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Interdisciplinary  
Development  
Research and  
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**Habib University**  
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## ABOUT THE JOURNAL

Tezhib (*not tehzi*b)-or Illumination literally means to ornament a surface with gold. It is an art form that manifests as palmettes, rosettes, and arabesques around the margins of the Quran and in important manuscripts, illuminating the mind of the reader through knowledge and beauty.

Allegorically, the art of Tezhib is represented by the tree; an attempt to understand the roots of knowledge, which branch from the mind towards the Infinite. The floral forms and motifs rest upon geometric patterns, which travel within a spectrum from finitude to infinitude.

Tezhib Undergraduate Research Journal was founded in 2018 with the vision of making a diverse set of knowledge and intellectual thought more accessible. It is a student led journal by Habib University students, with the support of Habib University's faculty. It serves as a platform for the research produced by students from undergraduate universities across Pakistan in the fields of literature, language, philosophy, development, religious studies, and technology. It aspires to motivate students towards research and to cultivate a culture of inquiry and academic discourse.



## EDITOR'S NOTE

Tezhib is not just a journal: it is a platform for researchers to present their work in unique and interactive ways, such as podcasts, blogs and research working group sessions. In 2023-24, Tezhib hosted 1 book talk with a Habib University faculty member and 3 research working group sessions with Habib University alumni. One such research working group session in collaboration with the Office of Research, had a Dean's Fellow and their student present research on common interests. This is the kind of research culture that Tezhib is proud to cultivate on campus.

Tezhib also contributed to the undergraduate research conference 'Aamozish-e-Tehqiq: Navigating Gender, Climate and Peace building' in March 2024, in collaboration with the Office of Research and the Social Development and Policy program. Special thanks to Dr. Shama Dossa for creating this opportunity and the United States Institute for Peace (USIP) for providing the fund for the conference. Tezhib will be publishing a special edition of the papers submitted on the conference theme at the end of May 2024.

The student, faculty and staff collaboration that Tezhib is able to foster is central to its working. We bore witness to its collaborative success by being selected as panelist for The Engaged Liberal Art in the Global South Conference hosted by the Al Akhawayn University in Ifrane, Morocco in April 2024.

We are also proud to announce that, as of February 2024, Tezhib is recognized by the Council of Undergraduate Research (CUR). CUR is platform that recognizes institutions that have exemplary undergraduate research programs and faculty who have facilitated undergraduate research at their institutions through their mentorship and leadership. Being an internationally listed undergraduate journal

showcases Tezhib's commitment to excellence and mission.

And lastly, as we sign off our tenure we are proud to publish Tezhib's Volume III. This volume is divided into two issues. Issue 1 is about Comparative Analysis, Religion and Philosophy while Issue 2 is about Economics, Social Issues, Health and Welfare. We hope that these issues bring to light insights from undergraduate researchers from Pakistan on these topics in order to cultivate a culture of research and inquiry.

Congratulations to all the authors being published!

I would like to take a moment to thank my incredible Managerial Editors, Samana Butul and Soha Zaka and our extremely diligent design lead, Soheba Shoaib for all their hard work, skill and leadership without which none of this would have been possible. And to the entire team including all the designers, social media managers and event leads for working tirelessly throughout the year.

I would also like to especially appreciate the student and faculty reviewers for volunteering their time in reviewing the papers despite their busy schedules in the middle of the semester. Thank you to all of you!

Lastly, we are incredibly in debt to Dr. Coline Ferrant for her unwavering support and trust in Tezhib. Thank you professor for everything that you have done for us!

**Saniyah Salman**

*Editor in Chief*

*Tezhib 2023-2024*





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## THE CHINESE DREAM: WITH SOME HEGEMONIC ASPIRATIONS?

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### Abstract

This paper uses a structural realist framework to gain insights into the political motivations of China leading back to the past half-century. It explicates how the “Chinese dream” was crafted as a means of cultural power, and how it bears resemblance to the “American Dream.” The role of Chinese policymakers and presidents such as Xi Jinping and Deng Xiaoping is also highlighted, shedding light upon the different strategies they have adopted and viewpoints they have held that have aided in shaping the Chinese experience. The viewpoints include their distaste for the imperial world order, whilst adopting strategies that bore an uncanny resemblance to those same imperial powers. This paper draws a comparative analysis to answer some questions such as: did China aim to replicate the cultural power approaches of the US; and will it be able to surpass the US in the current world order? The central argument is that whilst Chinese diplomats have seemingly been imitating the current unipolar power in their approaches and have been successful in rising to power, it does not seem that they will be able to topple the current world order and rise as the world hegemon. This is due partially to China’s own internal instability, along with the strong footing of the US in the world order.

Keywords: The Chinese Dream, The American Dream, cultural power, sticky power, China’s soft power approaches, political world order, South China Sea, global hegemon



## **Introduction**

China's steady ascension, not only in Asia, but also on the global stage, has allowed it to leverage its foreign relations with small and medium powers alike. The country's identity as an emerging power in the world and as a potential hegemon is widely debated by Chinese scholars, international scholars and is many a time rejected by Chinese leaders as they prefer to distinguish themselves from more outwardly hegemonic powers such as the United States (US), which will be one of the topics of discussions in this paper. To understand different power approaches, Mead (2004) is quoted as follows:

Traditional military power can usefully be called sharp power; those resisting it will feel bayonets pushing and prodding them in the direction they must go... Economic power can be thought of as sticky power, which comprises a set of economic institutions and policies... Together with soft power (the values, ideas, habits, and politics inherent in the system), sharp and sticky power sustain U.S. hegemony and make something as artificial and historically arbitrary as the U.S.-led global system appear desirable, inevitable, and permanent (p.48).

Similar to the US, using a multifaceted strategy, China has employed soft-power approaches, such as using cultural power and national power, the sharp-power approach, such as the military, as well as the "sticky power" approach, an economic approach. Some view these utilizations of different forms of power as China's attempt to be the new world hegemon, however, some maintain that this is a pragmatic approach where China merely aims to stabilize itself in the world economy without an explicit pursuit of global dominance. President Deng Xiaoping's position, which directly refutes China's aspirations to become a superpower, resonates with the latter viewpoint as I have further expanded on in this paper.

This paper explores China's different power approaches through a classical and structural realist approach and draws a comparative analysis to that of the US – often viewed as China's primary rival. Examining several aspects including economic prosperity and cultural revolutions, I aim to analyze strategies employed by both countries to ascend to power, focusing primarily on the Chinese strategy whilst drawing a comparison to the US one to give context. A historical analysis of governmental approaches, their mobilization of people, and an overview of the existing world order are at the center of this approach. I posit that China and the

US have overlapping political approaches, which, when analyzed over a historical timeline, give the impression that China is imitating some approaches adopted by the US in an attempt to gain power in the world order. Despite their similarities, I argue that both countries will remain political rivals in the future with the US maintaining global hegemony.

## Theoretical Frameworks

Structural realists - defensive and offensive realists both talk about the architectural nature of the international political system which shapes how much power a state can gain, along with how the states view security threats. Defensive realists “argue that structural factors limit” the amount of power a state can gain, and that it is “unwise for states to try to maximize their share of world power” lest the system punish them if they push too far (Mearsheimer, 2006, p.71). Hence, it is safe for a country to maximize their own protection without focusing too much on gaining power or control over another. Contrarily to defensive realists, offensive realists maintain that structural factors encourage states to “maximize their share of world power” (Mearsheimer, p.71) which includes “pursuing hegemony” (Mearsheimer, p.72) because it ensures their survival. Because it is assumed that every respective state will be striving for hegemony, the safest bet is to strike whilst the iron is hot lest you be left behind. Structural realism maintains that it is the “structure or architecture of the international system that forces states to pursue power” (Mearsheimer, p.72) with power being a “means to an end” (Mearsheimer, p.72) whilst classical realists, on the other hand, maintain that states want power because of the human nature to desire power, with the state being an extension of the self. Nothing can be done that would change this nature of the self, and consequently the state, to want to be “all-powerful” (Mearsheimer, p.72). Where structural realism views power as a means to an end, classical realism views power as being an “end in itself” (Mearsheimer, p.72). All in all, “power is the currency of international politics” (Mearsheimer, p.73) as per realists and it is in a state’s best interest, for multiple reasons, to gain the power that they can and safeguard themselves against other states, whose future intentions they cannot gauge.

## The American Dream and American growth

The American Dream is an idea that was first defined in 1931 and has been reiterated by multiple authors and presidents in the history of the United States from its inception till the current day. It was first defined in 1931 by author James Truslow Adams in his book, *The Epic of America*. He defined it as being a dream of a land where real life would be better and richer and fuller for every man regardless of his race and class (Adams, 1931 as cited in Hauhart, 2015). This dream, as he envisioned it, was achievable by anyone as long as they worked hard, persevered, and lived up to their natural potential with their consequential achievements being the fruit of their labor (Hauhart, 2015). The second definition of the American Dream was by author Thomas Clayton Wolfe who was credited with having the ultimate definition. He wrote in the novel *You Can't Go Home Again*, which was published in 1940 after his death, that every man has an opportunity to be himself, make something for his life, for his work, and to work towards his vision which is the “promise of America” (Library of Congress, 2014 as cited in Combs, 2015, p.230).

Both writers acknowledged material possessions as part of, and not the sole component of the American Dream. They acknowledged the right to a better and more fulfilling life regardless of one's social status or circumstances. In 1963, Martin Luther King further went on to build upon the notion of the American Dream, advocating to make the concept more achievable for marginalized communities such as the African American community. He stressed upon the Constitution of the Declaration of Independence which promised that all men are created equal and deserve rights and emphasized that the black community was unjustly denied the rights promised to them in their land (Combs, 2015). President Barack Obama, in 2008, also talked about the American Dream, saying that the country could, and would, “reclaim the American Dream” (Obama, 2008 as cited in Combs, 2015, p.232) and show that “[they] are one” united people with equal opportunities for all. Writing her analysis of the American Dream and its current status, Combs, in 2015, asserts that “far too many Americans” (p.232) are being cut out from achieving the modern conception of this Dream due to growing poverty rates and The American Dream is still “rooted in the economy,” (Combs, p.232) despite the Dream, as it was originally conceptualized, having emphasized non-material achievements alongside economic achievements. While authors and presidents alike stressed upon American nationality, the nation being



one, and having equal opportunities in all facets of life, the American Dream is seen to be achieved by the populace when they achieve economic feats, and so, analyzing the progress of this Dream from that standpoint, many Americans are still being excluded from this dream and so it is only a utopian concept.

## China's growth and Chinese perspectives on their growth

In a speech to the United Nations General Assembly in 1974, Chinese ex-president Deng Xiaoping had criticized the old world order of colonialist, imperialist and hegemonic traits, and criticized the US and then the Soviet Union for “vainly seeking world hegemony” (Xiaoping, 1974/2013, para 4, United Nations General Assembly)

at the expense of developing countries of Asia, Africa and Latin America by bullying these countries “that are not their match in strength” (Xiaoping, para 4). He had placed China in the latter category and asserted that China will never “seek to be one [imperialist, superpower]” (Xiaoping, para 32) and that if ‘she’ ever did seek to be, then the world populace should call her out on it accordingly and overthrow it. He emphasizes on the importance of safeguarding political independence to develop a country’s economy owing to the danger of aggressive forces by imperial and colonial countries.

Xiaoping’s stance aligns with a structural realist viewpoint of why states want power. As Mearsheimer put it, “states can never be certain about the intentions of other states” (Mearsheimer, 2006, p.73). It defies the first assumption of the structural realist approach, which is that there is “no centralized authority” (Mearsheimer, p.74) because Xiaoping states that there are certain forces at play that actively oppress others. However, it also meets the fourth and fifth assumptions of the approach which are that the “main goal of states is survival” (Mearsheimer, p.74) and that “states are rational actors” (Mearsheimer, p.74). Xiaoping’s stance simultaneously presents the classical realist approach that the Chinese nation is taking, which is that of “self-reliance” – a country should rely on the “strength and wisdom of its own people,” (Xiaoping, 1974/2013, para 22, United Nations General Assembly) be in charge of its economic progress, make use of its resources and develop an interconnected system which would ensure independence from other states (Xiaoping, 1974). Hence, power is an end in

itself, with no further agenda being sought here.

Whilst Xiaoping spoke almost 5 decades ago, his views still shape the political reality of China today, when it comes to the Chinese Dream, with Jinping purporting a similar narrative of rejuvenating the nation, implying that it is an internal matter that needs attending, rather than something which should concern the global world order. However, in 2013, Jinping announced that he would like to “evolve a new kind of relations between great powers, between an established power and an emerging power” (Mohanty, 2013, p.37) which is an acknowledgment of China’s growing role in the global field.

## The Chinese Dream & its similarity to the American Dream

The Chinese dream is a concept recently reinvigorated by Chinese President Xi Jinping. Xi Jinping, who had “the makings of a visionary front runner,” (Mohanty, 2013, p.34) put forth the slogan of fulfilling the zhongguo meng (Chinese dream) in 2012 which warranted the rejuvenation of the Chinese nation. The primary objectives included cutting down food waste, promoting transparent governance and combatting corruption, and addressing issues related to employment, housing, education, and healthcare. He was not the first president to orate about “the great renewal of the Chinese nation,” (Xinhua, 2012 as cited in Pu, 2017, p.131) and many before him had utilized this notion to mobilize domestic support post the nation’s “century of humiliation” (Wang, 2014 as cited in Pu, 2017, p.132). Whilst many presidents asserted the need for this renewal, it has always been unclear as to what this entails. Some hold the view that this renewal means to engage in a tussle over global leadership and emerge victorious, whilst some contend that it means that China should become a hegemonic power in Asia (Pu, 2017).

Jinping employed the idea of the Chinese dream, owing to it being “a hot topic” (Mohanty, 2013, p.34), at an exhibition on “The road to revival,” which depicted China’s historical struggle and humiliation against colonial powers. Following this debut, he made sure to reiterate his idea of the Chinese dream in important events emphasizing the revitalization of the Chinese nation. Some speculate that this means the becoming of China into a “strong military and economic power” (Mohanty, p. 34). His mobilization of this dream along with the slogans he has used bear resemblance to Ronald Reagan’s slogan in the 1980s to “Make America

great again,” (Reagan, 2004, *Tear Down this Wall: The Reagan Revolution - a National Review History*) a slogan which was reused by Donald Trump in 2016. Jinping’s later negotiations and cooperation with President Obama also led to the American media picking up on the Chinese dream and aspirations with some reporting the idea of it emerging as a new world power with horror (Mohanty, 2013).

Similar to how the American narrative of openness and liberty for all, without any practical application of it, came about at a time when there was a creation of the “industrial proletariat” (Vanneman & Cannon, 1987, p.257) to garner their support, it does not seem like a simple coincidence that Xi Jinping was talking about the Chinese Dream. In fact, bearing resemblance to the case of the US, there was a need to form a connection with the people and so to promote the Communist Party’s link with the “common people” (Mohanty, 2013, p.36), and so the idea of the rejuvenation of the Chinese nation was propelled forth. Jinping’s employment of the concept seemed deliberate, to show the US that China and the US did not have vastly different aims and were working towards a common goal – to benefit “the whole world” (Mohanty, p. 37) – or to be the saviors. Like Jinping’s mobilization of the masses, Mao Zedong’s “method of Party building” (Mohanty, p.36) in the 1950s also demonstrated how these are simply cultural power approaches taken by governments to garner the support of the proletariat.

Unfortunately, both US and Chinese dreams produced no fruitful outcome. Whilst it seemed ideal to have a collective dream and ambition for a whole nation combined, it did not consider socioeconomic factors and was based on the presumption that every citizen was concerned with the overall “well-being” of the nation. What is starkly different in both these ‘Dreams’, however, is that the US was mostly focused on internal rejuvenation (on the face of it), whilst the Chinese always emphasized on a revitalization post-humiliation by colonial states and so for the Chinese, there is a direct opponent they are rising up against, whether that be simply internal - a classical realist approach - or to rise up in the world order - a structural realist approach. However, Jinping gave the Chinese Dream a new meaning, one which is too intricately tied with the concept of the American Dream, as also picked upon by American policymakers.

## Can China topple the existing world order?

Despite the supposed peace-talks between Jinping and Obama, the US and China are locked in a struggle for power in Asia and globally, exacerbated by the Chinese aggression in the South China Sea. This is not a surprise given that historically, relations between dominant and rising states have always been rocky with the established state (in this case, the US) defending their status and the global world order and the rising state (China) being the “troublemaker,” challenging that state (Friedberg, 2011, p.18). Whilst the US, post- Cold War politics, has been the most powerful nation, China has been the most rapidly growing nation which has led to frictions between both rival countries. Historically, rapidly growing nations typically “feel impelled to challenge territorial boundaries” (Friedberg, p.18), which, when we analyze from a defensive realist approach, is that the state is acting rationally with its main goal being survival. This raises the question of the credibility of negotiations between presidents Obama and Jinping, and whether it was simply a political move played by both to quell the other, with both simultaneously being on the offensive, aiming to increase their power and might.

Whilst China has a strong military and a strong influence over the East Asian region with other countries refraining from offending the Chinese militia, the threat of aggressive US involvement has arguably prevented China from taking over the islands in the South China sea completely. The role of the other 5 claimants to the islands; namely: Taiwan, Vietnam, Malaysia, Brunei, and the Philippines, has also played a role with their positions being fortified with the backing of the US, especially those of Vietnam and Philippines (Liu, 2017). Whilst the US initially refrained from interfering in this issue, their recent intervention gives credence to the idea that whilst the US sees China as a threat, the power still lies in US hands as they have a strong global foothold and maintain the support of many other Asian countries such as Japan (Dobson & Fravel, 1997). Both the US and China are on the offensive, whilst simultaneously being on the defensive, not daring to make an outright offensive move out of fear of retaliation on the opposite end.

Despite China’s strong military and economic position, its future as a world hegemon seems bleak due to internal and external setbacks. The internal setbacks are China’s own “possibility of fractionalization” of the empire into

several autonomous states (Roy, 1994, p.153). Furthermore, a lot of states and industries are largely unprofitable, however, Beijing is reluctant to shut these industries down due to the fear of high unemployment rates and consequent social unrest. These issues are exacerbated by China's fluctuating demographics and population growth rate with their now aging, dependent population (Du & Wang, 2011) and the uncertainty as they experiment with policies, trying to balance out their population rates.

External hurdles faced by China include the existing world order. In the world where the United States rose to power, economic growth translated to military power, which does not hold true anymore. The global world structure was crumbling at the time of the establishment of the US as the world power, with nations seeking to rebuild after the world wars and colonial pasts. It is now hard for a "rising power to rise" (Brooks & Wohlforth, 2016, p.91) and an established power to fall due to there being an "alliance structure" (Brooks & Wohlforth, p.91) in place which constitutes the international order. It's almost unrealistic to expect a power transition to take place as many countries either benefit from US partnerships or avoid getting caught in their crosshairs – which would be inevitable if China was to be sided with.

## **Conclusion**

Global dynamics are rapidly changing, especially more so within the past decade. The utilization of the "Chinese Dream" was a soft-power approach used by China, seeming like a tool for them to display harmony with the US and soften the blow whilst they simultaneously took offensive approaches, for example, versus the US in the South China sea and economically. Whilst China does pose a threat to the US, which the US evidently recognizes, the Chinese government must prioritize the internal issues it is facing. If they focus too much on the global stage and ignore the current warning signs in its economic conditions along with the "rising trend of social unrest" (Mohanty, 2013, p.37) then their working class, already weary after Zedong's Great Leap forward and Jinping's similarity of mass mobilization, might protest. Furthermore, the US is too deeply entrenched in the global field of politics and overthrowing them will not be a simple feat, especially for a country that is still indecisive about its position in the international field.

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## ELECTRIC VEHICLES: A SUSTAINABILITY CRITIQUE

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### Abstract

This paper examines the environmental, social, and economic implications of electric vehicle (EV) adoption within the broader context of sustainability. Through a comprehensive analysis, the paper delves into the complexities and trade-offs associated with EVs, aiming to provide a nuanced understanding of their sustainability challenges. The paper identifies key challenges in the EV value chain, including resource extraction and production, battery recycling, and infrastructure development. It highlights the environmental impact of EVs, particularly concerning energy sources and battery production, while also addressing the social implications such as job displacement and access to mobility. Economic considerations are explored, including the upfront cost of EVs, job creation, and long-term cost savings. The paper emphasizes the need for a just transition framework to support affected workers and communities during the shift to electric mobility. Ultimately, the paper advocates for a holistic approach to EV sustainability that considers environmental, social, and economic factors. By recognizing the interconnectedness of these dimensions, policymakers and stakeholders can navigate the transition to EVs in a manner that promotes equity, resilience, and long-term sustainability in transportation systems.



## Introduction

In the mainstream discourse, electric vehicles (EVs) are presented as the ultimate technological solution to the socio-economic and environmental crises caused by fuel-based Conventional Vehicles (CVs). The use of EVs is even promoted on a widescale as a panacea for climate change and global warming, the gravest catastrophes of this century spurred by human actions (Dietz, Shwom, & Whitley, 2020). According to data, transportation is the major growing contributor to global carbon emissions accounting for 24% of the CO<sub>2</sub> emissions worldwide (Ritchie, 2020). However, the adoption of EVs as the remedy for environmental ruination merits a thorough investigation and a critical analysis of how sustainable and effective this solution is. This paper offers a sustainability critique of EVs by focusing on the limitations and issues pertaining to the integration of EVs in the sustainability framework that includes the environment, society and the economy. While the major global environmental organizations, such as the International Energy Agency (IEA) and the European Environmental Agency (EEA) among others, are endorsing the transition of mobility from CVs to EVs, a little is known about the key issues and challenges the life-cycle assessment of EV entails; some of these problems are discussed below (Henderson, 2020).

## Resource Extraction and Production

Production and extraction of lithium-ion batteries, an essential component of electric vehicles, is an underlying basic issue. Lithium and cobalt extraction is required for the production of these batteries, which run electric vehicles (Onat & Kucukvar, 2022). Although the functioning of batteries depends on these metals, their extraction can cause a number of problems.

It is important to take into account the extraction of these metals which is the initial stage of the manufacturing of EV batteries. The mining of these precious metals can have negative and disastrous consequences for the environment, habitat and the communities living on these lands. Particularly the extraction of Lithium, which is found in the arid areas, has detrimental effects on the ecosystems and the habitants as it causes water scarcity and desertification (Henderson, 2020). Similarly, cobalt mining is notorious for severely impacting the environment and for flagrant violations of human rights including practices of child labor

(Henderson, 2020).

The intensive manufacturing process of electric vehicles (EVs), including the production of batteries, can lead to the emission of greenhouse gases, particularly when the primary source of electricity used in production are fossil fuels (Dietz et al., 2020). Although EVs are often praised for their low operational emissions, the emissions from the manufacturing process are often neglected.

## Battery Recycling and Waste Management

The sustainability of electric vehicles (EVs) is extended to the final stage of their life cycle, when batteries are exchanged or retired. Recycling and waste management of EVs presents a number of challenges, particularly as the prevalence of EVs increases. Although lithium-ion batteries are highly efficient in their use, they can become a cause for concern when the battery life reaches the end of its lifespan (Onat, Aboushaqrah, Kucukvar, Tarlochan, & Hamouda, 2020).

Toxic waste and environmental contamination can result from inadequate recycling techniques or incorrect disposal (Onat et al., 2020). The leakage of hazardous material due to improper battery recycling can cause harm to the environment, local ecosystems and have adverse effects on human health. Hence, it is imperative to overcome the challenges of establishing effective and environmentally responsible recycling technologies for lithium-ion batteries (Henderson, 2020). Otherwise, the environmental footprint of EVs may be more significant than initially predicted.

## Infrastructure Development

The setting up of a charging infrastructure is also necessary for the broad adoption of electric vehicles. Energy distribution networks and both public and private charging stations are part of this infrastructure. Building the required infrastructure for charging, however, presents formidable obstacles on a number of fronts.

The development of a competent and resilient charging network to accommodate the widespread use of EVs in an area with limited access to renewable energy sources implies that the energy demand will be met through non-renewable energy sources which will lead to more carbon emissions. In conjunction with the environmental damage, the development process of infrastructure may cause displacement of people and affect their lives giving rise to land-use conflicts. Another implication of developing the desired infrastructure for EVs could be the drain of public and private resources to meet its financial cost. Moreover, the development of charging stations and their connections to the grid can disrupt the local ecosystems and deter the growth and lives of natural habitats.

## **Effects on Environment**

### **Energy Sources**

The ability of electric vehicles to lower greenhouse gas emissions when in use is widely praised. However, the source of the electricity used to charge them has a significant impact on this environmental benefit (Dietz et al., 2020). EVs' carbon footprints can be greater than those of conventional cars in areas where fossil fuels are the primary source of electricity.

For Instance, if the source of energy generation for EVs are fossil fuels, such as coal or oil, the saving of emissions during the vehicle's operational life will be offset by the non-renewable energy generation and consumption processes. Hence, renewable energy sources for electricity generation to support EVs are prerequisite.

### **Battery Production**

An electric car's operating phase typically releases fewer greenhouse emissions than that of a conventional internal combustion engine vehicle, however, the adverse environmental impacts of battery manufacturing of EVs could surpass their benefits of low carbon emissions (Onat & Kucukvar, 2022). This is an

important point that is frequently missed while analyzing the sustainability of EVs.

There is a significant environmental impact associated with the mining, processing, and manufacturing of batteries (Ritchie, 2020). There are several environmental and human rights issues associated with the extraction of rare earth metals, such as cobalt and lithium, as was previously discussed. Furthermore, the synthesis of chemicals and their assembly, two energy-intensive processes utilized in the battery manufacturing process, can increase greenhouse gas emissions (Henderson, 2020).

## **Impact on Communities**

### **Job Displacement and Transition**

There may be social and economic consequences of transitioning from internal combustion engine vehicles to electric vehicles, especially in terms of employment displacement (Henderson, 2020). As the use of EVs increases, the automobile sector—which has historically been the backbone of many economies—may experience substantial upheaval.

Since there will be less demand for conventional cars and fossil fuels as we move toward electric vehicles, employment losses in the oil and automotive industries could arise from this transformation (Henderson, 2020). Communities that depend largely on these industries may experience financial difficulties in addition to the possibility of losing their jobs and a decrease in earnings.

In order to handle these issues, a framework for just transitions is necessary. In the absence of which, individuals who are already at risk from economic inequality may bear a disproportionate share of the societal costs associated with the transition to electric vehicles.



## Access to Mobility

Even while EVs have many advantages to offer the environment, moving to electric mobility could make transportation disparities worse in areas that are underprivileged (Henderson, 2020). There may be disparities in the availability of electric vehicles (EVs) and the infrastructure needed for charging them in the areas where services are lacking, leading to unequal access to transportation choices (Kovačić et al., 2022).

The availability of EVs and charging stations is frequently restricted for marginalized and economically disadvantaged communities because of funding constraints and a lack of infrastructure investment in their neighborhoods for charging EVs (Kovačić et al., 2022). These communities may become even more isolated as a result of their lack of access to electric mobility, which makes it difficult for them to benefit from cleaner, more environmentally friendly modes of transportation.

## Economic Implications

### Vehicle Cost

The initial cost of electric cars (EVs) is one of the biggest financial obstacles consumers face. Since battery technology is expensive, electric cars are often more expensive than traditional automobiles with internal combustion engines (Henderson, 2020). Although EVs might save money over time by requiring less fuel and maintenance, many buyers may be put off by the upfront cost of ownership.

## Environmental and Health Reparations

As discussed previously, an unintended consequence of the widespread adoption of EVs and the development of its desired charging stations and infrastructure can be the impairment of the environment and the inhabitants of the places

where these mining activities take place and often involves hazardous working conditions, use of fossil fuels to extract lithium from hard rocks and exploitation of labour (“How much CO<sub>2</sub> is emitted by manufacturing batteries?,” 2022). These implications altogether incur heavy economic costs in terms of reparations for the environmental damage, the impact on human and other living beings’ health and the deterioration of the living conditions for the indigenous populations (Henderson, 2020).

## **Conclusion**

As the world pivots towards embracing EVs as a cornerstone of sustainable transportation, the critical examination of their sustainability, as presented in this paper, reveals a complex web of challenges and implications. Despite their potential to significantly reduce CO<sub>2</sub> emissions from the transport sector, EVs have certain adverse effects that extend beyond the environment to society, and the economy (Henderson, 2020).

The transition to EVs demands a nuanced approach that addresses the multifaceted challenges inherent in their widespread adoption. While EVs with their zero tailpipe emissions offer promising prospects for achieving the goal of transport decarbonization, a comprehensive evaluation of the entire EV value chain is imperative to fully understand the sustainability challenges they present (Henderson, 2020).

In navigating the transition to EVs, it is crucial to recognize the interconnectedness of environmental, social, and economic implications. The development of an equitable and sustainable transportation system requires a holistic approach that considers all the socioeconomic and environmental impacts of EV adoption.

To conclude, the sustainability of EVs hinges on an understanding of the complex interactions between environmental imperatives, social dynamics, and economic realities. Hence, by embracing a holistic approach that accounts for these complexities, we can pave the way towards a more sustainable transition to EVs.

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TELL THE UNTOLD:  
A FEMINIST ANALYSIS OF MOTHER-DAUGHTER  
COMMUNICATION REGARDING MENSTRUATION IN URBAN  
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## Abstract

Menstruation is one of the most important aspects of a woman's life, yet is stigmatized and not talked about openly. This leads to women not being able to share the problems they face regarding menstruation. The first point of conversation about menstruation for some women is their mother, where sometimes the mother-daughter relationship serves as a channel for daughters to discuss their concerns and confusions regarding a topic on which an open discussion is otherwise not possible. Thus, I aim to understand the communication that takes place between mothers and daughters regarding menstruation. Most of the existing research on this topic does not take into account the role and position of women in the society as affected by gender-based inequality. Thus, using the Feminist Participatory Research methodology and theoretical framework, I collected and analyzed the data. I interviewed four mothers who have daughter(s) of age 18-25 and conducted participatory workshops with five young women (18-25 years old). I found that mothers and daughters have had different experiences according to their time and context, which impacts the way they communicate with each other. Moreover, the way they communicate and experience menstruation is determined by gender roles and their position in the society. This study expands on the literature on the topic, while elaborating on the challenges faced by women regarding menstruation, and the impact of gender dynamics on their experiences and communication.

Keywords: Menstruation, Communication, Gender, Mother, Daughter



## Introduction

Menstruation is one of the most important aspects of a woman's life, yet this topic and other topics related to sexual or reproductive health are a taboo in our society. Because of the stigma, there is an embarrassment that comes along with these topics and so there is a lack of conversation on them. Being a feminist, this embarrassment and discomfort concerns me for the women in the society as limited or no access to this information and conversation is detrimental for the health of women. Hence, access to correct information and proper conversations about menstruation is just as important for women as is the access to basic healthcare or educational facilities.

For some women, the first point for conversations like these is a mother, where she serves as an important source of a girl's information regarding her health (Ali & Rizvi, 2010). Lack of proper communication between mothers and daughters results in an inadequate information in women about their own issues, leading to ambiguity regarding their own bodies (IRSP, 2017). A part of this lack of communication stems from the gender and power dynamics, where this cannot be discussed openly with/in front of men and results in the dismissal of pain and not being able to communicate menstruation-related problems like Pre-Menstrual Syndrome (PMS). As a result, women face multiple bodily, social and psychological discomforts (UNICEF, n.d). This makes it important to understand how mothers and daughters communicate about menstruation and how their communication is affected because of patriarchy and women's role in the society. Thus, the purpose of this study is to explore the kind of communication that takes place between mothers and daughters regarding menstruation from a feminist lens. This means that I aim to understand this communication in the light of feminism, focusing on how women's position in the family determines or impacts how mothers and daughters communicate about menstruation, and the issues they face that rise as a consequence of menstruation being a taboo.

## Background

Menstruation is the "monthly flow of blood and cellular debris from the uterus that begins at puberty in women and females of certain other primates" (n.a, 2017). Conversation around menstruation is much needed because it is one of the most crucial parts of women's lives. Menstrual health is also now included in the human rights council agenda as WHO calls to recognize and frame menstruation

as a “health and human rights issue, not a hygiene issue” (WHO, 2022, n.p). Therefore, it must be dealt with a wholistic approach as it is not only confined to biological aspect, but also has social and mental dimensions to it (Askew, 2021). It is also important to understand what menstrual health actually is. According to Hennegan (2021), menstrual health is “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, in relation to the menstrual cycle” (p.32). Thus, achieving menstrual health implies having access to information regarding menstruation and care and hygiene practices and materials, having access to timely diagnosis and treatment for issues related to menstrual cycle, being able to experience positive and respectful circumstances and environment that are free from stigmas and does not lead to bodily or psychological distress, and lastly, having agency to decide when and how to participate in other events of life when experiencing menstruation or menstruation-related discomforts (Hennegan, 2021).

Research suggests that girls get their early information about menstruation from their mothers (Kissling, 1996). Also, menstrual beliefs and practices of a mother affects the development of the same in their daughters, because the daughter identifies herself with her mother. Theories like that of development of sex role identity in adolescent females suggest that mothers and daughters would hold the same beliefs about menstruation (Stoltzman, 1986). In case mothers lack in passing menstruation-related information to their daughters, the daughters blame their mothers for not communicating the right information, leading to negative period experiences (Costos et al., 2002).

Study on menstrual experiences among female students in Pakistan confirms that females generally have a negative experience of menstruation. Those who get their information from their mothers have significantly positive experiences (Aflaq & Jami, 2012). Other studies also suggest that there is a lack of knowledge and awareness about menstruation in young girls. According to a report by UNICEF, there is a “lack of discussion about menstruation in both public and private spaces in Pakistan [which] has left adolescent girls devoid of vital information on what to do when they are on their periods” (UNICEF, n.d). It also identifies that there is a need to remove shame and stigma associated with menstruation in order to be able to ensure that women and girls have healthy lifestyles and can access healthcare (UNICEF, n.d). Moreover, in most of the societies in Pakistan, menstruation is not openly discussed, even between mothers and daughters. Because of this reluctance in communication, it lays an impression that



menstruation is an embarrassing and unclean phenomenon and so experiencing it is also unpleasant (IRSP, 2017). Due to inadequate awareness and sanitation facilities in school, a number of girls also drop out after they start menstruating, as they find it difficult to communicate about it and manage their periods (IRSP, 2017). A case study by UNICEF in Sindh in 2017 revealed that menstruation is considered to be a traumatic event in a girl's life, which leads to the feelings of fear, shame and distress. Because it is considered as a sign of female maturity, mothers and girls hide it from the males in the family to avoid early marriages. It was also seen that girls who knew about periods beforehand and were able to communicate openly about it, went through positive experiences of menstruation (UNICEF, n.d). This makes it essential to research on the kind of communication that takes place between mothers and daughters so that it helps in health-related policies and improves access to health and healthy lifestyles for young women.

## Theoretical Framework and Methodology

Key themes that emerged out of the literature review regarding menstruation and mother-daughter communication about it implicitly mentioned how women's position in the society affects their experiences and communication regarding menstruation and the gender dynamics associated with this communication. Thus, I aim to look at the mother-daughter communication regarding menstruation from a feminist perspective and so used feminist participatory research as my theoretical framework and methodology.

Feminist theory talks about women's position in the family and society, exclusion and marginalization of women and their experiences and gender discrimination and inequality. It also sheds light on the agency and power dynamics between different genders society (Beasley, 1999). Thus, feminist research "focuses on the experiences of women in natural social settings, where the aim is to make women visible, raise their consciousness and empower them" (Gelling, 2013, p.6). It raises notions of power, oppression and gender inequality and aims to generation new knowledge, while simultaneously empowering women (Gervais et al., 2018).

Feminist research, combined with participatory approach, allows for the participation and collaboration of women, wherein they are able to produce and

analyze knowledge, and become empowered during the whole process (Baum et al., 2006). Feminist participatory research enables participants to play a crucial role in the process of research. Hence, participants take up role as co-researchers, which allows for a collaborative approach to the collection and analysis of data with new and important gender-based insights on a topic of research (Gervais et al., 2018). Since there is a lack of conversation about men and masculinities, and gender relations in menstruation and reproductive health of women (Mumtaz & Salway, 2009), there are incomplete studies of women's experience and communication about menstruation. In order to get a wholistic idea of the topic, it is important to include the factors that determine women's experiences and perspectives on menstruation through a feminist lens. This allows me to use feminist theory as my research includes women's perspectives on how their power and place in the society affects their experiences and communication regarding menstruation (Grant & Osanloo, 2015).

## Design and Methods

To understand the communication about menstruation that takes place between mothers and daughters in Urban Karachi, I employed exploratory study as my methodology and feminist participatory research as my theoretical framework, wherein I collaborate with my participants and have them as equal stakeholders of the research.

Since there are two stakeholders when it comes to mother-daughter communication regarding menstruation, I involved both, mothers and daughters (young women who are not mothers), as participants of my research. I used snowball sampling and my connections to recruit participants for my research. I employed two different methods with the two different groups of people.

### In-depth interview

In-depth interview is one of the research methods to learn about a participant's perspective on a topic of research. It is a way through which participant shares their feelings, opinions and experiences as an expert, and provides and insight into their interpretation and experience with the respective issue/phenomenon (Mack et al., 2005). Thus, I conducted semi-structured in-depth interviews with four mothers, who have daughter(s) of age 18-25. I conducted these interviews to

understand their experiences and views on communication about menstruation. They were not the mothers of the young women participants who I recruited.

### Participatory workshop

Participatory workshop is a research method that allows to gain an insight into the lived experiences of participants on a certain topic through collaborative and creative environment. Participatory research workshops bring together people who are major stakeholders in a topic, but are excluded from a discourse on it. Thus, the participants are considered as equal to the researcher and the researcher also becomes a participant to collaboratively research on a subject and come up with solutions to improve the existing situation (Northway et al., 2014). Therefore, I conducted three participatory workshops with five participants, who are 18-25 years old, and I took a role of a participant too.

The reason of recruiting this particular age group is that it is important to consider youth experiences and narratives in menstruation and other health topics because youth is the period where people experience bodily, emotional and psychological changes, and the experiences they have during this period sets stage for their practices in adulthood (Szymańska, 2021). According to the United Nations, youth is defined as people between the ages of 15-24 (UNDESA, 2013). According to UNICEF-The Convention on the Rights of the Child, people younger than 19 years are considered children while World Health Organization recognizes people younger than 19 to be adolescents (UNDESA, 2013). Thus, because of this and the ethical concerns involved with including children in the study, my sample consists of young people who are between the ages of 18-25, and mothers whose children fall under this age criteria.

### Implementation of research

The method of collecting data from the mothers was different than with young women participants. The participatory approach was employed mainly with young women participants in which we came together to inform, consult, involve, collaborate and empower (Vaughn et al., 2020) each other to understand the communication around menstruation and work on strategies to improve this communication, especially with our mothers. Figure 1. represents steps of participatory research (Vaughn & Jacquez, 2020).



**Figure 1: Steps of participatory research**

## Design

I conducted interviews with 4 mothers. 3 of the interviews were in person and 1 was conducted online, via WhatsApp call. The consent form was shared with all the participants beforehand and I briefed them about my research and answered any questions they had prior to the interview.

There were 3 sets of participatory workshops that were conducted with young women participants. The first workshop was online and was around an hour long, where we introduced ourselves and I introduced them to the research, my methodology, theoretical framework, process of the research and the commitment of the participants. The consent form was discussed and mutually agreed upon by the participants, after which it was shared with them and signed. My role as a co-participant, facilitator and sole author was also agreed upon, while the participants agreed that they will act as contributors and will be given credit for their involvement.

The second workshop was conducted in person and was about an hour long. We engaged in meaningful discussions and activities to learn about the topic in depth. The third workshop was meant to be two hours long; however, it seemed like too long a period to commit for. Hence, the third workshop was divided into two parts, each was an hour long and was conducted in person. Part one of the third workshop was about building up on the conversations from the second one, while the second part of the third workshop were about collaboratively finding solutions and collectively analyzing the data. Table 1. represents the timeline of interviews and workshops.

Interview/Workshop	Date, 2022	Mode	Duration
Interview 1	6-Nov	In-person	30 minutes
Interview 2	9-Nov	In-person	20 minutes
Workshop 1	13-Nov	Online	1 hour
Interview 3	14-Nov	In-person	30 minutes
Workshop 2	18-Nov	In-person	1 hour
Interview 4	20-Nov	Online	45 minutes
Workshop 3 (part 1)	22-Nov	In-person	1 hour
Workshop 3 (part 2)	25-Nov	In-person	1 hour

**Table 1: Timeline of interviews and workshops**

## Participants as Co-Researchers

Central to participatory approach to research is the idea that participants serve as co-researchers and are involved actively in collecting and analyzing the data (Gervais et al., 2018). Because there were two sets of participants in this research, participatory method could be employed only with young women (daughter) participants as it was easier to gather them physically in one place, and difficult to bring mothers together due to their other commitments. Thus, the data collected from mother participants was shared with the daughter participants, with the consent of the mothers and keeping their identities anonymous, so that all the participants together can make sense of it and analyze it, alongside providing their perspectives on the topic.

In addition to this, participants gave their input into designing creative activities that would aide in discussions about communication regarding menstruation with our mothers. The participants also informally interviewed their mothers and discussed amongst each other about their mothers' perspectives on menstruation and their communication with their own mothers. This allowed for more in-depth insight into the topic as it added the perspectives and experiences of six more mothers into the conversation.

## Ethics and Consent



Before the interviews and workshops with all the participants; mothers and daughters, I briefed them of the ethical considerations in the research and that their participation will be voluntary. They were made aware that they can refuse to answer any question and also withdraw from the study at any time, without any consequences. There was an ethics section in the consent form, mentioning all these details (appendix 1,2,3) The mothers were informed that the provided data will be shared with my team (the young women participants) and used for research purposes. Every mother participant demonstrated their will of keeping their names and identities anonymous. Hence, their names have been kept confidential throughout the research.

Before and during participatory workshops with the young women participants, I acquired constant consent from them. During the first workshop, the participants were briefed about the ethics of the research and we collectively decided on some rules that everyone will abide by during the whole research process, such as not sharing stories outside of the group without the respective person's consent, providing a safe space for everyone to share and respecting each other's experiences and point of views.

In addition, "defined as the ability to recognize the influence of one's own values and conceptual and cultural baggage on the research content, reflexivity is an intrinsic part of the participatory research process" (Gervais, et al., 2018). Because the research involved my personal views on the topic, as well as communication with my mother, I made sure that my biases do not impact the interview and data collection process. In order to do this, I kept a self-reflexivity journal and tried my utmost to not let my identity as a feminist and my passion for this topic hinder or bias the research process.

The data collected from the interviews was documented through recordings and notes, and the data from the workshops was documented using notes and resources used in activities (like charts and sticky notes). The data was saved in my password-protected personal laptop and google drive.

## Collection

While I conducted 4 interviews with the mothers separately (appendix 4), I indulged in 3 participatory workshops with the young women participants.

**First workshop:** The first workshop was conducted online via zoom and was about an hour long. The purpose of the workshop was to introduce each other and take any questions from the participants. We did some activities like telling embarrassing moments or sharing our first period stories to break the ice and build a good relationship with each other. Some preliminary discussions took place about our expectations from the research, participants' feelings and perceptions related to menstruation and our communication about it with our mothers.

**Second workshop:** The second workshop was conducted in-person, where the agenda was to understand the perspective and feelings around menstruation. This was done through activities like body mapping and period bingo. This also served as an ice breaker where we were able to listen to each other's experiences and understand that everyone experiences periods differently. We also shared tips with each other about coping mechanisms and communication strategies.

The second agenda of this workshop was to identify the gender dynamics associated with menstruation. Hence, we discussed how being a woman in a patriarchal society affects this communication and our experiences with menstruation. We also watched videos of advertisements of sanitary pads (made in Pakistan and India) to analyze how menstruation and gender is portrayed in media. Some participants were willing to have a conversation with their mothers too regarding the topic to get a more thorough understanding of the communication that takes place between mothers and daughters and why mothers communicate the way they do. Thus, we decided on the prompts that we can discuss with our mothers which included their experience with their mothers, their perceptions and menstrual experiences, if they believe period conversations should be normalized, and what role (if any) do men play in this whole conversation.

**Third workshop:** The last workshop, both parts, were conducted in-person and were an hour long.

The agenda of the workshop was to identify the similarities and differences between our and our mothers' perceptions and experiences with periods and reflect on how we communicate about it with them. Also, we identified power structures at our homes and connected it with the agency that women have in

deciding what sanitary products they want to use and how they want to indulge themselves in daily life events while experiencing menstruation or menstruation-related discomforts. I also provided the participants with interview notes from my separate interviews with the mothers, keeping their identities anonymous so that the data can be analyzed. Now that we had all the data on the topic, we used some papers and sticky notes to divide the data into themes and analyze them accordingly. Along with the co-analysis, I used MS word and MaxQDA to analyze the data later and shared it with the participants to review.

## Results and Discussion

While some themes commonly emerged in interactions with mothers and daughters, some themes did differ, which is a reflection of the difference in perspectives and menstrual experiences of mothers and daughters, consequently affecting their communication.

It is crucial to note that while some participants mentioned that their aunts or sisters guided them about menstruation, in the context of this study, the participants mainly shared their experiences and communication with their biological mothers and not with other females in the family.

### Generational difference

“Maa ne bol dia karo toh karna hai, aage se kisi sawal ki gunjaish hi nahi thi.”

(If the mother asked us to do something, we had to do it. There was no room to question.)

In interactions with mothers, the context and need of the time was a recurring theme. When asked if they were able to talk to their mothers about menstruation, the participants acknowledged that when they were growing up, the circumstance wasn't as such that it allowed for an open communication regarding these taboo topics. They mentioned that during their time, the word of their parents was set in stone. If they were told to do or not do something, it was supposed to be obeyed and there was no room for questions. This is why they were not motivated to think or ask questions about it. “Hai toh hai, ab kia karsakte hain.

Itni samajh hi nahi thi ke kuch sochein ya poochein” (It is what it is. We were not mature enough to even think about it or ask questions), shared a mother naively as she described how they were not encouraged to think and talk about it. However, based on conversations with young women participants, the generation now passionately looks for answers. They do not accept things as they are and need reasons for everything. Be it due to media/internet or any other reason, the curiosity, specially related to topics that are hidden, have increased so much that if mothers do not give them this information, they turn to their friends or the internet.

Moreover, all the mothers said that they did not feel much of a period pain or PMS, but the daughters did mention how painful periods can sometimes be for them. This is an interesting generational difference to note. In a similar way, a mother also mentioned that earlier the lives were not so hectic. Thus, pain, PMS or other issues related to menstruation did not affect them as much. But now the lives have gone busier, and people’s diet and pain tolerance has changed, which makes menstruation a big deal and a topic that must be dealt with carefully.

### Internalization of taboo

“Kisi ko pata chalega toh kia bolega?”

(If somebody gets to know, what will they say?)

The mothers had an internalization of the taboo associated with menstruation and so felt that they had to take care of themselves all alone, that’s why they didn’t share it with anyone. “Mujhe pata hai sab mujhe akele hi karna hai kyun ke kisi ko bata toh nahi sakte” (I know I have to do everything on my own because I just can’t tell anyone!), said a mother in frustration. On the other hand, the young women participants believe that this is a cycle that needs to be broken. According to them, the reason why mothers internalized this taboo and did not complain/question was because they didn’t see their mothers doing this. However, the daughters now have more exposure than did their mothers and so they have started to question the taboo and normalize it.

### Deprived of key information

“I had so many questions but got such superficial answers. As I grew up, I was able to figure out things on my own.”

Some of us felt that were deprived of the key information by their mothers. There was an exception of one participant who believed that she was timely equipped with all the information, which led to her having positive menstrual environment and experience. The rest of the participants shared that they “freaked out and felt fear and shame” as they were not aware and ready for this experience. Whenever they tried to ask their mothers about menstruation, they did not get satisfying answers and the conversation was always shushed. Fatima shared in the workshop, “Being completely unaware makes the person totally overwhelmed as it comes as a total shock to them. Imagine finding out one day, all of a sudden, that you are gonna bleed once a month for 7 days, for almost your entire life!”. This feeling was also evident in other participants’ responses, as almost all of them, including me, remember the exact date, time and/or place where we got our first periods. It marks an important day of a menstruator’s life as it changes their lives forever. Hiba said, “Whenever I have a daughter, I will make sure that she knows about this from the get go!”. Thus, almost everyone demonstrated that they would have had a better experience if they knew this prior to getting periods and their questions were answered while they got them. Imra shared, “I know some people who do not menstruate on time and it just ruins their physical, emotional and even social lives. If it was talked about more, they wouldn’t have to go through this”. This shows that lack of key information and channel of communication leads to bodily, social and psychological discomforts for a woman.

It is interesting to note that where the mothers accepted their situations as they were and were not curious to gain more information about this, the daughters felt they were not equipped with the important information regarding menstruation, and if they were given that, especially by their mothers, they would have had better experiences and would have helped them manage their periods in a better way.

### Negotiation and compromise

“My mother has to work constantly without complaining. Abbu ko samajhna chahye ke woh kyun kaam nahi kar rahin.”

(My father should understand why she is not working.)



While the mothers did not feel the pain or did not pay much attention to the symptoms or consequences of periods, the daughters feel that their mothers have to do some sort of a compromise in their homes or outside, while they are on their periods or are communicating about it. The daughters are expected to perform household chores and continue with their studies despite severe pain and PMS. Most of the participants acknowledged that they are given leeway by their mothers and are encouraged to rest while on periods, but they have not experienced their mothers asking for break and have to keep functioning normally, as they have no room to rest or take a break.

In addition to this, a compromise in communication with mothers and males of the family was also identified. Most of the participants do not buy sanitary products on their own and so whoever does the grocery for the house, buys them. A participant shared that because she can't tell her father what pad to buy, she has to compromise and adjust with whatever she gets. The daughters try to negotiate with men as Fatima mentioned with a sigh of relief, "kaam bhi hojaye lekin pata bhi na chale" (The work gets done and nobody gets to know about it). There are religious reasons as well that come into play. If a male in the family asks why a female is not reciting namaz or fasting, they have to lie and beat about the bush. While everyone acknowledges that even men in the family know about this, as sometimes they are even buying pads for the females, there is an invisible wall that prevents them to communicate. Rihha shares in confusion, "It's an ironic situation. My father is bringing me pads and yet I can't tell him that I am in pain because of periods".

## Agency

"My mom was not in favor of me using a menstrual cup but after some convincing, she is okay with it. In fact, now she advises my sister to use it too!"

Both the mothers and daughters shared that they have complex power structures at home. While some people (mostly fathers/males) make financial decisions at home, others decide on children's whereabouts. But with menstruation related decisions, women do have a freewill and agency. For example, it's their call on what sanitary product to use and from which company, when to refer to a doctor for menstruation-related problems and what medicines/remedies to take. Hence, there is a good communication between mothers and daughters regarding the issues they're facing, if they should consult a doctor, and what product to use.

Only one participant said that she was socialized in a way where this agency and communication was there since she got her first period. The rest of us accepted that it's normal to decide and discuss with the mothers now that we have grown up. But initially, it was all a blur and we had to use and do whatever was recommended by our mothers. Hence, we all agreed that with time, the communication became better and as we grew up, our mothers started giving us more room in decision making. A mother said, "Aj kal betiyon ko humse behtar pata hota hai. Agar meri beti aa ke mujhe bataye ke humare liye kia acha hai, mei uski baat sunoongi" (Nowadays, daughters know about things better than us. If my daughter tells me about something that is good for us, I will listen to her). While for some daughters it is easy to convince their mothers, others have to rebel. It is given, however, that women have an agency to take their own menstruation-related decisions.

It is interesting to note that women do not enjoy so much of an agency in how they want to conduct themselves while on periods, like resting or taking a break, but they do get to decide what products work the best for them. This is also something that the mothers weren't able to do with their mothers, but they and their daughters now have this freedom to decide.

## Media

"Aj kal media or internet se itni zyada information mil jati hai. Lekin it is better agar mayein apni betiyon ko khud sahi information dein."

(There is a lot of information available on media and internet nowadays. But it is better if mothers give the correct information to their daughters by themselves.)

Both groups of people identified the role of media and used it as reason to improve mother-daughter communication regarding menstruation. All the mothers mentioned that media and internet is so prevalent and everything is so out in the open, that you cannot hide anything from your children. Thus, the daughters will know about menstruation and other things from the internet if the mothers don't tell them. That is why, it is needed now, more than ever, that the 'right information' is delivered to the daughters. One mother, however, claimed that since everything is available on the internet, daughters do not feel the need of asking their mothers. But another mother said that even though they know

everything, it is essential that the mothers take the first step in communication.

During the workshops, we watched some advertisement videos of sanitary pads and tried to analyze how media portrays periods and gender dynamics in the conversation (appendix 5). We discussed that media is not a true reflection of women's menstrual experiences. "Ads shouldn't glorify the comfort after wearing pads", said Mehrin. Also, in most of the videos, it was shown that mothers do not tell their daughters beforehand, which leads to fear and embarrassment when daughters get their periods when they're not at home. Hence, the mothers must communicate it beforehand and support their daughters so that they do not have to suffer through psychological and social discomforts.

Moreover, the plot of the ads is made such that no male is supporting a female during her periods or talking about it. Females are also seen to say dialogues like "shukar hai meri class teacher ek aurat thi" (Thank god my class teacher was a female), when she gets periods in her school. This sends a message that men do not play an important role in the conversation around menstruation and so shouldn't be included in the process. Imra responded to this idea and said, "I don't think it is right. I can discuss this with my dad and I think media should also promote this".

## Solutions

The solutions highlighted by daughters were providing sex education, awareness regarding PCOS and other related issues and on general myths and misconceptions in school or community centers. While all the daughters seemed to passionately agree that there should be open communication with men in the family, some mothers did not support this idea as they believe that it is not necessary for men to know so it shouldn't be discussed out in the open.

Both groups agreed that mothers and daughters should be like "best friends" and have an open communication, not only about menstruation, but also about other feminine topics. Mothers mentioned that sessions of mothers and daughters should be conducted. Because mothers didn't experience a normalized conversation with their own mothers, they sometimes do not know how to initiate a conversation and make it a safe space for their daughters. Thus, it is better that both are gathered on the same platform and made aware of how it's both their responsibilities to take a step and communicate regarding menstruation. Through these platforms, mothers and daughters can learn and share their best practices,

and collaborate to make things better for themselves and other women in their societies. The importance of collaborative spaces was reiterated in the workshops as well as participants learned from each other and shared tips about a number of things, ranging from using menstrual cups, to coping mechanisms during period pains, to communicating more effectively with mothers.

Alongside the general long-term solutions, the participants also felt that it was a good experience of having a conversation about periods with their mothers as a part of this research. They felt more comfortable doing this often now and felt that this activity broke an ice between them and their mothers, which will now allow them to have a more open conversation with them.

## Feminist Analysis

### Changing position of women in society

Drawing all the findings and results back to the feminist theoretical framework, I believe that change in mother-daughter communication from the time when mothers couldn't communicate with their daughters, to the time when mothers want to communicate with their daughters, can be attributed to the changing position of women in the society. With the society moving towards gender equality and women raising their voice against discrimination, they are gaining more power and voice. Thus, while earlier the women (mothers) did not question and nor felt the need to either, nowadays women (daughters) feel that they are deprived of key information regarding menstruation which is leading to them doing negotiations and compromises with men around them. These compromises rise as a lack of communication with and in front of men, and results in them facing bodily, social and psychological discomforts. Thus, young women are more determined to change the situation and normalize conversations around periods, even with men, as opposed to general perception of mothers, so that they do not have to compromise and have a better position and voice in matters that concern them. The mothers also expressed a want for a different relationship with their daughters than they had with their own mothers.

## Presence of men

### Fear, shame and embarrassment

Fear, shame and embarrassment was a common answer when mothers were asked why they did not have an open communication with their own mothers about menstruation. I wonder what instills this shame, fear and embarrassment in these conversations. In this research, women said that they were more comfortable talking about menstruation with other women, hence there is less shame and fear, and it is easily overcome in all-women setting. However, with males in the picture, women are not comfortable in talking about it. A mother also claimed that males have their own jokes and so in gatherings where there are males, periods shouldn't be talked about because they might use it as a joke on women and make fun of them. This reflects that there is a need to sensitize males so that the fear, shame and embarrassment in these conversations can be minimized.

## Support

A major discrepancy was found in the answers of the mothers. When asked if men have an important role to play in menstruation, all the mothers replied with a yes. They referred to their husbands and mentioned how they take care of their wives and are supportive in issues like these. However, when asked if conversation about periods should be normalized with men, some said that there isn't a need because it is about a woman's privacy. Hence, I wonder if men are supportive, then why do we feel hesitant in talking about it in front of them. In the opinions of the young women participants, it is a cycle that needs to be broken. Also, according to us, the men in this conversation are not only our fathers, but also our brothers and male friends. If they are not sensitized, they will not understand women's experiences and support them. As a result, women will feel ashamed in talking about it in front of men and continue suffering in silence. Therefore, if the communication between all members of the house, men or women, is normalized, the idea of shame and embarrassment associated with menstruation will be minimized. This will also enhance mother-daughter communication regarding menstruation as it will give them more space to discuss and look out for each other.



## Gender roles

The reason why women feel that they have to compromise and not show that they are in pain or are facing other problems due to menstruation is the prevalence of gender roles in the society. Upon asking a mother if she rests during period pains, she replied, “mei kaam nahi karoongi toh poora ghar struggle karega” (If I don’t work, the whole house is going to struggle). She added that she is supposed to take charge of all household chores, cook food for children and husband, ensure that the children are eating, going to tuitions, working and sleeping on time. Thus, because of the role of household responsibilities been given to her, she doesn’t enjoy a room to complain, rest or take time out for herself. A mother also mentioned that working women must be allowed to take period leaves from their workplaces, just like maternity leaves, if she feels sick during periods. However, she did not mention that the same must be applied for housewives and they should be able to take breaks from their daily tasks and routines if they face period discomforts.

One mother did realize that the onus of a daughters’ upbringing and health lies only upon a mother. Thus, she said, “har baap ko bhi apni beti ke baare mei pata hona chahye” (Every father must also know everything about her daughter), signaling that mothers and fathers are equal stakeholders in a child’s upbringing so that the sole responsibility doesn’t lie on a woman. Thus, they should be aware about all their children’s problems and are able to communicate with them regarding this, so that gender roles are eradicated and there are positive environments for mothers and daughters to communicate and experience menstruation.

## Limitations

The study was conducted within the span of a month, and so time was a major limitation. Apart from this research report, there is a potential for working on other ways to disseminate the findings of this research that are accessible to non-academic audience and can be used to empower other women around us. Moreover, this study represents some of the lived experiences of women in urban Karachi. Thus, the experiences of women in rural areas would differ and can be studied upon further for a comparative analysis.

## Conclusion

This research study focused on analyzing the communication about menstruation between mothers and daughters, by collaborative learning and knowledge production. It suggested that mothers and daughters have different experiences of menstruation which reflects through their communication. Moreover, our society is not completely ready to openly discuss taboo topics like menstruation, but it is evident that gender roles and dynamics do impact how mothers and daughters experience and communicate about menstruation.

The study paved a way for participants; mothers and daughters, to take a step to initiate and improve their communication on this topic with each other. If taken right measures and policy decisions on a larger scale, the normalization of this conversation would also result in improving women's attitudes towards their health and enable a healthy lifestyle, where they have adequate access to information and resources.

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BUILDING A BETTER FUTURE – EXPLORING THE  
IMPACT OF FEMALE LITERACY ON POPULATION  
GROWTH AND ECONOMIC PROSPERITY

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## **Abstract**

This paper studies the correlation between female literacy rate, overpopulation, and its impact on four developing countries' economies. Data from World Bank and other sources were analyzed using population growth, GDP growth, literacy rate, unemployment rate, total debt service, inflation rate, contraceptive prevalence, demand for family planning, and adolescent fertility rate. The research reveals that decreasing the female literacy rate in Afghanistan and Pakistan results in a low percentage of married women using contraceptives, increasing population growth, and negatively impacting the economy. However, rising literacy rates in Bangladesh and Iran have caused more married women to use contraception, leading to less population growth and positively impacting the economy.

**Keywords:** Afghanistan, Bangladesh, Contraceptive Prevalence, Economy, Education, Female Literacy Rate, GDP, Iran, Overpopulation, Pakistan, Sex Education





## Introduction

Education provision for females has been a crucial topic in recent years. Researchers and policymakers alike have come to recognize the vital role that educated women play in shaping the world's economic, social, and political landscape. Among the many factors that affect a country's well-being, women's literacy rates are arguably one of the most important. A study by Hill and King suggests that countries with higher levels of women's education tend to experience faster economic growth, longer life expectancy, lower population growth, and improved quality of life. Educated women are better equipped to participate in the workforce, make informed health and family planning decisions, and contribute to the economy. Thus, increasing the participation of women in education can lead to a range of positive outcomes for both individuals and society, including sustainable development and a better future for all [1].

Empowering women with education have a cascading effect that can help break the cycle of poverty, reduce population growth, and drive economic progress. By thoroughly examining multiple case studies and analyzing relevant secondary data, we seek to strengthen our hypothesis that empowering women through education will not only help control the population but also be economically viable. Through this analysis, we will demonstrate the importance of investing in women's education to promote economic growth and sustainable development while reducing population pressures.

## Literature Review

In our research, female illiteracy refers to women's lack of primary education and schooling, which leads to insufficient reading, writing, and calculation capabilities and weak cognitive analysis skills. As mentioned before, a key result of female illiteracy is overpopulation, which has led to numerous social and economic problems like scarcity of resources, pollution, increase in crime rate, inflation, and more.

India is among the world's highly overpopulated countries. According to World Bank data, the most recent record shows that India's population constitutes around 1.4 billion [2]. Among this population, only 40.1% of women aged 25 and above have completed lower secondary education [3], while only 24.9% have completed upper secondary education [4]. A study conducted in

2013 showed that on a linear regression, there was a significant inverse relationship between crude birth rates (CBRs) and female literacy in India, as shown in Fig. 1. below. Every 1% increase in female literacy is associated with 0.325/1000 live births [5].

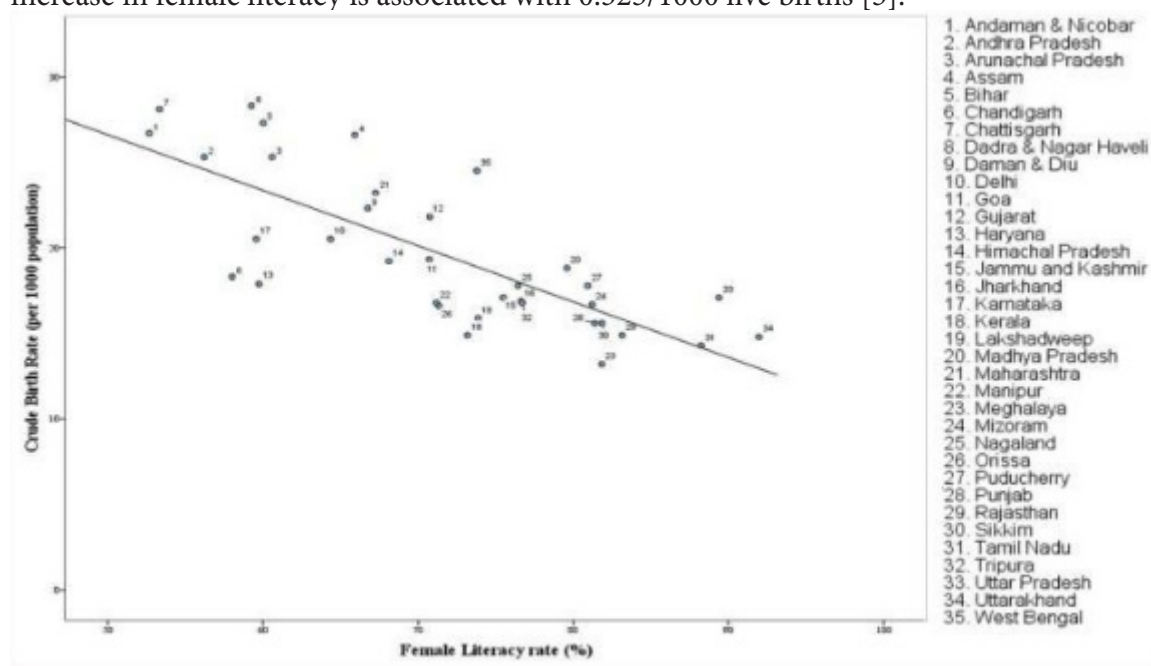


Fig. 1. Relationship of CBR with Female Literacy Rate in India (%) [5]

Another study conducted by Morris Altman shows that changes in variables that empower women, such as education and family planning, contribute to the reduction of family size and, thereby, in the rate of population growth, irrespective of relative prices and levels of income [6]. In addition, a case study in Uganda showed that higher education levels are consistently associated with lower fertility rates and positively associated with contraceptive use. The significant implication of these results is that raising women’s education improves their economic opportunities, and the behavioural responses in fertility will lead to a decline in population by reducing the willingness to engage in unprotected sex and a subsequent rise in the birth rate [7] (see Fig. 2).

Variable	Urban			Urban			Rural			Rural		
	1-2	3-4	5+	1-2	3-4	5+	1-2	3-4	5+	1-2	3-4	5+
	Family size			Desired children			Family size			Desired children		
No education	50	13	57	11	33	0	26	21	61	30	53	51
Primary	7	55	23	48	43	0	41	63	34	30	43	38
Secondary	34	27	19	31	19	0	19	6	12	38	4	11
Postsecondary	9	5	1	10	5	0	14	9	7	2	0	0

*Fia. 2. Ratio of Women's Education with Desired Children in Uaanda [7]*

One more study analyzed data from a 2002 survey in six villages in rural Bangladesh to test the hypothesis that daughters of women with more education marry later and that daughters-in-law of more educated women initiate childbearing at a slower rate. Significant associations were found between the educational level of mothers and the age at marriage of their daughters and between the education level of mothers-in-law and the timing of first birth among their daughters-in-law [8].

Female illiteracy plays a substantial part in global economic disparity, limiting women’s access to numerous opportunities and individual resources. On average, women have lower literacy rates than males, a 21 percent discrepancy in underdeveloped nations, with a few exceptions (notably Jamaica and Lesotho). In addition, more women are becoming illiterate with each passing second; at least 50% of adult females in 43 of the 85 emerging countries lack literacy. According to UNESCO, women contributed to 58% of the illiteracy rates among adults in 1960, rising to 60% by 1970 and 63% by 1985. According to a study of literacy rates between 1960 and 1985, 133 million of the 154 million new illiterates during that time were female. Asia saw immense growth in the number of illiterates, up to 109 million people [9].

In contrast to literate females, illiterate females are less productive, per the United Nations Development Program (UNDP). This phenomenon is because they cannot obtain information or engage in economic activity due to illiteracy. According to estimates, a 1% decrease in female illiteracy might result in a 0.3% rise in gross domestic product per capita [10]. Ultimately, women who lack

literacy often earn less than literate women. In low-income nations, women without a primary education only make up 70% of what women with primary education make, as reported by the UNESCO Institute for Statistics [11].

Illiteracy also affects population growth, leading to a lesser knowledge of family planning and resulting in more family members. The World Bank reports that uneducated women will likely have more children, labor problems, and infants born with unstable health [12]. In addition, a McKinsey Global Institute study discovered that reducing the gender parity index may boost the world economy by \$12 trillion by 2025 [13].

China is the world's most populous country, with over 1.4 billion people. It has been this way for decades now, and the government has taken measures like the 'One-Child policy,' which was in effect from 1979 – 2015, to address this problem. Overpopulation has contributed significantly to environmental issues such as water scarcity and air pollution [14]. China's population density was estimated to be 147 people per square kilometer in 2020 [15], which is higher than the global average population density of 58 people per square kilometer [15] and puts pressure on resources and infrastructure in densely populated areas. On the contrary, China's vast and growing population fueled its recent rapid economic expansion, establishing an extensive and increasing market for goods and services [16]. Fig. 3. below shows the Annual GDP growth<sup>2</sup> of China.

India is the world's second most populated country, with over 1.3 billion people [15]. India has faced economic challenges and high poverty rates due to unemployment. According to World Bank, 27.5

% of the Indian population lived below the poverty line in 2016 (Fig. 5.) [17]. In 2021, India's unemployment rate was 6.9 percent (Fig. 6.) [18]. In 2020, India's per capita GDP was \$1,947, which dropped by 7.8 percent by 2021 (Fig. 4.) [19].



Fig. 3. Annual GDP Growth of China [22]

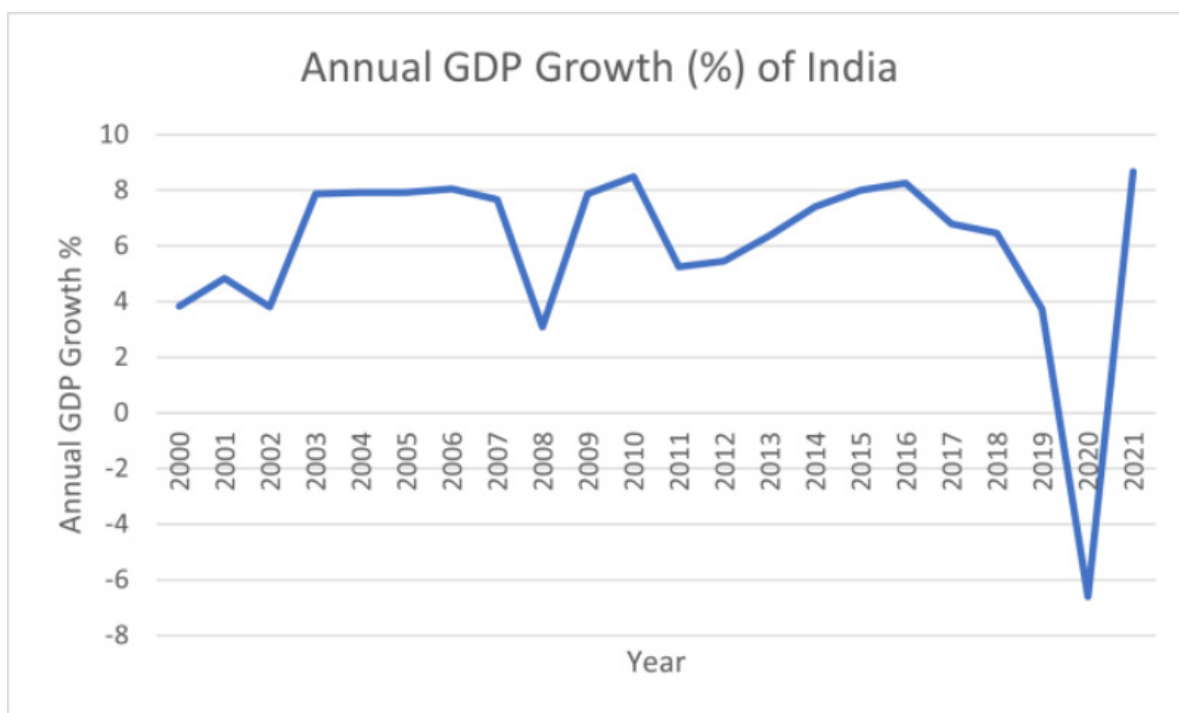


Fig. 4. Annual GDP Growth (%) of India [19]



Fig. 6. Unemployed Labour Force in India [18]

Spain’s population is slightly over 47 million people in 2021 [15]. Overpopulation is less of an issue than unemployment is, particularly among young people [20]. The immigrant influx has pressured social services such as healthcare and



education. One statistic that illustrates the challenges of overpopulation in Spain is its population growth rate of 0.3% in 2020 (Fig. 7.) [15]. This population growth rate is relatively low compared to some other countries but still represents an increase in population that may be challenging to manage.

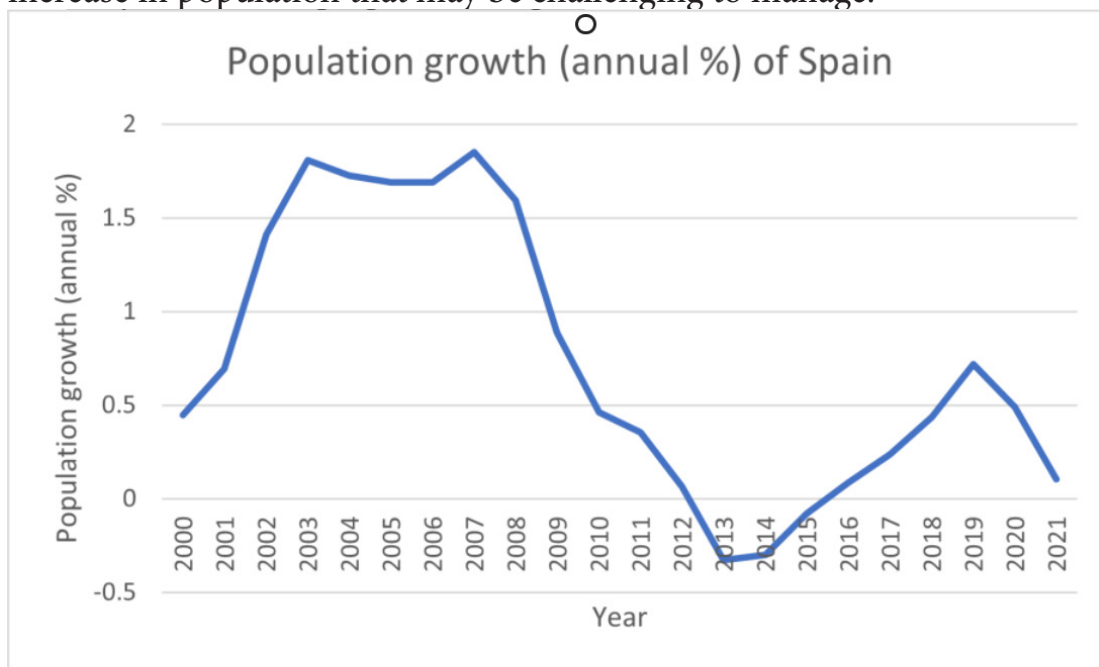


Fig. 7. Annual Population Growth of Spain [15]

Mali, situated in West Africa, has a population of 20 million as of 2021 [15], due to high birth rates, with an average of 6.3 children born to each woman. Mali’s population has grown 3.0 percent in 2020 (Fig. 8.), one of the world’s highest population growth rates. As the population grows, the demand for resources and food increases, depleting the limited arable land. This causes a decline in agricultural productivity and a rise in food prices, resulting in insufficient resources for the population [21].

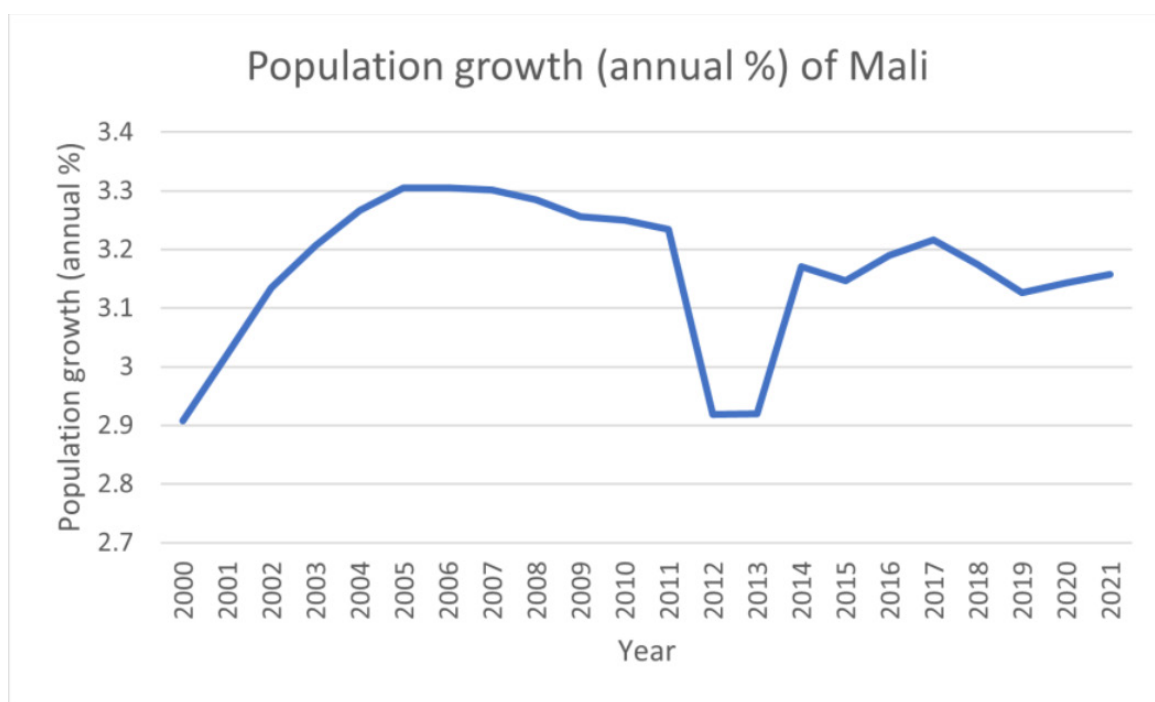


Figure 8: Annual Population Growth of Mali [15]

The statistical data presented so far has indicated that the lack of adult female literacy has resulted in population growth and has affected the economic conditions of the countries. As shown thoroughly throughout the literature review, due to illiteracy, women cannot make informed decisions about family planning and cannot participate in the country’s economic growth.

Our project hypothesizes that increasing the female literacy rate can increase the country’s economic growth and reduce population growth. This study aims to compare the effects of women’s education on population and economic development in four countries: Pakistan, Afghanistan, Bangladesh, and Iran. To support our stance, we will focus on several critical indicators, including population growth, adult female literacy rates, annual GDP growth, GPI (Gender Parity Index), adolescent fertility rates, contraceptive prevalence, demand for family planning, unemployment rate, inflation, total debt service, and the participation of women in the labor force. Moreover, the research aims to explore females aged 15 to 30 who have at least completed upper secondary education. According to World Bank Data, only 23% of adult educated females in Afghanistan and 46% in Pakistan; as a result of which, the fertility rate in Afghanistan is 4.1, and Pakistan is 3.6, which is relatively high. Comparing this with the GDP per capita growth percentage, as per World Bank Data, Afghanistan lies at 23.0% and Pakistan at

4.6% [19]. On the contrary, Bangladesh has a 72% adult female literacy rate and a fertility rate of 2 and 7% GDP per capita growth [19]. Therefore, while comparing the data, we aim to study how the female literacy rate is inversely proportional to population growth and directly proportional to economic growth.

## Methodology

Our objective is to examine the relationship between female literacy, overpopulation, and its impact on the economy in Pakistan, Bangladesh, Afghanistan, and Iran, i.e. how the female literacy rate affects the overpopulation of these countries, in turn impacts their economy. To achieve this, we conducted quantitative secondary research from 2000 to 2020. Our data sources were the World Bank, the Census, and the Economic Information Center (CEIC). This research entails analyzing the data using several indicators that impact the countries' population growth due to female literacy rates, such as contraceptive prevalence, adolescent fertility rate, GPI (Gender Parity Index), and demand for family planning. We also analyzed the relationship between female literacy rate on the economy of countries through indicators such as unemployment rate, annual GDP growth, total debt service, and inflation rate. Considering the indicators for both overpopulation and economy gives us a deeper insight into how the former impacts the latter based on female literacy rate for the mentioned countries and allows us to draw a contrast between those countries based on their analysis.

We have used graphical analysis to represent our findings and data to establish our narrative. Graphical analysis is the most appropriate method of analysis for this study as it provides us with visually compact information for our data. The emerging patterns and trends of the graphs throughout 2000 – 2020 allowed us to draw correlations for the stated indicators between several countries, which would have been challenging otherwise. We use a combination of scatter plots, line graphs, and bar charts to analyze the data in terms of mod average-based analysis and the deviation from the said average. This allowed us to compare the results of the four aforementioned countries with each other and dissect the reasons for the resulting results. By using objective data and combining it with observations, secondary alibis and information and the overall deconstruction of the socio-economic and political environment, we extracted results from our research to show how female literacy impacts overpopulation and in turn the economy.

## Results

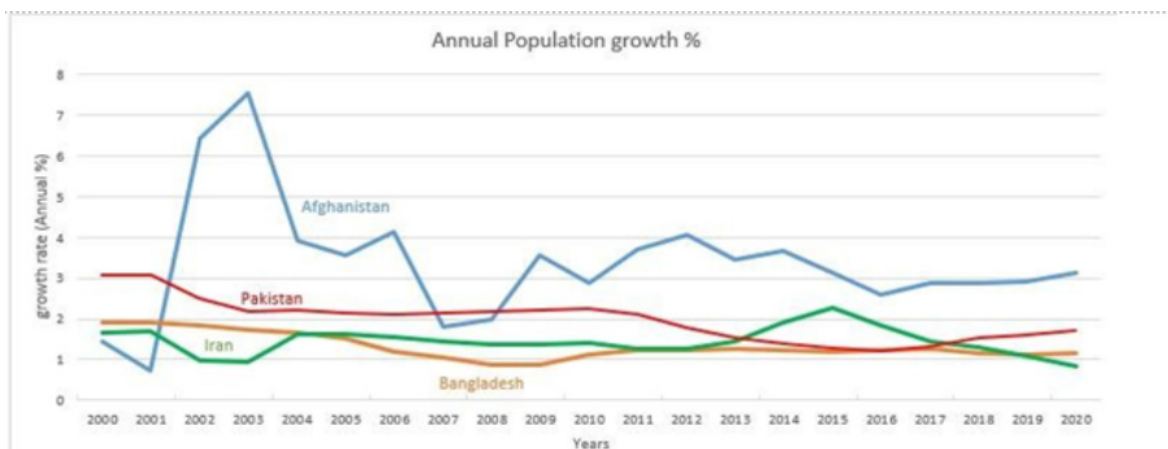


Fig. 9. Population growth (Annual %) across all four countries over 20 years [23]

Fig. 9. shows that Afghanistan’s Population increased from 0.74 to 7.5 % during 2001-2003. While there was a sharp decrease in 2004 to 3.9 % after a few fluctuations between 2006-2009, the population growth was stagnant and gradually stabilized around 2021 to 2.85 %. On the other hand, the population growth of the other three countries has overall remained relatively constant. There have not been significant changes, but the population growth of Pakistan has decreased from 3.08% in 2000 to 1.83% in 2021. The population growth of Bangladesh has changed from 1.9% to 1.15% from 2000 to 2021, respectively. In Iran, there has been a change from—1.65 %in 2000 to 0.72% in 2021. After the gradual fluctuations, in 2021, Afghanistan and Pakistan have a higher annual percentage of population growth than Iran and Bangladesh.

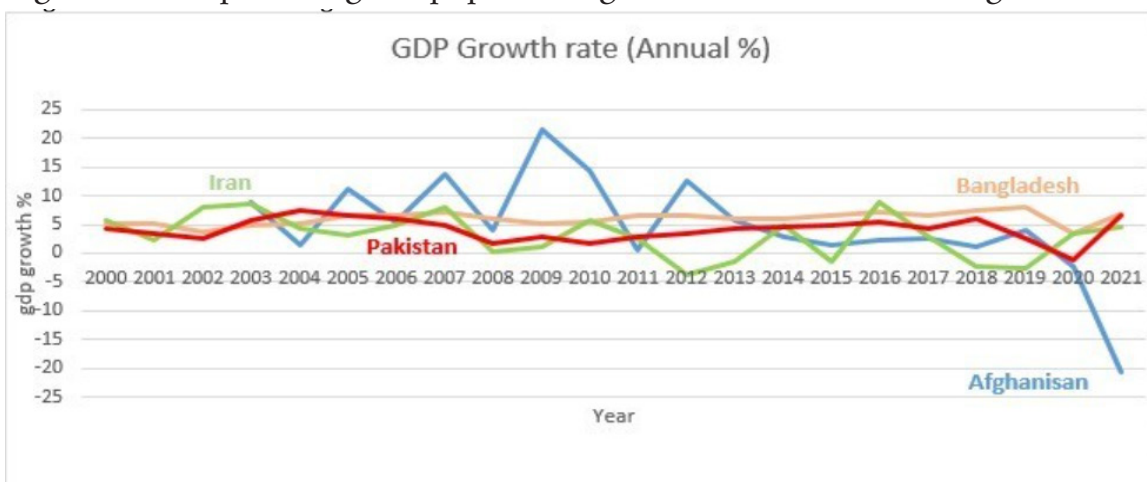


Fig. 10. GDP growth (Annual %) across all four countries over 20 years [24]

The GDP has fluctuated over the years, with the highest and sharpest fluctuation noted in Afghanistan. Afghanistan had the highest GDP growth of 21.4% in 2009 and the lowest of -20.7% in 2021. In Pakistan, GDP growth has fluctuated to a great extent, but the value of GDP noted in 2021 is the second highest in the past 20 years (i.e., 6.5 %). Pakistan has had the lowest GDP growth of -1.3% in 2020. The GDP growth in Iran is less than that in Afghanistan and Pakistan. In contrast, in Bangladesh, the fluctuation in growth rate is lesser than in the other three countries, and the growth is relatively constant and better than others (see Fig. 10).

Fig. 11. shows that while there is no data available on the world bank for Afghanistan before 2011, the available data points indicate a gradual increase in literacy rate till 2021, from 32.1 % to 41.6 %. Pakistan also gradually increased the literacy rate of female youth from 53.1% in 2005 to 65.5% in 2014. However, it stagnated until 2019, to a value of 65.2%. In Bangladesh, there is no consistently available data from 2000-2010; however, after a few fluctuations in the open data above from 2000 to 2007, there is a gradual increase in the literacy rate, coming to a constant rate of 95.9 % in 2020. The limited data on Iran indicates a stagnant literacy rate of 98.8 % in 2021. The available data shows that Iran and Afghanistan have the highest literacy rate, with Iran's literacy rate higher than that in Afghanistan. In comparison, Pakistan and Bangladesh have low literacy rates, with the weakest in Afghanistan in 2021 (41.6 %).

**Text Box** In Fig. 12., the GPI of secondary school enrolment in Afghanistan went from 0 in 2001 to 0.57 in 2018. Pakistan's GPI3 in secondary school enrolment was 0.8 from 2006 to 0.87 in 2019. From 2009 to 2013, it dropped by 0.06. In contrast, from 2000 to 2021, Bangladesh observed a GPI greater than 1, which went above 1.2 in 2021. For Iran, the ratio lay around 0.9 from 2001 to 2021. Bangladesh has the highest and most stable GPI (above 1) amongst all countries overall. While Iran's GPI has been below 1, it is still higher overall than Afghanistan and Pakistan. Pakistan has shown a gradual increase in GPI from 2004 to 2019. However, it has the lowest GPI among all four countries.

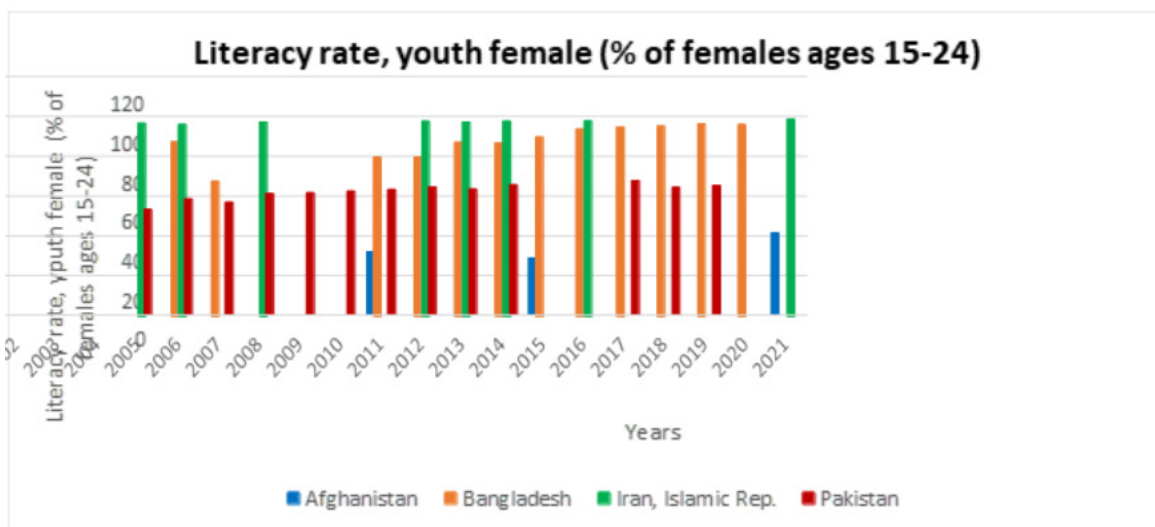


Fig. 11. Literacy Rate, Youth Female (% of females ages 15-24) across all four countries over 20 years [25]

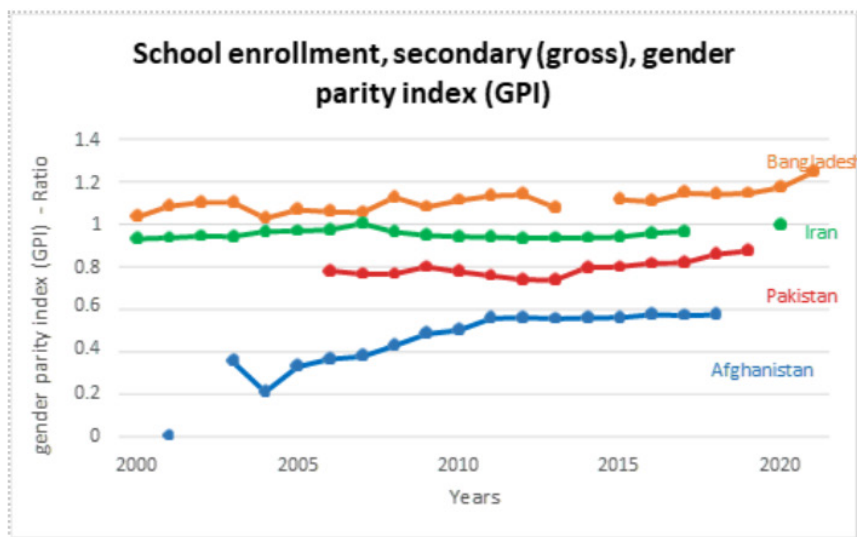


Fig. 12. School enrollment, secondary (gross), gender parity index (GPI) across all four countries over 20 years [26]

Fig. 13. shows that the adolescent fertility number in Afghanistan dropped from 152 births in 2000 to 84 births in 2020, while for Bangladesh, Pakistan, and Iran, it was 147 to 76, 74 to 43, and 35 to 30, respectively. Although Bangladesh lies above Pakistan in adolescent fertility numbers, it experienced a significant drop in the rate by 71 births, while in Pakistan, it was by only 31 births.



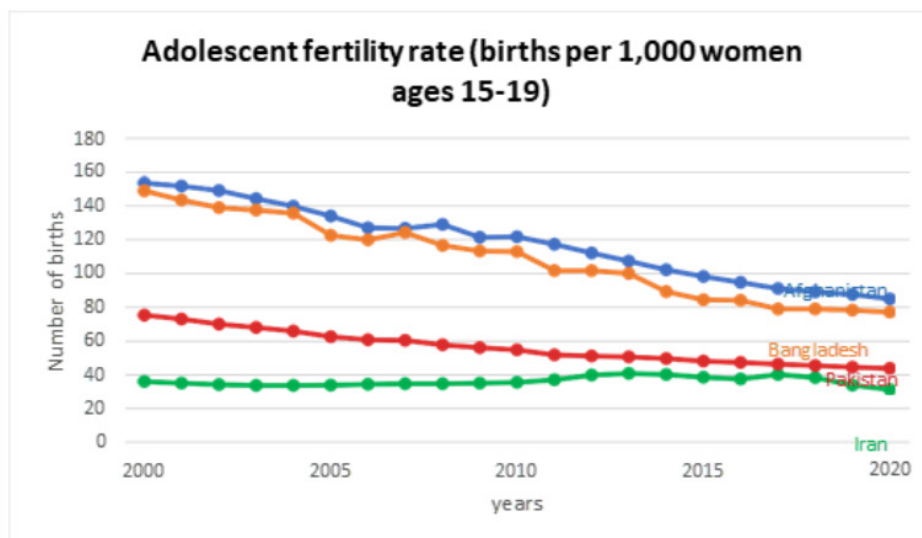


Fig. 13. Adolescent fertility rate (birth per 1,000 women ages 15-19) across all four countries over 20 years [27]

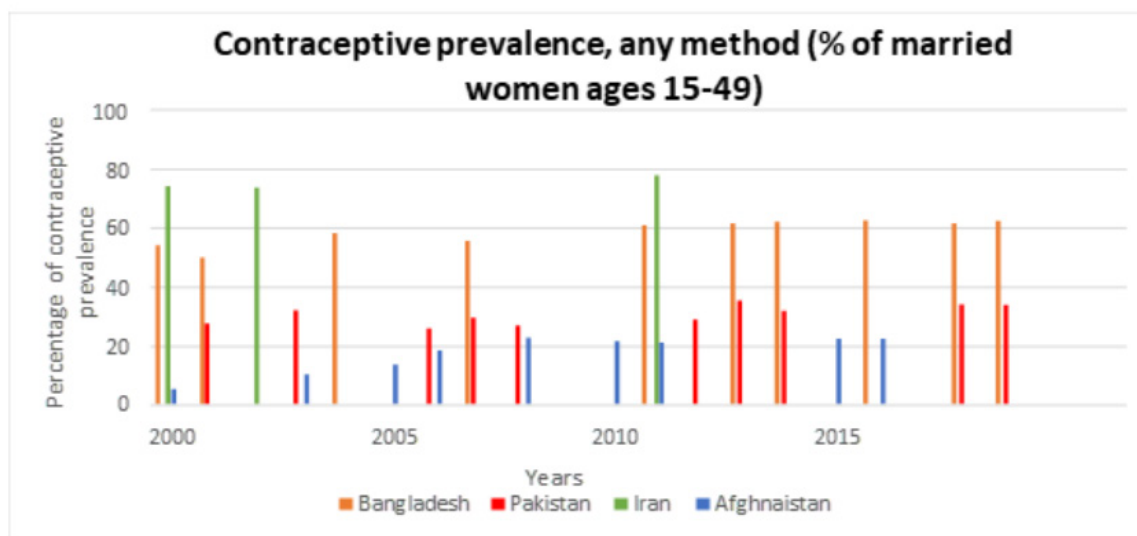


Fig. 14. Contraceptive Prevalence, any method (% of married women ages 15-49) [28]

Fig. 14 shows that the Contraceptive prevalence<sup>4</sup> among married women in Pakistan and Afghanistan lies under 40%. In Iran, fewer data points are available; the ones present show the percentage rises to almost 80%. From 2001 to 2019, Pakistan experienced a rise in contraceptive prevalence by just 6.4%, while in Afghanistan, the rate reached 22.5% from 5% between 2000-2008.

Fig. 15 has only one data point for Iran. Hence its pattern cannot be stated.

However, Iran had one of the highest percentages of women demanding family planning in 2011. From 2011 to 2018, the percentage of women seeking family planning in Iran and Bangladesh remained consistently around 70%, while in Pakistan and Afghanistan, it ranged between 40% and 50%.

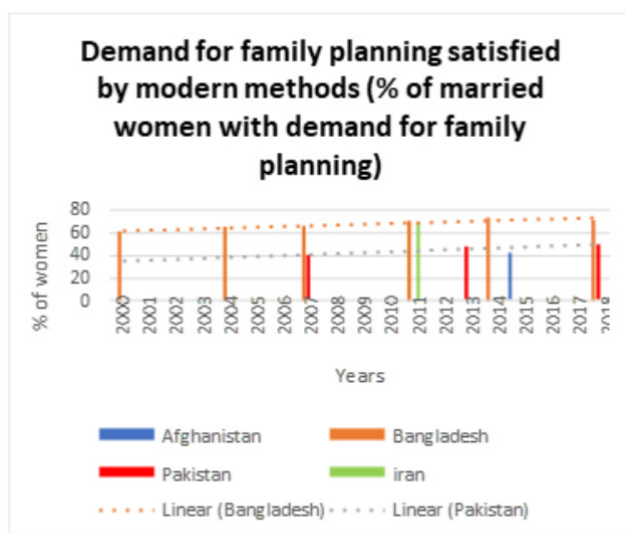


Fig. 15. Demand for family planning satisfied by modern methods across all four countries over 20 years [29] [33]

According to Fig. 16., the unemployment rate in Pakistan is nearly constant in the first ten years while increasing in the last ten years. Similarly, in Afghanistan, it is almost constant in the first 14 years, while it has grown over the previous six years. In Iran, the unemployment rate has fluctuated, but the value in 2020 is less than in 2000. However, in Bangladesh, it slightly increased in the first nine years but reached the same level as 2000 in 2010, and by 2020, the overall change in unemployment rate had risen by 2.5% from 2000 to 2020.



Fig. 16. Unemployment Rate (Annual %) across all four countries over 20 years [30]

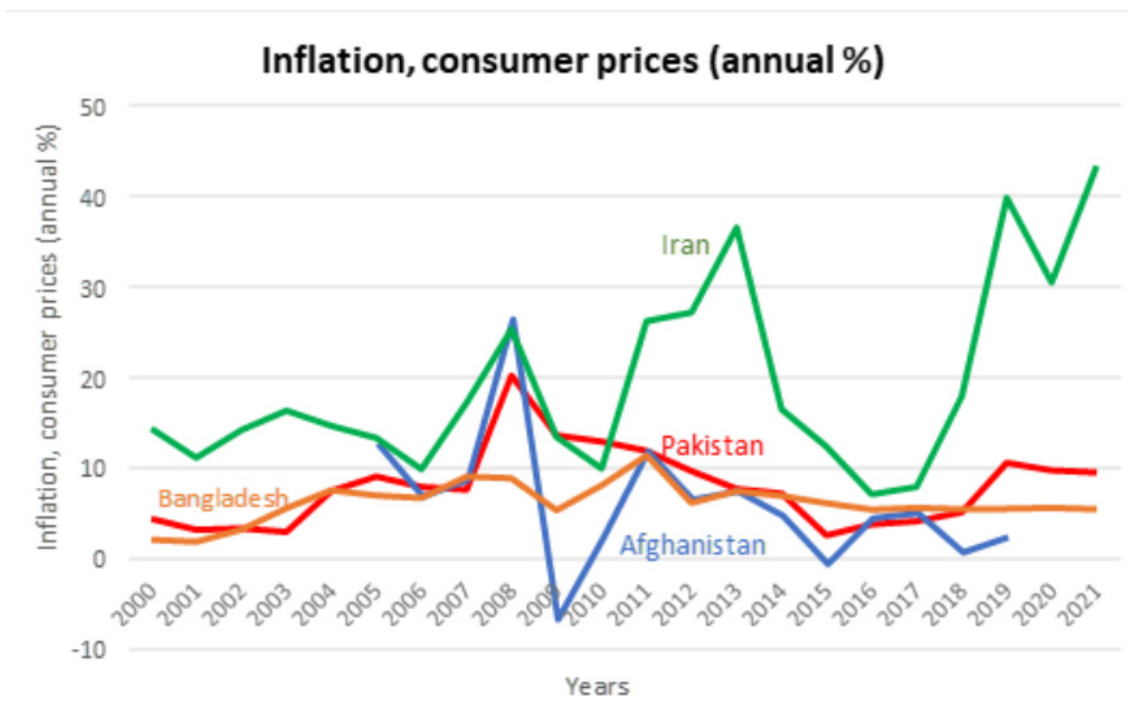


Fig. 17. Inflation Rate (Annual %) across all four countries over 20 years [31]

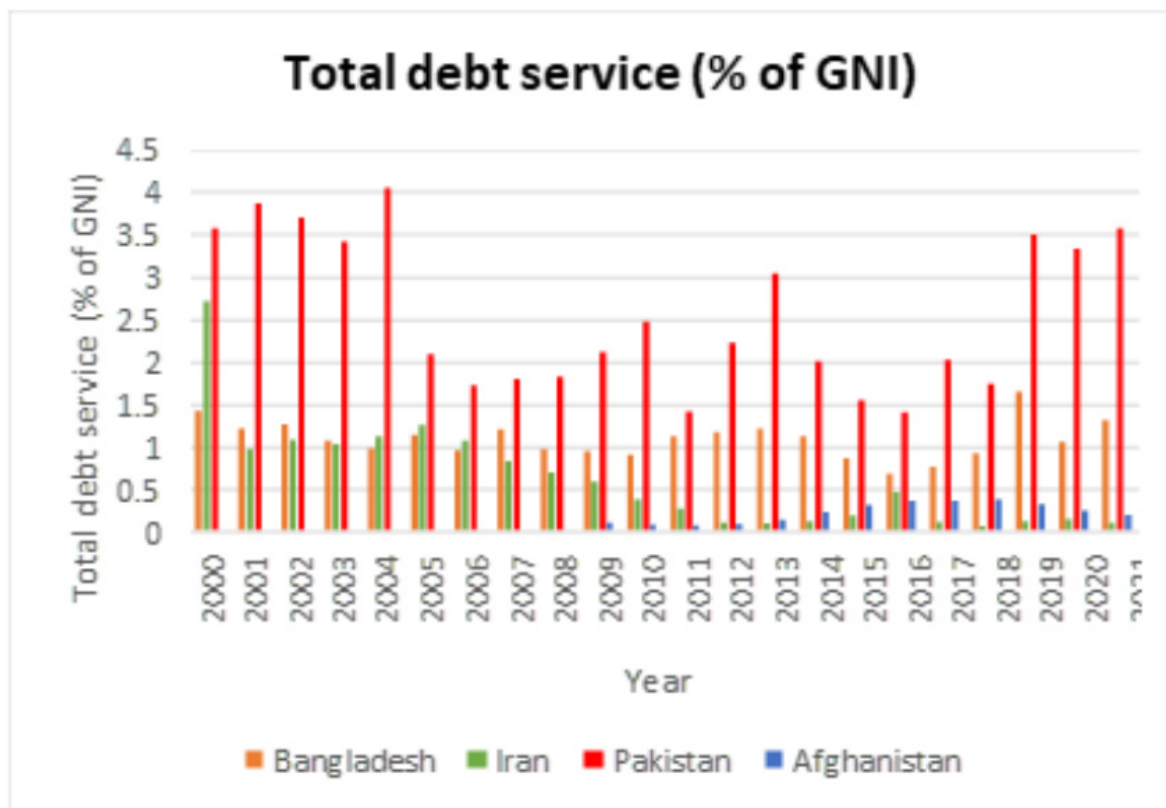


Fig. 18. Total Debt Service (% of GNI<sub>t</sub>) across all four countries over 20 years [32]

Fig. 17 shows that the inflation rate for all four countries fluctuated over the two decades. Pakistan experienced the highest inflation rate of nearly 20% in 2008, the highest in the past 20 years. The overall inflation rate for Pakistan has increased by approximately 5% from 2000 to 2021. On the other hand, Afghanistan has only 14 years of data available, with an extreme high of 26% in 2008 and a low of -6% in 2009. In Iran, the inflation rate has moderately increased over the two decades, rising from about 15% to 45%, suggesting a relatively stable but upward inflation trend. Bangladesh, however, shows an overall increasing trend in the inflation rate from 2000 until 2011, after which it decreased until 2021. Specifically, the inflation rate for Bangladesh has increased from about 2% to 6% over the past 20 years.

According to Fig. 18, Pakistan’s percentage of debt in any year is the highest among other countries; it reached about 4.1% in 2004. On the other hand, the total debt in Afghanistan in any year is the lowest, with the highest of 0.35% in 2016. In Bangladesh, it has not varied a lot and fluctuated around 1 to 1.5%,

the highest is about 1.6%, reaching in 2019, and the lowest went to 0.7% in 2016. The trend in Iran has decreased, with the highest value of 2.7% in 2000 and the weakest of approx. -0.1% in 2021.

## Discussions

Overpopulation has been a major global problem; however, in South Asia, the adversity of overpopulation has been intensely felt. To observe how significant the impact of female literacy is on overpopulation and how it, in turn, affected the economic conditions of Bangladesh and Iran, we analyzed various factors for GDP growth, early marriages, employment rate, and more. We drew out conclusions about how female literacy slowed down population growth. We also looked at the data of the same indicators for Afghanistan and Pakistan to observe the impact of the lack of female literacy on these countries' population growth and economy and draw comparisons with Iran and Bangladesh.

Population growth trends for Bangladesh, Iran, Pakistan, and Afghanistan are shown in Fig. 1, revealing a gradual decrease in population growth for the former three countries. At the same time, Afghanistan has experienced an increase from 1.5% to 3%. In comparison, Fig. 2 depicts the GDP growth trends for these countries over 20 years, revealing a significant decrease for Afghanistan from 9% in 2003 to -20% in 2021, connoting that population growth harms a country's economy. Since education has a crucial role in economic conditions, both males and females must partake in the education and employment sector for a better economy of a country.

Fig. 9 shows that the female literacy rate in Afghanistan and Pakistan decreased, leading to less exposure to sex education, contraceptive prevalence, and family planning. Moreover, Fig. 5 shows that the adolescent fertility rate of these countries is increasing, which shows that as the female literacy rate decreases, the fertility rate increases, resulting in steep and high changes in the population. On the other hand, with the rise in female literacy in Bangladesh and Iran, the countries' fertility rate is increasing, and the countries' population is constant.

We researched a few indicators, including Inflation Rate, Total Debt, and Unemployment Rate, to see the literacy rate's effect on the country's economy. According to the trends acquired in Fig. 16, the unemployment rate in Pakistan and

Afghanistan was constant in the first 10-14 years, declaring that the government has not catered much to the worsening situation. However, in Bangladesh, the overall change in the unemployment rate is not significant in the past ten years, which shows that the country has controlled its lack of employment. We were unable to compare these trends with that of literacy rate due to fewer data points of literacy rate for every country.

As per Fig. 17, Pakistan, Bangladesh, and Iran have been facing constant inflation for the past years, while Bangladesh has controlled its inflation rate, declaring that having control over unemployment can lead to a decrease in the inflation rate.

An increase in inflation can result in a lack of resources in a country, which leads to taking loans from external sources and an increase in the country's debt. High levels of total debt service as a percentage of GNI can indicate a country's financial vulnerability. The trends in Fig. 18 show that Pakistan has a very high rate of debt, showing that it is financially unstable. However, it is relatively low in Bangladesh, Iran, and Afghanistan.

To analyze if an increase in inflation and total debt can result in the downfall of a country's economy, we calculated the GDP growth for Pakistan, Afghanistan, Iran, and Bangladesh. The fluctuation in GDP growth, as per Fig. 10, indicates that the economy of Afghanistan and Pakistan is unstable, which is why they change significantly with any minor difference. On the other hand, the economy of Bangladesh and Iran are comparatively stable, resulting in smoother and more regular graphs.

## Conclusion

After analyzing our data, we noted that with an increase in female literacy in Bangladesh and Iran, adolescent marriage rates decreased, and contraceptives increased, leading to population control. Moreover, as a result, more women participated in the countries' workforces, resulting in a constant and stable trend in their economies. On the other hand, the female literacy rate in Pakistan and Afghanistan decreased over the years while their population grew, resulting in unstable economies. Hence, through the research, our hypothesis, 'to



find out if an increase in female literacy rate positively impacts the economy and negatively impacts overpopulation,' is proven valid and correct.

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# THE MALE GAZE IN MODERN URDU LITERATURE AND THE IMPACT ON THE SOCIAL IDENTITY, AGENCY, AND SEXU- ALITY OF FEMALE LITERARY CHARACTERS

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## Abstract

Within modern Urdu prose, male writers have formed portrayals of female literary characters in various ways, some more realistic than the other. By using the definition of the “gaze”, as established by John Berger et al.’s formative book *Ways of Seeing* (1972), as well as the definition of the “male gaze”, as established by Laura Mulvey in her seminal essay titled “Visual Pleasure and Narrative Cinema” (1975), prominent themes within Urdu-language short stories and novellas by male writers are identified and interpreted in the form of thematic literary analysis. Through this analysis, it is determined that male characters, written through the male gaze, play a significant role in impacting the social identity, agency, and sexuality of the female literary characters present within these stories.

Keywords: Male Gaze, Patriarchy, Short Story, South Asia, Urdu



## Introduction

From European oil paintings depicting the nude female form to South Asian cinema objectifying women through song and dance, the male gaze has dominated the narrative of various art forms throughout history. The term has, without fail, shifted across every creative outlet, including literature. Therefore, this research paper shortlists modern South Asian short stories and novellas, originally written in the Urdu language, that present male characters whose behavioural patterns and thought processes are dictated by the male gaze, to shed light upon how the formation of these male characters impact the social identity, agency, and sexuality of female literary characters. The selected stories are Rahman Abbas's "Asexual," Saadat Hasan Manto's "Open!," and Hasan Manzar's novella *Rocking Chair*. By confining the selected stories to those written by male writers, the definition of social identity, agency, and sexuality of these female literary characters can be explored through the identification and analysis of literary themes while staying within the realm of the male gaze as perceived by the male writer.

### The Interlink Between the 'Gaze' and Patriarchy—Formation of the Male Gaze

The relationship between what one sees and how one perceives is an ever-changing one. When a child arrives in this world, they inspect and recognize their surroundings and their loved ones before they have even learned the words to describe what and who they are seeing. As John Berger et al. established in their formative book *Ways of Seeing* (1972), the act of seeing "establishes our place in the surrounding world; we explain that world with words, but words can never undo the fact that we are surrounded by it" (p. 7). This act of seeing is a wholly physical one, resulting in the gaze that every human being exhibits. However, the physicality of the gaze also brings about long-term cultural, social, and bodily implications. This is a consequence of every human being gazing at a person or a situation in their own manner. Their perception, brought about by the gaze, depends primarily on what one already knows and their moral, cultural, and religious values. Therefore, the gaze that belongs to the majority has fundamentally impacted the symbolic meaning-making process that has taken place in today's world through mediums such as photography, cinema, and music.

Feminist film theorist Laura Mulvey subsequently terms this way of seeing, as



described by Berger et al., as the “male gaze” in her seminal essay titled “Visual Pleasure and Narrative Cinema” (1975). Mulvey states that in a patriarchal world driven by a monolithic view of gender and cultural identity, this gaze has been divided into a dichotomy of active/male gaze and passive/female representation (Mulvey, p. 808). Furthermore, it was not until the coinage of the term “male gaze” by Mulvey that the gaze’s patriarchal roots became deeply embedded in the female representation within various mass-consumed art forms, including literature. Within her essay, Mulvey includes a psychoanalytic introduction to the male gaze as well, including Sigmund Freud’s concept of scopophilia, which is defined as a component of sexuality that exists primarily as the physical act of gazing, “subjecting them to a controlling and curious gaze”, to attain sexual or aesthetic gratification from the act (p. 806). Moreover, Berger et al. describe the phenomena of a woman having two constituent yet distinct elements of her identity—the surveyor and the surveyed. The gaze is a physical exercise reducing the female being into a submissive object brought under the gaze’s control. This subsequently controls her behaviours and the character traits that are exhibited while presenting a claim necessary to carry out the thematic analyses in the proceeding sections: “How to fight the unconscious structured like a language (formed critically at the moment of arrival of language) while still caught within the language of the patriarchy” (Mulvey, p. 804).

## The Male Gaze and the Reckoning of Identity

A recurring trope within Urdu short stories written by male South Asian writers is of the male protagonist observing the female protagonist from afar, the acknowledgment of this female character marking the turning point of the narration to focus intently upon the female’s behaviour and attitude. This change in narration encompasses the male character’s thoughts that ensure the objectification of the female character as a result. A marked feature of this trope is the reckoning of social identity that takes place for the female character, solely through the eyes of the male protagonist. Observing the female character from afar, the male character’s thoughts assume everything about the female character, ranging from important aspects of one’s life such as one’s character traits, ambition and goals, and sexual preferences, to more trivial aspects such as one’s favourite food to eat. However, the legitimacy of these assumptions, in serious and non-serious capacities, is diminished once it is realized that they

are rooted in the male gaze. Toward the end of the story, the male character approaches the female character and finally converses with her, finding out that the presupposed image he had painted of her in his mind was not completely accurate. The revealed truth of the female character is also seen through the lens of the male gaze, as the self-proclaimed identity of the female character is, more often than not, driven by patriarchy.

A prominent example of this trope can be seen in Rahman Abbas's short story titled "Asexual". The story follows Shahid Iqbal, a young man enrolling in a college in Mumbai, where he quickly befriends his peers and professors alike. Abbas, as he sets up the premise for the short story, narrates through the perspective of the male protagonist, as Shahid wonders why "this city was sitting on the sizzling fuse of a firecracker whose heat from inside the surface was turning the roads hot" (Abbas, p. 157). As the college reopens for a new academic year, Shahid arrives to class late. He feels rooted in place at the threshold of the classroom, as if his shoes were stuck to the softening tar of the roads on an exceptionally warm day. This sensation of being stuck in place by hot melting coal, or even the imagery Abbas paints of Mumbai as a city inherently warm and "sizzling", serves as foreshadowing for how the remaining short story pans out. The male gaze paints sexual sensation as an experience so heated that the man engaged in this act is stuck solely to it as a body over emotion, similar to how a shoe sticks to softening tar until one physically pulls away. Even then, the indication of a physical presence in the form of an embedded footprint, or the traces of touch driven by the male gaze, are left behind long after the act is completed. Therefore, this imagery stands in contradiction to the title of the short story itself. However, readers are prepared for future events—as indicated by the narrative foundation smoothly laid down by Abbas—when the character of Tasneem Deshmukh is introduced on the second page.

While one's sexual orientation, more often than not, lies on a spectrum of sexual orientations, asexuality is generally defined as one who experiences a lack of "sexual attraction for others (although perhaps not lack romantic attraction), along with lacking additional sexual processes (e.g., no sex drive)" (Bogaert, "The A, B, C, and Ds of Sex (and Asex)", p. 23, 2012). Tasneem Deshmukh is asexual. However, the physical act of seeing, as carried out by Shahid, turns Tasneem into a presence to be reckoned with through the perspective of the male gaze. As Berger et al. explain in *Ways of Seeing* (1972):

*One might simplify this by saying: men act and women appear. Men look at women. Women watch themselves being looked at...The surveyor of woman in herself is male: the surveyed female. Thus she turns herself into an object—and most particularly an object of vision: a sight (Chapter 3, p. 47).*

This imbalanced dynamic determines that a man's behaviour is driven by his ability to provide, whereas a woman's behaviour is driven by her ability to internalize and adapt to the behaviour of men, focusing on what can be done to her and for her (Berger et al., 1997, pp. 45–46). This is the determining factor behind not only establishing a relationship of any nature between a man and a woman, but also establishing the extent to which this relationship impacts a woman's behaviours and character traits as a result. This impact is driven by patriarchal beliefs. While Shahid is combating hidden sexual desires despite attempting to detach himself emotionally from Tasneem (Abbas, p. 160), she is experiencing a conflict within herself about the lack of desire she feels. Hence, when Tasneem witnesses a waterfall on a college picnic trip, she describes it as "beautiful but bereft of purpose" (Abbas, p. 161). She says, to symbolize the fleeting desire, if any, that she feels: "The water that we see falling, it doesn't stay in the same place the very moment we see it" (Abbas, p. 161). Due to this instance, when Tasneem describes herself as a "dry river" (Abbas, p. 171), her state of feeling incomplete becomes more impactful. Moreover, Shahid's entrance into her life changes her behaviour towards him, as she begins to form an association with him in particular—a male classmate who shows special interest in her. It is her subconscious internalization (women appear) of what Shahid provides for her through his attention (men act) that results in her confession: "No. Rather it is true that I identify myself through you [emphasis added]" (Abbas, p. 166).

At the beginning of the story, Shahid's female partner foreshadows the prevalent theme of assumed social and personal identity that leaves readers questioning Shahid's true intentions toward the story's conclusion. She reasons with Shahid as he expresses his insecurity about Tasneem not interacting with him or participating in mutual activities, a set of behaviours he had come to expect from all his peers: "That's her wish. Don't assume [emphasis added] that she thinks of you as her adversary" (Abbas, p. 158). The words of Shahid's partner reflect literary historian Rakhshanda Jalil's concluding remarks on the short story, highlighting the question lingering in a reader's mind long after the story has concluded: "What if a woman is self-avowedly asexual? What if she is willing to be a man's friend and companion but nothing else? Will the male gaze continue to

peer and prod looking for something that does not exist?” (Introduction, 2018, p. 18) The male gaze views sexual sensation as the only valid form of intimacy, taking precedence over the emotional intimacy experienced through friendship or simply any bond created between two people of the opposing biological sex that is out of the realm of sexual intercourse. This is especially evident when Shahid and Tasneem share a dip in the sea. When Shahid apologizes to Tasneem for accidentally touching her breast while they were splashing about, Tasneem says: “I didn’t feel a thing...I don’t feel anything” (Abbas, p. 169). Shahid looks past this statement, which sounds quite odd in the moment they were sharing, and continues to share a sexual relationship with his partner while developing an emotional connection with Tasneem. Therefore, when a female literary character, such as Tasneem in this argument, says “I don’t feel any need. I’m a dry river” (Abbas, p. 171), the male character regards this as a suggestion for them to take the situation upon themselves to navigate, a situation that the female character may not wish to have navigated to begin with. The phrase “dry river” is perceived to be caused by a drought, a void in sexual intimacy experienced by the female character, rather than it being how the female character is or chooses to be. As a result, Shahid invades this space of sexual intimacy that Tasneem has kept locked away, attempting to fill this dry river even when there’s no reaction shown by Tasneem when Shahid holds her hands (Abbas, p. 171). In the case of Rahman Abbas’s short story “Asexual”, Shahid accounts for Tasneem’s distant nature to be caused by her distaste for him rather than her sexual orientation. However, this assumption of social and personal identity, as driven by the male gaze, impacts every aspect of a woman’s life.

## The Male Gaze and the Politicization of the Body

Dharti-maan, maadar-e-vatan, and motherland are some of the feminine nouns that have been used throughout history to refer to land, any land, that houses citizens and is ruled by a governing body. An example of such a land was the Indian subcontinent, home to a growing population of Muslims and Hindus under colonial rule. The use of these feminine nouns set the foundation for the subcontinent’s history, where the female body has been instilled with the values of nationhood, loyalty, and community. While this aspect in the history of nation-building could be perceived as presenting women with an elevated sociopolitical status, the symbolism of any real being, advertently or not, causes

the objectification of that being. Moreover, this process of objectification of the female body is further driven by the commodification of the concept of nation-building and cultural identity. Commodities are meant to be traded and sold. Inevitably, the female body becomes a means of this exchange between nationhood and identity (Spivak, 1990, p. 803), as witnessed in the aftermath of the partition of British India. This exchange results in the politicization of the female body, a perpetual cycle with no definite means of escape. During colonial rulership, the cultural identity of the women of the subcontinent was being questioned by the white figures of authority as being unrefined or underdeveloped. After decolonization, there was an incessant pressure to revert to their original cultural identity, especially in light of the growing communal tensions between Muslims and Hindus. Therefore, women are in a state of uncertainty “within a divided loyalty: being a woman and being in the nation, without allowing the West to save them” (Spivak, 1990, p. 803).

Within this process of decolonization witnessed through the male gaze, the chadar or dupatta is a repeated motif in Urdu prose and poetry with a strong connection to one’s cultural identity. This motif further highlights the communal and nationalist values that have been embedded within the female body. A chadar or dupatta is a way for the female body to be concealed or unconcealed at the urge of the male authority figure, be it the colonial ruler or the communal ruler. This aspect of the female cultural identity strengthens the control the male gaze has on the female body, consequently resulting in the female body being used throughout political turmoil as a tool to carry out communal revenge. This revenge is exhibited in the form of abduction, torture, and sexual assault. Saadat Hasan Manto’s “Open!” (“Khol Do”) serves as a notable example of this theme.

Manto’s “Open!”, like many of his other most impactful short stories, is set within the premise of pervasive communal violence and rioting taking place during the partition of British India into two independent states. A train journey from Amritsar to Mughalpura has taken much longer than usual, and upon its fateful arrival, those who have survived have busied themselves in a fervour to find their missing child, or their “mother, wife or daughter” (Manto, p. 81). When Sirajuddin awakens after the tumultuous train ride and finds himself on the floor of a refugee camp, he remembers his young daughter, Sakina. The foundation for the female self as a medium of survival and revenge is established when Sirajuddin recalls the last words of his wife: “Leave me, but take Sakina and run. Quickly!” (Manto, p. 82). This medium is carried forward to the reader’s



first introduction of Sakina, who is running barefoot with her aging father to escape the riots that took away her mother. As they are running, Sakina's dupatta slips off and falls to the ground, a ground covered with the blood of those who lost their lives moving from one form of oppression to another. Here, Manto utilizes the motif of the dupatta to indicate the link between cultural identity and honour that Sirajuddin associates with this piece of cloth. It is when this piece of cloth is viewed through the male gaze, Sirajuddin's gaze, that this connection with the female body is established. Each step forward taken by Sirajuddin and his daughter can be the step determining their fate and whether they escape or succumb to the riots. However, Sirajuddin pauses midway to pick up Sakina's dupatta, despite her urges not to. Once Sirajuddin awakens at the camp, Sakina's dupatta is all that is left behind on his person.

When eight male volunteers agree to assist in the search effort to find Sakina, Sirajuddin's hope, which had diminished after witnessing his wife's brutal killing, is reignited once more. However, this hope proves to be misplaced since Sirajuddin's desperation to find his daughter, who "has a fair complexion and is very beautiful" (Manto, p. 82), blinds him to the ruthless reality of a group of men searching for a young girl amid the partition. A chilling parallel is drawn when, after Sakina is finally found on a road near Chheharta, one of the volunteers offers Sakina his coat since she was feeling uneasy without her dupatta and "was trying unsuccessfully to cover her breasts with her arms" (Manto, p. 83). Such gestures, which appear kind and harmless at first glance, carry grave implications. The transference from the dupatta to the man's coat signifies the transference of any identity and autonomy Sakina is left with to be possessed by this man, resulting in repeated sexual assault. Conversely, Sirajuddin experiences an opposing journey where his daughter's safety begins to take precedence over the loss of her dupatta. Therefore, when Sirajuddin identifies the body of a young girl at the hospital as Sakina, the change in the reality of both father and daughter becomes highlighted. Therefore, the doctor's words "Open the window" (Manto, p. 84) mean very different things to Sirajuddin and Sakina. For Sirajuddin, when Sakina bleakly lowers her shalwar, it is enough confirmation that his daughter is alive and still sustains meaning in his life, despite her dupatta lying abandoned. For Sakina, however, the lifeless movement of her body is a performance of the medium of exchange, an exchange that exacts revenge on the motherland to secure one's national and cultural identity.



## The Male Gaze and Female Emancipation

Various male Urdu-language writers have emerged over time, such as Krishan Chandar, Rajinder Singh Bedi, and Saadat Hasan Manto, who have become accredited with providing their female characters with a more realistic voice, as opposed to the “cosmetic, unnatural, almost fictionalized depictions of women that Urdu readers had hitherto encountered” (Jalil, “Introduction,” 2018, p. 9). Hence, it is a great stride within the realm of South Asian literature for such portrayals of female characters to be celebrated. One such example of a realistic portrayal of female characters is seen within the story-telling of Hasan Manzar’s novella *Rocking Chair*.

Manzar’s *Rocking Chair* draws a parallel between two sisters, Baji and Yalda. While Baji remains unveiled, uses her education to better her life, and finds companionship in like-minded Habib Sahib, Yalda remains fearful of what might happen if she stopped surveying herself through the eyes of her manipulative and disparaging partner Ibn Hasan. Ibn Hasan exercises complete freedom in his life, from where he can work, what he can consume, as well as his travels to England where he met Englishwomen who “after all were no more than recreation, and so quite harmless” (Manzar, p. 237). He also initiates all physical intimacy with Yalda, the first instance involved him coercing Yalda for a kiss as a bribe to get her cherished bicycle overhauled at the workshop—a male-dominated space Yalda could never visit herself, hence, not having a choice to begin with. This instance of coercion, the first of many experienced by Yalda at the hands of Ibn Hasan, made Yalda firmly believe that “she was in Ibn Hasan’s power—perhaps for life. There was an element of regret in this new-found pleasure” (Manzar, p. 231), a pleasure that was being used as a weapon for destruction.

Moreover, the contrasting behaviours and attitudes towards emotional and physical intimacy exhibited by both Yalda and Ibn Hasan determine how “the sex role system divides human experience; men and women live in these different halves of reality; and culture reflects this” (Firestone, 1970, p. 165). However, it is their wedding night, an anticipated event by Yalda to free herself from the immense guilt she experiences from being intimate with Ibn Hasan before religiously permitted, that shatters her mental prison. When Ibn Hasan says to her, “Aren’t you going to change? Take off your jewelry, you’ve played the bride

long enough!” (Manzar, p. 246), realization dawns upon Yalda. This realization is soon replaced by a sense of urgency for regaining autonomy over herself, many years after Bajji would question her irritably: “Why can’t you get rid of him silly girl, and live a more purposeful life?” (Manzar, p. 225) Yalda had spent her youth grasping onto the guilt of being with a man she was not married to, without realizing that for the man, it was not the marriage but the four walls they found themselves in—be it their bedroom or the dark back rows of a near-empty cinema hall (Manzar, p. 251):

*I used to believe that chastity is the name of a piece of skin, and if somebody has the ill luck to lose it, the only thing she can do to regain it is to hand over her whole life to the person who deflorated her, which was why I had to endure this evil spell, knowing full well what he is (Manzar, p. 263).*

As Tasneem Deshmukh from Rahman Abbas’s short story “Asexual” describes herself as a “dry river” (Abbas, p. 171), Yalda instead breaks away from the destructive patterns and questions of identity that Ibn Hasan has imbued their relationship with throughout the years. She says to Ibn Hasan:

*There is nothing new in me for you, and what there is, is beyond your reach. You felt nothing because your life has stretched as much as it could. After the season of rains is over, the water that is left behind will stagnate and putrefy. My life is a flowing river. It cannot end in this house [emphasis added] (Manzar, p. 271).*

This point in the novella serves as a significant marker for Yalda unchaining herself from her self-inflicted shackles, recognizing herself to be a free adult woman for the first time since Ibn Hasan manipulated her consent to receive physical intimacy as a vulnerable teenager. Yalda not only frees herself from Ibn Hasan, but frees herself in her own life, taking her beloved rocking chair back home as a prominent signifier of her new-found freedom. This is why Manzar’s Rocking Chair and the character of Yalda are groundbreaking additions to the world of modern South Asian literature written by male writers. The novella showcases that the male gaze the male writer exhibits can be adjusted from within to progress away from detrimental ideas of virility and gender dichotomies.

## Conclusion

As witnessed in the sections of thematic analysis, modern Urdu stories and novellas have covered themes such as the assumed social identity of female characters through observational narration, the uncertainty of the position of a wife and mother in a patriarchal society, consensual and coerced sexual conduct, and the emancipation of a character recognizing the lasting patterns of abuse exhibited by her romantic partner. Therefore, it is determined that male characters, as written by male writers, contribute to the definition of social identity, agency, and sexuality of these female literary characters. This contribution not only restricts the agency and autonomy of female characters within literary narratives, but also reinforces prevailing societal norms and expectations placed upon women in reality. Such representations contribute to the marginalization and subjugation of women, perpetuating a cycle of gender inequality and reinforcing patriarchal structures. In turn, these entrenched stereotypes and societal expectations shape how women are perceived and treated in various social contexts, perpetuating gender biases in real-world contexts.

Throughout history, the portrayal of female subjects has remained restrained to two extremes, either as the transcendental mahbuub (beloved) within the bounds of the classical Urdu ghazal, or the precarious wife losing her sense of self due to the societal roles she is expected to master. These portrayals play a significant role in the alienation of the female surveyor from within herself. By depicting women primarily as idealized symbols of love or constrained figures confined to traditional societal roles, literature perpetuates narrow and limiting stereotypes. An appropriate way forward would be to encourage literary works that contain realistic portrayals of the female psyche, create situations where the female character exercises agency through a gray perspective, and allow for situations that demystify the female body as seen through the male gaze. Examining and challenging these portrayals in literature is crucial for fostering a more inclusive and equitable society where women's voices and experiences are authentically represented and valued. The female literary character must reside within the same sociopolitical conditions as the male protagonist to harbour a realistic portrayal. Until the male characters within South Asian literature view the female characters as occupiers of the same world that they occupy, the shackles of the male gaze will never be broken. As revolutionary Urdu poet Asrarul Haq Majaz puts it:

بتاؤں کیا تجھے اے ہم نشیں کس سے محبت ہے

میں جس دنیا میں رہتا ہوں وہ اس دنیا کی عورت ہے

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*Bataoon kya tujhe ai ham-nashin kis se mohabbat hai*  
*Main jis dunya mein rahta huun woh iss duniya ki aurat hai*

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What shall I tell you, my friend, of the one I love  
She is a woman of the same world I live in

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Asrarul Haq Majaz, Kis Se Mohabbat Hai

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## MATERNAL EXPERIENCES AND PERCEPTIONS OF THEIR CHILD'S SPEECH DIFFICULTIES: A PAKISTANI CASE STUDY

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### Abstract

Motherhood presents unique challenges for any mother. However, these challenges seem further amplified for mothers of children facing speech and language difficulties. Globally and locally, understanding such maternal experiences remains a largely unexplored domain. The present exploratory case study, to the best of our knowledge, is the first in its attempts to offer insight into the complexities of a Pakistani mother's experience of raising a child with speech delay. Employing a single-subject study design, the study utilizes in-depth, structured interview protocols and qualitative content analysis for data collection and analysis. The scope of this study does not limit its insights into maternal experiences of raising a child with speech and language delay only, additionally addressing aspects of child and maternal mental health. Furthermore, the present study also discusses critical barriers to intervention within the Pakistani context, addressing the challenges of bilingualism and the need for culturally relevant assessment tools. Findings implicate important contributors to dyadic mental health, with religious coping as the primary protective factor that facilitates hope within Pakistan's collectivistic, multi-cultural landscape. Building onto extant literature, this study attempts to contribute to avenues for policy-making, intervention, and further research, especially within the Pakistani context.

Keywords: Maternal experiences, Child and maternal mental health, Speech delay, Language difficulties





## Introduction

According to the Diagnostic and Statistical Manual for Mental Disorders (DSM-5), speech challenges can occur due to either an impairment in speech articulators (mainly tongue, lips, teeth, and jaw) or an inability to comprehend rules and the formulation of speech. Nugraha et al. (2019) postulate that at least 3-10% of children in the United States experience speech challenges. However, the data for low and middle-income countries (LAMICs) such as Pakistan is scant due to underreporting and associated stigma. Nonetheless, the documented disadvantages and complications encompassing speech and language difficulties in young children are mammoth. These may include low academic achievement, lower IQ, social exclusion, bullying, and adjustment challenges, among other difficulties (Nugraha et al., 2019). A recent meta-analysis reveals that parent-implemented language interventions for children facing speech-related challenges could be effective (Heidlage et al., 2019), thus highlighting the role of parents in this regard.

Globally, the assessment and intervention approaches for language disorders, like aphasia, have been criticized for their limited appropriateness for culturally and linguistically diverse populations, often favoring individuals from English-speaking backgrounds (Mellahn et al., 2021). This concern is underscored by research conducted in Pakistan, where speech pathologists encounter challenges due to the absence of an aphasia assessment tool in Urdu, relying instead on informal assessments (Badar et al., 2021). Research by Pert and Letts (2006) highlighted the common practice of code-switching, which refers to the process of alternating between different languages in a conversation among bilingual children of Mirpuri-speaking Pakistani heritage. This linguistic complexity suggests a pressing need for assessment tools for speech and language problems that can account for such multifaceted linguistic and cultural considerations. Adding onto this is our post-COVID-19 environment; amidst the pandemic, Speech-Language Pathologists (SLPs) faced challenges in treatment and prompted a shift to telepractice. In Pakistan, telepractice was found to be less effective than face-to-face services but still provided essential support, highlighting the adaptability of SLPs in navigating unprecedented circumstances (Akram et al., 2021).

In the absence of culturally sensitive diagnosis and treatment in Pakistan for individuals with linguistic challenges, their caregivers face numerous consequences, including mood disorders, distress, burnout, and disruptions to their social lives.

These difficulties can have severe consequences for parents, as demonstrated by a systematic review conducted by Morales et al. (2023). The review found that maternal depression is associated with internalizing, externalizing, and social competency problems in children. Given these implications, it is imperative to conduct more in-depth research into maternal experiences and perceptions related to their child's speech delay. This will help uncover the underlying thought processes of mothers contributing to the resultant issues in their well-being..

## Background

In light of extant literature, it must be acknowledged that understanding the complex interplay between various factors leading to speech and language development difficulties in children remains a challenging feat. Interconnected maternal and child-specific factors, amidst broader general factors, further complicate the bidirectional relationship of factors individually and collectively impacting the mother-child dyad.

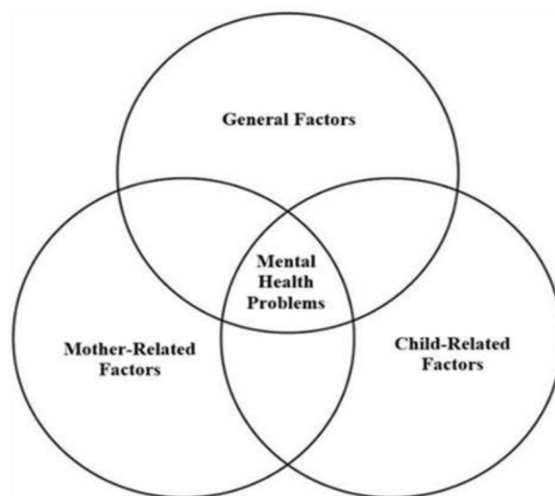
According to some studies, speech delays in children are rooted in neurological effects, with studies linking these pathogenic biological variations to gene USP7, causing speech delays and neurodevelopmental conditions (Fountain et al., 2019). These variations are consistently correlated with abnormalities in the white matter within the corpus callosum, which is crucial for brain communication. Additionally, several researchers posit that speech delays may be a precursor to various disorders, like selective mutism or receptive aphasia, leading to worsening psychiatric and developmental concerns as the child ages (Miniscalco et al., 2006; Shetty, 2012).

In view of the foregoing, researchers continue to discuss the important role of risk and protective factors in the development of speech and language-related difficulties. Risk factors for children, in this case, refer to conditions that increase the chance of a child presenting with speech- language disorders. In a crucial study by Molini-Avejonas et al. (2017), several different factors were identified as risk factors associated with speech and language difficulties in children. For instance, a family history of language change places children at risk for such difficulties during the prenatal period. Furthermore, maternal use of drugs, alcohol, or tobacco during pregnancy is also a substantial risk factor. During the perinatal period,

prematurity poses a risk of the child developing communication challenges. The researchers also added that in the postnatal period, excessive hospitalizations act as a known risk factor since they deprive the child of adequate stimulation. Other researchers posit that genetic, neurological, and psychiatric conditions also entail language difficulties, whereas chronic diseases are risk factors for children's speech-related challenges (Harrison & McLeod, 2010). Moreover, longitudinal studies show increased rates of auditory and linguistic deficits, psychiatric disorders like social phobia or anxiety disorders, and developmental issues in children with speech delays (Beitchman et al., 2001).

In contrast to this, protective factors that reduce the risk of a child developing linguistic challenges notwithstanding other circumstances include a number of factors as detailed by Harrison and McLeod (2010) in a critical longitudinal study exploring risk and protective factors associated with speech and language impairment in preschool children. A child's temperament being persistent and sociable were identified as key protective factors. Additionally, maternal well-being also relates to positive language outcomes for the child. Parental relationship happiness had a similar impact, and so did parenting self-efficacy. Lastly, the researchers found that parental involvement and stimulation also enhanced the linguistic outcomes of children.

Ongoing research highlights the multitudinous effects on child development that can occur due to a speech or language delay, further owing to biological, cognitive, and socio-emotional consequences (Burnley et al., 2023; Langbecker et al., 2020; Le et al., 2020). However, there is a dearth of research that identifies the precise link between emerging mental health issues and specific maternal or child-related factors – both in the context of the mother and child. This remains a challenging ordeal since no single mechanism has been strictly implicated in this process and also because there is a lack of research exploring this matter (Mimeau et al., 2020). This section discusses select key factors (maternal, child-specific, and general) summarized from several important evidentiary studies, specifically detailing the complex interplay and reinforcement of particular factors contributing to child and maternal mental health problems. Figure 1 offers a visual representation of the overlapping mechanisms involved in the emergence of mental health problems as conceptualized in this discussion:



**Figure 1:** Factors Influencing Mother-Child Dyad Mental Health

## ***Mother-Related Factors***

### **Maternal Mental Health**

Researchers have established that maternal stress is associated with poor mental health outcomes for the mother-child dyad (Lutkiewicz et al., 2020). According to Levickis and Eadie (2022), maternal stress has a profound impact on a mother's interaction with her child, often leading to less responsiveness and sensitivity from the mother towards her child. Limited stimulation and language exposure for the child not only impacts a child's language development but also influences social-emotional regulation, inevitably contributing to mental health problems such as depression and anxiety for the child (Hudson, 2013). Continuing in the same argument, researchers hypothesize that chronic stress affects the functioning of the hypothalamic-pituitary-adrenal (HPA) axis and cortisol levels (a stress hormone), thus affecting neural regions important for emotional regulation (Flores-Kanter et al., 2021). Therefore, reduced emotional regulation can, in turn, reduce responsiveness and sensitivity in mothers. Mueller et al. (2021) aid this argument by positing that stress limits cognitive resources and processing abilities, making it harder for mothers to meaningfully engage with their children and respond effectively to communication attempts. This not only impacts the child's mental health but also leaves mothers feeling a profound sense of guilt, which can further contribute to mental health problems like depression and anxiety for the mother (Levickis & Eadie, 2022). Moreover, such mothers may

blame themselves for their child's language difficulties, further adding to their negative self-perceptions. Bornstein et al. (2021) found that depressed mothers are more likely to deprive their children of crucial language exposure and learning opportunities, thus impacting the child's overall development.

## **Maternal Communication and Parenting Practices**

While the role of maternal input is indisputable when it comes to mother-child interaction, a child's attempts at initiating are just as crucial for the interaction. In a study, Mimeau et al. (2020) found that a child's inconsistent attempts at communication may lead to frustration and communication difficulties for both the child and the mother, leading the mother to also make infrequent communication attempts with her child. This can exacerbate both the child's language problems and the mother's mental health problems, often leading to low emotional engagement and warmth – factors that are integral protective factors against mental health problems (Mendes & Pessôa, 2013). Children who receive inconsistent parenting often face difficulties with anxiety and relational attachment into adulthood, alongside other mental health problems in the future (Moran et al., 2018).

## ***Child-Related Factors***

### **Pre-Existing Vulnerabilities**

Epigenetic factors such as a familial history of depression or anxiety can be an additional risk for developing mental health problems in children with speech or language problems (Van Dijk et al., 2021). Furthermore, speech and language difficulties can lead to reduced opportunities for social learning, which can hinder a child's ability to understand and process emotions (Mendes & Pessôa, 2013). This establishes a negative feedback loop for the child, thereby exacerbating their difficulties with social-emotional regulation and increasing their vulnerability to anxiety, depression, and other mental health issues. For children with comorbid conditions like Autism, the challenges of communication multiply manifold, further causing problems with self-esteem, anxiety, and other mental health concerns (Hancock et al., 2022).

## **Social and Communication Challenges**

As briefly mentioned, under maternal factors, a child's difficulty with expressing their needs can be a frustrating ordeal for the mother and the child. Such children struggle with attachment and reciprocal bonding, leaving the child feeling disconnected from the mother and other relationships in life (Mimeau et al., 2020). The frustration of being unable to communicate with the mother can trigger emotional dysregulation in the child and, consequently, the mother, leading to heightened emotional arousal (Edvoll et al., 2023). This pathway sets the child on a trajectory for developing anxiety, depression, and behavioral problems. In this dynamic, the mother also finds herself emotionally dysregulated, adding to the risks of her mental health problems. In parallel to this, cognitive processes — including but not limited to the phonology, morphology, narrative skills, vocabulary, and auditory attention of the child — are adversely affected, potentially impacting academic outcomes (Adams et al., 2012; Murphy et al., 2014). Speech delays are also associated with negative socio-emotional consequences, such as later reading difficulties and issues within peer relationships (Burgoyne et al., 2019). Children with speech and language disorders may experience withdrawal behaviors, lower popularity, and fewer friendships than their peers. They are at a higher risk for bullying, shyness, and lowered self-confidence (Lipscombe et al., 2016; Ramsden & Botting, 2004). The quality-of-life differences as seen in developmental language disorder, become more evident at later ages, with implications for adult outcomes in literacy and employability if not treated timely (Eadie et al., 2018; Law, 2009).

## **General Factors**

There are several general factors that combine with specific maternal and child-related factors, giving rise to mental health problems. The following discussion highlights some of the most profoundly discussed factors across literature that unfurl as a domino effect impacting the mental health of the mother-child dyad. A myriad of research has shown that socioeconomic difficulties can be a strong risk factor contributing to mental health problems (Hawkins et al., 2020; Maurer et al., 2023; Reiß et al., 2019). Limited access to helpful educational resources can hinder children's progress and make them more susceptible to bullying or academic disadvantage, hence contributing to low self-esteem, frustration, anxiety, and depression (Maurer et al., 2023). Research has shown that children from disadvantaged communities are more likely to be exposed to violence



and trauma, which can significantly impact their mental health and speech and language development (Perkins & Graham-Bermann, 2012). Parents unable to provide better resources to their children find themselves stressed, thereby leading to poor mental health outcomes for the parents, as well. Additional sources of stress for parents due to socioeconomic difficulties come in the form of job insecurity, long working hours, limited interactions with their children as a result of financial obligations, and lack of access to proper healthcare and intervention for their child's problems (Maurer et al., 2023). Additionally, this limited access to healthcare is not just reserved for speech therapy for their children, rather it also extends to seeking out competent psychological help (Hodgkinson et al., 2017). Lack of reasonable healthcare opportunities can keep families stuck in a negative feedback loop of maintaining mental health problems. Furthermore, stigma against mental healthcare and therapy may discourage mothers from seeking out help for themselves and their children, further exacerbating their mental health problems (Drent et al., 2022). Social stigma can lead to isolation for both the mother and the child, reinforcing feelings of inadequacy and further contributing to mental health problems for them (Nowland et al., 2021). All of the aforementioned factors can elevate stress levels for the mother and the child, which is followed by a number of adverse mental health outcomes for all parties involved. According to Mphaphuli (2023), stress can lead to conflict within the family, creating a stressful environment for children, thereby impacting their language development and emotional well-being.

In view of the foregoing literature review, it is important to acknowledge that these are just some of the key factors present amongst many that offer an explanation of the complex interplay of maternal and child-specific factors in the context of general factors that lead to mental health problems. The emergence of mental health problems is multilayered, especially in the context of speech and language problems in children, and thus cannot be fully understood via an oversimplified representation of certain mechanisms. However, this attempt is not to be undermined since it offers important insight into some of the plausible mechanisms involved in contributing to mental health problems in the mother-child dyad – potentially inviting further research in this matter.

## Rationale

Keeping these contextual factors in mind, the literature review highlights the impact of speech delays in children on parents, causing potential overprotectiveness and difficulties in establishing bonds, resulting in challenges like maternal depression (Morales et al., 2023). The following study, focusing on a middle-income community in Islamabad, aims to investigate the link between maternal experiences and childhood speech and language problems. It will not only improve the current understanding of maternal wellbeing at the individual level but also provide valuable insights into the prevalence and treatment landscape of these issues at the community level, especially in the Pakistani context. By quantifying the presence of language difficulties and identifying barriers, the study aims to guide the implementation of existing interventions and policies for screening and assessment, ultimately improving maternal and child health outcomes within the community. To address these implications, it is crucial to conduct in-depth research into maternal experiences related to their child's speech delay; current research primarily focuses on how mothers' interactions affect speech development. Generally, there is a lack of understanding regarding how a mother experiences and perceives their child's speech delay, with this knowledge gap being notably profound in the context of Pakistani mothers. The present study aims to contribute significantly to the understanding of this issue within Pakistan's multicultural environment. Hence, keeping in view the foregoing, we have formulated the following **research question**: "*What are Pakistani maternal perceptions and experiences of their child's speech difficulties?*" This is the overarching inquiry of the study that will explore areas where mothers' perception of their child's communicative issues change: What was the initial discovery like? What were the emotional responses of the role she held as the caregiver, and what immediate interventions were given? Alongside this will be a detailed account of her experiences regarding help-seeking behavior: What were the challenges faced during medical consultation, and what resources were available to her to learn more about the issue her child faces? Did resultant information change her communicative style of parenting behavior in any way - and in what ways? Overall, the research looks at the whole of the mother's experience and perception of her child's speech difficulties.

## Methodology

The study is an experiential qualitative exploration of a mother's experience

of raising a child with speech delay: the focus was on the comprehensive understanding and perspective of the participant. For the phenomenological research design, convenience sampling was utilized to recruit the participant with the sampling criteria being a mother who has a child facing speech and language difficulties like speech delay who has sought services (like speech therapy) for the communication issue. Appropriate ethical considerations were taken with informed consent as the participating mother was provided with detailed information about the study's purpose and procedure. The confidentiality of the participant's information was strictly maintained, with pseudonyms used as replacements for the mother and child's actual names.

### ***Mother-Related Factors***

The mother was 44 years old, belonging to a middle-income, Punjabi-Muslim family residing in Islamabad. Her son was 3.2 years old with an informal diagnosis of speech delay issues that were ongoing for the past year.

### ***Data Collection***

The data collection method involved an in-depth structured interview conducted online via Zoom. Interview questions were formulated through thorough consultation of the literature review. The interview was conducted in both English and Urdu, it was recorded with informed consent, and the data collected was transcribed for analysis.

### ***Data Analysis***

The interview transcription underwent experiential content analysis, extracting patterns through In-Vivo coding. It must be noted that due to the use of convenience sampling and the explorative nature of the case study, the findings may not be generalized beyond the context of the participants involved.

## **Results and Discussion**

The main areas of exploration included prenatal experiences of the mother-child dyad, the initial discovery of speech difficulties by the mother, immediate responses and interventions taken, mothers' communication strategies and parenting style, the role of mothers' support system, challenges faced while seeking healthcare services, and available sources for individual information seeking. All of these areas were explored to formulate a holistic understanding of what the mother had experienced during her journey with her child's speech difficulty and her perception of the issue. The case study highlighted the effect of prenatal experiences and complications during pregnancy on the mother when it comes to communicative issues with children later on – the mother reported feeling “conscious” of the warnings the doctor gave regarding the “accidental pregnancy”. The mother expressed that her pregnancy came as a surprise saying, “I did not know that I was pregnant until the fifth month.” Along with this, medical history of early hospitalizations and stay within the NICU was present: “Jab Talha paida howa tha, Talha bohot ziada bemar ho gaya tha (When Talha was born, he got really sick)”. She mentioned how this had an overall effect on her perception of the speech delay: “Yeh back of the mind, hamare aik cheez thi... Yeh factors thy mere dimagh mein jis ki wajah se main ziada disturbed thi ke shayad yeh ab bol nahi raha... (This was something we had in the back of our minds... We were thinking about these factors later and that deeply disturbed me. I thought maybe that's why he isn't speaking yet)”. This was a predecessor for the mother to be more vigilant in looking at developmental cues in her child after the birth and reported that all other developmental milestones were achieved on time. This finding highlights a critical understanding that mothers who have had past medical issues with their children are hypervigilant in noting down milestones as their child ages such as, walking, talking, and crawling according to normatively ascertained ages. This is an important protective factor, as demonstrated by literature that a history of speech delays in families and infant hospitalizations increases the risk of speech or language difficulties. Hence, the prenatal experiences of the mother with the child should also be inquired when screening for such disorders to aid in timely treatment plans.

Supplementing this, the case was instrumental in highlighting the initial perceptions and experiences of the mother when she discovered that her child faced language concerns and how this, in turn, led to challenges faced while seeking healthcare services. The mother reported that the child stopped previously expressed behaviors such as babbling and began displaying regression: “babbling jese karta tha... we noticed keh he stopped... uss time ham concerned thy keh isne ab bilkul hi

*chor dia hai babbling... (Like he used to babble... we noticed that he stopped. We then got concerned by the fact that he stopped babbling entirely)". Along with this, she noted that the problem was first highlighted when she realized he did not say 'mama' or 'baba' by the age 2.5 and was met with dismissal when this concern was taken to the general specialist: "...wo mere upper hassay thy keh kya hougaya hai baji apke pehle bachiyen hain tou apko nae pata chal raha larke tou hamesha late bolte hain... (He [the doctor] laughed at me when I brought up the concern. They would tell me I can't tell the difference because I've only ever had daughters and that boys always start speaking later)". When given the recommendation to put him in school to encourage speech development, she did so, but did not note improvement: "School me bhi ja ke mujhe nahi laga ke us ko koi bohot ziada difference nahi aa raha hai ya kuch (Even when I enrolled him into a school, I didn't feel like there was much of a difference in him)". She also noted that referral to a specialist for suspected 'swollen adenoids' was not illustrative in helping them, remarking that it was only the speech therapy that helped: "Bohot, bohot, bohot sukoon hai, sukar Alhumdulillah (There is so much relief now, all praise be to God)". Hence, the maternal perception of the delay was informed by the medical history of the child, which led her to seek other avenues of treatment despite doctors' dismissal of the issue. Further research can be done within healthcare settings on navigating maternal concerns of their child's development and doctors' expertise in what they may consider normal development in their routine healthcare settings.*

The case demonstrated the mother's immediate responses and interventions, what prompted them, and available sources for information seeking. The mother remarked, feeling like she was running 'late': "*mujhe bas yehi tha keh before three years we should help him kisi bhi tarha agar medical help agar hum isse dila sakte hain tou dila dain. Takay ye late na hou jaye... (I was just concerned about getting him [Talha] help before the age of 3. We wanted to get him medical help in any way we could, so that it's not too late)"* and emphasized seeking medical help for the child in any way to help him. Thus, a sense of being time-bound was perceived regarding this issue as she recalled her friend's experience: "*after 5 years they took him [her son] to unhoun ny yahi kaha kay you're late, you're bringing him late here... (They [her friend] took him [her son] after he was already 5, the doctors told them that they brought him in too late)"*, so there was a noted urgency in her experience in trying to help her child. In addition to this, she reported learning about developmental milestones through Youtube: "*...phir research karna shuru kardi thi aur ab tou Alhumdulillah sab kuch social media ke upar hai tou mujhe ek speech therapist ka mene ek interview dekha tha... mene socha mera bacha tou 2 saal ka*



*hai aur mama baba dono words nahi bolraha tou he should be speaking that phir mene thora sa search karna shuru kiya... (Then I started doing research. Praise be to God, now everything is on social media [the internet], so I found a speech therapist's interview on there... After watching the interview, I thought about how my son's already 2 years old and he hasn't said words like 'mama' and 'baba' like he should be able to, so I started doing even more research)"* which prompted her search for available speech and language pathologists. Within this particular case, information on social media served as a protective factor that educated the mother – this might not be the case for mothers who may have limited access to the internet or are unable to navigate educational content available on the internet. Further research could be done to explore the quantity and quality of available channels of information in Urdu for mothers who seek to learn more about their children's developmental milestones and when it is best to seek treatment for a better prognosis.

Interesting findings were noted regarding the mother's coping strategies and support system. The mother primarily relied on religious coping and was dismissive of her stress and anxieties regarding her child, but revealed a marked sense of relief when progress was seen in her child: *"Speech therapy ke - I think, kitnay sessions hon ge? - six, seven sessions ke baad, Alhumdulillah us ne bolna shuru kar diya tha. 'Mama' 'Baba', phir, ab toh Alhumdulillah woh bohot words bol raha hai. Bohot, bohot, bohot sukoon hai, sukar Alhumdulillah (After, what? I think 6 or 7 sessions of therapy, praise be to God, he [Talha] started speaking. He started with saying 'mama' and 'baba'. Praise be to God, now he says so many other words. It is such a big relief, Praise be to God)".* Yet, when probed about any worries or challenges she feels she faces while communicating with her child, she is dismissive of her own experience compared to others: *"main uss waqt bhi ye sochti houn keh jin lougon keh iss tarah challenges arahe hain jin logon keh bachay waqayi bohot ziada peeche reh rahe hain wo kya karte hounge... (Even then, I was thinking about the kind of challenges parents whose children are facing far more serious speech delays and such have to go through. I wonder what such parents do)"* without delving into her own challenges in communicating with the child - hence, it was noted that the mother diminished her own emotional experience. Instead, her anxieties and worries are focused on the future and the child's academic and social performance at school, she was noted commenting, *"backbencher na banjaye (I don't want him becoming a poor student [backbencher])"* while comparing the level of expressiveness she noted in her child, compared to peers. This finding is key in noting how mothers may conceptualize the problem and how this facilitates help-seeking behavior. In this case, because the issue was considered minimal and something that could be



cured, help was readily sought. Had more mothers been interviewed, there might be different trends on when it is appropriate to consider treatment. It should be noted that during this time, religious coping was the strongest protective factor of the mother's emotional turmoil: *"...thora sa disturb hoti thi lekin ye tha keh bas Allah pe faith hai keh Allah Ta'alah will help, Allah Ta'alah will help... (I used to be a little disturbed back then, but I had faith in Allah. Allah will help, Allah will help)"*. Family members were also identified as key people within the mother's support system: *"I had support at home, my daughter... Husband of course, main unkay sath share karti rehti thi... (I had support at home. My daughter and husband, of course...I shared things with them)"*. Hence, maternal perceptions of the speech and language difficulties in Pakistan may be facilitated for better prognosis through hope owing to its religious and collectivistic culture, as seen within this case.

Lastly, it was noted that a marked change was seen in mother's perceptions of her child's development; however, this did not result in changes in communication strategies and parenting styles. The mother noted that after her child's experiences in therapy, she understood that everyone has differing milestone achievements: *"Ab mujhe pata chal gaya hai keh sab sab log differently able hotey hain ... koi comparison nahi hai ek bande ka dusre keh sath... now we know keh sab ki ek different learning abilities hain aur capabilities hain... (I understand now that everyone has different abilities. We cannot compare one person with another. Now we know that everyone has different learning abilities and capabilities...)"*, which she remarked was something she learned. She also relayed within her experience that there was a lot of misinformation around her when she sought support from friends, family, and peers: *"Bohat ganda impact aa sakta tha agar hum logoun ki baatoun main aa jaatay... (It could have had a really bad impact [on Talha] had we listened to what people were saying)"* concerning the appropriate time to intervene for treatment. So, within this case, the mother took a stand to educate herself through sources available to her. However, had we had the opportunity to interview more mothers, we might have seen different patterns in help-seeking behaviors and the mothers' perceptions of their child's development. Resultant changes in parenting styles and communication strategies were according to those guided by the speech therapist and are subject to vary according to literature. In this case, the mother insisted on 'guiding' the child when they made a mistake and used the strategies that the therapist recommended practicing at home with the child. Further research can be done on treatment adherence and its resultant changes in parenting or communication styles can be explored. This case demonstrated that maternal perceptions of a child's milestones change after such challenges arise.

Overall, while we do acknowledge the limitations of a case study approach, we have noted the rich avenues for potential research to be conducted on Pakistani mothers and their experiences while navigating their child's speech and language difficulties. The present case study highlights the need to address several aspects and stakeholders involved in the intervention and treatment of such problems, such as at the individual level for mothers when it comes to advocating for healthcare and treatment, the social and academic level of community responses and schooling, and policy level of reliable sources of information they seek when issues are noted as concerns based on available resources like the internet.

## Recommendations

Evidence-based therapies like Parent-Child Interaction Therapy (PCIT), Cognitive-Behavioral Therapy (CBT), and Mindfulness-Based Well-being for Parents (MBW-P) could offer valuable support for both the child and the mother, addressing speech-related challenges and enhancing maternal responsiveness (Birdsey, 2020; Jones et al., 2017; O'Toole et al., 2020). Timely recognition of signs in children, referral to speech-language pathologists, and developmental monitoring are essential for improved speech development and reduced maternal distress (Al-Shamsi, 2023). On the community front, support groups can play a crucial role in reducing isolation and sharing information about managing speech difficulties (Special Learning, 2023). Community-based therapy in a real-world setting may enhance communication skills in children and involve parents, alleviating maternal guilt (Emily & Emily, 2019). At the policy level, implementing evidence-based measures, mandating professional training, allocating research budgets, and increasing funding for accessible services supported by public programs may contribute to comprehensive support for families dealing with speech difficulties, mitigating financial burdens and negative psychological impacts (American Speech-Language-Hearing Association, n.d.).

## Conclusion

In conclusion, this study investigated maternal perception and experience

concerning her child's speech delay. The literature review emphasized the manifold challenges for mothers and the potential impact on the mother-child relationship. An interview with a Pakistani mother of a child experiencing speech delay offered valuable cultural insights, revealing factors such as religious coping and familial support as a major protective factor, along with social media as a valuable source for the lack of knowledge about the child's issues. Within a collectivist culture, where mothers are often held accountable for various aspects, an isolating experience can be expected, however the case study conveyed an undermining of the mothers own emotional turmoil during this time with a focus on the child's social and academic progress instead. The findings highlight the need for further research to deepen understanding of Pakistani mothers' experiences and perceptions of their child's speech challenges. Such research is crucial for informing culturally sensitive interventions and support systems, promoting child and maternal mental health, while acknowledging the unique challenges posed by the intersection of cultural norms and complexities of addressing speech delays in children within the Pakistani context, where a lack of appropriate screening tools is recognized.

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## MIRRORING FEMALE REPRESENTATION IN BOLLYWOOD ITEM SONGS: A CASE STUDY OF HABIB UNIVERSITY, KARACHI.

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### Abstract

Due to high resemblance with India's traditions, culture and language, people in Pakistan widely consume Bollywood item songs. Bollywood item songs portray women as a subject of desire, setting harmful body ideals. This is done by promoting typical beauty standards such as white skin tone and tall height, which are appreciated in India, as well as Pakistan, as ideal characteristics of women. These ideas have long-term impacts on the people and communities that consume this form of media, however, little research is available about this in Pakistan. Even, Pakistani item songs tend to borrow these characteristics from the Bollywood and create similar expectations, standards, and objectifications, for women in Pakistan. Hence, I will explore and understand the impact of representation of women in Bollywood item songs on women objectification and the creation of body ideals for women in Pakistan. I aim to do this by using a mix of primary research methods. First, I will conduct a content analysis, wherein I will analyze the lyrics of eight Bollywood item songs and examine if they adversely influence the representation of women in the society. Next, I will conduct two focus group discussions with eight females from Habib University to gauge their experiences with body image issues and objectification of women due to media, and particularly those Bollywood item songs.



## Introduction

A fair, tall, slim girl wearing revealing clothes dances provocatively to a very catchy tune. The camera zooms in on her anklet, and then zooms in on her lips, and then on her chest. She is surrounded by men. Men, watching her with desire filling their eyes, drunk, dancing, and throwing money. The song plays and the lyrics are 'Aaja mere raja tujhe jannat dikhaon main' (Come my king, I'll show you heaven).

This is Kareena Kapoor. This is Katrina Kaif. This is also Malaika Arora Khan, or Nora Fatehi, or Sunny Leone. This is every actress who has danced in any Bollywood item song. This is every actress whom you recognize for her perfect body, and her captivating dance moves.

Item songs are an integral part of Bollywood cinema, and humming the lyric seems harmless to us. However, a deeper insight into these songs reveals a darker undercurrent. These visualizations, lyrics, and choreography speak a lot about women objectification and gender stereotypes, leading us to a bigger issue of body ideals. Moreover, the portrayal of women in item songs can have long-lasting effects on individuals and society as a whole. Young girls are exposed to these songs from a young age, and they may internalize these messages about what it means to be a desirable and valuable woman. Furthermore, the normalization of non-consensual behavior and objectification of women in these songs can contribute to a culture of sexual harassment and violence due to its portrayal of women being available and ready for men all the time. Therefore, it is crucial to recognize the power of media in shaping our attitudes and behaviors as a society. This paper, thus, aims to understand the impact of Bollywood item songs on women objectification, and the creation of body ideals.

A mix of primary methodologies are employed, in order to get a holistic understanding of the topic. With content analysis focusing on finding the recurring themes in the lyrics of eight selected item songs, the focus group discussions are based on how women from Habib University feel about women objectification and body ideals that these song set.

## Background

Item song is defined by Barret Grant as “a musical performance that holds little or no relevance at all to the film in which it features. It appears in a film to present beautiful dancing women in revealing and exposing clothes” (Sahu, 2015) (p.15). This aligns with how Dwivedi (2017) describes Bollywood item songs to be, i.e. a song where woman is wearing provocative clothes and is served as a sex object amongst a lot of men. These definitions portray how the item songs are generally seen, with no relationship to the movie but for a separate purpose of adding a part where women acts as a sexually desirable being.

It has been attested by Siddiqi (2020) that the media content consumed by an individual has a causal relationship with their attitude and behavior. Bollywood item songs normalize women’s objectification and promote the problematic patriarchal fantasies (Jain, et al., 2019). Jayakumar (2020) agrees to this and further states her belief that by not making sensitized cinema, the media is producing an enabling environment for practices such as rape that stem from women objectification or desirability. By this, she doesn’t mean that the film industry has directly glorified rape, but has indirectly promoted toxic masculinity or has normalized negating the idea of consent. Jha (2016) mentions another approach to how Bollywood contributes to this process of women objectification or normalizing rape culture. According to them, there is a lack of discourse generally in the South Asian societies such as India or Pakistan. There is little to no existence of conversations around sex education or sexuality. In the absence of such conversations, complete control is given to the media to shape the minds of individuals about issues like sexual violence or women objectification. Hence, if there are any problematic depictions through media, there are no forms available of ‘cultural correction’ (Jha, 2016) (p. 25). Siddiqi (2020) also mentions of how the lyrics that are sexist and misogynist ‘create a fallacious cultural view of masculinity, which is essentially characterized by aggression and violence’, and makes it more likely that individuals consuming this music, engage in a more sexually aggressive behavior with their partners (p. 113). An interesting take on the word ‘item song’, which explains its impact on the society itself, is by Kapoor (2018). She analyses and points out that the mere use of the word ‘item’ for an ‘item girl’ in the ‘item number’ is a representation of commodifying women. The association of the female actor in the song with an ‘item’ represents

the accessibility to the women as an object to be acquired. She relates the creation of this mindset to practices like dowry, molestations, and violence prevalent in India, which stem from viewing women as objects/commodities. Finally, it was observed that young male college undergraduates who frequently consumed highly sexual music engaged more in women objectification, and stereotyped gender roles accordingly, than the ones who didn't. (Dwivedi, 2017). This also explains how Bollywood songs may not have a very instant and explicit negative impact but does influence the behaviors of the consumer gradually. These various literatures help us set a basis for this study in which we detangle how exactly do these songs lead to objectification or misrepresentation of female body.

## Content Analysis

Before diving into the individual experiences of females with these item songs, it is important to analyze the words and phrases that make up these songs as a whole. This includes identifying the recurring thematic patterns in lyrics that may hint us toward a similar message intentionally or unintentionally being given through majority item songs.

In this section, we aim to understand the thematic resemblance in the lyrics of some Bollywood item songs. These themes were coded from eight Bollywood item songs, mentioned with details in the table below:

Song Name	Movie Name	Lyricist	Views on Youtube (as of 06 May 2023)
Halkat Jawaani	Heroine	Niranjan Iyengar	13M
Jalebi Bai	Double Dhamaal	Anand Raj Anand	19M
Fevicol Se	Dabangg 2	Sajid Wajid	297M
Aa Re Pritam Pyare	Rowdy Rathore	Sameer Anjaan	114M
Chikni Chameli	Agneepath	Amitabh Bhattacharya	324M
Ooh La La	The Dirty Picture	Rajat Arora	94M
Sheila Ki Jawaani	Tees Maar Khan	Vishal Dadlani	246M
Munni Badnaam Hui	Dabangg	Lalit Pandit	148M



Content analysis of these songs, widely popular on Youtube, yielded us with similar patterns of female representation. A few coded themes that were noticed were representing women using food, oversexualizing women's body/youth, objectifying women, and violating consent and invitations from women.

### Representing women using food/obscene objects

Many Bollywood item songs either have named the item girl, such as 'Jalebi bai', based on food items or have used metaphors that portray women as edible items. Some examples of these can be 'Chakhna bana ke chakh le' (Make your snack and taste me), 'Main toh tandoori murgi hoon yaar, ghatkale saiyaan alcohol se' (I'm tandoori chicken, swallow me with alcohol) and 'Main toh hoon namkeen butter' (I am a salty butter!). Another such example is 'Arre kaate supari banake mujhe joh' (You turn me into a betel nut.). By using these edible items to represent item girls, the songs leave an impact about the women being consumable or in a way available to be devoured. However, an interesting aspect to be catered here is that most of these lines are in the female's voice. The female is made to objectify herself, as a consumable item. The song writers are mainly men and hence these item songs are placed in the films at a point where they seem as a 'snack break', driving the situation to see women as an entertaining filler between the plot. This lessens the blame on the males, and simultaneously gives them the power to be the ones getting these delicacies.

Another trend seen in most Bollywood item numbers is female objectification, mostly using obscene objects unrelated to human body, used to represent women in a sexual way. Some of these include calling women 'Jhandhu baam' (ointment to be rubbed on body), 'taksaal' (mint), or cinema hall. Lyrics that include phrases like 'Takkiya bana le patt le' (Make me your pillow and sleep on me) and 'Kambal bana rapat le' (Make me your blanket and put me on you) are also indecent representation of how women wants to be treated. Women have also been compared to animals in some instances such as a tender deer in a jungle or as a fish in deep water. This objectification of women in various ways play an important role in shaping how female body or females in general are viewed as commodities or objects.

## Oversexualizing women's body/youth

Another repetitive theme in most item songs is glorifying female body, or their jawani (youth), to an unnecessary extent. 'Kamsin kamariya saali. Ek thumke se lakk mare' (This damn slender waist of mine, kills millions with just one jerk) is one such example that oversexualizes female waist. 'Haaye bichhu mere naina, Badi zeharli ankh mare' (My eyes are like scorpions, they give a very poisonous wink), and 'Lakk joh hila doon toh jhilla hile, jhilla hile' (If I move my waist, then the district shakes) are some other lyrics that depict similar themes. The following lyric is also an indication of the immensely sexualized reaction of men to female body: 'Girake apna pallu baar baar, Kar deti ho humko beqarar' (By dropping your blouse's cover, you make me restless). Apart from the common targeting of women's body parts like waist, eyes, chest etc. as what drives men crazy, their youth is also highly sexualized both by the females themselves and the men in song. Some specific examples include 'Haaye, joban hai pyaasa tu zor kare, Ainvayi yeh dil mein bhi shor kare' (It's making a noise in the heart for no reason), 'Joban yeh mera kainchi hai raja, Sare pardon ko kaatungi main' (O dear, my youth is like a scissor, I'll tear apart all the curtains), or 'O no no Sheila, Sheila ki jawani, I'm too sexy for you' (I'm too sexy for you). These are some of the many lyrics that frames young women or youth of women as desirable and capable of sexual inclination. This is detrimental for the idea of consent that we discuss later since it portrays young women as available and desirable beings.

## Violating consent and invitations from women

All of these above mentioned themes also indirectly contribute to the idea of submission to men or for men, the invitation of women to use her body and sexuality. However, a recurring pattern of lyrics that fell under this theme led us to cater this as a separate thematic understanding. 'Pyar se paros dung, toot le zara' (I'll serve with love, just jump on it) is an apt example of how these lyrics set an expectation for women to invite men to take advantage of them, which is unrealistic and might not be case for how majority women might wish it to be. Another impractical expectation from women is set by the lyrics 'Item bana ke rakh le, haaye' (Make me your chick, oh my). Additionally, when a female singer sings these lines, it seems to depict that the men are invited to treat women as their

property or refer them using slangs like, chick, item or other terms usually used to catcall women. On the other hand, some songs directly violate the idea of consent by saying things like ‘Chhedenge hum tujhko, Ladki tu hai badi bumbaat ... uff oh!’ (I’ll tease you, You’re a gorgeous girl ... oh my!) or ‘Ho laundiya patayenge miss call se, bat ball se, cinema hall se, arae marriage hall se, overall se’ (I’ll impress a girl with a missed call, with bat and ball, in the cinema hall, in the marriage hall, with overall everything). This lyric portrays an image of men trying to pursue women or following her at various places regardless of any mention of how this constant stalking might make women uncomfortable. These aforementioned lyrics are a proof of how these lyrics intentionally or unintentionally impact how the women are expect to behave in an intimate setting, to behave in an enticing way, or how men has control over using her or pursuing her as much as he wants.

These are examples from some of the many songs that are extremely famous and are source of entertainment for a lot of people in Pakistan. However, these recurring patterns about female sexuality, objectification, consent, invitation to men etc., seem to speak a bit about how this is what the viewers appreciate with or without realizing the implications it has on how women feel about themselves, and how men feel in relation to women being the subordinates. These themes do not only set a guiding path for us to investigate the female point of view of consuming these lyrics, but also help us with the pragmatic understanding of these in real life and their interaction with men.

## **What Do Women Feel: Focus Group Discussions**

The linkage of widely popular Bollywood item songs and objectification of female body and standards of beauty has an impact on how women are expected to behave. Thus, an important lens for this study is of the women themselves. This section discusses some key ideas and themes that emerged during the focus group discussions, comprising of eight female students at Habib University. These focus group discussions were also based on the afore-mentioned eight songs that were played and discussed, followed by their own reflections of real-life implications of these effects.

## The Mise – en – scene

Mise – en – scene refers to ‘putting on stage’, which includes everything that plays a part in the formulation of a scene (Sahu, 2015). This includes camera angles, lights, dressing, setting of extra dancers etc. According to the participants, there was a similar trend of how these settings were created in all the item songs. They pointed out the color palette for all the items and the girl’s clothes was very bright. It included shiny skirts and shimmery blouses, of color red, bright pink, orange, silver etc. The set was also propped with items of bright colors. This, according to the participants, gives the viewer an energetic feeling about the girl performing for you. Moreover, they mentioned how the camera angles were specifically focusing on body parts like belly, hips, breasts, lips etc. Additionally, none of them was wearing a blouse that covered their belly. Not only each one of their bellies were visible, most of their blouses had deep necklines with cleavages noticeable. The participants express, that for them, it implies that these are the part that entice the men or are the ones liked by them, which reduces the existence of the female in that space to these body parts and their movements. One of the most interesting approaches about the setting of these songs was by one of the participant who signaled the choice of the spaces for all these songs. All of these songs are shot in closed spaces, at a bar, or a bungalow, or at a restaurant. She added that the use of a closed space as the setting for these songs depicts lack of governance or regulation in the space. Moreover, less or selected people in the space, that too of the same interests, indicate minimum guilt for the people present as no one out of this group is watching their actions. This indirectly gives the viewer a similar experience or viewpoint while watching these songs.

## Women desire to be desired

Taking into account the afore-mentioned setting, the participants express that the takeaway message from these is that women are the one’s inviting men. They are dressing in a specific way, singing lyrics that hint towards consume me, or use me, and hence, it is portrayed that they enjoy the attention they get subsequently. An example of how the visualization illustrates this approach is recurring setting of hundreds of drunk men dancing around one girl, chasing her and trying to get her, while the girl continues to dance and tempt these men. Moreover, the above-

mentioned lyrics in the content analysis were also pointed out by participants where the women is singing as if her goal is to only please men and be as desirable as possible for them. Some participants mention how the specific action of the girl pointing out at her body parts herself to bring the viewer's focus to them is another instance of promoting the same mindset. In addition to this, the girl also at times tries to sit on the laps of the man, or dance around her provocatively to try to get his attention. Due to this, this is assumed that the girl wants the men to enjoy or see the body parts that are considered sexual, so she gets the sexual attention that she desires from the men. Moreover, the actions and the expression of men sitting as her audience or dancing with her are acts of confirmation that these steps by the girl are successful ones to entice a man. These actions and expressions include trying to run after her/chase her, give a very creepy sexual look to her, bite their lips or throw money at her. These actions, as pointed out by the participants, give an untrue depiction of how women wants men to see her as, and at the same time sets a problematic outlook for men who consume this media about how women want them to behave. This discourse sets basis for the next discussion theme that follows.

### Unrealistic expectations from women

As a result of the actions and the portrayal discussed above, participants highlighted the unrealistic expectations that are set from the women. These expectations vary, ranging from the physical ones to the ones that cater to how should a women behave in real life. A major repercussion of the Bollywood item song is the compromised agency of women in sexual relationships. Bollywood item songs often portray women in a manner that perpetuates the idea that they are objects to be desired by men, regardless of their own desires and consent. This kind of portrayal can have a damaging impact on women's ideas about consent, reinforcing the notion that they are not in control of their own bodies or sexual agency. By portraying women as passive objects of male desire, these songs contribute to a culture where sexual harassment and assault are normalized, because the women themselves also internalize this concept and take no actions against it. Moreover, because the precedent has been set about the women being always available and hungry for male attention, many men in their real life relationships cannot manage to hear a 'no' from the women. This is due to the expectation of men shaped through these songs that women are always accessible and inviting for attention, and their hopes

turn into disappointments once they learn that in real life this might not be the case always. This may, at times, lead to sexual violence. Moreover, participants believed that this also had some role to play in the practice of not prioritizing female choices or female pleasure in sexual activities. How do these two things link is when men view women merely as objects to be consumed or used, they neglect the needs or the expectation of the female counterpart, as for them, the only objective of her is to satisfy their needs. As one participant maintained, Bollywood item songs may not directly lead to this issue, it has some contribution in shaping the mindset. Moreover, the dressing of the women in item songs that aims to eroticize the experience for men also leads to an unrealistic expectation set from women in real life. Women, in real lives, are also sometimes expected to dress, lure, and entice men in a similar way in order to arouse him. Some participants added, with some real life examples they have heard of failed marriages, that failure to do so, at times, might lead to decreased interest of men in their partners as they had always thought of sexual interactions in a specific way, shaped by the media. The reason, according to majority participants, that media is blamed largely for this mindset, is because in Pakistan, it is the biggest outlet of exposure of both men and women to topics like these including sex education, gender roles, etc. Due to this, feelings related to these exposures are mostly suppressed and no discourse publically is appreciated, which then leads to more glorification of the misrepresented media since it lightens those suppressed feelings.

### Setting body ideals:

A major issue pointed out by all the participants was how these songs and the physique of the girl dancing sets the standards of beauty in the society. An attractive women is shown to be the one with fair skin, slim belly yet thick thighs, big breasts, long hair and glossy lips. In actuality, this is not how all women look like and this is not the definition of what it means to be beautiful. However, it has been internalized for females to achieve these body ideals in order to feel beautiful and is the standard of how men think beautiful/attractive women are. This, however, doesn't stop here. As pointed out by a participant, it is a prevalent culture for mothers to look for girls for their sons. In this process, even though the mother is a woman, she assesses the girl with the similar viewpoint and the scale of attractiveness as set by the media. She would want a fair, tall, slim girl for her son to love. This shows how the body ideals are normalized so much that we unknowingly try to shape ourselves into it, and measure others by the same standard as well. In order to confirm this, the



participants were asked if they ever compared themselves to an 'item girl', and 60% of the participants had. They shared how they tried to achieve figures like that of those girls, or even on some instances, their mothers made them apply masks and skincare products with the aim of getting fairer. One of them shared how failure to achieve a body like the actresses demotivated her and made her hate herself so much, just because she knew that the society also views her out of the category of beautiful because of her weight. All in all, these songs depict a perfect female body liked and appreciated by everyone, which has a practical implication with a negative impact on female body is viewed in the society by others as well as by the females themselves.

### What if I were her?

In the final stage of our focus group, we finally attempted to explore if the expressions or feelings depicted as that of the women is genuine or at least verifiable to some extent. Do women actually enjoy getting so much attention? Does she love when hundreds of men crave her 'attractive' body? Does she actually enjoy flaunting her cleavage and seeing men go crazy? Are these songs even a partially good representation of how reality is?

In order to analyze this, we asked the participants how you all would feel if you were at the place of the 'item girl', and you were getting similar amount of attention from the men dancing around you. All of the participants, expressed fear and terror. They were certain that this kind of setting where hundreds of men are drunk and following or chasing her, is uncomfortable for a women. The depiction of it to be enjoyable is a completely misrepresented emotion of how women actually feel about the male gaze or this kind of sexual attention from them. The responses of the participants reveal an important truth about the portrayal of the 'item girls' in Bollywood movies. These women are often shown as being completely at ease with

### Limitations:

This research was conducted in a span of one month and hence, time was a major constraint. Moreover, it only included the lived experiences of women at Habib University, which means that the experiences and opinions of women outside Habib University, and more so in rural areas of Pakistan can be different, and are a

valuable input for the study. This study has also just studied eight Bollywood item songs, and thus, excludes a lot of very recent and very old songs. Moreover, this research only employed qualitative research techniques, however, a mix of methods with quantitative research methods would have largely enhanced the research and its authenticity.

## Conclusion

This research has attempted to chart out the impact of Bollywood item songs on the lives of women. This includes, analyzing the lyrics literally along with the impact that their meanings might have. Additionally, focus group discussions with women enhanced the authenticity of this research by giving first-hand insights on the influence of the songs, as a female. All the females who participated agreed that they see these patterns of women objectification or unrealistic expectations from women, around them in one way or other and thus, emphasized on how important it is that the media is sensitized to portrayal of such issues. The findings of this research highlight the need for a more nuanced and responsible approach to the representation of women in Bollywood item songs that doesn't only avoid overly-fantasizing women's body but also promotes the actress exercising her agency to say 'no' and not portraying herself available and inviting of male attention all the time. While the songs themselves may seem harmless or even entertaining on the surface, a deeper analysis of their lyrics and meaning reveals a troubling pattern of objectification and unrealistic expectations placed on women, with the creation of body ideals that are widely prevalent in the society. These issues can have dangerous consequences such as mental health issues or body insecurities. Conclusively, more awareness is needed amongst the younger generation to break this cycle of blindly consuming and internalizing the media, and an active effort from the media to strive to create more diverse and empowering representations of women that reflect their true experiences and emotions.

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# WHO SHOULD YOU MARRY? THE IMPACT OF CONSANGUINITY ON PREGNANCY LOSS, CONGENITAL ANOMALIES, AND GENETIC DISORDER: A CASE STUDY OF INDIA

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## Abstract

Consanguineous marriages have been practiced since the dawn of human history. In various countries today, consanguinity is often encouraged for the benefits that come with it. The most common form of consanguineous marriages in the world are between first cousins. However, such unions are associated with various health risks due to the increased likelihood of inheriting a recessive allele. This study employed the National Family Health Survey (NFHS-5) India to explore the impact of cousin marriages on pregnancy loss, congenital anomalies, and genetic disorder. A household-level analysis was performed using logistic regression to model the relationship between cousin marriages, defined as being related to the husband prior to marriage, and the corresponding health risk variables. The study found that women in cousin marriages were at a higher risk of pregnancy loss compared to those in non-cousin marriages. The most common congenital anomalies in India were hypertension and locomotor disability, both of which yielded a positive link with cousin marriages. Anemia, classified as a genetic disorder in this study, also showed a similar trend. The study concluded that there is a 3.8% chance for a child to be born with a disability to consanguineous couples.

Keywords: *consanguineous marriages, disability, pregnancy loss, congenital anomalies, anemia*

## Introduction

Consanguinity is derived from two Latin words “con” meaning same and “sanguis” meaning blood (Islam, 2016). It is defined as a legal union between a man and a woman who are related by blood (Acharya & Sahoo, 2021; Bellad et al., 2011; Bittles & Black, 2010; Fatima & Leghari, 2020; Iqbal et al., 2022; Islam, 2016; Kuntla et al., 2013; Robertson et al., 2021; Shawky et al., 2013). Today, studies report the highest consanguinity rates in the Middle East and South Asia. Countries such as Pakistan (65%), India (55%), Saudi Arabia (50%), Qatar (35%), Oman (49%), Afghanistan (40%) have the highest rates of cousin marriages in the world (Iqbal et al., 2022; Islam, 2016).

Different studies have linked cousin marriages with congenital malformations, pregnancy loss, autosomal recessive disorders, larger family size, low contraceptive prevalence, and low birth weight (Acharya & Sahoo, 2021; Fareed & Afzal, 2014; Iqbal et al., 2022; Islam, 2016; Merten, 2019; Quratulain et al., 2011; Sedehi et al., 2012; Shawky et al., 2013). Consanguinity has remained a subject of debate in the past due to the lack of research to prove its potential health risks. A few research have showed no impact of consanguinity on human fertility and neonate death (Saad & Jauniaux, 2002). However, recent studies negate the early findings and suggest a strong causation between cousin marriages and pregnancy loss, birth defects, and genetic disorders. The relationship between cousin marriage and pregnancy loss, such as stillbirths and spontaneous miscarriages, as well as birth defects like hearing impairment, has been well analyzed as compared to genetic disorders that remain under-researched. This could be because genetic risks associated with cousin marriages are complex in nature and can vary depending on the specific gene involved. There is also a widespread lack of genetic awareness not only due to its complex nature but also because of low educational levels and cultural norms.

India, the world's topmost populous country, presents a unique challenge in terms of genetic disorder management due to its diverse ethnic groups and varied genetic makeup with thousands of endogamous groups (Khatak et al., 2020). The task of creating and maintaining a repository of genetic disorders is therefore daunting. A 2020 study in India evaluated public awareness of genetic counselling and found that genetic counselling is not widely understood and accessed in India, with decisions about parenting and childbirth often influenced by personal and social reputation considerations

(Khatak et al., 2020). While several significant studies have been undertaken in India to explore the impact of cousin marriages on pregnancy loss, congenital abnormalities, and genetic disorders (Acharya & Sahoo, 2021; Bellad et al., 2011; Chakravarti, 1968; Kalam et al., 2020; Khatak et al., 2020; Kulkarni & Kurian, 1990; Kumari et al., 2019; Kuntla et al., 2013; Padmadas & Nair, 2001; Robertson et al., 2021; Sharma et al., 2020), it is uncommon to find research that investigates all three aspects within a single study. More often than not, the genetic component is overlooked. Hence, the current study aims to evaluate the impact of consanguinity on pregnancy loss, congenital anomalies (such as impairments in hearing, vision, speech, and mobility, as well as heart, kidney, thyroid, and respiratory disorders, hypertension, and diabetes), and genetic disorders (like anemia) in India from 2019 to 2021. In simpler terms, this paper is an attempt to answer if consanguinity increases the likelihood of pregnancy loss, congenital anomalies and genetic disorders as compared to non-consanguineous couples? As per the best of knowledge, this study is out of very few studies in India to investigate all three components together using the most recent dataset available.

## **Background of the Study**

Globally, 20% of the world population is estimated to be married to their cousins (Albarghali, 2023). It is a social institution that has been a part of human civilization since ancient times. For example, Habsburg family of Spain spanning the 15th to the 20th century, suffered from a jaw disorder due to inbreeding. The disorder caused their lower jaw to outgrow the upper jaw. Over generations, the severity of the disorder escalated to the point where Charles II of Spain could not chew his own food (Sajid, 2023). Historical anecdotes also associate consanguinity referred as kin group endogamy in historical texts to Arabs and their neighboring Muslim communities (Islam, 2016; Korotayev, 2000; Murphy & Kasdan, 1959). Consanguinity among the Habsburg family and Arabs helped them preserve family wealth. In the case of Arabs, adherence to Islamic laws, which guarantee a daughter's share in all types of her father's property, coupled with endogamy, ensured that the primary income source - the land - remains within the family (Korotayev, 2000). While today the percentage of cousin marriages is significantly low in Europe, Muslim countries continue to practice and encourage marrying within the family, often in the name of adhering to their faith, however, Islam does not mandate that Muslims should marry their cousins (Fareed & Afzal, 2014;



Sedehi et al., 2012).

Although cousin marriages are an old practice, the knowledge about the potential health risks has evolved over time. Earlier studies on cousin marriages and their health effect are inconsistent with some asserting a positive association while some did not find any link between the two (Al-Awadi et al., 1986). However, with the advancement in the field of genetics, it is now confirmed that cousin marriages increase the probability of suffering from congenital abnormalities or genetic diseases.

## **Literature Review**

### **Consanguineous Unions**

First cousin marriages, where couples share the same set of grandparents, are the most prevalent form of cousin marriage globally (Acharya & Sahoo, 2021; Bellad et al., 2011; Kalam et al., 2020; Khatak et al., 2020; Kumari et al., 2019; Kuntla et al., 2013; Robertson et al., 2021; Sharma et al., 2020). First cousins can be further categorized based on their lineage: those from the mother's side and those from the father's side. Among these, marriages between first cousins from the father's side are the most common. There are many potential benefits to engaging in close-kin relationships, for example, family unity, marital stability, ease in dowry negotiations, reduced risk of divorce, and convenience in finding a partner. Moreover, apart from helping in keeping the wealth intact, such relationships also offer increased compatibility due to shared familial culture and values, and often provide geographical proximity which help parents remain close to their daughters (Fatima & Leghari, 2020; Islam, 2016; Kumaramanickavel et al., 2002; Merten, 2019). Research suggests that the decision of choosing a partner in consanguineous marriages is often not made by the individuals involved. Mostly parents and the elders of the family decide a suitable partner for their children (Fatima & Leghari, 2020). A study aimed at understanding the attitudes and perceptions of young people towards cousin marriages in Iran found a significant correlation between the marital choices of young people and their parents, especially in the context of consanguineous marriages. This suggests that if the parents are related, their child is likely to also marry within the family (Sedehi et al., 2012). Therefore, family culture, traditions, and established generational norms also play a crucial role in marrying within the family. A strong association between

cousin marriages and lower levels of education, rural residence, lower socio-economic status, young age and unemployment of women, and patriarchal societal structure is found (Acharya & Sahoo, 2021; Iqbal et al., 2022; Islam, 2016; Kuntla et al., 2013) indicating that cousin marriages are more prevalent among socio- economically disadvantaged groups within a country as they are less likely to accept or be accepted by the people other than their own community. However, in countries like Saudia Arabia, where the government is a monarchy, cousin marriages are often seen among the wealthiest families as a means to maintain their family wealth (Albanghali, 2023). Globally, Western Europe and North America report the lowest rates of cousin marriages today. In fact, 31 out of 50 states in the U.S. have laws against such marriages or only permit them under specific conditions (NESC, 2012). For the states, it is not yet prohibited in, cousin marriage is viewed as a taboo (Chalabi, 2021; NESC, 2012) discouraging people to marry within the family. This contrasts sharply with regions like the Middle East and South Asia, where cousin marriages are not only accepted but often encouraged. Migration patterns also significantly influence the prevalence of cousin marriages within a country. A prime example of this is Bradford, England. According to a study titled 'From Islamabad to Bradford', it was found that 75% of Pakistani Muslims residing there are wedded to their cousins. This has led to an increase in rare genetic disorders within the community and, consequently, a higher rate of cousin marriages in Bradford (Merten, 2019).

### **Consanguinity, Congenital Anomalies, and Pregnancy Loss**

Pregnancy loss is the death of the fetus during gestation. Abortion, miscarriage and still birth are different types of pregnancy loss. Congenital anomalies, on the other hand, are the birth defects that occur during intrauterine life and as a result, the child is born with a disability or a disorder. For example, heart disorders and hearing disabilities. Numerous studies have established a positive link between consanguinity and both pregnancy loss and congenital anomalies (Bellad et al., 2011; Islam, 2016; Robertson et al., 2021; Saad & Jauniaux, 2002; Shawky et al., 2013). They argue that consanguinity increases the likelihood of pregnancy loss and the incidence of birth defects in children born to consanguineous couples compared to non-consanguineous couples. For instance, a study conducted in Karnataka, India examined the impact of cousin marriages on pregnancy loss, low birth weight, and prematurity concluded that consanguinity could increase the occurrence

of pregnancy loss, including miscarriage and stillbirth (Bellad et al., 2011). Another study aimed at exploring the significance of consanguinity in clinical genetics found diseases such as asthma, mental retardation, diabetes, children’s hypertension, hearing defects, and heart diseases to be more prevalent in consanguineous families (Shawky et al., 2013). Several other studies report similar findings and declare first cousin marriages a strong risk factor for pregnancy loss and congenital anomalies (Al-Awadi et al., 1986; Mehmood et al., 2022; Naibkhil & Chitkara, 2016; Omer et al., 2016; Tayebi et al., 2010; Warsy et al., 2020; Yunis et al., 2006).

The experience of losing a pregnancy causes great emotional, physical, and mental distress to the family, especially to the mothers which may persist in later pregnancies (Robinson, 2014). If a child is born with a disability, studies indicate that mothers often internalize guilt for their child’s condition, and as their primary care givers, they do not only experience physical exhaustion but also endure mental and emotional pain on a regular basis (Cagla, 2020). Moreover, there are economic implications tied to both pregnancy loss and birth defects. For example, in Saudia Arabia, one-third of health resources are spent on people with congenital abnormalities or genetic disorders (Albarghali, 2023). In individual instances, the cost may seem a small amount, however, as suggested earlier, they can accumulate to a significant sum when viewed on a larger scale, impacting both financial cost and resource allocation of a country. Hence, the impact of pregnancy loss and birth defects is not only limited to couples with cousin marriages but can potentially negatively impact the health care system of a country.

### Consanguinity and Genetic diseases

S.NO	Identifying Information	Country	Sample Size	Name of Genetic Disease	P Value at 95% CI
1	Elmag et al. 2007	Qatar	1030	Blood disorders	<0.001
				Diabetes mellitus	<0.001
				Cancer	<0.001
2	Mozzan et al., 2008	Saudia Arabia	11,874	Down Syndrome	0.17
				glucose-6-phosphate dehydrogenase deficiency	0.72
				sickle cell disease	0.87
				Diabetes mellitus	0.29
3	Qureshi et al. 2011	Pakistan	300	Beta- Thalassemia	0.001
4	Shawky et al. 2013	Egypt	8109	Down Syndrome	>0.05
				Blood disorders (Sickle cell and Beta- Thalassemia)	<0.05
				phenylketonuria	<0.001
				neurodegenerative disease	<0.01
5	Ben-Omar et al. 2019	Qatar	599	Autosomal recessive disorders	0.02
				Autosomal dominant disorders	>0.05
6	Albarghali 2023	Saudia Arabia	384	Blood disorders	<0.001
				Cancer	0.04

*Table 1: Findings from various studies that have investigated the relationship between cousin marriages and genetic disorders. The p-values are included to indicate the statistical significance of the relationship between the two variables. The color coding has been applied accordingly: blue signifies a significant p-value and a positive impact, while orange represents an insignificant p-value and no impact.*

Children from consanguineous marriages have a heightened risk of inheriting genetic diseases compared to those from non-consanguineous marriages (Kuntla et al., 2013; Quratulain et al., 2011; Shawky et al., 2013). This is because humans inherit two versions of each gene, one from each parent, which can be dominant or recessive. A dominant gene will express itself regardless of the other version, while a recessive gene will only express itself if the child inherits another copy of the same gene (MacDonald, 2018; Naibkhill & Chitkara, 2016; Poorolajal et al., 2017). Since first cousins share the same set of grandparents, the likelihood of inheriting two recessive genes is higher compared to parents who are distant cousins/unrelated. Two recessive genes become one dominant gene resulting in the child being born with an autosomal recessive disorder. Table 1 provides a summary of studies that investigated the link between cousin marriage and genetic disorders, with the majority indicating a strong causation between the two variables implying that the risk of inheriting a genetic disease is elevated in cousin marriages compared to non-cousin marriages. Heart diseases, blood diseases (anemia, thalassemia), cancer, hearing loss, speech disorder, and vision disabilities are some of the established genetic disorders inherited through cousin marriages in the literature (Albanghali, 2023, Kuntla et al., 2013; Naibkhill & Chitkara, 2016; Saad & Jauniaux, 2002; Sajid, 2023; Shawky et al., 2013; Yunis et al., 2006). However, it is also important to note that the scope of genetic diseases is not limited to these, and there is no definitive list of disorders that can result from cousin marriages, given the possibility of infinite combinations in genetic mutations. Cousin marriages can also lead to the occurrence of various rare genetic disorders that have not been previously identified such as the case of the Muslim Pakistani family in Bradford England (Merten, 2019). Congenital anomalies may also be categorized as genetic disorders, contingent upon whether the disability a child is born with runs in the family. There are genetics tests that confirm the cause of the disability in a child, but they are expensive and not easily accessible in developing countries where there is no effective public health care system. Often, in such scenarios, any disability/genetic disorder is considered as god's will (Rehmatullah, 2023, 13:19)

## Country context

India, officially the Republic of India, is a country in South Asia with the population of 1.42 billion (World Bank, 2023). It is a federal parliamentary democratic country and is divided into 28 states and 8 union territories. It has 6 administrative levels: union, state, division, district, subdistrict, and block with union as the government of India and block as its most specific geographical point. India is a diverse country with its people belonging to different social, cultural, racial, and linguistic backgrounds. It boasts a linguistic landscape encompassing over 300 languages (22 officially recognized), indicative of the diverse geographical backgrounds found across the country (Kumaramanickavel et al., 2002). Owing to such vast diversity, the study of consanguinity in India can be highly complex. However, post 1961 census, the data on consanguinity was collected for the first time and gradually with the country's efforts to increasing the literacy rate, employment rates, and rapid urbanization in the recent years (Sharma et al., 2020), there is a significant decline in the rate of cousin marriages in India from 1992 to 2015 (Kumari et al., 2019) but in states such as Jamu and Kashmir and Kerela, the percentage of consanguinity remains high and unchanged. Moreover, despite the decrease in the rate of cousin marriages, considering the diverse ethnic makeup, the genetic burden of India is still high. As per the last census of India, which was conducted in 2011, there is 2.21% (26.8 million) disabled population residing in India with no proper infrastructure and facilities (Dixit, 2022).

## Data and Methodology

This study used data from the fifth round of the National Family Health Survey (NFHS-5), which was carried out from 2019 to 2021. The NFHS is a large-scale, multi-round survey that covers a representative sample of households in India. It collects information on various aspects of the respondent's life, such as background, reproduction, marriage and cohabitation, contraception and others. The NFHS-5 included 636,699 households and 724,115 eligible women aged 15 to 49. The questions considered to determine consanguineous marriage are whether the respondent was related to her current husband in any way before marriage and what type of relationship it was. The first question was answered in yes/no while the second question had categories for respondent to specify their relationship. The women who report that their husband was related to them by blood before their marriage are considered as consanguineous

marriage. For pregnancy loss, respondents answered in yes or no that if they had any terminated pregnancy. For disabilities, it was asked if any member of the household suffers from any disability and in the case of yes, the respondent was prompted to specify the disability (hearing, visual, speech, mental, locomotor or other). For other diseases and anemia, eligible respondents were asked if they suffer from anemia or other diseases such as heart disorder, kidney disorder, respiratory disorder, thyroid disorder, cancer, diabetes, and hypertension. Lastly, to find out how consanguineous marriage varies across different settings, a set of background characteristics has been considered. These are current age of women, religion, caste, educational in years, wealth index, place of residence (urban/rural) and State. All the statistical analysis was conducted using STATA version 18.0. MAXQDA Analytics Pro (22.8.0) was used to analyze existing literature.

The background characteristics encompass three types of variables: binary (rural/urban), discrete (education, age), and categorical (wealth index, religion, caste, region). All variables, except for 'region', were already included in the dataset. The 'region' variable was manually created to categorize the 36 states and union territories in India, based on the grouping from Sumana Acharya and Harihar Sahoo's research paper (Acharya & Sahoo, 2021). The rationale to adhere to this division was that the referenced paper a) employed the same dataset (NFHS-1 and NFHS-4) and b) is a recent addition to the literature. The 'region' variable comprises six geographical regions, namely, North, South, East, West, Central, and Northeast. Table 2 presents the 36 states and union territories, each listed under its respective region.

S.No	North	South	East	West	Central	Northeast
1	Chandigarh	Andaman and Nicobar Islands	Bihar	Dadra and Nagar Haveli	Chhattisgarh	Arunachal Pradesh
2	Delhi	Andhra Pradesh	Jharkhand	Daman and Diu	Madhya Pradesh	Assam
3	Haryana	Karnataka	Odisha	Goa	Uttar Pradesh	Manipur
4	Himachal Pradesh	Kerala	West Bengal	Gujarat		Meghalaya
5	Jammu and Kashmir	Lakshadweep		Maharashtra		Mizoram
6	Punjab	Puducherry				Nagaland
7	Rajasthan	Tamil Nadu				Sikkim
8	Uttarakhand	Telangana				Tripura

Table 2: Region wise division of India (Acharya & Sahoo, 2021).

Another variable of child disability was manually created by matching a child's disability with his/her parent's marriage i.e., consanguineous or



not. Under this variable, people aged 0 to 17 are considered children and it stores the data for all the disabled children born to consanguineous or non-consanguineous couples. Lastly, for genetic disease, the variable of anemia2 was generated. This variable is a combination of two variables: anemia and blood transfusion. Anemia is defined as the deficiency of healthy red blood cells in the human body. This variable contains information for individuals who have/does not have anemia and have either availed/not availed any facility for blood transfusion. It is because thalassemia-major also known as life-threatening anemia, is one of the prominent disorders caused by cousin marriages and the most common treatment for it is blood transfusion. Hence, the two variables were combined to ensure more accuracy in the results.

In this study, a covariate logistic regression model is used for analysis.

It is important to note that, except for child disability variable discussed above, this study has majorly undertaken household level analysis, meaning that the analysis is based on households with consanguineous couples and disabled individuals who may or may not be the children of the identified consanguineous couples.

### Regression Equation

$$\text{Logit (p)} = \beta_0 + \beta_1 \times \text{cousin\_marriage} + \beta_2 \times \text{educ\_years} + \beta_3 \times \text{age} + \beta_4 \times \text{religion} + \beta_5 \times \text{caste} + \beta_6 \times \text{urban} + \beta_7 \times \text{region} + \beta_8 \times \text{wealth index}$$

The above equation is the basic logit model used in this study. Logit regression is used because all the target variables such as cousin marriage, types of disability, or anemia are binary variables. As the literature suggests, education, age, religion, caste, wealth index, and region are added as controls (Acharya & Sahoo, 2021; Kuntla et al., 2013; Sharma et al., 2020) which help enhance the accuracy and reliability of the analysis.

### Descriptive Statistics

Variable of Interest	Descriptive
Mean Age	30.6
Mean Education in Years	5.7
Total % of Eligible Married Individuals	65.2%
Total % of Eligible Married Individuals Engaged in Cousin Marriages	23.5% <sup>2</sup>
Religion of Majority People	Hinduism
Caste of Majority People	Other Backward Class (OBS)
Wealth Index of Majority People	Middle Class
% of People in Urban	24.2%
% of People in Rural	75.8%
Most Populated Region	Central (24.2%)
Least Populated Region	West (10.2%)

Table 3: Variables of Interest along with the baseline information about them

According to NFHS-5, the average age of the population falls between 30 to 31 years, coupled with an average education of 5 to 6 years. Approximately 65.2% of eligible individuals (aged 15 to 55) are married, with 23.5% of them in cousin marriages. Hinduism is the predominant religion, and a significant portion of the population belongs to a backward caste, for example, Yadavs, Kurmies and Gujjars. The majority reside in rural areas, 75.8%, while only 24.2% are in urban centers, and most people come from middle-income households. Central India (Chhattisgarh, Madhya Pradesh, and Uttar Pradesh) is the most populated region, accommodating the majority of the population, whereas only 10% reside in West India (Dadra and Nagar Haveli, Daman and Diu, Goa, Gujarat, and Maharashtra).

### Cousin Marriages

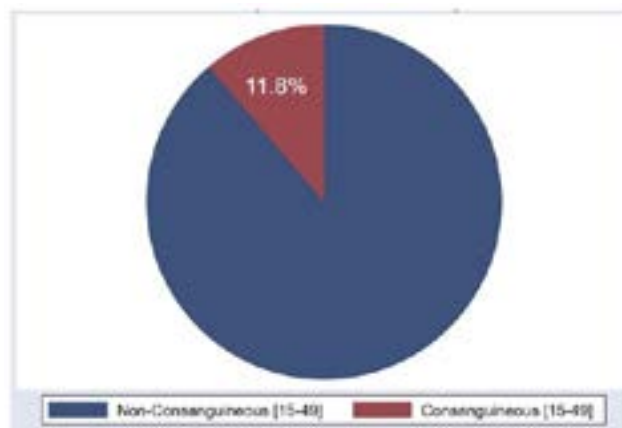


Figure 1: Rate of cousin marriages in India.

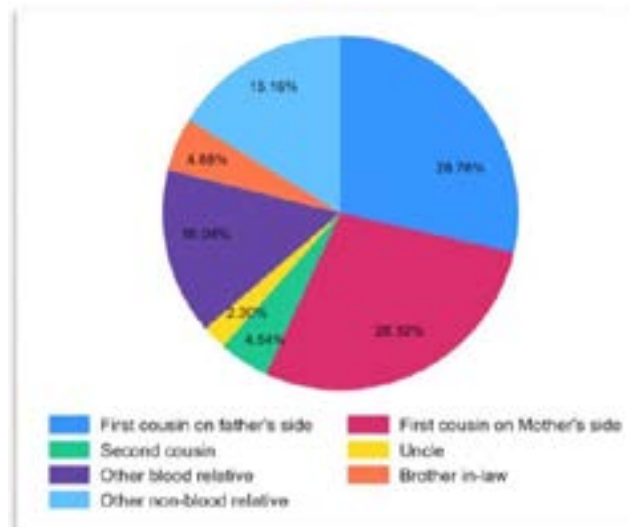


Figure 2: Types of cousin marriages practiced in India.

In India, consanguineous marriages account for 11.8% couples, with the predominant type being between first cousins from the father’s side. The second most prevalent type involves first cousins from the mother’s side.

### Cousin Marriages Across Different Background Characteristics

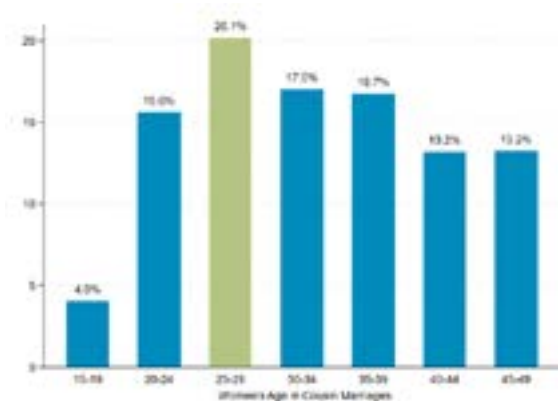


Figure 2: Rate of cousin marriages across different age groups of women

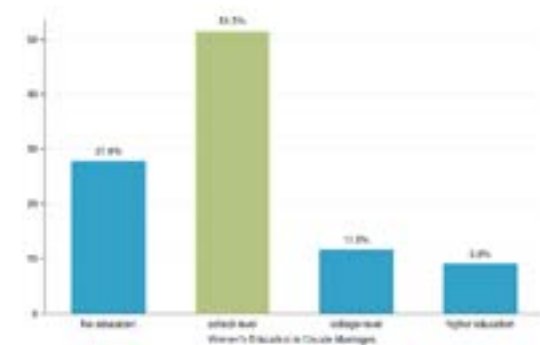


Figure 2: Rate of cousin marriages across different educational levels of women

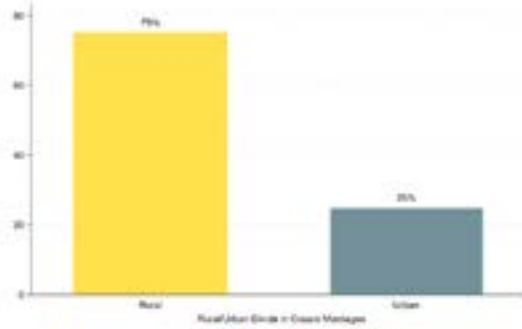


Figure 5: Rate of cousin marriages in rural and urban areas of India

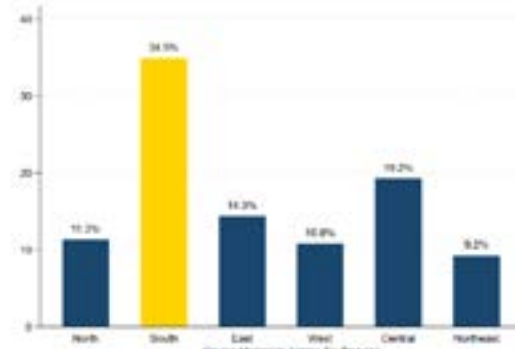


Figure 6: Rate of cousin marriages across six different regions of India

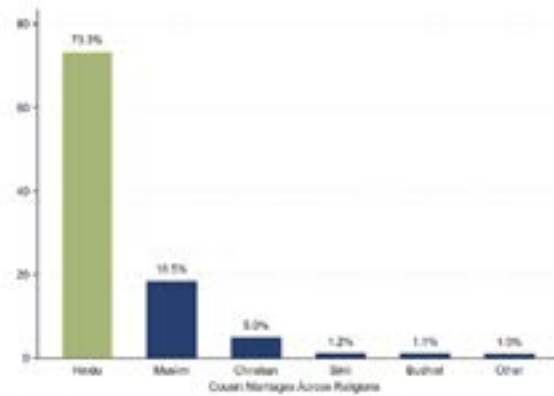


Figure 7: Rate of cousin marriages across different religions in India

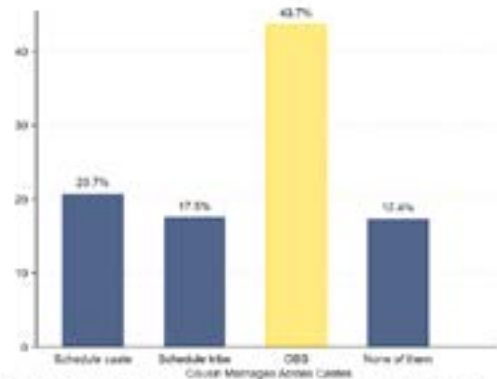


Figure 8: Rate of cousin marriages across different castes in India

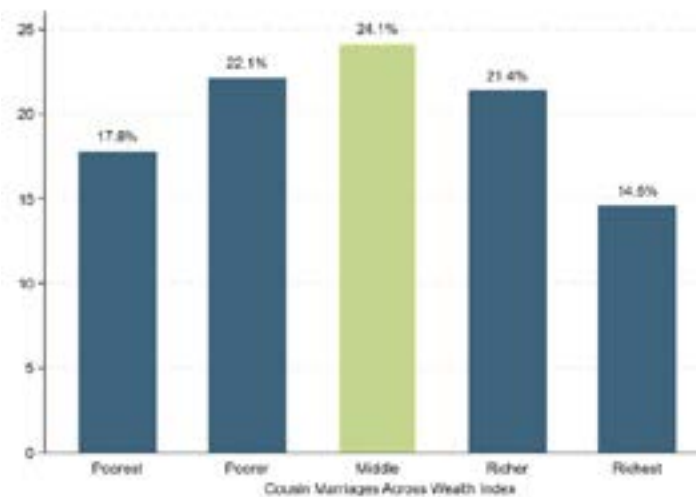


Figure 9: Rate of cousin marriages across different wealth index in India

According to NFHS-5, cousin marriages are most prevalent in India

among women aged 25-29 with varying levels of education, ranging from 1 to 10 years. These women typically reside in rural areas of the southern region (Andaman and Nicobar Islands, Andhra Pradesh, Karnataka, Kerala, Lakshadweep, Puducherry, Tamil Nadu, and Telangana), identify as Hindus, belong to a backward class, and come from a middle- income household.

### Occurrence of Pregnancy Loss

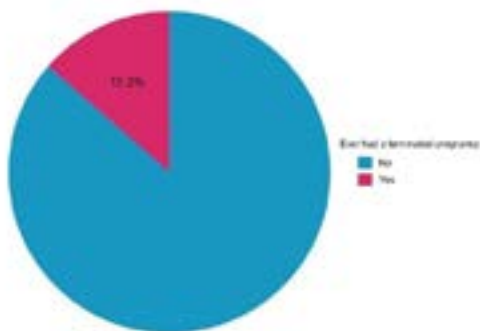


Figure 10: Percentage of women who ever had a terminated pregnancy.



Figure 11: Type of pregnancy loss for women who had a terminated pregnancy after 2014.

According to NFHS-5, 11.2% of eligible women reported at least one terminated pregnancy in their lifetime. However, inquiries about the type of pregnancy loss were limited to women who experienced pregnancy loss after 2014, as the survey is conducted every 5 years. The variable of type of pregnancy loss will not be used in analysis, since there is no information on women who were pregnant post 2014 and did not experience any pregnancy loss.

### Disabled Population and Types of Disabilities

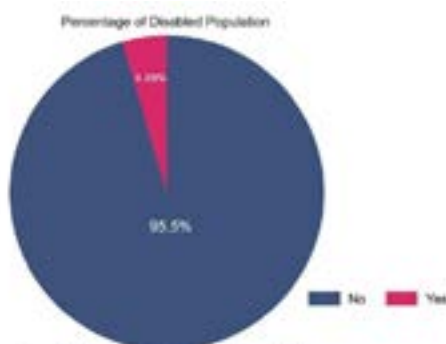


Figure 12: Percentage of disabled population.

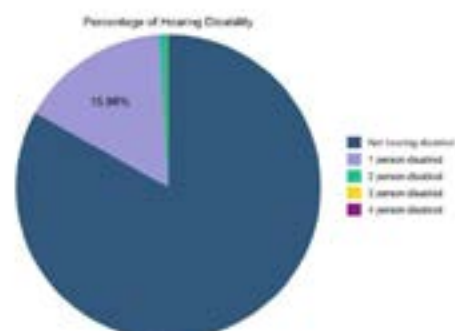


Figure 13: Percentage of hearing disabled population.

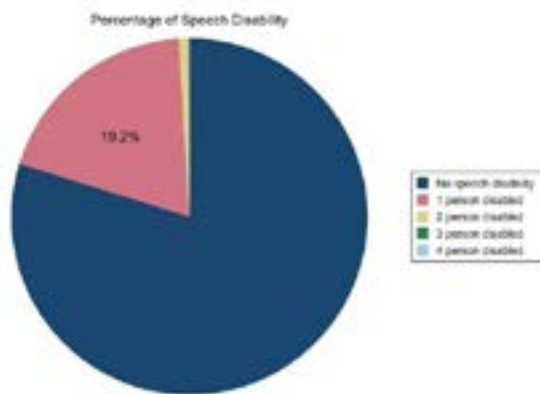


Figure 14: Percentage of speech disabled population.

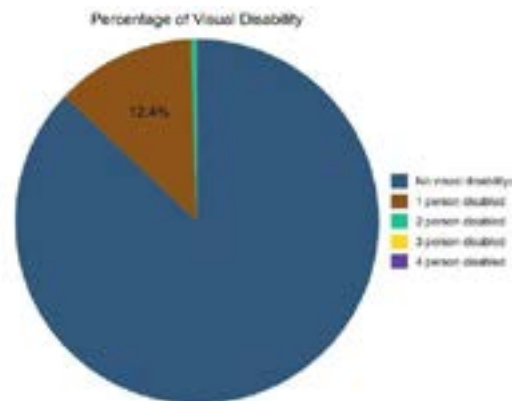


Figure 15: Percentage of visually disabled population.

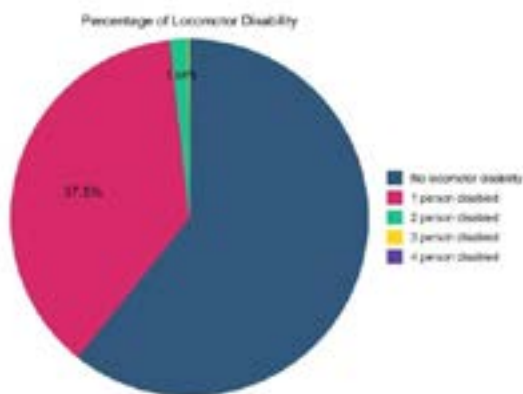


Figure 16: Percentage of locomotor disabled population.

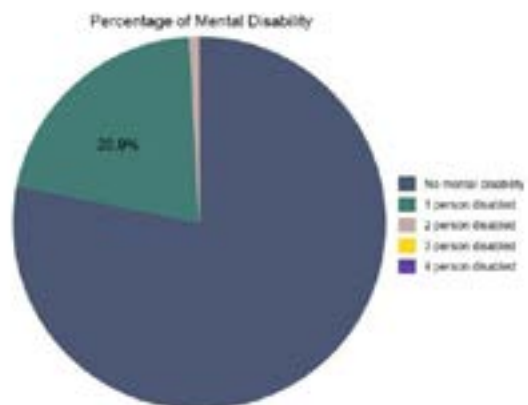


Figure 17: Percentage of mentally disabled population.

As per NFHS-5, 4.5% of the population suffers from at least one kind of disability in India. The five most common type of disabilities were included in the dataset and the rest were noted in the variable for ‘others.’ The most prevalent disability is locomotor. It is a kind of disability in which an individual struggles to move or control his/her body or limbs. The least prevalent disability is visual disability.

### Other Diseases



Name of the disease	Yes	No
Heart Disease	0.74%	>90%
Chronic Kidney Disease	0.62%	>90%
Thyroid Disorder	2.06%	>90%
Chronic Respiratory Disorder	1.32%	>90%
Cancer	0.48%	>90%
Hypertension	4.37%	>90%
Diabetes	1.73%	>90%
Total no. of respondents = 825, 954 (29% of total)		

Table 4: List of other diseases along with the response percentage.

Eligible men and women were asked for the list of diseases presented in Table 5. The most common disease is hypertension which is commonly known as high blood pressure. The least prevalent disease is cancer. It is important to note that since this question was only answered by men and women of aged 15-55, these diseases may not be representative of the health situation in India.

### Genetic Disorder (anemia)

Anemia2	%
Not Anemic	47.5%
Anemic	52.4%

Table 5: Percentage of Anemia

Random sampling was employed to select from eligible men and women who were then screened for anemia. It was originally a categorical variable (severe anemia, mild anemia, moderate anemic, not anemic) which was turned into a dummy variable (anemic or not anemic). NFHS-5 indicates that 47.5% individuals are not anemic while 52.4% of the individuals are anemic (and both have responded to the question of blood transfusion).

## Results

Dependent Variable: Cousin Marriage		
	Coefficient	P-value
<i>educ_years</i>	-0.01	0.00
Age	-0.02	0.00
Urban	-0.09	0.00
Religion		
Muslim	0.76	0.00
Christian	-0.21	0.00
Sikh	0.05	0.21
Buddhist	0.12	0.01
Other	0.03	0.55
Caste		
Schedule tribe	0.11	0.00
Other backward caste	-0.11	0.00
None of them	-0.06	0.00
Don't know	-0.06	0.30
Region		
South	1.64	0.00
East	0.46	0.00
West	0.72	0.00
Central	0.48	0.00
Northeast	0.28	0.00

<i>wealthindex_india</i>		
Poorer	0.12	0.00
Middle	0.17	0.00
Richer	0.13	0.00
Richest	0.05	0.01
<i>_cons</i>	-2.02	0.00
<i>n</i> = 519,835		
<i>r_square</i> = 0.0579		

Table 6. Logistic regression with covariates and cousin marriage as the dependent variable. The set significance level is 95%.

Table 6 investigates the impact of covariates on cousin marriages in India. The findings reveal that increase in educational years, older age, and residing in urban areas is

associated with a reduced likelihood of intra-family unions. As compared to Hindus, being Christian decreases the likelihood of cousin marriages. Moreover, in comparison to a scheduled caste, belonging to other backwards castes (OBS) or no caste decreases the likelihood of cousin marriages. On the other hand, being a Muslim or a Buddhist increases the log of odds in favor of cousin marriages. Interestingly, all the regions of India have a positive impact on cousin marriage and so does all wealth indexes.

The constant term indicates that if an individual has no education, lives in a rural area of the north region, belongs to Hinduism and a scheduled caste and comes from the poorest household, the likelihood of cousin marriage will decrease by 2.02 unit. This could be due to the combined effects of all these factors on marriage practices, for example, belonging to the poorest household

with no education can make it difficult for an individual to marry let alone marry within the family.

Dependent Variable: Loss of Pregnancy Occurrence		
	Coefficient	p-value
consanguineous_marriage	0.32	0.00
educ_years	0.01	0.00
age	0.01	0.00
urban	0.16	0.00
religion		
Muslim	-0.20	0.00
Christian	-0.09	0.16
Sikh	-0.21	0.00
Buddhist	-0.27	0.00
Other	-0.05	0.18
caste		
Schedule tribe	-0.43	0.00
Other backward caste	0.01	0.22
None of them	0.06	0.00
Don't know	0.16	0.00
region		
South	-0.25	0.00
East	0.26	0.00
West	-0.17	0.00
Central	0.02	0.05
Northeast	0.09	0.00
wealthIndex_India		
Poorer	0.06	0.00
Middle	0.10	0.00
Richer	0.11	0.00
Richest	0.16	0.00
_cons	-2.17	0.00
n = 519,835		
r_square = 0.0121		

Table 7. Results from logistic regression of occurrence of pregnancy loss with other covariates. The results are assessed at 95% significance level.

Table 7 investigates the impact of covariates on the occurrence of pregnancy loss. The findings reveal that consanguineous marriage as compared to non-consanguineous marriage has a positive impact on pregnancy loss i.e., the log of odds in favor of pregnancy loss increase by 0.32 unit. Higher education, older age, and living in urban areas also increase the likelihood of pregnancy loss. As expected, all religions have a negative impact on pregnancy loss as abortions is a banned/discouraged in almost all religions. It is interesting to note that although religion has a negative impact, castes have a positive

impact on pregnancy loss as compared to scheduled caste. It could be because while different religions may discourage abortions, but it is the caste that decides social standing in the society which is also tied to the economic conditions, hence, as compared to the scheduled caste lower castes may not have access to proper healthcare and nutrition which may increase the risk of pregnancy loss.

Dependent Variable: Child Disability		
	Coefficient	p-value
<i>cousin_marriage</i>	0.190	0.00
<i>educ_years</i>	-0.010	0.00
<i>age</i>	0.003	0.01
<i>urban</i>	-0.030	0.16
religion		
Muslim	0.046	0.07
Christian	0.033	0.42
Sikh	0.507	0.00
Buddhist	-0.009	0.91
Other	-0.004	0.96
caste		
Schedule tribe	-0.229	0.00
backward classes	0.024	0.24
None of them	0.040	0.11
Don't know	-0.013	0.88
region		
South	0.149	0.00
East	-0.044	0.11
West	0.226	0.00
Central	0.062	0.01
Northeast	-0.208	0.00
<i>wealthIndex_India</i>		
Poorest	-0.019	0.42
Middle	-0.089	0.00
Ficher	-0.191	0.00
Richest	-0.362	0.00
<i>_cons</i>	-3.185	0.00
Richest	-0.362	0.00
<i>_cons</i>	-3.185	0.00
n = 488,469		
F-statistic = 0.0056		

Table 8 investigates the impact of covariates on the occurrence of child disability. The findings reveal that cousin marriage has a positive impact on child disability i.e., the log of odds in favor of a child being born with a disability increases by 0.19 unit. As supposed, higher education and living in urban centers decrease the likelihood of child disability, as they are less likely to marry their cousins. As assumed, compared to the poorest wealth index, belonging to any other wealth strata decreases the likelihood of child disability since access to proper health care, education and, better facilities is more easily

available as we move up in the wealth index.

	(1)	(2)	(3)	(4)	(5)
	hearing	visual	speech	mental	locomotor
<b>education</b>	-0.100 (0.002)	-0.111 (0.002)	-0.108 (0.001)	-0.111 (0.001)	-0.104 (0.001)
<b>wealth</b>	-0.006 (0.35)	-0.004 (0.00)	-0.022 (0.00)	0.002 (0.94)	-0.012 (0.00)
Age	0.007 (0.24)	-0.001 (0.21)	-0.002 (0.17)	0.007 (0.00)	-0.002 (0.00)
Urban	0.122 (0.01)	0.097 (0.00)	0.078 (0.00)	0.079 (0.00)	0.02 (0.00)
<b>religion</b>					
Muslim	0.108 (0.01)	0.101 (0.00)	0.079 (0.00)	0.100 (0.00)	-0.01 (0.43)
Christian	0.172 (0.07)	-0.044 (0.04)	0.007 (0.41)	0.29 (0.00)	0.08 (0.10)
Other	0.201 (0.00)	0.320 (0.00)	0.04 (0.11)	0.32 (0.00)	0.40 (0.00)
<b>caste</b>					
Other	-0.071 (0.00)	0.22 (0.10)	-0.23 (0.21)	-0.30 (0.00)	-0.062 (0.00)
Other	0.009 (0.97)	-0.071 (0.17)	-0.078 (0.44)	-0.08 (0.67)	0.001 (0.40)
<b>sex</b>					
Male	0.184 (0.00)	0.248 (0.00)	0.200 (0.00)	0.22 (0.00)	0.20 (0.00)
Other	-0.060 (0.21)	-0.100 (0.04)	0.078 (0.07)	0.01 (0.00)	-0.003 (0.00)
None of them	-0.006 (0.97)	-0.071 (0.54)	0.000 (0.70)	-0.023 (0.40)	0.044 (0.07)
Don't know	-0.121 (0.32)	-0.103 (0.49)	0.219 (0.21)	-0.097 (0.00)	-0.107 (0.40)
<b>region</b>					
South	0.106 (0.00)	0.072 (0.32)	0.110 (0.00)	-0.007 (0.33)	-0.007 (0.01)
East	-0.060 (0.37)	-0.042 (0.40)	0.028 (0.00)	-0.029 (0.01)	-0.112 (0.00)
West	0.007 (0.20)	0.419 (0.00)	-0.017 (0.47)	0.109 (0.00)	0.110 (0.00)
Central	-0.004 (0.94)	0.001 (0.17)	0.113 (0.00)	0.006 (0.00)	0.007 (0.01)
Northeast	0.226 (0.00)	-0.004 (0.49)	0.070 (0.30)	-0.204 (0.00)	-0.05 (0.00)
<b>wealth index</b>					
Poor	-0.041 (0.40)	-0.012 (0.57)	-0.000 (0.20)	-0.021 (0.00)	0.021 (0.54)
Middle	-0.138 (0.02)	-0.104 (0.00)	-0.11 (0.00)	-0.120 (0.00)	-0.006 (0.00)
Rich	-0.200 (0.00)	-0.220 (0.00)	-0.19 (0.00)	-0.22 (0.00)	-0.074 (0.00)
Unknown	-2.476 (0.00)	-0.520 (0.00)	-0.15 (0.00)	-0.454 (0.00)	-0.121 (0.00)
omit	-1.077 (0.00)	-0.921 (0.00)	-0.05 (0.00)	-1.17 (0.00)	-1.016 (0.00)

Table 9: Ordered logistic regression estimates for five equations. As the five equations employ the same covariates, however, replace the dependent variable each time. Hearing, visual, speech, mental and locomotor are the five dependent variables that have been tested against the same covariates here as one of the main variables. The main report also contains joint tests from the ordered regression components over their position. The coefficients are stated in front of the variable listed on LHS and their respective p-value is stated behind them in brackets. The p-values are listed at 95% confidence level.

The provided logistic regression analysis in Table 9 investigates the impact of covariates on hearing, visual, speech, mental and locomotor disability. The findings reveal that cousin marriage has a positive impact on all kinds of disabilities i.e., the log of odds in favor of hearing, visual, speech, mental, and locomotor disability increase by 0.19, 0.21, 0.16, 0.13, and 0.08 unit respectively. Increase in education is associated with decreased likelihood in all kinds of disabilities except for mental disability indicating the stress, anxiety,

or depression can be more common in individuals with higher education. Increase in age also increases the likelihood of suffering from hearing and mental disability. Living in urban centers increases the likelihood of mental and locomotor disability. For example, an individual suffering from depression (mental) or getting into an accident (locomotor) is higher in urban areas than in rural areas.

Belonging to OBS increases the likelihood of suffering from one or all kinds of disabilities excluding visual disability due to poor quality of life. Moreover, being richer or the richest as per the wealth index decreases the likelihood of suffering from one or all kinds of disabilities. Lastly, belonging to the west region of India (Dadra and Nagar Haveli, Daman and Diu, Goa, Gujarat) increases the likelihood of all kinds of disabilities except for the speech disability and it could be because of varying levels of access to better health and education facilities across different regions in India.



	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Heart disease	Kidney disease	Respiratory disease	Thyroid disorder	Hypertension	Diabetes	Cancer
<b>Age</b>	0.111 (0.00)	0.109 (0.00)	0.107 (0.00)	0.106 (0.00)	0.104 (0.00)	0.100 (0.00)	0.100 (0.00)
<b>Urban</b>	0.011 (0.00)	0.010 (0.00)	0.009 (0.00)	0.009 (0.00)	0.008 (0.00)	0.007 (0.00)	0.007 (0.00)
<b>Religion</b>							
Muslim	0.041 (0.00)	0.118 (0.00)	-0.042 (0.07)	0.178 (0.00)	0.009 (0.00)	0.408 (0.00)	0.271 (0.02)
Christian	0.114 (0.02)	0.001 (0.00)	0.131 (0.00)	-0.074 (0.00)	0.116 (0.00)	0.047 (0.00)	-0.110 (0.00)
<b>Sex</b>							
Male	0.019 (0.00)	0.005 (0.00)	0.208 (0.00)	-0.096 (0.17)	0.009 (0.00)	0.000 (0.00)	0.056 (0.15)
<b>Region</b>							
West	0.067 (0.00)	-0.067 (0.00)	0.044 (0.00)	0.066 (0.00)	0.075 (0.00)	-0.014 (0.00)	-0.080 (0.00)
Central	-0.174 (0.00)	-0.092 (0.00)	-0.004 (0.00)	-0.001 (0.00)	-0.028 (0.00)	-0.080 (0.00)	0.298 (0.00)
<b>Caste</b>							
Untouchable	-0.241 (0.00)	-0.164 (0.00)	-0.276 (0.00)	0.004 (0.00)	-0.074 (0.00)	-0.200 (0.00)	0.174 (0.00)
<b>Married status</b>							
Married	-0.017 (0.00)	-0.005 (0.00)	-0.063 (0.00)	-0.011 (0.00)	-0.111 (0.00)	-0.200 (0.00)	-0.025 (0.00)
<b>State of origin</b>							
West	0.008 (0.00)	0.003 (0.00)	0.043 (0.00)	0.041 (0.00)	0.011 (0.00)	0.014 (0.00)	0.236 (0.00)
Central	0.077 (0.00)	0.012 (0.00)	0.021 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.075 (0.00)
East	0.082 (0.00)	0.120 (0.00)	0.144 (0.00)	-0.011 (0.00)	-0.217 (0.00)	0.140 (0.00)	0.003 (0.00)
<b>Region</b>							
West	-0.107 (0.00)	0.001 (0.00)	0.407 (0.00)	0.140 (0.00)	-0.027 (0.00)	0.200 (0.00)	0.272 (0.00)
East	0.201 (0.00)	0.046 (0.00)	0.407 (0.00)	0.236 (0.00)	-0.040 (0.00)	0.321 (0.00)	0.140 (0.00)
West	-0.072 (0.00)	0.340 (0.00)	0.174 (0.00)	-0.720 (0.00)	-0.448 (0.00)	-0.156 (0.00)	0.002 (0.00)
Central	-0.240 (0.00)	-0.340 (0.00)	-0.207 (0.00)	-0.721 (0.00)	-0.221 (0.00)	-0.100 (0.00)	0.170 (0.00)
North	0.166 (0.00)	0.267 (0.00)	0.206 (0.00)	0.000 (0.00)	0.007 (0.00)	0.000 (0.00)	0.000 (0.00)
<b>Married status</b>							
Married	0.211 (0.00)	0.275 (0.00)	0.008 (0.00)	0.178 (0.00)	0.244 (0.00)	0.047 (0.00)	0.201 (0.00)
<b>Married</b>							
Married	0.141 (0.00)	-0.379 (0.00)	0.120 (0.00)	0.712 (0.00)	0.000 (0.00)	0.261 (0.00)	0.004 (0.00)
<b>Richer</b>							
Richer	0.179 (0.00)	0.300 (0.00)	0.141 (0.00)	0.920 (0.00)	0.418 (0.00)	0.654 (0.00)	0.188 (0.00)
<b>Richer</b>							
Richer	-0.047 (0.00)	0.204 (0.00)	0.008 (0.00)	1.171 (0.00)	0.407 (0.00)	0.700 (0.00)	0.233 (0.00)
<b>Richer</b>							
Richer	-0.731 (0.00)	-0.400 (0.00)	-0.011 (0.00)	-5.004 (0.00)	-5.291 (0.00)	-7.070 (0.00)	-6.523 (0.00)

Table 10: OLS estimates for seven equations. All the seven equations exclude the same covariates. However, variables are dependent variables that have been tested against the seven covariates listed in the table. The **robust** for all five equations is the same, 0.0000000. This table reports two statistics from the original regression coefficients and their p-values. The coefficients are shown in bold in the original table and the respective p-value is shown in parentheses. The p-values are tested at 95% confidence level.

The provided logistic regression analysis in Table 10 investigates the impact of covariates on heart disease, kidney disease, respiratory disease, thyroid disorder, hypertension, diabetes, and cancer. The findings reveal that cousin marriage has a positive impact on all kinds of diseases/disorders, however, the point estimate for cancer is not significant at 95% significance level. Increase in age increases the likelihood of suffering from one or all kinds of diseases. Living in urban centers also increases the likelihood for all kinds of diseases although only respiratory disease, thyroid disorder, and diabetes are significant. Belonging to the central India decreases the likelihood for all diseases, whereas, belonging to the east region increases the likelihood for all

diseases except for hypertension. Interestingly, all wealth indexes have a positive relationship with all kinds of diseases, and it could be because while the lower wealth indexes may not have the appropriate resources to prevent such diseases, the upper class may have excessive resources and lack balance. For instance, diabetes is most common in overweight individuals who are most likely to belong to middle- and upper-class families.

Dependent Variable: anemia2		
	Coefficient	p-value
cousin_marriage	0.023	0.01
education	-0.010	0.00
Age	-0.005	0.00
Urban	-0.046	0.00
religion		
Muslim	0.075	0.00
Christian	-0.677	0.00
Sikh	0.145	0.00
Buddhist	-0.188	0.00
Other	-0.628	0.00
caste		
Schedule tribe	0.177	0.00
backward classes	-0.083	0.00
None of them	-0.073	0.00
Don't know	0.017	0.65
region		
South	0.090	0.00
East	0.349	0.00
West	0.140	0.00
Central	-0.165	0.00
Northeast	-0.109	0.00
wealth_index		
Poorest	-0.126	0.00
Middle	-0.180	0.00
Richer	-0.216	0.00
Richest	-0.260	0.00
cons	0.712	0.00
n = 497,319		
LogLikelihood = 0.9164		

Table 11: Results from logistic regression of anemia with other covariates. The results are assessed at 95% significance level.

Table 11 investigates the impact of covariates on anemia and blood transfusion called anemia2. The findings reveal that cousin marriage positively impacts the occurrence of anemia2, i.e., the log of odds in favor of anemia2 increase by 0.02 unit. Higher education, older age, and living in urban areas

decrease the likelihood of anemia<sup>2</sup>. Belonging to a scheduled tribe (“ST refers to the scheduled tribes that are very much aloof from the social setup and live in the far-flung forest areas called tribal areas”) increases the likelihood of suffering from anemia<sup>2</sup>. All wealth indexes as compared to the poorest decrease the likelihood of anemia<sup>2</sup> as all the classes may have the basic resources to prevent anemia<sup>2</sup> such as proper intake of iron.

## Discussion

As research and our understanding of public health concerns expand, consanguineous marriages have gained increased attention over recent years. These types of marriages have been a deeply ingrained social and cultural practice since the dawn of human history and so in the contemporary time, the challenge is not only the health risks of cousin marriages but more importantly, the societal acceptance that it has gained over the decades. In India, the prevalence of cousin marriages is decreasing with societal modernization and increased literacy rates. This study reports the rate of cousin marriages in India from 2019-2021 to be 11.8% which is a 0.1% decrease from 2015-2016 and 4% decrease from 1992 (Acharya & Sahoo, 2021) with first cousin from father’s side the most prevalent type of cousin marriage. The 0.1% decline may seem a small number, but given the large population of the country, it could potentially impact a significant number of people. However, this decline does not guarantee a significant change in the negative health consequences. For example, the highest rate of cousin marriages can be seen in the southern region of India including Tamil Nadu, Andhra Pradesh, Telangana, and Karnataka and so, a 0.1% decrease in southern region of India may seem different than in northeast region which reports the lowest rate of cousin marriage. Moreover, the cultural and social acceptance of cousin marriages also plays a significant role. Despite the decrease, if cousin marriages are still prevalent in certain communities due to cultural or social norms, the impact of the decrease might be limited.

Moreover, consanguinity is reported highest amongst women of age 25-29, with low to secondary level of education, rural residence, belonging to other backward classes (OBC), middle-income households, and scheduled tribe. The common denominators in all the stated characteristics are lack of

decision-making power and access to new and correct information. As per the Indian Constitution, the criterion for a scheduled tribe is “distinctive culture, geographical isolation, shyness of contact with the community at large, and backwardness” (Rawat, 2023) and so when the constitution acknowledges the ‘backwardness’ of some communities which entails both lack of agency and advanced information, it is apparent that the high incidence of societal acceptance of cousin marriages is not only because of its historical roots. Consanguinity is linked to a variety of health risks due to the increased chance of inheriting recessive alleles. This study, in lined with several other studies, has found a positive link between consanguinity and health issues such as pregnancy loss ( $p=0.00$ ), hearing disability, speech disability ( $p=0.00$ ), visual disability ( $p=0.00$ ), locomotor disability ( $p=0.01$ ), mental disability ( $p=0.01$ ), heart disease ( $p=0.00$ ), kidney disease ( $p=0.00$ ), respiratory disease ( $p=0.00$ ), thyroid disorder ( $p=0.00$ ), diabetes ( $p=0.00$ ), hypertension, cancer ( $p=0.13$ ), and anemia ( $p=0.01$ ). It is interesting to note that cancer does not yield a significant relationship ( $p\text{-value} > 0.05$ ) with cousin marriage. However, different studies have found a positive association between cancer and cousin marriages (Albanghali, 2023) which clears the doubts of relevance. The insignificance can be an indicator of the lack of data as there is no specific information available on the type of cancer in the dataset. In other words, not all types of cancers are genetically hereditary and hence, cannot be inherited through cousin marriages. Interestingly, despite the lack of statistical significance, the observed positive relationship supports the notion that there is some level of association between cousin marriages and cancer. Therefore, given a family history of a specific type of cancer, it is probable that it is transferred to the next generation. Anemia is also another interesting variable to discuss. One of the major causes of anemia is iron deficiency (malnutrition). Sickle cell anemia or thalassemia are types of anemia that are common in children born to consanguineous couples, but they are comparatively less prevalent than anemia caused by malnutrition. According to WHO, 30% women worldwide suffer from anemia caused by malnutrition. The results of this study positively link anemia to cousin marriages. It is intriguing to report this finding because this indicates that the most common type of anemia is not just caused by iron deficiency or malnutrition, it can also be inherited and prevalent among the children of consanguineous couples.

## **Conclusion**

The study is successful in concluding that given a consanguineous couple, the likelihood (predictive probability) of their child inheriting a disability is 4%. Thereby, this study rejects the null hypothesis of no significant relationship and accepts the alternative hypothesis i.e., cousin marriages have a significant impact on pregnancy loss, congenital anomalies and genetic disorder (anemia<sup>2</sup>).

## **Limitations and Future Research**

This type of study is ideally suited for individual-level analysis. However, due to data limitations and resource constraints, I could only conduct a household-level analysis. It's crucial to carefully consider households with multiple mothers, as this necessitates an intergenerational analysis, which is more complex than the analysis performed in this paper. In India, where 75% of the population resides in rural areas, most households have more than one mother. Therefore, future research could focus on individual-level intergenerational analysis for more accurate results.

Moreover, concerns about overestimation of the results can be raised as a household-level analysis has been employed in this research paper. While the concerns are valid, it's important to note that this potential overestimation does not invalidate the results and the variable for 'child disability' (c\_disable) is proof. As previously mentioned, this variable was manually created through matching, thus, this study lays the groundwork by connecting cousin marriages with child disability and future research can bring further precision into the latter results. Lastly, for future research, it would be intriguing to examine cousin marriages over different time periods. This could provide insights into whether a decrease in cousin marriages in India has led to a decline in disability rates

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