and policies to be taken into account by the nations is important and for this many international organizations such as United Nations, European Union, Arab league and others at national levels have been continuously discussing the need to combat gender-based violence and for the same they have been defining what violence actually is and what are the different types which fall in the category of violence against women. Initiatives such as developing awareness among masses and educating the general public, supporting survivors in employment and most importantly free legal aid, interpretation and judicial support can play pivotal role to reduce the level of violence.

The limitation of this research is that besides providing enough ways to combat violence, it is mostly based on policies and initiatives, it is silent on the need to have develop moral and well-planned surroundings and safe transportation which is also a responsibility of government to take care of and these if implemented properly can be considered as important players in ensuring safety against violence to a major extent.

Public spaces are all those spaces which are used by every person of the society. Public spaces should be in a condition that everyone can feel a sense of safety and security while using it. Creating safe and empowering public safety with women and girls are the need of the time. Due to the fear of getting harassed, the freedom of movement of women has been restricted. United Nation Women organization is trying to take various initiatives to create safe public spaces. Some countries like Papua New Guinea, Ecuador, Morocco, Mozambique etc. took various different steps to promote safety, hygiene, reduced sexual harassment and safe public transport. All the steps small or big together will help in providing women safety and security, also will help in combating the gender-based violence in the society. Women will also not fear from using these public spaces. Limitation of this article is that it doesn't provide any information about the steps it took to

promote safe public spaces which means lack of any information about the kind of measures it took to provide safe public spaces. This article does not suggest whether the initiatives taken by government in those countries were effective on the ground level or not.

METHODOLOGY

This research project is based on the qualitative method of research. Therefore, we have carefully examined and analyzed various works to compile the information. This research project endeavors to conduct a comprehensive investigation into gender-based violence (GBV) utilizing qualitative research methodologies. Qualitative research offers a nuanced and in-depth exploration of individuals' experiences, perceptions, and the socio-cultural contexts that shape gender-based violence. This methodological note outlines the rationale for choosing qualitative approaches, the overall research design, data collection methods, and the analytical framework that will guide the study.

Rationale for Qualitative Research:

Qualitative research is inherently suited to unraveling the complexities embedded in the phenomenon of gender-based violence. By focusing on the subjective experiences and perspectives of individuals, qualitative methods provide a platform for understanding the lived realities of survivors and the intricate dynamics that perpetuate violence. This research approach aims to go beyond statistical data, allowing for the exploration of the cultural, social, and contextual factors that contribute to the prevalence and persistence of gender-based violence.

Research Design:

The study will adopt a qualitative research design that encompasses several key components. The research will be exploratory and descriptive, aiming to delve into the multifaceted aspects of GBV and capture the diversity of experiences among different groups. A phenomenological approach will be employed to uncover the essence of individuals' experiences with gender-based violence. This approach is particularly apt for understanding the subjective meanings and interpretations that individuals assign to their experiences, contributing to a richer understanding of the phenomenon.

Data Collection Methods

Focus Group Discussions: Focus group discussions will be employed to facilitate interactive conversations among participants. This method is particularly valuable for capturing collective perspectives, social norms, and community attitudes towards gender-based violence.

Documentary Analysis: Relevant documents, such as legal reports, support group materials, and media representations, will be analyzed to supplement the primary data. This will provide a broader context for understanding the institutional responses and societal discourse surrounding gender-based violence.

This qualitative research methodology aims to provide a rich and nuanced understanding of gender-based violence. By embracing the complexities of individuals' experiences, perceptions, and societal dynamics, the study aspires to contribute valuable insights to the ongoing discourse on combating gender-based violence and fostering a more equitable and just society.

Aims and Objectives

1. Gain a comprehensive understanding of the gender-based violence.
2. Uncover the various forms of gender-based violence experienced by participants, including physical, psychological, economic, and sexual violence.
3. Explore how intersecting identities, such as race, class, and sexual orientation, shape the experiences of survivors.
4. Propose strategies for challenging and changing harmful gender norms and stereotypes.
5. Empowering society through education and to raise awareness.

UNDERSTANDING GENDER-BASED VIOLENCE: MEANING, CONCEPT AND FORMS

Gender-based violence (GBV) is a pervasive and deeply rooted issue that transcends geographical, cultural, and socioeconomic boundaries. It is a phenomenon that disproportionately affects individuals based on their gender, with women and marginalized groups often being the primary victims. To comprehensively address and combat gender-based violence, it is crucial to delve into its meaning, conceptual framework, and the various forms it can manifest.

Gender-based violence refers to any harmful act directed at an individual or a group based on their gender, perpetuating, and reinforcing gender inequalities. It encompasses physical, sexual, psychological, and economic harm, manifesting as a violation of human rights. The power dynamics inherent in society contribute to the prevalence of such violence, as it is often wielded as a tool to maintain control, power, and dominance over others.

THE CONCEPTUAL FRAMEWORK OF GENDER-BASED VIOLENCE

Understanding gender-based violence requires a nuanced examination of the social, cultural, and structural factors that contribute to its perpetuation. The conceptual framework involves recognizing the intersectionality of various identities, including gender, race, class, sexual orientation, and disability. These intersections create complex power dynamics that influence the prevalence and impact of gender-based violence on individuals.

Key components of the conceptual framework include patriarchy, misogyny, and harmful gender norms. Patriarchy, a social system where men hold primary power and predominate in roles of political leadership, moral authority, and social privilege, plays a central role in perpetuating gender-based violence. Misogyny, the ingrained prejudice against women, further reinforces discriminatory attitudes and behaviors.

Gender-based violence against women encompasses a range of harmful actions specifically targeting individuals based on their gender, perpetuating systemic inequalities. It manifests as physical, sexual, psychological, and economic harm, with women disproportionately bearing the brunt of its impact. This violence is deeply rooted in patriarchal structures that uphold male dominance and contribute to the perpetuation of harmful gender norms. Women often face physical violence, including domestic abuse and intimate partner violence, as well as sexual violence such as rape and harassment. Psychological abuse, involving emotional manipulation and control, is another insidious form that can erode a woman's sense of self-worth and agency. Economic violence, exhibited through financial control and exploitation, further reinforces gender disparities. Recognizing the specific manifestations of gender-based violence against women is crucial for developing targeted interventions and fostering a society that prioritizes the safety and well-being of all its members.

According to United Nations declamation on elimination of violence against women, Gender-based violence is any act that results in or likely to result in physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in private or public sphere of life.

It has been found out that women mostly have a fear of being the victims of the gender-based violence. Before discussing the reasons why women feel this way, following are the different forms of abuses that women experience almost on the daily basis around the world, ranging from mild to severe degree. Many a times, these experiences lead to their tragic deaths.

FORMS OF GENDER BASED VIOLENCE

Domestic violence

It is also called domestic abuse or intimated violence in a pattern of behavior that is used to maintain and gain power and control over intimate partner. Violence against in domestic sphere has increased and continues to be a serious concern according to Indian National commission for women registering over 6,900 complaints in the 'protection of women against domestic violence category in 2022[4].

1. **Physical abuse-** It includes hurting or trying to hurt a person by hitting, kicking, burning, grabbing forcefully, punching, shoving slapping, hairpulling, biting, denying medical care or forcing alcohol or drug use or any other physical force.
2. **Emotional violence-** It includes undermining a person's sense of self- worth through constant criticism, belittling one's abilities, name calling or other verbal abuse, damaging a partner's relationship with the children or letting the partner to not see family and friends. 11.6% of women were insulted or made to feel bad about themselves by their spouses[5].
3. **Psychological violence-** It includes threatening physical harm to partner, or children, destruction of property or the victim to keep a distance and isolation from friends, family and work space.
4. **Economic violence-** It involves making or attempting to make a person financially dependent by maintaining a total control over financial resources, money and not taking consent of the partner while selling the share of assets of the victim.

Sexual Violence

It involves forcing a partner to take part in a sexual act when the other person does not consent. **What is consent?** According to oxford Dictionary, Consent is permission to do something, especially given by somebody in authority. Consent is an unambiguous, affirmative, and conscious decision by each person to engage in mutually agreed-upon sexual activity. (University of California, riverside)

[4] Times of India, Jan 9, 2023, Editor- Ambika Pandit
[5] National Institute of Health, National library of medicine; journal(google) J family, Med Prim care 2023, Feb 12(2) 332-337.

1. **Sexual abuse-** Acts committed against the will of another person either when the person does not give consent or when consent cannot be given because of minor age or disability. Or it can be a result of severely intoxicated or unconscious because of alcohol or drugs.

It includes

1. **Rape-** Sexual activity, most often involving sexual intercourse which is against the will of the victim through force or the threat of force or with an individual who is incapable of giving legal consent because of minor status, mental illness, mental deficiency, intoxication, unconsciousness, or deception.
2. **Female genital mutilation-** It refers to all procedures involving partial or total removal of the female external genitalia or other injury to the female genital organs for non-medical reasons. It is most often carried out on young girls between infancy and age 15. It is thought to ensure virginity before marriage and fidelity afterward, and to increase male sexual pleasure.
3. **Child Marriage-** Child marriage refers to any formal marriage or informal union between a child under the age of 18 and an adult or another child. Despite a steady decline in this harmful practice over the past decade[6]. It is still prevalent in many under-developed countries across the globe. Niger in West Africa has the highest number of child marriages globally.[7]
4. **Sexual exploitation-** It can be of various type: Sex Trafficking, taking pictures of a child for pornographic use and denying age-appropriate privacy to a child.
5. **Marital Rape-** Mostly whenever thought of sexual assault, it is assumed that it is by someone stranger not someone closer such as intimate partners, but According to the Rape, Abuse & Incest National Network (RAINN), 33 percent of sexual assaults are perpetrated by a current or former intimate partners. However, due to under reporting, the actual incidents of sexual assault by someone in the home is thought to be higher.[8]
6. **Honor Killings-** Families emphasizes on the sexual purity of women. As a result, female genital mutilation is prevented. The value of family honor is above the safety of women in society.[9] In case of loss of virginity before marriage, women are killed in the sake of family reputation and it is termed as honor killing.
7. **Femicide-** It refers to killing of a woman on the reason of being a woman. It usually happens in situation when women are overly dependent on men for survival as a result to assert male dominance over women after exploiting and abusing them.

Online Digital Violence

1. **Cyberbullying-** It is defined as an act through which a person is intentionally bullied by someone else by constantly remarking mean comments and by means of abusive language in order to hurt an individual.
2. **Non-consensual sexting**- It involves sending explicit messages or photographs without recipient's consent.[10]

Besides, the mentioned forms of violence, there are also several others which are equally violent and cruel against the victims.

WHY VICTIMIZATION OF WOMEN

According to the hypothesis under the "Shadow of sexual assault" by Boyer and Bergstrom in 2011, they suggested that women are more likely see all the threats as having a potential to pose severe impact on them. There may be a number why women feel this way, which will be illustrated next. One such reason according to Hollander, 2001 and Reid and Konrad, 2004 is that women are socialized to believe that they are more vulnerable to personal violence and men are needed for protection. Recent cases of victimization and past experiences add increased fear in regard.

CAUSES OF VIOLENCE AGAINST WOMEN

Gender based violence can be attributed to factors such as poverty, discrimination, exclusive and lack of gendered indicators and due to presence women and other vulnerable sections are ignored and left to suffer.

1. **Patriarchy-** Whether to believe it or not, society till the day is male dominated and in many parts of the world; woman is considered as the inferior form of man who needs protection and the society has fixed certain norms for women how a women should behave in prescribed norm; a women should be polite, silent and one who do household chores.

[6] UNICEF- Child Marriage https://www.unicef.org/protection/child-marriage
[7] Statistics Research Department, Jun 16, 2023
[8] Health and wellness by Shara Kaszovitz: The Risk of Sexual Assault in the Home During a Pandemic https://jacksonhealth.org/blog/the-risk-of-sexual-assault-in-the-home-during-a-pandemic/
[9] Borgen project, 15 April,2021, Amy Perkins https://borgenproject.org/category/domestic-violence-2/
[10] United nations, ESCWA (Arabian region) google

Women are socialized in a manner that they are vulnerable and require male assistance to perform bold tasks. **Existence of Male Chauvinism and Misogyny** also contribute the gender-based violence. Male chauvinism refers to "male prejudice against women or belief that men are superior and able than women. Due to presence of patriarchy and sexism some people believe that it is normal to assert their dominance over women and as result they do absurd activities derogatory to the dignity of women; which according to them showcases their masculinity. In most instances, victimized women don't even report the abuse and thereby encourages such abusers to repeat such absurd acts.[11]

2. **Poverty-** According to many, poverty is one of the root causes of most evils in society and it can lead to increase in violence as well particularly against women. Women who are poor and vulnerable are more prone to abuse and detention from basic rights like clothing, shelter, food, security and education. Due to poverty in many parts of the world, education of girl child is often ignored and they are indulged to work as child workers at tender ages. As child workers, they are not treated well and are exploited, not paid well and constantly harassed. Poor girls and women are sexually exploited and are often pushed in sexual trafficking and brothels by their own parents for the sake of little money. Due to poverty, poor girls are married at very young ages. Many a times they experience domestic and intimate abuse by their partners, but they have fewer or no option to leave such violent relationships due to lack of financial resources and assistance; due to lack of education, they have no or very less skill to earn by themselves, thus leaving them reliant on earning men only.[12] In many instances, poor young children are lured by strangers by means such as candies or others, these children are often harassed, raped or brutally killed afterward by the perpetrator. This is termed as pedophilia. Thus, in the way or other, poverty leads to violence especially among women.

3. **Societal and gender norms/ Cultural factors-** According to WHO, cultural and social norms are highly influential in shaping individual behavior, including use of violence. Norms can protect against violence, but they can also support and encourage the use of it. Most societies around the world emphasizes on the purity of women, due to which genital mutilation of women is prevalent. In case, if a women loss her virginity before marriage she is considered impure, characterless by the society. They are often kicked out and many cases killed by their own families in name of honor killings to save family name.[13]

Patriarchal and sexist views legitimize violence against women. Other cultural factors such as gender stereotypes and prejudices, normative expectation regarding both men and women also encourages gender-based violence.[14]

Being the victims of sexual violence is seen as a shameful, disgraceful act in many parts across the globe. Victims are often accused and are considered guilty for attracting others through inappropriate behaviors and actions. (As in the murder and gang rape case of Nirbhaya in 2012, people accused the victim by raising questions like; what was she out at night and why did she enter a bus with only men in it?). Such societal behavior and responses results in low reporting by the victims that as a result encourage such absurd and inhumane acts against women.

1. **Political factors-** The under-representation of women in political sphere means that the prospective and demands of women will remain undiscussed. And it is often seen that political parties often use the topics such as violent cases against women as political campaigning tools for their own interest. Due to under-representation of women, women safety is often neglected.[15]

2. **Violence as weapon-** During the collapse of community structures and rule of law, women are exposed to violence in a severe manner. During warlike situations, armed forces sometimes use sexual assault and rape as weapon to insert a sense of fear and control over people, which is inhumane measure, as the trust of the people fails by experiencing such acts by ones who were supposed to save them. These violent acts are often carried out with impunity.[16]

3. **Anti-social disorder-** One finding that has repeatedly emerged is that there is a subgroup of domestic violence perpetrators who exhibits characters of anti-social personality disorder; they are sadistic (Ch 28, Pg no. 4970.[17]. They intentionally inflict assaultive behavior upon intimate partner.

PREVALENCE OF GENDER-BASED VIOLENCE

The prevalence of gender-based is not something that could be questioned as it has been reported in every corner of the world ranging from the western countries to the countries of the third world.

[11] Lecture by International Facility at Chandigarh University on topic Gender-based violence.
[12] https://www.unwomen.org>infocus
[13] Borgen project, 15 April,2021, Amy Perkins https://borgenproject.org/category/domestic-violence-2/
[14] 1https://www.coe.int/en/web/gender-matters/what-causes-gender-based-violence#:
[15] https://www.coe.int/en/web/gender-matters/what-causes-gender-based-violence#:
[16] Gender based violence in crisis, Aug 22, 2023, https://www.rescue.org/article/what-gender-based-violence-and-how-do-we-prevent-it
[17] Antisocial disorder and domestic violence: Treatment consideration, L Kevin Hamberger; Medical College of Wisconsin, USA and Jennifer Rohling, university of south Alabama, USA, 2007 (Ch 28, page no. 497, 500 and 501)

Urban-Rural Disparities

Gender-based violence is seen around the world irrespective of the fact whether the cases are from the developed nations or from underdeveloped nations. There may be some sort of difference, but it is nothing to be proud of. According to UN, out of estimated 735 million women, almost 1 in 3 experience gender-based violence. It is found that women of the rural area are more prone to gender-based violence as compared to those residing in the urban regions in most regions of the world.[18] There are several reasons for this:

1. As rural areas are still under the influence of patriarchal mentality thus in many parts of the world, women education is often compromised and they are forced to work as child workers and the process are married at tender ages without any financial independence, thus making them completely dependent on their partners, thus making them more prone to violence by the hands of their intimate partners. This is a result of poverty and illiteracy and can also be found in urban areas but there is often less as compared to rural ones as women in urban areas have access to educational institutes which may be far from rural settings.
2. Rural women have a disadvantage in the context of medical and health facilities as there are less facilities such as medical stores and well-equipped hospitals and labs as compared to urban women. The condition of rural areas further marginalized the rural women as they are not in a condition even to get the very basic sanitary products by themselves; leading to deaths in a great number. Lack of judicial facilities in rural localities also make rural women prone to violence.[19]
3. In rural areas, agriculture is the primary source of income and about 60% of people are dependent on it for their survival. Other sources such as secondary and tertiary are more available in urban areas and thus providing urban women a source of income and making them capable on their own. Most people migrate from rural to urban areas in search of work or to get quality education.
4. Rural regions are more dominated by cultural norms and patriarchal principle which believe in superiority of men over women, thus force even the well-educated, working women to follow the fixed gender roles and follow the traditional norms for women.

Thus, the situation of women and to bring revolutionary changes in their condition, initiatives are to be taken on individual or state level, which are mentioned further in the paper. Before taking initiatives, it is important to understand the available data of gender-based violence.

UNDERREPORTING ISSUES

According to American Medical Association (1995), violences against women; rape and murder in particular came the category of the most underreported crimes in the world.[20] There are a number of reasons for the high underreporting number in the context.

1. One of reason is the general acceptance of violent acts against women as women are generally supposed to be the one to suffer at the hands of men; patriarchal reason in general and reporting sexual violence is often seen as shameful and there is a prevalent stigma over the matter to voice against it. Less than 40 per cent of the women who experience violence seek help of any sort; according to a report of UN
2. Other reasons include that the victims themselves get so much trauma that they sometimes commit suicide or believe that what if their own didn't believe them or instead blame in return.
3. Many victims don't report the violent acts as they are threatened by the perpetuators and they develop a sense of fear that if they report the perpetuators can cause trouble to the victim or their families[21], due to this reason around 70-90% cases go unreported.
4. A huge number of murder cases are not reported by the family members because of the fear the murderer may have vast connection with other gangsters and criminals and they have a sense of fear that such criminals can pose further threat to other members of the family.
5. In many parts of the world the patriarchy also plays a pivotal role as families made female to ignore domestic violence such as slapping, verbal abuse or sexual abuse by marital partners; increasing number of underreporting cases.

According to National crime record bureau of India, there is an increase in violence against women by 15.3% in 2021 as compared to the year 2020.

[18] Prevalence of rural intimate partner violence in 16 US states, 2005; Matthew J Breiding, Jessica S Ziembroski, Michele C Black https://pubmed.ncbi.nlm.nih.gov/19566608/.

[19] Lohmann N. Lohmann RA, rural social work practice, New York: Columbia University press; 2005 (google Scholar)
Nuller KJ. Mackinney AC. Care across the continuum: access to health care services in rural America J. rural health, 2006; 22: 43-49 (google scholar)

[20] "A gap or a Chasm? Attrition in reported rape cases"; PDF, archived 2014-02-04.

[21] "Between 70-90% rapes thought to go unreported …and 94% of reported cases don't end in a conviction - University of Surrey - Guildford". *Surrey.ac.uk. Archived from* the original *on 2013-07-02*. Retrieved 2014-02-04.

According to NCRB, the number of violence incidents in India were:

Number of violence incidents in India	
Year	Numbers
2008	1,95,856
2011	2,28,650
2021	4,28,278

The data shows that there is an increase in the cases of violence in India, with proceeding years.

A Dowry death and the suicide or murder of a married women the cause of dowry, torture by in-laws or husband is increasing around the world. Most of these cases are seen in Asian and African countries. In context with India, these deaths were in form of death by burning or hanging.

According to NCRB,

1. 6589 dowry deaths were registered in 2021, all over the country and highest number in Uttar Pradesh having highest number of deaths and Bihar being second on list.[22]
2. In every 20 minutes, one woman is raped. In 2010, reported incidents of rape were 22,172 and 31,677 in 2021.
3. The number of human trafficking cases in India, imported from foreign was 80% from 2011-12, there was an increase in violation of immoral trafficking act.

It is found out that 86% of women don't report domestic violence to anyone; not even to family and friends, due to prevalence of social norms which made them believe that they are not good wives. Every minute, a women suffer a violence of a form or other by the hands of her partner or a close relative or friend.

Domestic violence cases in India (reported)	
Year	Number of cases reported
2011	99,135
2012	1,06,527
2015	1,13,403

Even though, child marriage is banned in India, there are cases found, in which girls under the age 10 were forcefully married. In 2012, reported abduction were 38,262 which was higher in in 2013 with number of 51,881. A total of 28,000 women were abducted in 2021 for forced marriages.

These are the reported figures but the actual number might be much higher than this. By observing the data mentioned, it is important to take initiatives in order to combat gender-based violence against women and creating safe spaces for women and other genders as well, where are not feared to getting abused.

COMBATING GENDER BASED VIOLENCE: ISSUES AND CHALLENGES

Efforts to combat gender-based violence (GBV) are crucial for fostering a society built on principles of equality, justice, and respect for all individuals. However, the path to eradicating GBV is fraught with a myriad of issues and challenges that necessitate careful consideration. This chapter explores the complexities associated with combating gender-based violence, shedding light on the barriers that impede progress and hinder the creation of safer, more inclusive communities.

SYSTEMIC CHALLENGES

1. Deep-rooted Patriarchy

One of the central challenges in combating gender-based violence is the persistence of deep-rooted patriarchal norms. Societal structures that reinforce male dominance contribute to the normalization of violence against women. Overcoming these ingrained beliefs requires sustained efforts in education, advocacy, and legislative reform to challenge and dismantle patriarchal systems.

2. Legal and Judicial Gaps

Despite progress in many jurisdictions, legal frameworks often fall short in addressing the complexities of gender-based violence. Gaps in legislation, weak enforcement mechanisms, and a lack of understanding among legal practitioners can hinder justice for survivors. Strengthening legal frameworks and ensuring their effective implementation are paramount to combating GBV.

[22] https://www.statista.com/statistics/633011/reported-dowry-death-cases-by-state-india/ Number of reported dowry death cases in India in 2021, by leading state

3. **Socio-Cultural Factors**

   Stigmatization and Victim Blaming

   Societal attitudes that stigmatize survivors and perpetuate victim-blaming create barriers for individuals seeking help. Overcoming these cultural biases necessitates widespread education and awareness campaigns to challenge stereotypes and foster empathy and understanding.

4. **Cultural Relativism**

   Cultural relativism, the belief that cultural practices should be understood within their specific context, can be a challenge when combating gender-based violence. Striking a balance between respecting cultural diversity and upholding universal human rights requires nuanced approaches that engage communities in dialogue and promote cultural sensitivity.

5. **Institutional Challenges**

   Underreporting and Data Collection

   Gender-based violence is vastly underreported, often due to fear of retaliation, societal stigma, or mistrust in the legal system. Improving reporting mechanisms and ensuring confidentiality are critical to obtaining accurate data, which, in turn, informs effective prevention and response strategies.

6. **Resource Constraints**

   Inadequate funding and resources allocated to initiatives combating gender-based violence pose significant challenges. Comprehensive programs, including support services, awareness campaigns, and educational efforts, require sustained financial investment to address the multifaceted nature of GBV.

7. **Intersectionality**

   Recognizing the intersectionality of gender-based violence is imperative. The experiences of marginalized groups, including LGBTQ+ individuals, racial and ethnic minorities, and people with disabilities, often differ from the mainstream narrative. Tailoring interventions to address the unique challenges faced by these groups is essential for an inclusive and effective anti-GBV strategy.

While progress has been made in the global effort to combat gender-based violence, numerous challenges persist. Overcoming these challenges requires a comprehensive and intersectional approach that addresses deep-seated societal norms, strengthens legal frameworks, and allocates adequate resources. By acknowledging and actively working to eliminate these challenges, societies can move closer to creating environments where individuals are free from the threat of gender-based violence, fostering a culture of equality and respect.

BREAKING THE CHAINS: STRATEGIES FOR COMBATING GENDER-BASED VIOLENCE

Efforts to combat gender-based violence (GBV) are crucial for fostering a society built on principles of equality, justice, and respect for all individuals. However, the path to eradicating GBV is fraught with a myriad of issues and challenges that necessitate careful consideration. This chapter explores the complexities associated with combating gender-based violence, shedding light on the barriers that impede progress and hinder the creation of safer, more inclusive communities.

What Is Safe Space for Women?

No space is considered safe till there is presence of fear in women's mind of being a victim of violence and until proper measures are not taken in the regard to combat gender-based violence. Besides this, there are some take aways that are often considered as characteristics of a safe space.

An atmosphere where women feel free to express themselves without fear, and are free to exercise their rights and are not afraid to report in case of violation is considered as a safe space. The term 'safe,' refers to the absence of trauma, excessive stress, violence (or fear of violence), or abuse.[23]

[23] https://www.unfpa.org/sites/default/files/resource-pdf/UNFPA%20UNFPA%20Women%20and%20Girls%20Safe%20Spaces%20Guidance%20%5B1%5D.pdf UNFPA, Women and girl safe spaces Page no. 5 Para 1



STRATEGIES TO COMBAT GENDER-BASED VIOLENCE AND PROVIDING SAFE SPACES FOR WOMEN.

URBAN PLANNING AND DESIGN

Urban planning and design refer to creating an idea for building the structure of the city by keeping in mind the strategies which we will use to make it. Making a proper plan and adopting an adequate design helps a lot to construct a city and helps in proper usage of land. An urban design includes everything from public spaces to infrastructure, it also includes transportation and way in which community will accommodate various spaces.[24] Urban planning tries to focus on each aspect of society and help to make plan in such a way which will lead to the development and fulfill the needs of community living in an area. Urban planning and design of an area also shows living standard of the people living in a particular area.

How to Make Our Cities Safer for Women?

City planners play an important role in creating safety by adopting a safe design. Urban designs relate to safety also. In India it is not the case.

Adequate Lighting

There are some places where there is unavailability of proper lightning. These areas are prone to crime. Proper lightning creates sense of safety and security to the people especially pedestrian. We have an example of United State which shows us clearly in very simple words that there is a relationship between gender bases violence and adequate lightning. In 2008, America and England reduced the street lightning[25] in order to save money and reduce carbon emission. The result of it at the end was negative in terms of women security.

Lack of adequate lightning can be seen as one among the various causes of incidents taking place in metropolitan cities in India e.g., Bangalore, Mumbai, and Chennai. In Delhi, the state government estimated 7000 dark spots [The spots with inadequate lightning] in 2016.

Various authors also write about women safety. These authors tried to suggest different ways to combat gender-based inequality. Like several others there is American Canadian author and journalist Jane Jacobs in her book "The Death and Life of Great American Cities" published in 1961 introduced concept of natural surveillance or what she described as eyes on streets. According to her a safe area is only that area in which everyone can move without a fear from each other at any point of time and can feel safe while using public areas easily. She says that this will automatically result in natural surveillance if more people will able to move freely, more they will be able to see easily and will try to keep an eye on what is going around them. If there is adequate lightning, if any where any crime is taking place people can easily see and detect what is happening which can help to safe a person from becoming a victim.

SAFE PUBLIC TRANSPORTATION

Transportation facility is used by everyone from an old person to a small child. In it an environment should provide where everyone can feel safe to use it including women. If women travelling at night in buses and trains lights inside the buses should be remained turned on for entire night.[26]

It is necessary to provide safe transportation facilities to avoid harassment against women. Women face greater risk while

[24] https://urbandesignlab.in/difference-between-urban-planning-and-urban-design/#:~:text=Urban%20designers%20are%20more%20focused,transportation%20system%2C%20or%20community%20park.

[25] Reduced street lighting at night and health: A rapid appraisal of public views in England and Wales; Judith Green, Chloe Perkins, Rebecca Steinbach, and Phil Edwards, Health Place. 2015 Jul; 34: 171–180.
doi: 10.1016/j.healthplace.2015.05.011
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4509526/

[26] https://www.government.nl/topics/mobility-public-transport-and-road-safety/public-transport/goals-of-public-transport/safe-public-transport, Government of the Netherlands

travelling late at night [Action Aid International]. Two surveys carry out by French National Federation of Transport users; it shows that sexual harassment in public transport is massive growing phenomena. In this survey 90% woman said they experienced harassment in public transport.

Many people also now started to feel unsafe using public transports like buses. Especially because acts like harassments etc., are increasing in buses and other people using it are unable to do anything. For e.g. "On 16th December 2012 an incident took place in Delhi in which six men brutally beat and raped 23 years old physiotherapist in front of other passengers. She died 13 days later from her injuries [International Transportation Federation undated pg3]

Promising practices on Safe Gender Responsive Public Transport Planning include following: [Action Aid International2017]

1. Protocols to address sexual harassment and violence for public transport workers
2. Increase in women representation and leadership in public transport.
3. Increase in women representation and leadership in public transport jobs.
4. organized bus stops, bus stop shelters and information stand.
5. Better lightning and visibility, including for parking and outdoor waiting area.
6. Route Information, time tables of various buses and phone numbers for emergencies should be written in various places.
7. A kind of awareness and training abut "women rights" should be provided public transport staff.
8. Increase in female staff in public transportation.
9. Increase in connectivity between neighborhood and routes so that women from poorest and most peripheral areas can access public transport.

To make public transport safe measures taken in other countries

1. Freedom From Fear Campaign in retail sector in UK was launched.
2. Campaign in South Africa for its public transport and challenging harassment against women workers.
3. "Let's Travel safe"- the "Viajemos-Seguras" initiative in Mexico [Action Aid International 2017] for safe public transport.

Well-Maintained Public Spaces

As women safety is concerned there are many areas not only in India but outside the India also which are prone to gender-based violence. One of the emerging issues related to women safety is that there is unavailability of well- maintained public spaces. Public spaces are the areas which are used by each and every member of the society. But in many are public areas like public transportation, public washrooms etc., are not well maintained. If we talk about public washrooms doesn't have good hygiene, washrooms are very dirty and are not cleaned. There are no proper sanitary facilities available which is important for people.

Government should take some initiatives to maintain public spaces properly, in order to avoid any kind of hindrances while using it. We can see ample of examples of initiatives taken by governments of many countries to make public transports safe and secure for women. Some of the many examples of it are as follows[27]:

1. In Port Moresby, Papua New Guinea took initiatives to promote safety and hygiene to its women in market as well as while travelling in public transport.
2. In Quito, Ecuador a local regulation was adopted in an order to add a specific provision against sexual harassment, lead to the reduction of harassment of women in public spaces.
3. In Morocco, the "Ministry of Housing developed" issued guidelines which is adopted to provide the women of its country safety and security and can also have a secure access to urban public spaces.
4. In Maputo, Mozambique advocate tried to mobilize Ministry of Education to promote safety to the women of its country and also create awareness among people about sexual harassment going in society against women.

Thus, we want our cities, streets to be well maintained with proper facilities so that people living in there should not face any problem or any kind or fear weather it is day or night.

[27] Creating safe and empowering public spaces with women and girls; https://www.unwomen.org/en/what-we-do/ending-violence-against-women/creating-safe-public-spaces

GENDER SENSITIVE INFRASTRUCTURE

An architect in Vienna built a neighborhood which built by keeping in mind the women need. It includes meeting spaces, gardens; reduced travel distances.[28] It simply means that making an infrastructure which includes both men and women irrespective of any kind of discrimination. This kind of infrastructure provides equal opportunities to every one for their development. This type of infrastructure will help especially women to progress and provides opportunities to them which will help to develop a sense of women empowerment among them. It will also help to remove inequalities that women are facing.

Some countries have tried to adopt gender sensitive infrastructure in their countries[29] as mentioned below:

1. In Liberia, gender sensitive approach was taken by upgrading slum area. It also included providing its people with proper sanitization facilities, green spaces, public spaces and urban agriculture. As everyone knows that water is an essential component of a human life. But in few cities in this country have informal settlements and those people who are leaving in those areas had poor access to water. Cities tried to identify those areas and tried to provide them with water so that women living in the areas don't have any kind of burden of collecting water. This will help them to save their time and main thing that happen will be the problem they are facing related to water will be solved.
2. Another example is of Tunisia country which took initiatives for providing opportunities to improve women safety and safe public spaces for everyone. With the help of women and some local expert's country took small steps by building public toilets, markets and gardens which will help to improve the condition of public spaces and also to provide a sense of security to the women. Now municipalities are also trying to work in implementing these small steps and also to design public spaces in accordance to the women needs.

EDUCATIONAL AWARENESS

Gender based violence happens in a way or other around the globe and it is important to counter this problem as it of utmost importance. Educational awareness is one such recommendation that may be useful to counter gender- based violence. As, children are among the most vulnerable population affected by gender-based violence.[30] According to UNESCO, school violence and bullying in educational institutions are mostly based on gender.[31] It can in form of physical, emotional and sexual violence among school going children and in their surrounding communities because of gender norms, stereotypes and other factors. Thus, it is important to educate children about the negative impact of violence, as the impact of gender-based violence is not well understood by children at early ages and they don't take it as a serious threat for a peaceful society. For this purpose, school policies and curriculum can play a pivotal role in it; as school is an ideal place to prevent abuse and educate them about the concept and ways to handle it.

1. It is important to start teaching children the lessons of gender equality and well mannerism from the very years of childhood and requires the engagement of all members such as parents, community and school teachers and other staff members.[32]
2. At tender ages, it is essential to break gender stereotypes by teaching and telling them such stories that encodes moral and social messages in them as at early ages both boys and girls are less likely to develop stereotypes regarding masculine and feminine aspects.[33] by letting them know that the jobs and position such as footballers, astronauts, piolet and others are not gender specific.
3. It is important to enforce confidence, sense of self evaluation and problem- solving abilities in both girls and violence.
4. It is to be ensured that boys don't develop negative masculinity at tender ages as it can pose a greater threat in near future.

[28] https://sustainable-infrastructure-tools.org/gender-responsive-infrastructure/ Gender responsive Infrastructure; How inclusive infrastructure development leads to equal opportunities and benefits

[29] Women in Cities; By Felicity Kitchin, Giulia Maci, and Arne Janssen| March 3rd 2022| Youth & Gender, https://www.urbanet.info/gender-sensitive-approach-infrastructure/

[30] https://unesdoc.unesco.org/ark:/48223/pf0000368753

[31] UNESCO School-Related Gender-Based Violence (SRGBV): A Human Rights Violation and a Threat to Inclusive and Equitable Quality Education for All. 2020. [(accessed on 1 April 2022)]. Available online: https://unesdoc.unesco.org/ark:/48223/pf0000374509 [Ref list]
Source- Healthcare (Basel). 2023 Jan; 11(1): 142.
Published online 2023 Jan 3. doi: 10.3390/healthcare11010142

[32] McLaughlin C., Swartz S., Cobbett M., Kiragu S. Inviting Backchat: How schools and communities in Ghana, Swaziland and Kenya support children to contextualise knowledge and create agency through sexuality education. *Int. J. Educ. Dev.* 2015;41:208–216.
doi: 10.1016/j.ijedudev.2014.06.006. [CrossRef] [Google Scholar] [Ref list]

[33] Doni E. Exposing Preschool Children to Counterstereotypical Professional Role Models Using Audiovisual Means: A Small Study in a Preschool in Greece. Day Care Early Educ. 2021;49:295–302. doi: 10.1007/s10643-020-01071-3. [CrossRef] [Google Scholar] [Ref list]

5. Training and empowering girls to speak up, physical defense and making them understand the true meaning of violence and ways to tackle it. On the other hand, to develop and imbibe positive masculinity, teaching gender equality and teaching safe and effective bystander intervention techniques.[34]
6. It is also essential to teach both girls and boys about good and bad touch and at appropriate sex education and importance of good health has to be taught via academic curriculum.[35]
7. Such environment and steps promote a sense of equality and provides an environment to openly discuss and report any instance regarding violence of any sort without shame, thus it can be helpful in reducing gender-based violence.

Thus, educational awareness from child hood itself make children aware of the concept and make them encourage them to treat all equally and thereby it can reduce the numbers of violence in future, as children were conditioned in a way which condemns violence in any form and promotes inclusiveness and peaceful safe surrounding.

COMMUNITY ENGAGEMENT AND AWARENESS

It refers to spreading awareness among masses related to people for active participation and to acknowledging people. It can be related to wellbeing, promoting health, or providing social justice. When all the people living in an area together and work together on a certain issue or idea together for the welfare of the whole community in living in an area together. It can be also being done to eradicate social evils like gender-based violence and promoting women safety.

Awareness: It means telling people about something which can be related to them and society in which they are living and are important. They are many ways to spread awareness like ads, newspaper, going door to door telling people about the issue etc.[36]

Reference: https//unfoundation.org/blog/post/stand with /stand with her six women led organization

According to United Nation for the survivors of Gender Based Violence, local organizations can play a vital role in helping them and to provide a moral support to them, and to fight against these violences. United Nation Office for Coordination of Humanitarian Affairs estimates that 1 in every 3 women worldwide will experience physical and sexual abuse in life time. In 2020, UN office on Drug and rime found that average a girl or women is killed by someone in her own family every 11 minute

ORGANISATIONS FOR WOMEN AND GENDER BASED VIOLENCE

SUCH AS WITH HER FUND

1. United nation Foundation with the help of EU [European Union] started to collect a kind of fund which is also known as With Her Fund. For the sake of development of women at the grass root level it started to give funds to various local organizations. As, at the grass root level local organization can become a great help for eradicating the problem of gender-based violence from the big cities and metropolitan cities but also from the local areas of society.
2. Even the deaf women don't feel safe nowadays to protect them and their rights some organizations are made for them. One of which is

DEAF WOMEN VIOLENCE PROGRAM:

It is a program which is launched for the safety and security of deaf women. This program is not only run by the deaf women but it includes women who can hear also they all work together. These kinds of program's aim to provide moral support as well as some resources for the women who became the victims of gender-based violence. This program is prevalent in all across Argentina. Easter Mancera trained psychologist, with years of experience she is providing help to the women who faced such situation especially of high vulnerability

Songs and Dramas can be used as a kind of means to challenge the violence against women.

It can become a great source to spread knowledge and awareness among the people living in a society not only about the issues of gender-based violence and women safety but other issues also. It is one of the many ways to convey your thoughts to the people regarding any issue

[34] Sarnquist C., Kang J., Amuyunzu-Nyamongo M., Oguda G., Otieno D., Mboya B., Omondi N., Kipkirui D., Baiocchi M. A protocol for a cluster-randomized controlled trial testing an empowerment intervention to prevent sexual assault in upper primary school adolescents in the informal settlements of Nairobi, Kenya. *BMC Public Health.* 2019; 19:834. doi: 10.1186/s12889-019-7154-x. [PMC free article] [PubMed] [CrossRef] [Google Scholar] [Ref list]

[35] McLaughlin C., Swartz S., Cobbett M., Kiragu S. Inviting Backchat: How schools and communities in Ghana, Swaziland and Kenya support children to contextualise knowledge and create agency through sexuality education. *Int. J. Educ. Dev.* 2015;41:208–216. doi: 10.1016/j.ijedudev.2014.06.006. [CrossRef] [Google Scholar] [Ref list]

[36] safe-cities-and-safe-public-spaces-international-compendium-of-practices-02-en_2.pdf

For e.g.: There is an organization which is made by young women in Malawi's Balaka District which is known as FORSESE (foundation for education and gender violence). This organization uses songs and dramas to depict prevalent social issues going on in the society. Main theme of this organization is to spread awareness especially among women about gender-based violence, women safety and provide knowledge about reproductive health. This kind of organization helped several women to develop sense of confidence among them and guided them that there is no need to be afraid.

PUBLIC AWARENESS CAMPAIGNS

Societies around the globe are facing of gender-based violence and thousands are the victims but the reporting numbers are not as per the numbers of victimization because of a number of reasons. From the centuries, it was normalized and was considered as stigma, disgraceful and offensive to raise question over it. But, over the past century, public campaigning brought revolutionary changes in the context.

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1. By launching public protest and rallies the idea of gender-based violence can be exposed a large set of people, this can encourage a sort of people to promote the idea that why this issue is to be addressed and what's the need. The terror, fear and pain of victims can also be uncovered in such campaigns by keeping the identity of the victim anonymous if they want to. The United Nations Issue-Based Coalition on Gender, Justice and Equality is also taking initiatives via campaigns to address the problem and to raise awareness among people how to counter the violence and support survivors.[37]
2. Posters, theatrical plays and movies depicting the gender-based violence and promoting gender equality can also be helpful in spreading awareness among people as people can retain the thing which they often see and somehow it affects their mindsets in a way or other.
3. Use of social media: It can become a good platform for raising voice against any activities. People with the help of social media can easily spread their views about any issue going on in the society with other people.

Outside the homes, in many parts of the world women are prone to harassments and assaults. There are many examples of using social media tools like Instagram, Facebook etc., to spread awareness among public and to share your own personal view about any kind of issue. One among which is "Me Too" campaign a social media movement which was started with the sexual assault allegation against Hollywood producer Harvey Weinstein is acted as reminder to the public that there are many women in the society are facing the problem of gender-based violence and harassment. It can be any women can become its victim. This movement was started in 2006. Thus, becoming an example if we use social media wisely it can become an asset and can also help in spreading awareness about various prevalent issues going on in the society. {blogs.worldbank.org}.

Social media platforms can also be helpful in the context as most people spend their maximum hours at these platforms thus, by making use of them to address this issue by projecting the ill condition of survivors and victims, ways to prevent the issue, etc. can really make an impact on the minds of the people.

1. Attend public forums about public policing, public safety, and changes in law, sexual harassment and stalking can also help in creating awareness.[38]
2. "A DEVICE''[39]: It can be used as one of way to solve this problem. We can make a small device for women which women can easily carry along with her while travelling, in case women feel unsafe or unsecure she can quickly use this device. This device should have function through which women can be able to alert police and send her location in case of emergencies

   With the help of efficient technology, we can add another feature to it which is that this device can contain one another function which creates beeping sounds for the harasser so that he gets scared and can help to collect other people for the help who are available in that area. There can be one more feature added into it like capturing photos, videos so that harasser it will help to catch harasser more easily and these can be sent directly to department which are tackling with issues like public harassments.

   Teach value to everyone in the society {Joyce, Kenya}: With the help of law-makers we can make a special kind of police which will tell consequences of their activities to the people if they tried to perform any kind of activity

[37] https://www.unaids.org/en/resources/presscentre/featurestories/2020/november/20201125_awareness-campaign-gender-based-violence-middle-east-north-africa

[38] https://blogs.worldbank.org/voices/raising-awareness-root-out-violence-against-women-and-girls Raising awareness to root out violence against women and girls PAULA TAVARES, DECEMBER 01, 2017

[39] https://www.bbc.com/future/article/20200511-how-smart-home-devices-are-being-used-for-domestic-abuse

which leads to the mistreatment of women in one way or another. With the assistance of judicial courts these can be implemented properly. It will also become a source of help in teaching women about their rights. It will also to teach people some moral values which will act as a vision for the people to stop violence and harassment against women as well as will encourage a respectful attitude towards women by every member of society.

3. WIDE SPREAD CAMPAIGNS [Emma, Cardiff]: It includes all those activities like anti drink and drive or stop smoking campaign on television. These should be supported by brands and should target both men and women and every section of society.
4. "Introduction To An App: A way To Share A sense of Unease" {Paranaque City, Philippines}: It is a kind of idea which involves introduction to an app, this app will include two levels with one press it will tell that woman is feeling unsecure and with second press it will tell that a woman is feeling a sense of danger. One among other features of this app will be that it will also allow sharing her location with others if she feels any kind of danger.

REPORTING MECHANISM

It is a kind of system that allows victims who faced any kind of violence or harassment etc. to report against crime. It should be safe and easily available to everyone in the society. It should be kept confidential, so that victim has some kind of safety and security while reporting against any crime.[40]

CHALLENGES TO REPORTING UNESCO 2014

Challenges faced in Asia Pacific region for implementing there Reporting mechanism:

1. Victims don't trust reporting mechanism because of the fear of victimization, stigma, punishment can make reporting GBV a risky for them.
2. Different type of reporting mechanism includes telephone help lines, chat room and online reporting, "Happiness and sadness boxes" and in school teachers can provide a helping hand to the students. These kinds of systems must be provided to each and every member in the society without any discrimination. Various committees or NGOs can also help victims to report against any crime.

POLICY AND LEGISLATION

Gender based violence is crime against humanity. Some kinds of crimes are considered to be punishable under law. Unfortunately, there is a long list which is still victimizing thousands around the globe. Gender-based violence (especially economic and domestic violences such as verbal, emotional and martial sexual violence) is one such example. Violence against women at homes is a matter that goes undiscussed and is considered not that important.

The United Nations and many other international agencies such as European Union and others have largely discussed the need to address gender-based violence and domestic violence against women. These organizations have estimated that gender-based violence against women devastate the life women, along with it also leads to loss to the economies as well as the victims don't work regularly after the victimization due to fear of facing the same thing again.[41]

Convention on the Elimination of all Forms of Discrimination Against Women; the adoption of UN Declaration on the Elimination of Violence against Women in 1993; the establishment of the UN Trust Fund to End Violence against Women in 1996; the launch of the UNITE to End Violence against Women campaign, which aims to raise awareness of the issue of violence against women and mobilize action to address it; the adoption of the UN Spotlight Initiative in 2017 and many others were the international initiatives taken to address and counter gender-based violence.[42]

The rate of cases in India concerned with gender- based violence is on different levels and it had developed a sense of fear in the hearts of all. India took a number of steps and frame laws to safeguard Indians especially women from gender-based violence as follows:[43]

[40] https://www.endvawnow.org/en/articles/1734-reporting-mechanisms.html

[41] UNDP, Gender-based violence does not go away on its own, now is the time to act by Matilda Dimovska, March 13, 2023 https://www.undp.org/uzbekistan/blog/gender-based-violence-does-not-go-away-its-own-now-time-act#:~:text=Matilda%20Dimovska&text=Gender%2Dbased%20violence%20is%20a,norms%20prioritizing%20men%20over%20women

[42] UNDP, Gender-based violence does not go away on its own, now is the time to act by Matilda Dimovska, March 13, 2023 https://www.undp.org/uzbekistan/blog/gender-based-violence-does-not-go-away-its-own-now-time-act#:~:text=Matilda%20Dimovska&text=Gender%2Dbased%20violence%20is%20a,norms%20prioritizing%20men%20over%20women

[43] INDIA – Gender Based Violence Policy Briefing April 2018, https://www.noneinthree.org/wp-content/uploads/2019/05/NEWIndia-policy-briefing-for-web-updated-May19.pdf

Important legislation in India addressing gender-based violence
Dowry Prohibition Act
nlawful treatment of women, including dowry death, abduction, or rape; were incorporated in Indian panel code shable crimes. Indecent Representation of Women was also introduced to safeguard women from being ed. Child-Labour (Prohibition and Regulation) Act.
Commission of Sati (Prevention) Act
National Commission for Women Act
The Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex Selection) Act
Protection of Women from Domestic Violence Act
Prohibition of Child Marriage Act
The Protection of Children from Sexual Offences Act
Criminal Law (Amendment) Act – Other offences such as acid attack, stalking, sexual harassment in public nd workspaces were added to penal code.
Child Labour (Prohibition and Regulation) Amendment Act, which considered sexual intercourse with a girl rape even she is the wife until the age of her age is below 18.
riminal Law (Amendment) Act - rape of a girl below the age of 12 to be punishable with death.

These are some of the ways to combat gender-based violence which we have discussed, there a number of other ways to which we were not able to cover up. Next, we will be discussing challenges to it.

CHALLENGES WHILST IN IMPLEMENTING SOLUTIONS, LAWS AND POLICIES TO COMBAT GENDER-BASED VIOLENCE

Violence against women or any other gender is violation of human rights.[44] It is an act which is shameful and barbaric but 1 in every 3 women faces violence of a form or other, according to a report of United Nations. Such acts left a devastating impact on the minds of the victims and others associated with them. The number of victimizations is increasing day by day despite the various initiatives of government and international organizations in order to combat gender-based violence. There are a number of challenges which are responsible for this.

1. One of the major reasons is the lack of awareness among the masses, many of the victims are not aware that what they are experiencing as they were never taught about this. Offences such as online stalking and crimes committed in the name of religion or customs are not seen as something that much absurd and obscene in areas having low illiteracy rates throughout the globe. Despite of the various campaigns, this reason remains as some don't get the idea and concept properly or others don't want to understand it themselves or to their families as well because they assume such campaigns as shameful or against their ideals.
2. Other challenge is absence of criminalization, many of the act such as rape, sexual harassment, life-threats, forced prostitution, female femicide, etc., are categorized as criminal offences in the criminal penal codes across most counties, but there are some of the violent acts such as marital rape, forced marriage and verbal constant abuse by family are not mentioned are not yet included in Indian Penal code as criminal offences.[45] Due to such reasons a number of victim suffer at the hands of family or near ones.
3. The attitude of society and the procedure to make a complaint against victimization can also be a challenge to combat violence against women. In many cases, the victim is often criticized or blamed for their own action which resulted in crime against women. The attitude of the complaining registering agencies is crucial. Some of the inappropriate question made the victims more vulnerable and it is always the women who have to prove that she is the victim. Such system made the condition of the victims more traumatizing. Till, 2013 in order to prove that a woman was sexually violated or raped, they were to go through two-finger test, which was banned by supreme court in India as it was a violation of a woman's dignity and privacy; it further made the women more traumatized. Being banned in many parts, it is still practiced in many regions across the globe. Thus, reporting steps like these are challenges in reporting as victims are more afraid to go through them.

[44] "Vienna Declaration and Programme of Action". UN General Assembly. 12 July 1993. Retrieved 3 April 2016, Paragraph 18
[45] http://www.penacclaims.com/wp-content/uploads/2020/04/Abhijeet-Mittal.pdf
[46] TimesofIndia.com, Oct 31, 2022

Thus, these are some of the challenges that act as huge barriers in combating gender-based violence. It is important to get rid of these challenges and take steps which would be followed as de-jure not as de-facto in order to fight this evil.

CONCLUSION

The multifaceted issue of Gender-Based Violence (GBV) demands a comprehensive understanding to effectively combat its pervasive presence in societies worldwide. Understanding Gender-Based Violence is a critical first step towards dismantling the intricate web of factors that contribute to its persistence. GBV is not confined to physical acts of violence; it encompasses a spectrum of behaviors rooted in power imbalances and societal norms that perpetuate discrimination. A nuanced comprehension of GBV necessitates recognition of its various forms, including physical, psychological, economic, and sexual violence. By delving into the intricacies of these manifestations, society can foster empathy, awareness, and informed activism, laying the groundwork for a collective effort against this deeply entrenched problem.

Gender-based violence is a shameful and absurd crime prevalent in our society. It leads to the development of fear and trauma in the minds of not only the ones who were victimized but, it also impacts and leaves a horrific impression on the hearts of others around as well. Most common victims of gender-based violence are women. This topic is often neglected or not given the required attention; which further accelerates the victimization beyond imagination. It is important to address this issue and take essential steps.

It is important to make people understand that if we do not take steps and initiatives today, there will be no tomorrow. For the purpose, the true meaning of the gender violence is to be discussed. In order to create a society where there is no role of gender, rather it believes in the principle of equality in true sense. For this purpose, effective initiatives both on legislative and community levels needs to be taken taking into consideration what priorities and goals we as a society want to achieve. It is the time to get rid of so-called traditional system of patriarchy and ill believes and accept the need of an equal just society where all live peacefully irrespective of gender or any other difference or diversity. Inequalities and discrimination against anyone in any form whether social, economic, educational, political, employment and leadership opportunities need to be eradicated in de-jure manner not as de- facto to live in such utopia.

However, as we turn our attention to the challenges and issues associated with Combating Gender-Based Violence, it becomes evident that dismantling the existing structures requires a concerted and sustained effort. Societal norms and deeply ingrained gender stereotypes pose formidable obstacles. The normalization of violence against marginalized groups and the pervasive culture of silence often hinder survivors from seeking help. The inadequate legal frameworks and enforcement mechanisms further exacerbate the challenges. Additionally, the intersectionality of various identities, such as race, class, and sexual orientation, complicates the experiences of survivors and necessitates an intersectional approach in addressing GBV. To overcome these challenges, there must be a coordinated effort from governments, non-governmental organizations, communities, and individuals, emphasizing education, legal reforms, and destigmatization.

Strategies for Combating Gender-Based Violence offers a glimpse into potential pathways for liberation from the shackles of GBV. Education emerges as a central tenet, fostering a culture of respect, consent, and equality from an early age. This involves revising curricula to incorporate comprehensive sex education and promoting media literacy to challenge harmful narratives. Empowering survivors through accessible support services, both legal and psychological, is integral. The importance of legal reform cannot be overstated, with stringent laws against GBV serving as a deterrent and a means of justice for survivors. Furthermore, breaking the chains requires active engagement with communities, religious institutions, and grassroots organizations to challenge harmful norms and foster inclusivity.

In the grand tapestry of combating Gender-Based Violence, a multi-pronged approach that encompasses understanding, addressing challenges, and implementing strategies is imperative. The battle against GBV is not a singular event but a continuous process that demands the commitment of individuals, communities, and nations. It requires a paradigm shift in societal attitudes, policies, and institutions. As we envision a world free from the shackles of Gender-Based Violence, it is essential to recognize that this vision can only be realized through persistent effort, collaboration, and an unwavering dedication to equality and justice. The chains can be broken, but it requires the collective strength of society to forge a path towards a safer and more equitable future for all.

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FOREST GUARDIANS: COMMUNITY LED EFFORTS TO COMBAT DEFORESTATION

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ABSTRACT

This work provides a succinct overview of the literature on "Forest Guardians: Community-led Efforts to Combat Deforestation." As global concerns over deforestation escalate, a paradigm shift towards community-led initiatives has gained prominence. It delves into the transformative landscape of "Forest Guardians: Community-led Efforts to Combat Deforestation," shedding light on the crucial role local communities play in the global endeavour to preserve and sustainably manage the world's forests. As deforestation continues to pose a significant threat to biodiversity, climate stability, and the well-being of communities dependent on forest resources, the focus has shifted towards innovative and community-driven conservation approaches. The first part of this exploration navigates through an extensive literature review, offering a comprehensive synthesis of research findings, methodologies, and emerging themes in the realm of community-led forest conservation. From the Amazon rainforest to Southeast Asian landscapes, the literature reveals diverse models of engagement, illustrating the varied strategies employed by Forest Guardians in their commitment to combat deforestation. By analyzing the successes and challenges documented in these studies, the article seeks to unravel the complex dynamics and unique contributions of local communities as they actively participate in preserving their natural heritage.

The second segment of the work delves into case studies from different regions worldwide, providing in-depth analyses of specific community-led initiatives that have made significant strides in the fight against deforestation. These case studies exemplify the power of grassroots movements, showcasing the resilience, adaptability, and efficacy of Forest Guardians in the face of multifaceted challenges. From indigenous practices to innovative technological applications, the article explores the rich tapestry of approaches employed by communities to address the drivers of deforestation. Through this detailed examination, the article aims to contribute valuable insights for policymakers, researchers, and practitioners involved in environmental conservation, emphasizing the need for inclusive and collaborative strategies that empower local communities as true guardians of the world's forests.

INTRODUCTION

In the global pursuit of sustainable environmental practices, the preservation of Earth's vital forests stands as a paramount imperative. Central to this endeavor is the emergent paradigm of "Forest Guardians: Community-led Efforts to Combat Deforestation." As the world grapples with the escalating challenges posed by rampant deforestation, a growing body of literature underscores the indispensable role that local communities play as stewards of their surrounding ecosystems. This paradigm shift recognizes that the preservation of forests extends beyond policy frameworks and governmental initiatives; it hinges upon the engagement and empowerment of communities intimately connected to these invaluable natural resources. This introduction serves as a gateway into the multifaceted landscape of literature exploring the dynamic intersection between community-led efforts and the global fight against deforestation. Through a comprehensive review of research findings, case studies, and narratives, this exploration aims to unravel the strategies, successes, and challenges inherent in the collective endeavors of Forest Guardians, casting light on the innovative and resilient approaches that communities worldwide employ to counteract the pervasive threats to our planet's lush and biodiverse woodlands.

The global community grapples with the intricate challenges posed by environmental degradation, few issues loom as large and consequential as deforestation. This multi-faceted phenomenon, explored in the chapters to follow, is more than the mere felling of trees; it represents a complex interplay of ecological, social, and economic forces reshaping the very fabric of our planet.

This study initiates delves into the fundamental aspects of deforestation—unravelling its concept, discerning its meaning, and contemplating the far-reaching implications that reverberate across diverse ecosystems. From the historical roots of forest clearance to its contemporary significance, this chapter sets the stage for a nuanced understanding of the intricate dance between humanity and the verdant expanses that have long adorned our Earth.

The study furthermore takes us deeper into the heart of the matter by exploring the drivers that propel deforestation forward. We delve into the relentless expansion of agricultural frontiers, the allure of economic gains through logging, and the complex web of globalized demands that intertwine to accelerate the loss of vital forested landscapes. Understanding these drivers is paramount, as it unveils the economic imperatives, societal pressures, and policy frameworks that fuel the transformative forces reshaping our planet. This exploration not only serves to elucidate the root causes but also sets the

stage for the critical analysis that follows in Chapter 3.

In Chapter 3, the spotlight turns towards the proactive and imperative realm of combating deforestation. Here, we confront the issues and challenges that underpin the global struggle to preserve and sustainably manage our invaluable forests. From the delicate balancing act between food security and conservation to the intricacies of sustainable land use, this chapter navigates the terrain of solutions, policy frameworks, and community-led efforts that form the linchpin of our collective response. As we embark on this exploration, the overarching goal is clear: to uncover pathways that lead towards a harmonious coexistence with the world's forests, recognizing the urgency and collective responsibility to forge a sustainable future for generations to come.

LITERATURE REVIEW

In the realm of environmental conservation, the imperative to combat deforestation has ushered in a paradigm shift, placing community-led efforts at the forefront of sustainable solutions. The literature on "Forest Guardians: Community-led Efforts to Combat Deforestation" represents a diverse tapestry of research, narratives, and case studies that illuminate the pivotal role local communities play in safeguarding the world's forests. As we delve into this work, we embark on a journey that transcends traditional conservation models, recognizing the agency of those intimately connected to the lands they inhabit. This literature review endeavours to navigate through the nuanced narratives, methodologies, and challenges presented in the exploration of forest guardianship, shedding light on the innovative and often unheralded strategies employed by local communities to counteract the multifaceted threats posed by deforestation.

"Blessed Unrest: How the Largest Movement in the World Came into Being and Why No One Saw It Coming" by Paul Hawken is a groundbreaking exploration of the myriad grassroots movements that have silently burgeoned worldwide to address pressing global challenges. Hawken masterfully unveils a clandestine web of environmental and social initiatives that collectively constitutes what he terms the 'largest movement in the world.' With meticulous research and impassioned storytelling, Hawken takes readers on a journey through the unsung heroism of countless individuals, communities, and organizations working tirelessly to combat issues ranging from environmental degradation to social injustice. The strength of the book lies in its ability to portray the interconnectedness of these movements, emphasizing the power of collective action and the untold force residing in the cumulative efforts of diverse communities.

What sets "Blessed Unrest" apart is Hawken's adept storytelling and his ability to illuminate a hopeful narrative amidst global challenges. By shedding light on the unseen and underappreciated endeavours of ordinary people, the book not only inspires but also challenges conventional notions of activism. It is a testament to the fact that the sum of countless small actions can indeed lead to significant global change. The author's optimistic tone is infectious, encouraging readers to recognize their individual agency in contributing to positive transformation. Through compelling anecdotes and a rich tapestry of narratives, Hawken succeeds in portraying a world where the 'blessed unrest' of grassroots movements becomes a powerful force for societal and environmental healing. Overall, "Blessed Unrest" is a captivating exploration of the invisible threads that connect a diverse array of movements, and it stands as a rallying call for collective action in the face of global challenges.

The book "Empire of the Tiger: A Natural History of India" by R. Kannan stands as a compelling exploration of India's rich biodiversity and the interconnected relationship between its people and the natural world. Kannan, an eminent wildlife conservationist, weaves together a narrative that delves into the complex tapestry of India's ecosystems, shedding light on the efforts of communities in safeguarding the country's diverse wildlife and forests. The book provides a unique perspective on the role of local inhabitants as de facto guardians of their natural heritage, emphasizing the importance of community-led conservation initiatives. Kannan's storytelling skillfully captures the essence of India's wilderness, celebrating the tiger as an emblematic species while illustrating the broader challenges and triumphs in the ongoing struggle to preserve the nation's natural treasures.

"Empire of the Tiger" goes beyond the conventional discourse on conservation by exploring the cultural, historical, and socio-economic dimensions that shape the conservation landscape in India. By blending ecological insights with narratives of local communities, Kannan highlights the symbiotic relationship between humans and nature. The book serves not only as a natural history account but also as a call to action, urging readers to recognize the integral role of communities in the preservation of India's ecological diversity. Overall, Kannan's work serves as a captivating testament to the intricate connections between people and the environment, offering a nuanced perspective on the community-led efforts that play a pivotal role in combatting the threats of deforestation and biodiversity loss in India.

"Nature's Allies: Eight Conservationists Who Changed Our World" by K. M. Chinnappa offers a captivating exploration of the lives and contributions of eight environmental champions who have left an indelible mark on global conservation efforts. Chinnappa, drawing from his experience as an Indian Forest Service officer, skillfully weaves together narratives that traverse continents and eras, presenting a diverse array of conservationists who have played pivotal roles in shaping our understanding of and approach to environmental preservation. The book provides an engaging and insightful journey through the lives of these individuals, ranging from well-known figures like Rachel Carson and Jane Goodall to lesser-

known heroes, emphasizing the profound impact that passionate individuals can have on the conservation movement.

While "Nature's Allies" stands as a commendable tribute to environmental stewardship, it is not without its shortcomings. Some readers may find that the book, in its focus on a select few individuals, omits the stories of many other unsung heroes and grassroots movements that have also significantly contributed to conservation. The narrative tends to concentrate on Western perspectives, and a more global representation of conservation efforts, including those led by individuals in developing nations, could have added a more inclusive dimension to the book. Additionally, the depth of exploration into the ecological philosophies and methodologies employed by each conservationist varies, leaving some stories feeling more comprehensive than others. Despite these limitations, "Nature's Allies" remains a valuable resource for those seeking inspiration from the diverse and impactful journeys of environmental champions across the world.

In conclusion, these books collectively provide a nuanced understanding of community-led efforts and conservation initiatives to combat deforestation. Hawken's work stands out for its global perspective on grassroots movements, emphasizing the power of collective action. Kannan's book adds a unique dimension by focusing on India's biodiversity and the crucial role of local communities as stewards of the environment. Chinnappa's exploration of individual conservationists contributes to the narrative, highlighting the diverse strategies employed in the global conservation movement.

However, these books are not without their shortcomings. While "Blessed Unrest" and "Empire of the Tiger" offer inspirational narratives, they may lack specificity in addressing the intricacies of local challenges and community dynamics. "Nature's Allies," while celebrating the achievements of conservationists, falls short in providing a more comprehensive global perspective and depth of exploration into ecological philosophies. Additionally, all three books could benefit from a more inclusive representation of diverse voices and grassroots initiatives.

In the broader context, these works collectively emphasize the importance of acknowledging the role of communities and individuals in the fight against deforestation. The literature encourages readers to recognize the interconnectedness of environmental issues on a global scale and underscores the need for collaborative, community-led solutions. Despite their limitations, these books contribute valuably to the discourse on environmental conservation, urging readers to appreciate the richness of local knowledge and the power of collective action in safeguarding our planet's ecosystems.

DEFORESTATION: CONCEPT, MEANING AND IMPLICATIONS

Deforestation, a term laden with ecological implications, encapsulates the widespread and deliberate removal or clearing of forests, transforming once-lush expanses into barren landscapes. This multifaceted concept goes beyond the mere felling of trees; it embodies a complex interplay of ecological, economic, and social dimensions. This detailed note aims to unravel the concept and meaning of deforestation, exploring its historical roots, contemporary significance, and the far-reaching consequences that echo through the interconnected ecosystems of our planet.

Deforestation, an escalating environmental predicament, encapsulates the widespread and deliberate clearance of forests, carving a path of profound ecological disruption. At its core, deforestation mirrors the intricate dance between human development and the natural world. Historically rooted in the quest for agricultural expanses and resources, the contemporary magnitude of deforestation has exponentially risen with industrialization, population growth, and globalized demand. The mechanization of logging processes and the expansion of agricultural frontiers, often driven by economic imperatives, form a relentless tandem, clearing vast expanses of once-thriving ecosystems. This deleterious trajectory unfolds with multifaceted consequences that stretch far beyond the immediate boundaries of the cleared land.

The environmental ramifications of deforestation are vast and interconnected. Forests, revered as biodiversity hotspots, carbon sinks, and regulators of climate patterns, become battlegrounds where the repercussions of habitat loss, altered water cycles, and heightened greenhouse gas emissions converge. The intricate web of life sustained by forests unravels, pushing numerous species to the brink of extinction and amplifying the impacts of climate change. Moreover, the social and economic fabric of communities reliant on forests for sustenance and livelihoods is profoundly impacted. Indigenous populations, often the stewards of these ecosystems, face displacement and the erosion of their traditional knowledge and cultural heritage. As the consequences reverberate globally, the urgency to address deforestation becomes not only an environmental imperative but a collective responsibility to forge a sustainable future for our planet.

1. **Historical Roots**

   Deforestation is not a recent phenomenon but has deep historical roots. Throughout human history, societies have cleared forests for agriculture, settlement, and resource extraction. However, the scale and intensity of deforestation have escalated dramatically with industrialization and population growth. The advent of technologies like chainsaws and bulldozers has amplified the impact, allowing for large-scale clearing at unprecedented rates.

2. **Ecological Dimensions**

   At its core, deforestation disrupts the intricate balance of ecosystems. Forests, often referred to as the lungs of the Earth, play a pivotal role in maintaining biodiversity, regulating climate patterns, and sequestering carbon dioxide. The removal of trees disrupts these ecological functions, leading to habitat loss, diminished biodiversity, altered water cycles, and increased greenhouse gas emissions. The ripple effects extend beyond the immediate areas of deforestation, impacting global climate and weather patterns.

3. **Drivers of Deforestation**

   Understanding the concept of deforestation involves scrutinizing the underlying drivers propelling this environmental crisis. Economic pressures, driven by the demand for agricultural land, timber, and commodities, rank among the primary catalysts. Agricultural expansion, logging, infrastructure development, and urbanization contribute to the relentless conversion of forests into alternative land uses. Globalization further amplifies these drivers, creating intricate supply chains that link distant consumer markets to deforestation in remote regions.

4. **4. Environmental Consequences**

   Deforestation carries profound environmental consequences. Loss of biodiversity, as species lose their habitats and face extinction, is a direct outcome. The disruption of water cycles can lead to altered precipitation patterns, affecting both local and regional climates. Moreover, the release of stored carbon into the atmosphere exacerbates climate change, contributing to a vicious cycle where deforestation and a warming climate reinforce each other.

5. **5. Social and Economic Impacts**

   Beyond the ecological realm, deforestation has substantial social and economic impacts. Indigenous communities and local populations often bear the brunt, facing displacement and loss of traditional livelihoods. The degradation of ecosystems threatens food security, as forests provide essential resources such as fruits, nuts, and game. Additionally, the loss of ecosystem services, such as water purification and soil fertility, undermines the foundation of sustainable agriculture and human well-being.

Deforestation is a complex and multifaceted concept that intertwines human activities, ecological consequences, and global interconnectedness. As the world grapples with the challenges posed by widespread forest loss, understanding the concept and meaning of deforestation becomes paramount. It is not merely the clearing of trees but a profound alteration of the natural balance that sustains life on Earth. The journey toward a sustainable future necessitates a collective commitment to conservation, sustainable practices, and a harmonious coexistence with the planet's invaluable forests.

DRIVERS OF DEFORESTATION

Deforestation, a complex and multifaceted environmental challenge, is propelled by an intricate web of drivers that shape the destiny of the world's forests. One of the primary drivers is the relentless expansion of agricultural frontiers. As global populations burgeon and the demand for food escalates, agricultural practices extend deeper into pristine forest areas. Large-scale clearances for crop cultivation and pastureland not only fragment ecosystems but also contribute significantly to the loss of biodiversity. The economic incentives associated with the production of commodities like soy, palm oil, and beef drive the conversion of forests into agricultural lands, creating a delicate balancing act between the need for food security and the imperative to preserve vital ecosystems. The interconnected nature of the global economy amplifies this driver, as international markets demand ever-increasing supplies of these commodities. As a result, countries facing economic pressures often find themselves compelled to clear vast expanses of forests to meet the demands of a globalized agricultural market, leading to a domino effect that spans continents.

Logging, another significant driver of deforestation, represents the extraction of valuable timber resources for various industries. The allure of economic gains often fuels both legal and illegal logging activities, particularly in regions rich in timber resources. Clear-cutting, the practice of felling all trees in a designated area, is a particularly destructive method that not only depletes forests of their biodiversity but also leaves landscapes vulnerable to erosion and habitat loss. Moreover, selective logging, while seemingly less destructive, can still have profound ecological impacts when not executed sustainably. The mechanization of logging processes has intensified these activities, enabling large-scale operations that penetrate deep into previously inaccessible forested areas. The pervasive nature of logging is often intertwined with weak governance, corruption, and inadequate law enforcement, allowing illegal logging operations to thrive and exacerbate the challenges of sustainable forest management. The drivers of deforestation are thus deeply rooted in economic imperatives, global market demands, and the intricate interplay between societal needs and environmental preservation, creating a formidable challenge that demands comprehensive and integrated solutions.

The intricate relationship between human communities and forests has been a defining aspect of the evolving narrative of deforestation. While the impacts of large-scale industries and global economic forces are often emphasized, the role of local communities in shaping the trajectory of deforestation is equally pivotal. This chapter delves into the multifaceted

dynamics that characterize the interplay between communities and deforestation, exploring historical contexts, indigenous knowledge, socio-economic pressures, and the potential for community-led conservation efforts.

Deforestation, a complex and pervasive environmental issue, is driven by a myriad of interconnected factors that span economic, social, and political realms. Understanding the drivers of deforestation is crucial for developing effective strategies to mitigate its impact and promote sustainable land use. This chapter explores the multifaceted forces propelling deforestation, ranging from the expansion of agricultural frontiers to the demands of the global timber trade, and delves into the economic imperatives, policy frameworks, and societal pressures that shape the destiny of the world's forests.

1. **Agricultural Expansion**

   One of the foremost drivers of deforestation is the expansion of agricultural frontiers. As the global population burgeons and the demand for food escalates, agricultural practices extend into pristine forest areas, leading to large-scale clearances for crop cultivation and pastureland. Economic incentives associated with the production of commodities such as soy, palm oil, and beef contribute significantly to the conversion of forests into agricultural lands. The interconnected nature of the global economy amplifies this driver, as international markets demand ever-increasing supplies of these commodities, creating a delicate balancing act between the need for food security and the imperative to preserve vital ecosystems.

2. **Logging and Timber Trade**

   Logging, driven by the demand for timber and wood products, stands as another potent driver of deforestation. The allure of economic gains fuels both legal and illegal logging activities, often leading to the degradation of forest ecosystems. Clear-cutting, a particularly destructive method, not only depletes forests of their biodiversity but also leaves landscapes vulnerable to erosion and habitat loss. The mechanization of logging processes has intensified these activities, enabling large-scale operations that penetrate deep into previously inaccessible forested areas. The global timber trade, which often involves the movement of wood and timber products across borders, creates a complex supply chain that makes it challenging to regulate and monitor logging practices, contributing to the persistence of illegal and unsustainable logging.

3. **Infrastructure Development**

   The need for infrastructure development, driven by urbanization and economic growth, is a significant driver of deforestation. Roads, highways, and dams often cut through forested areas, opening previously inaccessible regions for logging, agriculture, and settlement. While infrastructure development is crucial for societal progress, the challenge lies in balancing the necessity for growth with the preservation of ecologically sensitive areas. Poorly planned infrastructure projects can have cascading effects on surrounding ecosystems, leading to fragmentation, habitat loss, and increased vulnerability to other drivers of deforestation.

4. **4. Economic Pressures and Globalization**

   Economic pressures, often exacerbated by globalization, play a central role in driving deforestation. The pursuit of economic growth, job creation, and increased revenue often takes precedence over environmental considerations. The global interconnectedness of markets and supply chains means that the impacts of economic decisions in one region can have far-reaching consequences for forests in another. As countries compete in the global market, there is often a race to exploit natural resources, including forests, to gain a competitive advantage. This dynamic creates a cycle where the pursuit of economic development can lead to the degradation of valuable ecosystems and the loss of biodiversity.

5. **5. Policy and Governance**

   The role of policy frameworks and governance structures cannot be overstated in understanding the drivers of deforestation. Weak or ineffective policies, coupled with corruption and inadequate law enforcement, create an environment conducive to illegal logging, land encroachment, and unsustainable land-use practices. Policies that prioritize short-term economic gains over long-term environmental sustainability contribute to the perpetuation of deforestation. On the other hand, well-designed and enforced policies can act as powerful tools in promoting sustainable land management, conservation, and responsible resource use.

6. **6. Societal Pressures and Consumption Patterns**

   The choices and consumption patterns of individuals and societies around the world also contribute to the drivers of deforestation. Demand for products linked to deforestation, such as timber, beef, soy, and palm oil, drives production and, subsequently, land conversion. Awareness and education about the environmental consequences of consumer choices are crucial in influencing behavior and encouraging sustainable alternatives. Additionally, population growth and changes in lifestyle patterns contribute to increased resource consumption, placing additional stress on forest ecosystems.

Deforestation is a complex and multifaceted issue driven by a convergence of economic, social, and environmental factors. Addressing the drivers of deforestation requires a holistic approach that considers the interconnectedness of these factors and seeks to balance human development with environmental preservation. As the world grapples with the challenges posed by deforestation, understanding and mitigating these drivers stand at the forefront of global efforts to achieve sustainable and harmonious coexistence between human societies and the invaluable ecosystems of our planet.

COMBATING DEFORESTATION: ISSUES AND CHALLENGES

Combating deforestation is a critical endeavour that demands immediate attention due to its far-reaching environmental, social, and economic consequences. This term paper explores the multifaceted issues and challenges associated with the global effort to curb deforestation. One of the primary issues stems from the complex interplay of various drivers, including agricultural expansion, logging, and infrastructure development. Balancing the demand for economic growth with sustainable land use practices poses a significant challenge, as many developing nations grapple with the need to alleviate poverty while preserving their ecosystems. Additionally, the lack of effective enforcement mechanisms and weak governance structures in some regions exacerbate the problem, allowing illegal logging and land encroachments to persist unchecked. The global nature of deforestation requires coordinated international efforts, but divergent interests, conflicting policies, and resource disparities among nations hinder the development of unified strategies. Moreover, the socio-economic implications for local communities dependent on forest resources further complicate conservation efforts, necessitating inclusive and community-driven solutions. Overcoming these challenges demands a holistic approach that combines regulatory frameworks, technological innovations, and community engagement to address the root causes of deforestation while promoting sustainable alternatives. The path forward requires a commitment to collaborative, science-based initiatives that recognize the interconnectedness of environmental, social, and economic considerations in the fight against deforestation.

In the intricate fabric of our planet's ecological tapestry, few challenges loom as large and ominous as the relentless march of deforestation. The indiscriminate clearing of forests, driven by a confluence of economic, social, and environmental factors, poses a critical threat to the delicate equilibrium of Earth's ecosystems. This chapter embarks on a comprehensive exploration of the myriad issues and formidable challenges entwined with the global endeavor to combat deforestation.

Forests, long revered as the lungs of our planet, harbor unparalleled biodiversity, sequester carbon, and sustain the livelihoods of countless communities. However, as human populations burgeon and the demands for resources intensify, the sylvan landscapes that once stood as bastions of life are increasingly falling prey to the axe and bulldozer. The urgency of addressing this environmental crisis is underscored not only by the stark decline in forest cover but also by the far-reaching consequences that reverberate across ecosystems and impact the global climate.

At the heart of the challenge lies the inexorable link between deforestation and human activities. The insatiable demand for agricultural land, timber, and other commodities fuels a relentless cycle of land-use change, pushing forests to the brink. Simultaneously, the interconnected nature of global markets and consumer behavior casts a wide net, drawing deforestation into the shadows of supply chains and consumer choices. Tackling this multifaceted challenge demands a nuanced understanding of the economic, social, and geopolitical factors that perpetuate deforestation on a global scale.

Yet, the battle against deforestation is not merely an environmental struggle—it is inherently tied to social justice and the rights of indigenous communities. The chapter delves into the importance of recognizing and respecting the traditional stewardship of forests by indigenous peoples, highlighting the intricate balance between conservation and human livelihoods. It scrutinizes the impact of weak governance and inadequate legal frameworks, emphasizing the need for robust policies that can withstand the pressures of economic interests.

Moreover, as the specter of climate change looms ever larger on the global stage, the chapter navigates the critical interplay between deforestation and climate dynamics. Forests, once regarded as a natural buffer against climate change, are now both victims and contributors to its accelerating pace. The exploration extends to the intricacies of carbon sequestration, emission reduction strategies, and the delicate tipping points that, if breached, could lead to irreversible ecological consequences.

In essence, this chapter serves as a compass in the dense thicket of challenges surrounding deforestation. It invites exploration into the intricate connections between human activities, policy landscapes, and ecological consequences. As we delve into the heart of these issues, the overarching goal is clear: to illuminate the path toward a sustainable future where forests thrive, biodiversity flourishes, and the delicate balance between human progress and planetary preservation is meticulously upheld.

ECONOMIC PRESSURES AND LAND USE CHANGE

Agricultural Expansion

One of the primary drivers of deforestation is the conversion of forests into agricultural land. Economic pressures and the growing demand for food, especially in developing countries, often lead to the expansion of agriculture into pristine forest

areas. Balancing the need for food security with forest conservation is a delicate challenge, requiring sustainable agricultural practices and policies that promote land-use planning.

The global surge in agricultural expansion has emerged as a formidable challenge in the battle against deforestation, posing complex issues that demand a nuanced and comprehensive approach. As the demands for food security and economic development intensify, the delicate balance between meeting human needs and preserving the world's forests becomes increasingly precarious. This note navigates through the intricacies of why agricultural expansion constitutes a major challenge in the combat against deforestation, exploring economic drivers, environmental consequences, and potential strategies for mitigation.

ECONOMIC PRESSURES AND GLOBAL DEMAND:

At the heart of the challenge lies the incessant economic pressure driving agricultural expansion into pristine forest areas. Developing countries, seeking to bolster their economies and cater to burgeoning populations, often find themselves compelled to convert forests into agricultural land. The economic incentives associated with the production of key commodities, such as soy, palm oil, and beef, create a powerful impetus for clearing vast expanses of forests.

Moreover, the interconnected nature of the global economy exacerbates the issue. As international markets demand an ever-increasing supply of these commodities, the pressure on countries to expand their agricultural frontiers intensifies. This global demand not only perpetuates deforestation but also renders it a shared responsibility, requiring collaborative efforts on an international scale to address the root causes.

Impact on Biodiversity and Ecosystems:

The conversion of forests into agricultural land exacts a staggering toll on biodiversity and ecosystems. Forests, rich repositories of diverse flora and fauna, harbor a wealth of species uniquely adapted to their specific habitats. Agricultural expansion disrupts these ecosystems, leading to habitat fragmentation, loss of biodiversity, and, in some cases, the outright extinction of species. The intricate web of life supported by forests is unraveled, jeopardizing the delicate balance that sustains numerous plant and animal species.

The consequences extend beyond immediate habitat loss. Deforestation contributes to the fragmentation of ecosystems, making it challenging for species to migrate, reproduce, and maintain genetic diversity. This further amplifies the risk of ecosystem collapse, creating a cascading effect that reverberates through the entire ecological landscape.

Climate Change Implications:

Agricultural expansion not only depletes forests of their biodiversity but also contributes significantly to climate change. Forests serve as crucial carbon sinks, absorbing large quantities of carbon dioxide and mitigating the impacts of greenhouse gas emissions. When these forests are cleared for agriculture, the stored carbon is released into the atmosphere, intensifying the greenhouse effect and contributing to global warming.

Furthermore, the removal of forests disrupts local and regional climate patterns, leading to changes in precipitation, temperature, and weather cycles. The loss of forests also diminishes the capacity of the land to absorb and retain water, increasing the risk of floods and droughts in affected areas. The intricate relationship between forests and climate underscores the urgency of addressing agricultural expansion to mitigate the far-reaching consequences on a changing climate.

Societal Impacts and Indigenous Rights:

The ramifications of agricultural expansion extend to the social fabric of communities that depend on forests for their livelihoods. Indigenous communities, often residing in forested areas, find themselves on the front lines of this battle. The encroachment of agriculture not only displaces these communities but also threatens their traditional knowledge, cultural practices, and sustainable land management techniques.

Recognizing and respecting the rights of indigenous peoples to their ancestral lands becomes integral to any strategy combating deforestation. Indigenous communities, when empowered and given a stake in conservation efforts, can serve as effective stewards of the land, offering valuable insights into sustainable practices that harmonize with the environment.

SUSTAINABLE AGRICULTURE AND LAND-USE PLANNING:

Addressing the challenge of agricultural expansion requires a paradigm shift toward sustainable agricultural practices and meticulous land-use planning. Sustainable agriculture focuses on maximizing food production while minimizing environmental impact. Practices such as agroforestry, organic farming, and precision agriculture offer alternative models that prioritize biodiversity, soil health, and water conservation.

Land-use planning emerges as a critical tool in this endeavor. Governments and international bodies must collaborate to implement and enforce policies that delineate areas for agriculture, protect ecologically sensitive zones, and promote

reforestation initiatives. Integrating conservation into land-use planning requires a holistic understanding of local ecosystems, biodiversity hotspots, and the socio-economic dynamics of the communities reliant on these forests.

GLOBAL COLLABORATION AND POLICY FRAMEWORKS:

Given the global nature of agricultural markets and their influence on deforestation, effective solutions necessitate international collaboration. Creating and enforcing robust policy frameworks that discourage unsustainable agricultural practices, promote responsible supply chains, and incentivize sustainable land management is imperative. Initiatives such as certification programs for sustainably sourced products can play a pivotal role in shaping consumer behavior and encouraging businesses to adopt environmentally friendly practices.

Striking a balance between meeting the world's food demands and preserving vital ecosystems requires a comprehensive and integrated approach. Governments, businesses, and civil society must collaborate to design and implement strategies that recognize the intricate interplay between economic development, biodiversity conservation, and climate resilience. The challenge is formidable, but with concerted efforts, innovative solutions, and a shared commitment to sustainability, it is a challenge that can be met for the benefit of the planet and future generations.

Logging and Timber Trade

The global demand for timber and wood products fuels illegal logging, contributing significantly to deforestation. Weak governance, corruption, and inadequate law enforcement create challenges in curbing illicit logging. Implementing and enforcing stricter regulations, promoting sustainable forestry practices, and supporting certification programs are crucial steps in addressing this issue.

The haunting echo of chainsaws in the world's forests signifies more than the harvesting of timber; it represents a critical challenge in the global fight against deforestation. Logging, driven by the lucrative timber trade, is a potent force in the conversion of lush, biodiverse landscapes into desolate expanses. This note delves into the multifaceted challenge posed by logging and the timber trade, exploring its economic drivers, environmental consequences, and the intricate web of issues that complicate efforts to combat deforestation.

Economic Drivers and Global Demand:

At the heart of the challenge lies the economic engine that propels logging activities—the insatiable demand for timber and wood products. Timber, a fundamental raw material for construction, furniture, and paper production, is a cornerstone of the global economy. As populations burgeon and urbanization accelerates, the demand for timber products follows suit, creating economic incentives for logging companies to exploit forests on an unprecedented scale.

The global nature of the timber trade further complicates the issue. Timber harvested in one region often finds its way into international markets, creating a complex supply chain that spans continents. This interconnectivity makes it challenging to regulate and monitor logging practices, as products from illegally logged or unsustainable sources can easily infiltrate the global market.

Illegal Logging and Weak Governance:

One of the most pernicious aspects of the timber trade is the prevalence of illegal logging, fueled by weak governance, corruption, and lax law enforcement in many regions. Illicit logging operations exploit regulatory loopholes, forge documentation, and often operate in remote areas where oversight is limited. This not only contributes significantly to deforestation but also undermines efforts to sustainably manage forest resources.

The economic incentives associated with illegal logging make it a pervasive challenge. Logging operations driven by profit motives often operate outside the purview of regulatory frameworks, leading to widespread environmental degradation and the loss of invaluable biodiversity. Tackling illegal logging requires not only strengthening legal frameworks but also addressing the root causes, such as poverty, corruption, and inadequate law enforcement.

Unsustainable Logging Practices:

Even in cases where logging is conducted legally, the methods employed can be environmentally unsustainable. Clear-cutting, the practice of felling all trees in a designated area, is a common method that leaves ecosystems devastated and vulnerable to erosion, habitat loss, and disruptions to water cycles. Selective logging, while less destructive, can still have significant ecological impacts, especially when carried out without proper planning and consideration for the regeneration of the forest.

Sustainable logging practices, such as reduced-impact logging and certified forestry, offer alternatives that prioritize biodiversity conservation, soil health, and the long-term viability of forest ecosystems. However, transitioning to sustainable practices requires not only the commitment of logging companies but also the support of consumers, who play a crucial role in shaping demand for responsibly sourced timber.

Certification Programs and Corporate Responsibility:

Addressing the challenge of logging and the timber trade involves incentivizing responsible practices and promoting transparency in the supply chain. Certification programs, such as the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC), play a pivotal role in this regard. These programs set standards for sustainable forestry and provide consumers with a means to identify products sourced from responsibly managed forests.

Corporate responsibility also emerges as a critical factor. Companies involved in the timber trade must adopt ethical and sustainable practices, ensuring that their supply chains adhere to stringent environmental and social standards. The role of consumers in demanding certified and responsibly sourced products cannot be overstated, as their choices influence market dynamics and encourage a shift towards sustainable practices.

Indigenous Rights and Community Empowerment:

Indigenous communities often bear the brunt of logging activities, as their ancestral lands are frequently targeted for timber extraction. Recognizing and respecting the rights of indigenous peoples to their land is not only a matter of social justice but also a key component in combating deforestation. Indigenous communities, when empowered and given a stake in the management of forest resources, can serve as effective stewards, employing traditional knowledge and sustainable practices to preserve both their way of life and the integrity of the ecosystems they inhabit.

International Collaboration and Enforcement:

The challenge of logging and the timber trade transcends national borders, necessitating international collaboration to create effective solutions. Agreements, such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), aim to regulate the international trade of timber and protect endangered species. However, the effectiveness of such agreements depends on robust enforcement mechanisms, cooperation between countries, and the commitment of the global community to combat illegal logging.

The challenge posed by logging and the timber trade in the combat against deforestation is profound and multifaceted. It demands a comprehensive approach that encompasses legal frameworks, sustainable practices, corporate responsibility, and the empowerment of local communities. As the world grapples with the imperative to balance economic development with environmental preservation, addressing the complex issues associated with logging becomes not only a necessity but a collective responsibility for the well-being of the planet and future generations.

INFRASTRUCTURE DEVELOPMENT AND URBANIZATION

Roads and Infrastructure Projects

Infrastructure development, including the construction of roads and dams, often results in the fragmentation of forests. Opening previously inaccessible areas accelerates deforestation as it facilitates human encroachment and exploitation. Balancing the need for development with environmental preservation requires thoughtful planning, impact assessments, and the integration of sustainable practices in infrastructure projects.

Urbanization

As populations continue to migrate towards urban areas, urbanization exerts additional pressure on surrounding forests. The demand for housing, fuel, and other resources can lead to unplanned expansion, further threatening nearby ecosystems. Sustainable urban planning, coupled with awareness campaigns, can help mitigate the impact of urbanization on forests.

Globalization and Consumer Demand

Supply Chains and Global Markets

Globalized supply chains contribute to deforestation as products, such as soy, beef, and palm oil, often come from regions where forests are cleared for production. Tackling this challenge requires international cooperation, transparency in supply chains, and the adoption of sustainable production standards by both producers and consumers.

Consumer Awareness and Behaviour

Consumer demand for products linked to deforestation perpetuates the cycle. Raising awareness about the environmental impact of certain goods and promoting sustainable consumer choices are essential components of any successful strategy to combat deforestation. Education campaigns, eco-labeling, and corporate responsibility initiatives can help shape consumer behavior.

Indigenous Rights and Local Communities

Indigenous Land Tenure

Indigenous communities often live in and depend on forests for their livelihoods. Recognizing and respecting indigenous land rights is crucial for both biodiversity conservation and sustainable development. Empowering indigenous communities with the tools and resources to protect their territories can serve as an effective strategy against deforestation.

Community-Based Conservation

Engaging local communities in conservation efforts is vital. Supporting community-led initiatives, providing alternative livelihoods, and ensuring equitable benefits from forest resources can foster a sense of stewardship and reduce the pressure on forests.

POLICY AND GOVERNANCE

Weak Legal Frameworks

In many regions, weak legal frameworks and enforcement mechanisms contribute to rampant deforestation. Strengthening and enforcing environmental laws, enhancing monitoring capabilities, and promoting international cooperation are essential for combating deforestation at a systemic level.

Policy Coherence

Addressing deforestation requires a coordinated approach across various sectors, including agriculture, forestry, environment, and trade. Ensuring policy coherence, where different governmental departments work in tandem, can streamline efforts and avoid conflicting interests.

CLIMATE CHANGE AND FEEDBACK LOOPS

Carbon Sequestration and Emission Reduction

Forests play a crucial role in mitigating climate change by sequestering carbon dioxide. Deforestation not only releases stored carbon but also diminishes the capacity of the land to absorb future emissions. Implementing strategies to reduce emissions from deforestation and forest degradation (REDD+), afforestation, and reforestation are integral components of climate change mitigation efforts.

Feedback Loops and Tipping Points

Deforestation can trigger feedback loops, where the loss of forests contributes to climate change, further accelerating deforestation. Understanding and preventing such feedback loops are critical to avoiding ecological tipping points that could lead to irreversible damage. Integrated approaches that consider both climate and conservation goals are necessary to break these cycles.

Combating deforestation requires a holistic approach that addresses economic, social, political, and environmental factors. The challenges outlined in this chapter underscore the need for coordinated international efforts, robust policies, and sustainable practices at the local and global levels. As the world grapples with the urgency of preserving its forests, innovative solutions, community engagement, and political will are essential in forging a path towards a sustainable and biodiverse future.

Forest Guardians: Community Led Efforts to Combat Deforestation

Amidst the global challenges of deforestation, a beacon of hope emerges in the form of community-led efforts to preserve and protect our planet's invaluable forests. This chapter delves into the transformative power of communities as stewards of the land, exploring the initiatives, practices, and benefits that arise when local populations take the reins in the fight against deforestation. From sustainable land management to conservation practices rooted in indigenous wisdom, the role of communities stands as a cornerstone in the endeavor to forge a sustainable future for our forests.

Empowering Communities as Stewards of the Land

Community-led conservation initiatives harness the deep connection that local populations often have with their natural surroundings. By empowering communities as stewards of the land, initiatives take root that transcend mere environmental preservation. Indigenous knowledge, passed down through generations, becomes a guiding force in sustainable land management. These efforts not only protect the immediate surroundings but also contribute to the preservation of biodiversity, the mitigation of climate change, and the safeguarding of critical ecosystem services.

Sustainable Practices and Traditional Wisdom

Community-led conservation emphasizes the importance of sustainable practices deeply embedded in traditional wisdom. Indigenous communities, with an intimate understanding of local ecosystems, often implement practices that maintain a delicate balance between human needs and environmental health. Agroforestry, rotational farming, and community-managed protected areas are examples of sustainable practices that arise from the rich tapestry of traditional knowledge. These approaches not only combat deforestation but also promote resilience and adaptability in the face of environmental

changes.

COMMUNITY FOREST MANAGEMENT

One powerful model of community-led conservation is community forest management. This approach involves local communities actively participating in the governance, protection, and sustainable use of nearby forest resources. Through co-management strategies, communities establish rules, monitor activities, and implement sustainable harvesting practices. Community forest management not only safeguards against illegal logging and land encroachment but also ensures that the benefits derived from the forest contribute directly to the welfare of the local populations

There are many factors to combat deforestation but there are some important factors and we all have some responsibilities to control deforestation and doing much better for reforestation. There are following factors to combat deforestation: -

Planting Trees

This is an easiest way to control the deforestation and to help the environment. The process of replanting trees in areas that have been affected by natural disturbance like forest fires, drought and unnatural ones like logging, mining, agriculture clearing and urbanization is called reforestation.

Paper Recycling:

The paper industry is one of the largest industries in the world which has a significant impact on the environment. The paper production consumes large amounts of natural resources and energy , contributing to deforestation, water pollution and greenhouse gas emissions.

Recycling is the crucial solution to migrate the environmental impact of paper manufacturing. By recycling paper, we can reduce the need to conserve natural resources and minimize waste in landfills. Recycling also decreases carbon emissions, which is essential in the fight against climate change. Recycling paper offers numerous benefits, including conserving natural resources, reducing waste and landfills space, saving energy, migrating greenhouse gas emissions, and creating economic opportunities.

Reduced deforestation and habitat destruction:

Reducing the need for virgin wood fiber is a significant benefit of recycling paper. By paper recycled paper, there is less demand for wood pulp from forests, which reduces the need for deforestation and habitat destruction. Conservation of natural resources: Recycling paper reduces the need for virgin wood pulp, which is obtained by cutting down trees. Trees are a vital resource for the environment as they help in regulating the climate, provide oxygen, prevent soil erosion and maintain biodiversity.

Benefits of Community-Led Conservation

The benefits of community-led conservation extend beyond the preservation of forests. Local communities, when empowered to take charge of their natural resources, experience a range of positive outcomes. Economic sustainability is fostered through the creation of livelihood opportunities tied to sustainable resource use, such as non-timber forest products and ecotourism. Social cohesion is strengthened as communities collaborate to protect shared resources, fostering a sense of shared responsibility and pride. Additionally, the preservation of cultural heritage and traditional practices is upheld, ensuring the continuity of knowledge that has evolved in harmony with the environment (Paudel et al., 2019).

Challenges and Opportunities

While community-led conservation holds tremendous promise, it is not without challenges. External pressures, such as economic demands and policy gaps, can threaten the success of community initiatives. Recognition of land rights, legal frameworks that support community ownership, and equitable benefit-sharing mechanisms are vital components for overcoming these challenges. Nevertheless, the opportunities presented by community-led efforts are vast, representing a bottom-up approach that aligns with the principles of sustainability, inclusivity, and resilience.

In the face of deforestation's daunting challenges, community-led efforts stand as beacons of resilience, wisdom, and collective action. By recognizing the role of communities as the guardians of our forests, we not only combat deforestation but also foster a harmonious coexistence where the well-being of people and the planet are intricately intertwined. As we embark on this exploration, the narrative unfolds—a tale of communities working hand in hand with nature, forging a path towards a future where forests flourish and humanity thrives.

CONCLUSION

Deforestation, a complex and pervasive environmental issue, is driven by a myriad of interconnected factors that span economic, social, and political realms. Understanding the drivers of deforestation is crucial for developing effective strategies to mitigate its impact and promote sustainable land use. This chapter explores the multifaceted forces propelling deforestation, ranging from the expansion of agricultural frontiers to the demands of the global timber trade, and delves

into the economic imperatives, policy frameworks, and societal pressures that shape the destiny of the world's forests.

In the journey through the intricacies of deforestation, from unraveling its conceptual foundations to exploring the multifaceted drivers that propel its relentless force, and finally delving into the complex landscape of combating this environmental crisis, a profound tapestry emerges. Chapter 1 laid the groundwork by delineating the concept and meaning of deforestation, underscoring its significance in the broader ecological context. The implications, both immediate and far-reaching, were illuminated, revealing the intricate interconnectedness of forests with biodiversity, climate regulation, and the well-being of communities.

Chapter 2 brought to light the diverse and often interlinked drivers propelling deforestation. From the relentless expansion of agricultural frontiers fueled by global economic demands to the insatiable appetite for timber within the timber trade, the drivers are deeply embedded in the complexities of human development, economic imperatives, and societal pressures. Infrastructure development, economic globalization, and policy frameworks further compounded the challenge, emphasizing the necessity for a comprehensive understanding of the forces that transform thriving ecosystems into clear-cut landscapes.

Chapter 3 ushered us into the realm of combating deforestation, where the battleground is as complex as the forces driving it. The issues and challenges are myriad, ranging from reconciling the need for food security with sustainable land use to navigating the intricate web of global supply chains and enforcing policies that strike a delicate balance between development and environmental preservation. The chapter underscored the critical role of communities, sustainable practices, and global collaboration in charting a course toward a future where the incessant march of deforestation is halted.

It becomes evident that combating deforestation is not a singular endeavor but a collective responsibility that demands interdisciplinary approaches, innovative solutions, and a fundamental shift in the way societies perceive and interact with their natural surroundings. The urgency of the task at hand necessitates a harmonious convergence of ecological conservation, socio-economic considerations, and global cooperation. The call to action is clear: to forge a sustainable future, one where the intricate dance between human development and the natural world is orchestrated in harmony, and the invaluable tapestry of our planet's forests is preserved for generations to come.

The exploration into community-led efforts to combat deforestation unveils a profound narrative of resilience, wisdom, and collective stewardship. In the face of the formidable challenges posed by deforestation, communities emerge as potent guardians of our planet's invaluable forests. This chapter has navigated the transformative power of local populations acting as stewards of the land, showcasing initiatives that transcend mere environmental preservation.

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ADDRESSING WOMEN'S HEALTH AND WELL-BEING: MENSTRUAL LEAVE FOR WOMEN/GIRLS IN EDUCATION INSTITUTIONS

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ABSTRACT

Menstrual leave is a policy that allows women to take paid or unpaid time off from work or educational institutions when they are experiencing severe menstrual symptoms. The idea behind menstrual leave is to address the physical and emotional challenges that some women face during their menstrual cycles and to promote gender equality and women's well-being. Menstrual leave can support women's health and well-being by providing them with the opportunity to rest and recover during a difficult time in their menstrual cycle. For some women, menstruation can be accompanied by severe pain, fatigue, and emotional distress, which can affect their ability to concentrate and perform well in educational settings. About 3% to 33 % of females report very severe pain that renders them incapacitated for one to three days causing them to miss school or work in many countries like Japan, Indonesia, South Korea, and Taiwan, Menstrual leave is implemented but it lacks implementation in many countries throughout the world. The empirical study has been done by selecting samples from Chandigarh, Mohali, and Panchkula. So, the present paper aims at the significance of Women's Health and wellness, well-being, and menstrual leave for women, especially in educational institutions.

Keywords: Women's health and well-being, Menstrual hygiene, Menstrual leave.

INTRODUCTION

MEANING OF MENSTRUATION

Women's health and well-being have long been a subject of concern and advocacy worldwide. In the pursuit of gender equality and women's rights, addressing issues specific to women's health has gained increasing attention. One of the key aspects of women's health that deserves particular consideration is the menstrual cycle. Menstruation is a natural, biological process experienced by women and girls, and it can often bring about various challenges and discomforts, both physical and emotional. Menstruation, commonly known as a woman's period, is a regular, natural, and essential part of the female reproductive system. It typically occurs in females of reproductive age, starting during puberty and continuing until menopause. This process follows a monthly cycle, which is regulated by hormonal changes in the body. Menstruation serves a fundamental purpose in preparing the uterus for potential pregnancy. When conception does not occur, the body sheds the uterine lining, which is expelled as menstrual blood through the vagina. Menstruation typically lasts 3 to 7 days, and its timing can vary from person to person. This biological process can be accompanied by physical and emotional symptoms, such as cramps and mood swings, and proper menstrual hygiene is crucial for maintaining health and well-being during this time. It is both a biological and cultural phenomenon, influencing aspects of women's lives, from their reproductive health to societal perceptions and attitudes.

NEED TO IMPLEMENT MENSTRUAL LEAVE

The implementation of menstrual leave is a vital step towards addressing gender equality and women's well-being. Menstruation is a natural biological process that can bring physical and emotional challenges for many women and girls. Menstrual leave acknowledges the unique needs and challenges associated with menstruation, offering women and girls the opportunity to take time off from their educational or professional responsibilities during their periods and allowing them to manage the discomfort and pain associated with menstruation effectively. Moreover, it enhances academic and workplace productivity by reducing absenteeism and improving overall focus. This policy not only contributes to a more inclusive and equitable society but also enhances women's overall health, well-being, and productivity. By supporting women during their menstrual cycles, we empower them to make informed decisions about their health, education, and careers. Additionally, menstrual leave reduces the stigma around menstruation and fosters open discussions, ultimately contributing to a more inclusive and understanding society. From a human rights perspective, it aligns with the principles of equality and access to healthcare. In essence, the implementation of menstrual leave signifies our commitment to a more equitable and supportive world for women and girls, with far-reaching positive implications for society, education, and the workforce.

By recognizing the importance of menstrual leave, we can foster a more supportive and gender-equal environment, ensuring that women and girls have the resources they need to thrive in education and the workplace. The importance of implementing menstrual leave cannot be overstated, as it addresses several critical aspects of gender equality, women's health, and overall well-being.

By introducing menstrual leave policies, we not only recognize and validate the unique needs of women and girls during

their periods but also take significant steps towards promoting gender equality and social progress.

LEGAL CONSIDERATION

Mr. Ninong Ering, a former member of parliament from Arunachal Pradesh, proposed a private member's bill in the Lok Sabha that would, among other things, grant women employees of any firm that is registered with the relevant government four days of paid menstrual leave each month. A grievance redressal system is outlined in the Menstruation Benefit Bill, 2017, which also suggests implementing menstrual leave and other related benefits. Nevertheless, the Bill was not brought up for debate in Parliament. As a member of the Legislative Assembly for Arunachal Pradesh, Mr. Ering again introduced the bill during the 2022 Budget Session; however, the bill was quickly withdrawn. Therefore, the law as it is in this case continues to.

EFFORTS MADE FOR MENSTRUAL LEAVE IN INDIA

Menstrual leave policies have been implemented by a few Indian companies, such as Zomato, which in 2020 announced that it will offer a 10-day paid period of leave annually. Other businesses have also adopted this strategy, including Swiggy and Byjus. The only two Indian states that have menstruation leave policies in place are Kerala and Bihar. The state of Bihar implemented a policy in 1992 that granted workers two days of paid leave per month for menstruation. A Kerala school has also implemented a comparable system, and Kerala recently announced that the state's higher education department will provide menstrual and maternity leaves for students in universities under its purview.

LEGISLATIVE MEASURES

Women's Right to Free Access to Menstrual Health Products and Menstrual Leave Bill (2022): The proposed Bill aims to extend the benefit for students and gives women and transwomen three days of paid leave during their menstrual cycle. According to research cited by the Bill, about 40% of girls miss school when they are menstruating, and nearly 65% of them claim it affects their everyday academic schedules.

COUNTRIES PROMOTING MENSTRUAL LEAVE

Vietnam, South Korea, Zambia, Japan, Indonesia, Philippines, Taiwan, and Spain. Spain has become the first European country to grant paid menstrual leave to workers, with the right to three days of menstrual leave per month, which can be expanded to five days.

LITERATURE REVIEW

Menstrual leave raises several questions regarding women's health, workforce participation, and gender equality at work. The accompanying articles have been instrumental in giving a brief thought regarding the discussions and distinguishing the issues basic of the subject of period leave up until this point. As indicated by a gauge by the IMF, equivalent support of ladies in the labor force will build India's Gross domestic product by 27% and will add an incredible USD$700 billion to its Gross domestic product by 2025. Thus, as seen in this report, financial development and orientation equity go hand in hand. This warrants ladies to be given better working conditions and favorable terms of business. A large number of young ladies face aggregation and well-being challenges in India as a result of their absence of mindfulness with respect to the feminine cycle.

As examined by UNICEF, in India 71% of young ladies, until their most memorable monthly cycle, remain ignorant about it. The New York Times in one of its articles has talked about the variables that have prompted the presentation of period leave in the USA. One of the noticeable focuses it talked about is the restrictions related to the period which goes past topographical regions and the downgraded lifestyles it thrushes upon ladies.

A news story distributed on Aljazeera examined the different responses even among the ladies of India towards the presentation of the "period leave "by Zomato. It especially engaged on the differentiating sees even among the segments of ladies towards such a ladies-driven arrangement, with some in favor of it while others against it.

The Hindu featured how the Province of Bihar has proactively taken on such a strategy of giving two days of pass each month to the ladies' representatives starting around 1992. This is featured in light of the fact that this State is viewed as a loafer in the part of orientation equity and ladies, strengthening ... Likewise, this article features the aggravation that ladies' representatives need to go through each month because of the period.

In Manupatra the article in an overall way deals with the entirety origination of period leave. It talked about 3 News Offices, Zomato's 'period leave' strategy that triggers banter among Indian ladies, and finally the Feminine Cycle Advantages Bill of 2017, a confidential part's Bill, and an examination of the areas contained in it. It likewise upheld the plans of period leave which are embraced by a portion of the nations all over the planet. It further talked about the natural methodology for the arrangement connecting with period and feminine leaves. The main viewpoints that have been managed by this article are the established parts of such strategy, the area of protection for ladies, also, the above all else point being appropriately maintaining the poise of ladies through such feminine leaves.

LEGAL APPROACHING

Lawful Forthcoming Gives plunge access to the Legality of the Feminine leave prior to continuing into tracking down the assessment of the representatives and businesses. Article 14 of the Indian Constitution peruses as "14. Balance under the watchful eye of regulation. The State will not deny to any individual balance under the watchful eye of the law or the equivalent security the regulations inside the domain of India Forbiddance of separation on grounds of religion, race, position, sex or spot of birth."

This Article has been splendidly drafted by the sharp designers of our Constitution to incorporate a negative obligation as well as a positive obligation upon the State. The negative obligation of the State refers to the obligation that the State will not intervene in the freedoms of the subjects while the positive obligation puts the responsibility upon the State to approach regulations that will safeguard the ones who need it. Accordingly, the implication that this Article infers isn't that everyone ought to be dealt with similarly, however, that there shouldn't exist any extraordinary treatment between classes without legitimate reasons connected for the equivalent. Equivalent insurance of the regulations implies that individuals correspondingly arranged should have similar regulations material to them. On the off chance that a demonstration that safeguards the right of ladies to take maternity leave is legitimate furthermore, has been invited, it is troublesome to contend why the thought of feminine pass-on should be focused on as unreasonably biased to ones who can't profit from it given that no one has a decision with regards to period or the way it impacts both mental and physical prosperity. One of the arrangements from which such a strategy of giving period leave to the ladies can be legitimate is Article 42 of the constitution. This Article falls under the part of Order Standards of State Strategy. According to this article, the State is commanded to "make arrangements for getting simple and compassionate circumstances of work and maternity alleviation". Further, under Article 15 separation on the grounds just of sex has been disallowed. Notwithstanding, condition 3 of the said article gives that the State would be able to make extraordinary arrangements exclusively for ladies and youngsters and nothing in article 15 will keep the State from making such arrangements. Consequently, from the two Articles, it very well may be noticed that the actual Constitution projects an obligation on the State to give help to ladies in issues of work and a solid workplace for the ladies' representatives, both genuinely also, intellectually. The previous explicitly connects with the "fair and altruistic states of work". Presently taking into account the arrangement of period leave with respect to this it can undoubtedly be inferred that the ladies workers who, in light of the shortfall of such a strategy are bound to work during their monthly cycle period, such training would qualify as crooked and harsh and an infringement of this Article. The State is under a commitment, by uprightness of Article 42, to guarantee "just and sympathetic circumstances of work" for ladies' representatives and to satisfy its commitment. One more viewpoint for the protected legitimacy of such a strategy determines its strength structure Article 21 of the Indian constitution which certifies to each individual the right to life.

Article 21 of the Indian Constitution peruses as "21. Insurance of life and individual freedom No individual will be denied of his life or individual freedom with the exception of as per technique laid out by regulation."

The right to life under this article incorporates the option to live with human dignity. In a nation like India ladies need to confront numerous sorts of social marks of disgrace, either in the general public or on the other hand in their working environment, as a rule. Lady workers face separation and, what's more, embarrassment due to periods, indeed, even from their female partners. This outcome in the infringement of their established right to live with human respect. To deny such practices, what's more, to forestall the sufferings of such ladies workers as well as infringe men's protected rights, the law-making body has every one of the privileges to step in and figure out such a strategy.

RESEARCH GAP AND RESEARCH PROBLEM

From the above significant articles, the one key component that is by all accounts missing is the assessment of the general population and the investigation thereof. This point being ordinarily of public significance needs to be perceived from the perspectives and thinking of significant partners, in particular ladies workers, men workers, and businesses. Along these lines, the specialists will attempt to examine strict examples to foresee whether the proposition will be answered in a certain or on the other hand negatively. Today ladies are utilized in nearly every area of the economy and their execution has been at standard with their male partners. It has also been seen that in a considerable lot of areas, the ladies' representatives have beaten the male representatives and have dealt with business-related issues more prudently than the last option. Nonetheless, one of the significant issues which proceed to obstruct the presentation of working ladies is the issues they face during their periods.

So the Exploration questions are:

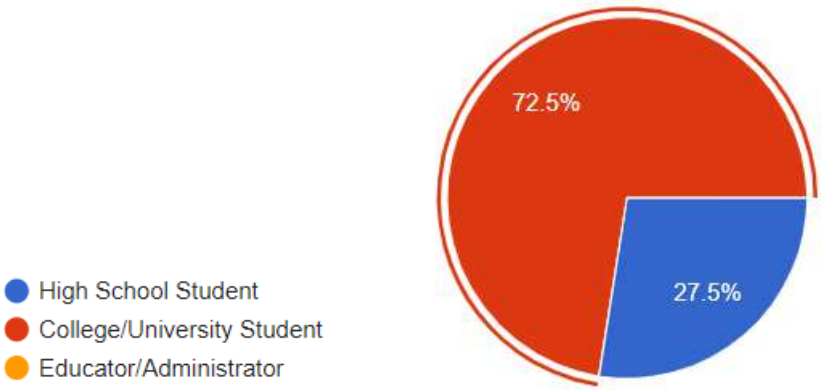
1. What are the assessments of workers, and people, towards Period Leave?
2. What ought to be the length of such leave assuming that that will be a paid or neglected leave?
3. Should the left strategy be left to the business or the public authority make it mandatory to bypass a law?

METHODOLOGY

1. Quantitative Data Collection
2. Sample collection through Google form
3. Interviews

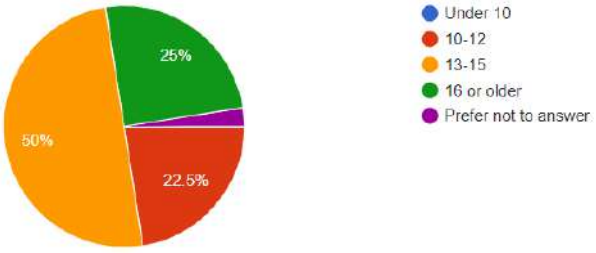
ANALYSIS

Educational Status



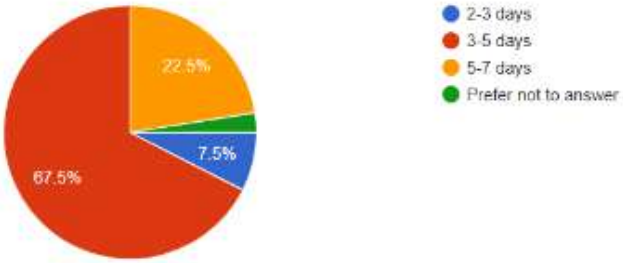
INTERPRETATION: From the above pie chart, it can be interpreted that approx. 3/4th of the total surveyors are adults i.e., between 18 to 23 years of age.

1. **At what age did you start menstruating?**



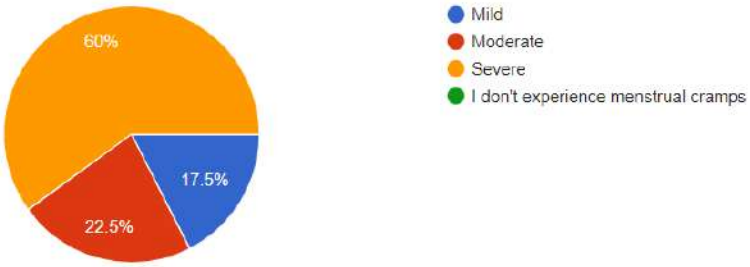
INTERPRETATION: It can be concluded that approx. half of the menstruators started menstruation in their early teens.

2. How long does your menstrual cycle typically last?



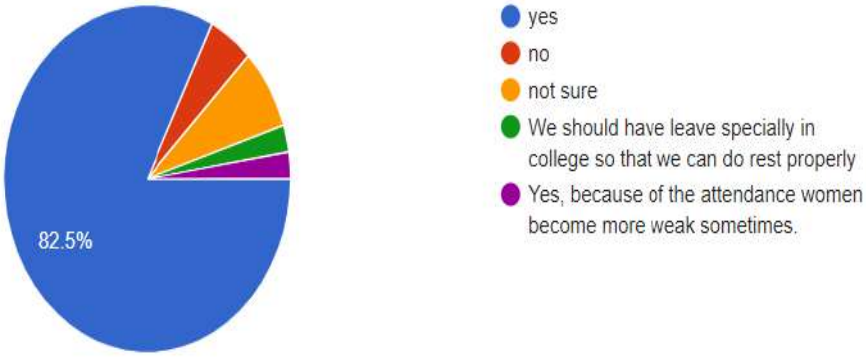
INTERPRETATION: From the above query, it has been observed that an average menstrual cycle typically lasts for approx. 3 to 5 days.

3. **How would you rate the severity of your menstrual cramps or discomfort**?



INTERPRETATION: From above data, it is clearly seen that more than half of the menstruators suffer from severe pain and discomfort and no one is there who has not experienced this problem.

6**. Do you believe that educational institutions (schools, colleges, universities) should have policies in place to provide menstrual leave to female students?**



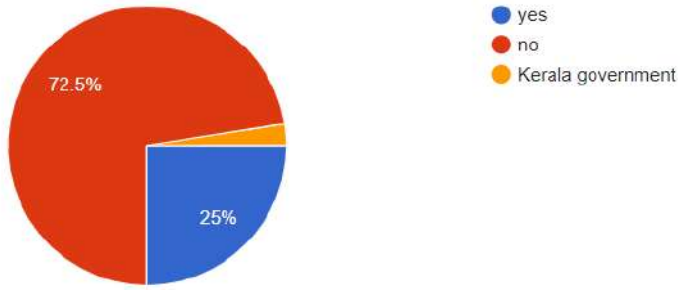
INTERPRETATION: The above data shows that most surveyors believe that educational institutions should have policies in place to provide menstrual leave.

7. **Are you aware of the concept of "menstrual leave"?**



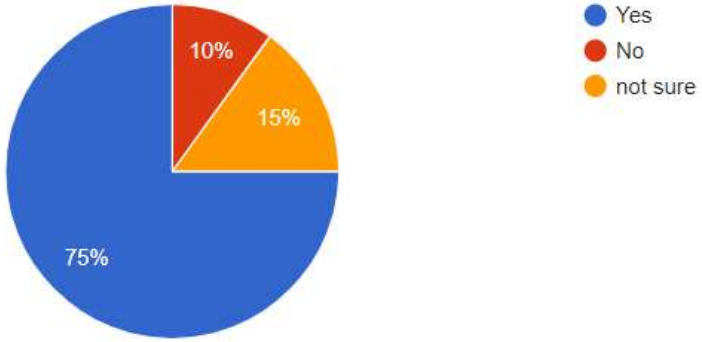
INTERPRETATION: From the above data, it is clearly visible that the answers might be different but all show the same context. Almost everyone is aware of the concept of menstrual leave.

8. **Are you aware of any educational institutions that currently have menstrual leave policies in place?**



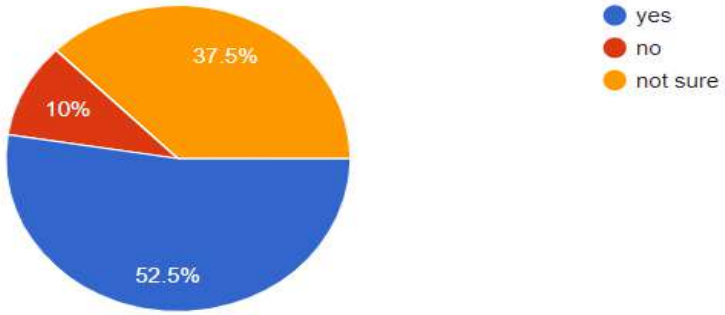
INTERPRETATION: From the above pie chart, it can be interpreted that about 3/4th of the population is NOT aware of any educational institutions that currently have menstrual leave policies in place.

9. **Do you think there is a societal stigma or taboo associated with discussing menstruation?**



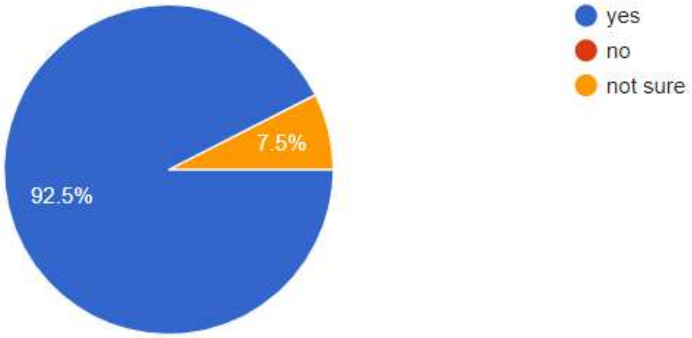
INTERPRETATION: It can be concluded that 75% of the surveyors think that there is a social stigma or discrimination associated with menstruation.

10. **Should menstrual leave be a legally mandated requirement for educational institutions?**



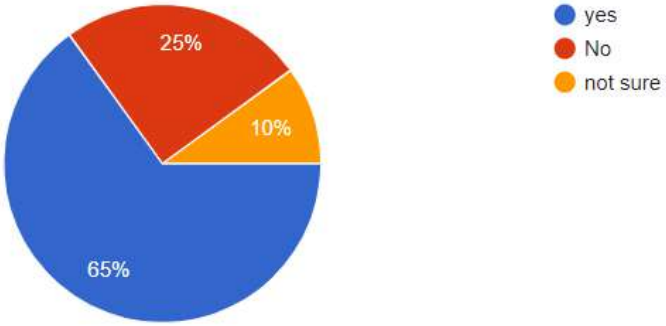
INTERPRETATION: The information provided shows half of the surveyors agree that menstrual leave should be a legally mandated requirement for educational institutions but along with that it can also be seen that more than 1/3rd of the population is not sure about this objective.

11. **Should educational institutions provide additional support and accommodations for female students during their periods (e.g., flexible scheduling, and access to pain relief medications)?**



INTERPRETATION: Almost all the surveyors agree to the fact that educational institutions should provide additional support and accommodations for female students during their periods.

12**. Have you ever had a personal experience where menstrual leave or the lack thereof had a significant impact on your life or education?**



INTERPRETATION: From the above query, it can be seen that 65% of the surveyors agree that lack of menstrual leave had a significant impact on life and education whereas 10% of surveyors are not sure about this. While 25 % don't think that it had any impact.

13. How do you think menstrual leave in educational institutions could positively impact women/girls and their overall well-being?



RESULT DECLARATION

To learn more about the opinions and level of acceptance of employees regarding menstrual absence, the researchers examined the responses to questions about period leave. The investigators would continue studying each question separately. A few additional items were excluded from the analysis due to the significantly different responses. unanimous and left little room for analysis. One such question concerned the respondents' knowledge of the terms menstruation and menstrual leave. As a result of both respondents providing positive answers, the researchers continued to examine the survey responses in order to gauge how widely the ideas covered below are accepted. Prioritizing the analysis of the general questionnaire aspects, the researchers would move on to the specific ones.

CONCLUSION

In conclusion, granting women and girls the right to menstrual leave in educational institutions is an important and forward-thinking step toward promoting gender equality and placing a higher priority on the health and well-being of women. By acknowledging and tackling the distinct obstacles linked to menstruation, we establish a setting that enables women to pursue their academic goals with honor and ease. In addition to recognizing the biological realities of women, menstrual leave has been shown to boost productivity in general, lower absenteeism, and improve academic performance. Additionally, it is essential for de-stigmatizing menstruation, fostering candid discussions, and elevating cultural awareness. This program promotes women's holistic development and equal access to education in accordance with human rights principles. In our pursuit of a more just and equal society, the application of Menstrual leave is a concrete demonstration of a commitment to fostering environments free from the constraints placed on women and girls by biological realities and societal taboos. It is evidence of our shared commitment to improving women's rights and well-being in educational settings and promoting a more liberal and caring society.

The implementation of menstrual leave in institutions is a crucial step towards fostering a more inclusive and supportive work or educational environment. Recognizing the unique challenges and physiological aspects of menstruation is not only a matter of gender equality but also a fundamental human rights issue.

Menstrual leave acknowledges the biological differences between individuals and promotes a workplace or educational setting that prioritizes the well-being of its members. By offering menstrual leave, institutions demonstrate a commitment to creating policies that address the diverse needs of their workforce or student body.

Moreover, menstrual leave can contribute to destigmatizing menstruation, fostering open conversations about women's health, and challenging societal taboos surrounding the topic. This cultural shift not only benefits individuals directly affected by menstruation but also contributes to a more compassionate and understanding community.

Institutions that embrace menstrual leave are likely to see positive impacts on employee or student satisfaction, productivity, and overall morale. It sends a powerful message that the organization values the holistic health and dignity of its members.

The need for menstrual leave in institutions goes beyond mere accommodation; it reflects a commitment to creating environments that respect the diversity of human experiences and prioritize the well-being of all individuals, irrespective of gender.

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EXPLORING THE EFFECTS OF BULLYING ON ACADEMIC PERFORMANCE AND STUDENT WELL-BEING

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ABSTRACT

Bullying has become a pervasive issue within educational institutions, affecting students in various ways. This research paper examines the multifaceted impact of bullying on student's academic performance and mental wellbeing. It explores the complex relationship between these factors and sheds light on bullying's detrimental effects. Students who endure bullying often experience declining grades, less participation in class, and increased absences. The fear and stress of bullying fosters a hostile learning environment that hinders concentration and success. Victims of bullying frequently suffer from depression, anxiety and low self-esteem. Witnessing bullying can also impact bystanders psychologically. They may feel guilt, fear and lack of safety, contributing to their own distress. Even bullies themselves sometimes display emotional turmoil, as their behaviors relate to underlying personal issues. The research draws on several studies and data to clarify how bullying connects with academics and mental health. The findings underscore the urgency to comprehensive anti-bullying policies in school to mitigate harm to students. A safer, supportive environment and academic assistance cannot alone solve this issue – a nuanced, holistic approach is needed. In conclusion, bullying distinctly harms academic performance and mental wellness through complex relationships. Educators and lawmakers must recognize bullying's extensive effects to better safeguard student's wellbeing and education. Addressing the issue requires consideration of its academic and psychological dimensions to protect the next generations.

Keywords: Bullying, Academic performance, Student well-being

INTRODUCTION

Children's education should aim to develop each child's character, personality, talents, and capabilities to the fullest extent. It should encourage them to respect not only their own human rights and cultures but also those of others. Additionally, it should instil in them the principle of peaceful coexistence, environmental protection, and positive social interactions. UNICEF's summary of the Convention on the Rights of the Child emphasizes the rights to good health, education, equality, and protection for every child.

Prioritizing the best interests of children is crucial in decision-making processes that may impact them, with adults, especially policymakers, focusing on what is optimal for children. Governments, upon ratifying the Convention, commit to reviewing and improving their laws related to children, encompassing social services, legal matters, health, education, and funding levels. They are obligated to ensure that the minimum standards outlined in the Convention are met, providing support to families in safeguarding children's rights and creating an environment conducive to their growth and fulfilment of potential.

India houses nearly 19 percent of the global child population, with over one-third of its total population, approximately 440 million people, being under 18 years old. An estimated 40 percent of these children are deemed to be in significant need of care and protection, highlighting a pressing issue. School violence is a widespread problem, encompassing various forms such as corporal punishment, sexual abuse, neglect, verbal and emotional abuse, bullying, peer-to-peer violence, youth gangs, weapons, or harassment during the journey to and from school. This violence infringes upon children's rights, being both unjust and preventable. It is essential to create an environment where children can learn without fear, enabling them to realize their full potential. Unfortunately, there is a lack of awareness regarding children's rights, particularly their right to protection and participation, among both adults and children.

Consequently, instances of mistreatment, abuse, or harassment may not be recognized as violations of rights. Educational institutions represent the primary spaces where children can assert ownership in the contemporary world. These institutions not only provide education but also foster a realm of possibilities and opportunities for students, typically commencing between the ages of four and six. Throughout adolescence, a pivotal period, individuals encounter various traumatic events or experiences that contribute to heightened stressors, posing a potential threat to psychological well-being and healthy development.

The school plays a crucial role In shaping the development of adolescents, who spend a significant portion of their day engaged in academic and co-curricular activities. As an institution, the school contributes to the overall educational and socialization process, emphasizing the adolescent's personality development (Green Baum, 1974). The school environment involves interactions among administration, teachers, parents, students, and the community, influencing comprehensive development through formal curricula and teacher involvement. This engagement focuses on academic achievement, motivation to learn, self-improvement, and social adjustment. For a modern society to achieve economic

growth, technical advancement, and cultural progress, it must tap into the talents of its citizens. Education plays a crucial role in fostering age-appropriate skills and a lifelong learning attitude.

Despite the potential of quality education to alleviate poverty and enhance lives, school violence poses a significant obstacle. Addressing this issue requires a shift in perspective and a collective commitment from individuals, governments, NGOs, and hinternational organizations. This report, tailored to the Indian context, aims to enhance understanding of school bullying and its impact on high school students. The initial step toward eradicating school bullying involves understanding the extent, nature, and consequences of the problem. Specifically, examining the social, psychological, and cultural contexts in which school bullying occurs is essential for developing effective interventions.

CONCEPTUAL FRAMEWORK OF BULLYING

Bullying is commonly associated with larger urban areas, but in reality, it knows no demographic boundaries. Factors such as school size, racial composition, and urban or rural setting do not seem to directly influence bullying behaviours, the victims involved, or the types of abuse occurring within school environments. Recent interest in the issue of bullying, particularly in schools, is evident in a comprehensive survey conducted by Peter Smith and others across 21 countries in America, Europe, Africa, Asia, and Australia. Every student has the right to attend school without facing bullying, harassment, or intimidation.

Students affected by bullying or those suspended due to their involvement in bullying experience reduced learning opportunities. Effectively addressing bullying can enhance the learning outcomes for many students. Bullying can be a humiliating and distressing experience for a child, making it inappropriate for parents or teachers to ignore the issue if it occurs in school.

The support of parents and teachers is crucial in helping the child cope with bullying. Bullying can occur at any stage and across diverse cultures, genders, and socioeconomic groups. Many students are likely to encounter bullying in some form during their schooling, whether as the victim, bystander, bully, or a combination of these roles. Students should expect that their concerns about bullying will be addressed by school staff, with appropriate support provided for both the target and the bullied.

Schools should create opportunities for students to engage in learning experiences that cover key aspects such as positive relationships, safety, gender equity, discrimination, bullying, and harassment. It is the shared responsibility of teachers, students, parents, caregivers, and the wider community to collaboratively address bullying. Bullying is defined as intentional, repeated hurtful acts, including name-calling, threats, and shunning, committed by one or more individuals against another. It involves an ongoing pattern of harassment and abuse, encompassing both physical and psychological intimidation through actions like teasing, taunting, threatening, hitting, and stealing (Olweus, 1993; Banks, 1997; U. S. Department of Education, 2001).

Forms of School Bullying

1. Social Bullying
2. Pack Bullying
3. Individual Bullying
4. Physical Bullying
5. Teenage Bullying
6. Verbal Bullying
7. Emotional Bullying

BULLYING

Tara Kuther, Associate Professor of Psychology at Western Connecticut State University, notes that bullying takes on a more sophisticated and subtle nature in high school, becoming increasingly relational. This complexity makes it challenging for teenagers to discern when to intervene, unlike younger children, where bullying is often more physical and straightforward.

Sometimes, the victim's names are manipulated to convey derogatory meanings. For instance, Rehaan may be referred to as Rihanna, Utkarsh might be twisted into Oot, and Shanti may be altered to Ashanti, signifying a shift from peace to chaos. Praful may be mockingly called a Fool, and Loveleen may be instructed to just "Love," among other instances. This form of bullying has subtle yet impactful psychological effects. Victims of such bullying attempt to evade the bully by skipping school or pretending to be unwell, all the while keeping the details hidden from others. They experience a profound sense of misery and isolation, enduring the torment in silence due to the fear of potential repeated attacks by the bullies if their identity is revealed

Physical bullying encompasses any undesired physical interaction between the perpetrator and the target. This form of bullying is readily recognizable and includes actions such as punching, pushing, shoving, kicking, inappropriate touching, headlocks, teasing, fighting, engaging in school pranks, and using accessible objects as weapons.

Verbal bullying involves making slanderous statements or accusations that inflict undue emotional distress on the victim. Examples include using foul language, employing derogatory terms, playing with the person's name, making negative comments about someone's appearance or body, engaging in personal abuse, tormenting, harassing, and subjecting the individual to ridicule.

Bullying is a pattern of recurrent aggressive actions intended to harm another person either physically or mentally, with the aggressor seeking to gain power over the victim. Norwegian researcher Dan Olweus, a pioneer in bullying research, defined it as the exposure of an individual to negative actions repeatedly and over time. Olweus studied the characteristics of both bullies and victims, providing prevalence figures and creating a self-report measure to identify those involved.

While subsequent studies expanded on the topic, most still build upon Olweus's foundational work. Many researchers adopt Olweus's definition, which identifies a student as bullied when exposed repeatedly to negative actions by one or more peers, encompassing a range from nonverbal aggression to serious physical assaults. Olweus emphasized "repetition" in the definition but acknowledged that a single serious instance, under specific circumstances, could qualify as bullying. Ross suggested the need for a more detailed operational definition of these circumstances to enhance research quality and intervention programs.

Smith and Sharp's definition, describing bullying as a "systematic abuse of power," is also widely recognized. This definition, aligning with Olweus's emphasis on repetition, implies an imbalance of power, making it difficult for the victim to defend themselves. It also implies an obligation for others to intervene in support of the victim's rights. However, Crick and Dodge criticize this definition as too vague, potentially encompassing interactions that may not fit the bullying category.

Many adults, including educators, often view verbal bullying as "normal" and "harmless" (Hazler, 1992). Boulton's (1997) survey of 138 teachers in Northwest England revealed that one in four teachers did not consider behaviors like name-calling, spreading rumors, intimidating stares, and taking belongings as bullying. The top three behaviors recognized as bullying were physical actions like hitting, pushing, and kicking; forcing individuals to do unwanted things; and making threats.

Shields and Cicchetti (2001) found that education professionals perceived physical threats or abuse as more severe than verbal, social, or emotional abuse. Disturbingly, educators often downplayed the seriousness of social exclusion, despite research indicating its detrimental long-term effects on healthy development (Sharp, Thompson, & Arora, 2000). Although emotional harassment is challenging to identify and prove, it should still be encompassed within the bullying definition.

Hazler and colleagues (1997) attempted to refine the definition by identifying specific characteristics of bullies and victims through interviews with 14 experts in the field. They quantified expert agreement, resulting in a list of 19 characteristics for both bullies and victims. Ross (2002) suggested that these findings should be essential reading for those interested in bullying and victimization, possibly incorporated into a widely accepted operational definition of bullying.

According to the Department of Education (1998), bullying is defined as intentional, repeated harmful acts, words, or behaviour, such as name-calling, threatening, or shunning, committed by one or more children against another. For an act to be considered bullying, the victim does not intentionally provoke it, and an imbalance in real or perceived power must exist between the bully and the victim. Bullying can manifest as physical, verbal, emotional, or sexual in nature.

Bullying is commonly understood as a subset of aggressive behaviour characterized by an intentional desire to harm another person, as defined by various researchers (Camodeca et al. 2003; Olweus, 1978; Rivers & Smith, 1994; Smith & Thompson, 1991). This intentional negativity can manifest in diverse ways, extending beyond physical actions to include subtle and elusive forms. Rivers and Smith (1994) highlight that verbally aggressive notes can circulate in classrooms without teachers being aware of the bullying occurring. Recently, bullying has been likened to terrorism, characterized by an "unprovoked attack" with the intent to harm the victim (Ross, 2002). While definitions of bullying may differ, they commonly stress the significance of repetition, along with harm and imbalanced power. While not all aggression qualifies as bullying, bullying always involves hurtful and hostile behaviour.

Despite widespread acknowledgment of bullying as a prevalent issue, experts in the field, including Boulton (1997), Crick and Dodge (1999), and Sutton, Smith, and Swettenham (1999), recognize considerable debate over a clear, universally accepted definition of bullying. Numerous publications on bullying consistently highlight the challenge of defining bullying clearly. Ross (2002) underscores that while researchers agree on the widespread existence of bullying, consensus on a universally accepted definition remains elusive.

CONCEPT OF ACADEMIC PERFORMANCE

Academia refers to the collective scientific and cultural community involved in higher education and research as a whole. The term originates from the 'academia' near ancient Athens, a renowned centre of learning associated with Plato and the goddess of wisdom. The expression "the Groves of Academe" stems from the site's former identity as an Olive grove.

The word scholar is often used interchangeably with "Academic" and generally denotes individuals who achieve mastery in a specific research proficiency or skill. Academic achievement, a criterion for selection, promotion, and recognition in various domains, signifies the knowledge gained through diligent effort and learning. Coined by Plato, academic achievement is fundamental in educational research, playing a pivotal role in shaping an individual's career and future educational plans.

It encompasses the learning outcomes of pupils, and fostering youth achievement is a fundamental obligation of the education system. Derived from the word 'Academy,' the term 'Academic' is broad and reflects the learning outcomes measured by test scores or teacher-assigned marks in school subjects. Achievement denotes successful completion of tasks, be they academic, manual, personal, or social, indicating the degree of success or proficiency attained. It is a multidimensional activity that aids both students and teachers in assessing their performance, effectiveness of teaching, and facilitates improvements accordingly.

A good academic record of students is an index of an effective educational system. Student's development process is a product of an interaction between choices and socialization experiences in academic disciplines. Therefore, researchers have been attempting long to investigate various factors determining academic achievement. The term academic achievement is defined by Freeman "as test designed to measure knowledge, understanding and skills in a specific subject or a group of subjects."

The scientific rearing and education of a child is monitored on the basis of his academic achievement. Academic achievement has always been the centre of educational research despite many varied statements about the aims of education. Academic Achievement is regarded as the educational growth of an individual or group of people through a process of regular educational instruction.

Academic achievement is a very broad term which generally indicates the learning outcomes of pupils. Achievement of those learning outcomes requires a series of planned and organized experiences and hence learning is called a process. Academic Achievement affects three major areas of behaviour of pupil-cognitive, affective and conative. It is an index of the amount learned during the course.

In our society academic achievement is considered as a key criterion to judge one's total potentialities and capacities. Hence academic achievement occupies a very important place in education as well as in the learning process. Academic achievement also denotes the knowledge attained and skill developed in the school subjects, usually designated by test scores. Achievement is influenced by personality, motivation, opportunities, education and training. Academic achievement is the core of the entire educational growth.

It is regarded as an important goal of education. Academic achievement is an outcome of the instruction provided to the children in schools which is determined by the grades, or marks secured by the students in the examination. In educational institutions, success is measured by academic achievement, or how well a student meets standards set out by local government and the institution itself.

Assessing achievement can be done through various types of tests, such as verbal or written assessments. Baron and Bernard posit that academic achievement involves the interplay of three factors: aptitude for learning, readiness for learning, and opportunity for learning. Additionally, it encompasses health, physical fitness, motivation, special aptitude, emotional balance, and interests. Achieving high levels of academic success for a child requires significant contributions from parents, teachers, the child's intelligence, and the school. Academic achievement is a distinct and enduring responsibility of schools and educational institutions established by society to foster comprehensive scholastic growth and a child's worth and success. Different definitions of academic achievement include

Good's (1941) description as knowledge attained or skills developed in school subjects, usually determined by test scores or teacher-assigned marks. Crow and Crow (1962) define achievement as the extent to which a learner benefits and acquires from instructional efforts in a specific learning area. In simpler terms, achievement reflects the level of skill or knowledge acquired through training. According to the Oxford Advanced Learning Dictionary (2000), achievement is something successfully attained through one's efforts and skills. Merriam-Webster's Dictionary (2001) suggests that achievement is a significant aspect of students' behavior in the educational process, dependent on the degree of effectiveness for optimal performance. The Dictionary of Education (2002) characterizes academic achievement as a measure of knowledge gained through formal education, often indicated by test scores, grade point average, and degree attainment.

SIGNIFICANCE OF ACADEMIC PERFORMANCE

While education isn't the sole path to success in the professional realm, substantial efforts are dedicated to identifying, assessing, monitoring, and fostering students' progress in schools. Parents are invested in their child's academic performance, believing that strong academic results offer increased career options and job stability. Schools share this interest in cultivating good academic habits, driven not only by the desire to enhance students' prospects but also by concerns about the institution's reputation and the potential for financial aid from government entities, often contingent on the overall academic achievement of the school.

State and federal education departments play a role in school improvement initiatives, developing metrics for success to formulate improvement strategies. The significance placed on academic achievement has prompted crucial inquiries among educational researchers, exploring factors that contribute to student success and the extent of their impact. Various factors have been proposed and studied, yielding diverse results that sometimes align and, at other times, contradict one another. A comprehensive understanding of academic achievement continues to elude researchers.

The quest for understanding persists, with educational researchers worldwide striving to make a breakthrough in elucidating this phenomenon. This is particularly evident in countries like India, where population growth has surpassed the capacity to harness natural resources, leading to a shortage in facilities and heightened competition for student admissions and promotions.

Consequently, the increasing educational needs have outpaced the available resources, resulting in a sharp decline in academic standards. The deterioration in standards has prompted educators to thoroughly investigate the factors influencing students' academic achievement at all levels and propose improvement measures to educational authorities. The academic achievement of students is a crucial outcome in any educational system, reflecting their educational status. In today's intensely competitive world, academicians, parents, and students recognize academic achievement as a key indicator of a child's future.

However, low achievement and school failures pose significant challenges to educational systems globally, constituting a curse. Determining why a student achieves poorly or fails involves exploring potential factors such as school environmental issues like peer harassment or bullying, as well as associations with personality dimensions and socio-economic backgrounds. Examining the problems of failure raises numerous questions, the answers to which remain unclear. Low achievement or school failures are substantial problems requiring in-depth investigation. While various factors are linked to these issues, a review of the literature highlights many important factors that still lack thorough examination.

CONCEPT OF MENTAL WELL BEING

Adolescents undergo a significant transition during their teenage years, encountering major challenges related to mental health and social identity. They grapple with various pressures, difficulties, and circumstances, including peer pressure, bullying, moving to a new school, strained relationships with friends, involvement in gangs, negative peer influences, conflicts with parents, the quest for autonomy, exam stress, feelings of inadequacy, disruptions in the home environment, academic failures, pubertal changes, and school exclusion or truancy.

Cairns and Lloyd (2005) analysed data from the Young Life and Times survey in Northern Ireland, highlighting that school work and exams ranked as the most prevalent stressors for 16-year-olds.

Anonymous (2004) explored trends between 1983 and 2003 in young people's emotional health through the Young People and Health survey, revealing an increasing tendency for youth to express significant concerns about school and career issues. Adolescents in disadvantaged communities face a heightened risk of encountering multiple stressors, including high crime rates, family poverty, conflicts within families, exposure to deviant peers, and schools with insufficient resources (Gonzales et al., 2001; Seidman et al., 1994).

Garrison and Force (1959), Hallahan and Kauffman (1978), and Chauhan (1979) have identified three fundamental factors contributing to emotional disturbance in adolescents: biological disorders and diseases, problematic family relationships, and negative school experiences. Positive adjustments not only instil a sense of pride and satisfaction in adolescents but also motivate them for future success, foster independent thinking, build self-confidence, and ultimately enhance their mental health.

Emotional challenges often impact academic performance as concerns about oneself or home life can hinder concentration on studies. While the pressure to excel and pass exams may originate from parents or teachers, adolescents typically strive for success and set high standards for themselves. Excessive nagging, however, can be counterproductive.

While exams hold significance, they should not dominate one's life or lead to unhappiness. Schools bear the responsibility of eliminating factors contributing to student maladjustment and addressing undesirable behaviour. Adolescents make up approximately one-fifth of India's population, and recent news reports highlight cases of suicides and attempts, particularly among Class X and intermediate (PUC) students.

Frustration arises from pressure imposed by teachers and parents, competition, and high ambitions, making them susceptible to mental health issues or even suicide. Studies estimate that one in five children and adolescents may express a mental health problem in a given year, with approximately one in ten in the United States suffering from severe mental illness.

In India, the Indian Council of Medical Research reports that about 12.8% of children (13-19 years) face mental health challenges. Ignoring the mental health of adolescents is tantamount to neglecting the future of the nation. Untreated mental health problems in young people can affect their development, school performance, relationships, and may lead to school failure, family conflicts, drug abuse, violence, and suicide. The management of schools and the curriculum they follow plays a significant role in influencing the development of adolescents, who often report increased issues of depression, frustration, and even suicide due to abrupt changes in the educational system.

REVIEW OF LITERATURE

Bullying research has become important because it has become a social threat that is frequently associated with social, emotional and academic impacts. The subject of bullying has been a topic of great relevance in several researches. Numerous studies have been conducted and results obtained.

Researchers conduct a number of applied investigations to make sure that a substantial amount of work has previously been done and that the proposed investigation directly correlates with the issue at hand. Literature must be the first source for any further work.

Hawker & Boulton (2000), they observe that bullying related emotional discomfort and anxiety can also hinder academic progress by making it difficult for a student to actively engage in learning process.

Espelage & Swearer (2003), their studied showed that bullying and academic success are negatively correlated. Bullying victims frequently find it difficult to focus on their academics, which lowers their grades and negatively affects their general academic performance.

Merrell (2008) elucidated that numerous strategies for prevention and intervention have been created to deal with bullying in schools. Studies have demonstrated that these initiatives can enhance student's well-being and academic achievements. Putting into practice practical anti-bullying tactics is essential to helping children advance academically and in their general development.

Wolke & Lereya (2015), according to them bullying is linked to a number of psychological effects such as anxiety, sadness, and low self-esteem. The general wellbeing and academic motivation of a student might be greatly impacted by these emotional problems.

Benjamin Kutsyuruba, Don A Klinger, Alicia Hussain (2015), in their studies regarding the relationship among school climate, school safety, and student achievement and well-being, state that the factors mentioned are important antecedents for academic performance. It also states that the subjective perception of the school surroundings and their own personal attributes contribute to the results and certain behaviours. Thus, an extensive study on the factors such as school climate, safety, well being of students and student learning is required.

Muhammad Ramli, Fattah Hanurawan, Nurul Hidayah, Marthen Pali (2016), conducted a research which aimed for describing student's well-being assessment at two private institutes in Indonesia. This was an evaluative research by means of quantitative approach. The result this research elucidated was that the student's well-being was psychologically high in terms of health status but low in terms of caring and loving. Another result was found that there was a higher tendency of physical and sexual mistreatment done by students as well as teacher.

Nahla Mansour Al-Ali, Khulood K Shattnawi (2018), say that bullying in schools is one of the most prevalent anti-social behaviors among children and adolescents and is a major global concern. Bullying is more common issue in schools than any other, even with anti-bullying preventative programs put in place in practically every school in the US, Europe and certain low-income nations. This research focuses on who is at risk, how bullying is defined in schools, how big of a problem it is, its effects, academic correlations, who is at risk and the evidence supporting school-based initiatives to stop and prevent bullying.

Lauraliisa Mark, Airi Varnik, Merike Sisask (2019), show that the likelihood of pupils exhibiting significant distress, defined as both poor mental health and hopelessness, was higher for both sexes who bullied others and for those who were the targets of bullying. Girls alone had higher risks of being bullied and becoming victims. The individuals who experienced prolonged cyberbullying demonstrated the lowest degree of mental health for both genders. Since, cyberbullying has the lowest degree of mental well-being, cyberbullying should receive more attention.

Kayla Miskimon, Lyndsay N Jenkins, Sonya Kaminski (2023), the relationship between bullying victimization and outcomes related to mental health and academic performance were investigated in this study. The indirect impact of academic achievement on the relationship between bullying victimization and mental health was also investigated in this study. The results elucidated that the traditional victimization was positively correlated with mental health issues in both

boys and girls using multi-group path analysis. Furthermore, for girls exclusively, academic achievement was adversely correlated with both traditional and cybervictimization. Lastly, the findings showed that only females had a significant indirect effect of academic performance on the relationship between traditional and cyber victimization and their mental health. The results of this study show that the consequences of bullying victimization varied depending on gender. There is discussion of the implications for researchers, including ideas for potential future bullying intervention initiatives.

In conclusion, the thorough analysis of the literature on bullying has shown that there is a strong link between bullying and the negative effects it has on student's well-being and their academic achievement. These results highlight how important it is to provide all-encompassing treatments and nurturing surroundings in order to lessen the negative impact of bullying and provide a more secure environment that is better for learning and mental health.

PLAN AND PROCEDURE

Plan and procedure constitutes a significant part of research. It includes an outline of what the investigator will do from writing the hypotheses and their operational implications to the final analysis of data Kerlinger (1973). A plan of action is pre-requisite for successful culmination of research. A well thought plan of action in advance followed by a systematic execution brings out desirable fruitful results.

As per the objectives of the study, the investigator had to plan the entire process of research work in terms of research design suited to present study; and to accomplish the purpose of the study, the design has been systematically presented andexplained in this chapter, which is given as follows:

3.1 Research Methodology

3.2 Population and Sample

3.3 Research Tools Used

3.4 Description of Research Tools

3.5 Collection of Data

3.6 Statistical Techniques Used

RESEARCH METHODOLOGY

An advance methodology is needed as it facilitates the smooth sailing of the various research operations thereby making research as efficient as possible andyielding maximal information with minimal expenditure of time and resources. A well thought of method to be employed depends upon the nature of the problem under consideration and also on the basis of kind of data required for its solution. The present investigation aims to identify the victims of school bullying and to investigate the impact of bullying on victim‟s academic achievement, mental health and social adjustment. It is a descriptive research as it involves collecting data using self-reported tools to test the hypotheses or answer the questions concerning the current status of the victims of bullying with regard to academic achievement, mental health and social adjustment. Descriptive research is designed to obtain pertinent and precise information concerning the status of phenomenon and wherever possible to draw valid general conclusions from the facts discovered. The rationale to employ the descriptive research method has rightly been justified by popular authorities of research methodology like Best, Mouley, Kerlinger, Duncan, Lancing, Runkel etc. In this way the present study aims at finding out the prevalent position of three major variables i.e. bullying, academic achievement, mental health and social adjustment with reference to victims of bullying, to investigate a relationship between these concepts, addressing the findings in relation to future educational implications.

POPULATION AND SAMPLE

Population

Population refers to any collection of specified group of human beings or of non-human entities such as objects, educational institutions, time units, geographical areas, prices of products etc. Some statisticians call it universe. By the universe we mean all possible respondents or measures of a certain kind. The portion of the universe to which the researcher has access is called the population. In most researches, it is the population and/or universe which are of focus of interest. The target population for the present study comprises of all the students studying inclasses IX and X.

Sample

A sample is a „miniature replica‟ of the entire group or aggregate from which it has been taken. A sample, in other words, is a small representation of a large whole,***Mouly (1964)*** gives the following advantages:

"The layman thinks that taking the sample from the total population may not get valid results but in actual fact sampling is proper and adequate, that is, not only sufficiently representative but also of sufficiently large size in order to ensure stability of the generalization made as a result of the study."

A number of factors may affect the sample size, for instance, available resources of time, money, personnel and facilities. A good sampling design has four essential criteria i.e. goal orientation, measurability, practicability and economy. Sampling is both necessary and advantageous. During the recent years appropriate techniques for sampling have been increasingly used in education and other social sciences to get necessary information about a specific population. Through appropriate sampling techniques, it is possible to draw a representative sample from the population so that the findings can be extended to the population from which the sample is drawn. The sample has great utility in research. It is easier and less time consuming as well as economic to deal with a sample than to study the whole population. Sample of 150 students were taken from high schools of Mohali, Punjab.

RESEARCH TOOLS USED

Once the sample was selected, the next step was to choose the suitable tools for the data collection. The selection of a tool for a particular study depends upon various considerations such as objectives of the study, availability of suitable tests, personal competence of the investigator to administer, score to interpret the results and reliability and validity of the scale. Taking all these factors into consideration, the investigator selected the following tools for collecting information from the respondents.

ADOLESCENT PEER RELATIONS INSTRUMENT (2000) DESIGNED BY ROBERTO PARADA

Academic Achievement was assessed on the basis of students' last two years annual examinations' average score.

Mental Health Inventory (M.H.I.) by Dr. Jagdish and Dr. A.K.Srivastava.

DESCRIPTION OF RESEARCH TOOLS

A brief description of research tools is as follows:

Adolescent Peer Relations Instrument (2000) designed by Roberto ParadaBullying: Definition and Implications for Measurement

Bullying has been defined as behaviour executed by one or more people to intentionally inflict harm on others (Parada & Craven, 2002; Schuster, 1996). Researchers tend to agree that this happens repeatedly and in different ways (Crick et al., 2001; Lowenstein, 1977). More recently, bullying has been differentiated from other behaviours used by students which are often mistaken for bullying such as teasing (see Parada, 2000, 2006); and peer conflict (Finger, Craven, Parada, &Yeung, 2007).

An increasing awareness of the detrimental effects of single-item scales to measure bullying has recently become apparent. A new multiple-item multiple scale behavioural measure of bullying was developed for secondary schools) was found to be a reliable and valid scale for adolescent students. This tool has been developed by Roberto H. Parada, Lecturer Adolescent Development, and Centre for Educational Research, University of Western Sydney, Australia to identify the prevalence of bullying. This inventory was suitable according to Indian conditions also due to its simple language and universal content which was further cross examined by eminent Indian professors from the field of Psychology, Education, English and Hindi (For using Hindi version). The APRI defined as Adolescent Peer Relations Instrument is a self-report test consisting of 18 items with three subscales assessing the frequency of physical, verbal and social bullying as a victim. The tool has been designed for the age group of 12-17 years. For each item, the participants were asked to rate themselves on a 6 point scale. These are Never, Sometimes, Once or twice a month, once a week, Several times a week and every day.



SUBSCALES OF ADOLESCENT PEER RELATIONS INSTRUMENT

SCORING

This three-scale APRI instrument measures three ways of being targeted (Physical, Verbal, and Social). In total 18 items were used to measure being bullied. All items were measured on a six-point Likert response scale (1 = Never, 2 = Sometimes, 3 = Once or twice a month, 4 = Once a week, 5 = Several times a week, 6= Everyday). Responses closer to

1 represented small amounts of being bullied,whereas scores closer to 6 represented frequent amounts of being bullied.

Scoring was achieved by adding up the items up for each individual‟s total score. Any student who scored 18 had never been bullied. On the basis of low, average and high frequency of bullying, victims and non-victims of bullying were identified. In the present study, this tool had been translated into Hindi and executedto identify the victims of bullying.

VALIDITY OF ADOLESCENT PEER RELATIONS INSTRUMENT

The APRI is a standardized tool. Still the instrument was given to experts for their judgment of irrelevance and relevance. After careful examination of the opinion by the selected experts, the content validity for the instrument was established.

Reliability of Adolescent Peer Relations Instrument

Descriptive statistics were reported on all variables in the survey. Cronbach‟s alpha test for reliability was used to assess internal consistency of the survey. This test established reliability for survey questions. Chi Square tests were used to measure the significance of differences between observed and expected differences. All the three sub-scales of victimization of bullying i.e. Physical, Verbal and Social had alpha coefficients from .85 to .90 (median = .89). A reliability coefficient of .70 or higher is considered "acceptable" in most Social Science Research (Trochim, 2005), therefore, with coefficients ranging from .85 to .90 (median = .89), one can say the reliability is significantly reliable. Reliability estimates for the study conducted by Marsh et al. (2004) ranged from .82 to .93, with similarly high estimates found by Parada (2006

Table 3.2: Results of Cronbach's Alpha Test for Reliability of Bullying Items

Variable	Cronbach‟s alpha Score
Verbal Bullying	.853
Social Bullying	.894
Physical Bullying	.904
Total Bullying	.861

Academic Achievement

In the present study, academic achievement was assessed on the basis of student‟s average score of previous two academic sessions. This information was collected from the reliable sources i.e. result registers and computer records maintained by the schools. The high achiever students were those having more than 80% score (average of their previous sessions). Average achievers were between 60%-80% while low achievers were students who scored below 60%.

Mental Health Inventory (M.H.I.) by Dr. Jagdish and Dr. A.K. Srivastava.

The present „Mental Health Inventory‟ (MHI) has been designed to measure mental health (positive) of normal individuals. Though, there are some scales for measuring mental health but most of them tend to assess mental ill-health rather than mental health. The salient feature of the scale lies in inclusion of the symptoms of psychological well-being or positive symptoms of mental health along with absence of mental ill-health. The preamble of the World Health Organization‟s charter defined health as a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity. (Monopolies et al. 1977)

For the present purpose developing the inventory, mental health is defined as person‟s ability to make positive self-evaluation, to perceive the reality, to integrate the personality, autonomy, group oriented attitudes and environmental mastery.

Scoring

In the present scale, 4 alternative responses had been given to each statement i.e. Always, Often, Rarely and Never. 4 scores to „Always‟, 3 scores to „Often‟, 2 scores to „Rarely‟, and 1 score to Never‟ marked responses as to be assigned for truekeyed (positive) statements whereas 1,2,3 and 4 scores for „Always‟, „Often‟, „Rarely „and „Never‟ respectively in case of false keyed (negative) statements. The over-lined items are negative while remaining positive. The area wise detail of the statements is presented in the following table.

Table 3.6: Showing Item numbers included in various dimensions of Mental Health

Dimensions ofM.H.	ITEMS	Positive	Negative	Total
PSE	1*,7*,13*,19,23*, 27, 32,38, 45,51	06	04	10
PR	6,8.14*, 24*, 35*, 41,46*, 52	04	04	08
IP	2*,9*, 15*, 18*, 20,25*, 28*, 33,36,40,47,53	01	11	12
AUTNY	3*, 10*, 29, 42*, 48*,54	02	04	06
GOA	4*,11*, 16*, 21*,26, 30*,39,43, 49*,55	04	06	10
EM	5*,12, 17*, 22*, 31, 34,37,44,50,56	07	03	10

Uses of Mental Health Inventory

The inventory may be used for measuring mental health of individuals in various spheres of life. It has been mostly employed in researches in industrial and educational fields. The scale is helpful in screening the individuals with poor mental health who may need assistance and counseling for their happier life and excellent future.

Instructions for Test Users

1. It is a self-administering inventory. The examiner should read the instructions given on the front page and the examinees should also read them silently alongwith the examiner.
2. There is no time limit for answering it. Ordinarily an individual takes 5 minutes in completing the test.
3. Examiners should be instructed to interpret the meaning of the sentences themselves. However, meaning of the difficult words, if any should be given by the examiner.
4. Co-operation of the examinees in answering the inventory is very essential. The examiner should assure them that their answers and scores will be treated with strictest confidence.
5. The examiners should indicate frankly and honestly the purpose of the test, if and when any question regarding this is raised by the examinees.
6. There is no need of telling why letters and numbers are placed before the questions. If a question is asked about these, the examiners should tell the meaning of the letters.

Instructions for Scoring

Inventory can be scored by hand only. For any answer indicative ofadjustment Zero is given, otherwise a score of one is awarded. Table 3.9 shows the key response indicative of lack of adjustment. The inventory is designed to be an aid in counseling school students of age group 14-18 years whose personal problems pertain to social adjustment. Table gives the scoring instructions for all the items.

COLLECTION OF DATA

After getting permission, the investigator visited classrooms and introducedher to the students. Firstly, the investigator established rapport with the students and told them about the purpose of visit and gave orientation about the tools that were to be administered. Students were also assured that their responses would be kept confidential and will be used for research purpose only. The tools were administered one by one and all the instructions were explained to the students. The students were instructed that there were no right or wrong responses and they could take their own time in deciding any option by going through each and every item. They wereinstructed not to waste too much time on any one item. First of all, Adolescent Peer Relations Instrument was distributed among students. Once the responses were filled by all the students, then Mental Health Inventory for School Students were given to the same students for assessing their mental health and social adjustment. While administering the tools, the teachers helped the investigator in maintaining discipline in the class. After collecting the data, the investigator thanked the students as well as the staff for their co-operation. Same procedure was followed for every school.

In order to collect the data related to academic achievement, the investigator visited the school office and collected the achievement scores obtained by the studentsin their annual examinations of previous two years. This was made available through the result registers as well as computer records maintained by the schools.

Statistical Techniques Used

The long process of hypotheses formulation and data collection culminates with statistical data analyses. The data, after collection, had to be processed and analyzed in accordance with the outline laid down. For each returned survey, a unique identification number was assigned to the survey response. After collecting data, Microsoft EXCEL was used to tally responses. The tallies of all responses were then exported into the Statistical Package for the Social Sciences (SPSS) 13.0 for Windows. SPSS is one of the most popular statistical packages that can perform highly complex data manipulation and analysis with simple instructions (Punch, 1998). Prevalence of Bullying and other variables were examined primarily by using the descriptive statistics in SPSS. For purposes of this study, SPSS was used to determine measures of central tendency, correlation, and variability.

Analyses and Interpretation of Data

The function of analysis is to build an intellectual edifice in which properly sorted facts and figures are placed in their appropriate settings and consistent relationships, so that general inferences can be drawn from them. Analysis and interpretation of data leads a researcher to arrive at the results which he /she desires toaccomplish in the study. The data, after collection has to be processed and analyzed inaccordance with the outline laid down at the time of developing the research plan. This is essential for a scientific study and for ensuring that all the relevant data is available for making

comparisons and analyses. Data for this purpose is collected by administration of various tools and the same is eventually subjected to quantitative analyses. Therefore, it has been done under the following three sections:

The major objectives of the present study were to find out the prevalence of bullying among high school students, identify the victims of bullying and impact of bullying on victims' academic achievement, mental health and social adjustment. The study also investigates the difference in academic achievement, mental health and social adjustment between victims and non-victims with regard to gender. The data related to victims of bullying was assessed from the standardized inventory developed by Roberto H. Parada (2000). Mental Health and Social Adjustment had been assessed through Mental Health Inventory (M.H.I.) by Dr. Jagdish and Dr. A.K. Srivastava and Adjustment Inventory for school students (AISS) by A.K.P.Sinha and R.P. Singh in 1993 respectively. In addition to these, the previous two year's annual examinations scores of the students were also taken in order to assess their academic achievement. The quantitative analyses and corresponding interpretations of data pertaining to the present study are discussed under three different sections:

RESULTS RELATED TO IDENTIFICATION OFVARIABLES

This section dealt with the identification of:

4.1.1 Results related to identification of level of Bullying among high schoolstudents

4.1.2 Results related to identification of Victims and Non-Victims of Bullying

4.1.3 Results related to identification of level of Academic achievement of victimsand non-victims

4.1.4 Results related to identification of level of Mental Health of victims and non-victims

RESULTS RELATED TO IDENTIFICATION OF LEVEL OF BULLYING AMONG HIGH SCHOOL STUDENT

One of the objectives of the study was to identify the level of school bullying among high school students. To achieve this objective, percentage is calculated to identify the level of different dimensions of bullying and total bullying. Results related to the dimensions of Bullying namely Verbal Bullying, Social Bullying and Physical Bullying and overall Bullying have been presented along with their graphicalrepresentation.

TABLE 4.1.1: Level Of Bullying (Dimension Wise) And Total Bullying Among High School Students(Total Number Of Students – 320)

Sr.No.	Dimensions of Bullying	High%(N)	Average% (N)	Low% (N)
1.	**Verbal Bullying**	32.5 (104)	11.6 (37)	55.9 (179)
2.	**Social Bullying**	32.2 (103)	11.9 (38)	55.9 (179)
3.	**Physical Bullying**	37.5 (120)	5.6 (18)	56.9 (182)
4.	**Total Bullying**	40.0 (128)	4.1 (13)	55.9 (179)

Interpretation

Table 4.1.1 reveals that:

Verbal Bullying: 32.5% students have been highly bullied verbally where as 11.6% and 55.9% students have been bullied verbally on an average and low level respectively.

Social Bullying: 32.2% students have been highly bullied socially where as 11.9% and 55.9% students have been bullied socially on an average and low level respectively.

Physical Bullying: 37.5% students have been highly bullied physically where as 5.6% and 56.9% students have been bullied socially on an average and low level respectively.

Total Bullying: Further above table highlights that 40% students have been highly bullied, 4.1% average and 55.9% have been bullied but at a very low level as far as total bullying is concerned.

On the basis of above interpretation, it was further inferred that there isprevalence of bullying among high school students. Few students have been highly bullied verbally, socially or physically. On the other hand, a few students have beenbullied on an average level whereas most of the students have reported low level of bullying. This interpretation can be more precisely understood with the help of graphical representation.

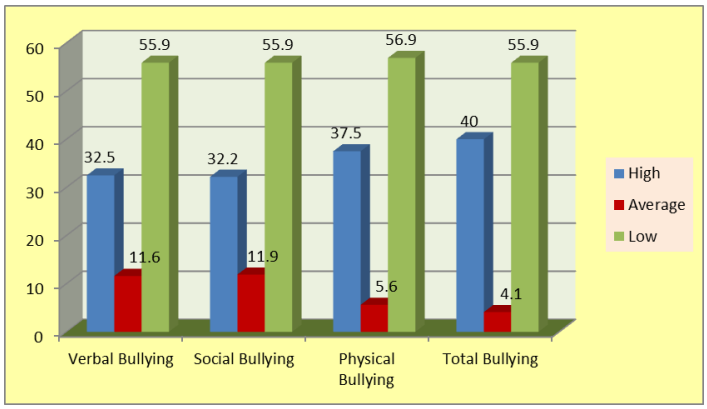


Figure 4.1.1: Bar graph showing the Level of Bullying among high school Students

RESULTS RELATED TO IDENTIFICATION OF VICTIMS AND NON- VICTIMS OF BULLYING AMONG HIGH SCHOOL STUDENTS

One of the objectives of the study was to identify the victims of school bullying. To achieve this objective, percentage is calculated to categorize victims and non-victims of bullying. Results related to the identification of bullying with regard to different dimensions namely Verbal Bullying, Social Bullying and Physical Bullying and overall Bullying have been presented along with their graphical representation.

Table 4.1.2 : Identification Of Victims And Non-Victims Of BullyingAmong High School Students

Level ofBullying	Percent (%)	Male (%)	Female (%)	Total (%)	Identification
High	40.0%	75 (58.6%)	53 (41.4%)	128 (100%)	**Victims**
Average	4.1%	9 (69.2%)	4 (30.8%)	13 (100%)	**Non-Victims**
Low	55.9%	76 (42.5%)	103 (57.5%)	179 (100%)	**Non-Victims**
Total	100%	160 (50%)	160 (50%)	320 (100%)	**Total**

Further, Table 4.1.2 exhibits that 40% students who were highly bullied were considered as victims of bullying as they have been severely and repeatedly bullied over time. It is vivid that 40% i.e. 128 out of 320 students were found victims of bullying. Out of these 128 victims, 75 were found to be male victims and 53 were identified as female victims. It was further inferred that 4.1% of students who were bullied on an average level and 55.9% students who were bullied almost negligible were categorized as non-victims collectively. The number of non-victims came out to be 192 out of 320. Male non-victims were 85 and female non-victims were 107.So, it is clear that there are more victims of bullying among male students. This interpretation can be further explained through graphical representation.

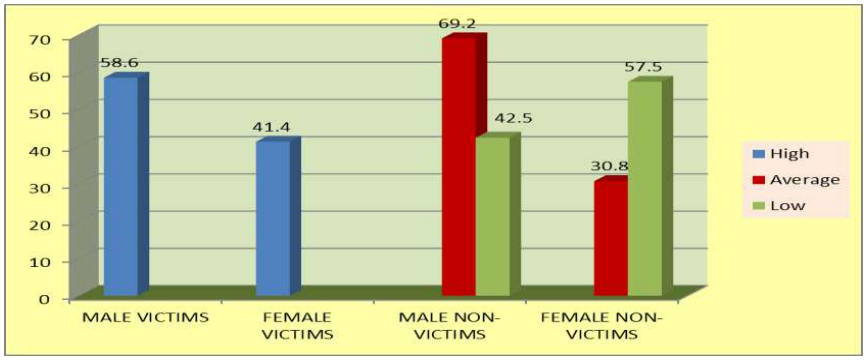


Figure 4.1.2:***Bar graph showing the identification of victims and non-victims of bullying***

Results Related to Identification of Level of Academic Achievement of Victims and Non-Victims of High School Students

The objective of the study was to identify the level of academic achievement of victims and non-victims in order to differentiate between the impact of bullying on victims and non-victims. To achieve this objective, percentage is calculated to identify the level of academic achievement of victims and non-victims of bullying. Results related to the level of academic achievement have been presented in the table below along with their graphical representation.

Table 4.1.3: Level Of Academic achievement Of Victims And Non-Victims Of High School Students

ACADEMIC ACHIEVEMENT	HIGH %	AVERAGE %	LOW %	TOTAL %
VICTIMS	13 (10.2%)	19 (14.8%)	96 (75%)	128 (100%)
NON-VICTIMS	36 (18.8%)	134 (69.8%)	22 (11.5%)	192 (100%)
TOTAL	49 (15.3%)	153 (47.8%)	118 (36.9%)	320 (100%)

Interpretation

Further, Table 4.1.3 exhibits that out of 128 victims, 13(10.2%) victims were found to have high; 19(14.8%) average and 96(75%) low academic achievement. It was further inferred that out of 192 non-victims, 36(18.8%) were found to have high: 134(69.8%) average and 22(11.5%) low academic achievement. If we talk about the academic achievement of both victims and non-victims collectively, then 49((15.3%) students have high, 153 (47.8%) have average and 118 (36.9%) have low academic achievement. This interpretation can be further explained through graphical representation.

Results Related to Identification of Level of Mental Health of Victims and Non-Victims of High School Students

The objective of the study was to identify the level of Mental Health ofvictims and non-victims in order to differentiate between the impact of bullying on victims and non-victims. To achieve this objective, percentage is calculated to identify the level of Mental Health of victims and non-victims of bullying. Results related to the level of Mental Health have been presented in the table below alongwith their graphical representation.

TABLE 4.1.4 (a): ***Level Of Mental Health (Dimension Wise) And OverallMental Health Of Victims Of High School Students***

DIMENSION	HIGH %	AVERAGE %	LOW %	TOTAL %
Positive SelfEvaluation	22 (17.20 %)	72 (56.30 %)	34 (26.60 %)	128 (100 %)
Perception of Reality	18 (14.10 %)	90 (70.30 %)	20 (15.60 %)	128 (100 %)
Integration ofPersonality	8 (6.30 %)	84 (65.60 %)	36 (28.10 %)	128 (100 %)
Autonomy	32 (25 %)	79 (61.70 %)	17 (13.30 %)	128(100 %)
Group Oriented Attitudes	16 (12.50 %)	74 (57.80 %)	38 (29.70 %)	128 (100 %)
Environmental Mastery	2 (1.60 %)	126 (98.40 %)	0 (0 %)	128 (100 %)
Overall Mental Health	3 (2.3%)	111 (86.70 %)	14 (10.90 %)	128 (100 %)

Interpretation

Further, Table 4.1.4 (a) exhibits the mental health of victims dimension wise. It was further inferred that out of 128 victims, 22(17.2%) victims were found to have high; 72(56.3%) average and 34 (26.6%) low **Positive Self Evaluation**. Under **Perception of Reality,** 18 **(**14.10%) have high; 90 (70.3%) average and 20 (15.6%) low level of mental health. It was further inferred that out of 128 victims, 8(6.3%) were found to have high: 84(65.6%) average and 36(28.1%) low level of **Integration of Personality**. Out of 128 victims, 32(25%) have high; 79 (61.7%) average and 17(13.3%) low level of **Autonomy**. In **Group Oriented Attitudes** dimension, 16 (12.5%) victims fall under high; 74 (57.8%) average and 38 (29.7%) low level of mental health. The table further reveals that only 2(1.6%) victims have high level of **Environmental Mastery** whereas 126 (98.4%) average and 0 (0%) low level of mental health. Under **Overall Mental Health**, 3 (2.3%) fall into high; 111 (86.7%) average and 14 (10.9%) low level. This interpretation can be further explained through graphical representation.

Figure 4.1.4 (a)

Bar graph showing the Level of Mental Health (Dimension wise) and Over all Mental Health of Victims of High School Students

Table 4.1.4 (b):Level Of Mental Health (Dimension Wise) And Overall Mental Health Of Non-Victims Of High School Students

DIMENSION	HIGH %	AVERAGE %	LOW %	TOTAL %
Positive SelfEvaluation	40 (20.8%)	132 (68.8%)	20 (10.4%)	192(100%)
Perception of Reality	28 (14.60%)	147 (76.60%)	17 (8.90%)	192 (100%)
Integration ofPersonality	41 (21.40%)	134 (69.80%)	17 (8.90%)	192 (100%)
Autonomy	27 (14.10%)	149 (77.60%)	16 (8.30%)	192 (100%)
Group Oriented Attitudes	39 (20.30%)	131 (68.20%)	22 (1.50%)	192 (100%)
Environmental Mastery	20 (10.42%)	160 (83.33%)	12 (6.25%)	192 (100%)
Overall Mental Health	10 (5.20%)	178 (92.70%)	4 (2.10%)	192 (100%)

Interpretation

Further, Table 4.1.4 (b) exhibits the mental health of victims dimension wise.It was further inferred that out of 192 non-victims, 40 (20.8%) non-victims werefound to have high; 132(68.8%) average and 20 (10.4%) low **Positive Self Evaluation**. Under **Perception of Reality, 28 (**14.60%) have high; 147 (76.6%) average and 17(8.9%) low level of mental health. It was further inferred that out of 192 non-victims, 41(21.4%) were found to have high: 134(69.8%) average and 17(8.9%) low level of **Integration of Personality**. Out of 192 non-victims, 39(20.3%) have high; 131 (68.2%) average and 22 (11.5%) low level of **Autonomy**. In **Group Oriented Attitudes** dimension, 16 (12.5%) non-victims fall under high; 74 (57.8%) average and 38 (29.7%) low level of mental health. The table further reveals that only 20 (10.42%) non-victims have high level of **Environmental Mastery** whereas 160 (83.33%) average and 12 (6.25%) low level of mental health. Under **Overall Mental Health**, 10 (5.2%) fall into high; 178 (92.7%) average and 4 (2.1%) low level. This interpretation can be further explained through graphical representation.

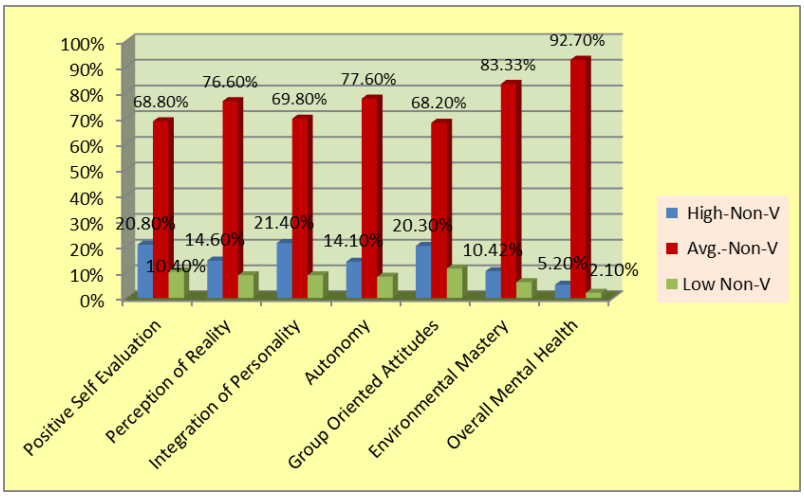


Figure 4.1.4 (b): ***Bar graph showing the Level of Mental Health (Dimension wise) and OverallMental Health of Non-Victims of High School Students***

Main Findings, Discussion of Results, Educational Implications And Suggestions For Future Research

The present chapter is devoted to report the findings of the study on the basis of analyses and interpretations. It has focused on the aspects namely main findings, educational implications and suggestions for further research. The data analyses and their interpretations of the study in the previous chapters would naturally lead one towards a conclusive phase.

Main Findings

The study was conducted to analyze the relationship of school bullying with academic achievement, mental health of victims of bullying. Further, the objectives of the study were to find out the significance of difference in academic achievement, mental health and social adjustment of victims and non-victims of bullying with gender differences. The findings of the study that emerged out from the analyses and interpretation of the have been discussed as below.

SECTION-I Findings Related to Identification of Variables

Findings related to the identification of level of different dimensions of bullying and total bullying among high school students. 32.5% high school students were found to have high, 11.6% average and 55.9% low level of bullying in the dimension of „Verbal Bullying". In „Physical Bullying" dimension again 37.5% high school students were found to have high, 5.6%average and 56.9% low level of bullying. In the last dimension i.e. „Social Bullying", 32.2% of high school students fall under the category of high level, 11.9% averageand 55.9% low level of school bullying. Further under

total bullying 40% of high school students were found to have high, 4.1% average and 55.9% were found to have low level of school bullying.

FINDINGS RELATED TO THE IDENTIFICATION OF VICTIMS AND NON-VICTIMS OF BULLYING AMONG HIGH SCHOOL STUDENTS.

1. 40% of the high school students were found to be highly bullied. Out of this 40%, 58.6% were male and 41.1% were female. These highly bullied (male and female) students were identified as **VICTIMS** of school bullying.
2. 4.1% students were found to be bullied on an average level. Out of this 4.1%, 69.2% were found to be male and 30.8% were female. 55.9% students were bullied, but on a very low level. Out of this 55.9%, 42.5% were found to be males and 57.5% were females. So, these average and low level bullied students (male and female) were identified as **NON-VICTIMS** of schoolbullying.

Findings related to the level of academic achievement of victims and non- victims of high school students.

1. 10.2% victims and 18.8% non-victims were found to have high academic achievement.75% victims and 69.8% non-victims were found to have average academic achievement while 14.8% victims and 11.5% non-victims fall under the category of low level of academic achievement.
2. 15.3% of the total students were found to have high academic achievement.71.9% of the total students were found to have average academic achievement while 12.8% of the total students fall under the category of low level of academic achievement.

Findings related to the level of different dimensions of mental health adjustment and overall mental health adjustment of victims and non-victims of high school students.

1. 17.2%victims and 20.8% non-victims of school bullying were found to have high, 56.30% victims and 68.8% non-victims average and 26.60% and 10.40% low level of mental health adjustment in the dimension of „Positive Self Evaluation".
2. In „Perception of Reality" dimension, 14.10% victims and14.60% non-victimswere found to have high, and 76.60% victims and 70.30% non-victims average and 15.60% victims and 8.90% non-victims low level of mental health adjustment.
3. In „Integration of Personality", 6.30% of victims and 21.40% of non-victims were found to have high, 65.60%victims and 69.80%non-victims average and 28.10% and 8.90% low level of mental health adjustment.
4. In „Autonomy" dimension, 25% victims and 14.10% non-victims showed high level, 61.70% victims and 77.60% non-victims average and 13.3% victims and8.3% non-victims low level of mental health adjustment.
5. Again in „Group Oriented Attitudes", 12.50% victims and 20.30% non- victims fall under the category of high, 57.8% victims and 68.2% non-victims average and 29.7% victims and 11.5% non-victims low level of mental health adjustment.
6. In the last dimension „Environmental Mastery", 1.60% victims and 20.0% non- victims were found to have high, 78.4% victims and 79% non- victims average and 20% victims and 1% non- victims low level of mental health adjustment
7. Further, under overall mental health adjustment, only 2.3% victims and non- victims were found to have high, 76.7% victims and non- victims average and 20.90% victims and non- victims low level of mental health adjustment.

Suggestions For Future Research

Every research study culminates in opening the newer avenues for further research. On the basis of findings of present study, it is suggested that further studies on related areas can be designed which are as follows:

1. Same study can be undertaken on different age group students.
2. Similar study can be undertaken on children with special needs, giftedchildren, children with disabilities also.
3. A similar study can be done on bullies and by-standers also.
4. Staff bullying by principal, parents or within staff can also be studied.
5. The impact of bullying can be studied on various other traits such asemotional adjustment, physical health etc. of victims as well as bullies.
6. Role of parents, teachers and school environment on bullying can be studied with regard to bullies, bullied and by-standers.

7. Other forms of bullying like cyber bullying, sexual bullying, bullying byteachers, can be undertaken by the researchers.
8. Longitudinal studies can be undertaken for the better perspective andunderstanding the long-term effects of bullying on children as adults.
9. Same study can be conducted by varying the size and locale of the sample.
10. A Study on various Anti-Bullying Intervention Programs and Anti-bullyingLaws can also be done.
11. Replication of this study can be done to investigate what safety measures andintervention practices can be used to protect victims of bullying,

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Appendices

Student Bullying Inventory

Name of the School……..

Name ……. …….

Class……..... Gender: Male/Female ……

Village……...District……

Result of last year (%)…….

Instructions

Following pages consist of few statements. These statements enquire about your view in variety of situations. For each statement six alternatives are given. These alternatives are as: 1.Never 2.Sometimes 3.Once or twice a week 4.Once a week 5.Several times a week6.Everyday

Once decided, put a () mark on the corresponding option. There are no correct or wrong answers. Please respond each statement according to your experience. All the information given by you will be kept confidential and will be used only for research purpose.

Please indicate how often a student (or students) at this school has done the following things TO YOU since you have been at this school this year. CIRCLE THE NUMBERTHAT IS CLOSEST TO YOUR ANSWER.

S. No.	In the past year at this school …	Never	Sometimes	Once or twice a Month	Once a week	Several times a week	Everyday
1.	I was teased by students saying things tome.	1	2	3	4	5	6
2.	I was pushed or shoved.	1	2	3	4	5	6
3.	A student wouldn't be friends with mebecause other people didn't like me.	1	2	3	4	5	6
4.	A student made rude remarks at me.	1	2	3	4	5	6
5.	I was hit or kicked hard.	1	2	3	4	5	6
6.	A student ignored me when they were with their friends.	1	2	3	4	5	6
7.	Jokes were made up about me.	1	2	3	4	5	6
8.	Students crashed into me on purpose asthey walked by.	1	2	3	4	5	6
9.	A student got their friends to turn againstme.	1	2	3	4	5	6
10.	My property was damaged on purpose.	1	2	3	4	5	6

11.	Things were said about my looks I didn'tlike.	1	2	3	4	5	6
12.	I wasn't invited to a student's place because other people didn't like me.	1	2	3	4	5	6
13.	I was ridiculed by students saying things tome.	1	2	3	4	5	6
14.	A student got students to start a rumorabout me.	1	2	3	4	5	6
15.	Something was thrown at me to hit me.	1	2	3	4	5	6
16.	I was threatened to be physically hurt orharmed.	1	2	3	4	5	6
17.	I was left out of activities, games onpurpose.	1	2	3	4	5	6
18.	I was called names I didn't like.	1	2	3	4	5	6

Student well-being Inventory

Name of the School…….

Name……. …….

Class……..... Gender: Male/Female …….

Village…….. District……

Result of last year (%)…….

Instructions

This questionnaire is developed for psychological research. Following pages consist of few statements. These statements enquire about your view in variety of situations. For each statement four alternatives are given. These alternatives are as: 1. Always 2. Most of the times 3 Sometimes 4. Never

Once decided, put a (√) mark on the corresponding option. There are no correct or wrong answers. Please respond each statement according to your experience. All the informationgiven by you will be kept confidential and will be used only for research purpose.

S. No.	STATEMENTS	Always	Most of the times	Sometimes	Never
1.	I feel lack of confidence				
2.	I get excited very easily.				
3.	I am not able to take quick decision on anysubject.				
4.	I feel that circumstances are going against me.				

5.	I feel that my intimacy with my group communityincreasing gradually.				
6.	I have affection and attachment with myneighbours.				
7.	I mould myself according to circumstances.				
8.	I feel that I am losing self-respect.				
9.	I feel anxious in doing simple tasks for a longtime.				
10.	I use to worry even about trivial matter for a longtime.				
11.	I feel pleasure in taking responsibilities.				
12.	I am not able to take decision about my next step.				
13.	I hesitate in meeting with others.				
14.	I do my duty well even in adverse circumstances.				
15.	I feel that I am not able to fully utilize my abilities in performing my different duties.				
16.	In adverse circumstances, I act without keeping inview of the real facts				
17.	I feel irritation.				
18.	I feel to be insecure.				
19.	I am much worried about my responsibilities.				
20.	I feel depressed/ dejected.				
21.	I play important role in social ceremonies.				
22.	I utilize my relations even in difficult times.				
23.	I feel that my relations with others are notsatisfactory.				
24.	My responsibilities are like burden to me.				
25.	I suffer from inferiority complex.				
26.	I am an used to be lost in world of imagination.				
27.	I am an anxious about my future.				
28.	My friends/relatives remain ready to help me inthe difficult times.				
29.	I make definite plans about my future.				
30.	I am engaged even by the slightest unfavorabletalks.				
31.	I take decision easily even in difficultcircumstances.				
32.	I am not able to behave in such a way as my friends except from me.				

33.	I am satisfied with most of the aspects of my life.				
34.	My friends and colleagues have respect for me.				
35.	My confidence varies highly in quantity.				
36.	I am always ready to fight the problems.				
37.	I make impressions about people or issue even inabsence of facts and grounds.				
38.	I am not able to concentrate fully in my works.				
39.	I feel inclined towards opposite sex.				
40.	I solve my problems myself.				
41.	I fully cooperate in the important functions of mycommunity				
42.	I am perplexed with my contradictory thoughts.				
43.	I take decisions on the basis of facts even though they are contrary to my community.				
44.	I am not able to continue any task for long.				
45.	I feel my self-secured amidst my friends /group.				
46.	I do not become hopeless even when I fail.				
47.	I consider myself useful for society.				
48.	I aspire for something without having in view of my short comings.				
49.	I do not get influenced even by reasonablearguments.				
50.	I am not able to take such decision as I want totake.				
51.	I am afraid of imaginary calamities.				
52.	I feel that this world is a place good enough forpassing life.				
53.	I feel full of enthusiasm to think that I willcertainly achieve my objects				
54.	I do not get disappointed with the common worries of daily life.				
55.	My mood changes momentarily.				
56.	I myself decide what and how I should do.				

NOURISHING COMMUNITIES: ADDRESSING NUTRITIONAL CHALLENGES THROUGH SUSTAINABLE APPROACHES

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ABSTRACT

Nourishing communities and addressing nutrition challenges through sustainable approaches is a multifaceted initiative aimed at promoting healthy diets and combating malnutrition. Food security is a fundamental human right and a crucial aspect of global well-being. It refers to the availability, accessibility, and affordability of sufficient, safe, and nutritious food that meets the dietary needs and preferences of individuals. The present research project aimed to assess nutrition challenges, evaluate sustainable approaches, identify best practices, and propose recommendations to nourish communities and align with global sustainable development goals (Goal 2 which clearly indicates End hunger, achieve food security and improved nutrition, and promote sustainable agriculture). A sample of 50 Children (Age 3-6) along with their parents were taken under the study from district Mohali. Self- constructed questionnaire including parental information and dietary habits was used by statistical analysis, the results revealed in case Frequency of the meal intake responses revealed that majority (42%) of the respondents used to have two meals followed by once a day (30%) and only 28 per cent consumed three meals a day. Regarding skipping or missing the meal, response was 77.5 per cent affirmative and that too usually. The most skipped meal was breakfast (39.35%) followed by lunch (38.06) and evening meal (22.58). There are a few ways to make our food systems more sustainable: by making agriculture more environmentally friendly, by encouraging people to eat in ways that are good for the planet, and by transforming our food systems to be more diverse and flexible. To make this happen, we need to shift our focus from just agriculture to looking at the entire food system. This is crucial for the complex and complete changes we need to achieve truly sustainable food systems, which are necessary for ensuring food and nutrition security for all now and in the future.

Keywords: Nutrition, Food Security and Sustainable Food Systems.

INTRODUCTION

Undernourishment

It is mainly due to the inability to receive high-quality food for consumption or when an individual is not getting the desired level of calories, protein, or micronutrients through various sources. The micronutrient deficiencies, stunting, wasting, and being underweight constitute the term 'Undernutrition' (WHO-2016). "Undernutrition is determined by low weight-for-age, low weight-for-height, and low height-for-age (WHO,2006)". Undernutrition has multidimensional aspects associated with deteriorated sensory-motor capacity, impaired cognitive functions, reproductive disorders, and social development issues with an overall decrease in quality of the life of individual. The undernutrition phenomenon escalates worldwide health confrontations linked to exceptional care, infirmity, and death.

Undernutrition

is the main causative factor with a pessimistic impact on the child's growth, and it also impairs the school recital and efficiency of the child. More than 2 million children die due to malnutrition every year before they reach the age of five. The World Health Organization (WHO) has reported that out of 178 million malnourished children globally, about 20 million are severely malnourished affecting 3.5-5 million death annually among children less than 5years. Furthermore, Asia, particularly south-central Asia, accounts for 70% of the world's wasted infants (UNICEF-World Bank 2012).

Undernutrition in children less than five years in India is dominating globally and about double of Sub-Saharan Africa (World Bank-2014). 151 million children were stunted globally in 2017, with approximately 24% of children (less than five years) experiencing stunted growth in low & middle income countries (UNICEF, 2018). "The Global Nutrition Report (2018)" reiterates the emergency of undernutrition in the nation as India is on the top for stunted children.

Undernutrition is a focal communal health indicator and prospective source of high disease-prone or morality status in South Asia. Persuasive data suggests that malnutrition is the primary cause of underweight, wasting, and stunting, with tremendous growing consequences among society's vulnerable section. India has the maximum proportion of underweight children with 2-5 years of age.

It has also been reported that India recorded 25.5 million wasted children, along with Nigeria 3.4 million, and Indonesia, with 3.3 million children (Phungwayo, *et.al.*2021). Focus on the early stages of life is a matter of more significant concern as malnutrition affects the child's growth and overall development and the several indicators of child growth. Good nutrition for all is the requisite constituent to maintain good health. A healthy and economically viable diet providing optimal nutrition is the need of the hour for promoting salubrious life.

The World Bank UNICEF, and WHO divulge that the world is still far from being malnutrition free. The "Joint World Bank" issues a print in March 2019 presenting the markers of stunting and wasting amongst <5 years age group child and consistent progress has been observed in the target to achieve the "World Health Assembly goals set for 2025" and scaling up movement target plan for 2030 (UNICEF-World Bank-2019). Though undernutrition is apparent in varied ways, the direction and pathways to hinder are almost identical: varied nutritious and safe food at an early age, sufficient nutrition to the mother during and after pregnancy, healthy environment for the children with proper hygiene and sanitation all around. The development assessment evaluates children's health and nutritional status and provides significant measures to decide prospective action. However, other similarly significant malnutrition forms less evident to the naked eye-specifically, are deficiencies of vital vitamins and minerals. The risk of infection and contagious disease, and moderate undernutrition deteriorates each immune system segment.

Nutrition evolution in India was reconsidered by the "U.N.'s Food and Agriculture Organization" in 2006 with documented data for ongoing transition amongst society's wealthier segments (Kennedy G, 2017).To evaluate and assess the remaining nutrition and health hygiene challenges, India's government has launched the National Nutrition Mission (POSHAN ABHIYAN) in March 2018 (National Health Portal- India). The government has fulfilled its necessary obligations by forming determined goals and putting considerable efforts to introduce an effective financial plan for better nutrition that transforms into well-built immunity, illness-free, and superior health. In 2012, the WHA (World Health Assembly) approved an inclusive execution plan for the young infant, child, and maternal nutrition (lactating mother) that intensified six global targets related to priority nutrition levels to be attained by 2025 (WHO-2014). Worldwide major organizations, NGOs, local governments, and World Bank need to influence and take up the issues to ultimately eradicate malnutrition from the specified areas for the economic development of society and a healthy environment all over.

The child undernutrition problem is mainly concerned with middle and low-income countries, where one-third of the infants are expected to be malnourished. (Mohseni.*et.al* 2019).Child growth and development is globally recognized as critical in nutritional status and health in growing populations. Children's dietary needs are unique and demand special attention because of their rapid growth and development. Preschool children require persistent thought worldwide in this direction. This age group needs unique nutritional requirements for their growth and overall development. Reducing child malnutrition requires economically viable nutritious food. A major focus should be on addressing the dietary needs of particularly vulnerable groups and the simultaneous increase in the demand and availability of value-added food products to improve their health, growth, development, and maintain future health and efficiency. It is mandatory to move ahead with the exponential growth and use of particular food commodities or to formulate value- added food preparations for a malnourished preschool group of children. Therefore, the availability of nutritious value-added recipes developed mainly for preschool children is the need of the hour.

Value-added supplemented nutrition-sensitive food approaches are a must for improving the potential of the diet and eradication of malnutrition. Value-addition or supplemented recipes can enhance the nutritional value of the food by adding functional ingredients and improving their sensory attributes, which is the fundamental objective of value addition in the dietary system.

Spirulina is one of the blue-green microalgae which is indigenous to Africa and used worldwide nowadays. Spirulina genre can serve as an excellent substitute for various uses allied to nutritious food and therapeutic formulations of food which transform immune function and control numerous diseases (Karkos. *et.al*.2011). Spirulina is considered one of the most excellent protein sources in gram protein per cultivable land ratio (Siva Kiran *et al*., 2015). As per NASA report 1kg of spirulina carries nutrition power equivalent to 1000 kg of vegetables and fruits. NASA and the European space agency MELISSA recommended spirulina as a significant food and nutrition supplement. Spirulina can be used from infancy to adulthood for both genders, i.e., male and female. However, its effects mainly manifest in the young growing child, especially at the weaning and preschool stage. Spirulina is a vital complete food source of efficient nutrients with all every essential amino acids along with beta-carotene. 4 per cent decline in bitot's spot among 50,000 pre-school children was reported by Seshadari, 1993 on feeding one gram of dried spirulina for six to thirteen months. Value-added food product formulated with spirulina, cornflour, and wheat flour at 5,5 and 90 per cent concentration respectively was found to be well accepted and can safely be recommended (Vijayarani *et al.*,2012). The microalgae are supplemented in various food formulations. The blue-green micro-algae can be proposed to alleviate problems related to malnutrition and being rich in multiple nutrients, is simple to produce economically and can supplement many traditional foods (Hug & Weid 2011). 30 undernourished children (18-36 months of age) fed with 10 g spirulina daily, for nine months, resulted into better improvement in HAZ (Normal) (Masuda. *et al*. 2014). Féfé Khuabi Matondo *et al*. (2016) also observed significant growth for weight-for-height and weight-for-age along with significant improvement in total proteins, albumin, and corpuscular volume among the interventional group intervened with 10gm of spirulina daily.

Onubi *et al*. (2015) discussed the advantages of consuming prebiotics (produced by probiotics) in terms of weight and height gain, particularly in malnourished children in developing countries. Furthermore, the children's growth curves in the probiotic groups were considerably higher than others in the comparison group, implying that probiotics aid in the compensatory growth of children with stunting.

Soybean, a legume grown in subtropical, tropical, and moderate temperatures, is considered to have maximum protein content of all food crops and equal protein availability in animal feed. Biscuits are one of the oldest bakery products with cheaper worldwide demands, especially among children and other age groups and are ready to eat at any time. Wheat or *maida*, the main ingredient that constitutes most biscuits, lacks in essential amino acid lysine. In contrast, soybean is a better alternative, well- off in lysine and sulphur-containing amino acids. Supplementation of soybean in biscuits or other forms of food is very common in most parts of the nations and especially suited for the economically weaker sections of society. Supplementation or value–addition may not always be productive on its own. The intervention studies need to be accompanied by awareness through nutrition education, and it must propagate nutrient-rich food consumption, especially for the target population. In general parents do not possess enough nutritional knowledge regarding means for proper nutrition along with health-seeking and health care behaviours. Recommendation for a healthy diet in qualitative and quantitative terms and dissemination of good knowledge regarding the quantum and sizes of servings per day must be identified by each individual. It must be understood that the attribute characteristics rely on the natural intake utilization of the nutrients in the food, and quantitative indicators comprise the estimation of the quantity of nutrients necessary to consume.

Malnutrition among children less than five years is a foremost concern for health officials. There is a need to empower public health interventions for mild malnutrition cases and vulnerable populations along with forceful local implementation and evaluation of strategies. Hence, the critical status of undernourished children in the target group stresses, the significance of the value-added supplemented food formulations and nutrition education in improving the nutritional level of the undernourished children among the vulnerable group. To fill the gap in the existing knowledge the present research project is proposed.

Objectives of the study:

Below stated are the proposed objectives of the present study.

1. To assess nutritional status of undernourished children.
2. To study the efficacy of nutrition interventions on nutritional status of undernourished children.

Review of Literature

The following straplines were used to organize the review of literature relevant to the current study:

2.1 Undernutrition: An Overview

2.2 Undernutrition in the World: A Global Scenario

2.3 Undernutrition: A National Scenario

2.4 Undernutrition: A Regional Scenario

2.5 Undernutrition in pre-school children

2.6 The role of probiotic in enhancing the nutritional status of undernourished children

2.7 Development and sensory evaluation of value-added food preparations

2.8 Role of feeding interventions in improving nutritional status of children

2.9 Impact of nutrition education and counselling

UNDERNUTRITION: AN OVERVIEW:

Nutrition is a vital column for one's growth and development. Undernutrition is primarily caused by a lack of dietary energy; irrespective of any additional specific nutrient is a limiting factor. Undernutrition is often replaced with the term malnutrition which means an impairment of health, either because of deficit or excess, or by an imbalance of nutrients.

Measures of child malnutrition are used to track the development and progress of children. Analysis of child malnutrition during the Post-2015 Development period assisted in determining if the world is on course to meet the Sustainable Development Goals, notably goal two, "end hunger, ensure food security and improved nutrition, and promote sustainable agriculture." The interrelation between malnutrition and infections can result in a possibly deadly disease cycle and deterioration of nutritional status. The first 1,000 days of a child's life are critical, and poor nutrition can result in stunted growth, diminished cognitive ability, and poor school and work performance (UNICEF-2020). Undernutrition poses silent crisis in the country. The pervasiveness of underweight children in India is on top globally and is virtually two times of Sub- Saharan Africa. According to the Millennium Development Goal, India is responsible for halving malnourished children's occurrence by 2015.

The consequences of child malnutrition in terms of sickness and death are considerable, and malnutrition has a measurable influence on productivity, therefore failing to invest in tackling malnutrition decreases potential economic growth. The

situation is alarming in India with highest prevalence of undernourished children (World Bank, 2015). Protein-energy malnutrition is a state of lack of energy or protein to fulfill the body's metabolic requirements, resulting from either insufficient protein intake and low dietary protein quality, or higher demands due to disease or nutrient depletion. (Mane, V *et al.* 2015).

According to Arunkumar and Hidhathula (2015), undernutrition has a negative impact on cognitive function, motor development, sensory development, and social development. As a result of undernourishment, children would be much less likely positioned to gain from schooling and will earn less as adults.

Bagilkar (2015) described malnutrition as a crucial global health issue because of which millions of children died and are disabled each year. Undernutrition also prevents millions more from reaching their full intellectual and productive potential.

Undernutrition is the main causative factor with a imparing impact on the child's growth, and it also impairs the school recital and efficiency of the child. More than 2 million children died due to malnutrition every year before they reach the age of five. Globally 47.7 per cent of preschoolers are affected with anaemia, and 33.3per cent has vitamin A deficiency (Laillou, A., *et.al*, 2014).

Malnutrition is an important community health marker and fundamental reason for numerous diseases. It is also the foremost factor for the worldwide burden of the disease. It affects one out of three preschool-age children. It has a long-term adverse effect on the physical and cognitive growth of the children. (Dhone *et al*., 2012).

According to Srivastava *et al.* (2012), undernutrition during preschool age childhood is associated with sluggish cognitive development and severe health impairment later on in life that reduces the superiority of the life of an individual. It is one of the reasons behind the high mortality rates observed in developing countries.

A GLOBAL SCENARIO OF UNDERNUTRITION

According to the joint malnutrition statistics, the prevalence of stunting has been dropping since 2000, with more than one in five children stunted under the age of five in 2019, and 47 million suffering from wasting.

According to UNICEF, A very high incidence of stunted population was noticed in three regions in 2019, affecting around one-third of children. On the other hand, three areas showed minimal levels of stunting. However, huge inequalities might exist within locations with lowered down occurrence of stunting. Chronic malnutrition varies greatly between neighbouring nations. About 1 in every 8 people in one state is affected. On the other hand, over one-half of their counterparts in the neighbouring countries, is at a disadvantage because of the irreparable cognitive and physical impairment that can accompany stunted growth.

Stunting affects around 21.3 percent (144 million) of children worldwide, and 6.9 percent (47 million) of children less than five years'. The rate of malnutrition is frightening. Stunting is receding too slowly, whilst wasting continues to have a significant influence on the lives of so many young children. All forms of malnutrition are prevalent in Asia and Africa. Asia and Africa reported that 54% and 40% undernourished children (stunted) <5 years of the age. Asia had 69 percent of the wasted children less than five, and Africa had roughly 27 percent (UNICEF, WHO, World Bank Group Joint malnutrition estimates, 2020 edition).

Around the world, 47 million children under the age of five were found to be malnourished, with 14.3 million of them seriously malnourished. South Asia had more than half of the wasted children and Sub-Saharan Africa had a quarter, with a comparable ratio for seriously wasted children. The 14.8 percent wasting prevalence in South Asia signalled a pressing need for a variety of interventions, including a nutritional programme (UNICEF 2019).

Sultana *et al*. (2019) investigated the prevalence and make out the associated risk aspect of child malnutrition in Bangladesh. 6965 children from 0-59 months of age studied were from 2014 health survey report. The study reported that the incidence of underweight and stunting was 25 percent, and wasting was 11 per cent. The stunting prospect heightened with age and was found the maximum in the children aged 36-37 months. It was extensively higher than children who were less than six months. Berhanu G *et al.* (2018) conducted a community-based comparative cross-sectional study at Albuko district in Ethiopia on preschool children, and the overall results showed that prevalence of stunting children from food-insecure (42.8 per cent) situations outnumber children from food-secure households (35.9 per cent).

Demilew *et al.* (2017) undertook a study on 480 subjects aged 2-3 years' from the slum region of Bahir Dar, Ethiopia. According to the survey, the prevalence of stunting was 42 per cent, underweight was 22.1%, and wasting was 6.4 %. Incidence of severe underweight, wasting, and stunting was respectively 16.3%, 3.8 %, and 1.3%.

Chataut and Khanal (2016) carried out a descriptive study on 402 children less than five years' from rural areas of Kavre, Nepal. Malnourished children made up 7.0 percent of the population, 97 percent were stunted, and 18.9 percent were underweight, according to WHO growth criteria.

Ozor *et al*. (2014) conducted an evocative cross-sectional study on the incidence of undernourishment among children of

the age of less than five in Nigeria's Ekpoma community. The research enrolled a number of 402 children. Male children were found to be more prone to be underweight (3.2%) than female children (2.2%). Underweight, stunting, and wasting were found to occur in 2.5, 12.4, and 9.5 percent of the population, respectively.

According to Nisbett et al. (2014), malnutrition have an effect on over 2 billion people worldwide, with roughly 25 percent of all children in low and middle-income nations chronically stunted. The WHO has reported that out of 178 million malnourished children globally, about 20 million are severely malnourished affecting 3.5-5 million death annually among children less than 5years. Furthermore, Asia, particularly south-central Asia, accounts for 70% of the world's wasted (UNICEF-World Bank 2012).

Khambalia *et al.* (2012) analyzed the prevalence and socio-demographic indicators of malnutrition among children in Malaysia. They drew the conclusion that 13.2% of children (0-18 months) were underweight as per Z score. Males were more likely to be underweight than females, and rural children were more affected as compare to urban children.

A NATIONAL SCENARIO OF UNDERNUTRITION

Singh *et al.* (2019) reviewed a study data of NFHS (2015-16) with seeks to inspect the socioeconomic inequality in malnourished children from 640 districts of India. The study revealed that in India, 38 per cent of children stunted, and 35 percent were underweight. The prevalence of underweight (7 to 67%) and stunting (13 to 65%) children differ significantly across the districts. The districts have a higher contribution of malnourished children to the particular areas of the central-east and West part of the country. The underweight and stunted children were mainly found in the least developed regions of India. Among the children less than five years, malnutrition status is undoubtedly low compared to global or even South East Asian S.D.G. regions. Further, in some Indian districts, malnutrition is as high as in many other African countries (Chattopadhyay, S.,2019).

Global Hunger (2018) reported that India had been categorized with severe hunger levels in a recent study. Gautam *et al.* (2018) reported the prevalence of stunting of 31.2 per cent and severe stunting of 13.59 per cent among 390 children of Kanpur aged less than five yrs. On the other hand, 14.62 per cent of the children had been found wasted with 6.15 percent cases of severe wasting. The children with mild and moderate malnutrition were 40.51 and 7.95 per cent, respectively, as per the measure of mid-upper arm circumference. A significant correlation between malnutrition and age of the children were also observed.

Vasudevan, & Udayashankar (2019) examined the nutritional level of children of age group less than five years in union territory of Pondicherry and reported that underweight, wasting and stunting in the study area was respectively 18.3 %, 31.6%, and 20.1%. The proportion of moderate and severe underweight and wasting was noticed maximum among 1-2 years age group, whereas, the age group 4-5years had the highest percentage of moderate and severe stunting.

Senthilkumar *et al.* (2018) assessed prevalence of malnutrition and determinants in a group of children less than five years in Coimbatore's tribal area (Tamil Nadu). Overall, 51 per cent of the children were assessed to be undernourished, with 41.3 per cent underweight, of which 11.2 percent were severely malnourished. Nearly 21.8 per cent of children wasted, with 6.8 per cent severely wasted. Karki *et al.* (2017), performed a study on 390 sample subjects of age 6-59 months to identify the factors and determinants for malnutrition and found that almost half (47.8 percent) of children had a malnourished effect and had no immunization. In contrast, one-fourth (23.26 percent) of the children who were undernourished were vaccinated.

The National Family Health Survey-4 (2015-2016) estimated that in India, every third child under the age of five is underweight, whereas NFHS-3 (2005-2006) estimated that every fifth child found to be underweight. The records mentioned in ICDS (Integrated Child Development Scheme) centers reported that 27.6 per cent of children of age group 0-6 years that had been enrolled in ICDS centres were found underweight until march 2014 (Demilew, 2017). The clinical, anthropometric, and biochemical Survey in 2014 (CAB) stated that in Uttar Pradesh the prevalence of stunting among the children was found 62 % that is the highest one. On the other hand the prevalence of underweight and wasting cases was found 45.7 in the district of Jharkhand and 32.4 percent in Chhattisgarh respectively which are the highest percentage of the case. The case of severe stunting is assessed to be elevated in Uttar Pradesh that is 35.6 percent. Whereas, prevalence of severe underweight and severe wasting was found the highest (18.8 % and 11.5%) in Chhattisgarh. Among the district Rai bareli in Uttar Pradesh was found to have the maximum prevalence of the cases of underweight, stunting and wasting that is approximately 77.4 percent. In the state of Uttar Pradesh Hamirpur district and in Bihar, the Aurangabad district was recorded to have the prevalence of 70.2 and 37.2 percent respectively *(*Agarwal.et.al 2018).

A REGIONAL SCENARIO OF UNDERNUTRITION

The prevalence of stunting is not uniformly distributed across the different districts in Punjab. Stunting is comparatively lower in the Mansa district (7%), followed by bathinda and Muktsar (17% each), whereas the prevalence of stunting is higher in mohali (59 %) and Fatehgarh sahib (48%). Severe stunting is lower in Mansa(3%), followed by patiala (9% each). Overall, 32 percent of the Punjab children belonged to the wasting category, and 19 percent under severe wasting. Regions were the ratio of underweight children ranges from 52 per cent in Mansa ("Ministry of Health and Family Welfare

DLHS-4). Jain *et al*. (2018) conducted a study among a sample of 600 children less than five years from a rural region of the Bathinda district to assess the nutritional status and the environmental characteristics that affect the children's nutritional status. The study revealed that 30.7 percent of the children were underweight, 7.5 percent wasted and 46.2 percent stunted respectively.

According to a report based on the studies carried out in the districts of Chandigarh, Panchkula and Mohali Children suffer from severe malnutrition. Around 37.4 percent of children in these areas were underweight, while According to Dr. Rakesh Gupta (2014) of the National Rural Health Mission, children who suffer with acute malnutrition are nine times more likely to die than children being well. Furthermore, malnutrition was responsible for 53 per cent of casualties amongst children less than of five years' in Haryana.

UNDERNUTRITION IN PRESCHOOL CHILDREN

Osguei (2019) examines the association between demographic status, socio-economic status and nutritional level of Nepalese children < five yrs. A study of 3630 children found that 46.3 percent were stunted, 38.1 percent were underweight, 14.1 percent were wasted, and 44.9 percent were anaemic. In a cross-sectional study on 600 children in district Rohtak's rural areas among children of 1-5 years of age, nearly 41.3 per cent of subjects were found stunted and 54.4 per cent were malnourished. The prevalence of underweight and stunting was more among girls (Gupta *et al*. 2019).

Nayak *et al*. (2018) conducted a community-based case study among preschool children of 3-6 years attending Anganwadi centers of Udupi, district of Karnataka, India. The majority (45.8%) of the children belonged to the 3-4 yrs of age group. The maximum (84.4%) of the children were in low socioeconomic status and were underweight. Undernutrition and the socioeconomic status of the parents was observed significantly associated.

Bharati, (2018) studied the growth and the impact of socioeconomic variables on preschool children nutritional status. 205935 children aged 0-59 months, showed a progressive development in all the age groups. The proportion of underweight boys was highest for the 9 and 23 months as compared to 12-35 months old girls. The large ratio of underweight or stunted children progressed from 6 months to the next second year of life.

A study of 400 preschool children of rural areas of Chhattisgarh state reported prevalence of 36% of underweight, 35.5 % stunted, and rest 28.5 % were under the category of wasting. Nearly half of the girl children were found to be malnourished and stunted. The proportion of female children was more nutritionally destitute than males (Sukla and Borkar, 2018). A study was carried out with the thirty slums of Kanpur cluster sampling each cluster having 390 children aged 0-60 months, and the result based on WHO classification indicated the prevalence of stunting (31.28%) and severe Stunting (13.59%). The wasting subjects were categorized in two, i.e., wasting (14.62 %) and severe wasting (6.15%). As per the mid-upper arm circumference criteria, moderate malnutrition was 40.59 percent and 7.97 per cent were severely malnourished. The finding further concluded that malnutrition's prevalence decreased significantly with better maternal education (Gautam. 2018).

Karki *et al*. (2017) examined a study with underweight children under the age of five in Nepal and concluded that one-quarter (26.16 percent) of the children were mildly malnourished based on MUAC (mid-upper arm circumference).

A study on children aged 1-7 yrs aged children, conducted in governmental and non- governmental kindergartens in Kosovo, revealed that the average for WAZ, HAZ and

WHZ were all within 0.0 and 0.1. A proportion of stunted children was 1.3per cent, while the proportion of wasting children was 1.9 per cent (Rysha,*et.al.* 2017).

A study on 456 preschool children of 3-6 years participated in Anganwadi centers in Kannur district, Kerala, explained 17.3 percent underweight prevalence and a significant association between the nutritional status It was also determined that mother's level of education is important in preventing underweight in preschool children S.S,Anitha *et al*. (2017).

Pasha Mushtaq *et al*. (2017), performed a pilot cross-sectional research in Nandayal, Andhra Pradesh, to evaluate the nutritional status and stratify the effects involved with preschool children's nutritional status. There were a total of 161 children aged 3-6 years, with 42.2% and 57.8 % respectively males and females. Malnourished children in the second degree (according to the Gomez classification) accounted for 47.8 percent of the total, with the first degree accounting for 39.1 percent. The study also discovered that the mother's education and socioeconomic status had an additional impact on the second and first degrees of undernutrition. Saaka and Zackaria (2016) assessed the relationship between wasting and stunting on 2,720 preschool children of Ghanania. The incidence of simultaneous wasting and stunting within and between children aged less than 5 yrs was lesser i.e. at 1.4 percent. Children with low weight-for-height scores had a higher risk of linear stunted growth (stunting), particularly those under the age of three. Islam *et.al*. (2014) carried out a descriptive study with 144 under-five children from Tangail's rural and urban areas (72 children each). Weight-for-height study reflected that children found to be severely wasted were 1.39 percent, moderately wasted (1.39 percent), and mildly wasted (22.23 percent) in the rural area. Weight-for-age results showed that children were relatively underweight (38.8 percent mild and 25 percent moderately malnourished), and the preponderance of height-for-age among rural children was 44.45 percent higher than among urban children (2.7 per cent). The study further concluded that nutritional knowledge, personal hygiene

practices, breastfeeding, adding nutritious value-added food, community education, and dietary patterns would significantly improve the children's nutritional status.

THE ROLE OF PROBIOTIC IN ENHANCING THE NUTRITIONAL STATUS OF UNDERNOURISHED CHILDREN

Research was conducted on the iron deficient children with interventiom of probiotics before and after test. One group of children was supplemented with iron syrup and other group was intervened with iron syurp with fermented milk containing fructo-oligosaccharides and lactobacillusplantarum for 90 days. The result revealed that serum ferritin, haemoglobin level and body weight, height of the children increased significantly ($p \leq 0.05$) who were intervened with fermented milk and iron syrup (Helmyati *et.al*.2020).

Synbiotic (probiotic and prebiotic bacteria) supplementation effects on the growth of children between the age of 2-5 years, selected from the Khatamolanbia Clinic, Shahid Sadoughi University of Medical Sciences, Yazad, Iran were investigated sixty- nine FTT (Failure to thrive) patients were involved and the study showed that out of 69 patients, 81 per cent were mild underweight, and the remaining 19 per cent were of moderate underweight. The patients were introduced with probiotic and prebiotic bacteria for a month. The mean weight of the children in the symbiotic group increased significantly. The study also suggested that symbiotic can be effective in weight and BMI gain, especially in undernourished children (Aflatoonia *et al*., 2020).

Onubi *et al*. (2015) discussed the advantages of consuming prebiotics (produced by probiotics) in terms of weight and height gain, particularly in malnourished children in developing countries. Furthermore, the children's growth curves in the probiotic groups were considerably higher than others in the comparison group, implying that probiotics aid in the compensatory growth of children with stunting.

Famouri *et al*. (2014) undertook a triple-blinded research in Shahrekord, Iran to study the effects of synbiotic on children's growth. A total of 84 underweight children aged 12 to 54 months, 42 each in both the groups (control and supplemented), and the children who were selected for study were assigned as interventional and control groups. The interventional group was intervened with synbiotic and starch powder in a sachet, containing 150 million spore bacillus coagulants and 100 mg fructo- oligosaccharides for six months. Results showed significant increasing effect on the weight of interventional group. Surono *et.al*. (2014) conducted a ninety-day randomised, double-blind study on Indonesian children aged 12-24 months. There were four categories (Placebo, probiotic, zinc supplementation, and a combination of probiotics and zinc). The results showed a good prospective to improve children's zinc levels after taking a combination of probiotic L. and plantarum IS-1056 and zinc supplementation in the experiment, as well as a significantly improved humoral immune response.

Protective effects of probiotics and their impact on preschool children aged 2-5 years living in urban slums with a sample of 379 preschool children were assessed by Hemalatha *et.al* (2014). The Children were intervened in three randomly allocated groups with probiotics for nine months to estimate weight gain and their effect on linear growth, diarrhoea and fever and it was found that it helped to make a healthy gut. A double-blind, randomized pre-post trial study was carried out for 90 days on the preschool children of Indonesia to measure the effects of the probiotic, on the body weight, or the humoral immune response, with two groups (placebo and probiotic). Total serum & salivary levels were analyzed along with the children's body weight measurement. The total serum did not extensively increase in the probiotic group than the placebo group. In contrast, the whole salivary level and the children's body weight increased significantly ($p \leq 0.05$) in the probiotic group compared to the placebo group. The salivary level was substantially more in underweight children who intervened with probiotics. The study additionally found that probiotics had positive effects on weight gain, total salivary level, and humoral immune response in underweight children (Surono *et al*. 2011). Sazawal (2010) also assessed the consumption of probiotics and prebiotic milk for one year resulted in an increase in weight gain and iron content in the body of experimental children from Sangam Vihar, New Delhi.

Development and sensory evaluation of Value-added food preparations

Zegeye *et al.* (2019) formulated cookies from the blended flour of sorghum and wheat added with soybean flour, and the preparations indicated a significant increase in ash and fat. Organoleptic acceptability was based on color, taste, flavor, texture, appearance, and crunchiness. It was illustrated that soybean and sorghum could be effectively supplemented with wheat at 5 per cent sorghum and 10 per cent soybean to provide overall acceptability. The incorporation of wheat and sorghum blend in the flour up to 20 per cent provided cookies satisfactory acceptable organoleptic superiority.

Srivastava, (2017) planned a study to develop fortified food products by adding spirulina in noodles, cookies, and pasta to improve nutrient contents (protein, calcium, iron, copper, phosphorous, and vitamin B12) in the food products. Adding spirulina in pasta and noodles at 5 and at 10 percent in biscuits was most acceptable on sensory evaluation indicators. The study's outcome revealed that the developed food preparations were quite nutritious. The nutritional value was comparatively higher than the control group, and fortified food products using spirulina help combat malnutrition.

Adegoke *et al*. (2017) evaluated the acceptability of various food preparations that formulate turmeric powder, soybean

flour, and wheat flour. The optimal flour blend used to develop the biscuit consisted of turmeric powder, of ratio 0.5 percent, and soybean flour, 26.63 per cent, with wheat flour 72.88 per cent, respectively. The sensory evaluation compared with control (100 % refined wheat four) revealed a significant effect at the level of 5 per cent.

Pasupuleti *et al.* (2017) conducted a study to assess krishna poshak mix *laddus*' given efficacy on the nutritional status of 100 preschool children (50 experimental & 50 control) in rural areas of Guntur District of Andhra Pradesh. The results indicated that supplemented *Krishna Poshak* mix *laddus* to the children is an efficient supplement to improve the children's anthropometric measurement. The primary analysis suggested mean weight gain as 12.7±1.07, and UMAC was13.16±1.09. After six weeks of the intervention, the calculated mean weight was 13.31±1.10, and UMAC was 13.6±0.7.

De Marco *et al*. (2014), a trial was carried out a trial to estimate the effects of adding spirulina on dried pasta's technological and nutritional quality attributes. Wheat flour was substituted by spirulina at three different levels, i.e., 5g, 10g, and 20g. In contrast, the control (without spirulina) sample was compared and analyzed for its technical and nutritional quality characteristics and the technical quality was analyzed in terms of cooking behavior and texture profile. Besides, it has also been subjected to its measurement of protein content, *in Vitro* phenolic compound, antioxidant activity, and protein digestibility. It was pointed out that the addition of spirulina in pasta has shown an increase in antioxidant properties and a good amount of protein content as compared to control. The pasta with 20gram of spirulina considerably altered technological quality characteristics.

Ndif. *et al. (*2014) developed biscuits by introducing full-fat soy flour at different levels with wheat flour and inferred that the cookies were well acceptable at 30 and 50 percent of the addition of soy flour with wheat flour**.**

Role of feeding interventions in improving nutritional status of children

Castro *et al*. (2017, conducted trials on 110 preschool children aged 2-5 years in Brazil to measure the effects of vitamin and mineral product supplemented inulin (a prebiotic fiber) on vitamin A and iron status of children. 30 g of inulin diluted in 100ml of water, supplemented five times a week, given daily for 45 days. It was inferred that values of Z scores and all parameters were significantly higher after the intervention. The supplementation significantly improved the intake level of energy, micro, and macro-nutrients and improved the iron and anthropometric status of the product developed.

The impact of developed spirulina fortified biscuits on two anaemic groups (experimental and control group) was assessed at Allahabad's. The analysis result shows that the biscuits contained 2.55 per cent moisture, 6.25 per cent protein, 20.43 per cent fat, 1.18 per cent crude fiber, 4.07 per cent ash, 2.88.98 per cent calcium, 115.92 per cent phosphorus, and 3.94 per cent iron. Developed fortified biscuits intervened to the subjects for 45 days resulted into a significant increase in hemoglobin level (1.66g/dl) than the control group (Fatima and Srivastava,2016).

Steenkamp. *et al.*(2015) planned a study on children with moderate acute malnutrition (12-60 months). The research study was made to determine the anthropometric alteration in those who were intervened with ready to use supplementary food for six weeks, followed up until 12 weeks. The Z-scores for weight-for-age, height-for-age, weight-for-height, and mid-upper arm circumference, all improved significantly. Maximum (70.5%) of the subjects stood in a similar malnutrition classification, and only 26 per cent recovered. The children's growth rate with a low initial weight-for- height was found significantly higher, i.e., $r = -0.15$, $p<0.05$, followed by those with less wasting. Douamba *et al*. (2012), undertook a study on 304 malnourished children aged (6-48) months in order to estimate the impacts of a cereal and soy dietary preparation on the health parameters of undernourished children in Ouagadougou, Burkina Faso. Children (172 female and 132 male) were intervened with developed value-added food (composed of 60 per cent of small millet, 20 per cent of soybean, and 10 per cent of groundnuts). It was inferred that after of the intervention 63.81 per cent of children improved with the normal W.H.Z.> −2. Result showed that, there were only 6.58 per cent children with W.H.Z. <−3.

IMPACT OF NUTRITION EDUCATION AND COUNSELLING

Fadare *et al*. (2019), in their investigation, reported that mother's knowledge had positive & optimistic link with weight-for-height and height-for-age Z scores in the children. A mother with a higher level of education possesses a momentous positive involvement with the child's height-for-age and weight-for-height Z scores. Hence, imparting nutrition education and knowledge to mothers is a vital footer to bring into better nutrition status. Oly-Alawuba *et al*. (2017) also revealed in their study a significant ($p\leq 0.05$) change on correlation between the mother's nutrition knowledge and anthropometric parameters among 400 children aged 2-5 years.

Sharma and Lakhawat (2017) conducted the pre and post-test before and after imparting education to mothers. The baseline (pre-test) scores of all the mothers expressed a low level of nutrition knowledge. After imparting nutrition education, a maximum (82%) of mothers gained a high level of nutrition awareness. The study also found that 39.8 percent of the subjects were familiar with food, but this increased to 75 percent after imparting nutrition education. The knowledge regarding the food groups illustrated at the primary level was only 7.5 per cent, which improved to 77.5 percent afterwards. Mothers had poor knowledge (4.7%) about nutrition deficiency diseases; however, it increased (82.1%) after gaining nutrition education.

A short-term training program was conducted to evaluate the knowledge of forty-five mothers of under-five children and to

measure the effect of pre-arranged training instructions in a backward region of New Delhi. The pre-test proportion of 40 per cent of mothers had poor knowledge, 33.3 per cent had average knowledge, and only 26.7 per cent possessed better knowledge. On the other hand, post-test scores suggested that only 26.7 percent had poor knowledge, 46.7 percent acquired average knowledge, and the rest- 26.7 percent gained adequate knowledge (Mishra. *et al.* 2017). Sahana and Chandrasekhar (2016), conducted a study on the mothers of children under five groups from Shimoga, Karnataka, and concluded that more than half (55.2% and 55.8%) of the children were underweight and stunted whose mothers were illiterate as compared to the children of mothers who possessed primary education (41.0% and 42.9%). The children of the mothers who were employed were weak with stunting and underweight (77.4% and 80.6%) compared to home wives, i.e., 46.8 percent and 48.0 percent, respectively.

Priyanka and Veenu (2015) also assessed impact of nutrition education on mothers' nutritional knowledge. The pre-scores exemplify a lack of nutrition knowledge in mothers in the study area. The post-scores had a significant ($p<0.01$) gain in knowledge after imparting nutrition education. Aparna (2015) evaluates the consistency and efficiency of designed nutrition education programs to spread awareness concerning PEM (protein-energy malnutrition) amongst the mothers of children aged less than five. Results have shown a significant ($p\leq0.05$) growth in mothers' knowledge compared to pre-test scores. Sengupta and S Benjamin (2014) conducted a community-based intercession study on a sample of 101 children of 2-5 years from an urban slum area of Ludhiana on the impact of mother education and motivation. The nutritional and health education was provided to increase their knowledge and educate them to prepare various types of low-cost healthy supplemented food for their children.

Singh and Babu (2013) conducted a trial on 412 primary school children in Hyderabad. The study concluded underweight children were 28.9 per cent and 21.8 per cent were found stunted, and a higher percentage was observed in children of illiterate parents. Shettigar *et al.* (2013) conducted cross-sectional descriptive research on 50 mothers with children under the age of five in rural Kotekar (Mangalore) to assess their knowledge of nutritional problems. Nearly half of the mothers (54%) had poor knowledge, around 38 per cent average, and only 8 per cent had good knowledge.

John (2011) conducted a study on 500 preschool children aged 3-6 years of the tsunami-affected region of district Nagapattinam. It was noticed that maximum children were undernourished, and a significant difference was observed between mean nutrient intake and RDA. The difference between the pre-test and the post-test mean value was significant ($p\leq0.01$).

According to Ramrao (2013), the most of the adolescent girls evaluated either have low or fair awareness and knowledge about women's healthcare and dietary habits. After two months of training in reproductive health care and nutritional awareness, their awareness and behaviours improved significantly, and their percentage scores increased significantly. Nutrition education had shown a good sign in increasing the level of nutrition knowledge and nutrient intake before and after imparting nutrition education. However Kaur, 2007 observed significant increase in energy, protein, carbohydrates, and all the vitamins except vitamin B_{12} and minerals increased ($P\leq0.01$) significantly.

METHODOLOGY

In this chapter, the necessary outlines of the planning of the experiment will be discussed in a very systematic order. On the other hand, the research investigation's execution part is thoroughly discussed in Chapter 4.

Statement of the problem:

"Nourishing Communities: Addressing Nutritional Challenges Through Sustainable Approaches

Site of the study:

Mohali district was purposively selected for the study.

Domain of the study:

Villages of Mohali were taken under the study.

Selection of sample:

A group of 50 undernourished children between the ages of 3 and 6 years' randomly selected from the area the domain as prescribed above constituted the basis of the study. Purposively selected of 50, under-nourished children were further stratified according to the experiment plan and grouped into five groups. It is also specified that each of the five groups were further sub-grouped into experimental and controlled groups as per the research requirement and is presented in the following paragraph.

Designing of questionnaire-cum-interview schedule:

A self-constructed and pretested interview schedule was prepared to be introduced to parents to obtain the basic information on the family concerning age, gender, initial weight and height, education status of the parents and the parent's occupation status, family type, house type, annual income, eating and dietary habits of the children.

COLLECTION OF DATA

Personal visits were made to interview the parents to collect relevant informationwith the help of the questionnaire as finalized above. The data so collected on age, gender, initial weight & height, education status of the parents, parents' occupation status, family type, house type, annual income, eating, and dietary habitsof the children were subjected to further tabulation and analysis leading to logical and scientific inferences.

Dietary assessment:

a) Dietary habits and dietary intake: The dietary evaluation was done for three consecutive days using the "24-hour recall method". Information regarding dietary habits, likes and dislikes of food, meal intake, preference for various food, and dietary intake was fetched.

Results and Discussion

In the previous chapter 3, the planning of the experiment was discussed under the research methodology adopted. In this chapter (4), the execution part will be presented along with necessary information on various indicators, analysis and interpretation, and further discussion as per the study's objectives will be discussed.

General profile of pre-school children:

As per the sampling plan, two hundred pre-school undernourished children randomly selected from the study area were stratified into five strata. These strata of forty units, each with twenty control and twenty experimental, constituted the basis of the study.

Through the developed questionnaire, necessary data was collected from the purposively selected experimental children and their parents for their socio-economic profile (Table 4.1). The distribution of age suggested that the maximum (29.5%) children belonged to three years group followed by four (28%), five (22%) and six (20.5%) years. There were almost equal percentages of male (49.5%) and female (50.5%) children. Educational status showed that majority (68.5%) of the parents were illiterate; about 15 per cent of parents have acquired primary education, 14.5 percent were ended with metric and only 2 per cent have been over with intermediate. Most of the pre-school children parents belonged to labour class (58.5%) followed by servicemen (29.5%) and only 12 per cent were doing their own small business. Mothers of the maximum (53%) respondents were not working and about 47 per cent of the mothers were working. Nearly two-third (64%) of pre-school children belonged to nuclear family and one third (36%) had joint family. Annual income data of their family showed that for majority (59.5%), annual family income was between Rs.70000-1, 00,000, one fourth had more than a lakh and rest (15.5%) were having between Rs. 50000-70000 annualy. Maximum of the preschoolers were living in kutcha house (57.5%) followed by mixed (30%) and only 12.5 per cent were living in jhuggi.

Table-4.1 General Profile of the pre-school children

Variables		Frequency (n=200)	Percentage (%)
Age	3 Years	59	29.5
	4 Years	56	28
	5 Years	44	22
	6 Years	41	20.5
Gender	Male	99	49.5
	Female	101	50.5
Parental Education	Illiterate	137	68.5
	Primary Education	30	15
	Metric	29	14.5
Father Occupation	Intermediate	4	2
	Businessman	24	12
	Serviceman	59	29.5
	Labour	117	58.5
Mother Occupation	Working	94	47
	Not- Working	106	53
Family Type	Joint	72	36
	Nuclear	128	64
Income	50,000-70,000	31	15.5
	70,000-100,000	119	59.5
	More than lakh	50	25
House type	Katcha	115	57.5
	Mixed	60	30
	Jugghi	25	12.5

Fig. 4.1-4.4 Distribution of pre-school children according to general information

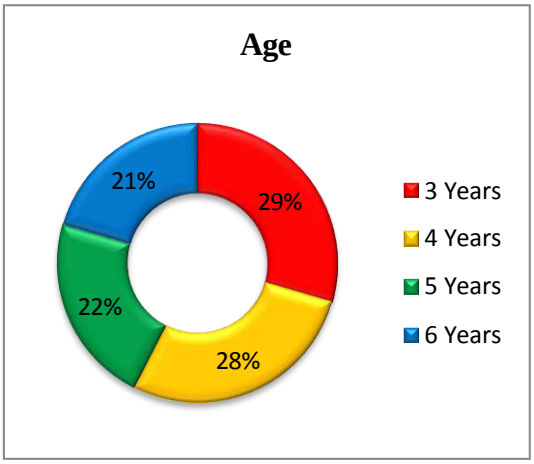


Fig.4.1

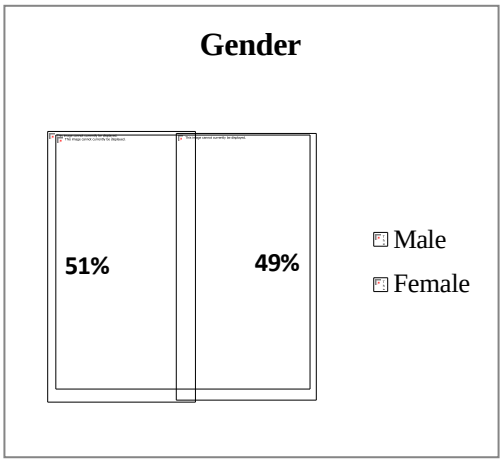


Fig.4.2

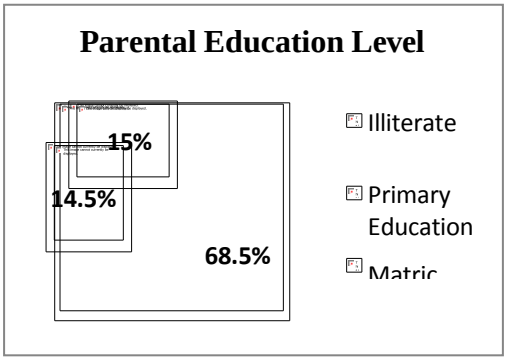


Fig.4.3

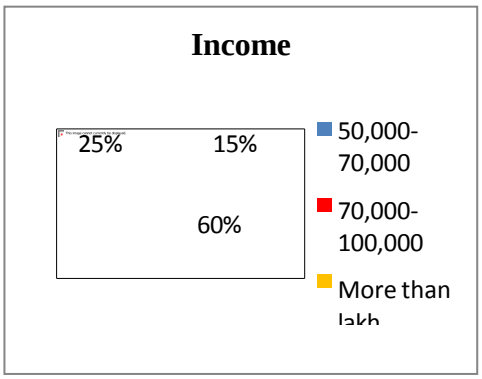


Fig.4.4

Dietary habits of pre-school children:

In response to classification on dietary habits as vegetarian and non-vegetarian, majority (97%) of the subjects were vegetarian and only 3 per cent were non- vegetarian. Out of non-vegetarians, chicken was preferred by maximum (83.33%) and only 16.66 per cent had liking for fish, however, non-vegetarian food was available hardly once a month to all (100%) of the subjects. Frequency of the meal intake responses revealed that majority (42%) of the respondents used to have two meals followed by once a day (30%) and only 28 per cent consumed three meals a day. Regarding skipping or missing the meal, response was 77.5 per cent affirmative and that too usually. The most skipped meal was breakfast (39.35%) followed by lunch (38.06) and evening meal (22.58). The reasons for skipping the meal were attributed as not tasty (19.35%), monotonous (14.19 %), no appetite (43.22%), and lack of time (23.22%). In response to nibbling, it was noticed that almost all (99.5%) nibbled; maximum between lunch and dinner (65.82%), some in between breakfast and lunch (19.59%), also in dinner and bedtime (14.57%) if available. As far as snacks were concerned, almost 100 per cent loved snacking and street food. Most preferred snacks were chips (31.5%) followed by biscuits (28%), chocolates (21%) and crax (19.5%). While most liked street food preference wise were *chat/tikki* (25%), *samosa /bread pakora* (23.5%), hotdogs/ burgers (21.5%), *golgappa* (19%) and *bhelpuri* (11%).

Table-4.3 Dietary habits of pre-school children

Variables		Frequency (f)	Percentage (%)
Eating Habit	Vegetarian	194	97.0
	Non- Vegetarian	6	3.0
If Non-Vegetarian which Non-Veg. do you consume?	Chicken	5	83.33
	Fish	1	16.66
Frequency of consuming non-Veg.	Daily	0	0.0
	Once a week	0	0.0
	Twice a week	0	0.0
	Once in a month	6	100
	One	60	30.0

Number of meals you consume in a day	Two	84	42.0
	Three	56	28.0
Do you skip meal?	Yes	155	77.5
	No	45	22.5
If yes then	Usually	134	86.45
	Sometimes	21	13.54
Which meal do you skip most?	Breakfast	61	39.35
	Lunch	59	38.06
	Dinner	35	22.58

Reason of skipping meal	Not Tasty	30	19.35
	Monotonous	22	14.19
	Not Feeling Hungry/Cranky	67	43.22
	Lack of time	36	23.22
Do you nibble?	Yes	199	99.5
	No	1	0.5
If yes then what time?	In between breakfast and lunch	39	19.59
	In between lunch and dinner	132	65.82
	In between dinner and bed time	29	14.57
Do you like snacking?	Yes	200	100.0
	No	0	0.0
What do you prefer in snacking?	Biscuits	56	28.0
	Chips/Lays	63	31.5
	Kurkura/Crax	39	19.5
	Cookies/Chocolate	42	21.0
Do you like Street Food?	Yes	200	100.0
	No	0	0.0
If yes, then what do you like in junk food?	Hotdogs/Burger	43	21.5
	Bhelpuri	22	11.0
	Chat/Tikki	50	25.0
	Golgappa	38	19.0
	Samosa/Bread Pakoda	47	23.5

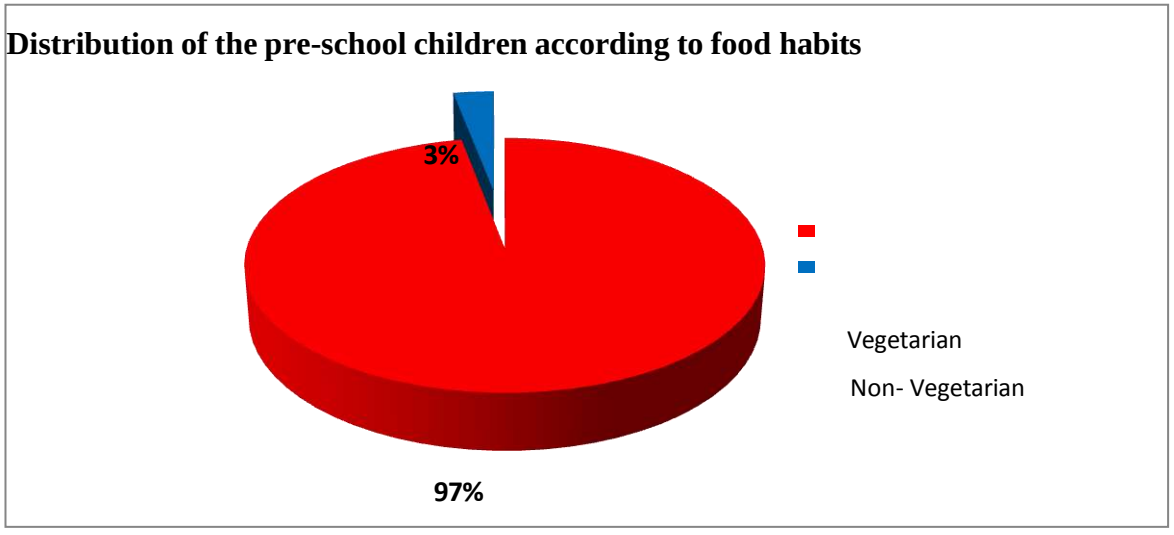


Fig.4.9

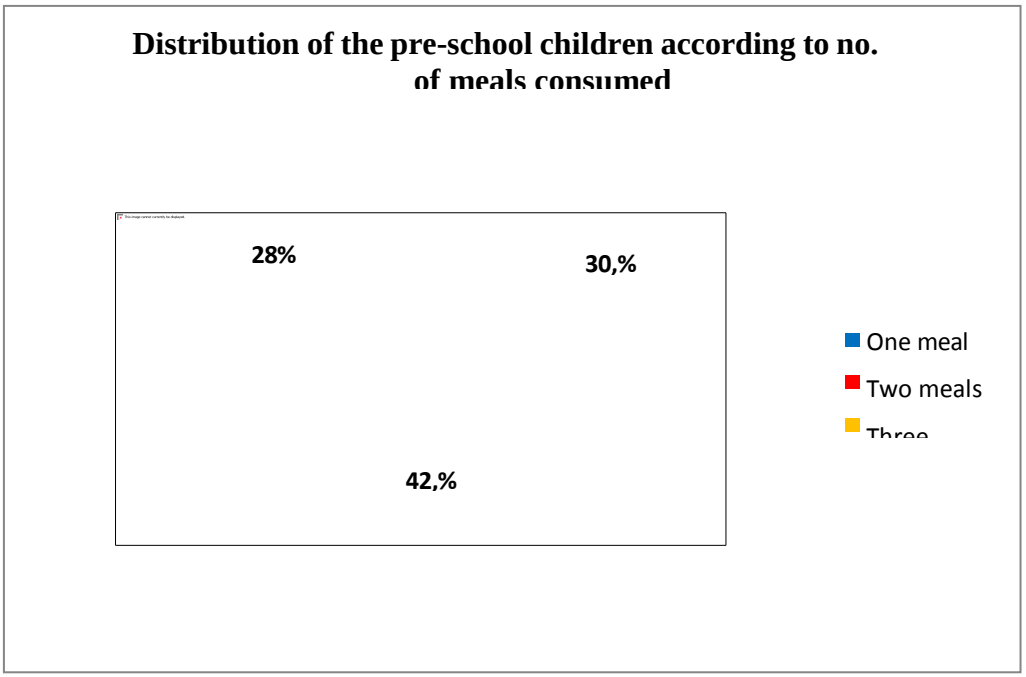


Fig.4.

CONCLUSIONS AND SUGGESTIONS

Conclusion

Supplementation of the value-added food products and imparting nutrition education to the mothers of the children is helpful to improve the nutritional status of the individuals. At the same time, supplemented value-added foodproducts are not only beneficial to improve nutritional status but also fulfil the daily requirement of essential nutrients required for the body to remain healthy. Hence, value-added food products to children and nutrition education to the mothers of the children could be promoted in the community as one of the strategies of food-based approach for improving nutritional status and eradicating undernutrition from the community.

Suggestions

There are a few ways to make our food systems more sustainable: by making agriculture more environmentally friendly, by encouraging people to eat in ways that are good for the planet, and by transforming our food systems to be more diverse and flexible. To make this happen, we need to shift our focus from just agriculture to looking at the entire food system. This is crucial for the complex and complete changes we need to achieve truly sustainable food systems, which are necessary for ensuring food and nutrition security for all now and in the future.

Here is a need to empower people to make choices that inform and empower them toward healthy, sustainable diets. Merely making foods available and affordable does not mean that people will choose them. Although there are significant social and cultural norms to acknowledge and build on, encouragement to shift dietary norms will have to come in many forms . The latter will include behavioral nudges based on changes in the relative price of different food categories, use of consumer price subsidies and taxes where appropriate, informational gains through front-of-package labeling, advertising of prohealth diets and sustainability rather than cheap empty calories, and more. In other words, the various domains of food systems must work together rather than in siloes, and the many instruments of policy and investment, retail, and marketing practices must be coherent and consistently pointing toward the common goals embedded in the transformation agenda.

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ANNEXURE-I

ASSESSMENT OF NUTRITIONAL STATUS OF CHILDREN (3-6 YEARS) OF DISTRICT MOHALI (PUNJAB)

General Information

Name of respondent: …….....Date of Birth: .....

Class:…….. Sex: Male/ Female……

Parental Education:

A) Illiterate

B) Primary Education

C) Matric

D) Intermediate

E) Graduate Father Occupation:

A) Businessman

B) Serviceman

C) Labor Mother Occupation:

A) Working

B) Not- Working Family Type:

A) Joint

B) Nuclear

C) Extended

Income:

A) 50,000-70,000

B) 70,000-1,00,000

C) More than lakh House Type

A) Katcha

B) Pucca

C) Jugghi

Dietary Habits

1. Eating Habit

a) Vegetarian

b) Non- Vegetarian

c) Eggetarian

2. If non- Vegetarian which non-veg., do you consume?

a) Chicken b) Mutton c) fish d) pork

3. Frequency of consuming non-veg

a) Daily b) Once a week c) Twice a week d) Once in a month

4. If eggetarian frequency of consuming egg

a) Daily b) once a week c) twice a week d) once in a month

5. Number of meals you consume in a day

a) One b) Two c) Three

9. Do you skip meal?

(a) Yes (b) no

10. If yes then

(a) Daily (b) Usually (c) Sometimes

11. Which meal do you skip most?

(a) Breakfast (b) lunch (c) dinner

12. Reason of skipping meal

(a) Not tasty (b) monotonous (c) lack of time (d) Not feeling hungry

13. Do you nibble?

(a) Yes (b) No

14. If yes then what time?

(a) In between breakfast and lunch (b) in between lunch and dinner

(b) In between dinner and bed time

15. Do you like snacking?

(a) Yes (b) no

16. What do you prefer in snacking?

17. Do you like junk food? (a)Yes (b) no

18. If yes then what do you like in junk/street food?

BEYOND THE BELL: IMPROVING ACCESS TO EDUCATION FOR MARGINALIZED CHILDREN IN INDIA

Sahil Gaur, Aashish Sandhu, Priyashu Kumar

Supervisor: Dr. Tushar Dhar Shukla

ABSTRACT

There is no doubt that education, in all its guises, may serve as a catalyst for societal transformation and the achievement of social justice. By enabling children to see their full potential and acquire a respectable place in society, our educational system may be a critical component in the process of developing a more equitable society. 2009 saw the passage of India's Right of Children to Free and Compulsory Education Act, which was designed to ensure the afore mentioned right. Even though the Right to Education Act was signed into law almost a decade ago, this objective is still not being fully met possible. Even though almost all of the children were signed up for classes at the school, a significant proportion of them are unable to show up for class, which contributes to high dropout rates. This faster rate of decrease may be due to the individuals' socioeconomic backgrounds, which include their gender, religion, economic level, caste, and ethnicity. Children who have been diagnosed with a disability and require specialized instruction are also often denied entry into the school system due to a lack of available resources. The kinds of resources that are utilized for teaching and learning have an effect on the overall quality of education. As a result of the fact that many teachers and students are restricted to using inferior textbooks and other resources, learning can be difficult for children who come from low-income families and do not have access to any other alternatives for educational resources. In order for the school to continue to be excellent, it is necessary for it to have the fundamental academic and physical infrastructure.

INTRODUCTION

In India, unequal access to education has grown to be a serious issue. It has also gained relevance since the increasing effects of globalization are endangering the educational opportunities of underprivileged people. Several studies have demonstrated that children from socially and economically poor families seldom get the chance to complete even a basic education, and the majority of them go on to find employment while they are young. The group of people who do not attend school is widely agreed upon and consists of persons from minority groups, urban poor people, Scheduled Castes (SC), Scheduled Tribes (ST), and those who reside in remote rural regions.

MAINSTREAMING THE MARGINALIZED

The concept of universal education exists, but the rate at which the Indian educational system is wasting and stagnating is still far too great. Children from lower socioeconomic groups find it challenging to start and finish their education due to a variety of circumstances, including social, economic, and cultural impediments as well as problems with educational institutions. The following suggestions might be useful in mainstreaming the underprivileged children;

1. The government ought to monitor the effectiveness of the Right to Education Act's implementation to ensure that all students are enrolled in and remain in school.
2. To lower the dropout rate, the government should keep an eye on kids who are at danger of leaving school. To ensure retention, relevant authorities should also develop appropriate social mapping techniques among minority and impoverished communities.

RATIONAL OF THE STUDY

The National Policy on Education (1986) and its 1992 POA encourage the construction of infrastructure needed to deliver quality education to all. Educational disparity limits opportunities for low-income children, girls, members of linguistic, ethnic, and socially excluded groups, and children with special needs and impairments.

RESEARCH OBJECTIVES

1. To investigate the many initiatives and endeavors aimed at bringing the concept of universal education into reality, along with the extent of waste and inertia in the Indian educational system.
2. To carry out studies on how educational inequality affects girls, kids from low-income households, and people who belong to socially, linguistically, and racially marginalized groups.
3. To do research on the challenges parents face in attempting to exercise their rights to children's health and welfare as well as to an education.

SIGNIFICANCE OF THE STUDY

Given present inequalities, creating educational facilities for all children must advance. A complete effort that balances quantity and quality is essential to ensure that all groups of society in different areas may benefit from this undertaking. Different forms of educational inequality limit the opportunities of low-income children, females, members of linguistic, ethnic, and socially excluded groups, and children with special needs and impairments. Thus, the nation's major purpose should be to integrate all children, notwithstanding the barriers.

STRUCTURE OF THE STUDY

In the first chapter we discussed about background and rational , significance research objectives. In second chapter we discussed about detailed study based on author reviews. In the third chapter Methodology we discuss about Research Design, data collection, Survey Sample and analysis base. In the fourth chapter we discuss about findings of survey results presentation, Visual Representation based on pie charts and bar graph and data analysis. In the fifth chapter we discuss about Discussion Interpretation of Findings, Implications, Comparison with Literature, Limitations of the Study in detailed. In sixth chapter Recommendations Practical Recommendations for Educational Institutions, Policy Recommendations, Future Research Directions were dectate. In the seventh chapter Conclusion Summary of Key Findings, Importance of the Study, Call to Action were discussed.

LITERATURE REVIEW

Social Justice and Education

A more fair society requires social justice. Education can improve society, reduce inequality, and boost the economy. Dreze and Sen (2016) say it might "effectively establish a new social order based on freedom, equality, and justice." Education is considered a "catalyst of social change" and a crucial investment in human capital since it raises living standards.

"More literacy and educational attainment of disadvantaged groups can increase their ability to resist oppression, to organize politically, and to get a fairer deal," D'reze and Sen 2015. Fair distribution of educational opportunities and resources promotes social justice and eliminates bias that prevents some groups from learning.Economics has dominated social justice discourses (Vincent 2015). Young and Fraser observed distributive, cultural, and associational unfairness issues.

Gewirtz (2016) examined relational and distributional social justice and proposed a model for educational policy research, drawing on Rawl, Young, and Fraser. "It is very worthwhile to think about the two dimensions as separate, albeit strongly connected," he said. Relational justice helps explain social connections.

Constitutional Rights and Marginalization in Education

In 2016, Ujjwal Kumar Halder All communities worldwide experience marginalization. Marginalization affects all civilizations. The root reasons of marginalization differ by culture. The Varna system's preambles, which segregated individuals by birth order, rooted Indian marginalization. Marginalization is a multidimensional process that favors those "at the center" and disadvantages those "living on the margins." Caste and class prejudices prevent many individuals from social and economic advancement in many cultures. The current article discussed the Constitution's provisions supporting fairness via education in India and the government's many initiatives, plans, and projects to educate underprivileged children.

According to the discussion, India's basic education system is a result of "divisive policy" and expanding inequalities (Govinda, 2017). It widens the socioeconomic gap. Standardized techniques cannot solve basic education facility growth and improvement. Every school must improve its capacity through smart, creative means to attract and retain impoverished pupils from undeveloped regions.

Difficulties Facing Children in Marginalized Indian Communities

Mr. Gautam Makwana (2017) The first step to social and economic growth for India's poor is literacy. With greater options and access to basic services and rights, they can improve their quality of life. Underprivileged Indian children lack formal language, reading, and writing development, as well as literacy resources like books and stories, which lowers their brain development.

A "marginalized group" is a group of outcasts. The technique divides people into dominant and marginalized groups. Freire, Marx, and Gramsci also use "downtrodden," "oppressed," and "vulnerable, discriminated, disadvantaged, subjugated, socially excluded, alienated, or downtrodden" interchangeably with "proletariat," "subaltern," "powerless," "examined," and "exploited, vulnerable, discriminated, disadvantaged." To clarify, "marginalized" people lack cultural, social, political, and economic opportunities. Peter Leonard (2020) defines social marginality as "being outside the mainstream of productive activity or social reproductive activity."

METHODOLOGY

Research Design

Research design is a researcher's chosen methods and processes for a study. The design lets researchers focus on the best methods for their issue and organize their study for success. The researcher used descriptive methods in this investigation.

Data Collection

The survey included all parents of poor children in rural or backward Jabalbur, Madhya Pradesh. The researcher sampled marginalized Schedule caste and tribal parents. The researcher sampled elementary school parents. The researcher used purposive sampling to survey three rural settlements in Jabalbur.

Questionnaire Design

Researchers scored positive and negative answers to evaluate them. Positive responses showed parents know their children's rights, while negative ones showed they don't. The researcher recorded all responses, positive and negative, and calculated them using the given numbers. After computing positive and negative responses, the researcher calculated dimension proportions. Last, the researcher included the positive and negative responses.

Survey Sample

The researcher took 60 samples. The study sampled 30 mothers and fathers.

Data Analysis

The researcher evaluated three aspects of children's education rights. First dimension "Access to School" has five claims. Researchers found six claims in the second dimension, "Discrimination against Children." Researchers chose six phrases for the third dimension, "Roles and Responsibilities of Parents."Only two health and care rights were listed in the research. For public knowledge of children's health, the researcher included eight sentences in the first category, "Health of the Children."Researchers visited the village's Government Elementary School to discover SC/ST children. The researcher then interviewed the youngsters' parents. Father and mother were then questioned by the researcher.

FINDINGS

Presentation Of Survey Results

The survey "Beyond the Bell: Improving Access to Education for Marginalized Children in India" identified systemic discrimination, inadequate infrastructure, and socioeconomic barriers to education as the biggest obstacles for marginalized children. The data emphasises the need for targeted interventions, economic disparity reduction, friendly learning environments, and technology and community participation. The above results lay the groundwork for viable ideas that motivate relevant parties to work together to remove barriers and improve learning for all Indian children.

Data Analysis

Health, Care, and Educational Rights dominate the test. Another factor the researcher considered was the non-directive interview scheduling. The researcher took field notes after the interview. This study examined each main and sub-dimension using content analysis.

Educational rights elements the study identified three educational rights aspects. First dimension "Access to School" has five claims. Researchers found six claims in the second dimension, "Discrimination against Children." Researchers added six sentences to "Parents' Roles and Responsibilities.

VISUAL REPRESENTATION

Knowledge Of Children's Educational Rights

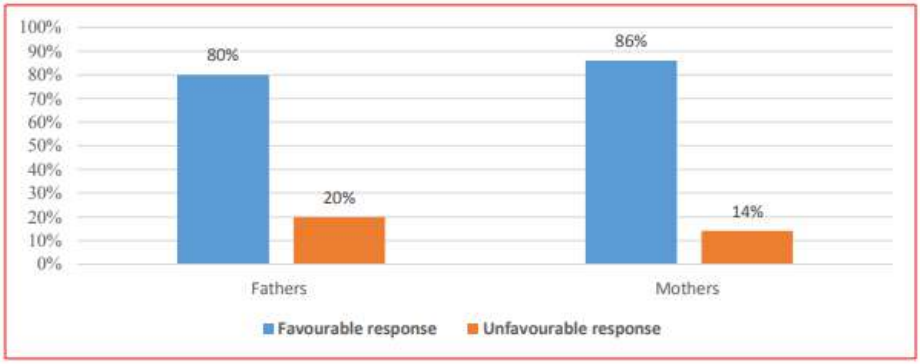
Access To School

Including youngsters under the age of fourteen in a work environment.

Table 4.1 Displays the replies for involving children under the age of fourteen in a workplace.

	Responses	Fathers	Mothers
The term "in favor" refers to those who are in favor of keeping kids out of the workplace. The phrase "not in favor" refers to those who would prefer to involve the kids in the workforce.	Positive response	80%	86%
	Unfavorable response	20%	14%

Figure no 4.1 displays the replies for involving children under the age of fourteen in a workplace.



Interpretation: Table 4.1 and Figure 4.1 show that 86% of mothers and 80% of fathers think children under 14 shouldn't work in factories or shops. Their education is this era's goal. They should study. Parents must also enroll their children in school at the right age. Some said being this age anyplace

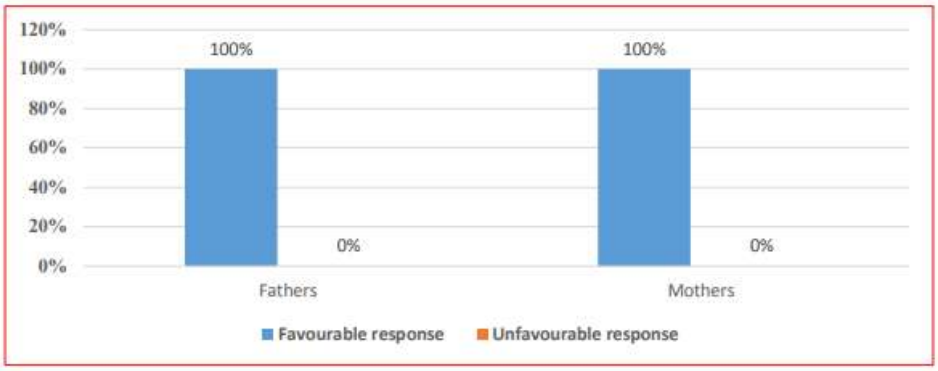
is unlawful and improper. One father said that it is unlawful to hire children under 14 in any company. In answer, 20% of dads and 14% of moms agreed youngsters should work in stores, factories, and other places to support the family. It will help them meet family needs. Some mothers urged low-income children to work to support their family. Mothers and fathers thought that children under 14 shouldn't work in factories or stores (86% and 80%, respectively).

STATEMENT NO. 2: TO ATTEND TO CHILDREN'S EDUCATIONAL NEEDS.

Table no. 4.2. Displays the replies to meet children's educational needs

	Responses	Fathers	Mothers
Those who provide for children by taking into account their needs are considered to be responding "in favor." The phrase "not in favor" refers to those who do not exercise caution by taking their needs into consideration.	Positive response	100%	100%
	Unfavourable response	0%	0%

Figure. No. 4.2. demonstrates how to respond to children's educational needs



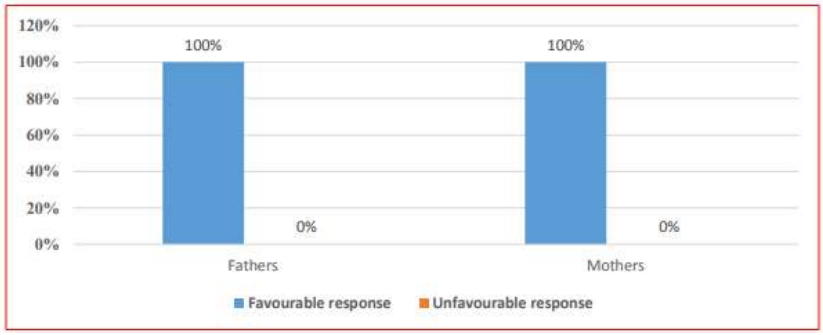
Analysis: 4.2 Figure/Table. As seen in No. 4.2, 100% of respondents claimed they consider children's education. They said that they done all possible to raise successful adults. Some stated they included their kids in tuition. After school, parents send them for tuition. Some said that they encourage their children to join school extracurriculars. Parents tell kids to rest and eat after school, then study and do homework. One hundred percent of respondents claimed they regarded children's educational requirements.

STATEMENT NO. 3: CHILDREN WHO FAIL ANY CLASS.

Table 4.3. Displays the answers given by kids when they fail a lesson.

"In favor" of response denotes: Those who went above and beyond "Not in favor" responses refer to those who have not made extra efforts.	Responses	Fathers	Mothers
	Positive response	100%	100%
	Unfavourable response	0%	0%

Figure. No. 4.3. Displays the children's replies after they fail a class.



Interpretation: Table and Figure 4.3 support student enrollment. Many people said, "It's the age of education, and we should enroll our children so they can finish their education." Some of them said "it is difficult for us to teach them in the home and even giving tuition due to lack of money because we are not educated." Most parents are optimistic and know how crucial it is to enroll their children in the best school, but illiteracy and a weak economy threaten their well-being.

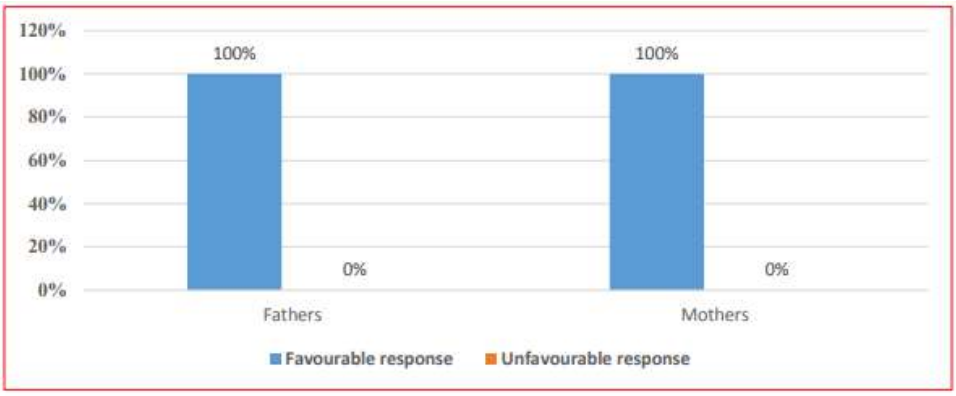
2. DISCRIMINATION AGAINST CHILDREN

Statement No. 4. Teachers' partiality while awarding children's test grades

Table 4.4. Displays the replies given by educators in cases of bias when assigning test scores to students.

"In favor" responses refer to: Those who will file complaints. "Not in favor" indicates that the respondent does not know where to file a complaint.	Responses	Fathers	Mothers
	Positive response	100%	100%
	Unfavourable response	0%	0%

Figure no. 4.4. displays the comments instructors gave in order to show their bias while awarding children's test scores.



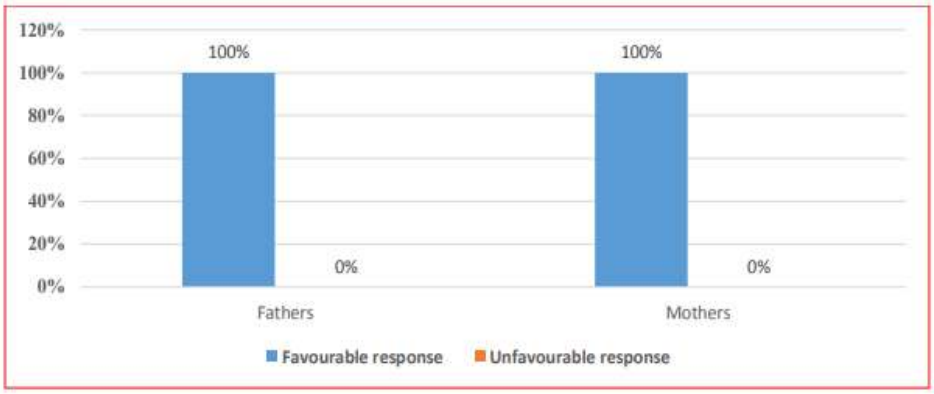
Interpretation: Table 4.4 and Figure 4.4 show that 100% of fathers and mothers said no teachers created grade-based disparities between their children. No prejudice has been noticed at school. Students receive marks for their performance and ability. They said that professors never favored their students. One mother stated her child failed seventh grade and she told the school to give him another chance to study. If not, the instructor did not mistreat the pupil. "We will definitely file a complaint with the principal and higher authorities if teachers attempt to discriminate against our child," she stated. We may assume all parents gave good comments.

STATEMENT NO. 5: THE SCHOOL'S MANAGEMENT REFUSED TO PROVIDE ENTRANCE

Table 4.5. Displays the answers to the school's admissions denials made by the administration.

	Responses	Fathers	Mothers
"In favor" responses indicate: Those who support taking action against Those who are not in favor are indicated by the response "not in favor."	Positive response	100%	100%
	Unfavourable response	0%	0%

Figure. No. 4.5. Displays the replies to the admissions rejections made by the school's administration.



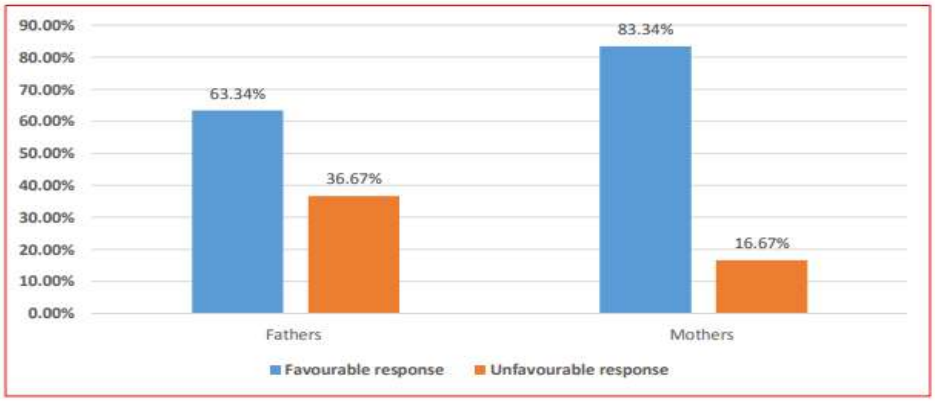
Figure/Table 4.5 interpretation. Figure 4.5 shows that 100% of parents claimed the school never denied their children entry. They always inspire our kids to learn. We will definitely complain if this happens. According to the survey, all parents responded positively.

Statement No. 6: Encouraging girls to participate in activities and sports and providing opportunities for them in the school.

Table 4.6. Displays the answers to the questions on the availability of games and sports in the school and the attitudes toward females participating in these activities.

	Responses	Fathers	Mothers
The "in favor" response refers to those who support females' equal participation. The phrase "not in favor" refers to those who oppose females' involvement.	Positive response	63.34%	83.34%
	Unfavourable response	36.67%	16.67%

Figure. No. 4.6. Displays the replies on the availability of games and sports in the school and the attitudes toward females' involvement in these activities.



Analysis: Table 4.6 and Figure 4.6 show that 63.34% of fathers and 83.34% of moms allow games and sports. "Whether girls' child should participate in games and sports?" the interviewer repeated. They said, "Girls should participate in games and sports on an equal basis with boys." Also, 36.67% of dads and 16.67% of moms were unaware if the school had gaming and sports facilities. Girls don't need games or sports, they said. She can't play like men. In conclusion, 63.34% of fathers and 83.34% of mothers reply positively, whereas 36.67% and 16.67% respond negatively.

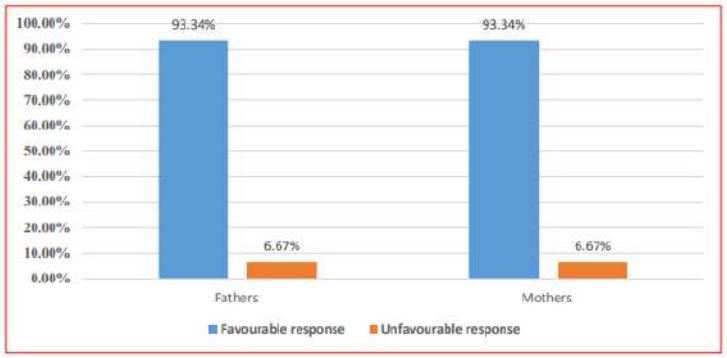
3. Roles and responsibilities

Statement No. 7: Adequate age for children's admission.

Table 4.7. Displays the answers for the appropriate age for children to be admitted..

	Responses	Fathers	Mothers
"In favor" responses indicate that the respondent is in favor of enrolling their child at the right age. The meaning of the response "not in favor" is: People who are ignorant of the legal enrollment age	Positive response	93.34%	93.34%
	Unfavourable response	6.67%	6.67%

Figure. No.4.7 Displays the answers on the suitable age for children's admission.



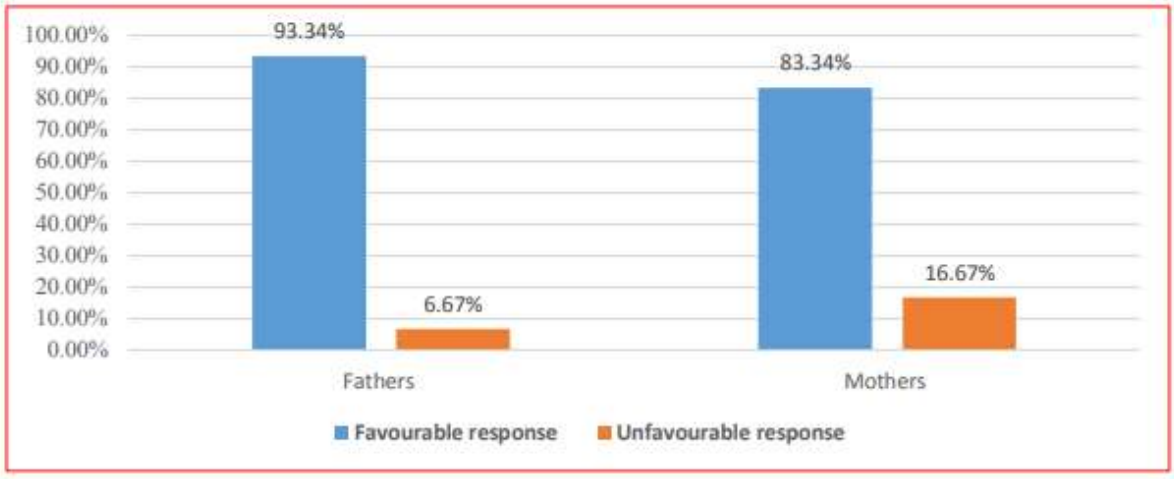
Interpretation: Table 4.7 and Figure 4.7 show that 93.34% of fathers and 93.34% of mothers know the school enrollment age. Some said that one should start caring for their ward at four years old to help them adjust to school. Some think kids should join at the Indian government's six-year-old age. Some mothers said their child must be enrolled by age four. Learning to sit, talk, and other abilities will help the child. Additionally, 6.67% of parents were unclear about the appropriate school registration age. Moms and dads recognize the right age to enroll in school (93.34%).

Statement No. 8: Motivate kids to take part in extracurricular activities.

Table 4.8. Displays the answers to motivate kids to take part in extracurricular activities.

	Responses	Fathers	Mothers
Response "in favor" denotes: Those who urge involvement "Not in favor" responses refer to those who discourage participation.	Positive response	93.34%	83.34%
	Unfavourable response	6.67%	16.67%

Figure. No. 4.8. Displays the answers to motivate kids to take part in extracurricular activities.



Interpretation: Figure 4.8 and Table 4.8 show that 83.34% of moms and 93.34% of fathers encourage their children to participate in school extracurriculars like music and dance and Independence Day and Republic Day events. Some parents said they encourage their daughters to play sports, especially racing. Additionally, 16.67% of mothers and 6.67% of fathers think kids shouldn't do extracurriculars. Their primary concentration should be school. Other activities will hurt their grades. Conclusion: 93.34% of fathers and 83.34% of mothers provide positive comments, whereas 6.67% and 16.67% give negative reactions.

CONSCIENCE OF RIGHTS CONNECTED TO HEALTH AND CARE

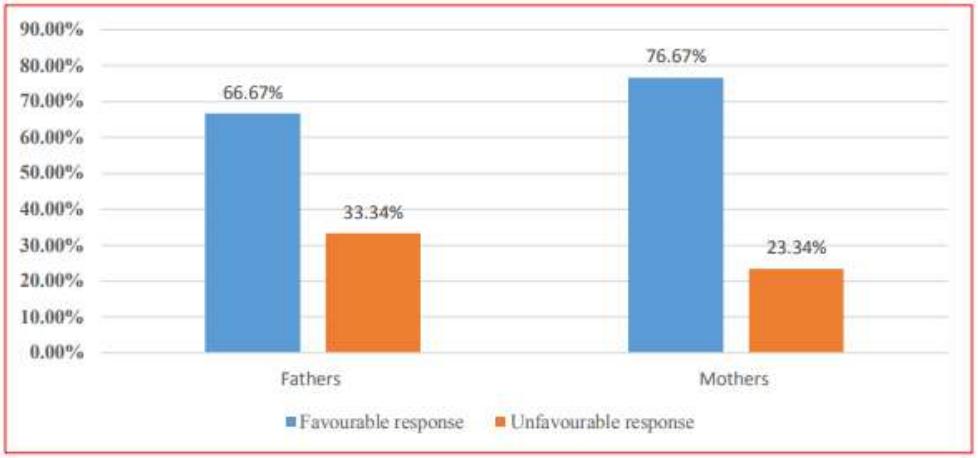
1. Health of the children

Remark No. 9: Having toilet within the school.

Table. 4.9 displays the replies to the question of whether the school has toilet.

Those who are "in favor" of restrooms are shown by their response. "Not in favor" responses refer to those who oppose having restrooms.	Responses	Fathers	Mothers
	Positive response	66.67%	76.67%
	Unfavourable response	33.34%	23.34%

Figure. 4.9. displays the replies on the availability of toilet at the school.



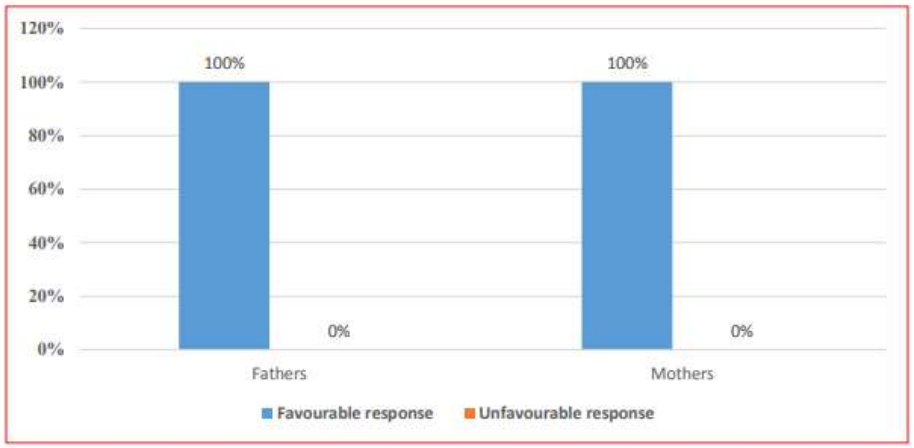
Interpretation: Figure 4.10 and Table 4.9 show that the school had bathrooms and that 66.67% of fathers and 76.67% of moms visited. The school should offer bathrooms, they claimed. Some said that school restrooms are essential. Restrooms keep kids in school. One said his kids attend the government school in the wilderness. Kids truly need their own restrooms. It prevents accidents that damage children. Some thought toilets were essential for children's hygiene. The survey also found that "What is the need of toilets in the school?" 23.34% of moms and 33.34% of fathers replied. They said the school doesn't need restrooms. We live in villages, therefore there are plenty of fields and open terrain. They said that urban schools need restrooms while rural ones do not. In conclusion, 66.67% of fathers and 76.67% of mothers reply positively, whereas 33.34% and 23.34% respond negatively.

Statement No. 10: Food and Diet of the Children

Table. 4.10. Displays the children's answers on their food and diet.

Those who are "in favor" include those who follow a nutritious diet. "Not in favor" responses indicate that those who are not in favor of the same	Responses	Fathers	Mothers
	Positive response	100 %	100 %
	Unfavourable response	0%	0%

Figure. No. 4.10. Displays the kids' replies on their diet and food



Interpretation: Table 4.10 and Figure 4.10 show that all parents worry about their kids' diets. Some said claimed they had

incorporated the products in doctor-recommended diets. Sometimes they see a doctor or get nutrition advice. Some replied with milk, ghee, rice, saag, curd, lassi, and other meals. One can conclude that all parents react positively.

Table. 4.11. Displays the answers from the "Health of the Children" dimension.

ACHIEVEMENT OF THE KIDS		
Respondents	Positive response in %	Unfavorable Response in %
FATHER RESPONSE	82.084	17.92
MOTHER RESPONSE	81.67	18.33

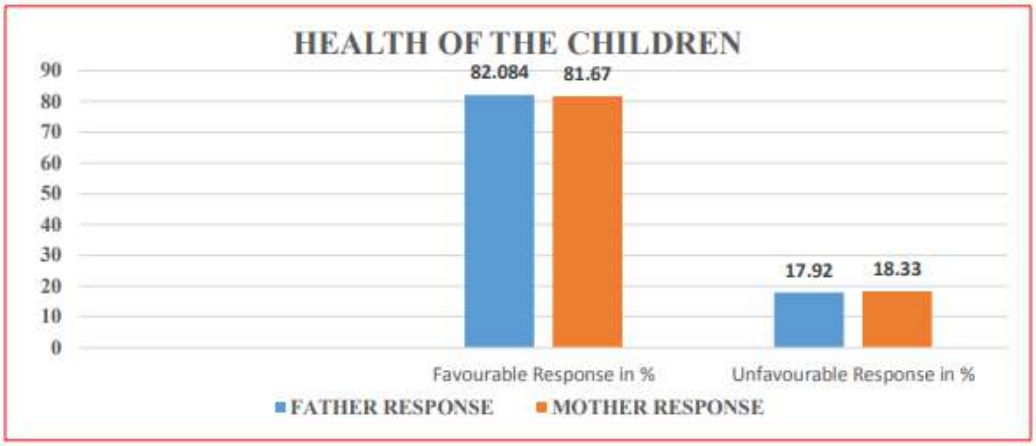


Figure. 4.11. displays the answers from the Dimension "Child Health."

In response to all the questions above about parents' awareness of their children's health, 81.67 percent of mothers and 82.084% of fathers gave positive answers, indicating that they are aware of their children's good health. Additionally, 17.92% of dads and 18.33% of moms offered negative replies, suggesting they care less about their kids' health. Known children's health issues: The researcher identified many school access concerns for Scheduled Tribe and Scheduled Caste parents after a detailed interview. According to 23.34% and 33.34% of parents, the school doesn't need a restroom. They dislike school restrooms. Most parents know their kids' diets, but sometimes finances prohibit them from buying enough food. 20 30 40 50 60 70 80 90 82.084 17.92 81.67 18.33 0 Significant Unfavorable Reaction in Children's Health Father's Reaction% Mother's Reaction Additionally, 10% of fathers and 23.34 percent of moms opposed their children's marriage. They felt that marrying girls as soon as possible would relieve parents and help them maintain their social status.

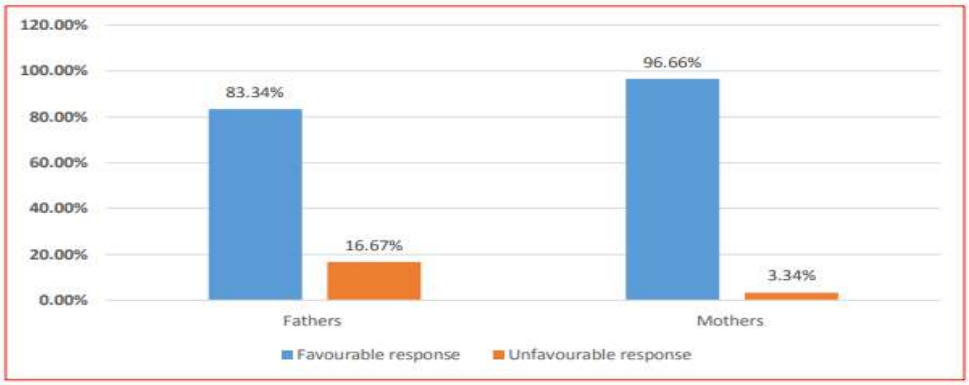
CARE OF CHILDREN

Statement No. 11: Overcome all obstacles to fulfill children's needs.

Table. 4.12. Demonstrates how to respond to any issue in order to suit the requirements of the kids.

	Responses	*Fathers*	*Mothers*
"In favor" responses indicate: Those who have issues "Not in favor" responses refer to those who don't sense any problems.	*Positive response*	*83.34 %*	*96.66%*
	Unfavourable response	*16.67%*	*3.34%*

Figure. No. 4.12. Demonstrates how to respond to any issue in order to address the requirements of the kids

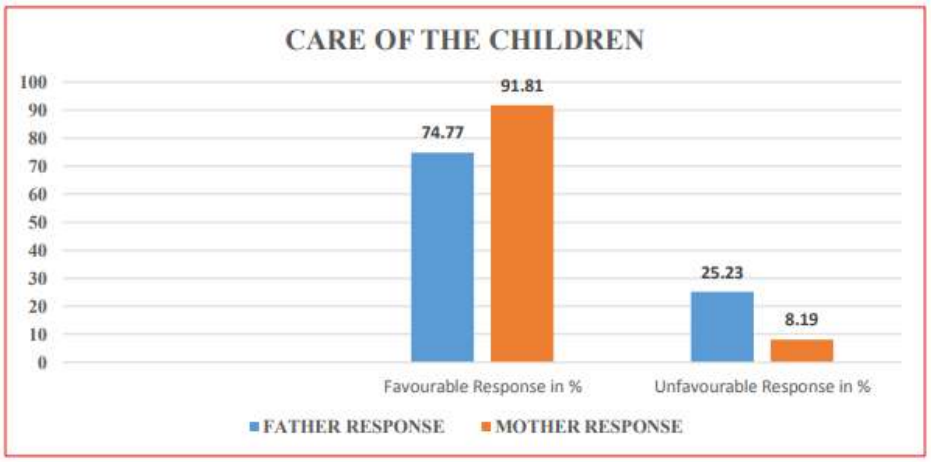


Due to having more than four children, 83.34% of dads and 96.66% of moms had trouble parenting them, according to Table 4.12 and Figure 4.12. Some have five or six. They stated their finances prevent them from paying school tuition and other expenses. Some said that they struggle to provide for other needs. The government should help our economic requirements, they added. Conversely, 16.67% of dads and 3.34% of women reported no parenting issues. 83.34% of fathers and 96.66% of mothers answer positively, while 16.67% and 3.34% answer negatively.

Table. No. 4.13. Displays the answers for the "Care of the Children" component.

CARE OF THE CHILDREN		
Respondents	Positive response in %	Unfavorable Response in %
FATHER RESPONSE	74.77	25.23
MOTHER RESPONSE	91.81	8.19

Figure. No. 4.13. The responses for the "Care of the Children" component are displayed.



Interpretation: After reviewing every question on the "care of the children" dimension, 74.77% of fathers and 91.81 percent of mothers gave positive answers, indicating that they understand the importance of providing for their children. Additionally, 8.19% of moms and 25.23% of fathers gave unfavorable responses, suggesting that parents are less aware of their child-rearing responsibilities. Issues Found Regarding Child Care: After talking to parents, the researcher identified some of the challenges Scheduled Caste and Scheduled Tribe parents have in enrolling their children in school. Most parents know how to care for their children, but research on expecting moms shows that many cannot afford prenatal essentials due to financial hardship. Additionally, 16.37% of dads and 33.33 percent of moms supported their kids assisting around the house. No children's rights group was found either.

DISCUSSION

Interpretation of Findings

Conclusions Regarding the Right to Education

1. Access to School

When questioned about "Access to school," 86.67% of dads and 83.87% of moms answered positively, showing that they realize its value. It shows that fathers know how to get their kids into school better than women. According to research, 13.34% of mothers and 16.13% of fathers had negative responses.

Found school access issues: The researcher identified some of the challenges to school access for Scheduled Caste and Scheduled Tribe parents after a detailed conversation.

According to interviews, these families' low socioeconomic situation may force them to send their children to work in factories, hotels, stores, or other enterprises. Additionally, all of these parents enroll their children in government schools since they cannot afford the extra fee. It was also proven that illiteracy and the economics cause most dropouts.

2. Discrimination against children

92.78% of fathers and 96.12% of mothers gave affirmative answers to the question "Discrimination against children," demonstrating their awareness of the rights at stake. In addition, 3.88% of mothers and 7.22% of fathers provided negative responses, indicating that they might not be aware of it. This implies that the majority of mothers are aware of their rights

regarding discrimination against children.

CONCLUSIONS ON RIGHTS CONCERNING HEALTH AND CARE:

Child health A poll asked parents about their awareness of the "Health of the children," and the results showed that 81.67 percent of mothers and 82.084% of fathers provided favorable comments on their children's health, showing that they are aware of their children's healthy status. In addition, 17.92% of dads and 18.33% of moms answered negatively, suggesting they care less about their kids' health.

1. After a thorough conversation with parents of Scheduled Caste and Scheduled Tribe children, the researcher found a few health challenges that these parents have when enrolling their kids in school. Parental opinions on the necessity for restrooms at the school range from 23.34% to 33.34%. They don't like the bathrooms at schools. Most parents, according to studies, know what their children should eat, but they might not be able to afford to provide them everything.
2. Child care Studies show that 74.77% of fathers and 91.81 percent of women responded favorably to the question "Care of the Children," demonstrating their proficiency as parents. Furthermore, negative replies were provided by 8.19% of mothers and 25.23% of fathers, indicating that parents are less conscious of the need to care for their children.

IMPLICATIONS

Education's effects on the federal and state governments

Children's rights are heavily influenced by the government. Federal advice must be given to states to defend children's rights.

UNICEF works with disadvantaged nations and funders on several projects. The Indian government must engage with UNICEF on children's rights.

The excluded community must participate in mainstreaming to understand their child's fundamental requirements. Any caste discrimination in schools is wrong.

Government guarantees equal rights for all children. The State Commission for the Protection of Child Rights and the National Commission should consider the rights of children in remote, rural, and isolated areas with insufficient healthcare and educational facilities.

Consequences for Education in Schools

School is like a second home for kids to develop their behavior and ambitions. Teacher must employ human rights-based education to protect and assist children realize their rights. Teachers should teach democratically.

The school must include parents in instructional activities. Parents must have a teacher-parent meeting to address their children's difficulties. Health and sanitation facilities should be adequate at the school.

COMPARISON WITH LITERATURE

Mr. Gautam Makwana (2017) The first step to social and economic growth for India's poor is literacy. With greater options and access to basic services and rights, they can improve their quality of life. Underprivileged Indian children lack formal language, reading, and writing development, as well as literacy resources like books and stories, which lowers their brain development. Together with table 4.6's base Also, 36.67% of dads and 16.67% of moms were unaware if the school had gaming and sports facilities. Girls don't need games or sports, they said. She can't play like men. In conclusion, 63.34% of fathers and 83.34% of mothers reply positively, whereas 36.67% and 16.67% respond negatively.

"More literacy and educational attainment of disadvantaged groups can increase their ability to resist oppression, to organize politically, and to get a fairer deal," D'reze and Sen 2015. Fair distribution of educational opportunities and resources promotes social justice and eliminates bias that prevents some groups from learning.Economics has dominated social justice discourses (Vincent 2015). Young and Fraser observed distributive, cultural, and associational unfairness issues. non-table interpretation: Table 4.12 shows that 96.666 percent of moms and 83.34 percent of fathers with more than four children experienced parenting challenges. Some have five or six. They stated financial restrictions prevent them from paying school fees. Some said they struggled to satisfy other standards. They said the government should help us financially. However, 3.34% of women and 16.67% of fathers reported no parenting issues. 96.66% of mothers and 83.34% of fathers agree, while 16.67% and 3.34% disagree.

LIMITATIONS OF THE STUDY

1. All parents of underprivileged children living in rural or backward areas in Madhya Pradesh's District Jabalpur made up the study's population.

2. The study's focus was on marginalized kids in rural areas. only 3. The study's scope was restricted to the rural area's marginalized parents. only 4. The Scheduled Tribes and Scheduled Castes were the only groups included in this study.
3. Discrimination Against Children: In order to address the concerns of socially disadvantaged groups, including girls and members of Scheduled Castes and Tribes, the government has implemented an affirmative action strategy.

RECOMMENDATIONS

PRACTICAL RECOMMENDATIONS FOR EDUCATIONAL INSTITUTIONS

Educational Implications for school:

1. Teachers should teach democratically. The school must include parents in various programs. Parents must have a teacher-parent meeting to address their children's difficulties.
2. Kids see school as a second home where they may determine their behavior and goals. Teacher must employ human rights-based education to protect and assist children realize their rights.
3. The school must have enough restrooms and health facilities.

POLICY RECOMMENDATIONS

1. Encourage social connection and safety with these activities. Research shows that social isolation hurts boys' and girls' learning. REALISE programs like Village Saving and Loans Groups and Sexual and Reproductive Health Clubs should foster social networks. Educational programs and initiatives may benefit from social protection methods.
2. Pay school fees on time. In an atmosphere where students were sometimes removed at the end of the month for unpaid fees, timely payments were crucial to student attendance. New payment methods should be regularly evaluated, especially when digital and phone infrastructure is unstable.
3. Consider all students. Even in girl-focused programs, helping boys and girls reduces complaints and bias. The REALISE project, inspired on the DRC's Girls' Education Challenge, gave males clubs, textbooks, and class supplies as well as girls.

FUTURE RESEARCH DIRECTIONS

1. More research can address child discrimination, sexual assault, domestic violence, and physical and psychological suffering.
2. Future research may include kid rights and work.
3. The inquiry focused on Madhya Pradesh's Jabalpur District. Therefore, future study can include other state districts.
4. This research only considered Scheduled Tribe and Scheduled Caste children's rights. In the study, more marginalized groups may be included.
5. The study researcher alone considered parental awareness. Further research may include educators, government officials, and elected and selected panchayat members.

CONCLUSION

SUMMARY OF KEY FINDINGS

Under Article 21-A of the Indian Constitution, all children under 14 have the right to free and compulsory education. Many national and international accords recognize this. These groups say education should promote human rights. Education should also help people grow and contribute to society by fostering tolerance, understanding, and camaraderie. Education for All (EFA) with good education. Numerous studies in India have examined urban and rural parents' awareness of their children's rights. Madhya Pradesh has not conducted any research on the disadvantaged in rural District Jabalpur. Thus, the researcher has decided to study rural Jabalpur parents' knowledge of children's rights from poor social groups. To assess parents' understanding of their children's rights and identify the barriers mothers and dads encountered in achieving their rights to education, health care, and other rights, the researcher surveyed disadvantaged parents.

IMPORTANCE OF THE STUDY

1. Everyone deserves education. Article 21-A of the Indian Constitution guarantees free and compulsory education for all children under 14. Numerous international and national accords recognize this. These groups promote promoting human rights in education.

2. Thus, the researcher investigated rural Jabalpur parents' understanding of their children's rights from low-income socioeconomic groups.

3. Underprivileged parents were questioned to see how well they knew their children's rights and what challenges they encountered in getting their own healthcare, education, and other benefits. Research recommendations based on findings may help.

CALL TO ACTION

The groundbreaking study "Beyond the Bell: Improving Access to Education for Marginalized Children in India" addresses educational inequality in India. This comprehensive study found institutional prejudice, poor infrastructure, and socioeconomic inequalities that limit high-quality education. The report urges government agencies, organizations, academic institutions, and the public to collaborate on targeted efforts. This involves crafting inclusive policies, providing finances, and finding innovative ways to reach remote and poor groups. Since education is a human right and the foundation of social and economic progress, these challenges must be addressed immediately. Together, we can remove barriers and ensure that every Indian child, regardless of background, has equal access to education's life-changing potential. This opens doors to a better future. Beyond the study's pages, we must act now to establish an inclusive and equitable learning environment for all.

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TECH FOR GOOD: LEVERAGING TECHNOLOGY TO ADDRESS SOCIAL CHALLENGES IN INDIA

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INTRODUCTION

In simple words, technology is the application of scientific knowledge. It means the production of such machinery, arrangements, and procedures meant to achieve a certain goal or perform a function. Today every field of human work, from industry to medicine, is affected by and improved with technology. The first stone tool created by man was a technological production at that time since it was a product of man‟s knowledge.

In an approach to bridge the digital divide, it is necessary to get affordable, equitable, and quality access to Information & Communication Technology (ICT). It is estimated that two- thirds of the world‟s population is still offline so there is a need to provide affordable access to the internet for all. For developing countries, it has become a priority area to alleviate poverty by promoting access to ICT. At the same time, tremendous growth in the use of ICT devices and services, faster change of technology, and frequent innovations in the ICT sector had left the world with a threat of deterioration in environmental conditions and human healthas the waste of electronic and electrical equipment, which contain hazardous components, is still handled in an environmentally unfriendly manner mainly in developing nations. It is a huge challenge for nations to handle e-waste in a responsible manner and protect the environment.

Digital India Program started by the Government of India is an attempt to use technology for the benefit of people in order to overcome some of the challenges facing the country. The program charts a roadmap to a digital India where a digitally literal population can leverage technology for endless possibilities. Our political leaders have made it clear that broadband highways are as important as national highways and that the end goal is to offer better services, foster innovation, and generate more jobs. The critical enabler is going to be the technology and the foundation to a digital nation will be the laying of a pan India network.

Digital technologies are transforming the way we work, communicate, interact with others, and have fun. They also have a significant impact on economies and societies. They also stimulate innovation across a wide range of domains. The population's degree of digital proficiency significantly influences technology's ability to be innovative. It makes sense that there is a strong link between education and skill sets and the adoption and utilization of digital technologies across multiple domains in life. Education and skill development play a crucial role in encouraging innovation. To put it briefly, digitalization is a new wave of innovation that is comparable to the 19th- century innovations of electricity and mechanization. Though technological advancement is evolutionary, its effects.

A realistic and aspirational definition of sustainable development that is applicable to all nations is provided by the SDGs. Value judgments are reflected in this broad set of interconnected social, economic, and environmental goals, which are specifically established through a variety of targets and indicators. The 2030 Agenda focuses on all of the SDGs at once in order to achieve synergistic progress. It aims to raise money and guarantee that nobody is left behind. It encourages public-private partnerships, national action plans, and multi-stakeholder engagement in order to help achieve the goals. Additionally, it aims to use science, technology, and innovation (STI) to propel advancement.2. A strategy for ending poverty known as "sustainable livelihoods" bases resource access and consumption on social, economic, and environmental equity. One could say that a livelihood is sustainable.

STATEMENT OF THE PROBLEM

This study was designed to investigate the Tech For Good : Leveraging technology to addressSocial Challenges in India.

OBJECTIVES

1. To investigate the impact of technology on education system.
2. To determine the learning level of exposure to online platforms of learning.

DELIMITATION

The study’s scope has been restricted to the students studying in UITTR department of Chandigarh University specifically B.a.+ B Ed and B.sc.+ B.ed.

LIMITATION

The nature of the respondent was one of the limitations. The network connection was alsoone of the limitations during collection of data.

SIGNIFICANCE OF THE STUDY

The study "Tech for Good: Leveraging Technology to Address Social Challenges" explores the intersection of technology and its potential to create positive impacts on societal issues. The term "Tech for Good" signifies the application of technological innovations and solutionsto address and alleviate various social challenges. Here is a breakdown of the key aspects and significance of the study: The study introduces the concept of "Tech for Good," emphasizing the idea that technology can be a force for positive change in society. It highlights the need for harnessing technological advancements to tackle pressing social challenges and improve the overall well-being of communities.

REVIEW OF LITERATURE

From the first intelligence acquaintance to the acquired phase and ultimately to actualization, knowledge is the foundation and essential to all subjects. All living things have undergone evolution and adaptation over time, but humans have advanced significantly and amassed a vast body of knowledge through constant invention and discovery. Global initiatives enabled researchers in their respective fields to conduct ongoing research, which led to these inventions and discoveries. In order to ensure that a significant amount of work has already been done and that the proposed investigation directly correlates with the problem at hand, researchers perform a series of applied investigations. Any subsequent work must start with literature.

Aggarwal Sangeeta and Kaur Navpreet (2017): In their paper, researchers have elucidated the state of ICT in the Indian education system. The Indian government has included ICT in schools as part of the Rashtriya Madhyamik Shiksha Abhiyan (RMSA), which will provide funding to government and government-aided secondary and high schools. This will ensure the successful implementation of ICT in education.In addition, CIETs and SIETs received financial support for the creation of smart schools and the National ICT Award for creative use of ICT in education. The National Mission on Education through Information and Communication Technology was an additional program. In addition to other projects like virtual labs, talk-to-a-teacher programs, e-Yantra, and e-Kalpa (SWAYAM) Study Webs of Active Learning for Young Aspiring Minds, it deals with e-content development. Digital Library of the Nation, etc.

In 2016, Cherian M. and Thampy K. Since ICT is used extensively in all sectors of the economy these days, the education sector has also begun to take advantage of ICT's potential to improve the teaching-learning process. The penetration of ICT-enabled teaching and learning among college instructors was examined in this research paper, along with the relationship between demographic factors and the penetration of ICT in the teaching and learning process. The demographic factors that were examined included the teacher's designation, college location, qualifications, and qualification. The findings indicated that universities in urban areas make the most use of ICT due to improved material availability and infrastructure. In relation to designation, associate professors were employing ICT more successfully.

Siapno & Gisela C. (2016): They investigated the relationship between the competency level of teachers and demographic factors such as age, sex, educational background, and teaching experience in their research work. They also looked at the relationship between ICT integration for instruction and competency level. The findings indicated that teachers' proficiency with ICT for the teaching and learning process was moderate. It has a positive correlation with how they use ICT in the classroom. In relation to the demographic variable, it was discovered that age and teaching experience were inversely correlated with the level of ICT competency, while educational background, sex, and teaching discipline were not. Researchers found that in addition to teaching faculty members ICT competency, an action plan is necessary.

Jessy Abraham (2016): Researchers talked about the problems and trends in India's e- learning education environment in the current research article. India has made significant strides in e-learning, such as with Digital India and the ICT policy forschool education. The researcher described in this paper the various phone features—such as voice, SMS, graphics, display, downloadable apps, and mobile internet browsers—that can be improved through teaching and learning. There are obstacles to e-learning in addition to the implementation of different software applications and equipment, such as inadequate technical support and inadequate training for equipment handling. People's mindsets need to shift, and they should become aware of the advantages of online education. By incorporating all stakeholders, the government should increase the cost-effectiveness of technology. Universities need to do better.

A.P. Unde, B. Benson, and A.H. Brown: His case study involved three college professors who were actively seeking ways to enhance their technological skills. It is a qualitative research project. The results of the study indicated that these professors attended technology workshops because they were aware of their limitations. Their sense of technological competence diminishes and they experience insecurity. Their low self-esteem is caused by their feelings of being mistreated and ignorant when they work with technically proficient individuals. In order to allow for individualized instruction, they have suggested that a one-hour technology workshop be held with a small number of participants based on their experiences. Furthermore, it is recommended that individuals set a goal to

apply the knowledge they have acquired.

Rajawat P. (2016): The researcher reviewed the literature on ICT and its useful application in education, as well as how it affects pedagogy. ICT significantly affects the process of teaching and learning. It has a positive impact on teachers' professional development, academic performance, learning environment, and reflective practices. The advent of a virtual environment has altered the learning environment due to information and communication technology. According to studies, teachers are not utilizing ICT in this way even though they are aware of its potential and acknowledge that it has improved the quality of education. The way that content is delivered has changed as a result of ICT use; multimedia approaches are now employed.

Saini K.A. (2016): The researcher described in this research article how the use of ICT in education has brought about a revolutionary approach to the process of teaching and learning. Teachers now have access to creative ideas thanks to the use of multimedia in the teaching-learning process. It aids educators in sating pupils' curiosity. It offers a variety of exercises that improve language proficiency in speaking, writing, listening, and reading.

Prestridge S., Tondeur J., Braak J.V., Roblin N.P., and Voogt J. (2016): "Preparing Beginning Teachers for Technology Integration in Education: Ready for Take-Off?" is the title of their research project. They examined how new teachers were incorporating technology into their lessons. Analysis was also done on the relationship between their pre-service education program and their use of technology. Six teachers—two from each of the three schools—were the subjects of a longitudinal research design. It was discovered that their motivation to use technology in their current practice came from their pre-education training. It was discovered that there are gaps in the knowledge that new instructors have about technology and the requirements for using it in the classroom. Institutions of teacher education must establish a connection between the subject matter.

As of 2016, Selvam S.K.P. In his study "Instructing B.Ed. students on e-learning in the classroom to promote technology literacy for sustainable development," The attitude of Salem District, Tamil Nadu, B.Ed. students toward e-learning in the classroom wasinvestigated by researchers. Regarding gender, age, parent's education, and occupation, the attitudes of B.Ed. students toward online learning in the classroom were investigated. After conducting a thorough analysis of the data, it was discovered that 78.9% of B.Ed. students had a positive attitude toward e-learning in the classroom. Thisindicates that the students hold a strong belief in the benefits of e-learning in the classroom. When it came to demographic variables like age and gender, there was no discernible variation in the attitudes of B.Ed. students toward e-learning in the classroom.

The study "Teaching and learning with technology: effectiveness of ICT integration in school" was conducted in 2015 by Ghavifekr S. and Rody W.A.W. They looked at the useful components of ICT integration in public schools as well as the efficacy of ICT integration from the perspectives of teaching and learning. It was discovered that although ICT integration works, there are insufficient and inadequately maintained ICT tools. ICT will become effective when it is properly implemented and supported by the upper management of the school. For ICT to have a meaningful impact on the teaching-learning process, proper implementation and ongoing maintenance are necessary.

In 2015, Gushan A.K. and Alshumaimeri: The attitude of teachers regarding the use of IWB in English language classrooms was investigated in this study project. Teachers' opinions regarding IWB use, technical difficulties, and challenges they encounter were investigated. 43 female teachers from various secondary schools in Riyadh were the subjects of the investigation. The outcome demonstrated that teachers' attitudes toward IWB were positive. The curriculum is inappropriate for effectively utilizing IWB in the classroom, they both agreed, along with having a positive attitude. Furthermore, inadequate training and funding result in inadequate infrastructure and classroom supplies that do not meet IWB technology.

In 2015, Shams N. and Kecabi S. conducted a study in which they assessed teachers' attitudes regarding the use of IWB in EFL classes as well as the frequency of its use in Irarian schools. His study involved 174 EFL teachers teaching at various levels, from class 6 to class 11, who employed IWB. Four themes were used by researchers to examine teachers' attitudes: instructional effect, usability, motivational effect, and frequency. The usage of this technology in the classroom was found to have impressed the teachers. They acknowledged that it's a pragmatic approach, and as a result, they become more motivated. Findings indicated a positive correlation between increased competency levels.

Aziz A., Barakat H., Aytekin I., and Abdulrahman M. (2012). Researchers examined how teachers felt about implementing IWB in the classroom and how it benefited the students in their study. The researcher's work revealed that, in order for teachers to implement IWB in the classroom with success, they require an urgent and sophisticated professional development program. Students exhibited a favorable disposition toward IWB when teachers employed it skillfully in their lessons. Use of interactive whiteboards can therefore improve the learning environment by helping students develop their skills, motivate them, and make the lesson interactive, which makes them more engaged and alert. However, the effectiveness of the teaching staff is ultimately responsible for this. How well educators use technology to support the teaching- learning process.

Abbase H., Habadi A., and Goodarzi A. (2014): Researchers discover how to build competencies for using IWB in language teaching classrooms in this research paper. This study employs an ethnographic methodology, with data gathered through interviews, field notes, video recordings, and observation. It was discovered that the development of fruitful student collaboration in IWB requires more than just implementing technology in the classroom. It is only feasible if the teacher and student have a common understanding of the goals of the tasks and how to have fruitful conversations.

Georgina and Wallace, T. (2014): This research paper details the effects of a five- semester course that integrated technological and pedagogical knowledge. The efficacy of this process was evaluated through pre-, post-, and follow-up surveys. The findings indicated that learning about the integration of educational technology has a statistically significant positive impact. Teachers who took this course learned how to improve the way they present material to students in grades K–12. Additionally, it improved their ability to identify and make use of the proper tools that were made available to them.

In 2013, Bidaki, M.Z. and Mobasheri, N. In their research, they examined how the use of IWB impacts primary school instruction through the eyes of the teachers. They worked with 198 students in a council primary school in the United Kingdom.

In 2013, D.R.B. and P.C.O.A. conducted a survey to find out more about the ICT competencies of university of Benin students preparing to become teachers. This study has looked at how students use ICT, how they rate their own ICT skill competencies, and whether there are any notable differences in how students perceive their ICT competencies in relation to factors like demographics, study-related factors, and computer training type. Researchers used an ICT usage and perceived competencies inventory, which was modified from Bassayetal, for this study. The results indicated low ICT usage due to inadequate infrastructure and a lack of Internet access. Data on students' perceptions of their own ICT competence revealed that they did not believe they were competent in this area. The study found no discernible differences in ICT competency between gender and academic level, but yes In 2013, Ksorkmaz, O., and Cakil, I. This qualitative study, which involved 17 teachers, aims to identify the challenges that educators have when utilizing smart boards. They used both open-ended questionnaires and semi-structured interviews to gather the data. The study's findings demonstrated that although teachers believe smart boards to be helpful, they do not make use of them due to a lack of appropriate knowledge, particularly technical knowledge. Teachers experience technical difficulties when using Smart Boards, which demotivates them even though they are aware of their importance and usefulness. According to research, schools should regularly assign technical experts, and teachers should receive the necessary training.

In 2013, Oyernoke, A. and Fagbohun, M. Researchers attempted to determine whether secondary school teachers are computer or ICT literate and, if so, whether they are utilizing it in their teaching-learning process through survey research. Data gathered via a questionnaire revealed that although most teachers use only word processors and powerpoint for the teaching-learning process, they are aware of the potential of ICT. In order to help teachers acquire ICT pedagogical competencies, the government should work with the ministry of education to integrate ICT trainings into teacher preparation programs. Adequate infrastructure is necessary for teachers to be proficient in ICT. Every school ought to be familiar with the ICT lab and the newest technological devices.

In her research paper Smart Class: Need of an Hour, Seetha S. (2013) explains what a smart class is and how it has transformed the process of teaching and learning. Five main parts make up a smart classroom: an LCD touch screen, an audio system, a video projector, and a control system. video camera and proprietary software for control. Due to its ability to engage students' auditory and visual senses, it is extremely effective in sustaining their interest and involvement in the lesson. Active learning occurs in digital classrooms because students can participate in virtual field trips and, for example, use reference materials that teachers can create libraries for.

S. Celik (2012). The researcher conducted his study as part of a faith-based project that included IWB integration into Turkish educational institutions and schools. The perceptions and self-reported competencies of primary school teachers in utilizing IWB for their instruction were examined by researchers. 252 teachers working at 13 primary schools in Kirkale, Turkey, were the subject of the researcher's study. The findings indicated that although teachers were aware of the various IWB features, their proficiency with them was lacking. They have very little confidence in their ability to use IWB. A research study concluded that improving the way IWB is used in teaching training programs is necessary before confidence and competency levels rise.

Rani, S. (2012): Using pre-science achievement as a covariate, he examined the impact of content on gender and science achievement. Pre-test post-test control group design was used to conduct the study. The study's findings demonstrated that, when compared to traditional teaching methods, science achievement has improved considerably when science is taught using e-content. However, when prior scientific achievement was considered as a covariate, there was no discernible impact of the treatment and gender interaction on scientific achievement.

R.Y. Clarke (2012): This study, sponsored by Samsung, is titled "The Next Generation Classroom: Smart Interactive

and Connected Learning Environments." One potential benefit of digital education is the use of digital devices and content, such as tablets. We looked into the Samsung Galaxy Note 10.1. Samsung developed a solution known as Samsung Smart School after realizing the value of computers and information technology in the classroom. This solution was centered around three main goals: fostering an interactive learning environment in the classroom, assisting teachers in effectively managing their classes and students' progress, and facilitating the seamless implementation and management of packaged education solutions in schools. Solution is a digital education bundle that includes software and a tablet (such as the Samsung Galaxy Note 10.1) that is intended to improve teacher-student communication. Screen sharing is one of Samsung Smart School's features and functions.

Wang, Y., Ahamed, S.I. Karim, F., Yau, S.S., Gupta, S.K.S., Wang, B.: Researchers demonstrated in this study that the use of ubiquitous computing technology in smart classrooms can improve collaborative learning among college students by shaking knowledge and abilities. Collaboration in the classroom is characterized by mediation and heterogeneity. Teachers foster a collaborative learning environment in this classroom where students are encouraged to think critically and take action. The RLSM Smart Classroom makes it feasible. RLSMs are created with the aid of smart classes. The creation of scenario-aware application software for smart classrooms is facilitated by RLSM.

In 2012, Turel Y.K. and Johnson T.E. In this study, the researchers examined the relationship between teachers' perceptions and how they use IWB. 174 teachers ofstudents in grades 6 through 12 participated in the current study. According to the research's findings, teachers were happy with IWB use and acknowledged that it is a potent tool that can improve teaching and learning by inspiring students. Teachers' ability to use IWB to create a positive classroom environment was lacking, though. They are therefore not very effective at using IWB, but as IWB usage increased, so did their efficiency, and they learned how to use IWB more from their peers than from experts.

Mohamed A.R. and T.K.R. Singh (2012) through an exploratory study, the researcher investigated how students felt about science instruction and learning when interactive whiteboard technology was used. The four areas that the study of student perspectives fell under were Learning, Interaction, Motivation, and Environment. Focus groups were used to interview twelve students from two classes of fourteen-year-olds from three public secondary schools in Penacy, Northen Malaysia. Following a series of 40- or 80-minute lessons taught by teachers, focus group interviews were held. The findings indicated that utilizing interactive whiteboard technology makes learning considerably simpler and more engaging for students. The learning materials have been enhanced by IWB technology, as students can now focus better and retain more information thanksto more color and pictures.

Kruusvall J., Umarik M., and Loogma K. (2011): The application of e-learning by VETteachers was examined in the research paper "E-learning as innovation: Exploring innovativeness of the VET teachers' community in Estonia." They also described the element that could be used to forecast the creative behavior of instructors in Estonia's professional and vocational higher education. Depending on their propensity and level of proficiency with educational technology, adopters were split into five groups: innovators, early adopters, early majority, late majority, and laggards. Although the distribution of VET teachers according to innovativeness followed a normal distribution, this empirical study revealed a significant difference in terms of competencies and innovation adoption between innovators and the remaining categories of adopters. Different professional higher education institutions and VET schools exist in Estonia.

HKEdAPFSLT (2011): This is a conceptual paper whose goal was to ascertain how university students' academic achievement in relation to topics related to technology laboratory classes was affected by their use of IWB. It has been stated that interactive white boards (IWBs) are useful for teaching science topics because they allow us to display virtual experiments and simulations. It is especially useful for physics-related subjects like electricity. Effective explanations for phenomena like electricity, electric motors, induction current, and electric bells can be found in virtual laboratories or simulations.

Hang H.Y., Chai, C.S., and Teo, T. (2009): Researchers conducted a comparative analysis of teachers' attitudes and beliefs regarding ICT use. 108 pre-service teachers from Singapore and Taiwan participated in the survey that they conducted. The results demonstrated that the epistemological views of pre-service teachers were typically relativistic. Their views on the use of ITC were unrelated to their pedagogical and epistemological convictions. According to the current research, there should be more effective ways to integrate ICT into the teaching and learning process in order to support and encourage constructivist teaching.

A.F. Aduke (2008). He examined the applicability of ICT and its difficulties on the educational process in Nigerian universities in his work "Usage & challenges of Information Communication Technology (ICT) in Teaching and Learning in Nigerian Universities." It was discovered that because ICT makes information easily accessible,it is a useful tool. ICT changed the teacher's job description from knowledge dispenser to knowledge facilitator. It can display text, images, and graphics on the screen and accept student input that can be collected and examined. It had improved the ability to participate effectively. ICT is relevant, but there are obstacles in the way of its effective application. Some of the main factors impeding progress include low tele-density, inadequate funding, a sluggish management style, inadequate internet connectivity, and an electric supply.

According to Hermans, Tondeur, Van-Braak, and Valcke (2008), teachers place a high value on three main stages of ICT: integration, enhancement, and complementary. The goal of the integration approach is to increase student achievement and attainment by implementing appropriate ICT use in a specific subject area that involves complex concepts and skills. The enhancement approach involves introducing the subject through ICT. Finally, using ICT to assist and promote students' learning is the complementary approach. With this method, students can be more productive and organized since they can access their notes on a computer, turn in their assignments via email from home, and search the internet for information from a variety of sources in order to complete the assigned task.

Gulbahar and Guven (2008): To learn more about the perceptions of social studies teachers in Turkey, they conducted a survey in a primary school. Their research indicates that although educators are aware of and embrace the potential of ICT, they hardly ever use it in the classroom because they don't believe they are proficient in its use. Teachers' inability to use ICT resources and lack of in-service training contribute to lower usage. Teachers found that there is a discrepancy in the ICT, the existing curricula, and the timetable for classes. Teachers should be given ample time to experiment with cutting-edge ICT techniques. To implement cutting-edge ICT tactics, legislators and educators must work.

Dobson, T., Petrina, S., and Guo, R.X. (2008): This study compared the ICT proficiency of immigrants and digital natives using the distribution of age-related demographics. Four sections were created in a tool for analysis: attitudes toward technologies, frequency of ICT use, ICT competencies, and demographics. To achieve this, they separated the population into four age-based groups: under-40, over-40, 25– 29, and 30-40. Regarding ICT competencies, there was statistically no difference in the opinions of people in the four age groups. Based on statistical analysis, they concluded that there was no appreciable difference in ICT competencies between immigrants and digital natives.

Schroeder, R. (2007): He examined the function of interactive whiteboards in active learning in his research. It was discovered that affective learning is reinforced by smart boards. Peers valued the knowledge and skills of the students, and they saw each other as teachers. However, a big issue with this teaching strategy is that it takes a lot of time,which can disrupt the class's discipline.

Glover D., Miller D., Averis D. (2007) In the present research work researcher observed 50 video- lesson plans taken by mathematics teacher and modern foreign language department in secondary school in UK. They observed that no doubt withthe use of teaching learning process become interactive and effective. Teachers' teaching style become different from traditional class when they use IWB for their teaching. IWB enabled them to extend and develop their existing approach. It has been observed that IWB has enhance teaching but alone IWB cannot bring quality. Teachers have to achieved technical and pedagogic fluency to maximise the potential for continuous interactivity. To make class lively, challenging and though-provoking it is requiring that teachers become confident operator of that equipment and software.

Higgins & S. Halls (2005): This is an evaluation study that looked at how IWB affected teachers' and students' perceptions. It was discovered that support for the use of IWB came from both educators and students. The adaptability of IWB helps to improve students' motivation, engagement, and attention span while lectures are being given. Regular training in the pedagogical and technical aspects of IWB is necessary to make teachers more effective.

Beauchamp, G. (2004): IWB has been promoted in primary schools in the United Kingdom in order to help teachers develop their ICT skills. Researchers looked at how using IWB presented teachers with opportunities and challenges for professional growth in order to create a general progressive framework and models for IWB implementation in schools. It has been noted that there is much that can be done, suchas providing teachers with IWB-related training and ample time to practice and internalize the lessons they have learned until they feel comfortable using IWB. More of the IWB's features will be used in the classroom by teachers as they gain confidence using them.

In conclusion, a positive correlation was found between the use of technology and its educational impact across a variety of literature sources on the use of technology in teaching and learning. The goal of reviewing the literature is to take into account the numerous studies carried out in various educational domains in light of smart classroom technology. The current study is limited to three main broad areas: teachers' perceptions of smart class technology, teachers' competency with it, and the impact of smart class technology on secondary school science learners. The information gleaned from the review of the literature helps to clarify how to proceed with the research. It has given the research project a direction and length. Thus, the impact of smart class technology was the subject of the current study.

METHODOLOGY

This chapter includes a methodical approach to planning, carrying out, and evaluating research. It includes the general methodology and plan employed to locate, compile, and analyze data in an organized manner. This covers the choice of research methodologies, strategies for gathering data, and the creation of a study plan. A clear research methodology is essential to guaranteeing the authenticity and dependability of the study's conclusions. The chapter has been divided into the following sections.

1. Define the population
2. Sources of information
3. Subject selection
4. Sampling method
5. The procedure for carrying out the tests

DEFINE THE POPULATION

Students of Universities

Sources of Information

A systematic sampling was conducted in this study. The goal was to collect responses from students and 44 participants who were from different universities and various age groups actively involved. The data was gathered by an online questionnaire administered by Google Forms. This questionnaire consisted of 15 multiple-choice questions

Subject Selection

In this research, a total of 44 individuals (all students) were chosen after providing informed permission. The entire population belonged to Punjab.

Sampling Method

Systematic random sampling method was used where the information about different universities was collected and then reputed universities were picked and Google form was shared among them. It is similar to simple random sampling, but it is usually easier to carry out. Every member of the population is assigned a number, but rather than being generated at random, individuals are chosen at regular intervals.

The Procedure for Carrying out the Tests

This questionnaire was designed with phraseology, clarity, and brevity in mind, as well as theavoidance of leading or embarrassing questions that could lead to incorrect answers. Yes / No. Each answer had a clear choice and was equally semantically separated from the others. The order of the questions was critical, and a logical sequence of question topics wasestablished. The sequence of teacher responses.

Limitations

The researcher relies on the honesty of the participants and the problem starts at the point where the respondent is willing to disclose the truth or not. It is a common problem in behavioral research that the questionnaire involves personal and sometimes indiscreet questions. There may be some participants who do not want to report their actual, true responses and therefore this can constitute a limitation to a study.

Delimitations

The sample was shared among 44 participants with systematic random sampling. There were various delimitations such as the study mainly focused on college students of particular universities. This study is limited to a certain period of time and involves only a quantitative approach.

RESULT AND DISCUSSTION

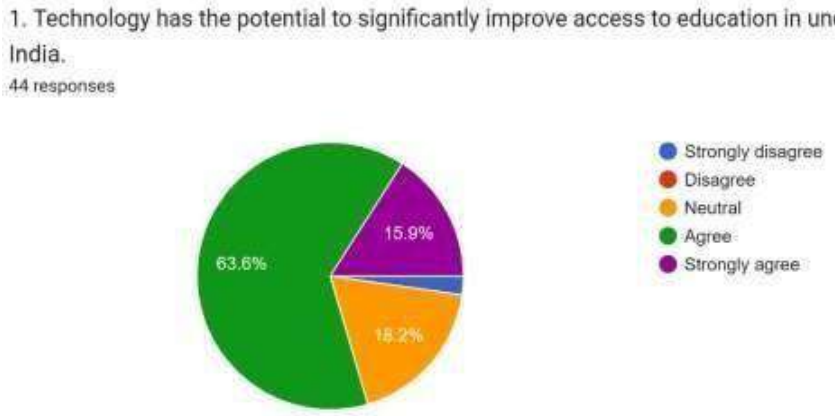


Fig. 1

In this question 63.6% participants responded as agreed, 15.9% participants strongly agreed whereas18.2% participants marked their answer as neutral and some strongly disagreed. Therefore majority of participants agreed that technology has the potential to improveaccess toeducation in underserved areas of India

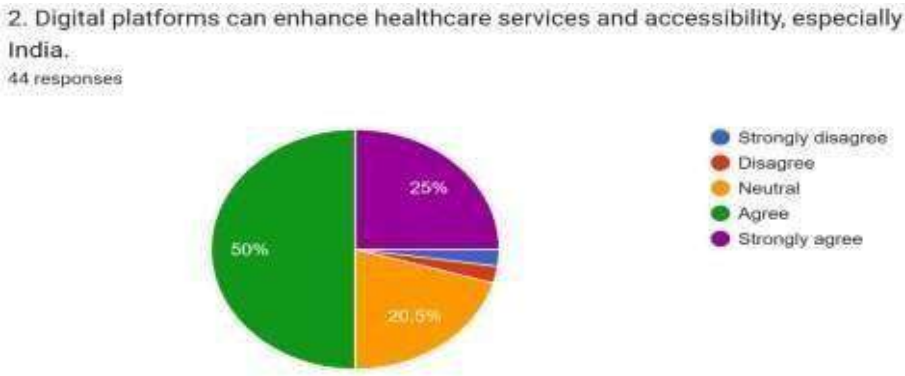


Fig. 2

In this question 50% participants responded as agreed, 25% participants strongly agreed whereas20.5% participants marked their answer as neutral and some disagreed and stronglydisagreed. Therefore, majority of participants agreed that digital platform can enhance healthcare services andaccessibility especially in rural areas of India.

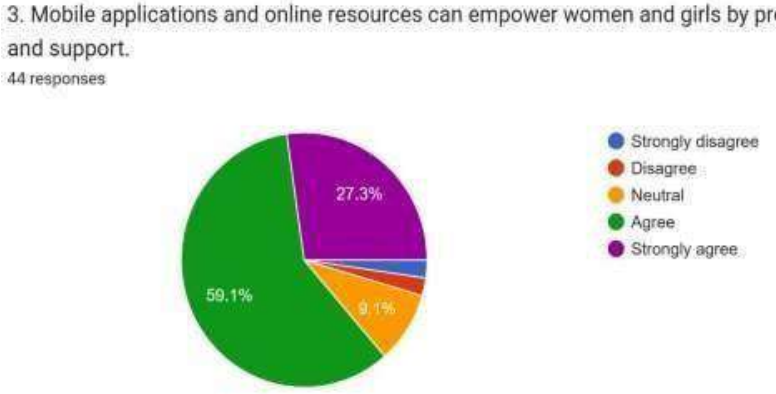


Fig.3

In this question 59.1% participants responded as agreed, 27.3% participants strongly agreed whereas 9.1% participants marked their answer as neutral and some disagreed and strongly disagreed.Therefore majority of participants agreed that mobile application and online resources can empowerwomen and girls by providing education and support.

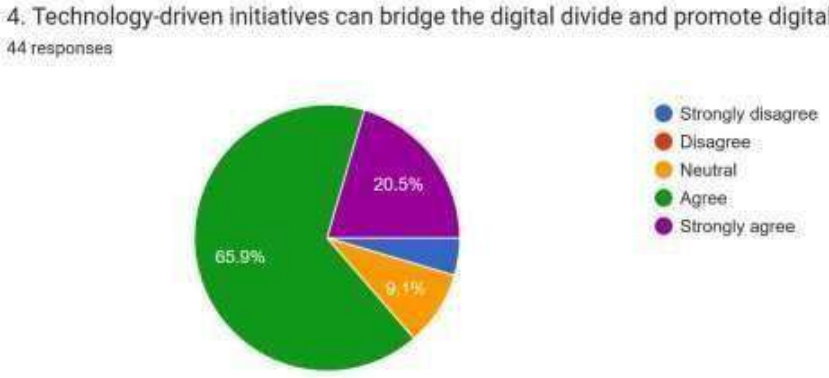


Fig. 4

In this question 65.9% participants responded as agreed, 20.4% participants strongly agreed whereas9.1% participants marked their answer as neutral and some strongly disagreed. Therefore, majority of participants agreed that technology driven initiative can bridge thedigital divide and promote digital literacy in India.

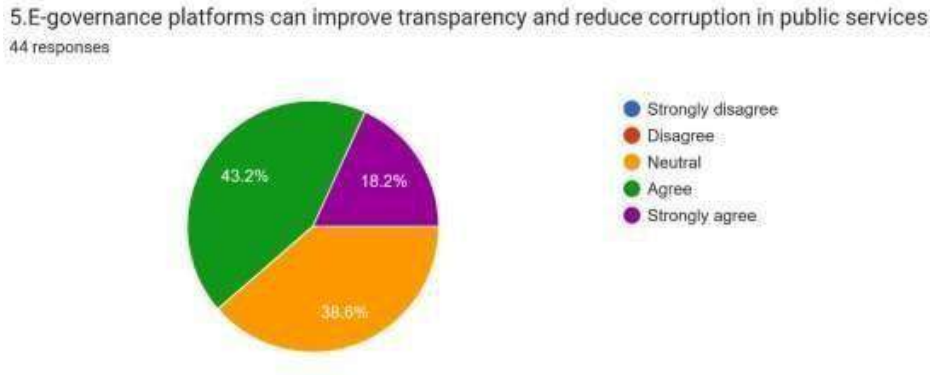


Fig. 5

In this question 43.2% participants responded as agreed, 18.2% participantsstrongly agreed whereas 38.6 % participants marked their answer as neutral. Therefore, majority of participants agreed that E governance platform can improve transparency and reduce corruption in public services.

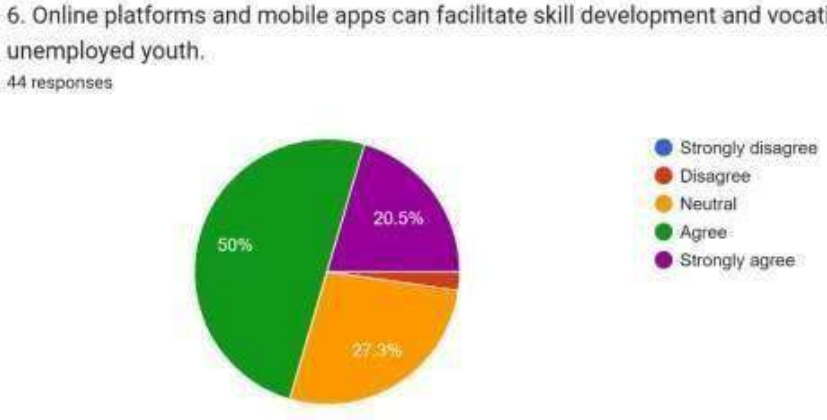


Fig. 6

In this question 50% participants responded as agreed ,20.5% participants strongly agreed whereas 27.3 % participants marked their answer as neutral and some disagreed. Therefore, majority of participants agreed that online platforms and mobile apps can facilitate skill development and vocational training in unemployed youth.

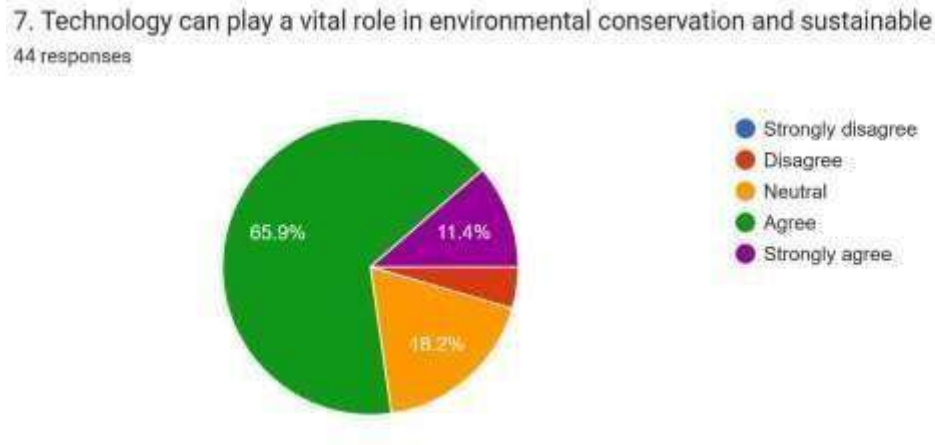


Fig. 7

In this question 65.9% participants responded as agreed, 11.4% participants strongly agreedwhereas18.2% participants marked their answer as neutral and some disagreed. Therefore, majority of participants agreed that technology can play a vital role inenvironmental conservation and sustainable practices in India.

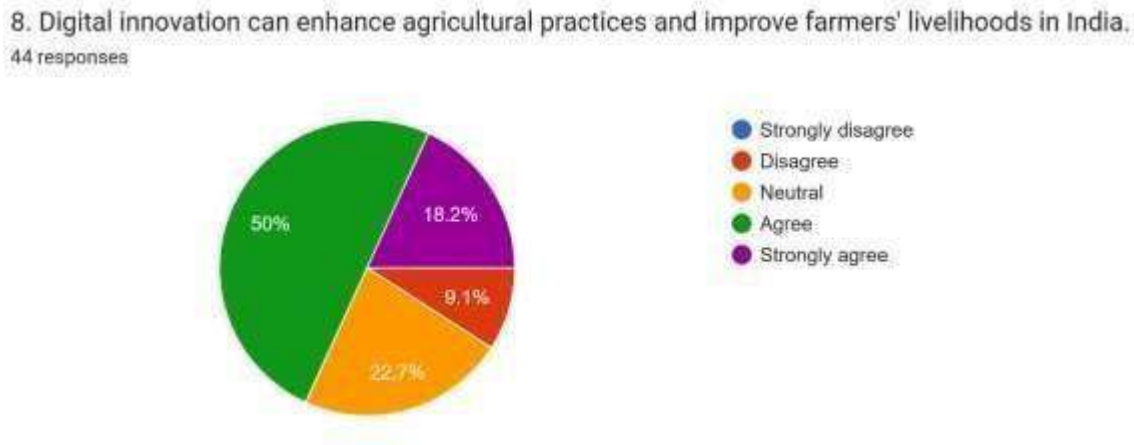


Fig.8

In this question 50% participants responded as agreed, 18.2% participants strongly agreed whereas 22.7% participants marked their answer as neutral and 9.1% participants disagreed. Therefore, majority of participants agreed that digital innovation can enhance agricultural practicesand improve farmer's livelihood in India.

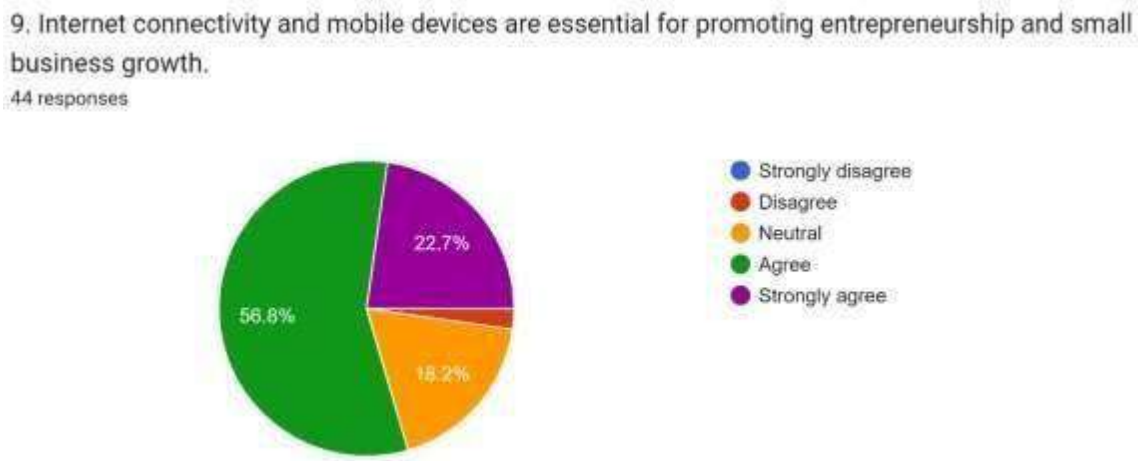


Fig. 9

In this question 50.8% participants responded as agreed, 22.7% participants strongly agreed whereas 18.2% participants marked their answer as neutral and some disagreed. Therefore, majority of participants agreed that internet connectivity

and mobile devices are essential for promoting entrepreneurship and small business growth.

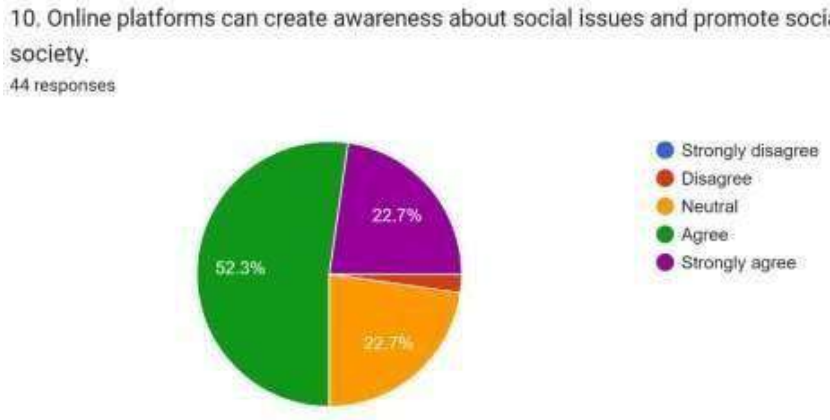


Fig. 10

In this question 52.3% participants responded as agreed, 22.7% participants strongly agreed whereas 22.7% participants marked their answer as neutral and some disagreed. Therefore, majority of participants agreed that online platforms can relate awarenessabout socialissues and promote social change in Indian society.

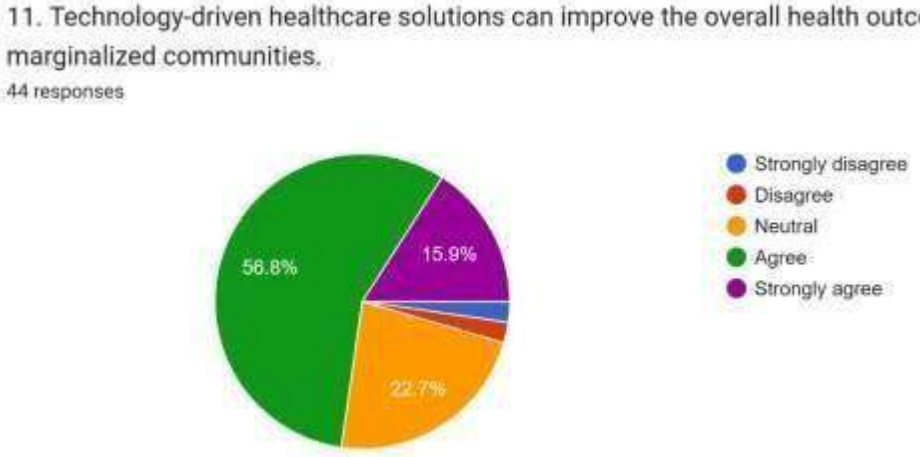


Fig. 11

In this question 56.8 % participants responded as agreed, 15.9% participants stronglyagreed whereas 22.7% participants marked their answer as neutral and some disagreed and strongly disagreed. Therefore, majority of participants agreed that Technology-driven healthcaresolutions can improve the overall health outcomes of marginalized communities.

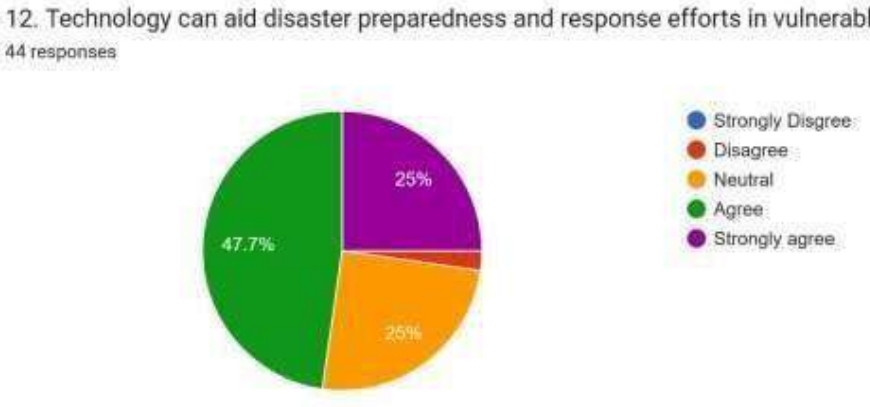


Fig. 12

efforts in vulnerable regions of n this question 47.7% participants responded as agreed, 25% participants strongly agreedwhereas 25% participants marked their answer as neutral and some disagreed. Therefore, majority of participants

agreed that Technology can aid disaster preparedness and response India.

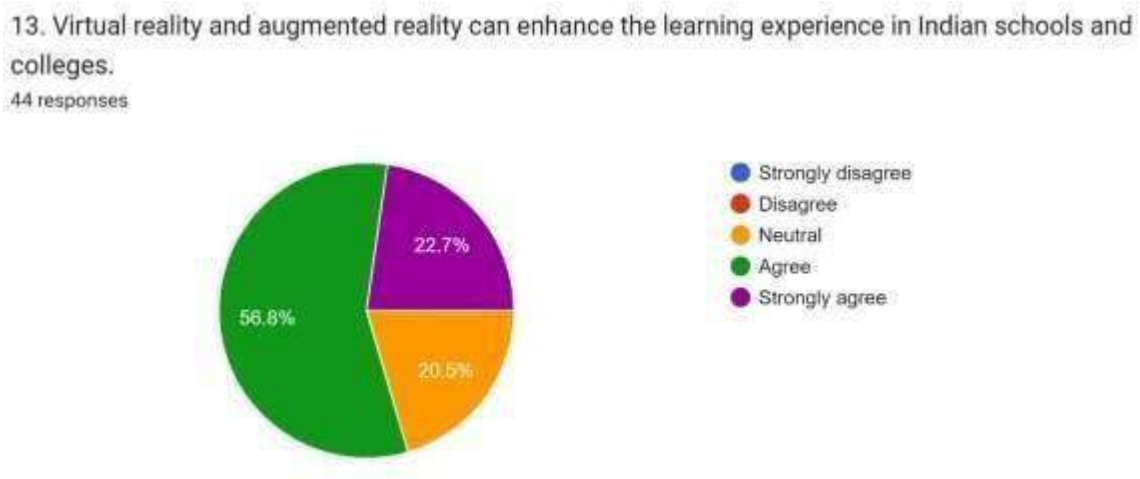


Fig.13

In this question 56.8% participants responded as agreed, 22.7% participants strongly agreedwhereas20.5% participants marked their answer as neutral. Therefore, majority of participants agreed that Virtual reality and augmented reality canenhance the learning experience in Indian schools and colleges.

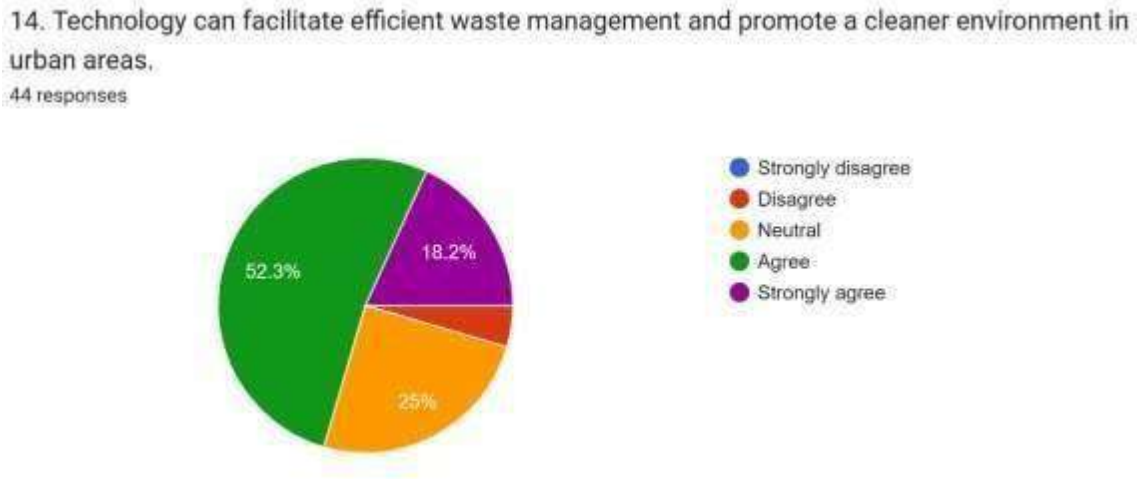


Fig.14

In this question 52.3% participants responded as agreed, 18.2% participants strongly agreed whereas25% participants marked their answer as neutral and some disagreed. Therefore, majority of participants agreed that technology can facilitate efficient wastemanagement and promote a cleaner environment in urban areas.

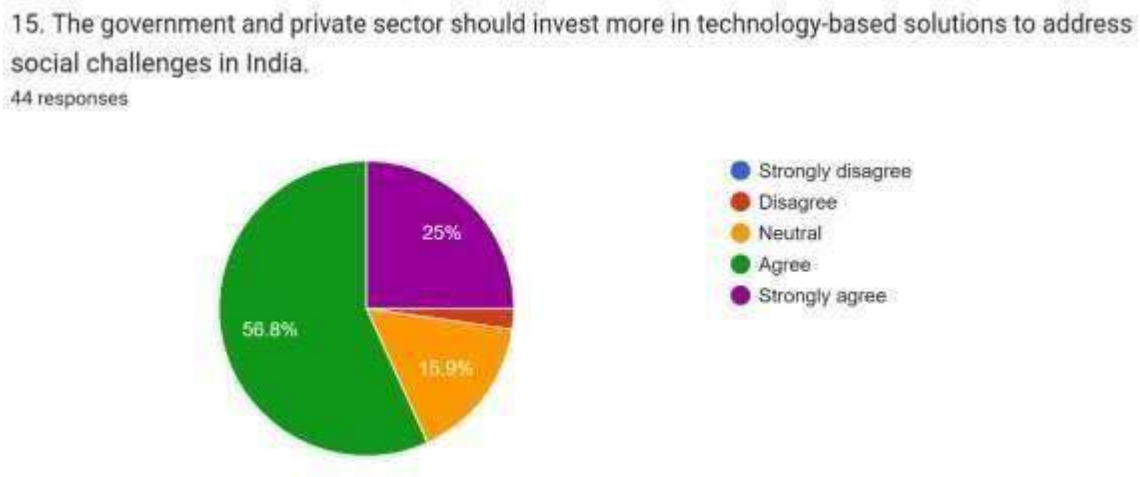


Fig.15

In this question 56.8% participants responded as agreed, 25% participants strongly agreed whereas 15.9% participants marked their answer as neutral and some disagreed. Therefore, majority of participants agreed that the government and private sector should invest more in technology-based solutions to address social challenges in India.

CONCLUSION

Represents a beacon of hope and a pathway towards a more inclusive and equitable future, as we navigate the complexities of a rapidly evolving world, the symbiotic relationship between technology and social betterment becomes increasingly apparent. This journey is not merely about adopting cutting-edge innovations but about harnessing the transformative power of technology to uplift communities, bridge gaps, and create a sustainable impact.

The stories and initiatives shared in this exploration underscore the immense potential of technology as a force for positive change in India. From healthcare advancements that reach the remotest corners to educational tools that empower the marginalized, the digital landscapehas become a canvas for innovation with a social conscience. As we witness the fusion of technological prowess with social responsibility, it is evident that the future lies in collaborative efforts that bring together government, private sector, and civil society to amplify the impact of these endeavours.

However, it is crucial to acknowledge that the road ahead is not without its challenges. Issues of accessibility, digital literacy, and ethical considerations must be navigated conscientiously to ensure that the benefits of technology are accessible to all strata of society. In the pursuit ofcreating a tech-powered utopia, it is imperative to foster a culture of inclusivity, openness,and continual dialogue.

In the grand tapestry of India's socio-technological evolution, this exploration serves as a testament to the incredible possibilities that lie at the intersection of innovation and compassion. By embracing a vision where technology is not just a tool but a means to empower, uplift, and connect, we can collectively steer towards a future where the dividends of progress are shared by every individual, community, and region. "Tech for Good" is not just a slogan; it is a rallying call for a harmonious coexistence of technology and humanity, and it is in this harmony that the true potential of a brighter, more inclusive India unfolds.

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Appendix 2

Self-made questionnaire "Tech for Good: Leveraging Technology to Address Social Challenges in India"

Respondents are asked to indicate their level of agreement with each statement on a scale of 1 to 5, where:

1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Instructions: Please indicate your level of agreement with the followingstatements by choosing the appropriate response.

1. Technology has the potential to significantly improve access to education inunderserved areas of India.

   1 2 3 4 5

2. Digital platforms can enhance healthcare services and accessibility, especially in rural regions of India.

   1 2 3 4 5

3. Mobile applications and online resources can empower women and girls by providingeducation and support.

   1 2 3 4 5

4. Technology-driven initiatives can bridge the digital divide and promote digital literacyin India.

   1 2 3 4 5

5. E-governance platforms can improve transparency and reduce corruption in publicservices.

   1 2 3 4 5

6. Online platforms and mobile apps can facilitate skill development and vocational training for unemployed youth.

   1 2 3 4 5

7. Technology can play a vital role in environmental conservation and sustainablepractices in India.

   1 2 3 4 5

8. Digital innovation can enhance agricultural practices and improve farmers' livelihoodsin India.

   1 2 3 4 5

9. Internet connectivity and mobile devices are essential for promoting entrepreneurship and small business growth.

   1 2 3 4 5

10. Online platforms can create awareness about social issues and promote social changein Indian society.

    1 2 3 4 5

11. Technology-driven healthcare solutions can improve the overall health outcomes of marginalized communities.

    1 2 3 4 5

12. Technology can aid disaster preparedness and response efforts in vulnerable regionsof India.

    1 2 3 4 5

13. Virtual reality and augmented reality can enhance the learning experience in Indianschools and colleges.

    1 2 3 4 5

14. Technology can facilitate efficient waste management and promote a cleanerenvironment in urban areas.

    1 2 3 4 5

15. The government and private sector should invest more in technology-based solutionsto address social challenges in India.

    1 2 3 4 5

IMPACT OF POVERTY ON EDUCATION

Mansi Jain, Pragya, Anjali Negi, Prateek Rai, Pradeep Kumar

Supervisor: Dr. Abdul Majeed

INTRODUCTION

According to the World Poverty Clock, 18 Indians are on the verge of escaping extreme poverty every minute as the nation's economy, which is among the fastest growing in the world, continues to expand. Over the past 25 years, the World Bank has reviewed the definition of poverty set forth by it, performed the necessary calculations, and established the one dollar as the absolute poverty line in the early 1990s. Three years later, in 1993, the absolute poverty line of 1.08 dollars was established for every nation based on purchasing power parity. The World Bank raised the global poverty line's scale in 2005 to account for the rising cost of living following a comprehensive analysis of living expenses worldwide. Based on purchasing power parity (PPP), the World Bank then calculated the percentage of the population living on less than $1 and 25 cents per day.

The World Bank proposed yet another significant revision to PPP in May 2014, this time pertaining to its calculation methodology, international poverty line, and indexing it to the US dollar of 2011. This came after a thorough revision of the definition of poverty, methodology, and changes with regard to the global economy. According to the 2011 PPP, the poverty line was set at $1.78 per day using the new method. Based on research conducted using the World Bank methodology, approximately 179.6 million people in India, 137.6 million in China, and 872.3 million people worldwide were living below the new poverty line as of 2013. India accounted for 20.6% of the world's population, with 17.5% of all.

The Rangarajan Committee was established, examined India's poverty line estimates, and produced a report in June 2014 and the year 2014. According to the report, the Tendulkar Committee's definition of poverty is based on monthly per capita consumption expenditures. The new poverty threshold for rural areas was determined to be 972 rupees per month, or 32 rupees per day. As a result, it is fixed at 1407 rupees per month for urban areas and at rupees forty-seven per day for daily or daily basis. 363 million people, or roughly 29.5% of the total population, were included. First of all, they would take into consideration the possibility that, in order to achieve the same set of capabilities, different sets of goods and services—more specifically, more expensive sets in wealthier countries—may be required in different countries. Second, they will enable benchmarking within and between developing regions as well as cross-national comparisons. India is classified as a lower middle-income country. In India, 60% of people were estimated to be living below the poverty line in 2011 using the $3.20 per day threshold. This suggests that in 2011, 763 million Indians were living below the poverty line. As of early 2021, 86.8 million people in India—or approximately 6% of the country's total population—lived in extreme poverty. According to current projections, the nation will achieve its sustainable development goals by 2030 and will be well on its way to eradicating extreme poverty. Heavy population pressure, underemployment and unemployment, capital deficiencies, underdeveloped economies, price increases, net national income, rural economies, a lack of skilled labor, an insufficient number of successful entrepreneurs, improper industrialization, low growth rates, antiquated social institutions, inappropriate use of natural resources, and a lack of infrastructure are some of the main factors contributing to poverty in India.

One of the main causes of the reduction or decline in India's poverty rate is the country's economy, which has grown rapidly since 1991. Another is the introduction or launch of social welfare programs like the Midday Meal Scheme for government schools and the MGNREGA, or Mahatma Gandhi National Rural Employment Guarantee Act. These initiatives significantly reduced poverty, according to Klonner and Oldiges' 2012 report. According to The World Bank, India has been working hard to lift millions and millions of people out of the crisis or problem of poverty and has achieved an annual growth rate exceeding 7% over the last 15 months. According to a report by the international financial institution, the nation has demonstrated results over the past three decades or thirty years, nearly halving its poverty rate and seeing some significant improvements in most human development outcomes.

STATEMENT OF THE PROBLEM

This study was designed to investigate the' *IMPACT OF POVERTY ON EDUCATION* '.

OBJECTIVE OF THE STUDY

To analysis impact of poverty on education

To evaluate how a student's education is impacted by Poverty.

Delimitation

The study's scope has been restricted to the students studying in UITTR department of Chandigarh University specifically

B.a.+ B Ed and B.sc.+ B.ed.

LIMITATION

One of the limitations was the respondent's nature. The non-attendance of respondents has been identified as an additional constraint. Certain students expressed reluctance to divulge personal information.

SIGNIFICANCE

This study aims to understand that poverty affects education in a big way, affecting academic achievement, prospects, and access to and quality of education. In order to improve education for children living in poverty, it is imperative to address the barriers that poverty causes and offer solutions.

REVIEW OF LITERATURE

A review of the literature aids the researcher in organizing and carrying out other people's experiences as well as in understanding the problems at hand. Furthermore, being aware of potential gaps in empirical research gives clues to fill them as much as possible, which contributes to the societal significance of empirical research. This chapter examines the empirical results of a few research on poverty, its issues, and its prospects. Empirical research on poverty raises a number of important questions, including how to define and quantify poverty, how much it has changed and what factors are influencing it, how it is distributed spatially, why official estimates of poverty differ from other estimates, and how well poverty alleviation initiatives are working. But naturally, it is impossible to relate to and provide detailed commentary on every study that has been done; nonetheless, a synopsis of the papers that have been chosen is provided below.

Defining and Measuring Poverty

Based on the definition of poverty provided by the Expert Group of Planning Commission (1962), the calorie criteria suggested by the Task Force (1977), and the state-specific poverty line suggested by the Expert Group of Planning Commission (1993), numerous studies have been carried out in India. Using the criterion provided by the Expert Group of the Planning Commission (1962), Minhas (1970) calculated poverty from 1956–1957 to 1967–1968. Poverty was characterized using calorie criterion by Dandekar and Rath (1971), Bardhan (1973), Rudra (1974), and Ahluwalia (1978). Three metrics of poverty were employed by Ravallion and Datt (1996) to estimate poverty from 1950 to 1990: the Headcount Ratio, the Poverty Gap Index, and the Squared Poverty Gap Index.

Mehta and Venktaraman (2000) discovered that individuals living below the "Official Poverty Line" could only afford to consume 1968 calories per person per day in rural areas and 1800 calories per person per day in urban areas. This is significantly less than the necessary amount of 2400 calories per person per day in rural areas and 2100 calories per person per day in urban areas. This is because in India to shifting dietary inclinations. Many of the poverty indices that have been used up to this point have come under fire for failing to account for non-income variables, which are crucial for creating a poverty index. They believed that a large portion of the issue with measuring poverty has been related to poverty measures. Additionally, the Headcount Ratio, Poverty Gap Index, Sen Index, and Foster- Greer-Thorbecke Index are the most widely used measures of poverty. According to Gupta's (2005) research, measures of consumption and income were unable to significantly reduce the deprivation that the poor face. In order to calculate poverty in various states, he used the Human Poverty Index and the Capability Poverty Index. According to his Using a headcount ratio, they calculated the percentage of persons living below the poverty li ne. Moreover, a number of research have been carried out that have emphasized the necessity of creating a poverty index based on both income and non-income characteristics. Poverty is defined by economists using the nutrition criterion, such as Meenakshi and Ray (2 002), Meenakshi and Vishawanathan (2003), Radhakrishna (2004), and Ray and Lancaster (2005).

Sundaram and Tendulkar (2003) discovered a decrease in poverty between 1994 and 2000. They looked at poverty in 15 states separately, in rural and urban areas. By recalculating the data from the 50th round using the mixed reference period, they were able to resolve the issue of comparability between monthly per capita expenditure in the 55th (1999-2000) round based on MRP (mixed reference period) and the 50th (1993-94) round based on URP (uniform reference period). The authors computed the headcount ratio (HCR), which represents the size of the impoverished population; the poverty gap index (PGI), which represents the depth of poverty; and the squared poverty gap (FGT), which represents the severity of poverty, in order to measure changes in poverty over the 1990s at the state level. The study discovered that over the six-year period from 1993–1994 to 1999–2000, Assam, Madhya Pradesh, and Orissa experienced an increase in poverty. Assam had an increase in HCR, PGI, and FGT poverty. In Madhya Pradesh, HCR increased but PGI and FGT decreased. HCR decreased while PGI and FGT increased in Orissa. There has been a decrease in the poverty ratio in the remaining 12 states. FGT decreased from 0.0308 to 0.0202, while the weighted average of PGI on MRP (mixed reference period) of 15 states decreased from 0.0933 to 0.0653. The main point is that poverty decreased in the 1990s despite variations in state laws.

Between 1993–1994 and 1999–2000, Sundaram and Tendulakar (2004) looked at the shift in the percentage of the poor in the Indian labor force. The authors divided the labor force's impoverished population into four categories: males and

females in rural areas, females and males in urban areas. For the 50th and 55th rounds of the NSS, they provided the gender, activity status, and rural-urban composition of these categories according to employment and unemployment. Research revealed that poverty prevalence is more among rural and urban women workers than those for men. The aggregate magnitude of working poor was estimated to be 93.9 million in rural India and 20.9 million in urban India in 1994. Total number of working poor was 114.8 million, which was 30 per cent of the working force. As per the estimates, from a level of 115 million, the number of working poor declined by a little over 12 million, almost entirely in rural area. The overall picture that emerged from the study is that there is a correlation between reduction in poverty and education. Education endowment increases the productivity of workforce and reduces poverty. Thus, the overall picture presented is that poverty declined in 1990s.

Mehta and Bhandari (2005) investigated patterns of poverty in developing Asian nations. Using the national poverty line and the international poverty line, which is a standardized worldwide poverty limit at 1993 purchasing power parity, the study looked at trends in poverty in Asian countries. The entire framework demonstrates that the rate of poverty did not change from 1987 and 1993. The World Bank (1997) reports that the incidence of poverty appears to have fallen substantially again after 1993. According to the authors, there are two reasons why South Asia's rate of poverty reduction is so low: first, the poorest countries have had low economic growth; and second, there have been persistent disparities in both income and non-income aspects that have hindered the poor from participating in growth. They came to the conclusion that social development, microfinance, good governance, and pro-poor economic growth might all help to lessen poverty. Microfinance offers financial services to low-income consumers, such as impoverished urban people or landless marginal farmers, among others. Microfinance can help the impoverished accumulate more physical capital as well as social and human capital.

According to Himanshu (2007), there was a decline in poverty from 1993 to 2005, but it did so at a slower annual rate than it had in the 1970s and 1980s. The author supports previous research showing that the 1990s were a lost decade for reducing poverty. According to this study, there was a slight decrease in poverty from 1993 to 2000, with the majority of the decline happening between 1999 and 2005. Although the annual rate of decline in poverty was lower than it was in the previous decade (1983–1994), it did decline more quickly between 1999 and 2005. The picture that emerged from the reduction of poverty between 1999 and 2005 demonstrates that the states that had higher rates of poverty than the national average prior to 1999 were the primary source of the national reduction in poverty. Moreover, his study report demonstrates indicates that the decrease in poverty at the federal level can be attributed to the states that had higher rates of poverty than the national average up until 1999. Additionally, his study report provides proof of advancements in non-income metrics from 1993 to 2005.

Thakur (2010) looked at how growth affects income distribution and poverty. He discovered that the headcount ratio fell to 39% in 1991 from 53.17% in 1977–1978 at the national level in India. The results of this study show an inverse relationship between poverty and growth. According to the author, the Gini coefficient was 27.71 percent in rural areas in 1991, citing estimates from the Indira Gandhi Institute of Development and Research. In rural areas, it rose to 30.11% between 1997 and 1998. Development has therefore led to an increase in inequality during the post-reform period, according to studies conducted by the IGIDR, the World Bank (1955), the Planning Commission (1977), and Tendulkar estimates.

There has been a decrease in poverty during the post-reform era, according to several empirical studies conducted in India, including Ravallion and Datt (1996), Malik (2000), Sundaram (2001), Rajan (2002), Mishra and Rao (2003), Sundaram and Tendulkar (2003), Himanshu (2007), Mehta Rekha and Santosh Bhandari (2005), and Thakur (2010). Economic growth has been found to be correlated with a decrease in poverty. The rate of decline and the variables influencing poverty, however, vary amongst research.

Mukherjee (2002) attempted a micro-level analysis of hunger. Utilizing Participatory Learning and Action (PLA) techniques with secondary data, he conducted micro studies in eight villages across multiple states. He discovered that although our food production is at its peak, the greatest proportion of people go hungry each night. The harsher truth is that the average Indian goes without food, which prevents them from getting the necessary nutrition. Merely 30% of the most impoverished individuals receive only approximately 1600 calories from their diet.

Kozel and Parker (2003) examined Uttar Pradesh's (UP) poverty's origins and development. The data utilized by the authors came from administrative records, participation studies, consultations, and the 55th round of the NSS. The Uttar Pradesh government gathered data on a set of monitoring indicators for the 55th round of the NSS in addition to the UP state sample. A unique poverty module (Schedule 99) was created for the same households. Information on numerous indicators, such as access to healthcare, education, infrastructure (water, sanitation), and use of particular anti-poverty programs, was included in the new module. The authors discovered that deprivation of material goods, deprivation of human resources, and social ties, influence, and strength. The UP's poverty data indicates significant regional variations and a rise in poverty from the west to the east. The authors came to the conclusion that programs and policies intended to alleviate poverty need to take into account its many facets.

In order to investigate regional differences in poverty, Murgai and Suryanarayan (2003) combined central and state samples for Karnataka from the NSSO 55th round. The authors calculated district-by-district headcount ratios and the poverty gap using the official poverty line. According to estimates of poverty, Karnataka's urban poverty is higher than its rural counterpart, but it is still similar across the board in India. Additionally, the study discovered a notable disparity in poverty levels within divisions and a concentration of the poor in northern districts.

Thirty-six villages were chosen by Krishna et al. (2004) from three Andhra Pradesh districts. The SC, ST, and OBC groups made up the majority in almost all of the chosen villages. According to their study, there has been very little net change in the percentage of impoverished households in these villages—65.5% were impoverished 25 years ago, and 63.5% are impoverished now. Just 1.9 percentage points separate them. Furthermore, it was discovered that 14.1% of all households had managed to escape poverty. In addition, it was discovered that 12.2% of households had concurrently fallen into the poverty trap over a 25- year period. The degree of poverty differed significantly amongst villages. In twenty-two of the thirty-six villages, the percentage of impoverished households fell; in the remaining fourteen, it rose 14 communities. Poverty was mostly caused by a confluence of factors, including bad health, medical expenses, social and customary costs, high interest rates on personal debt, big families, indolence, and drunkenness. One way out of poverty was through employment in the public and private sectors, irrigation, government support, and new agricultural technologies. The authors recommended two distinct sets of policies: one to help households escape poverty and the other to stop them from falling into it. The author proposed both sets of policies at the same time to address these two trends independently.

In 1987–1988 and 1993–1994—Koli (2005) carried out a study covering the entirety of the state of Rajasthan as well as its various regions. Four regions were identified within the state for the purpose of analyzing poverty. The HCR, PGI, and FGT are three measures of poverty that the author calculated at the regional level. According to the study, rural poverty decreased across the board. The region of southern Rajasthan had the highest level of poverty. During this time, regional variances grew. Urban poverty declined at a slower rate than rural poverty. In Rajasthan's east and southeast, urban poverty has grown. The migration of rural poor people to urban areas was the cause of the rise in urban poverty. The author made an index of social poverty. There was a found positive rank correlation coefficient between economic The author came to the conclusion that measures to lessen social poverty should be implemented in order to eradicate economic poverty. Development decisions should be made at the micro level because growth does not necessarily benefit the poor.

Sailbala (2005) attempted to investigate the patterns of poverty in rural Orissa and the contribution of education to poverty alleviation. She determined the percentage of families below the poverty line by social group, income category, and occupation status using the secondary data for the years 1992–1993. According to the study, scheduled tribes, marginal farmers, and lower income groups had higher rates of poverty. It also discovered a significant inverse link between poverty and education. According to the study, public education should be provided by the government to encourage people to take part in programs aimed at eradicating poverty.

An empirical analysis of the economic circumstances surrounding agricultural labor in rural Punjab was conducted by Sidhu et al. (2005). They separated the districts of Punjab into three regions based on the value of crop productivity, then chose one district from each region. 150 agricultural labor households from the districts of Ferozepur, Bathinda, and Fatehgarh Sahib were surveyed. They computed the incidence of poverty, levels and patterns of consumption, distribution of consumption, and income levels and patterns. They concentrated on factors that lead to poverty. According to their analysis, 41% of agricultural laborers lived in poverty. Their propensity to consume on average was 1.07, which is higher than one and suggests a deficiency in agriculture. It should be highlighted that 84% of the households had debt, with 85% of that debt coming from sources other than institutions. Furthermore, 84.88 percent of the debt was utilised for unproductive activities. The study concluded that raising wages and expanding opportunities for labor employment are two ways to raise the income levels of the impoverished. Furthermore, the development of the non-farm sector should be prioritized above all else. They recommended starting a large-scale campaign against alcohol consumption and traditional social norms.

The empirical literature on district-level studies of poverty, when carefully examined, shows that the degree of poverty varies. Additionally, a few district-level studies looked at the degree of poverty by social group, income group, and occupation. District-level factors influencing poverty were the subject of other studies. A small number of studies, nevertheless, focused on creating a composite poverty index. In the spirit of reducing poverty, the majority of district-level studies recommended that decisions about poverty be made at the micro level and that the poor be included as much as possible.

Determining Who the Poor Are Finding low-income households is crucial for the government's poverty alleviation program to be implemented in a way that produces results. However, many poor people are not included in the official definition of poverty because it is based on calories. Many academics have proposed more expansive criteria for defining poverty. Below is a list of a few studies that were done to identify the poor. According to Rao (1998), poverty is a complex phenomenon, and it may not be appropriate to categorize someone as poor based only on their income. Multiple indicators must take the place of the traditional norm. He cited a 1985 survey that was carried out in the underdeveloped village of

Senapannallur in the Trichy district of the state of Tamil Nadu. Based on an annual income of Rs. 700, the 300 households in the sample were divided into two categories: poor and non-poor. Nearly 75% of households at this income level were found to be below the poverty line. Based on the opinions of the impoverished, a list of 56 indicators of poverty was created. These 56 poverty indicators served as the basis for a three- stage process.

The mean and standard deviation for each indicator were determined independently for the poor and the non-poor. Selected indicators that show how the poor differ from the non-poor were kept after calculating the T-test for difference of mean or proportions. These indicators underwent additional analysis. Correlation analysis led to the removal of some indicators. Higher discriminating power indicators were chosen and low discriminating power indicators were eliminated using the discriminant function technique. In total, eight indicators were chosen in this manner. However, the set of chosen variables employed was insufficient to take the place of the income criterion. He underlined that a few more indicators needed to be included for a thorough analysis.

According to Rudra et al. (1998), the government's individual beneficiary-oriented program cannot be implemented effectively unless poor households are identified; in the absence of this, non-poor households will continue to receive assistance under the program by concealing their income. The official working group criteria for identifying the poor is not the same as the much broader criteria suggested by the authors. They noted that the median and quartiles of the deprivation score can be used to determine the status of a poor household based on the "Fulfillment of Basic Needs" schedule, which consists of 17 items pertaining to basic needs such as food, clothing, bedding, shelter, and health care, among others. Slanthi (1998) drew attention to shortcomings in the current definition of poverty. Many shortcomings are highlighted, including the following: i) The least cost diet is used to calculate the calorie norm; ii) The qualitative dimension is totally disregarded; iii) Differences in calorie intake between and within regions, between individuals, and within households are disregarded; iv) Two crucial needs—health and education—are ignored; and v) Poverty is assessed in absolute terms rather than relative terms. He proposed that different standards be used to identify the impoverished.

According to research by Guruswamy and Abraham (2006), the Planning Commission has been classifying poverty in India's rural areas according to a nutritional standard of 2400 calories, while in urban areas, it is based on 2100 calories. They maintained that the poverty line is actually a "Starvation Line" since it only considers food consumption and ignores other necessities. Emphasis was placed on the inclusion of adequate nutrition, access to clean drinking water, shelter, clothing, hygiene, and education in the new definition of poverty. The current poverty line, in their opinion, has three main issues: the poor class does not even meet the calorie standard; the calorie standard alone is insufficient; and there is no standard for basic needs other than food. Thus, poverty in India needs to be redefined. It ought to cover the price of clothing, food, medical care, and other expenses. Furthermore, some needs, like access to water, education, sanitary conditions, etc., cannot be measured in monetary terms. Making decisions solely based on one's food intake is setting oneself too low. The poverty line calculated is around Rs. 840 per capita per month when the minimum costs for clothing, energy, nutrition, health, and miscellaneous (Rs.573, Rs.30, Rs.17, Rs.55, and Rs.164, respectively) are taken into account. A family of five should make Rs. 4200 per month, or Rs. 50,000 per year, based on the previously determined poverty line of Rs. 840 per month. They should also have access to a pucca house with the a home with a toilet that is connected to a sewage system and power. Within a distance of one to fifteen meters from the dwelling unit, children living there should have access to both water and education. If an individual's MPCE is less than Rs. 840 or they are without access to basic amenities, they are considered impoverished. 84.6% of India's population lives below the poverty line in rural areas, 42.4% in urban areas, and 68.8% in total at this spending level. Over 2.5 times as many people live in poverty as the official figure according to their calculations.

Andhra Pradesh, Kerala, Punjab, and West Bengal were the four Indian states Majumder and Basu (2006) focused on. The 50th round of the NSSO (1993–1994) data was used for Urban and rural domains independently. They brought up the fact that the majority of studies on poverty are predicated on the idea that all members of the household receive the same amount of money. In actuality, though, women don't get their fair share. Accordingly, women who live in affluent households might not even be poor. This leads to an undervaluation of poverty among women and an overvaluation of poverty among men. The outcomes differ significantly when the unequal sharing factor is considered.

In 2010, Dreze and Khera attempted to investigate a straightforward technique for identifying BPL households based on inclusion and exclusion criteria. There were significant conceptual flaws in the BPL census that was carried out in 2002 and used the "Scoring method" to identify BPL households. According to their research, only 50% of households in the quintile with the lowest monthly per capita consumption expenditures had a BPL card, compared to 18% of households in the quintile with the highest monthly per capita consumption expenditures. A high percentage of underprivileged social groups' exclusion from the BPL list was discovered even by the wealth index. They criticized the scoring method for lacking verifications and transparency. The study offers inclusion and exclusion standards for determining what constitutes a "Social Assistance Base." A person's basic exclusion criteria may also include owning a multi-story pucca house, a car, a refrigerator, a landline phone, scooters, colored televisions, and other basic amenities like electricity, tap water, and a flush toilet. Four sets of exclusion criteria were developed by them. In addition to exclusion criteria, they proposed inclusion criteria.The following priority groups have been proposed as inclusion criteria: households headed by SCs/STs, landless

households, households without an adult member who has completed more education than class 5, and households with agricultural laborers. They also offered various approaches for combining inclusion and exclusion criteria in order to identify a "Social Assistance Base" (SAB)

METHODOLOGY

In this chapter, as per research demands a systematic method and procedure, the process adopted the following procedure including information regarding research design, source of data, selection of subjects, sampling method, selection of test and criterion measures, administration of tests and collection of data and statistical techniques employed for the analysis of data has been discussed. The methodology has been categorized into the following headings.

1. Read variety of reports.
2. Created a questionnaire.
3. Collection of data.
4. Sampling technique.

Read variety of reports: - We have read various reports that are Education and Anti-poverty : policy theory and strategy of poverty alleviation through education in china written by *Eryong, Xue, Zhou, Xiuying* , Philosophical Reflections on child poverty and education written by *Terzi , Lorella* , Effects of poverty in education written by *Ronald Buck, Joe Deutsch*, Poverty and education written by *Servaas van der berg* (book) published in 2008, Education Poverty in India written by Jandhyaia B. G. Tilak published in 2000.

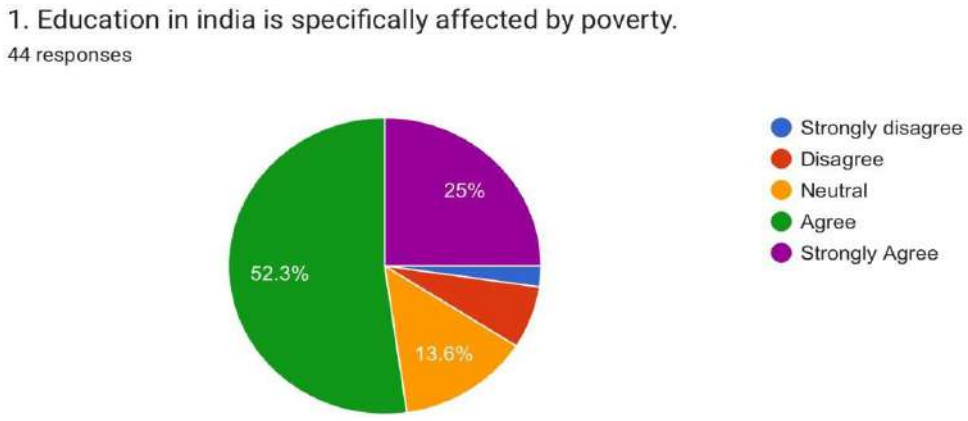
Created a questionnaire; - In addition to creating several Self- made questionnaires we also created one ourselves as follows: -

Description of questionnaire: - This questionnaire was carefully constructed with attention paid to phraseology, questions that are concise and clear and questions that are not embarrassing or leading and could lead to misleading answers. Strongly disagree/ disagree/ neutral/ agree/ strongly agree. Each answer had a clear choice that was equally spaced from one another in terms of semantics. A logical sequence of question topics was arranged and the order of questions was crucial.

Collection of data; - We had gathered information from several students at Punjab. Students that responded range in age from 18 to 25. The UITTR department (B.A+B.Ed and Bsc.BEd) of Chandigarh University provides the majority of responses.

Sampling Technique: Researches chose the participants in this study in order to evaluate how poverty affects education. For this study, a simple random technique was used.

RESULT AND DISCUSSTION



IN THIS QUESTION OUT OF 44 RESPONSES 52.3% PARTICIPANTS AGREED, 25% PARTICIPANTS STRONGLY AGREED, 13.6% PARTICIPANTS NEUTRAL, 6.8% PARTICIPANTS DISAGREED AND 2.3% PARTICIPANTS STRONGLY DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT EDUCATION IS AFFECTED BY POVERTY.

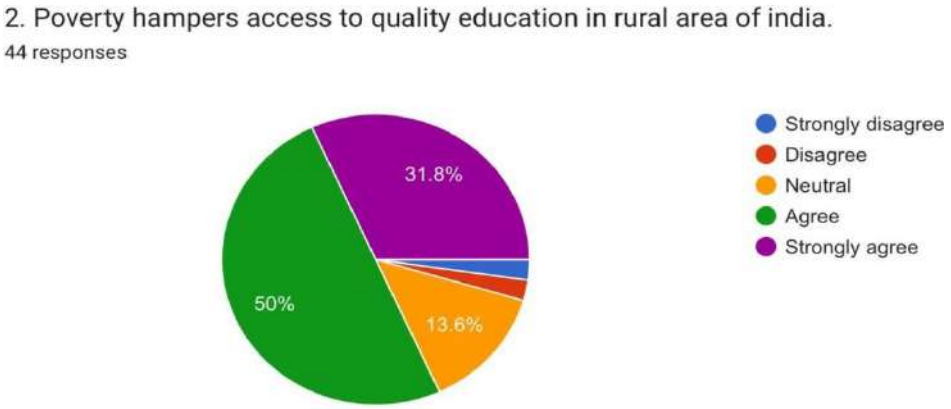


Figure:-2

IN THIS QUESTION OUT OF 44 RESPONSES 50 % PARTICIPANTS AGREED, 31.8% PARTICIPANTS STRONGLY AGREED, 13.6% PARTICIPANTS NEUTRAL , 2.3% PARTICIPANTS STRONGLY DISAGREED AND REMAINING 2.3% PARTICIPANTS DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT POVERTY HAMPERS ACCESS TO QUALITY EDUCATION .

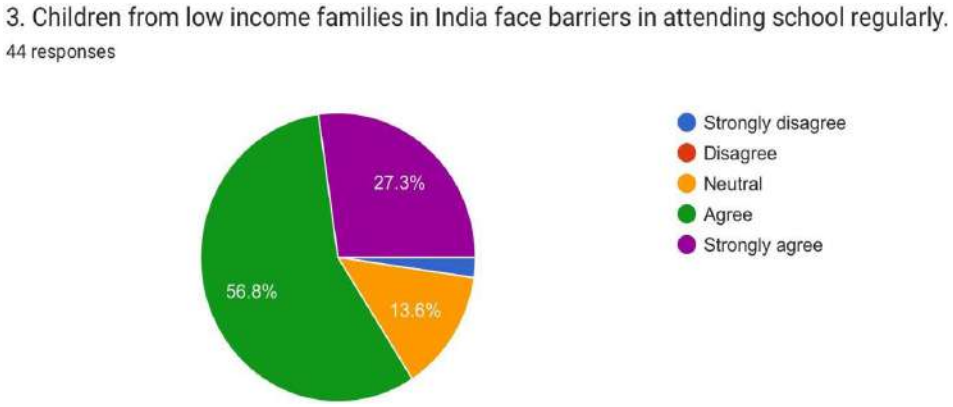


Figure: - 3

IN THE QUESTION OUT OF 44 RESPONSES 56.8% PARTICIPANTS AGREED , 27.3% STRONGLY AGREE, 13.6% NEUTRAL AND 2.3% STRONGLY DISAGREE. HENCE MAJORITY OF PARTICIPANTS AGREED THAT CHILDREN FROM LOW INCOME FAMILIES IN INDIA FACE BARRIERS IN ATTENDING SCHOOL REGULARLY.

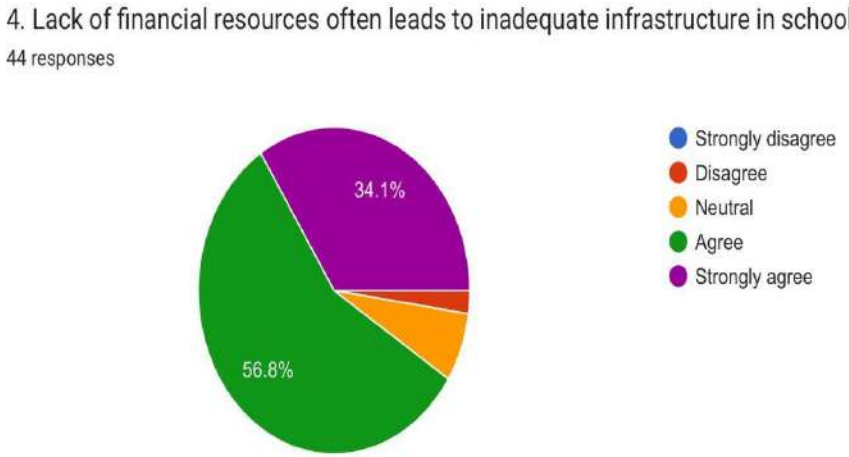


FIGURE:-4

IN THIS QUESTION OUT OF 44 RESPONSES 56.8% PARTICIPANTS AGREED, 34.1% PARTICIPANTS STRONGLY AGREED, 7.1% PARTICIPANTS NEUTRAL AND 2% PARTICIPANTS DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT LACK OF FINANCIAL RESOURCES OFTEN LEADS TO INADEQUATE INFRASTRUCTURE IN SCHOOL.

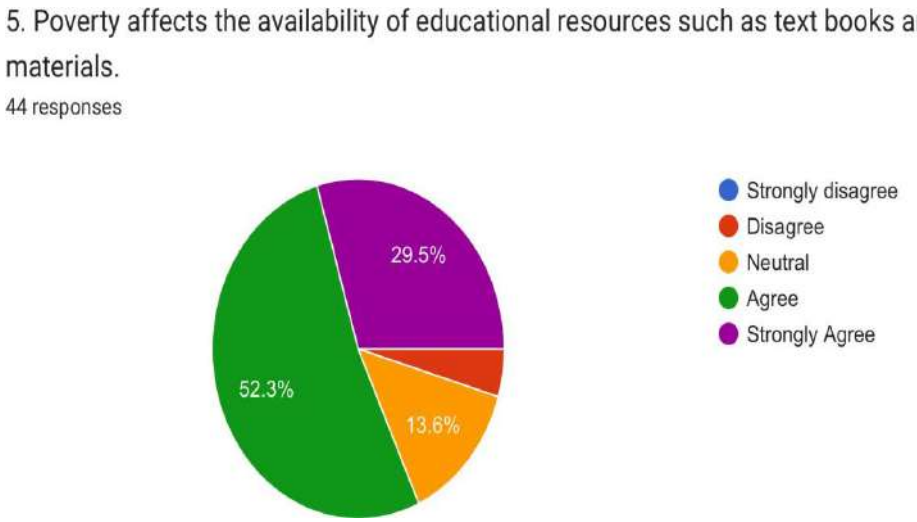


FIGURE:- 5

IN THIS QUESTION OUT OF 44 RESPONSES 52.3% PARTICIPANTS AGREED , 29.5% PARTICIPANTS STRONGLY AGREED, 13.6% PARTICIPANTS NEUTRAL AND 4.6% PARTICIPANTS DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT POVERTY AFFECTS THE AVAILABILITY OF EDUCATIONAL RESOURCES SUCH AS TEXTBOOKS AND LEARNING MATERIALS.

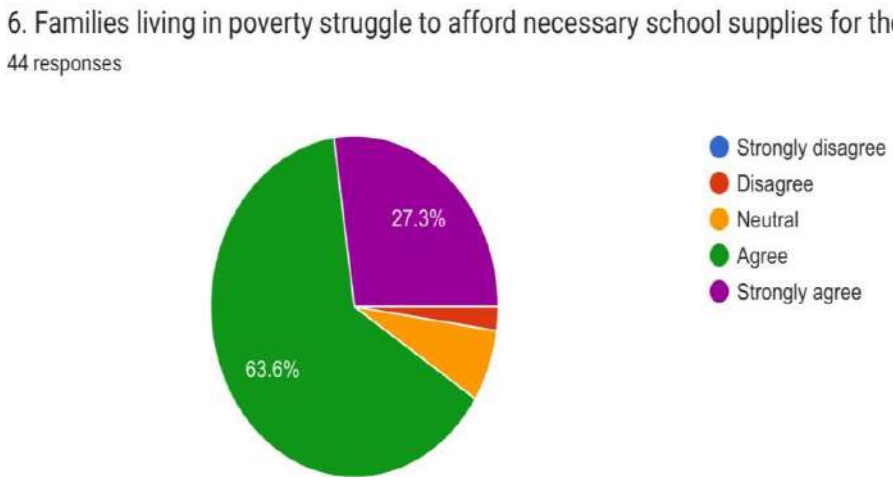


FIGURE:- 6

IN THIS QUESTION OUT OF 44 RESPONSES 63.6% PARTICIPANTS AGREED , 27.3% PARTICIPANTS STRONGLY AGREED, 13.6% PARTICIPANTS NEUTRAL AND 4.6% PARTICIPANTS DISAGREE. HENCE MAJORITY OF PARTICIPANTS AGREED THAT FAMILIES LIVING IN POVERTY STRUGGLE TO AFFORD NECESSARY SCHOOL SUPPLIES FOR THEIR CHILDREN.

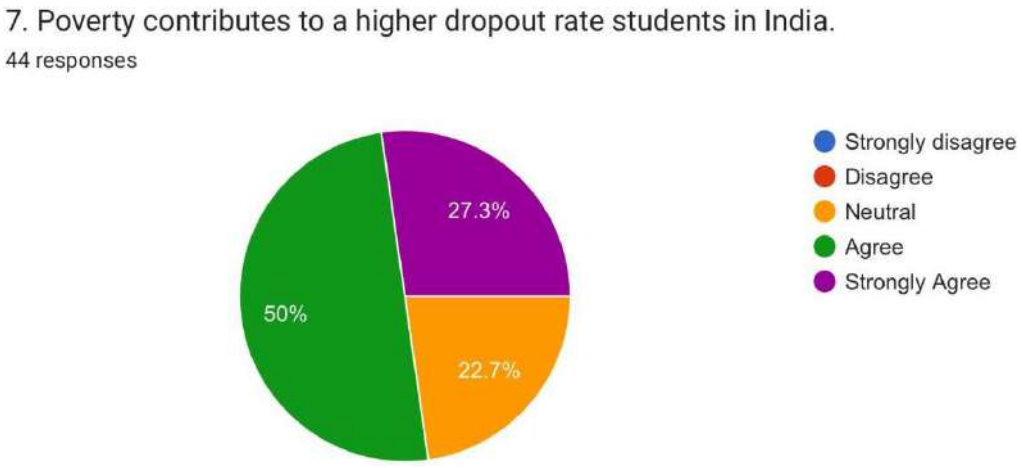


FIGURE: - 7

IN THIS QUESTION OUT OF 44 RESPONSES 50% PARTICIPANTS AGREED, 27.3% PARTICIPANTS STRONGLY AGREED AND 22.7% PARTICIPANTS NEUTRAL. HENCE MAJORITY OF PARTICIPANTS AGREED THAT POVERTY CONTRIBUTES TO A HIGHER DROPOUT RATE STUDENTS.

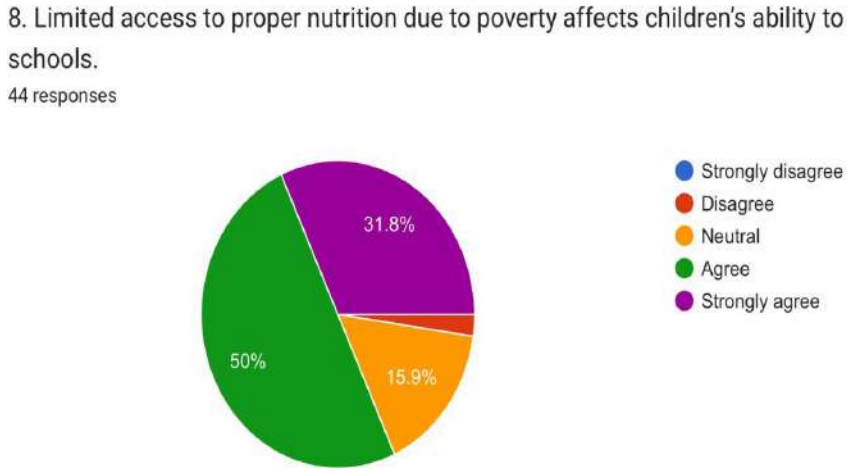


FIGURE:- 8

IN THIS QUESTION 50% PARTICIPANTS AGREED, 31.8% PARTICIPANTS STRONGLY AGREED, 15.9% PARTICIPANTS NEUTRAL AND 2.3% PARTICIPANTS DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT LIMITED ACCESS TO PROPER NUTRITION DUE TO POVERTY AFFECTS CHILDREN'S ABILITY TO LEARN EFFICIENTLY IN SCHOOLS.

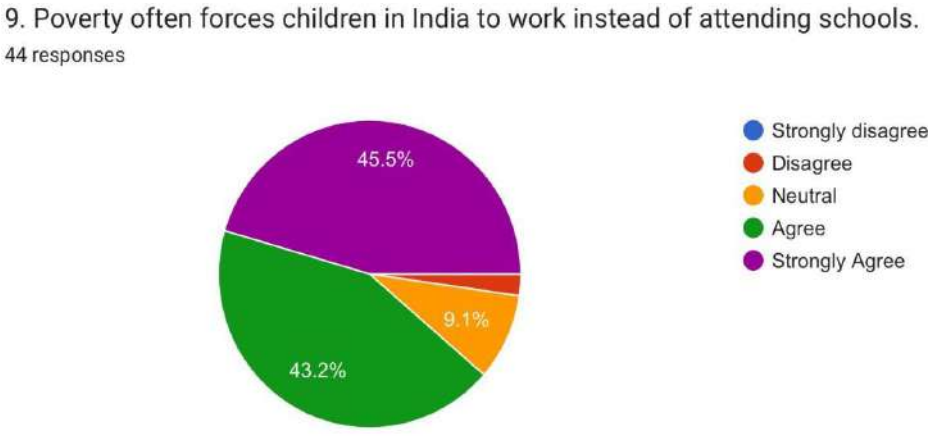


FIGURE:- 9

IN THIS QUESTION OUT OF 44 RESPONSES 43.2% PARTICIPANTS AGREED, 45.5% PARTICIPANTS STRONGLY AGREED, 9.1% PARTICIPANTS NEUTRAL AND 2.2% PARTICIPANTS DISAGREED. HENCE MAJORITY OF PARTICIPANTS STRONGLY AGREED THAT POVERTY OFTEN FORCES CHILDREN TO WORK INSTEAD OF ATTENDING SCHOOLS.

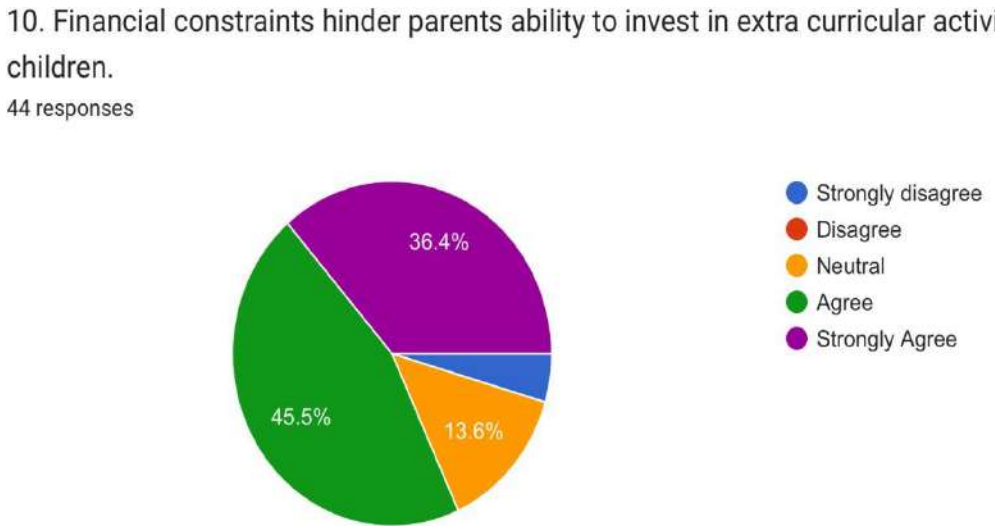


FIGURE: - 10

IN THIS QUESTION OUT OF 44 RESPONSES 45.5% PARTICIPANTS AGREED, 36.4% PARTICIPANTS STRONGLY AGREED, 13.6% PARTICIPANTS NEUTRAL AND 4.5% PARTICIPANTS STRONGLY DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT FINANCIAL CONSTRAINTS HINDER PARENTS' ABILITY TO INVEST IN EXTRA CURRICULAR ACTIVITIES FOR THEIR CHILDREN.

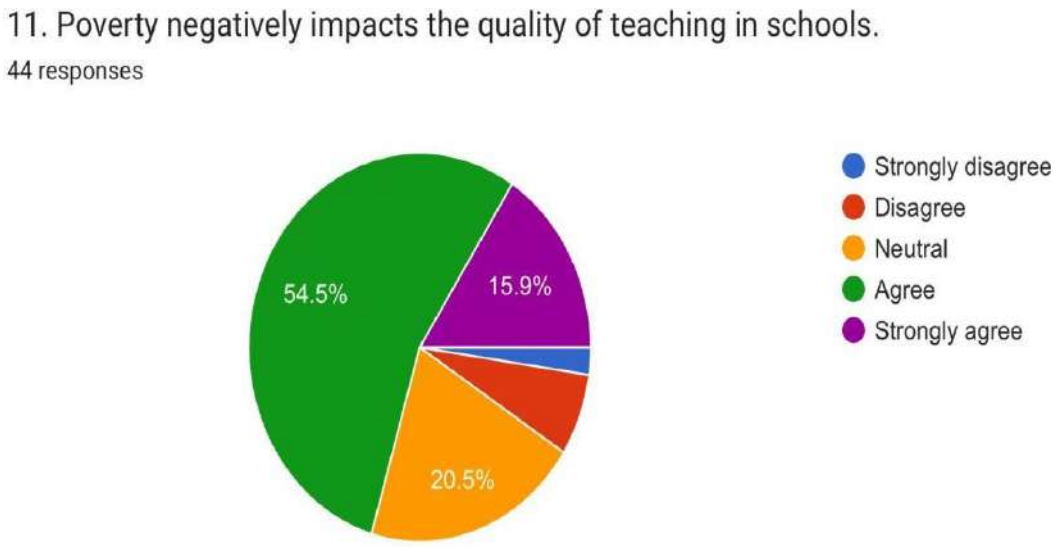


FIGURE:-11

IN THIS QUESTION OUT OF 44 RESPONSES 54.5% PARTICIPANTS AGREED, 15.9%

PARTICIPANTS STRONGLY AGREED 20.5% PARTICIPANTS NEUTRAL, 7% PARTICIPANTS DISAGREED AND 2.1% PARTICIPANTS STRONGLY DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT POVERTY NEGATIVELY IMPACTS THE QUALITY OF TEACHING IN SCHOOLS.

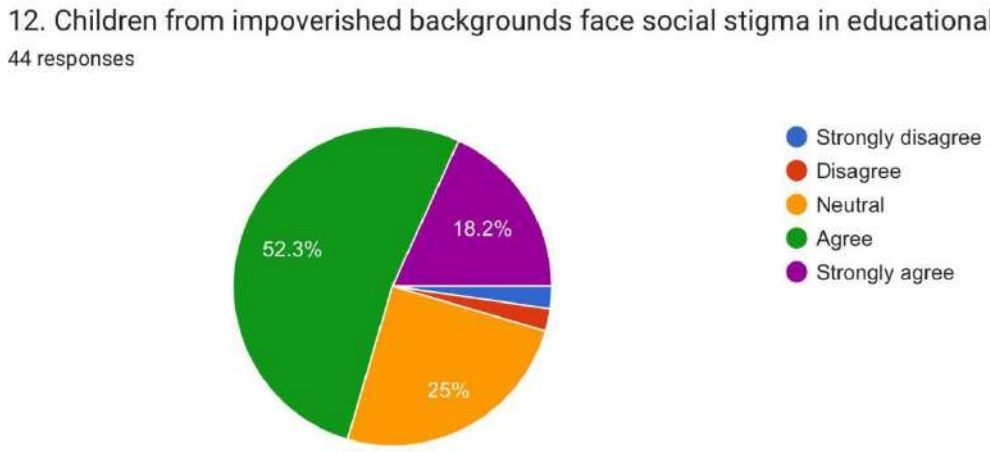


FIGURE:- 12

IN THIS QUESTION OUT OF 44 RESPONSES 52.3% PARTICIPANTS AGREED, 18.2% PARTICIPANTS STRONGLY AGREED, 25% PARTICIPANTS NEUTRAL, 2.25% PARTICIPANTS DISAGREED AND REMAINING 2.25% PARTICIPANTS STRONGLY DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT CHILDREN FROM IMPOVERISHED BACKGROUNDS FACE SOCIAL STIGMA IN EDUCATIONAL INSTITUTIONS.

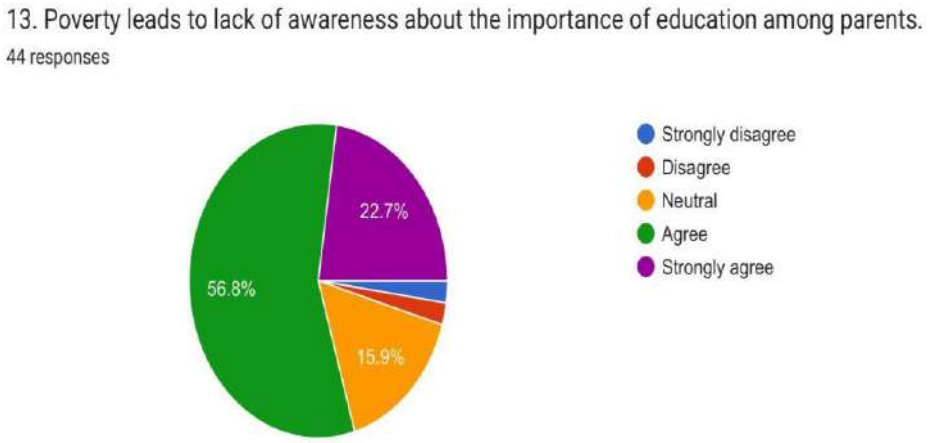


FIGURE:- 13

IN THIS QUESTION OUT OF 44 RESPONSES 56.8% PARTICIPANTS AGREED, 22.7% PARTICIPANTS STRONGLY AGREED, 15.9% PARTICIPANTS NEUTRAL, 2.3% PARTICIPANTS DISAGREED AND REMAINING 2.3% PARTICIPANTS DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT POVERTY LEADS TO LACK OF AWARENESS ABOUT IMPORTANCE OF EDUCATION AMONG PARENTS.

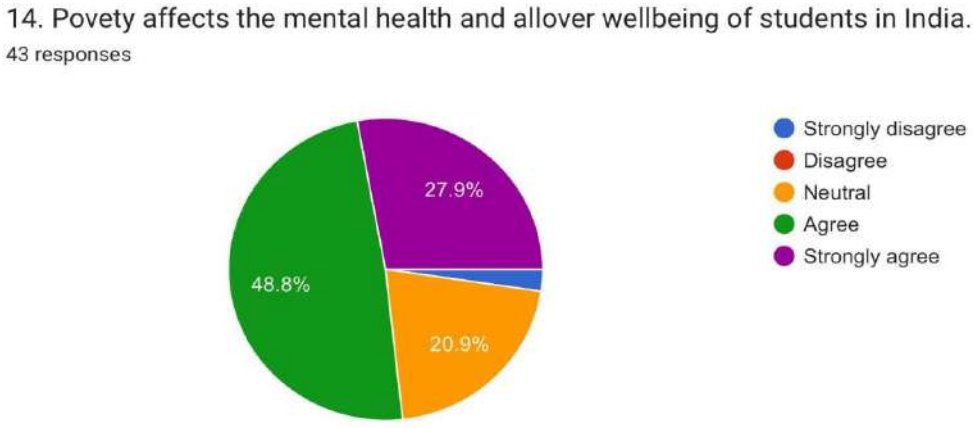


FIGURE:- 14

IN THIS QUESTION, OUT OF 44 RESPONSES, 48.8% PARTICIPANTS AGREED, 27.9% PARTICIPANTS STRONGLY AGREED, 20.9% PARTICIPANTS NEUTRAL AND 2.4% PARTICIPANTS STRONGLY DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT POVERTY AFFECTS THE MENTAL HEALTH AND ALL OVER WELL-BEING OF STUDENTS IN INDIA.

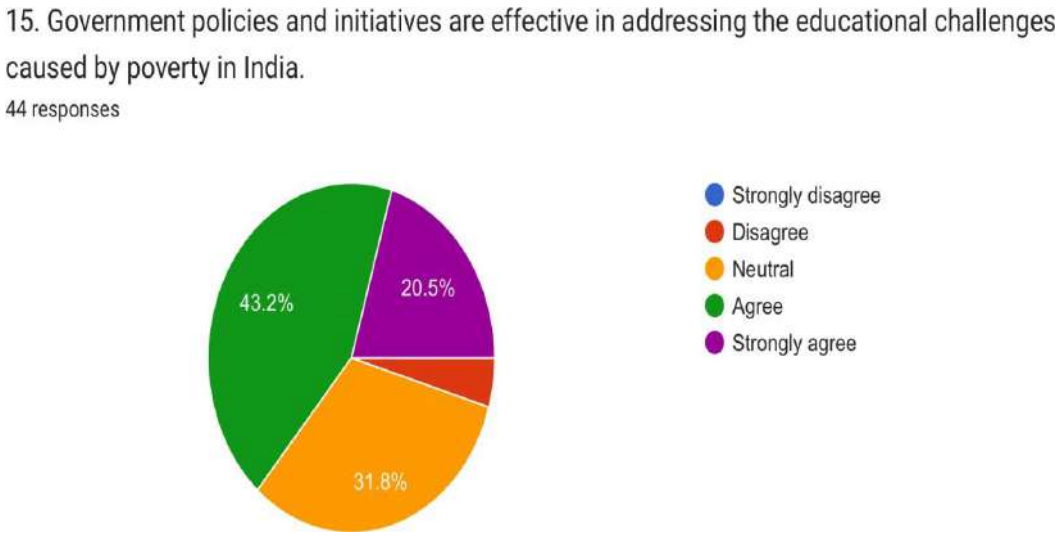


FIGURE:- 15

IN THIS QUESTION, OUT OF 44 RESPONSES,42.3% PARTICIPANTS AGREED, 20.5% PARTICIPANTS STRONGLY AGREED, 31.8% PARTICIPANTS NEUTRAL AND 4.5% PARTICIPANTS DISAGREED. HENCE MAJORITY OF PARTICIPANTS AGREED THAT GOVERNMENT POLICIES AND INITIATIVES ARE EFFECTIVE IN ADDRESSING THE EDUCATIONAL CHALLENGES CAUSED BY POVERTY IN INDIA

CONCLUSION

The impact of poverty on education is a complex and pervasive challenge that requires concerted efforts at individual, community, and policy levels. Breaking the cycle of poverty requires not only addressing the immediate economic needs of families but also investing in the educational infrastructure and opportunities that can empower individuals to escape the clutches of economic deprivation. By recognizing and actively addressing the intersectionality of poverty and education, societies can work towards creating a more equitable and inclusive educational landscape, fostering a brighter future for generations to come. Even when access is secured, the quality of education is compromised in impoverished settings. Underfunded schools in economically disadvantaged areas struggle to attract and retain qualified teachers. Insufficient resources mean outdated textbooks, inadequate infrastructure, and a lack of essential learning materials. Consequently, students in poverty- stricken schools are often subjected to a substandard educational experience, hindering their intellectual development and prospects.

The impact of poverty on the quality of education extends beyond material resources. Socioeconomic status can also affect the psychological well-being of students, influencing their motivation, self-esteem, and overall attitude toward learning. A sense of hopelessness and a belief that academic success is unattainable can permeate the minds of students facing economic hardship, further impeding their educational journey. One of the most direct consequences of poverty on education is the limited access to educational opportunities. Poverty often denies individuals the financial means to afford basic necessities, let alone educational expenses. Families living in poverty struggle to provide their children with the required uniforms, textbooks, and school supplies. Additionally, the opportunity cost of education becomes more apparent, as children from impoverished backgrounds may be compelled to work to contribute to the family income, further limiting their access to formal education.

Addressing the impact of poverty on education requires comprehensive and multifaceted strategies. Policymakers must prioritize investments in education, particularly in areas with high levels of poverty. Adequate funding for schools, teacher training programs, and educational infrastructure is crucial to ensuring that all students, regardless of their socioeconomic background, have access to quality education. Social welfare programs that alleviate the immediate economic burdens on families living in poverty can also contribute to improving educational outcomes. By addressing issues such as food insecurity, inadequate housing, and lack of access to healthcare, policymakers can create an environment that is more conducive to learning. Additionally, targeted interventions, such as scholarship programs, mentorship initiatives, and after-school support services, can help mitigate the challenges faced by students from impoverished backgrounds. These programs can provide the necessary resources, guidance, and emotional support to empower students to overcome the obstacles associated with poverty.

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APPENDIX

1) Education in India is significantly affected by poverty.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

2) Poverty hampers access to quality education in rural areas of India.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

3) Children from low-income families in India face barriers in attending school regularly.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

4) Lack of financial resources often leads to inadequate infrastructure in schools.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

5) Poverty affects the availability of educational resources such as textbooks and learning materials.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

6) Families living in poverty struggle to afford necessary school supplies for their children.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

7) Poverty contributes to a higher dropout rate among students in India.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

Limited access to proper nutrition due to poverty affects children's ability to learn effectively in schools.

1. Strongly Disagree
2. Strongly Disagree
3. Neutral
4. Agree
5. Strongly Agree

8) Poverty often forces children in India to work instead of attending school.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

9) Financial constraints hinder parents' ability to invest in extra-curricular activities for their children.

1. Strongly Disagree
2. Disagree
3. Neutral

4. Agree
5. Strongly Agree

10) Poverty negatively impacts the quality of teaching in schools.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

11) Children from impoverished backgrounds face social stigma in educational institutions.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

12) Poverty leads to a lack of awareness about the importance of education among parents.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

13) Poverty affects the mental health and overall well-being of students in India.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

14) Government policies and initiatives are effective in addressing the educational challenges caused by poverty in India.

1. Strongly Disagree

2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

EMPOWERING RURAL WOMEN: ENHANCING LIVELIHOOD AND GENDER EQUALITY IN INDIAN VILLAGES.

Ananya, Archita, Lavisha, Sakshi

Supervisor: Dr. Priya Sharma

ABSTRACT

If the capacity to make decisions is the measure of empowerment, then being disempowered entails being deprived of that capacity. The idea of empowerment is inherently present, associated with the state of disempowerment and describes the procedures through which individuals who possess the capacity to make decisions but have been denied this ability. Consequently, there may be statistical swellings showing gains in gender equality metrics, but unless the intervening women acted as change agents in this process, so it cannot be called "empowerment."

There is a gender disparity in the workforce and in access to education. Women's freedom of movement and their ability to make decisions in the home vary greatly depending on their age, level of education, and job status. It is discovered that women's acceptance of unequal gender norms continues to be prevalent in society. Compared to urban women, rural women are more likely to experience domestic abuse. There is also a sizable gender disparity in political participation. The study's conclusion notes that while employment and educational opportunities are important for empowerment, achieving the goal ultimately rests on people's attitudes toward gender equality.

The goals of this research paper are to comprehend the issue and viewpoint surrounding women's empowerment and to analyze the state of women's empowerment in India using a variety of indicators, including the ability of women to make decisions for their households, laws supportingwomen's empowerment, the role of the judiciary, and awareness.

INTRODUCTION

Living independently and with their own resources is extremely difficult for women in rural places. Nearly one-third of women work in agriculture worldwide, according to the UN, but the bulk of these jobs are in developing nations because women are less likely than men to own land(12.8 percent worldwide), which suggests that women are low-paid laborers. In addition, it is common for women to be expected to perform unpaid work in order to support their families or to handle household responsibilities in addition to their regular employment Equally important is the economic empowerment of women in rural communities. Rural women want our assistance because there are few opportunities and agriculture is their only practical option. Women are more likely to experience gender inequity and have fewer opportunity to achieve true independence in rural communities due to their propensity for conservatism.

Various points can be noted: -

1. Social significance: In the modern world, women's empowerment is important because itaffects human rights, gender equality, and societal well-being.
2. Good impact: By guiding policies and initiatives that can enhance the lives of women and theircommunities, research in this field has the potential to promote good change.
3. Academic interest: Women's empowerment can be a rich and pertinent topic for research if you have a personal or professional interest in gender studies, sociology, psychology, or similarsubjects.
4. Personal passion: Doing study on this subject might help advance your beliefs on gender equality and women's empowerment if you are enthusiastic about these issues.
5. Filling in the gaps: Studies can point out areas in which more information is needed andknowledge gaps
6. Prospects for employment: Studies on women's empowerment may provide doors to positions in academia, government, international development, non-governmental organizations, and othersectors.
7. Personal development: Studying a subject with so many facets and importance may be bothpersonally and intellectually fulfilling.

So, the decision to study women's empowerment ultimately comes down to our objectives, passions, and the positive difference we want to make in this area. Through the active process of empowerment, women are able to recognize their identity and authority in all spheres of life. It frees women from the shackles of outdated customs and practices and gives them greater access to resources and knowledge. It also gives women more autonomy in making decisions and bettertime management skills. This study was carried out on 100 women respondents (the spouses of household heads) chosen from 4 villages in Masodha block using a proportionate random selection technique in one of the development blocks of the

Faizabad district, namely Masodha block. Rural women were asked to complete a semi-structured routine in order to provide data. There were several barriers to rural women's empowerment that were noted, including psychological, political, social, and financial barriers. The main reason for poor empowerment of rural women was noted as 'lack of knowledge about new technology'.

Importance of empowerment for rural women: -Rural women's empowerment is a complex process that includes giving them the instruments, assets, information, and chances to strengthen their agency and raise their general well-being. The following elements are specifically included in rural women's empowerment:

1. **Economic Empowerment**: - Financing and credit availability for the establishment or growth of enterprises. Possibilities for earning money in small businesses, agriculture, and other industries. - Entrepreneurship and financial literacy training.
2. **Education:** - Availability of high-quality instruction and career guidance. - Removing differences in schooling depending on gender. - Gaining proficiency in reading and numeracy
3. **Health and Healthcare**: - Obtaining healthcare services related to pregnancy and motherhood. -Family planning and reproductive health education. - Knowledge about proper diet and lifestyle.
4. **Legal Rights**: - Awareness of one's legal rights and defense against violence against women. -Supporting the rights to land and property. Availability of legal assistance and services.
5. **Social and Cultural Empowerment**: - Dismantling gender inequality and damaging cultural practices. - Increasing self-worth and confidence. - Involvement in family and community decision-making.
6. **Infrastructure and Technology**: - Better roads, electricity, and clean water in remote areas. Availability of communication and information technology. - Making use of technology to obtain information and reach markets.
7. **Support Networks**: - Forming community organizations and self-help groups.- Establishing robust support systems with other women from rural areas.- Working together with regional NGOs and authorities.
8. **Political Participation**: - Involvement in national and local decision-making processes on an active basis. - Promoting laws that cater to the unique requirements of rural women.- Participation in elected offices and bodies that make decisions.
9. **Gender Equality**: Advancing gender parity in all spheres of existence.- Fighting for equal access to leadership positions, jobs, and educational opportunities. Attending programs promoting gender awareness.

There is no one-size-fits-all approach to rural women's empowerment; rather, it must take into account the particular circumstances and difficulties faced by each community. It's a thorough procedure designed to give rural women the power to take charge of their lives, make wise decisions, and engage fully in society—all of which will ultimately contribute to their personal development and the general uplift of rural communities.

1. **Limited access to education**: Women frequently encounter obstacles when trying to obtain a good education in rural areas. Their ability to fully engage in social, political, and economic activities is hampered by their lack of education.
2. **Financial Constraints**: Women living in rural areas frequently have fewer financial and employment options. Their inability to acquire land, credit, or other productive assets may limit their ability to produce income and enhance their standard of living.
3. **Discrimination based on Gender**: Discrimination and gender inequality that impede the empowerment of rural women are commonplace. Their ability to make decisions, move around, and access resources may be restricted by societal conventions, cultural customs, and traditional gender roles.
4. **Lack of Healthcare Services**: Inadequate healthcare facilities and services in rural areas disproportionately affect women. Limited access to reproductive health services, family planning, and maternal care can negatively impact their well-being and limit their opportunities for empowerment.
5. **Infrastructure and Technology Gaps**: Insufficient infrastructure, including roads, electricity, and internet connectivity, can isolate rural communities and impede women's access to information, markets, and essential services. Limited access to technology further widens the digital divide and hampers their ability to access information and economic opportunities.
6. **Social and Cultural Norms**: Strong social and cultural norms have the capacity to stifle women's empowerment and perpetuate gender inequality. Customs like forced marriage, dowry systems, and delegation of decision-making authority to family members might hinder their advancement and curtail their autonomy.

7. **Lack of Representation and Participation**: It might be difficult for rural women to take part in local, regional, and national decision-making processes. Their limited presence in leadership positions within the community, political institutions, and governance structures makes it moredifficult for them to have an impact on the policies and initiatives that impact their lives. To tackle these obstacles, all-encompassing strategies are needed, including enhancing healthcare and education, advocating for women's rights and gender equality, offering financial opportunities and resources, and encouraging inclusive governance and engagement. Rural women who are empowered might have favorable social and economic results that benefit not only the women but also their families, communities, and societies at large.

LITERATURE REVIEW

Timeline

A chronology of the historical development of initiatives and significant turning points for rural women's empowerment might be quite helpful. Here's a condensed summary:

1. The 19th century sees the emergence of early women's rights movements throughout most ofthe world.
2. The suffrage and education campaigns begin, paving the way for the empowerment of women.
3. The early 20th century: Despite having little rights, women in rural areas frequently labor inagriculture. Women now have the ability to vote in a number of nations thanks to suffrage efforts.
4. Mid-20th Century: - Following World War II, women's contributions to rural development are acknowledged. Development goals that include gender equality are highlighted by organizations such as theUnited Nations.
5. The 1970s saw the UN proclaim the International Women's Year, which ushered in the Decadefor Women (1976–1985), which was centered on the empowerment and equality of women.
6. 1990s: - With a focus on rural women's difficulties, the Beijing Declaration and Platform for Action (1995) becomes a seminal text for women's empowerment.
7. 21st Century: - A lot of nations implement programs and policies that are sensitive to genderand aimed at rural women. Microfinance programs, such as Bangladesh's Grameen Bank, offer chances for economic empowerment.
8. The 2010s: Gender equality and empowerment are emphasized as important SDGs (Goal 5) objectives.
9. Numerous groups help rural women's access to economic opportunities, healthcare, and education through their projects.
10. Present (2020s): - Ongoing initiatives to empower rural women persist, including matters like land ownership, entrepreneurship, and decision-making involvement.
11. The status of rural women's empowerment can differ greatly by nation and location, and this chronology only provides a broad perspective. Efforts are being made to address the particular possibilities and challenges that rural women confront in many parts of the world.

EXISTING SOLUTIONS

To empower women in rural regions, a number of current initiatives and solutions have been put into practice. Here are few instances:

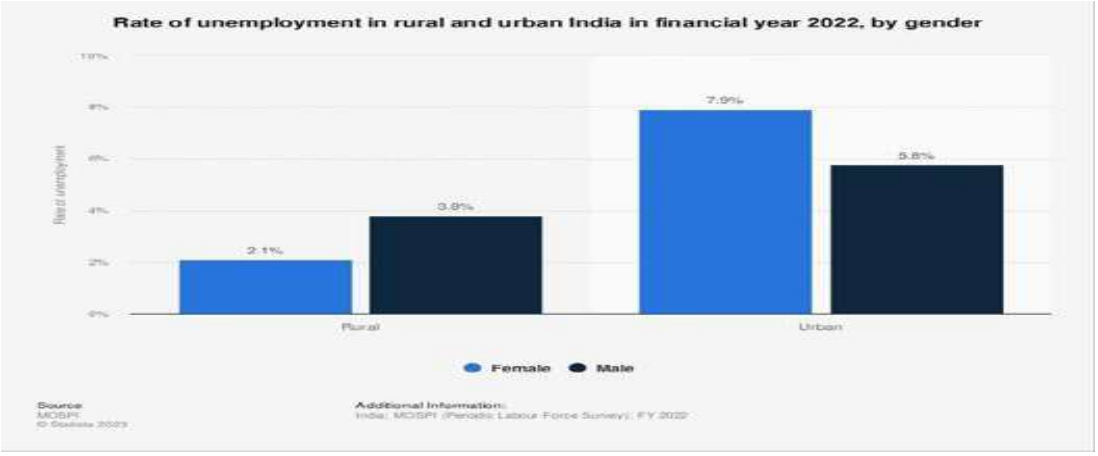
1. Women's Self-Help Groups (SHGs): SHGs are locally based groups that bring women togetherto do income-generating activities, obtain credit, and save money. These organizations give women a place to grow their social capital, acquire new skills, and become financially independent.
2. Skill Development and Vocational Training: Women who receive training in a variety of trades, including entrepreneurship, handicrafts, agriculture, and tailoring, are better equipped to earn a living and become independent.
3. Access to Microfinance: By making microfinance services more accessible, women can invest in income-generating ventures, launch or grow their own enterprises, and elevate their financial standing. Microfinance organizations offer modest.
4. Education and Literacy Programs: Promoting education and literacy among women in rural areas enhances their knowledge, confidence, and decision-making abilities. It opens up opportunities for better employment, improved healthcare practices, and increased participation incommunity affairs.
5. Health and Sanitation Initiatives: Empowering women in rural areas also involves addressing their health and sanitation needs. Providing access to healthcare services, awareness programs on reproductive health, sanitation

facilities, and menstrual hygiene management contribute to their overall well-being and empowerment.

6. Technology and Digital Literacy: Women may improve their access to information, communication, and economic possibilities by being trained in digital literacy and being exposedto digital technology. This can help close the digital divide.

These are but a handful of the strategies currently in use to empower women in rural communities. Every solution has advantages and disadvantages of its own, and the particular environment and community demands might affect how effective a certain solution is. Taking a comprehensive and diverse approach is crucial when creating interventions for women's empowerment in rural areas.

BIOMETRIC ANALYSIS



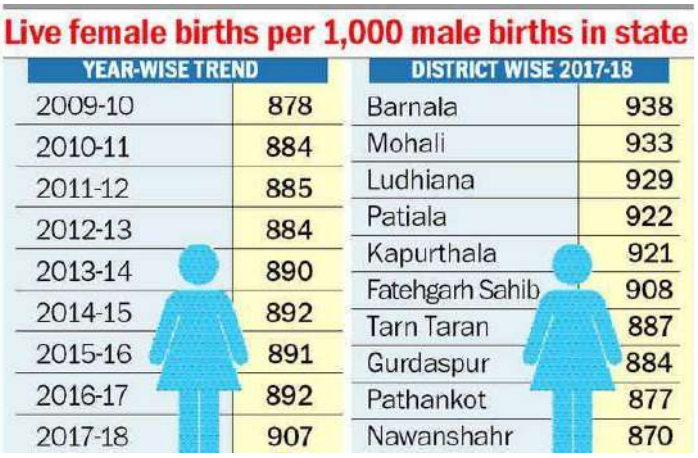
Compared to urban areas, women are less likely to be employed in rural areas for a variety ofreasons, such as:

1. Limited Educational Opportunities: In comparison to urban areas, rural areas frequently have fewer educational institutions and less access to high-quality education. Women's skills and employment qualifications may be limited as a result of this lack of educational opportunities.

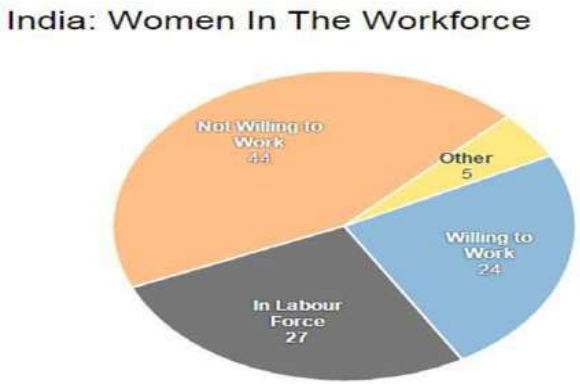
2. Traditional Gender Roles: Traditional gender roles and cultural norms, which assign women primarily to domestic duties and caregiving responsibilities, are strongly adhered to in many ruralareas. These social norms may deter women from looking for work outside the home.

3. Limited Job Opportunities: Compared to urban areas, rural areas typically offer a smaller selection of employment options, with a higher concentration of jobs in the informal sector and inagriculture. These industries might not offer many career opportunities for women, or they mightinvolve physically demanding jobs that are typically seen as better suited for men.

4. Socioeconomic Factors: Compared to urban areas, rural areas frequently experience higher ratesof poverty and slower rates of economic development. Finding suitable employment that aligns with their skills and aspirations can be challenging for women due to a lack of diverse industries,lower wages, and limited job opportunities.



1. Cultural preferences: For social, cultural, or economic reasons, male children are preferred in some societies. This may result in behaviors that distort the sex ratio, such as female infanticide orsex-selective abortion.
2. Limited access to healthcare and education: Women's general health and well-being may be impacted by rural areas' potential lack of access to healthcare and educational resources. Higher rates of female mortality may follow from this.



The lower literacy rates of rural women than of men can be attributed to a number of factors. Restricted access to education is a major factor. Due to transportation problems or safety concerns,girls may find it challenging to attend school regularly in rural areas where schools are often located far away. In addition, unequal opportunities result from societal expectations and traditional gender roles that frequently give boys' education precedence over girls': -

There are cultural norms and practices that also play a part. For example, in some communities, girls are expected to take on domestic responsibilities from an early age, which leaves little time for formal education. Pregnancies and early marriages can further limit girls' educational opportunities. Families may also choose to invest limited resources in educating their sons rather than their daughters because they believe that boys will earn more in the future.

REVIEW SUMMARY

The opportunities and varied challenges that women in rural areas encounter are examined in research on women's empowerment in rural areas. Research frequently explores issues like restricted access to financial resources, healthcare, and education. They draw attention to how socioeconomic inequality, cultural norms, and traditional gender roles all hinder women's empowerment.

The study also looks at effective empowerment initiatives, such as skill-building programs, education initiatives, and campaigns against gender stereotypes.

It emphasizes how crucial it is to involve local communities and encourage cooperation between different stakeholders in order to develop long-lasting empowerment solutions.

All things considered, the corpus of research offers insightful information about the complexity ofrural women's lives and lays the groundwork for creating interventions and policies that will strengthen their empowerment and general well-being.

PROBLEM DEFINITION

Problem Definitions for Rural Women's Employment Rates, Literacy Rate, and Sex Ratio:

1. Sex Ratio: The issue of sex ratio in rural areas pertains to a notable discrepancy in the quantityof males and females, frequently with a bias towards males. Cultural prejudices may be the causeof this discrepancy and give rise to behaviors such as female infanticide and sex-selective abortion. It presents issues with women's welfare, social harmony, and gender equality.
2. Literacy Rate: The significant differences in educational opportunities and outcomes between rural and urban areas are the main cause of the issue of the literacy rate for women living in rural areas. The lack of access to high-quality education for many rural women has an impact on their economic prospects, information access, and sense of overall empowerment.
3. Employment Rates: The problem of employment rates for rural women is characterized by theirlimited participation in the formal workforce. It is often due to traditional gender roles, lack of job opportunities, and skills mismatches. Improving employment rates is crucial for economic development and women's financial independence in rural areas.

Addressing these problems requires multifaceted efforts, including awareness campaigns, policy interventions, investment in education, vocational training, and the promotion of gender equality to create more inclusive and equitable rural

societies.

GOALS AND OBJECTIVES

Goal: Improve educational opportunities for rural women.Objectives:

Boost the number of girls enrolled in education.Boost the standard of instruction given.

Create programs for vocational training that emphasize practical skills. Goal: Enhance economic independence and opportunities for rural women.Objective:

Make credit and microfinance more accessible.

Encourage self-employment and revenue-generating ventures.Boost market accessibility and farming methods.

Goal: Ensure the overall health and well-being of rural women.Objective:

Raise awareness about family planning and healthcare services.Assist in providing quality, reasonably priced healthcare.

Take care of issues related to mother and child health.

Goal: Challenge and transform gender norms and promote social inclusion.Objective:

Run campaigns to raise awareness of gender equality.

Promote discussions in the community about questioning conventional gender roles. Encourage women to take part in decision-making.

Goal: Bridge the digital divide and enhance access to information.Objective:

Provide women instruction in digital literacy. Increase access to internet and mobile technology.

Use technology to expand your skill set and gain access to new markets. Goal: Foster active participation and leadership roles for rural women.

Objective:

Educate women in civic engagement and leadership.

Provide forums where women can express their thoughts and opinions. Promote the participation of women in local government.

Goal: Ensure legal rights and protections for rural women.Objective:

Educate women about their legal rights. Provide support services and legal education.

Encourage legislative changes that address discrimination based on gender. Intersecting Goal: Study changing needs and obstacles continuously.

Action: Evaluate the results of empowerment initiatives on a regular basis and modify tactics asnecessary.

Goal: Increasing the ability of institutions and organizations in the community.

Action: To support long-term empowerment initiatives, train educators, healthcare professionals,and community leaders.

Objective: Build strategic partnerships with government, NGOs, and private sector entities.

Action: Foster collaborations to leverage resources, expertise, and support for comprehensiveempowerment programs.

Goal: Make sure that initiatives for empowerment are sustained.

Action: Create plans for local resource mobilization, community ownership, and the incorporationof empowerment programs into already-existing systems.

One can aid in the creation and execution of successful rural women empowerment programs thatcater to the various needs of women in rural settings by coordinating research goals and objectiveswith these extensive and interconnected fields.

METHODOLOGY1. QUANTITATIVE METHODOLOGY

For a research paper on empowering rural women, the study will methodically move through several stages while using a quantitative methodology. The first step entails identifying particular factors that are essential to empowerment, like income, education, and resource accessibility. Expected relationships between these variables will be established through the formulation of hypotheses that will direct the investigation. To gather numerical data, a carefully thought-out survey instrument will be created, guaranteeing clarity and relevance to the study goals. The studywill use a representative sampling technique in an effort to gather a wide range of viewpoints fromthe target population of rural women. After that, information

gathering will start, including answersto questions from a structured survey that can be evaluated quantitatively. Statistical methods, including both descriptive and inferential analyses, will be employed to scrutinize the collected data, unveiling patterns, correlations, and potential causal relationships. The interpretation of thesestatistical findings will be crucial, offering insights into the impact of empowerment initiatives on variables of interest. Additionally, the study will address aspects of validity and reliability, ensuringthe robustness of the research design. Acknowledging any limitations and potential biases, the research will conclude by summarizing key findings, discussing their practical implications for empowering rural women, and suggesting potential avenues for future quantitative investigations in this domain.

QUALITATIVE METHODOLOGY

You would be examining the subjective aspects of rural women's experiences, perceptions, and the contextual factors influencing their empowerment in a qualitative research methodology focused on rural women's empowerment. Here are some crucial components:

In-Depth Interviews: One-on-one interviews let you delve deeply into rural women's personal stories. You can ask them about a range of topics, including daily struggles, goals, and experienceswith empowerment.

Focus Group Discussions: Bringing local women together in groups can facilitate understanding of cultural dynamics, social interactions, and shared experiences. It also enables people to talk about and expand upon one another's viewpoints.

Participant observation involves immersing oneself in the community to watch people going about their daily lives. This approach offers a comprehensive comprehension of the setting in which these women live and the challenge they face.

Analyze current documents: Look through records from the community, municipal laws, or autobiographies. This aids in comprehending the social and historical milieu in which these womenare vying for empowerment.

Case Studies: Choose particular members of the community or groups and carry out in-depth casestudies. This method offers a thorough examination of specific empowerment programs or successstories.

Triangulation: Integrate information from several sources to increase the validity and dependability of your conclusions. This could entail cross-referencing data from observations or documents with information gleaned from interviews.

MIXED METHODS

A mixed-methods research methodology attempts to provide a more thorough understanding of the research problem by combining both qualitative and quantitative research approaches within a single study. This approach combines the methodical gathering of numerical data and statistical analysis, which are usually connected to quantitative research, with the in-depth investigation of perceptions and context, which is typical of qualitative research. To optimize the benefits of both approaches, researchers using a mixed-methods design carefully consider when to apply each strategy, either consecutively or concurrently. A more comprehensive and nuanced interpretation of the research question is made possible by the synergy between quantitative and qualitative data,leading to a deeper comprehension of complex phenomena. Mixed methods improve the overall rigor and validity of the study through triangulation and validation, where results from one method corroborate or enhance findings from the other. This method gives researchers a strong tool to investigate various aspects of a given topic and is especially helpful when the research problem requires a multifaceted examination that cannot be adequately addressed by a single research method.

METHOD FOLLOWED – INTERVIEW BASED

One research technique called the interview-based method is interviewing individuals or groups in order to gather data. It is a popular qualitative research technique that enables investigators to compile comprehensive data, viewpoints, and insights regarding a specific subject or research question.

The interview process is facilitated by a set of questions or topic guide created by the researcher for an interview-based study. Typically open-ended and flexible, these questions enable the interviewee to share personal experiences, opinions, and knowledge pertaining to the research topic in detail. Depending on the circumstances and preferences of the participants, the interviewmay be done in person, over the phone, or via video conference.

Structured, semi-structured, and unstructured interviews are among the various forms of interviewsthat can be employed in research:

1. Structured interviews: In a structured interview, every participant is asked the same set of questions in the same order by the researcher. Respondents must select from a predetermined list of answers in response to the standardized, frequently closed-ended questions. Structured interviews are frequently employed in research projects that seek to collect particular data from participants in a methodical and consistent way. Various types of structured interviews involves- I.Close ended interview-In a closed-ended interview, participants are given a limited number of options for responding to a planned set of questions by the interviewer. This type of structured interviewing is used in research. The replies are preset and are usually presented to the participantsas multiple-choice, Likert scales, or yes/no choices. 1.Predefined Questions: All interviewees areasked a predefined list of questions by the interviewer. 2.Fixed Response Options: Each question gives participants a set

of response options, limiting their answers to predetermined categories.3. Quantitative Data: Since the data are frequently quantitative, statistical comparison and analysis are made simple.4. Standardization: By asking the same set of questions to every participant in the same manner, this approach ensures consistency in the data collected.5. Efficiency: Because of its structure, which enables faster data gathering, closed-ended interviews are typically more time- efficient than open-ended ones. 1. Quantifiable Data: Statistical analysis is made easier by the ease with which the responses may be transformed into numerical data.2. Consistency: By guaranteeing that every participant sees the identical questions, standardization helps to minimize response variability.3. Ease of Analysis: Because replies are structured, data analysis is frequently simple.4.Fit for Large Samples: This approach works well for investigations that involve a sizable participant base, which makes quantitative research possible.

II. Open ended-One kind of qualitative research approach is the open-ended interview, in which the interviewer poses wide, open-ended questions to elicit a participant's opinions, experiences, and viewpoints on a certain subject. Open-ended questions let participants share their thoughts, feelings, and opinions in their own words, in contrast to closed-ended questions that have predetermined responses.

In research, open-ended interviews have a number of benefits.

1. Rich and detailed information: Participants can answer open-ended questions with rich and detailed details, which help to better understand their viewpoints and experiences. It offers a multitude of qualitative data to researchers that can capture subtleties, context, and individual differences.
2. Flexibility and exploration: Researchers can follow up on intriguing ideas brought up by participants and investigate a variety of topics by utilizing open-ended questions. Unexpected ideas and discoveries are made possible by the more conversational and organic flow of information thatit permits.
3. Participant-centered approach: In open-ended interviews, the subject is given priority and giventhe opportunity to direct the discussion. The ability for participants to freely communicate their ideas and emotions makes the study process more genuine and participant-centered.
4. Developing new research ideas and directions: Open-ended interviews can aid in the development of new research hypotheses and serve as a roadmap for additional investigation. Open-ended interviews yield rich qualitative data that can stimulate new hypotheses, research questions, or fields of study.

Open-ended interviews can be used, however there are several things to keep in mind:

1. Resource- and time-intensive: Conducting open-ended interviews can take a lot of time, particularly when there are many participants. It can take a lot of time to record and analyze the information from open-ended interviews.
2. Possibility of interviewer bias: The interviewer's prejudices and preconceptions may unintentionally affect how the interview is conducted and interpreted. In order to reduce bias, researchers should conduct interviews in an impartial and nonjudgmental manner.
3. Data processing and interpretation: It might be difficult to evaluate and make sense of the qualitative information gleaned from open-ended interviews. Scholars must utilize exacting coding and thematic analysis methods to find themes, patterns, and significant insights in the data.

In conclusion, open-ended interviews are a useful research technique for eliciting detailed qualitative information and delving into the viewpoints and experiences of participants. Facilitating unrestricted self-expression among participants can yield valuable insights and novel perspectives on the subject matter under investigation.

For survey we have chosen following questions-

Introduction -

1. Name of the sample woman
2. Her age
3. Her education
4. Her martial age
5. When did she started her work

Open ended-

1. What improvement you want to improve your lifestyle.
2. Do you face gender inequality in your home

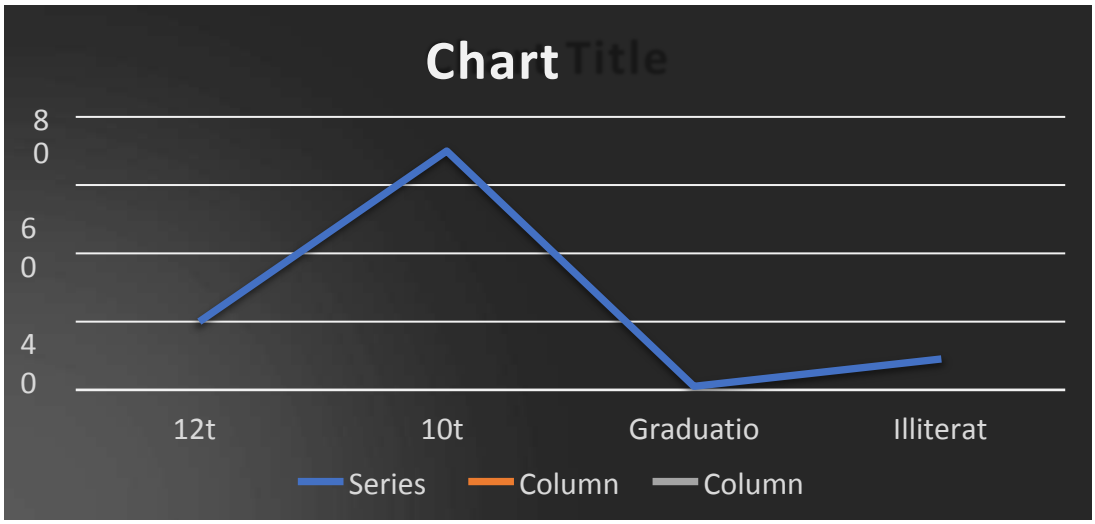
3. What makes you a Strong woman
4. What institution or societal changes you want to be made for women to enhance theirempowerment

Close ended-

1. Do you have a postal bank account
2. Do you want to work or want to do a housewife job.
3. Do your household ever affected by your work
4. Do you face male dominance issue at home or in your areas
5. Are you included in any of SHGs
6. Would you allow your daughter to engage to work.

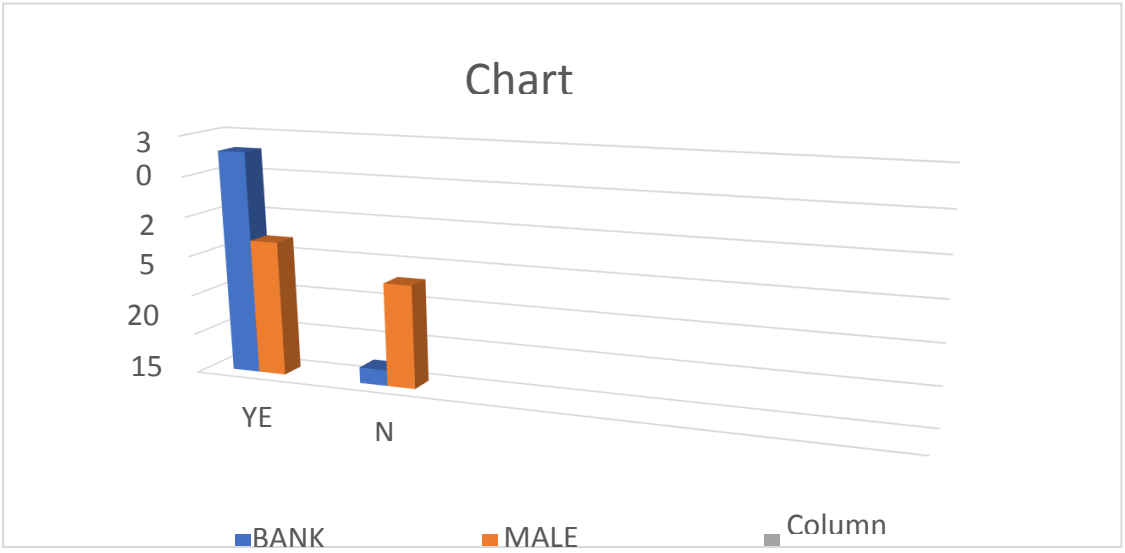
Result Analysis and Conclusion

1. Based on education-



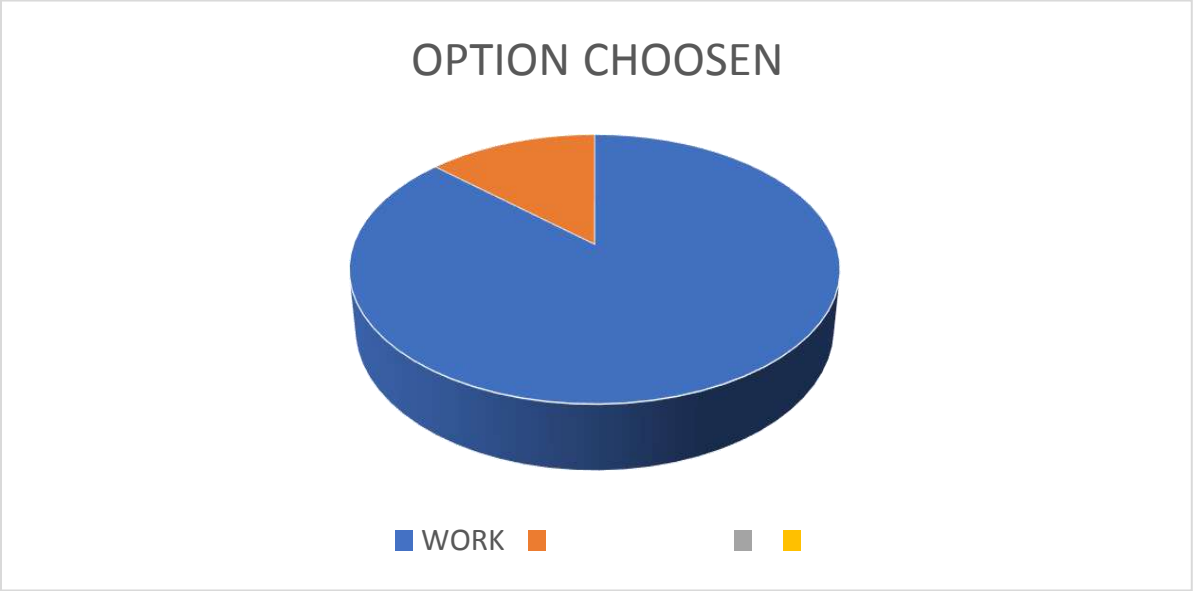
Education- Education gives rural women the information, abilities, and self-assurance they need to make wise decisions and meaningfully contribute to their communities. According to the abovegraph more number of women are educated but lack resources and higher education to grab opportunities.

On the basis of bank account and male dominance



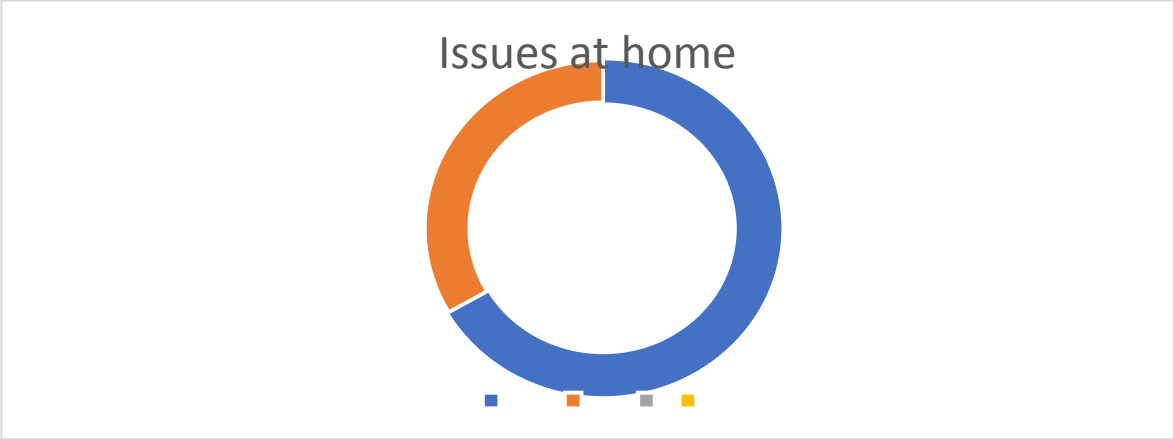
Gender Inequalities - Improving women's access to work, healthcare, and education in rural regions is a key component of addressing gender inequalities. On the basis of above graph more no of women have their own bank account but lack equality in society against male community.

On the basis of how many women chose to continue working and how manyof them chose to be a housewife-



More number of women chose to continue working so that they are not dependent on others and to live independently.

Pie chart on the basis of how many women are facing issues at home because of their work-



More number of women are facing issues at home because of lack of family support and lack of cooperation of their partner and society. They face harassment issues at home.

CONCLUSION

Rural women's empowerment is an important and continuous process that has a big impact on people's lives, families, communities, and societies overall. Women who have more authority are better equipped to use their rights, get access to resources, and take an active role in making decisions. Important findings about women's empowerment in rural areas are as follows:

1. **Economic Empowerment:** Sustainable development and the eradication of poverty depend on giving rural women economic power. Women can improve their families' financial well-being andend the cycle of poverty when they have access to possibilities for earning income, such as education, training, credit, and assistance for entrepreneurship.
2. **Education and Skill Development:** Women's empowerment in rural areas depends on giving them access to opportunities for education and skill development. They can make more educated decisions about their life, health, and livelihoods when they have the information and confidencethat comes from education. Women who participate in skill

development programs are more employable and have greater potential to generate revenue.

3. **Health and Well-Being:** Ensuring rural women's access to high-quality healthcare, reproductive rights, and family planning knowledge is a crucial part of empowering them. Enhancing women's health benefits their families and communities by allowing them to actively engage in social and economic activities while also improving their own well-being.

4. **Gender Equality and Social Norms:** Empowering women in rural regions requires confrontingand changing damaging gender norms and stereotypes. This entails fighting discriminatorybehaviors, advancing gender equality, and creating an atmosphere in which women's voices are acknowledged, valued, and respected. Enlisting men and boys as allies in this process is crucial tolong-lasting transformation.

5. **Leadership and Decision-Making:** Ensuring women's meaningful participation in decision- making processes at all levels is a key component of empowering them in rural regions. Effectivelyaddressing the unique needs and concerns of women requires women to be well-represented and in positions of leadership in grassroots movements, community groups, and local government.

6. **Access to Services and Resources:** Improving women's ability to access markets, technology, land, loans, and other productive resources is essential to their empowerment. Enhancing their access to necessities like as energy, clean water, sanitary facilities, and transportation also lessensthe stress of unpaid care work and improves their general well-being.

7. **Social Support Networks:** Creating robust networks of social support for women living in ruralregions helps to empower them. These networks can offer a forum for advocacy, group action, skilldevelopment, and knowledge exchange.

To sum up, the process of empowering women in rural areas is complex and calls for all- encompassing tactics and actions. We can build a supportive environment where women may reach their full potential, contribute to sustainable development, and foster inclusive and equitable societies by addressing economic, educational, health, social, and cultural issues.

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SANITARY FACILITIES IN EDUCATIONAL INSTITUTIONS FOR GIRLS AND WOMEN: PROMOTING GENDER EQUALITY, DIGNITY, AND AWARENESS

Saumya, Nupur, Muskaan, Muskaan, Alisha Padwal

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ABSTRACT:

This research examines the state of sanitary facilities in educational institutions for girls and women, with a focus on promoting gender equality, dignity, and awareness. The objectives include assessing the perceptions of stakeholders, identifying areas of improvement, and proposing recommendations for enhanced facility management. A cross-sectional study design is employed, encompassing the construction and validation of a questionnaire, as well as its administration to participants affiliated with educational institutions. The results, analyzed through the Kruskal-Wallis H test, reveal a consistent agreement among participants on fundamental aspects of sanitary facilities, such as the presence of separate facilities, cleanliness, and adequacy for women. Marginal differences are observed in opinions regarding amenities, ideal restroom-to-student ratios, and recent changes based on feedback. The study underscores the importance of regular audits, stakeholder engagement, and transparent communication for continuous improvement. Policy recommendations advocate for standardized guidelines, inclusive policies, and dedicated budgets. Future research should explore regional variations, conduct impact assessments of awareness programs, and investigate male perspectives. In conclusion, the study emphasizes the universal importance of sanitary standards while recognizing the need for nuanced, context- specific approaches to foster inclusive and dignified educational environments.

INTRODUCTION

Background and Rationale

In the landscape of educational institutions, the provision and quality of sanitary facilities have emerged as critical elements affecting the holistic well-being and educational experiences of female students. While strides have been made in recognizing the importance of gender equality in education, the state of sanitary facilities remains an often-overlooked aspect that warrants a comprehensive examination. This section aims to provide an in-depth exploration of the background and rationale underpinning the study, elucidating the contextual factors that underscore the significance of scrutinizing sanitary facilities in educational settings for girls and women [1].

The background of this study is rooted in the fundamental principle that access to quality education is a universal right, irrespective of gender. Educational institutions play a pivotal role in shaping the future of individuals and societies, and their infrastructure reflects societal values and priorities. However, despite progress in many areas of education, there exists a persistent gender disparity when it comes to the provision and condition of sanitary facilities. Girls and women continue to face challenges related to the adequacy, accessibility, and hygiene of these facilities, thereby affecting their overall educational experience [2].

Historically, societal norms and cultural taboos surrounding menstruation and personal hygiene have contributed to the neglect of female-centric sanitary facilities within educational institutions. This neglect manifests in inadequate infrastructure, lack of privacy, and insufficient menstrual hygiene management resources. Such conditions not only compromise the physical health and well-being of female students but also perpetuate gender inequalities by signaling a devaluation of their educational needs. The background of this study rests on the recognition that addressing these challenges is fundamental to dismantling barriers that hinder the full and equal participation of girls and women in education.

The rationale for this research stems from the imperative to bridge the existing gaps in understanding the intricate relationship between sanitary facilities and the broader goals of gender equality, dignity, and awareness. While there is a growing body of research addressing gender disparities in education, the specific focus on sanitary facilities remains relatively underexplored. These facilities are not merely utilitarian spaces but represent symbolic indicators of a society's commitment to providing an inclusive and empowering educational environment for all.

Moreover, the rationale is bolstered by the recognition that gender disparities in sanitary facilities are not isolated issues; they are embedded in a complex web of socio-cultural, economic, and educational factors. By addressing these disparities, this research aspires to contribute to a holistic understanding of the challenges faced by female students in educational settings. Such an understanding is crucial for informing targeted interventions and policies that go beyond the superficial aspects of infrastructure development, delving into the intricacies of cultural norms and societal perceptions that shape the experiences of female students.

In essence, the background and rationale of this study converge on the conviction that the examination of sanitary facilities in educational institutions for girls and women is not merely a matter of infrastructure assessment; it is a crucial step toward rectifying deeply ingrained gender inequalities in education. Through a nuanced exploration of these issues, this research aims to contribute to the ongoing discourse on gender-sensitive infrastructure development, advocating for a paradigm shift that places the dignity, equality, and awareness of female students at the forefront of educational priorities.

RESEARCH OBJECTIVES:

The primary objectives of this research are twofold. Firstly, it aims to comprehensively assess the current state of sanitary facilities in educational institutions catering to girls and women. This involves an examination of the physical infrastructure, hygiene practices, and accessibility of facilities. Secondly, the research seeks to discern the broader impact of these facilities on the promotion of gender equality, preservation of dignity, and cultivation of awareness among female students. By exploring the intricate dynamics at play, the study aims to identify existing challenges, gaps in infrastructure, and potential areas for improvement.

SIGNIFICANCE OF THE STUDY:

This research holds paramount significance for educational policymakers, administrators, and advocates for gender equality. By shedding light on the intricacies of sanitary facilities, the study aims to provide actionable insights that can inform targeted interventions, policies, and awareness campaigns. The significance lies not only in addressing the immediate concerns related to sanitary facilities but also in contributing to broader issues related to societal norms, female empowerment, and the intersectionality of gender and education.

Understanding the significance of sanitary facilities requires acknowledging their role as more than mere physical spaces. These facilities are symbolic of the value society places on the education and well-being of its female members. Thus, addressing the challenges in sanitary facilities is not just about infrastructure development; it is an essential step toward creating more inclusive, equitable, and supportive educational environments that empower girls and women.

STRUCTURE OF THE STUDY:

This study unfolds in several interconnected sections to provide a comprehensiveunderstanding of the examined issues.

Literature Review:

The literature review delves into existing research and theories related to gender, education, and sanitary facilities. It explores how gender disparities in infrastructure affect educational outcomes and delves into the cultural and societal factors influencing perceptions of sanitary facilities.

Methodology:

The methodology section outlines the research design, data collection methods, and analytical approaches employed in this study. This involves a mixed-methods approach, incorporating both qualitative and quantitative data to capture the multifaceted nature of the researchobjectives.

Findings:

The findings section presents the results of the assessment of sanitary facilities in educational institutions for girls and women. This includes insights into the current state of facilities, identified challenges, and perceptions of female students regarding these facilities.

Discussion:

The discussion section interprets the results in the context of the research objectives. It explores the implications of the findings on gender equality, dignity, and awareness, considering both immediate and broader impacts.

CONCLUSION AND RECOMMENDATIONS:

The study concludes by summarizing key findings and their significance. Recommendations for policy and practice are provided, emphasizing actionable steps to enhance the quality of sanitary facilities and promote a more equitable educational landscape for girls and women.

Through this structured exploration, the research aims to contribute not only to the academic understanding of the issues at hand but also to offer practical insights that can drive positive change in educational settings. By fostering dialogue and action around the enhancement of sanitary facilities, the study envisions a future where educational environments truly empower all students, regardless of gender, fostering an atmosphere where dignity, equality, and awareness flourish.

LITERATURE REVIEW:

Adequacy of Sanitary Facilities

In Nakuru Municipality, Kenya, this study assessed the adequacy of sanitary facilities for girls in 18 public primary

schools. Despite various facilities being present, they were found to be highly inadequate, impacting girls' education participation. The study recommends prioritizing sanitation, introducing legislation with penalties for non-compliance, and providing incentives for maintaining high standards. Building new and modern facilities is also suggested to address the shortfall [3]. This study explores the correlation between "Adequate Sanitary Facilities and the Health of Students." With two specific objectives and corresponding hypotheses, the research adopts a survey design, utilizing questionnaires for data collection. Analyzing data with Pearson correlation coefficient, the findings, based on a sample of 370 respondents, reveal a significant impact of inadequate sanitary disposal facilities on student health at the College of Health Technology, Calabar. Recommendations include prioritizing proper sanitation facilities by both the government and school authorities and enhancing awareness campaigns to instill positive attitudes toward cleanliness and personal hygiene among students [4].

Safety and Hygiene

This research highlights the importance of food hygiene in ensuring the safety of food from production to consumption. Lack of proper food hygiene can lead to foodborne illnesses and death. Factors contributing to foodborne illnesses include improper storage or reheating, inappropriate food storage, and cross-contamination. The increase in people eating out has led to a rise in foodborne illnesses due to unhygienic preparation and a lack of awareness. The Hazard Analysis and Critical Control Points (HACCP) approach is a systematic preventive method for ensuring food safety. Food hygiene training is essential, especially within the HACCP concept. The abstract emphasizes the prevalence of diseases caused by consuming unhygienic food worldwide and underscores the importance of good hygienic practices (GHP) to prevent and control foodborne diseases. The terms "food hygiene" and "food safety" are closely related, with HACCP implementation recognizing hazards and their control as a major challenge [5].

Gender Equality and Awareness

The study explores gender equality in teacher education in Estonia, focusing on students' attitudes and awareness. Findings indicate a generally favorable stance toward gender equality, recognizing unequal treatment based on gender as a concern. Notably, differences emerge among students, with beginners and male students exhibiting more gender stereotypes. These results present an opportunity to enhance future teachers' readiness for gender-sensitive pedagogy. The study contributes to existing research on gender aspects in education, offering practical insights for shaping teacher education curriculum. [6].

CHALLENGES AND DISPARITIES

Socioeconomic status significantly impacts health outcomes, particularly affecting black Americans who face dual challenges of low status, discrimination, and residential segregation. While improving overall health and reducing disparities are crucial objectives, certain interventions may initially widen black-white disparity ratios. Those with more resources can better access new technologies, potentially exacerbating disparities. Policy goals should prioritize better health and reduced mortality, but with careful targeting to address systemic inequalities and narrow disparities [7].

Interventions and Best Practices

This study uses empirical field research to assess if short-term Best Practice Interventions (BPIs) can result in sustained long-term improvements. It explores the conflict between achieving short-term results and fostering long-term capabilities in small and medium-sized enterprises (SMEs). The research, based on eight SME cases, examines BPI outcomes, factors influencing short- and long-term success, and the challenges in sustaining best practices. Findings highlight limitations in resource-limited SMEs, indicating that BPIs may struggle to build sufficient capability for enduring long-term change. Factors related to intervention context, implementation, and change-agent approach play crucial roles in this dynamic [8].

METHODOLOGY:

Research Design:

The research will employ a cross-sectional study design, chosen for its appropriateness in providing a snapshot of the current state of sanitary facilities in educational institutions for girls and women. This design allows for data collection at a single point in time, offering insights into prevailing conditions and perceptions. The cross-sectional nature is particularly beneficial in understanding the immediate impact of sanitary facilities on the educational experience of female students.

Data Collection:

Quantitative Data Collection:

The primary tool for data collection will be a structured questionnaire. This questionnaire will be designed to gather quantitative data on various aspects of sanitary facilities, including infrastructure quality, accessibility, cleanliness, and

the perceived impact on the educational experience. The questions will be carefully crafted to elicit specific responses that can be analyzed quantitatively, providing numerical insights into the state of sanitary facilities.

Questionnaire Design:

The questionnaire will be developed in two phases. In the first phase, a draft questionnaire will be constructed based on a comprehensive review of existing literature, ensuring that it covers key dimensions such as infrastructure quality, hygiene, accessibility, and the perceived impact on the educational experience. In the second phase, the draft questionnaire will be subjected to rigorous validation by experts in the field. This validation process ensures that the questions are clear, relevant, and effectively aligned with the research objectives. Experts in education, gender studies, and public health will provide critical feedback to refine the questionnaire for optimum effectiveness.

The finalized questionnaire will be structured to include a mix of closed-ended questions, allowing for quantitative analysis, and open-ended questions to capture qualitative insights. Careful attention will be given to the wording and sequencing of questions to maintain clarityand coherence, thereby enhancing the reliability of the collected data.

Survey Sample:

The survey sample will be drawn from individuals associated with various educational institutions catering to girls and women. Participants will include students, educators, administrative staff, and other stakeholders directly or indirectly involved in the educational ecosystem. A diverse sample will be sought to ensure a comprehensive representation of perspectives, considering factors such as geographical location, urban and rural settings, and different levels of educational institutions.

A purposive sampling technique will be employed to ensure that the participants have direct experience or involvement with the sanitary facilities in their respective institutions. The sample size will be determined based on the principle of saturation, ensuring that adequate data is collected to address the research objectives comprehensively.

DATA ANALYSIS:

Quantitative Data Analysis:

The quantitative data collected through the structured questionnaire will undergo systematic analysis. Descriptive statistics, such as means, frequencies, and percentages, will be employed to summarize and present numerical findings. Comparative analyses will be conducted to identify patterns and trends across different parameters, providing insights into the variations in experiences and perceptions.

Integration of Findings:

The quantitative and qualitative findings will be integrated to provide a holistic understanding of the state of sanitary facilities in educational institutions for girls and women. This integration will involve a triangulation of data, ensuring that the two types of data mutually reinforce and complement each other. By combining both quantitative metrics and qualitative narratives, the study aims to offer a comprehensive and nuanced depiction of the challenges and opportunities related to sanitary facilities in educational settings.

FINDINGS:

Presentation of Survey Results

Type of Institution		
	Frequency	Percent
College	39	24.7
School	21	13.3
University	98	62.0
Total	158	100.0

The table indicates that among 158 participants, 24.7% are affiliated with colleges (39 individuals), 13.3% with schools (21 participants), and the majority, 62.0%, are associated with universities (98 participants). This distribution reflects a diverse sample across different educational institutions, contributing to a comprehensive understanding of perspectives on sanitary facilities.

Location of the Institution:		
	Frequency	Percent
city	97	61.4
state	24	15.2
town	37	23.4
Total	158	100.0

The table reveals that 61.4% of the 158 participants are associated with educational institutions in cities, 15.2% within states, and 23.4% in towns. This geographical distribution offers insights into the diverse locations of participants' affiliated institutions and their potential impact on perceptions related to sanitary facilities.

Please mention your role in the institution		
	Frequency	Percent
Habitant	20	12.7
Parents	2	1.3
Student	134	84.8
Teacher	2	1.3
Total	158	100.0

The table outlines the roles of the 158 participants within their respective educational institutions. The majority, comprising 84.8% of the sample, are students. Habitant roles represent 12.7%, while parents and teachers each constitute a small percentage at 1.3%. This distribution underscores that the study primarily captures the perspectives of students, providing valuable insights into their experiences with sanitary facilities. The inclusion of habitants, parents, and teachers contributes to a broader understanding of how various stakeholders perceive and engage with these facilities within the educational context.

Are there separate sanitary facilities designated for females in yourinstitution?		
	Frequency	Percent
No	33	20.9
Yes	93	58.9
Maybe	32	20.3
Total	158	100.0

The table presents responses from 158 participants regarding the existence of separate sanitary facilities designated for females in their institutions. The majority, accounting for 58.9%, affirmed the presence of such facilities, while 20.9% indicated a lack of designated facilities. An additional 20.3% expressed uncertainty, suggesting a possibility of existing but unclear arrangements. This distribution sheds light on the varying situations across educational institutions, emphasizing the need for further exploration into the adequacy and accessibility of sanitary facilities designated for females within the sampled institutions.

What would you say about the overall maintenance and cleanliness of the femalerestrooms? (Please rate it)		
	Frequency	Percent
Excellent	39	24.7
Fair	40	25.3
Good	70	44.3
Poor	9	5.7
Total	158	100.0

Participants generally perceive the maintenance and cleanliness of female restrooms positively, with 44.3% rating it as "Good" and 24.7% as "Excellent." A significant portion, 25.3%, rates it as "Fair," while a smaller percentage, 5.7%, deems it "Poor." The distribution highlights both positive and potential areas for improvement in maintaining the cleanliness offemale restrooms within the sampled educational institutions.

Are there enough restrooms for women in your institution to accommodate the number of femalestudents and staff there?		
	Frequency	Percent
No	21	13.3
Yes	101	63.9
Maybe	36	22.8
Total	158	100.0

The table indicates that among the 158 participants, 63.9% believe there are sufficient restrooms for women in their institutions, while 13.3% disagree. An additional 22.8% express uncertainty about the adequacy of restroom facilities. This distribution underscores the importance of further investigation into the sufficiency and accessibility of restroom facilitiesfor women within the sampled educational institutions.

Do the following amenities exist in the restrooms? (Tick on all thatapply)		
	Frequency	Percent
a) Adequate number of toilets and stalls	124	78.5
b) Running water taps in the hand wash area	20	12.7
c) Soap/hand wash facilities	7	4.4
d) Hand dryer	3	1.9
e) Proper lighting and ventilation	2	1.3
g) Functioning locks on the doors	1	.6
h) Separate utility areas for the staff/students withdisabilities	1	.6
Total	158	100.0

Among the 158 participants, 78.5% reported the presence of an adequate number of toilets and stalls in the restrooms. However, other amenities exhibit lower frequencies: 12.7% mentioned running water taps, 4.4% noted soap/hand wash facilities, 1.9% reported hand dryers, 1.3% highlighted proper lighting and ventilation, 0.6% indicated functioning locks on doors, and 0.6% acknowledged separate utility areas for staff/students with disabilities. This breakdown reveals variations in the availability of restroom amenities within the sampled educational institutions, emphasizing potential areas for improvement in certain facilities.

How many restrooms should be present for every 50students according to you?		
	Frequency	Percent
a) One rest room and one hand wash area	29	18.4
b) Two restrooms and two hand wash area	39	24.7
c) Two restrooms and one hand wash area	8	5.1
d) Three restrooms and three hand wash area	51	32.3
e) Not sure	31	19.6
Total	158	100.0

Among the 158 participants, 32.3% believe that three restrooms and three hand wash areas should be present for every 50 students. Additionally, 24.7% suggest two restrooms and two hand wash areas, while 18.4% recommend one restroom and one hand wash area. Only 5.1% propose two restrooms and one hand wash area. Notably, 19.6% express uncertainty about the ideal restroom-to-student ratio. This diverse range of responses underscores differing perspectives on the appropriate provision of restroom facilities in educational institutions, indicating the need for nuanced approaches to facility planning and management.

Does your institution provide access to Sanitary pads/menstrual hygiene products to the female staff andstudents?		
	Frequency	Percent
No	61	38.6
Yes	54	34.2
Maybe	43	27.2
Total	158	100.0

The table outlines participants' responses regarding whether their institutions provide access to sanitary pads/menstrual hygiene products for female staff and students. Among the 158 participants, 34.2% affirm that their institutions do provide access, while 38.6% indicate that access is not provided. An additional 27.2% express uncertainty, marking their response as "Maybe." This distribution emphasizes the variability in the availability of menstrual hygiene products within the sampled educational institutions, shedding light on the need for greater attention to and standardization of menstrual hygiene support for female staff and students.

Are there any private/dedicated spaces for female staff and students to manage their menstrual hygiene needs? (Changing rooms)		
	Frequency	Percent
No	50	31.6
Yes	69	43.7
Maybe	39	24.7
Total	158	100.0

Among the 158 participants, 43.7% report that their institutions provide private/dedicated spaces, such as changing rooms, for female staff and students to manage their menstrual hygiene needs. However, 31.6% indicate that there are no such facilities, while 24.7% express uncertainty ("Maybe"). This distribution underscores the variability in the provision of private spaces for managing menstrual hygiene, emphasizing the importance of addressing this aspect to ensure the comfort and well-being of female staff and students within educational institutions.

Did you hear from any female staff/students complaining about the sanitary facilities in yourinstitutions?		
	Frequency	Percent
No	76	48.1
Yes	49	31.0
Maybe	33	20.9
Total	158	100.0

The table illustrates participants' responses regarding whether they have heard complaints from female staff/students about the sanitary facilities in their institutions. Among the 158 participants, 31.0% acknowledge having heard complaints, while 48.1% state they have not. An additional 20.9% express uncertainty ("Maybe"). This distribution underscores the prevalence of concerns raised by female staff and students regarding sanitary facilities, highlighting the importance of addressing these issues to ensure a supportive and dignified environment within educational institutions.

Are there any educational programs/ initiatives takenby the institution to raise awareness about menstrualhygiene and other related issues for female staff/students?		
	Frequency	Percent
No	36	22.8
Yes	78	49.4
Maybe	44	27.8
Total	158	100.0

The table reveals participants' responses regarding educational programs/initiatives aimed at raising awareness about menstrual hygiene and related issues for female staff/students in their institutions. Among the 158 participants, 49.4% affirm the existence of such programs, indicating proactive efforts by their institutions. However, 22.8% state that there are no such initiatives, while 27.8% express uncertainty ("Maybe"). This distribution underscores the varied approaches taken by educational institutions in addressing menstrual hygiene awareness, suggesting a need for increased efforts and clarity in promoting awareness and education on these vital topics for female staff and students.

Are male staff/students encouraged to participate in such initiatives/awarenessprograms taken by the institution?		
	Frequency	Percent
no	35	22.2
yes	72	45.6
maybe	51	32.3
Total	158	100.0

Participants' responses regarding the involvement of male staff/students in initiatives and awareness programs about menstrual hygiene in their institutions are summarized in the table. Among the 158 participants, 45.6% affirm that male staff/students are encouraged to participate, indicating inclusive efforts. However, 22.2% state that there is no encouragement for male participation, while 32.3% express uncertainty ("Maybe"). This distribution suggests a mix in institutional approaches to including male stakeholders in menstrual hygiene awareness programs, indicating an area where institutions might enhance inclusivity and engagement.

Are there any gender specific policies within the institution that promote gender equality & dignity,especially in the context of sanitary facilities?		
	Frequency	Percent
No	45	28.5
Yes	57	36.1
Maybe	56	35.4
Total	158	100.0

Participants' responses regarding the existence of gender-specific policies within their institutions that promote gender equality and dignity, particularly in the context of sanitary facilities, are presented in the table. Among the 158 participants, 36.1% indicate the presence of such policies, highlighting proactive efforts to address gender-specific needs. However, 28.5% state the absence of such policies, while 35.4% express uncertainty ("Maybe"). This distribution underscores the varying levels of institutional commitment to gender equality and dignity, emphasizing the potential for further policy development and clarification to ensure asupportive and inclusive environment for all.

Are instructional materials or information on managing menstruation provided to female students?		
	Frequency	Percent
no	49	31.0
yes	69	43.7
Maybe	40	25.3
Total	158	100.0

Participants' responses regarding the provision of instructional materials or information on managing menstruation to female students are summarized in the table. Among the 158 participants, 43.7% affirm that such materials or information are provided, indicating an effort to educate female students on menstrual hygiene. However, 31.0% state that no

Instructional materials or information are provided, while 25.3% express uncertainty ("Maybe"). This distribution emphasizes the importance of consistent and accessible educational resources for female students, highlighting areas where institutions may enhance support and information dissemination regarding menstrual hygiene.

Do female students feel safe talking to teachersor staff about menstrual hygiene issues?		
	Frequency	Percent
no	13	8.2
yes	93	58.9
Maybe	52	32.9
Total	158	100.0

The table outlines participants' responses regarding whether female students feel safe talking to teachers or staff about menstrual hygiene issues. Among the 158 participants, 58.9% affirm that female students do feel safe discussing such matters, indicating an open and supportive environment. However, 8.2% state that female students do not feel safe, while 32.9% express uncertainty ("Maybe"). This distribution suggests that while a significant portion feels secure discussing menstrual hygiene with teachers or staff, there is room for improvement in fostering a more comfortable and supportive atmosphere for such conversations within educational institutions.

Are there any initiatives such as providing free or subsidized menstrual hygiene products to femalestudents?		
	Frequency	Percent
No	62	39.2
Yes	51	32.3
Maybe	45	28.5
Total	158	100.0

Participants' responses regarding initiatives to provide free or subsidized menstrual hygiene products to female students are presented in the table. Among the 158 participants, 32.3% indicate the presence of such initiatives, reflecting efforts to address the affordability of menstrual hygiene products. However, 39.2% state the absence of such initiatives, while 28.5% express uncertainty ("Maybe"). This distribution suggests a need for increased

Attention to initiatives that enhance accessibility to menstrual hygiene products for femalestudents within educational institutions.

Is there an option for students to anonymously reportproblems with or concerns about sanitary facilities?		
	Frequency	Percent
No	49	31.0
Yes	57	36.1
Maybe	52	32.9
Total	158	100.0

Participants' responses regarding the existence of an option for students to anonymously report problems with or concerns about sanitary facilities are summarized in the table. Among the 158 participants, 36.1% affirm the availability of such an option, providing students with a means to report issues confidentially. However, 31.0% state that there is no such option, while 32.9% express uncertainty ("Maybe"). This distribution suggests a varied landscape in terms of reporting mechanisms for sanitary facility concerns, indicating potential areas for improvement in ensuring confidential and accessible channels for addressing issues within educational institutions.

Are there any recent changes/improvements in thesanitary facilities based on the feedback from the female staff and students?		
	Frequency	Percent
No	50	31.6
Yes	53	33.5
Maybe	55	34.8
Total	158	100.0

Participants' responses regarding recent changes or improvements in sanitary facilities based on feedback from female staff and students are presented in the table. Among the 158 participants, 33.5% indicate that there have been improvements, showcasing a responsiveness to feedback. However, 31.6% state that no recent changes have been implemented, while 34.8% express uncertainty ("Maybe"). This distribution suggests a dynamic landscape where some institutions actively respond to feedback to enhance sanitary facilities, while others may benefit from a more transparent and communicative approach to highlight improvements.

DATA ANALYSIS

Test Statistics a,b	Kruskal-Wallis H	df	Asymp.Sig.
Are there separate sanitary facilities designated for females in your institution?	1.144	1	0.285
What would you say about the overall maintenance and cleanliness of the female restrooms? (Please rateit)	0.036	1	0.849
Are there enough restrooms for women in yourinstitution to accommodate the number of female students and staff there?	1.941	1	0.164
Do the following amenities exist in the restrooms? (Tick on all that apply)	3.785	1	0.052
How many restrooms should be present for every 50 students according to you?	3.534	1	0.060
Does your institution provide access to Sanitarypads/menstrual hygiene products to the female staff and students?	0.191	1	0.662
Are there any private/dedicated spaces for female staff and students to manage their menstrual hygieneneeds? (Changing rooms)	0.764	1	0.382
Did you hear from any female staff/studentscomplaining about the sanitary facilities in your institutions?	0.448	1	0.503
Are there any educational programs/ initiatives taken by the institution to raise awareness about menstrual hygiene and other related issues for female staff/students?	0.066	1	0.797
Are male staff/students encouraged to participate insuch initiatives/awareness programs taken by the institution?	0.109	1	0.741
Are there any gender specific policies within the institution that promote gender equality & dignity, especially in the context of sanitary facilities?	0.909	1	0.340
Are instructional materials or information on managing menstruation provided to female students?	1.386	1	0.239
Do female students feel safe talking to teachers or staff about menstrual hygiene issues?	1.155	1	0.283
Are there any initiatives such as providing free orsubsidized menstrual hygiene products to female students?	0.578	1	0.447
Is there an option for students to anonymously report problems with or concerns about sanitary facilities?	0.764	1	0.382
are there any recent changes/improvements in the sanitary facilities based on the feedback from thefemale staff and students?	3.500	1	0.061

The provided table presents the results of a Kruskal-Wallis H test for various questions related to sanitary facilities in educational institutions. The Kruskal-Wallis H test is a non- parametric test used to determine whether there are statistically significant differences between three or more independent groups.

Are there separate sanitary facilities designated for females in your institution?

The Kruskal-Wallis H test results ($H(1) = 1.144$, $p = 0.285$) indicate that there is no statistically significant difference in responses among participants regarding the presence of separate sanitary facilities for females in different institutions. This suggests that perceptions of the availability of separate facilities are consistent across the sampled institutions.

What would you say about the overall maintenance and cleanliness of the female restrooms? (Please rate it)

The Kruskal-Wallis H test results ($H(1) = 0.036$, $p = 0.849$) reveal no significant differences in responses regarding the maintenance and cleanliness of female restrooms. This suggests a uniform perception among participants, indicating that opinions on cleanliness are consistent across the institutions.

Are there enough restrooms for women in your institution to accommodate the number of female students and staff there?

The results (H(1) = 1.941, p = 0.164) show no significant differences in opinions among participants regarding the adequacy of restrooms for women in different institutions. This suggests a general consistency in perceptions of restroom sufficiency across the sampled institutions.

Do the following amenities exist in the restrooms? (Tick on all that apply)

The Kruskal-Wallis H test results (H(1) = 3.785, p = 0.052) indicate a marginal level of significance, suggesting potential differences in responses regarding the existence of amenities in restrooms. Further investigation may be needed to understand the specificvariations in participants' perceptions.

How many restrooms should be present for every 50 students according to you?

The Kruskal-Wallis H test results (H(1) = 3.534, p = 0.060) suggest a marginally significant difference in opinions among participants regarding the ideal restroom-to-student ratio. This warrants further exploration to understand the specific nuances in participants' recommendations.

Does your institution provide access to Sanitary pads/menstrual hygiene products to the female staff and students?

The results (H(1) = 0.191, p = 0.662) indicate no significant differences in responses among participants regarding the provision of menstrual hygiene products, suggesting consistency in perceptions across institutions.

Are there any private/dedicated spaces for female staff and students to manage their menstrual hygiene needs? (Changing rooms)

The Kruskal-Wallis H test results (H(1) = 0.764, p = 0.382) show no significant differences in responses regarding the availability of private spaces for managing menstrual hygiene. This suggests a uniform perception across institutions.

Did you hear from any female staff/students complaining about the sanitary facilities in your institutions?

The results (H(1) = 0.448, p = 0.503) indicate no significant differences in responses among participants regarding the occurrence of complaints about sanitary facilities, suggesting a consistent lack of major concerns across institutions.

Are there any educational programs/ initiatives taken by the institution to raise awareness about menstrual hygiene and other related issues for female staff/students?

The results (H(1) = 0.066, p = 0.797) reveal no significant differences in responses among participants regarding the existence of educational programs, suggesting a consistent approach to awareness initiatives across institutions.

Are male staff/students encouraged to participate in such initiatives/awareness programs taken by the institution?

The results (H(1) = 0.109, p = 0.741) show no significant differences in responses among participants regarding the encouragement of male participation in awareness programs. This suggests a consistent approach to inclusive awareness initiatives across institutions.

Are there any gender-specific policies within the institution that promote gender equality & dignity, especially in the context of sanitary facilities?

The results (H(1) = 0.909, p = 0.340) indicate no significant differences in responses among participants regarding the existence of gender-specific policies, suggesting a consistent approach to gender equality and dignity across institutions.

1. **Are instructional materials or information on managing menstruation provided to female students?**
2. **The results (H(1) = 1.386, p = 0.239) reveal no significant differences in responses among participants regarding the provision of instructional materials, suggesting a consistent approach to educational support for female students across institutions.**
3. **Do female students feel safe talking to teachers or staff about menstrual hygiene issues?**

The results (H(1) = 1.155, p = 0.283) indicate no significant differences in responses among participants regarding the comfort of female students in discussing menstrual hygiene with teachers or staff. This suggests a consistent perception of openness and safety across institutions.

Are there any initiatives such as providing free or subsidized menstrual hygiene products to female students?

The results (H(1) = 0.578, p = 0.447) show no significant differences in responses among participants regarding the presence of initiatives to provide menstrual hygiene products, suggesting a consistent approach to support for female students across institutions.

Is there an option for students to anonymously report problems with or concerns about sanitary facilities?

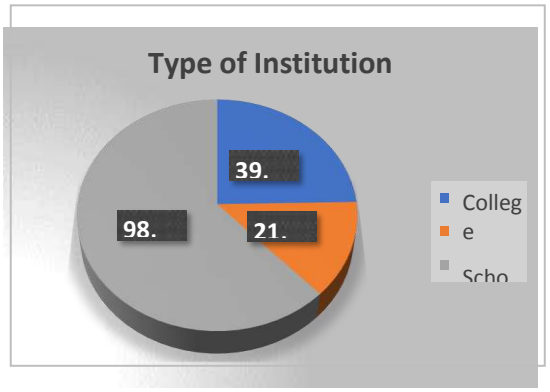
The results (H(1) = 0.764, p = 0.382) indicate no significant differences in responses among participants regarding the existence of an option for anonymous reporting, suggesting a consistent approach to feedback mechanisms across

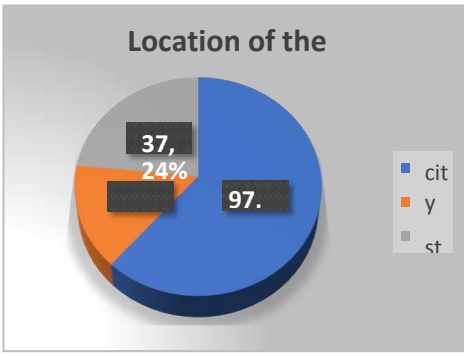
institutions.

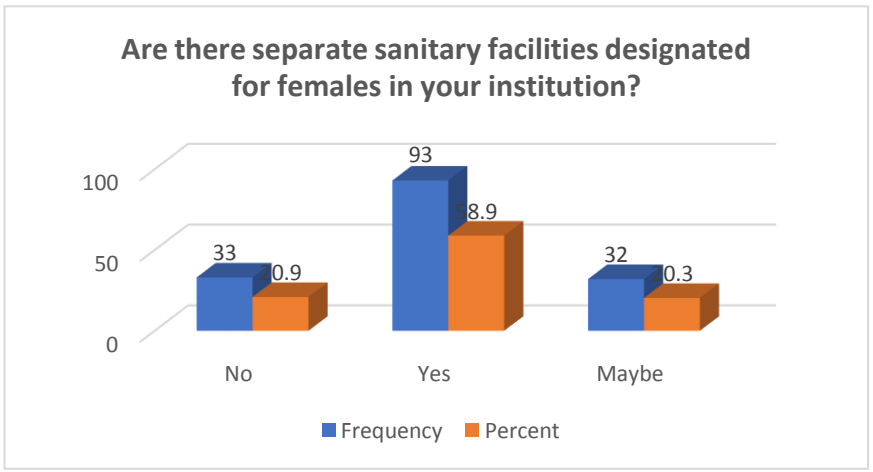
Are there any recent changes/improvements in the sanitary facilities based on the feedback from the female staff and students?

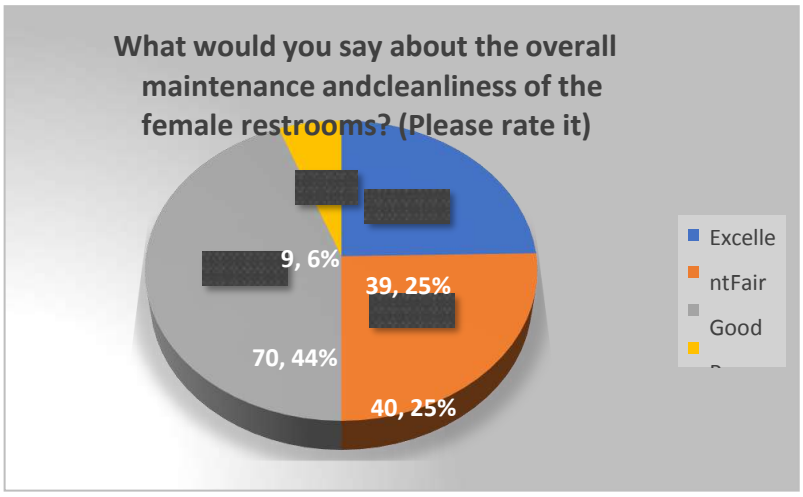
The results (H(1) = 3.500, p = 0.061) suggest a marginally significant difference in opinions among participants regarding recent changes or improvements based on feedback. This warrants further exploration to understand specific variations in institutional responsiveness. In summary, the Kruskal-Wallis H test results provide valuable insights into the consistency and potential variations in participants' perceptions across different aspects of sanitary facilities in educational institutions. Further analysis and exploration of specific areas with marginal significance may contribute to a deeper understanding of the factors influencing these perceptions.

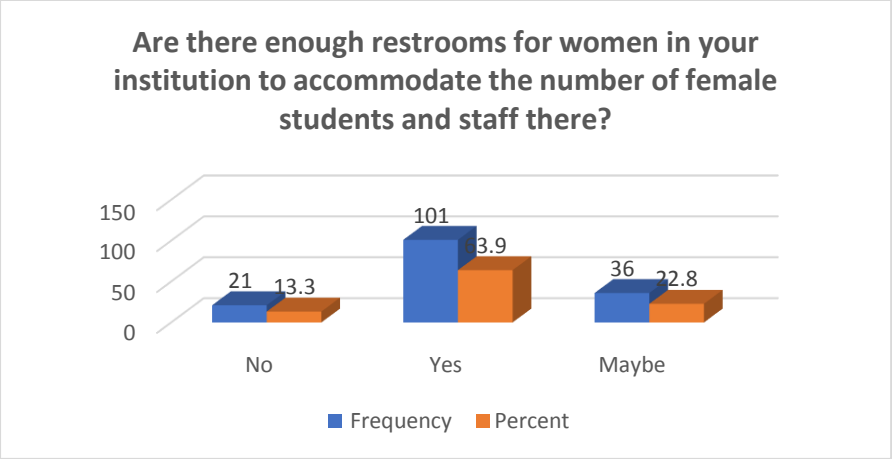
VISUAL REPRESENTATION (E.G., TABLES, CHARTS)

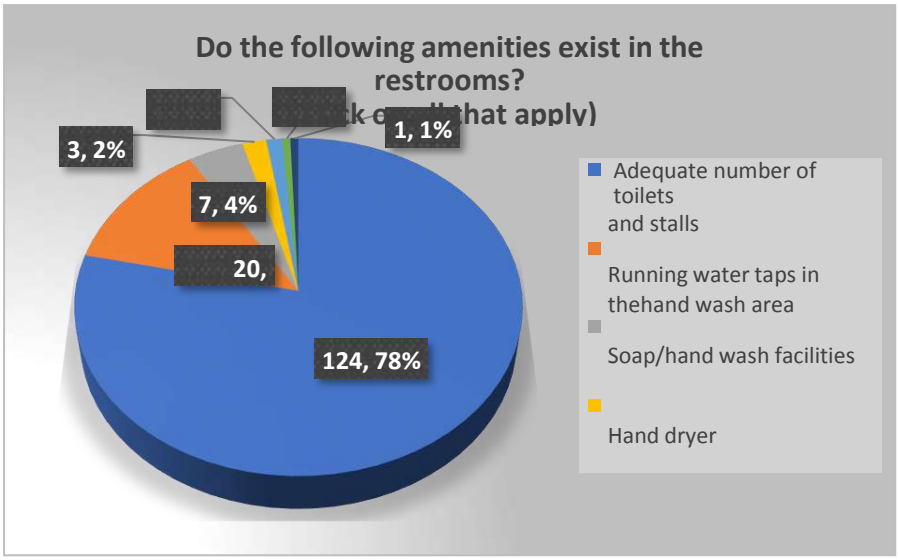


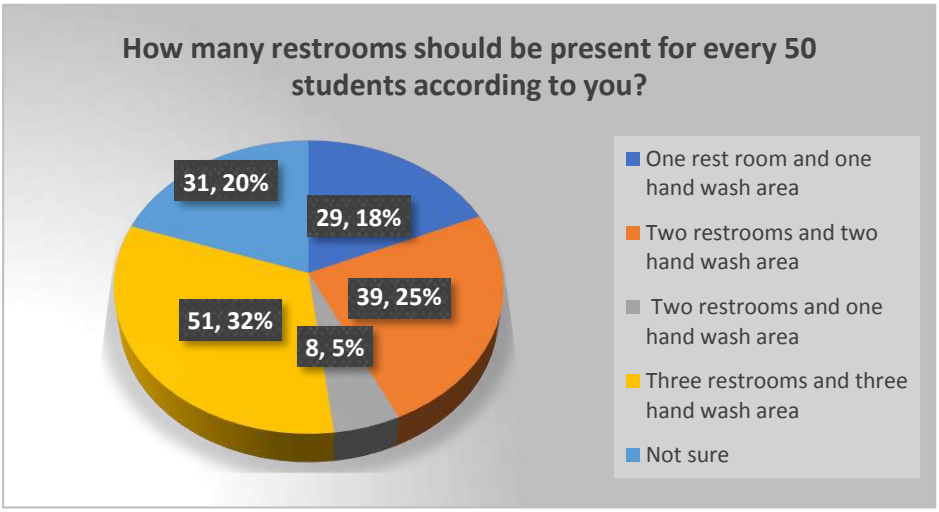


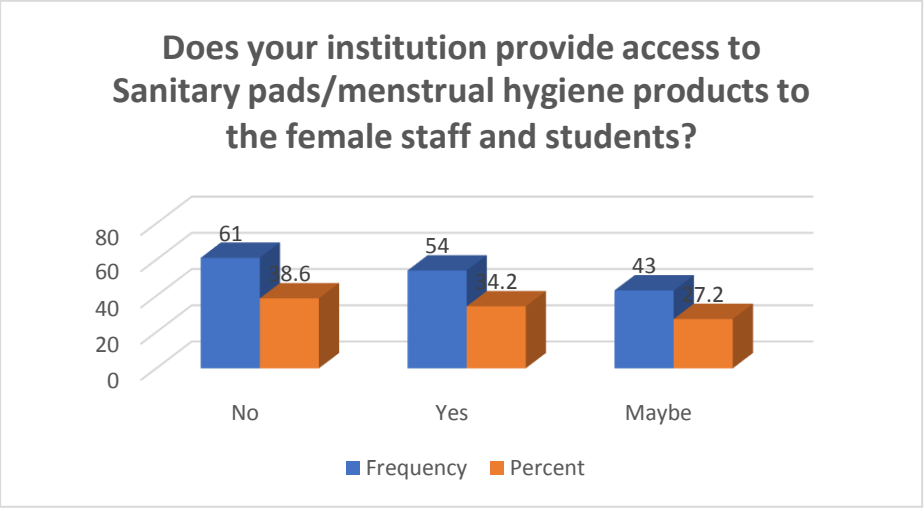


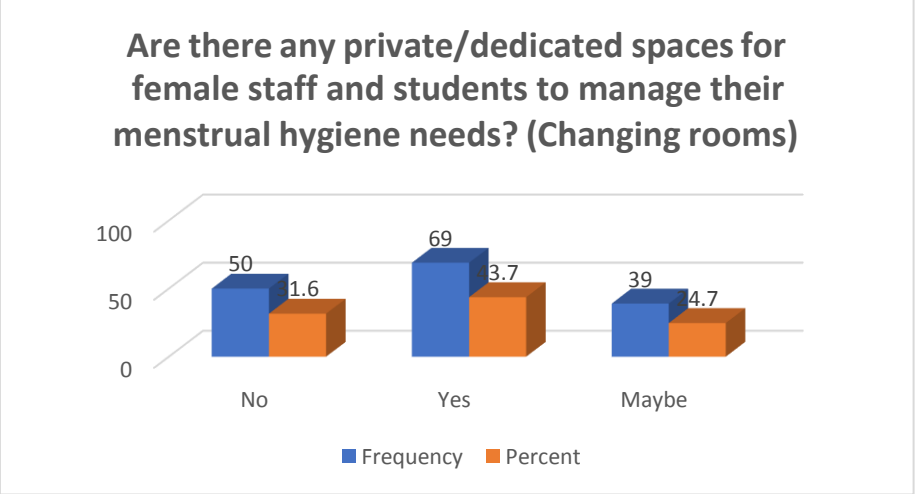


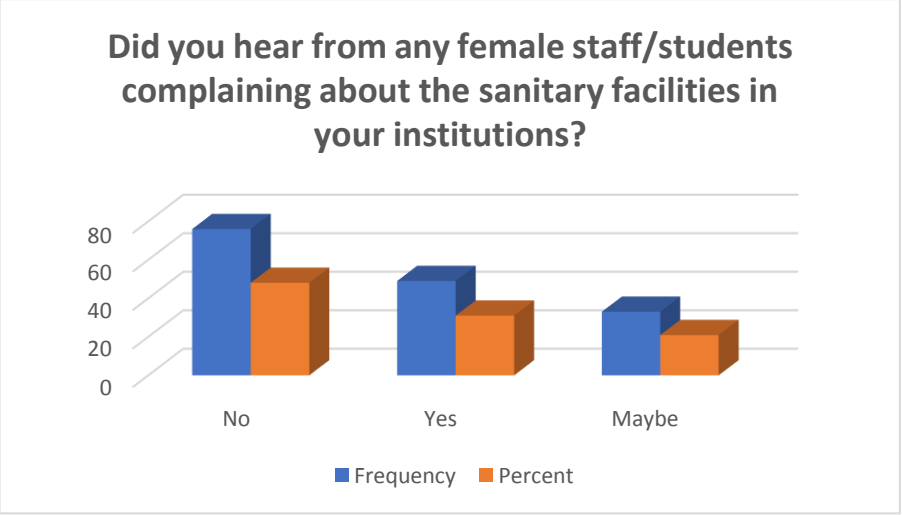

Are there enough restrooms for women in your institution to accommodate the number of female students and staff there?
150
100
50
0
21
13.3
101
63.9
36
22.8
No
Yes
Maybe
Frequency
Percent

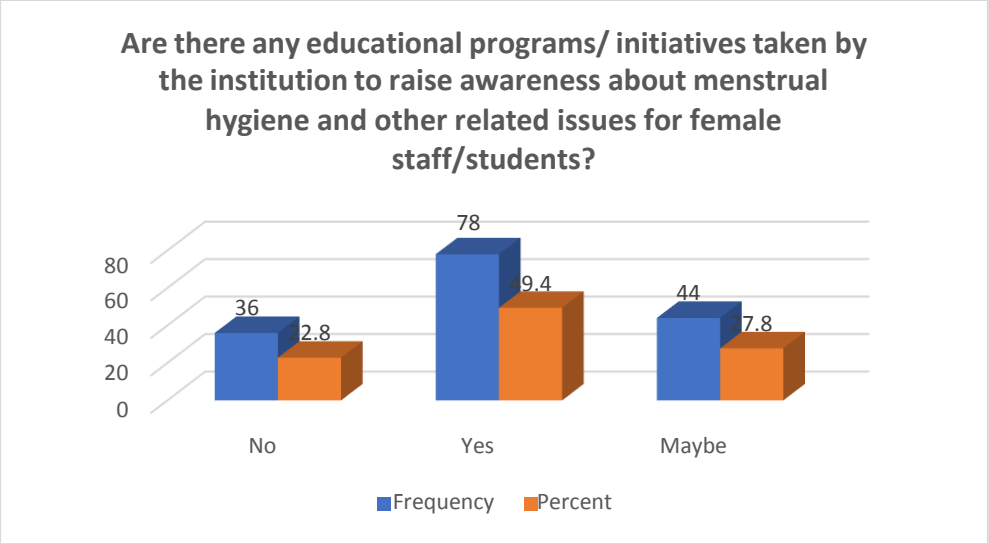

Do the following amenities exist in the restrooms?
3, 2%
1, 1%
7, 4%
20,
124, 78%
Adequate number of toilets and stalls
Running water taps in thehand wash area
Soap/hand wash facilities
Hand dryer

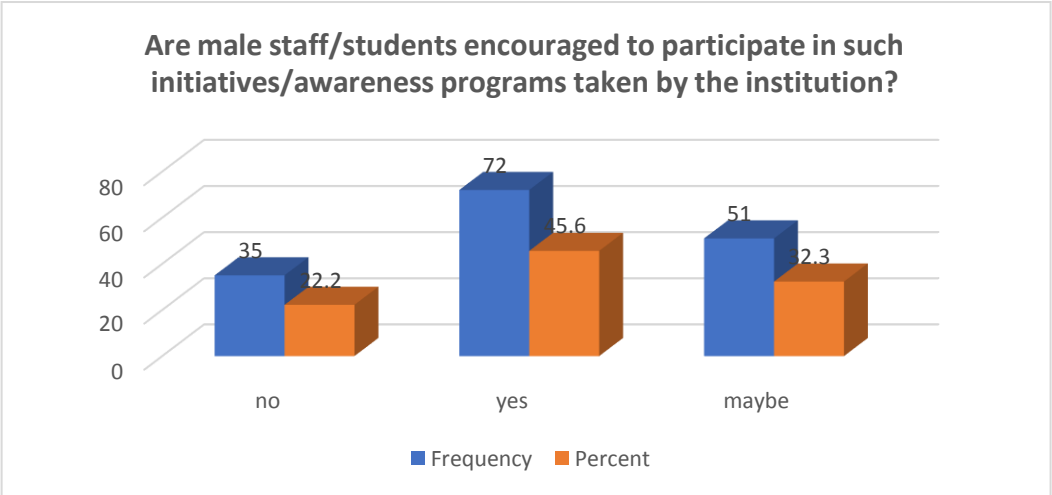

How many restrooms should be present for every 50 students according to you?
31, 20%
29, 18%
39, 25%
51, 32%
8, 5%
One rest room and one hand wash area
Two restrooms and two hand wash area
Two restrooms and one hand wash area
Three restrooms and three hand wash area
Not sure

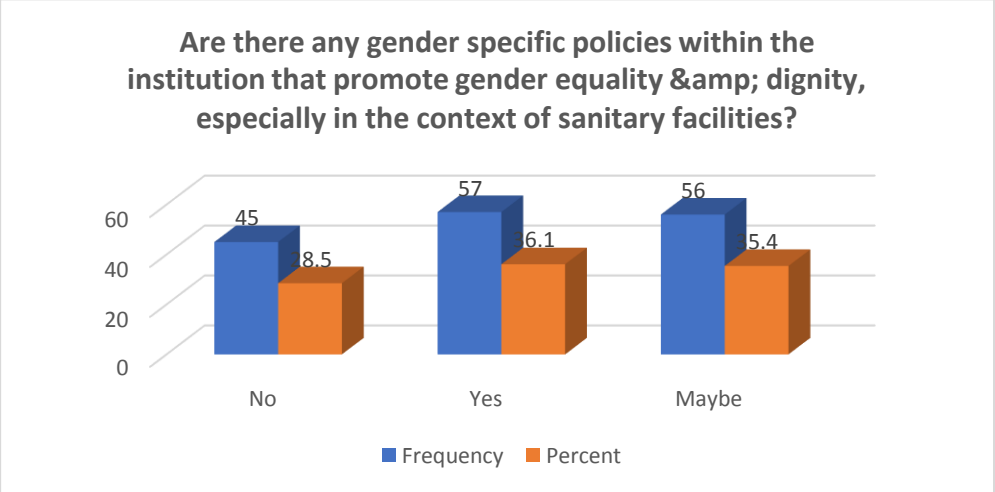

Does your institution provide access to Sanitary pads/menstrual hygiene products to the female staff and students?
80
60
40
20
0
61
38.6
54
34.2
43
27.2
No
Yes
Maybe
Frequency
Percent

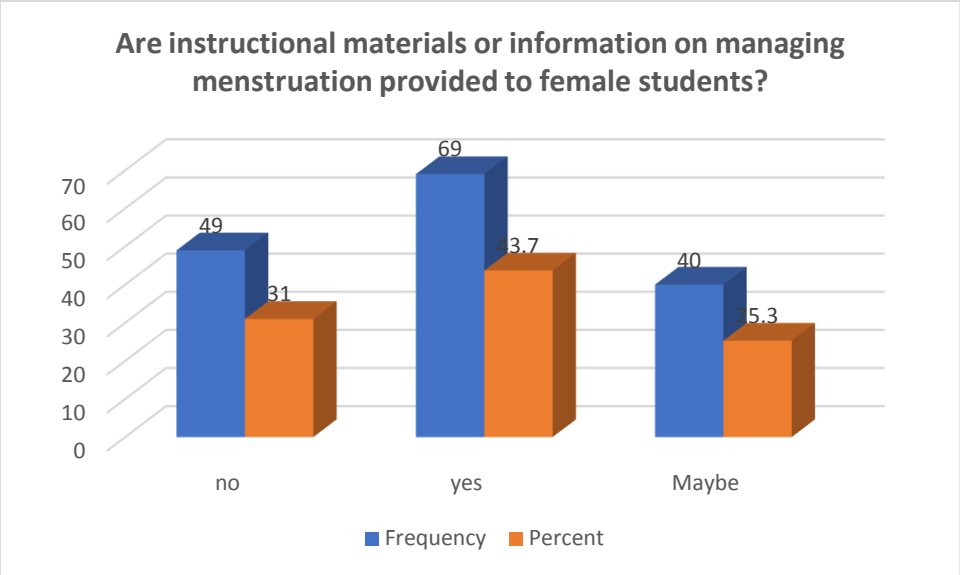

Are there any private/dedicated spaces for female staff and students to manage their menstrual hygiene needs? (Changing rooms)
100
50
0
50
31.6
69
43.7
39
24.7
No
Yes
Maybe
Frequency
Percent

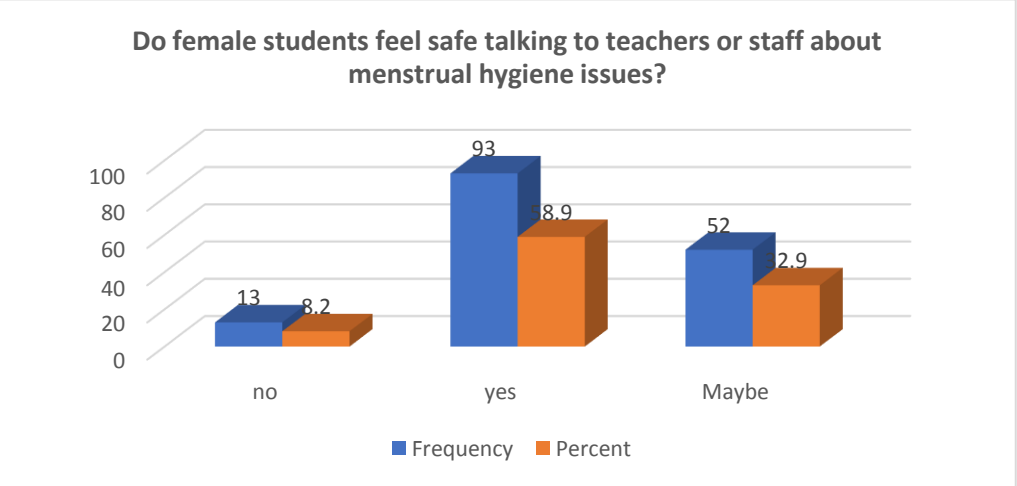

Did you hear from any female staff/students complaining about the sanitary facilities in your institutions?
80
60
40
20
0
No
Yes
Maybe
Frequency
Percent

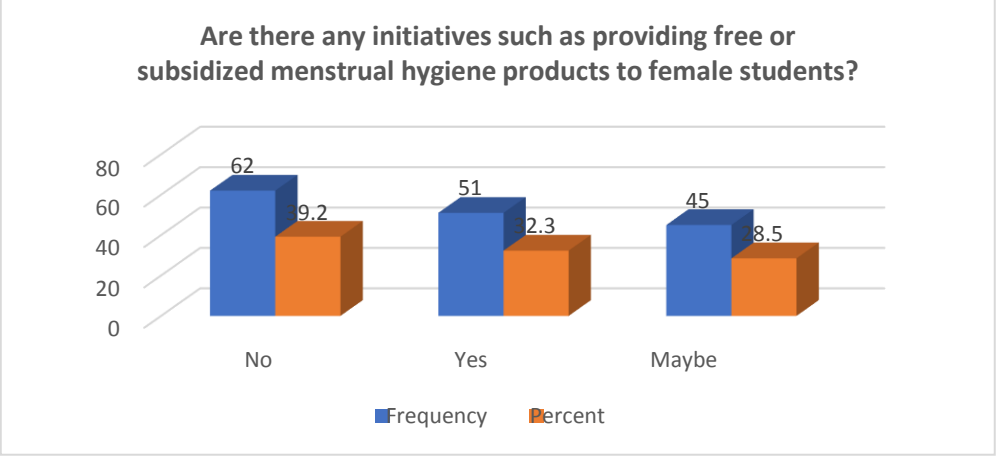

Are there any educational programs/ initiatives taken by the institution to raise awareness about menstrual hygiene and other related issues for female staff/students?
80
60
40
20
0
36
22.8
78
49.4
44
27.8
No
Yes
Maybe
Frequency
Percent

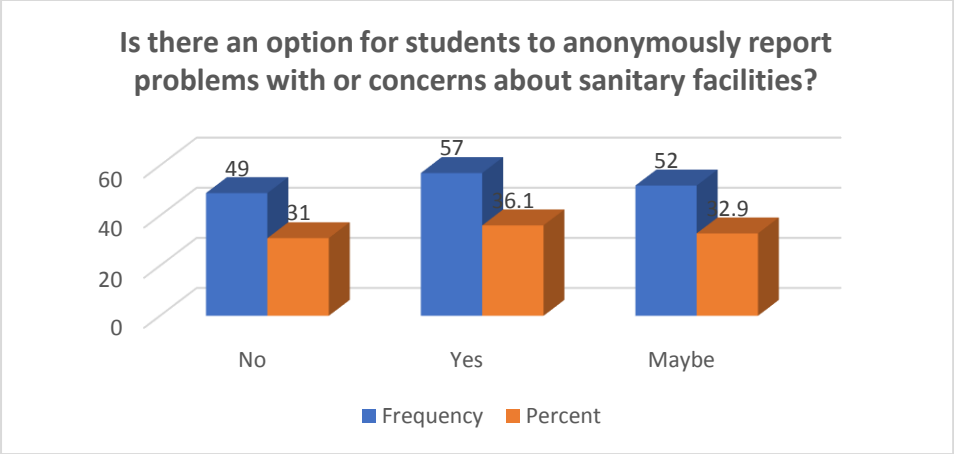

Are male staff/students encouraged to participate in such initiatives/awareness programs taken by the institution?
80
60
40
20
0
35
22.2
72
45.6
51
32.3
no
yes
maybe
Frequency
Percent

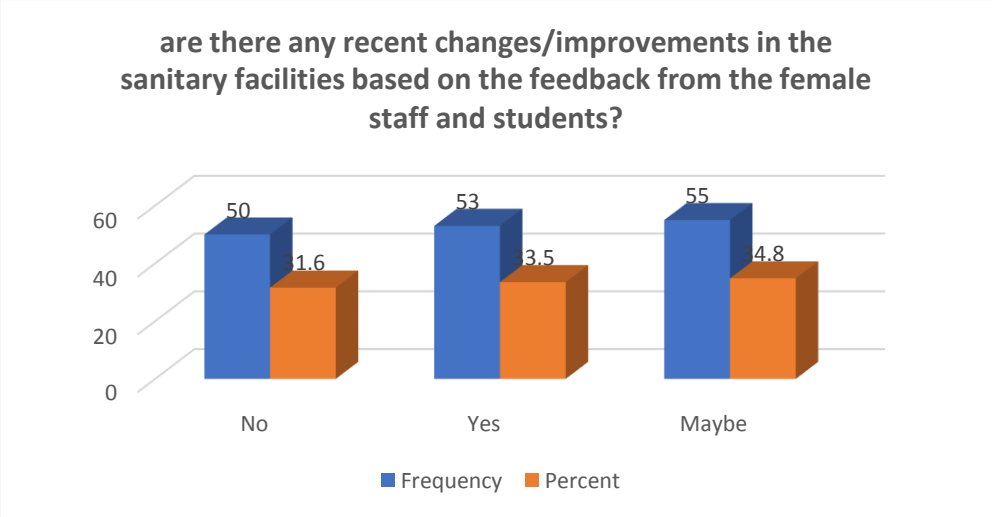

Are there any gender specific policies within the institution that promote gender equality & dignity, especially in the context of sanitary facilities?
60
40
20
0
45
28.5
57
36.1
56
35.4
No
Yes
Maybe
Frequency
Percent


Are instructional materials or information on managing menstruation provided to female students?
70
60
50
40
30
20
10
0
49
31
69
43.7
40
25.3
no
yes
Maybe
Frequency
Percent


Do female students feel safe talking to teachers or staff about menstrual hygiene issues?
100
80
60
40
20
0
13
8.2
93
58.9
52
32.9
no
yes
Maybe
Frequency
Percent


Are there any initiatives such as providing free or subsidized menstrual hygiene products to female students?
80
60
40
20
0
62
39.2
51
32.3
45
28.5
No
Yes
Maybe
Frequency
Percent





DISCUSSION:

Interpretation of Findings:

The results of the Kruskal-Wallis H tests provide valuable insights into the perceptions andexperiences related to sanitary facilities in the sampled educational institutions. Overall, the

majority of questions did not show statistically significant differences in responses among participants from different institutions. Notably, participants' perceptions were consistent regarding the presence of separate sanitary facilities, the cleanliness of female restrooms, adequacy of restrooms for women, and the provision of menstrual hygiene products. The lack of significant differences in these areas suggests a shared perspective on these fundamental aspects of sanitary facilities.

However, there were marginal levels of significance in responses related to the existence of amenities in restrooms and the ideal restroom-to-student ratio. These findings indicate that while there is a general consensus on certain aspects, there might be nuances in participants' opinions regarding the availability of specific amenities and the recommended restroominfrastructure.

Furthermore, the marginally significant result regarding recent changes or improvements in sanitary facilities based on feedback highlights a potential area of divergence among institutions. Exploring the specific nature of these changes and the factors influencing institutional responsiveness could provide valuable insights.

Implications:

The consistent perceptions across institutions regarding several aspects of sanitary facilities suggest a baseline level of agreement on essential elements. This shared understanding lays the foundation for collaborative efforts in addressing common challenges and implementing best practices. Institutions can leverage this shared perspective to establish benchmarks for sanitary facility standards, potentially leading to improved conditions for female students andstaff.

The marginal differences in opinions regarding amenities in restrooms and the ideal restroom-to-student ratio suggest areas where institutions might tailor their facilities to better meet the specific preferences and expectations of their

constituents. These findings underscore the importance of flexibility in facility management to accommodate diverseneeds and preferences.

The marginally significant result regarding recent changes or improvements based on feedback signals an opportunity for institutions to enhance their responsiveness to the needs and concerns of female students and staff. Engaging in a dialogue with participants to understand the nature of these changes could inform targeted interventions and improvements.

COMPARISON WITH LITERATURE:

Comparing the study findings with existing literature on sanitary facilities in educational institutions reveals both congruencies and divergences. Consistent with previous research, participants expressed a shared concern for the presence of separate sanitary facilities and overall cleanliness. However, the marginal differences observed in amenities and restroom- to-student ratio opinions highlight the need for context-specific considerations that may vary from broader trends identified in the literature.

The marginal significance in recent changes or improvements aligns with literature emphasizing the importance of continuous adaptation and responsiveness in maintaining satisfactory sanitary conditions. The study contributes to the literature by providing nuanced insights into the specific areas where institutions can focus their efforts for ongoing improvements.

Limitations of the Study:

While the findings offer valuable insights, it is crucial to acknowledge the limitations of the study. The cross-sectional design provides a snapshot of perceptions at a specific point in time, limiting the ability to capture dynamic changes or trends. Additionally, the study relies on self-reported data, which may be subject to response bias. The sample size and composition may also influence the generalizability of the findings, as participants represent a specific set of educational institutions.

Furthermore, the study does not delve deeply into the qualitative aspects of participants' experiences or the specific nature of recent changes in sanitary facilities. A more comprehensive exploration through qualitative methods could provide a richer understanding of the underlying factors influencing participants' perceptions.

In conclusion, while the study offers valuable insights into the perceptions of sanitary facilities in educational institutions, future research could employ a mixed-methods approach to complement quantitative findings with qualitative depth, allowing for a more comprehensive understanding of the complex dynamics at play.

RECOMMENDATIONS:

Practical Recommendations for Educational Institutions:

1. **Regular Facility Audits:**
2. Educational institutions should conduct regular audits of their sanitary facilities to assess the adequacy, cleanliness, and availability of amenities. This proactive approach ensures that facilities align with the preferences and needs of the users.

Stakeholder Engagement:

Institutions should actively engage with students, staff, and other stakeholders to gather feedback on sanitary facilities. Establishing feedback mechanisms, such as suggestion boxes or surveys, can provide valuable insights for continuous improvement.

Customization of Amenities:

Recognizing the marginal differences in opinions regarding restroom amenities, institutions should consider offering customizable options to meet diverse preferences. This may include providing a variety of amenities or seeking input from users on desired features.

Transparent Communication:

Institutions should maintain transparent communication regarding any recent changes or improvements in sanitary facilities. Timely updates on the implementation of feedback-driven enhancements foster trust and satisfaction among users.

Awareness Programs:

To ensure the well-being and dignity of female students and staff, educational institutions should implement and promote awareness programs on menstrual hygiene. These programs can include educational sessions, workshops, and the distribution of informational materials.

Policy Recommendations:

Standardized Guidelines:

Educational authorities and policymakers should establish standardized guidelines for sanitary facilities in educational institutions. These guidelines can serve as a benchmark for institutions to maintain a consistent level of quality and accessibility.

Inclusive Policies:

Policies should explicitly emphasize inclusivity, addressing the needs of diverse populations, including those with disabilities. Institutions should ensure that sanitary facilities are designed and maintained to accommodate the accessibility requirements of all users.

Budget Allocations:

Policymakers should consider allocating dedicated budgets for the maintenance and improvement of sanitary facilities in educational institutions. Financial support can facilitate the implementation of necessary changes and upgrades.

Period Poverty Initiatives:

Policies should incorporate initiatives to address period poverty, ensuring that female students have access to free or subsidized menstrual hygiene products. This proactive measure contributes to a supportive and inclusive educational environment.

Regular Compliance Checks:

Implementing regular compliance checks by educational authorities ensures that institutions adhere to established guidelines. Periodic assessments can help identify areas of improvementand enforce compliance with sanitary standards.

Future Research Directions:

3. In-Depth Qualitative Exploration:

Future research should include in-depth qualitative studies to explore the nuances of participants' experiences and perceptions regarding sanitary facilities. Qualitative insights can provide a deeper understanding of the factors influencing opinions and preferences.

Longitudinal Studies:

Conducting longitudinal studies would allow for the tracking of changes and trends in perceptions over time. Understanding how opinions evolve can inform targeted interventions and policy adjustments.

Comparative Analysis:

Comparative studies across diverse regions and educational systems can shed light on regional variations in perceptions and practices. This comparative analysis can contribute to the development of context-specific recommendations.

Impact Assessment of Awareness Programs:

Assessing the impact of awareness programs on menstrual hygiene is essential. Future research should focus on evaluating the effectiveness of these initiatives in improving knowledge, attitudes, and practices among students and staff.

Exploration of Male Perspectives:

To foster a more inclusive understanding, future research should explore male perspectives on sanitary facilities and related initiatives. Understanding how male stakeholders perceive and engage with these issues contributes to a holistic approach to facility management.

CONCLUSION:

Summary of Key Findings:

This study has delved into the perceptions and experiences surrounding sanitary facilities in educational institutions, capturing valuable insights through a comprehensive analysis of participant responses. The findings reveal a remarkable consistency in opinions regarding fundamental aspects such as the presence of separate sanitary facilities, overall cleanliness, and adequacy of restrooms for women. However, marginal differences surfaced in areas related to the existence of amenities in restrooms, the ideal restroom-to-student ratio, and recent changes based on feedback.

Participants expressed shared concerns about the need for continuous improvements and responsive actions to address the specific needs of female students and staff. The study emphasizes that while there is a baseline of agreement on essential

sanitary facility components, there are nuances that warrant attention for a more nuanced and tailored approach.

Importance of the Study:

The significance of this study lies in its contribution to the ongoing discourse surrounding sanitary facilities in educational institutions. By providing a nuanced understanding of participant perceptions, the study offers a valuable benchmark for institutions to assess and enhance their facilities. The consistency in certain areas underscores the universal importance of fundamental sanitary standards, while the identified variations highlight the need for flexibility in addressing diverse preferences.

Moreover, the study adds depth to the existing literature by exploring specific aspects such as recent changes based on feedback and variations in opinions about amenities. These insights are instrumental in informing targeted interventions, facilitating evidence-based decision- making, and fostering environments that prioritize the well-being and dignity of all users.

CALL TO ACTION:

The findings from this study constitute a compelling call to action for educational institutions, policymakers, and stakeholders involved in facility management. It is imperative to translate the study's insights into tangible improvements that align with the preferences and needs of students and staff. This includes regular facility audits, customization of amenities, andtransparent communication about recent changes.

Policymakers are urged to consider the study's recommendations for standardized guidelines, inclusive policies, and budget allocations to ensure the sustained quality of sanitary facilities across educational institutions. Periodic compliance checks and initiatives to address period poverty should be integral components of overarching policies.

Finally, the call to action extends to future research endeavors. Longitudinal studies, in-depth qualitative exploration, and comparative analyses across diverse regions can further enrich our understanding of evolving perceptions and regional nuances. Impact assessments of awareness programs and exploring male perspectives on sanitary facilities contribute to a holistic and inclusive approach to facility management.

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Appendix

Questionnaire Draft:

1. Type of Institution:
   a) School
   b) College
   c) University
2. Location of the Institution:
   a) City:
   b) Town:
   c) State;
3. Please mention your role in the institution:

   _____

   _____
4. Are there separate sanitary facilities designated for females in your institution?a)Yes
   b)No
   c) May be
5. What would you say about the overall maintenance and cleanliness of the femalerestrooms? (Please rate it)
   a)Excellentb) Good
   c) Faird)Poor
6. Are there enough restrooms for women in your institution to accommodate thenumber of female students and staff there?
   a)Yesb)No
   c) May be
7. Do the following amenities exist in the restrooms? (Tick on all that apply)
   a) Adequate number of toilets and stalls
   b) Running water taps in the hand wash area
   c) Soap/hand wash facilities
   d) Hand dryer
   e) Proper lighting and ventilation
   f) Menstrual hygiene disposal options such as bins, pad disposal bags
   g) Functioning locks on the doors
   h) Separate utility areas for the staff/students with disabilities
8. How many restrooms should be present for every 50 students according to you?
   a) One rest room and one hand wash area
   b) Two restrooms and two hand wash area
   c) Two restrooms and one hand wash area

d) Three restrooms and three hand wash area

e) Not sure

9. Does your institution provide access to Sanitary pads/menstrual hygiene products tothe female staff and students?

a)Yesb)No

c) May be

10. Are there any private/dedicated spaces for female staff and students to manage theirmenstrual hygiene needs? (Changing rooms)

a)Yesb)No

c) May be

11. Did you hear from any female staff/students complaining about the sanitary facilitiesin your institutions?

a)Yes

b) No

c) May be

12. Are there any educational programs/ initiatives taken by the institution to raiseawareness about menstrual hygiene and other related issues for female staff/students? a)Yes

d) No

e) May be

13. Are male staff/students encouraged to participate in such initiatives/awarenessprograms taken by the institution?

a)Yesb)No

c) May be

14. Are there any gender specific policies within the institution that promote genderequality & dignity, especially in the context of sanitary facilities?

a)Yesb)No

c) May be

15. Are instructional materials or information on managing menstruation provided to female students?

a)Yes

b)No

c) May be

16. Do female students feel safe talking to teachers or staff about menstrualhygiene issues?a)Yes

b) No

c) May be

17. Are there any initiatives such as providing free or subsidized menstrual hygiene productsto female students?

a)Yes

f) No

g) May be

18. Is there an option for students to anonymously report problems with or concerns aboutsanitary facilities?

a)Yes

b)No

c) May be

19. are there any recent changes/improvements in the sanitary facilities based on the feedbackfrom the female staff and students?

a)Yes

b)No

c) Not sure

20. Any other suggestions/facilities which were not present in your institution and would behelpful for your female staff/students?

ABOUT THE EDITORS



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PUBLISHED BY

NATIONAL PRESS ASSOCIATES

PUBLISHERS AND DISTRIBUTORS OF BOOKS AND JOURNALS

ADMIN OFFICE: C-24, GROUND FLOOR, PANCHSHEEL VIHAR, MALVIA NAGAR, NEW DELHI- 110017 (INDIA)

REGIONAL OFFICE: 79, GURU ANGAD DEV NAGAR, FLOWER ENCLAVE, DUGRI, LUDHIANA-141013 (PUNJAB), INDIA.

BRANCH OFFICE: G-1003, PRAKRITI SOCIETY, BANER-BALEWADI ROAD, BALEWADI PUNE, 411045 MHARASHTRA, INDIA

E-MAIL: npapublishing@gmail.com

Website: www.npapublishing.in

ISBN 978-81-19674-70-1

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