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SPECIAL ISSUE

**Bridging the Gender
Gap in Health:
Challenges and Solutions**

In Collaboration with



Guest Editors

Dr. Eleanor Nwadinobi – President, Medical Women's International Association

Dr. Wajiha Rizwan – President, Medical Women's Association of Pakistan

Dr. Zafar Mirza – Specialist in Health Systems & Population Health

Dr. Lubna Baig – Public Health Specialist



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Meet Our Guest Editors

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Dr. Eleanor Nwadinobi is a distinguished physician, gender equality advocate, and the first Nigerian President of the Medical Women's International Association. She has extensive expertise in gender-based violence prevention and health equity and has collaborated with organizations like the United Nations and UK Aid to shape policies on gender, health, peace, and security.

Dr. Wajiha Rizwan

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Dr. Zafar Mirza is a global health policy expert specializing in health systems and population health. He has served as a minister and health policy advisor, working with WHO and other organizations to strengthen healthcare systems and drive inclusive health reforms. His contributions span governance, policy development, and public health advocacy.

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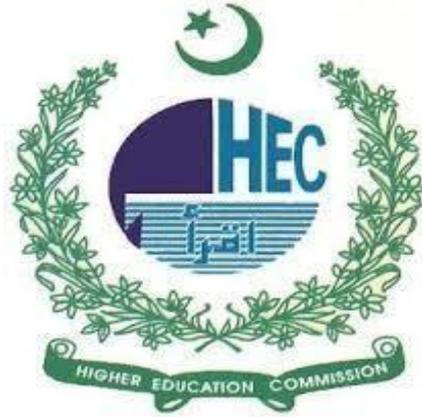
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Table of Content	Page Numbers
Editorial	
Advancing Gender Equity in Health: The Role of Medical Women’s International Association	1-2
Women's Health Crisis in Pakistan	3-4
Original Articles	
Exploring Career Barriers Faced by Female Doctors Due to Gender Bias: A Qualitative Analysis	5-10
Gender Disparities and Socioeconomic Triggers in Filicide-Suicide—An Analysis of Media Portrayals	11-15
Health and Educational Inequalities among the Third Gender Community in Lahore, Pakistan	16-21
Patients’ Preference in Selecting a Dental Practitioner based on Gender	22-26
Patient Perceptions of Surgeon Attire, Professionalism, and Gender Bias in Pakistani Public Hospitals	27-31
Gender Disparities in Medical and Dental Admissions: Students' Perspectives on Barriers	32-37
Challenging Gender Norms: Male Physicians' Perspectives on Family Planning in Rural Islamabad	38-43
Review Article	
Addressing Gender Disparities in Adolescent Sexual and Reproductive Health: A Scoping Review of Life Skills-Based Education in Pakistan	44-50
Short Communication	
Bridging the Gap: Strengthening Mental Health Support for Female Health Professionals in Pakistan and Türkiye	51-54

Advancing Gender Equity in Health: The Role of Medical Women's International Association

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As Presidents of the Medical Women's International Association (MWIA) and its affiliated national body, the Medical Women's Association of Pakistan (MWAP), we are honored to contribute to this special edition of the *Journal of University College of Medicine and Dentistry*. Advancing gender equity in health is at the core of our mission, as emphasized in the MWIA 2022–2025 President's theme: "*One Humanity: Health Solutions through Our Partnerships*." Globally, women face significant barriers to quality healthcare, particularly in low- and middle-income countries, where cultural stigma, economic constraints, and systemic biases exacerbate these disparities. Women health professionals also experience gender inequities, further hindering efforts to close the health gap. Overcoming these challenges requires a holistic, collaborative approach—one that upholds our shared humanity while addressing the diverse needs of individuals.¹

At MWIA, we are tackling these challenges through strategic partnerships that drive meaningful change.² As part of a diverse group of experts, MWIA contributed to the co-creation of the *Opportunity Map* at the Innovation Equity Forum (IEF) held in 2023. Designed to amplify underrepresented voices, this initiative highlights the unique perspectives of women in research and development, ensuring their contributions shape global health solutions. One of our flagship initiatives is our participation in the *Innovation Partnerships, Equity 2030 Alliance* with the United Nations Population Fund (UNFPA). This alliance prioritizes women-centric research, focusing on the development of diagnostic tools, treatments, vaccines, and reproductive health solutions tailored to women's needs. Launched at the World Health Summit in Berlin, this collaboration is instrumental in elevating women's health as a global priority.

MWIA is also proud to partner with the *Every Woman Treaty* coalition, a powerful alliance of 1,700 women's rights activists and 840 organizations across 128 nations. This coalition is advocating for a binding global norm to end violence against women and girls, recognizing gender-based violence as a critical public health issue with far-reaching consequences. In addition, MWIA is actively addressing the health needs

of refugees through its involvement in the *Group of Friends-Health* under the *Global Compact on Refugees (GCR)*, co-chaired by UNHCR and WHO. Led by MWAP, this initiative provides gender-sensitive healthcare solutions to vulnerable populations, ensuring that refugee women receive essential medical care.

Our commitment to global health extends to our partnership with the *Global Sepsis Alliance* and endorsement of the *Berlin Declaration on Sepsis*. At the 2024 World Sepsis Congress, MWIA emphasized the urgent need for improved sepsis diagnosis and treatment, particularly for women and children, underscoring our role in shaping global health policies. Furthermore, our collaboration with *Lehigh University's United Nations Youth Representative Program* reflects our investment in future healthcare leadership. By supporting youth engagement in NGOs across five continents, we are nurturing the next generation of health advocates committed to gender equity and inclusive healthcare.³

National Initiatives: Driving Change in Pakistan

At the national level, MWAP is addressing gender disparities in the healthcare workforce through targeted initiatives. We recently conducted a workshop on "*Building a Respectful and Harassment-Free Workplace*," led by Prof. Nazish Imran, alongside ongoing *Orientation Seminars* that explore the legal, social, and institutional aspects of workplace harassment in Pakistan. To provide further support, MWAP's *Counselling Cell*, directed by Dr. Aysa Zaheer (counsellingcellmwap@gmail.com), offers guidance for those affected by workplace harassment.⁴

A Call to Action

At MWIA, we view these partnerships not merely as strategic alliances but as vital components of our mission to build a more equitable world. Through intergenerational, multidisciplinary, and cross-sectoral collaboration, we are advancing inclusive and accessible health solutions. We invite our colleagues and partners to join us in this mission. As MWIA President Dr. Eleanor

Nwadinobi affirms, “*Elbows locked*”—together, we can bridge the gender gap in health and create a future where healthcare knows no gender.

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Women's Health Crisis in Pakistan

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Women's health is a significant crisis within Pakistan's overall healthcare system, affecting approximately 120.7 million citizens i.e. 50% of the population, according to the 2023 census.¹ This disparity arises primarily from two factors: the lower societal status of women, and their specific reproductive healthcare needs. Both of these factors are deeply influenced by cultural, economic, and systemic factors.

The lower status of women in society is indeed tragic. There are alarming disparities faced by women in every aspect of life at every age. In 2024, Pakistan earned the dubious distinction of being ranked 145th out of 146 countries in the Global Gender Gap Index, according to the World Economic Forum.² In the 18th edition of the Global Gender Gap Report, Pakistan has a gender gap index of 0.57. This index ranges from 0 to 1. A country with no gender gap would have an index of 1. It is calculated with the help of the data across four important dimensions of women's lives: economic participation and opportunity; educational attainment; health and survival; and political empowerment. The index, of course is a way to reflect the situation, the actual crisis is even worse. The reasons for poor status of women in society are multidimensional, intricate and intertwined.

Lack of attention to the health of women, including their reproductive healthcare needs, is one of the causes as well as a consequence of poor status of women. Poor health further weakens the capacity of women to develop and take control of their lives. For any girl, health issues reduce educational opportunities, which are crucial for her future well-being. Poor health makes her more prone to domestic violence and sexual abuse. She has to follow her destiny decided by others, in terms of early marriage and the number of children she will have, and even decisions about the lives of her children. Repeated sickness negatively affect their chances in life to become part of workforce, become economically independent, participate in decision making at all levels, assume leadership positions and appropriately nurture the next generation. And as it happens, the broad base of this pyramid is firmly cemented in poverty.

Poverty and disease are in vicious relationship, one feeds on another. Precarious health of women in Pakistan

is evident throughout her life-course. The quality of health information in Pakistan is generally poor, with gender-disaggregated health data being particularly scarce and of low quality. Equity is often overlooked in data discussions, and when considered, the commitment level is inadequate. Based on available information, it is evident that women's health in Pakistan is in a dire state. Approximately 40% of children in Pakistan are stunted, and notably, a significant proportion of these children are girls. This disparity highlights the severe nutritional and health challenges faced by female children in the country.

In addition to stunting, malnutrition among children under five is alarmingly high, with 53.7% of children affected by anemia.³ This condition is particularly prevalent among female children, underscoring the gender disparities in health outcomes. Children with low-weight for height (wasting) and low-weight for age (underweight) are as high as 23.3% (Sindh) and 41.3% (Sindh) respectively.⁴ Half of these children are girls. More than half the children under 5 years of age in Pakistan are anemic. 56.6% of adolescent girls are anemic in the country.⁵ One in seven women (14.4%) in reproductive age (15-49) are undernourished and as a result are underweight for their age. Sindh has the highest 22.6% underweight women.⁶

They give birth to underweight children who are malnourished and get stunted. About 41.7% to 57% of women reproductive age (15-49) are anemic. Around 30% deliveries are conducted by untrained birth attendants, and around 34% of deliveries take place at home. The total fertility rate (TFR) in Pakistan is 3.6 births per woman. Mothers living in rural areas, on average, bear one more child than mothers in urban areas. This is one of the highest TFR in Asia.

The contraceptive prevalence rate is only 34% of currently married women age 15-49. 66% are not using any contraceptive. Every fourth women who undergoes childbirth also undergo perinatal depression which in 90% of cases remain untreated.⁷ Pakistan has the highest rate of breast cancer in Asia.⁸ Every ninth women is in danger of developing breast cancer. Years lived with disability due to breast cancer in girls and women aged 10-24 years in Pakistan are the highest in the world and the burden is increasing across female age groups.

Beyond reproductive health, women face significant challenges from communicable and non-communicable diseases, exacerbated by their disadvantaged status. Many of these health issues are preventable or manageable with early intervention. However, societal norms, patriarchy, poverty, and systemic neglect hinder progress. The economic implications are profound. An alarmingly low percentage of women participate in the workforce, and they earn 10% to 30% less than men for equivalent work.⁹ Improving women's health necessitates systemic healthcare reforms emphasizing governance, financing, responsiveness, and delivery, alongside addressing inherent gender biases to create a more equitable society.

Improving women's health necessitates enhancing the overall healthcare system in governance, financing, responsiveness, and delivery, with a heightened sensitivity to women's health needs. Addressing gender biases in healthcare is essential to effect meaningful change.

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Exploring Career Barriers Faced by Female Doctors due to Gender Bias: A Qualitative Analysis

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Abstract

Objective: To explore the experiences of female doctors in facing and overcoming gender-related career barriers and the roles of male colleagues.

Methodology: This qualitative phenomenological study, conducted at a private medical college in Lahore, Pakistan, from August 2023 to July 2024, involved 13 faculty members (8 females, 5 males) selected through purposive and snowball sampling across various specialties. Female doctors who had experienced delayed promotions or held leadership positions, and male doctors with experience supervising or working alongside female colleagues, participated in semi-structured interviews. An interview guide, informed by key themes from existing literature on gender studies in the medical field, directed discussions on career advancement barriers, strategies to overcome them, and the roles of male doctors in supporting female colleagues. Inductive thematic analysis of the transcripts identified patterns and themes within the data.

Results: The analysis resulted in three overarching themes and eleven subthemes. Theme one 'Systemic barriers' highlighted the challenges faced by female doctors in career advancement in the form of discriminatory practices, societal expectations, and the lack of mentorship. Theme two focused on the 'professional empowerment strategies' for female doctors, emphasizing on developing interpersonal skills, building expertise, and engaging in leadership trainings. Third theme elaborated the supportive role of male doctors in promoting gender equity at workplace through mentorship, acknowledgment of achievements, and creating a safe working environment for females.

Conclusion: This study identified the barriers hindering professional growth of female doctors. It highlights the need of mentorship, empowerment strategies, and the supportive roles of male doctors in advancing gender equity. Implementing these strategies can lead to a more equitable healthcare system.

Keywords: Gender Equity, Gender Bias, Gender Discrimination, Mentorship, Phenomenological Study.

Introduction

The medical profession is often considered meritocratic field, where success is determined by competency and dedication.¹ However, literature suggests that medical meritocracy is largely a myth, especially

when it comes to gender equity.² Although women make up 65% of those who graduate from medical schools, only a few can be seen in leadership positions.^{3,4} This gender disparity is not only prevalent in low-income countries but is also a significant problem in developed countries such as the United States where female doctors still face delayed promotions and obstacles that prevent them from attaining leadership positions in the medical field. Despite being qualified and skilled, they have been denied opportunities to attain roles as department chairs, full professors, or administrators.⁵ In many cases, this deprivation is attributed to gender bias, which could be due to various reasons such as societal expectations, cultural norms, implicit biases, lack of support, and limited access to opportunities.⁶

Gender disparity is even more pronounced in Pakistan, where female doctors face significant challenges in their career progression due to deeply rooted gender biases, influenced by sociocultural norms and institutional practices.⁷ They are expected to fulfil family responsibilities while pursuing their careers, often without adequate support. This situation is further complicated by the scarcity of female mentors, limited professional development and research opportunities, lack of transparent recruitment and promotion policies, and workplace harassment.⁸ Even when they manage to overcome these obstacles, they encounter the 'glass ceiling', where gender bias prevents them from attaining leadership positions, and the 'sticky floor', which keeps them confined to supporting roles, often resulting in career stagnation or premature exits from the workforce.⁹

The existing literature has extensively examined the challenges encountered by female doctors in their career trajectories.^{7,8,10} However, the focus now needs to be shifted towards identifying strategies for overcoming these challenges and progressing in a gender-biased environment, particularly within the Pakistani context. To fully understand these strategies, it is important to explore them from both the perspective of female and male doctors, as male doctors play a crucial role in career development of their female colleagues.¹¹ The study aims to explore the

impact of gender bias as a barrier to the career progression of female doctors and identify the strategies they use to overcome these challenges. Additionally, the study aims to examine the role of male doctors in supporting the career development of their female colleagues. The insights from this study will provide comprehensive solutions to gender equity challenges, contributing towards empowerment of female doctors and development of a balanced healthcare system in Pakistan.

The research is guided by the following questions: How does gender bias impact the career progression of female doctors, and what strategies do they employ to overcome these barriers? How do male doctors contribute to supporting the career advancement of their female colleagues in the medical profession?

Methodology

This qualitative phenomenological study was conducted at a private medical college in Lahore, Pakistan after obtaining approval from the ethics review board (FMH-06/04/2023-IRB-1199). Thirteen faculty members (8 females, 5 males) were recruited using purposive and snowball sampling from various basic and clinical specialties. Initial participants were identified based on specific inclusion criteria: female doctors who had experienced delayed promotions despite being eligible or who held leadership positions, and male doctors with experience working alongside or directly supervising female colleagues. Snowball sampling was then used to identify additional participants who were either known for their extensive career experience, had faced significant career challenges, or were perceived by others as having valuable insights into gender equity in the medical profession. Participants were contacted in person and via email.

Semi-structured, one on one interviews were conducted by AZ according to the participants' feasibility using an interview guide developed by the research team. This guide was based on key themes identified from existing literature on gender studies in medical field and covered questions related to barriers in career advancement, strategies to overcome these barriers, and the role of male doctors in supporting the careers of their female colleagues. It was reviewed by two medical educationists for relevance and pilot tested with one male and one female doctor for language and clarity. The pilot interviews were excluded from the final analysis. Written informed consent was obtained before interviews. Interviews were audio recorded with the permission of the participants and lasted between forty to sixty minutes. Field notes were also maintained by the primary investigator during the interviews to note contextual information.

The audio recordings were transcribed verbatim by AZ and HT and transcripts were shared with participants for member checking.¹² Thematic analysis was conducted using Atlas.ti version 9.1.3.0 (Scientific software development, Berlin, Germany), following an inductive approach. Major themes and related subthemes were identified through open coding and supported with representative quotes. Data saturation was reached when no new themes emerged during analysis. This study followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) to ensure rigour in data analysis.¹³

Health care providers, policy makers and consumers. Although partial checklists are available, no consolidated reporting framework exists for any type of qualitative design. To develop a checklist for explicit and comprehensive reporting of qualitative studies (indepth interviews and focus groups).

The researchers, as females from the same institution, recognized the potential influence of their shared professional environment and gender on the research process. To address this, they engaged in intentional reflexive practices, including regular discussions to critically analyze their positionality and its potential impact on data interpretation. Additionally, credibility was enhanced through data triangulation achieved via member checking, where participants reviewed and validated the findings to ensure they accurately reflected their experiences and perspectives. During data analysis, two researchers independently coded the data and then compared and cross-verified their findings to ensure consistency, reduce individual bias, and strengthen the reliability of the identified themes.

Results

Our study included thirteen participants comprising eight female and five male doctors. These participants represented various specialties and designations, ranging from senior registrar to professors and department heads, which allowed us to gather a wide range of perspectives. Table 1 presents the demographic characteristics of the study participants. Thematic analysis revealed three overarching themes described in detail below, followed by Table 2 summarizing the themes, subthemes, and representative quotes from participants.

Theme 1: Systemic Barriers

'Systemic barriers' was identified as a prominent theme, highlighting the impact of sociocultural beliefs and organizational practices on the career advancement of female doctors. Our participants shared experiences of discriminatory practices, where male doctors were preferred over female doctors for hiring and promotions, presuming them to be more competent. Societal expectations and gender roles further limited their career growth opportunities, as they were expected to manage their professional duties with domestic responsibilities leaving them with little or no time to focus on career enhancing activities such as research and networking. Some participants reported that lack of mentorship left them to figure out their career progression on their own.

While discussing gender dynamics in workplace, some female doctors expressed that their opinions were often questioned or dismissed, making them feel undervalued. Some females reported positive experiences working with male colleagues, while others faced gender discrimination, verbal harassment, unequal task distribution, and being dismissed. Females also shared instances of bullying from female colleagues which disturbed their mental health. The female doctors shared that the emotional and psychological impact of these barriers was profound resulting in frustration and burnout. For them, peer support and inner motivation helped them to push forward.

Theme 2: Professional Empowerment Strategies

This This theme explored the professional empowerment strategies that female doctors in leadership roles found most effective in their career journeys. According to them, self-advocacy at different professional platforms helped them to gain projection and get better roles. Additionally, their assertiveness allowed them voicing their opinions in difficult situations. Building expertise made them indispensable at work.

Most participants believed that continuous education,

mentorship, and specialization in niche areas are necessary for achieving leadership roles. One participant further proposed that enrolling in leadership training programs would make women more suitable candidates for leadership roles. Some participants recommended creating formal mentorship programs to support career building and female exclusive networking spaces to share experiences, resources, and job opportunities. They highlighted the need to foster a research culture among female doctors and recommended organizing workshops on stress management to enhance their mental well-being.

Theme 3: Role of Male Doctors in Promoting Gender Equity

This theme focused on the contributions of male doctors in supporting their female colleagues at work. They reported recommending many competent female doctors for promotions in performance review meetings and also ensured that their achievements were acknowledged and celebrated. They mentored their female trainees and colleagues to help them excel professionally. This support extended to providing opportunities that would promote them and help build connections. Moreover, the participants emphasized on creating a safe working environment for females. Additionally, they spoke about the significance of flexible work policies to help female doctors balance their professional responsibilities with personal commitments.

Discussion

The present study aimed to explore the career barriers faced by female doctors in Pakistan, the strategies they employed to overcome these challenges, and the role of male colleagues in supporting their professional growth. Drawing on diverse perspectives from participants across various specialties, the findings underscored the critical importance of gender equity in the healthcare profession to promote impactful and equitable professional growth for women. The analysis revealed key themes, as outlined in Table 2, which depict the systemic, cultural, and personal challenges faced by female doctors and the strategies and support mechanisms that can help address these barriers.

Systemic Barriers

Our study highlighted several barriers hindering the professional growth of female doctors in Pakistan, with a significant issue being the institutional discriminatory practices during hiring and promotion. A similar finding is reported in a study on gender disparities in Pakistan's private service sector, where the majority of female respondents indicated that male employees were promoted more quickly than females.¹⁴ These practices often favour male doctors, based on assumptions that they are more competent and available for professional duties (Table 2, Discriminatory practices). However, such assumptions are not supported by literature. Research consistently highlights that female doctors excel in patient care, spending more time with patients and ensuring better communication.¹⁵ They effectively apply medical research, use diagnostic tools accurately, and make sound decisions regarding surgery.² This evidence contradicts the biases favouring male doctors and suggests that criteria used in hiring and promotion decisions should be re-evaluated to ensure fairness and equality for female doctors.

Another challenge reported, is the gender roles defined by sociocultural norms. Women are expected to balance home responsibilities while working full time, often without support (Table 2, Societal expectations and gender roles). This aligns with results from a recent study conducted across Pakistan, including Azad Jammu & Kashmir, which found that female doctors are burdened by socio-cultural expectations to uphold family honor, limiting their career progression.¹⁶ This results in their burnout and premature exits from the professions.⁸

A lack of structured mentorship opportunities was another barrier highlighted by participants. Female doctors who lacked career-related guidance from senior professionals suffered delays in their career progression (Table 2, Lack of mentorship). Mentorship plays a crucial role in career development, emotional support, and overcoming professional challenges.¹⁷ A study conducted on enablers and barriers to women leadership in Pakistani healthcare found that female participants with female mentors reported smoother career paths. However, others believed that mentorship, regardless of gender, was essential.¹¹ These findings emphasize the need for implementing formal mentorship programs to support female doctors in their careers.

An unexpected finding was the experience of discriminatory and unsupportive behaviour from certain female colleagues, which led to demotivation and mental stress that adversely affected career growth (Table 2, Emotional and psychological impact). While workplace harassment among female doctors has been explored in Pakistan, most studies focus on bullying by male colleagues or institutional factors, leaving a gap in understanding mistreatment by female seniors.¹⁸⁻²⁰ A survey in New Zealand found that female managers bully female subordinates 87% more than male subordinates, suggesting that competition or workplace hierarchy may contribute to this behavior.²¹ In Pakistan, limited leadership opportunities for women could increase competitiveness and mistrust. More research is needed to examine intra-gender bullying in the medical profession in Pakistan and develop strategies for fostering supportive and cooperative work environments.

Professional Empowerment Strategies

Cultivating assertiveness, resilience, determination, and self-promotion emerged as essential behaviors for female doctors striving for leadership positions (Table 2, Personal growth and skill building). Similar themes were reported in a study conducted in Indiana, where 16 women leaders in academic medicine shared key career lessons.²² These leaders highlighted the significance of assertive communication, surrounding oneself with supportive people, and consistently refining leadership skills.

One participant emphasized the value of leadership training programs in enhancing women's readiness for leadership roles (Table 2, Engaging in leadership training programs). This perspective aligns with existing literature, which underscores the role of such programs in developing essential leadership skills. Research indicates that leadership development initiatives, when paired with mentorship and peer support networks, significantly contribute to the personal and professional growth of female doctors.²³ For instance, a leadership training program in the United States received positive feedback from participants, indicating its effectiveness.²⁴ These findings suggest that similar initiatives

Table 1: Demographics of the study participants

Participant code	Gender	Designation	Department	Qualification
F1	Female	Assistant Professor	Medicine	MBBS, FCPS, CHPE
F2	Female	Senior Registrar	Surgery	MBBS, FCPS
F3	Female	Associate Professor	Paediatrics	MBBS, FCPS
F4	Female	Assistant Professor	Physiology	MBBS, MPhil, CHPE
F5	Female	Professor	Biochemistry	MBBS, MPhil, PhD
F6	Female	Professor and HOD	Pharmacology	MBBS, MPhil, PhD
F7	Female	Professor and HOD	Paediatrics	MBBS, FCPS,PGPN,CHPE
F8	Female	Professor and HOD	OBGYN	MBBS, FCPS, MHPE
M9	Male	Assistant Professor	Nephrology	MBBS, FCPS, CHPE
M10	Male	Associate Professor	Medicine	MBBS, FCPS, CHPE
M11	Male	Professor and HOD	Surgery	MBBS, FCPS
M12	Male	Associate Professor	Ophthalmology	MBBS, FCPS, MRCS, MME-I
M13	Male	Professor and HOD	Anatomy	MBBS, MPhil

*HOD stands for Head of Department ; CHPE Certificate in Health Professions Education; MME Masters in Medical Education; Masters in Philosophy

Table 2: Themes, subthemes, and their representative quotes

Theme	Subthemes	Representative quotes
Systemic Barriers	Discriminatory practices	'My colleague and I had same qualification and experience, but when it came to choosing the head, they chose him.' (F3)
	Societal expectations and gender roles	'Managing home and family matters is 90% my responsibility. When there is issue at home, it is always me who has to take leave, as if my job is not important.' (F1)
	Lack of mentorship	'I often felt lost because there was no one to guide me. I had to figure things out on my own.' (F4)
	Emotional and psychological impact	'When my promotion was delayed, I felt so frustrated, wondering if all my hard work even mattered.' (F3) 'It is not always from men as I faced bullying from female colleagues also which affected my mental health and disturbed workplace decorum for me.' (F5)
Professional Empowerment Strategies	Enhancing communication and networking	ffecte Expanding professional networks: 'Whenever I attend events like conferences, symposia, etc. I take my juniors along. It gives them exposure and motivation.' (F7) Female exclusive networking space: 'There should be safe spaces for females where they can connect and share their struggles.' (F1) Establishing formal mentorship programs: 'I think there should be mentoring programs that help you in making informed decisions about your career.' (F4)
	Personal growth and skill building	'I think it is important to talk about yourself...about your achievements. This will make you seen.' (F3) 'I encourage my juniors to improve their qualifications and skills, and I am there to support them at every step. Their achievement feels my achievement.' (F6) 'I enrolled myself in leadership program which helped me a lot. It helped me in developing emotional intelligence at work.' (F7) 'I focus on my journey. I don't compare myself with others.' (F3) 'I have ability to absorb external pressures at workplace which keeps me going. I try not to respond to negativity.' (F2) 'I think in this patriarchal society, we need to be a little assertive. I never hold back my opinion just because it is different.' (F5) 'Workshops on stress management will be helpful especially for female doctors.' (F7)
	Promoting research culture	'We need more representation and contributions of females in research.' (F3)
	Offering mentorship	'As head, I feel it is my responsibility to make sure my trainees are making right choices. So, I hold regular mentoring sessions for them.' (M11)

could be effectively adapted and implemented in various clinical settings, to provide valuable opportunities for women pursuing careers in academic medicine.

The findings also highlighted the urgent need to promote a research culture among female doctors to support their advancement into leadership roles (Table 2, Mentorship and research). Research productivity remains a crucial determinant of leadership eligibility, yet many women face barriers stemming from home and institutional responsibilities, limiting their ability to engage in research or publish in high-impact journals.¹⁰ This challenge reflects observations from a study conducted in Islamabad, which revealed that while equal research opportunities exist for both genders, female academicians often struggle to access them due to personal and family commitments.²⁵ Prioritizing early engagement in research and maintaining a strong academic profile is essential for women to overcome these barriers and compete effectively for leadership positions, ultimately contributing to reducing gender disparities in healthcare leadership.

Role of Male Doctors in Promoting Gender Equity

This study explored the role of male doctors in promoting gender equality within the medical profession. Key actions identified include recommending competent female doctors for promotions, providing career mentorship, acknowledging achievements, and fostering safe working environments (Table 2, Role of male doctors in promoting gender equity).

A study on women surgeons in Pakistan reported significant gender disparities, with many facing barriers to hiring and promotion due to bias, lack of mentorship, and unequal opportunities.²⁶ These findings align with global literature highlighting systemic challenges to women's career advancement.^{5,9} However, the role of male doctors as key decision-makers in these contexts often remain underexplored, with their influence primarily characterized as barrier rather than a facilitator. In contrast, our study presents a more encouraging narrative, where male supervisors actively advocated for the promotion of hardworking and eligible female doctors, ensuring merit-based decisions (Table 2, Recommending females for promotion). This proactive engagement by male leaders underscores their critical role in challenging systemic biases, creating supportive environments, and fostering equitable practices.

Male doctors in our study made significant efforts by providing mentorship and support to help female doctors advance in their careers. This finding aligns with a study on female doctors in leadership positions in Pakistan, which included participants from Punjab, Sindh, and Khyber Pakhtunkhwa.¹¹ In that study, women highlighted the importance of mentorship, with some preferring female mentors due to cultural factors. However, many participants also recognized that mentorship, regardless of gender, was valuable for career development.

Creating safe working environments was emphasized as a critical step toward achieving gender equality, with male participants acknowledging their responsibility in ensuring workplaces free from harassment and discrimination (Table 2, Ensuring safe working environments). This contrasts with findings from several studies in Pakistan, which highlight the prevalence of workplace mistreatment, harassment, and incivility faced by female doctors. For instance, research from

Aga Khan Hospital, Karachi, reported that 57.5% of female surgeons experienced verbal and mental harassment, often unreported, with significant impacts on their mental well-being, particularly among trainees.¹⁸ Another study in Lahore found that 43% of female doctors faced workplace violence and 47% reported workplace incivility, mostly by seniors and supervisors in private institutions.¹⁹ These studies underscore persistent systemic issues, while our findings offer a more optimistic perspective, highlighting proactive efforts by male colleagues to foster harassment-free and equitable workplaces.

Limitations

The current study has certain limitations that should be reported. While efforts were made to ensure the findings provide meaningful insights, the study's transferability may be limited as the participants were all affiliated with a single institution. Additionally, the voluntary nature of participant recruitment introduces the possibility of selection bias, as those who chose to participate may differ in important ways from those who did not. Furthermore, there is a potential for socially desirable responses during the interviews, which could have introduced a positive bias into the results. Future research could involve multiple institutions to improve the transferability of the findings across different settings.

Conclusion

This study identified significant barriers faced by female doctors, including systemic biases and sociocultural expectations that hinder their career progression. It highlighted practical strategies for female doctors' empowerment, such as, developing interpersonal skills, mentorship, and engaging in leadership trainings. Furthermore, the supportive role of male doctors in promoting gender equity is crucial. Focusing on these areas will foster a more equitable healthcare system, ultimately paving pathways for aspiring female leaders.

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Gender Disparities and Socioeconomic Triggers in Filicide Suicide. An Analysis of Media Portrayals

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Abstract

Objective: Filicide-suicide, a tragic form of homicide-suicide where a parent kills their child before taking their own life, is poorly understood, particularly in the context of gender dynamics. This study aims to explore the gender disparities and socioeconomic triggers in filicide-suicide cases in Pakistan, analyzing the characteristics of victims and perpetrators as reported in the media.

Methodology: A cross-sectional analysis was conducted using reports from major Pakistani newspapers over two years (January 1, 2019, to December 31, 2020). Data were extracted from online newspaper archives, focusing on sociodemographic traits, the methods of filicide-suicide, precipitating factors, and the gender and age of both victims and perpetrators. Descriptive statistics were analyzed using SPSS 26.

Results: Forty-four filicide-suicide incidents were identified. The majority of cases occurred in Punjab (63.6%), followed by Sindh (34.1%), with a single case from KPK (2.3%). Urban areas reported 56.8% of the incidents. Female perpetrators were more prevalent than males, and most victims were also female. The average age of victims was 10.18 years (SD 9.5). Notably, many cases involved multiple victims, a rare phenomenon in existing literature. Drowning (38.6%) and poisoning (31.8%) were the most common methods. Socioeconomic pressures, particularly financial stress, were frequently cited as precipitating factors.

Conclusion: The findings highlight gender disparities in filicide-suicide cases in Pakistan. Female perpetrators and victims dominate these incidents, reflecting deep-rooted gender inequalities. Women's disproportionate exposure to socioeconomic hardships and societal pressures likely contributes to these tragic outcomes. Addressing these disparities through gender-sensitive mental health interventions is critical to mitigating the risks of filicide-suicide and promoting broader gender equality in health.

Keywords: Filicide, Homicide-Suicide, Mental Health, Suicide.

Introduction

Homicide-suicide (H-S), also known as murder-suicide, extended suicide, or dyadic death, is a tragic polymorphic phenomenon that refers to homicide of one or several individuals and subsequent suicide of perpetrator.¹ Marzuk, Tardiff, and Hirsch (1992) have classified homicide-suicide through various ways.¹ According to Marzuk et al. (1992), the main types of homicide-suicide based on the victim-offender relationship are spousal

(uxoricide)/consortial couples, filicide-suicide (F-S) in which the homicide victim (or victims) was a child 0-16 years old, familicide-suicide (an overlap between the Uxoricide and Filicide categories: the killing of both spouse and children), and killing of other family members.¹ Filicide-suicide, a rare subset of homicide-suicide, is documented across various global regions. In Chicago, a 24-year study found 24 out of 459 filicide cases involved suicide.² South Australia's 29-year study identified 13 filicide-suicide cases, with a higher incidence among fathers compared to mothers.³ Research suggests that filicide-suicide might be more prevalent in some Asian societies. In South Korea, a decade-long newspaper analysis found 249 filicide-suicide cases, with mothers being the predominant perpetrators.⁴ Similarly, in Jamnanagar, India, the rate of filicide-suicide was 0.06 per 100,000, with mothers exclusively identified as perpetrators.⁵

There has been various classifications of filicide.⁶ D'Orban identified six distinct categories of mothers who committed filicide, a term used to describe a type of murder-suicide where parents kill their children before taking their own lives.⁷ Guileyardo and colleagues expanded these categories to sixteen. These subtypes of filicide are based on various motives and causes. They include Altruism, euthanasia, acute psychosis, postpartum mental disorder, unwanted child, angry impulse, spouse revenge, sexual abuse, Munchausen-by-proxy, violent older child, negligence and neglect, sadism and punishment, drug and alcohol abuse, seizure disorder, and innocent bystander. Filicide-suicide studies, though limited,⁹ show that motives and risk factors often relate to the victim's age and gender.^{10,11} As children age, the motivations for filicide may vary.¹² In the U.S., a qualitative analysis of 76 filicide-suicides revealed that both male and female perpetrators often experienced relationship conflict and mental health issues, but the factors they faced were distinct. Women frequently dealt with relationship conflict, mental health problems, and their children's health issues, while men more often had histories of violence and its consequences, such as legal or job problems.¹⁰ Studies in Taiwan linked financial strain, depression, and marital conflict to a higher risk of filicide-suicide.¹³ Domestic abuse history also poses significant risk, with intimate partner violence (IPV) frequently preceding such incidents. In South-Asian contexts, factors like patriarchy and gender bias may also contribute. For

instance, in India, a case involved a mother killing her daughters due to family pressure for a male child. Family disputes, mental illness, and cultural issues like dowry disputes were identified as key motives in Indian cases of filicide-suicide.^{14,15} Although filicide-suicide incidents have been covered by the media in Pakistan numerous times over the years, there has been a notable absence of academic studies on this phenomenon. Furthermore, Pakistan lacks official suicide data and does not report any suicide statistics to the World Health Organization. While doing literature search, only one published case report of filicide was found from Pakistan in which a woman with depressive psychosis killed her two children.¹⁶ To our knowledge, there has not been any published research about filicide-suicide. Thus, current study aimed to find out more about this tragic phenomenon and socio-demographic variables related to filicide-suicide in Pakistan.

Methodology

A cross-sectional analysis was conducted using reports from major Pakistani newspapers over two years (January 1, 2019, to December 31, 2020). This study was approved by the Institutional Review Board of King Edward Medical University on 7th of September, 2021(615/RC/KEMU).

As part of a wider project on suicide and homicide-suicide, we searched all news articles about filicide-suicide fatalities in four Pakistani newspapers—three in English (Daily Dawn, Daily Nation, and Daily Tribune) and one in Urdu (Daily Jang)—during a two-year period (January 1, 2019 to December 31, 2020). The four newspapers that were chosen are among the most widely read in the nation. In order to extract data for all newspapers, we examined e-papers, which are online versions of every page from every city, as well as the specifics of the online suicide report version. Following the operationalization of the definition of a filicide-suicide case, one author each examined one of four newspaper for accounts of filicide-suicides, that occurred during the study period. From there, they extracted data regarding a variety of sociodemographic traits, filicide-suicide method, potential reasons, any suicide notes left, etc. The information was then entered by each individual into a spreadsheet created especially for this use. To avoid duplication, one of the authors (NI) reviewed each entry in the spreadsheet. The data was analyzed using SPSS 26. Current manuscripts describe results from the subset of filicide-suicides only.

Results

A total of 44 cases of filicide-suicide with 44 perpetrators and 79 victims, were identified during the two-year study duration. Twenty-eight (63.6%) cases were reported from Punjab, 15 (34.1%) were reported from Sindh, 1 case (2.3%) was reported from KPK and none was reported from Balochistan. Twenty-five (56.8%) cases were reported from urban areas, 15 cases (34.1%) from rural areas while the information was missing for four cases. In 24 incidents filicide and suicide were committed at the same location. The presence of witnesses was mentioned in 8 of the total incidents. In 38 cases suicide death was within the next 24 hours of the homicide incident. Corresponding to Marzuk, Tardiff, and Hirsch’s (MTH) Class,¹ a precipitating event was reported in 32 incidents, the most common being domestic and financial issues. Fight with husband and other domestic issues were reported in 15(34%) of the incidents. Method of filicide and suicide was same in 35(79.5%) of the cases. The most common method for filicide was drowning, followed by poisoning. Number of homicide victims was

variable and shown in the table-1. There was one incident that involved 7 victims although five of the victims survived the homicide. The offender was pregnant in 2 incidents. In another incident the offender recorded a voice message prior to the incident in which she mentioned thoughts of killing herself and her children due to some domestic issues. Perpetrators survived in eleven incidents as mentioned in the newspaper reports, one or more victims survived in 14 cases while both the perpetrator and one of victims survived in only one case.

Table 1: Characteristics of homicide-suicide incidents

Category	Method	n (%)
Method of Homicide		
	Drowning	17 (38.6%)
	Poisoning	14 (31.8%)
	Firearm	3 (6.8%)
	Use of sharp object	3 (6.8%)
	Burning	2 (4.5%)
	Strangulation	2 (4.5%)
	Other	2 (4.5%)
	N/A	1 (2.3%)
Method of Suicide		
	Drowning	15 (34.1%)
	Poisoning	12 (27.3%)
	Firearm	3 (6.8%)
	Use of sharp object	4 (9.1%)
	Hanging	3 (6.8%)
	Burning	2 (4.5%)
	Other	2 (4.5%)
	N/A	3 (6.8%)
Number of Homicide Victims per Incident		
	1 victim	18 (40.9%)
	2 victims	14 (31.8%)
	3 victims	8 (18.2%)
	4 victims	3 (6.8%)
	More than 4 victims	1 (2.3%)
Precipitating Motives (Based on MTH Typology, 1992)		
	Amorous jealousy	0 (0%)
	Mercy killing	0 (0%)
	Altruistic or extended suicide	5 (11.3%)
	Familial trait	24 (54.5%)
	Financial and social stressors	15 (34.1%)
	Retaliation	Not reported
Homicide Type (Based on MTH Typology, 1992)		
	Neonaticide (age < 1 day)	0 (0%)
	Infanticide (age < 1 year)	2 (2.5%)
	Pedicide (age >1 and <16 years)	66 (83.5%)

Figure 1 shows the important characteristics of victims and perpetrators of the incident. Of the total 79 victims reported,

40 (50.6%) were less than the age of 5 years. The youngest victim in any of the incident was just six months old. The mean age of the victims was 10.181(SD 9.5) Years. In 24 (54.5%) incidents the victims was/were females, in 10 (22.7%) of the incidents the victims were both male and females. The age of the perpetrators was mentioned in just 18 instances, with a mean of 36.4 years (SD11.3 years). Most of the perpetrators, 37 out of 44 (84.1%), were females. Most of the female offenders were younger than 35 years of age while all the male offenders were more than 35 years of age. The occupation of the perpetrators was mentioned in three cases, while their educational status was not reported in any. Only one incident noted a history of mental illness in the perpetrator, but there were no mentions of substance use or use of alcohol in any case. Additionally, none of the reports mentioned any history of self-harm, domestic violence or any previous conviction in any of the perpetrators. There were no reports indicating contact with mental health or general practitioner services for any of the perpetrators from the reported incidents.

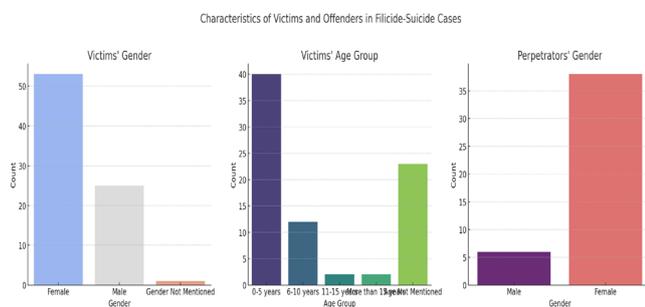


Figure 1: Characteristics of victims and offenders in Filicide-suicide cases

Discussion

This study sheds light on the intricate phenomenon of filicide-suicide in Pakistan. Over the course of two years (2019-2020), we analyzed 44 cases of filicide-suicide using newspaper reports. We analyzed the characteristics of victims, perpetrators, and the incidents themselves, highlighting the role of gender dynamics in such cases. Notably, our study observed a predominance of female perpetrators, challenging the traditional narrative that predominantly associates such acts with male offenders. This finding contrasts with previous research, which has produced conflicting results—while some studies report a female preponderance, the majority indicate male dominance.^{17,18} Earlier research has indicated that individuals involved in homicide-suicide incidents tend to be older compared to those involved in homicides alone. Previous studies have shown that most perpetrators mentioned were over 35 years old, females are usually younger compared to male offenders.^{4,19} In our study, the average age of perpetrators was 36 years. Notably, most female perpetrators were younger than 35, while male perpetrators tended to be older than 35 years.²⁰

Among the 79 total victims, 40 were children under the age of 5. This aligns with a study on filicide-suicide patterns in America, which highlighted that children under the age of 5 were at higher risk of being victims in such incidents, and infants are at the highest risk in such incidents.^{12,19,20} In our study, no case of neonaticide (killing of a baby within 24 hours of birth) was observed, while children aged less than 5 years were the largest group of victims observed. Majority of the victims were females and in only 9 cases

the victims were only males. This trend of female maternal filicide have been previously reported in India and one of the possible explanations could be the preference for sons and seeing daughters as a burden to household in such cultures. This is in contrast to previous western data but in line with numerous studies done in Asian background.^{2,3,4} Though we could not confirm any reason for such a trend in our data, this study is important as in western culture, due to link with male perpetrators and depressive psychosis, the prevention efforts for such cases are focused in a different direction. In Pakistani and in many Asian cultures, family disputes, pressure of male child, stress of children's chronic health conditions, intimate partner violence, and violence secondary to dowry as factors have been significant in previous studies and appear to be in line with our results where financial, familial conflicts were most common motive.^{21,13,14,15} Previous research has also linked filicide with postpartum mental health issues.⁷ This highlights the specific preventive measure of additional focusing on women's mental health, especially in postpartum period which sometimes is not given due importance due to cultural barriers. Further research is also needed in this regard to find out more about mental health status of both male and female perpetrators at the time of incident.

Interestingly, our research revealed that poisoning and drowning were the most common methods of filicide, in contrast to previous literature that often-cited firearms as the primary method.¹⁷ Furthermore, gender differences were apparent in the choice of killing methods in previous studies, with men more likely to use firearms and other violent methods whereas females were more inclined toward drowning or poisoning as means of homicide. Given that most perpetrators in our study were female, poisoning and drowning emerged as the two most common methods of filicide.²² Moreover, the method of suicide and homicide were same in most of the cases.²¹ Many types of filicides have been described in literature. We have followed the Marzuk, Tardiff and Hirsch (MTH) typology and majority of the cases fell under the Familial/ financial category of the classification and social stressors such as domestic and financial disputes were the commonly cited precipitating events. A study conducted in India examined the trends of filicide-suicide and reported altruistic homicide-suicide in the etiology of all the cases whereas altruistic or extended homicide-suicide was evident in only five cases in our study.²¹ Although mental illness has been reported in three-fourth of parents killing their children, this finding could not be replicated in our study possibly due to lack of reporting in media or undiagnosed illness.²⁰

Another noteworthy observation was the occurrence of incidents involving multiple victims. In 14 out of 40 cases, more than one victim was affected, a scenario referred to as 'triadic death.' Additionally, there were 12 cases exhibiting patterns resembling the pattern of 'mass murder' or 'family annihilator,' involving three or more victims. Interestingly, while many victims survived in such instances, the involvement of multiple victims remains a distinctive phenomenon which has been rarely reported in the literature.²¹ While filicide-suicide is a rare event, its dynamics are complex and only partially understood. The predominance of female perpetrators in our study contrasts with the widely accepted notion that men are more likely to commit such acts. This suggests potential socio-cultural and psychological factors influencing maternal filicide, such as extreme distress, economic hardship, or lack of social support. Additionally, our study aligns with previous

research indicating that perpetrators of homicide-suicide are generally older than those involved in homicide alone.²² However, the age distribution in our findings highlights a gender-based pattern—female offenders tend to be younger than their male counterparts, potentially reflecting differences in motives, stressors, or societal pressures faced by women. These findings highlight the need for a deeper exploration of gender disparities in the context of filicide-suicide, particularly focusing on the underlying socio-economic and psychological stressors contributing to such tragic events. This study examined filicide-suicide cases in Pakistan using newspaper reports as the sole source of data, leaving many aspects still unexplored.

Limitations: There were numerous limitations, including a scarcity of official data on such events and inadequate media guidelines leading to incomplete reporting of the events. Important information such as the perpetrators' age, education, occupation, mental health history, and substance use were often absent in the reports. Nonetheless, this study was the first to examine the characteristics of filicide-suicide in our local setting, employing detailed content analysis of the available media reports to extract important information.

Conclusion: Our study highlights several key findings, including the prevalence of female perpetrators as well as victims, a significant number of victims under the age of 5, the use of less violent methods of homicide, and the prominence of domestic triggers. Additionally, a unique trend observed in our study was the occurrence of filicide-suicides involving multiple victims. The prominence of domestic and financial stressors as triggering events for these incidents' points to the critical role of socio-economic stability in preventing filicide-suicide. The study underscores the urgent need for gender-sensitive mental health interventions and policies that address the unique vulnerabilities of women, particularly in resource-limited settings. Addressing these disparities is essential to promoting gender equality in health and reducing the risk of such incidents. Furthermore, efforts should focus on enhancing the quality of media reporting on these incidents. Careful and responsible coverage can minimize sensationalism, highlight key contributing factors, and raise awareness about domestic issues and available resources.

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Health and Educational Inequalities among the Third Gender Community in Lahore, Pakistan

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Abstract

Objective: The third gender community, commonly referred to as the ‘hijra’ community and including transgender, intersex, and eunuch individuals, faces widespread societal discrimination, leading to marginalization and reduced opportunities for social and economic participation. This study aims to explore the educational and healthcare challenges faced by this community, as perceived by its members, to gain deeper insight into the complexities of their lived experiences.

Methodology: This qualitative study conducted in-depth interviews with ten hijra individuals from three areas in Lahore, Pakistan. Data saturation was reached after eight interviews. Verbal consent was obtained with a transgender ‘Guru’ as a witness. Transcriptions were coded by two researchers. Seven themes were identified: early childhood educational experiences, peer attitudes, educational costs, family attitudes, teacher behavior, discriminatory healthcare, and the attitudes of doctors and paramedical staff. Thematic analysis was conducted manually.

Results: The study revealed that the hijra community faces minimal discrimination during early childhood education, but experiences significant bullying, harassment, and social exclusion in later school years, particularly from male peers and some teachers. Financial constraints often hinder their educational pursuits, with some parents being supportive while others are hostile. Healthcare discrimination is prevalent, with many reporting neglect and derogatory treatment from both public healthcare providers and paramedical staff, though private healthcare services offer better experiences for those who can afford them. These barriers underscore the systemic challenges faced by the hijra population in accessing education and healthcare.

Conclusion: The third gender community faces significant barriers in accessing education and healthcare, depriving them of basic human rights. Urgent policy reforms promoting equity, inclusivity, and community sensitization are needed to end their social neglect.

Keywords: Barriers, Discrimination, Education, Eunuch, Hijra, Health, Intersex, Transgender

Introduction

Transgender is a term used for people with gender identity different from one’s assigned birth sex (male or female). Hijra are individuals who identify

outside the normal gender binary. In South Asia especially in Bangladesh, Pakistan, and India, the term ‘Hijra’ is often used for transgenders.¹ Hijras are mainly classified into ‘Khusras’, who are true transgenders, ‘Zananas’, who wear dresses of the opposite sex and present as transgender and then comes ‘Narbans’ who are castrated males.² Transgenders and Hijras have also been recognized in ancient Hindu scriptures. During the Mughal empire in the sub-continent transgenders had been assigned to serve their ladies. But during modern times they were excluded from mainstream society and put aside as third-category citizens.³

At present their condition is even worse because they are left far behind in terms of education, health, employment, and sex identity as compared to the general population. Pakistani cities have a large number of transgender communities. Most of them live in pathetic environments usually in slums where they have a leader called ‘Guru’. Mostly they select their Guru based on activeness, experience, and multiple other factors. Then the guru has multiple ‘Chellas’ (servants) who mostly earn livelihood and give it to the Guru.

Due to the marginalization of these poor people, most of them earn by begging, dancing in weddings or through sex work. People with third gender were never included in census in Pakistan up till 2017. Still they haven’t been recognized as a separate sex. No government or private organization is aware of the exact figure of Hijras living in Pakistan. This also shows the level of discrimination they face as compared to other populations. There are a few NGOs working for the equity of transgenders in Pakistan like Gender Interactive Alliance (GIA), Blue Vein Organization (BVO), Pakistan Shemale Rights Organization etc.⁴

Transgender population face discrimination in every field of life, like in basic facilities of health and education as well as their poor representation and identity in policies for these people.^{5,6} Discrimination based on having a gender at birth pose an access barrier to medical treatment both in basic and specialized health facilities.⁷ They are subjected to verbal and physical abuse by

society including teachers and medical personnel. Also, there is no anti-discrimination law in Pakistan to ensure equality in health and education.⁸ More important is their less exposure to health promotion and disease prevention especially related to sexual health which leads to increased risk of sexually transmitted diseases e.g HIV (AIDS).⁹ Incidence of HIV in transgenders in Pakistan is 17.5% of total HIV population.¹⁰ The prevalence of HIV among transgenders in India is estimated about 14.5%.¹¹

Schools provide an ideal environment for students to interact, especially with the opposite gender, in a healthy educational setting. However, transgender individuals are often denied the opportunity to engage with other genders on an equal footing, even within educational institutions. The harassment they have to face in schools by fellows and even teaching staff poses a major barrier for them in pursuing their education.^{3,12} Because of social stigma most of transgender people lack access to higher education leading to poor literacy rate among them.

Qualitative research design is best to explore their perceptions regarding health and educational problems they face. This study was done to explore educational and health barriers/issues as perceived by the 'Hijra' population from a community in Lahore, Pakistan. The aim of this study is to explore the educational and healthcare barriers faced by the hijra population in Lahore, Pakistan. The objective is to understand their experiences and perceptions regarding discrimination, access to education, and healthcare services.

Methodology

This is an exploratory qualitative study conducted in 2019 through in-depth interviews (IRB number SKZMDC/DPHCM/ER/2019/003). In-depth interviews, as defined by Boyce and Neale (2006), are a qualitative technique involving intensive, individual interviews with a small number of participants to explore their perspectives on a specific issue, program, or situation.¹³ The interviews conducted were semi-structured, meaning they followed a set of predetermined questions, with additional probing questions used to explore and clarify particular topics. The primary advantage of in-depth interviews is their ability to gather detailed insights into the research questions, while allowing the researcher to manage the data collection process and address any uncertainties as they arise.

The study was carried out in different areas of Lahore, Pakistan. Lahore is the provincial capital of Punjab and is a metropolitan city. Three areas were purposively selected as they had dense population pockets of Hijra people. The study subjects were adults some were beggars and some doing job in the AIDs control program. They were contacted through a social activist in Hijras. The areas were Faisal Town, Shah Noor, and Pindi Stop in Township, Lahore. Participants were identified through purposive sampling (non-probability sampling. After obtaining ethical consent from the participants verbally, a total of 10 interviews were conducted, with 2 interviews held per day. The researchers had decided that the number of interviews would be based on data saturation, which was achieved after 8 interviews. However, 2 additional interviews were conducted, bringing the total to 10.

Data Collection

In each area, the researcher met the 'Guru' and after taking his verbal informed consent he proceeded to recruit 'Hijras' with the guidance of 'Guru'. Interviews were done at their home and transgender community activist office at 'Pindi Stop' Lahore. The interviews were conducted in a private setting in the presence of 'Guru' and two other researchers for taking field notes and audio and video recordings of the interviews. Verbal informed consent in the presence of witnesses (Guru and 2 researchers) was taken from each participant for audio or video recording. This helped in giving each participant enough confidence and a chance to speak openly without any hesitation to recollect past events and remember other significant experiences that could be shared. The sessions were audio and video recorded based on consent and choice of the participants.

Coding and Thematic Analysis

Video/ Audio recording of each interview was transcribed separately with a separate transcription of field notes of each interview. Transcriptions of video/ audio recordings and field notes were compared and discussed among the researchers to get a more reliable and authentic final transcript of each interview.

On a day-to-day basis, each transcribed form was then coded separately by 3 researchers using open and relational coding. Researchers highlighted the text and quotations which were to be used to support the description of themes. Codes were grouped wherever needed. Codes from each researcher were compared and discussed to develop consensus on the final list of codes. After finalizing codes, patterns/ themes were identified again separately by three researchers. Conflicts and disagreements on themes were discussed and sorted out by involving the supervisor so as to finalize those themes with consensus. Themes were developed, defined and described using the transcribed text and quotes. A summary of data reduction process is given in Figure 1. Framework method was used for analyzing the results.

In this study, a thematic analysis approach was employed to compare perspectives systematically, integrating both deductive and inductive methods. The process began with repeated listening to audio recordings while simultaneously reading transcripts to ensure thorough familiarization with the data. Open coding was then conducted, categorizing the emerging codes. Using these categories, an initial analytical framework was developed, which was subsequently applied to the remaining transcripts.

Any newly identified categories were incorporated through an iterative process. Emerging themes were then compared across all categories, leading to a final thematic analysis that focused on interpreting the health and education barriers and enablers experienced by the transgender population, as well as their general perspectives on these challenges. Formal ethical clearance was obtained from the ethics committee of the institute. Ethical issues were considered and properly addressed, like written informed consent was obtained and participants' confidentiality of information and privacy was ensured during interviews.

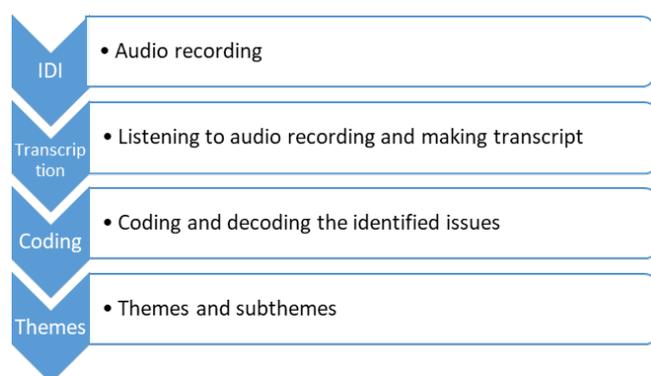


Figure 1: Flow of Data Reduction process

Results

Participants

A total of 10 interviews were conducted with transgender people in the age range of 20 to 35 years until data saturation was obtained. Interviewees were explored to share their perceptions about inequalities in health and education. Few transgender people didn't have educational experience at all. The following themes were identified.

Theme 1: Educational experience of early childhood

All interviewees shared that their community usually faces no discrimination in early school years. Interviewee 3 mentioned with a smile that *"everything was normal during early school life"*. The reason mentioned by majority was that our society could not recognize or discriminate transgender in childhood so usually they don't show attitudinal change. They talked about their childhood in very cheerful way as a period free of worries. They shared that the majority of their community don't go to school but those who go are not facing problem and barriers in early childhood.

Theme 2: Attitude of student-peers in later years of school life

Many interviewees experienced discrimination, bullying and hooting from fellow students in school days. Mostly girl class fellows were supportive then boys. Boys were abusive and used to harass them in classrooms and even outside college premises. One interviewee 8 claimed, *"I was so humiliated that I felt like an animal"*. Another interviewee (2) said, *"While traveling via local transport, some students of my class bullied me and this disturbed me so much that I cried afterwards"*.

Theme 3: Educational Expenditures

Some of the parents of transgender didn't have enough money to educate them so they were compelled to beg. Some parents supported and tried their best to get them educated and bore all their expenses.

Theme 4: Attitude of intimate family members

One interviewee (1) told, *"My parents supported me at every step so that now I'm doing masters in textile designing"*. Some parents especially fathers weren't supportive. They

were very strict and didn't like their transgender child and this was narrated by interviewee 3, *"My father hated me so much that he didn't want to see my face"*. Another (interviewee 9) explained like this, *"After intermediate I had to bear all my expenses on my own. I go home only to sleep and do household chores"*. An extreme measure was reported by interviewee 10, *"My elder brother tried to shave my eyebrows and head once"*. One more interviewee (7) shared his feelings, *"My mother taunted me by saying; what kind of creature you are born?"*. Majority interviewees reported and shared same kind of feelings and couldn't explain the reason for this behavior of their blood relatives and parents except their transgender status.

Theme 5: Behavior of teachers

Majority teachers were blamed to be strict and discriminative between transgender and other students though few were kind and supportive as well. An interviewee told, *"My teacher tried to harass me sexually when I was on a scouting camp with my class fellows. He offered me that he will make me class monitor if I do what he wanted"*. Interviewee said *"for transgenders, as we grow our problems also start getting bigger and worse. In school, teachers used to punish students for misbehaving with us but in college there is more freedom, so students won't listen to the teachers and sometimes even teachers also join them in making fun of us"*. Interviewee 8 said *"teachers were good, and I never faced any problem"*.

Theme 6: Discriminatory Health care

All of the interviewees complained of discriminatory and incompetent healthcare facilities. Most of the interviewees believed that healthcare professionals lacked basic education and knowledge about transgender. Interviewee 1 told us: *"doctors don't pay any attention to us. They treat other patients very well but show negligent behavior towards us. She got emotional while telling us about treatment by the doctors; Doctors say, Wait! Wait! We'll treat you ... but they don't. We are also human beings, not animals"*.

Theme 6: Health Facilities; Government. vs Private Hospitals

Most of the interviewees said they had to face indecent attitudes in government hospitals where doctors don't pay heed to them instead they pass sarcastic comments. Those who are poor had to go there while other transgender who had enough money avoid government hospitals. Interviewee 3 said: *"When doctors in government hospitals don't treat me, I start to shout at doctor and other staff available then they have to treat me unwillingly"*. Private hospital healthcare specialists treat them well but not all the transgenders have enough resources to afford private consultation. Interviewee 10 said: *"I usually go to private hospitals or clinics for medical treatment. Their behavior is just fine with me. I have not faced any discrimination or indecent attitude."*

Theme 7: Attitude of Doctors and Paramedical staff

Most of the doctors don't consider them as humans. Multiple times when they come in the emergency in very critical condition doctors don't make emergency arrangements for them. Interviewee3 told us about her experience *"I was being hit by a car near Liberty Market. I was left unconscious and*

bleeding for 18 hours in Services Hospital without even first aid. But somehow my community members reached there and compelled doctors to treat me". Interviewee 9 said: "doctor criticize us by saying that Angrez (British) has gone but left their signs in the form of you". This indifferent attitude is not only confined to doctors, but even paramedical staff also don't treat them the way they treat other members of society. Interviewee 10 told: "when I go to hospitals for checkup, nurses don't touch me as if I'm a contagious disease."

Discussion

The current study is a qualitative exploration of the perceptions of Hijras' about the health and educational discriminations faced by them during their childhood and adult life. While conducting this qualitative study we have tried to get the most intimate information regarding barriers in healthcare facilities and education for transgender community in Pakistan. Non-trans people of the society don't like to have social relations with transgenders. Our study themes explain how people and healthcare providers think about them.

People of mainstream society don't let hijras to join social institutions, they can't participate in cultural, social, political, and economic activities of the society, they are not included in health and educational reforms.¹⁴ It is evident from our study that transgenders are socially excluded from performing their desired productive role in society. The themes of 'attitude of family members' and 'attitude of doctors and paramedical staff' is supported by a study highlighting that it weakens their self-esteem and sense of social responsibility so much that they feel themselves useless and a burden on the community.¹⁵ The theme of 'educational experience of early childhood' is endorsed by the findings of a study that it is very difficult for Hijras to have some kind of entertainment at schools or play areas and even to perform religious rituals.

Even during public holidays like Eid, they have to stay at home and if they move out for some entertainment people won't let them have some fun.¹⁶ They face extreme discrimination from society throughout their life, from childhood to old age.⁶ The themes of 'educational experience of early childhood', 'Attitude of student/peers in later years of school life' and 'Behavior of teachers' supported by the evidence from other study explaining that they have limited access to healthcare and educational facilities due to this discriminative behavior of society. A recent study showed that bullying and harassment leads to a high dropout rate.^{17,18} They are mistreated not only in the health and educational fields but also, they are deprived of all other basic facilities too. Transgenders are human beings just like the rest of us and cultural norms perpetuate discriminatory behaviors.¹⁹ They have to face a lot of discrimination, social unacceptability, and disrespect in the society as evident from the description of themes.²⁰

Schools serve as a place in which students come from different ethnical backgrounds and interact with opposite gender in a healthy environment. The level of harassment they have to face in schools is a major obstacle in their education.^{17,21} The major hurdle which they complaint related to their education is indecent attitude of fellow students (mostly male fellows). During early school life their issues are almost none, but their issues grow with age. Sometimes they are physically abused and sometimes verbally by their class fellows and sometimes even by their teachers.²¹⁻²³ Arnold H. Grossman did research

on transgender experience about school violence and got similar results.²⁴ The policies in schools and higher educational institutes are not supporting and facilitating these Hijras or transgenders so measures addressing this issue must be taken at government level.¹⁸ Most of the parents are supportive especially mothers as mentioned in the themes of 'attitude of family members' and 'Educational Expenditures'. They bear their educational as well as other expenses but due to continuous social pressure regarding child's behavior parents cannot support them in the long run so they are left with two options either to quit their studies and stay at home all day long or come in practical life and become independent so that they may pursue their dreams like other human beings. Some of the transgenders did so and excel in society and play a productive role.⁶

When it comes to health, the situation is even worse, our themes of 'discriminatory healthcare' and 'attitude of doctors and paramedical staff' explain it well. Health is a right, not a privilege. Every human should get an equal chance to have proper health facilities. Transgender people most of the times face discrimination when accessing health care facilities.⁵ Similar results were found in a research study by Gretchen P. Kenagy in which he found that 26% of respondents had been denied medical care just because being transgender, 56.3% respondents had to experience violence in their homes by family members while 51.3% had been physically abused.²⁵

We were able to highlight a few of the reasons why transgenders are not able to get equal healthcare facilities as enjoyed by other people of society. Most important role in the provision of health care to people of society are played by doctors (Theme: 'attitude of doctors and paramedical staff') but even they show discrimination between transgenders and other people. Similar results were obtained in United States when an author named Lombardi did research on transgender healthcare issues.²⁶ Most of the disgusting behavior they had to face was in govt. hospitals where transgenders weren't even provided with first aid while they were in a very critical condition (as evident by a few cases mentioned in this study). Services provided in private hospitals are much better than govt. hospitals. They treat them well. Doctors and other healthcare staff behave well (Theme: 'discriminatory healthcare'). We lack gender-affirming healthcare due to system level bias and provider's insensitive behavior and influence mental health of Hijra and transgender people.^{19,27}

Limitations

The study has limitations as the participants were selected from a specific region of the metropolitan city of Lahore, Pakistan, making the context particular to this area. As a qualitative study, the findings cannot be generalized. Future research could explore the perspectives of staff, doctors, and faculty at various hospitals and educational institutions regarding transgender individuals. Additionally, it could examine the social pressures faced by parents in raising transgender children, the availability of vocational training institutions and opportunities for transgenders, and efforts to integrate transgender individuals into mainstream society.

Conclusion

Transgender people face discrimination in society in every walk of life. In a society where all other people enjoy

educational and health facilities, on the contrary transgenders are deprived of even basic educational opportunities so most of them are illiterate, and even if some of them make it to higher educational institutions, social stigmas force them to drop out soon, so they can't play any productive role and participate in national prosperity despite of their intense desire and enthusiasm. When other strata of society are enjoying free health facilities in government hospitals, they are struggling for even first aid in same hospitals and to make it worse even sometimes they are not regarded as human beings.

Authors' Contributions

AH: Conceptualization, Methodology, Data Collection, Writing – Original Draft; MH: Data Analysis, Writing – Review & Editing; HA: Literature Review, Transcription, Data Curation; ZH: Participant Recruitment, Data Collection, Ethical Approvals; NN: Supervision, Funding Acquisition, Manuscript Review; MM: Thematic Analysis, Writing – Review & Editing, Final Approval

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Availability of data: Quotations quoted in this manuscript are obtained from the dataset to highlight the findings. While the transcribed interviews are also available and can be shown upon request.

Conflict of interest: Authors declare that they have no competing interests

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Patients' Preference in Selecting a Dental Practitioner based on Gender

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Abstract

Objective: To examine the prevalence of gender-based selection of dental practitioners among male and female patients in the Out Patient Department (OPD) of the Institute of Dentistry, CMH Lahore Medical College, and to identify factors influencing their choice.

Methodology: A descriptive cross-sectional study was carried out in the OPD of the Institute of Dentistry, CMH Lahore Medical College, from April to July, 2024. A total of 303 participants, aged between 16 and 70 years, were selected through non-probability convenience sampling. The exclusion of dentists, dental students, medical doctors, and MBBS students was aimed at minimizing biases that could affect the results and limit the study's generalizability. Data was collected using a validated questionnaire, assessed for reliability with Cronbach's Alpha ($\alpha = 0.832$), and analyzed using SPSS. Demographic information such as age, gender, marital status, and level of education was collected in the questionnaire to observe their effect on gender preference. The Chi-square test was used to assess the significance of differences between variables, with a P-value of less than 0.05 considered significant.

Results: The mean age of participants was 32.4 years, with a gender distribution of 38.9% male and 61.1% female. Over half of the respondents (54.8%) had no specific gender preference while choosing a dentist. Key factors influencing dentist choice included experience, qualification, communication style, and accessibility. Among the female patients, 51 out of 185 wore Hijab as a part of a religious obligation. Out of these participants 59.7% indicated that it did not prevent them from seeking treatment from a male dentist.

Conclusion: Overall, a majority (54.8%) of the patients did not have any gender preference. However, in general, female dentists were preferred for preventive and paediatric care, while male dentists were favoured for invasive procedures like extractions and prosthetics.

Keywords: Gender Preferences, Gender Identity, Dentists, Patient-Dentist Relationship

Introduction

Dentistry, like other medical fields, emphasizes effective communication between healthcare providers and patients, making it a deeply personal process. It's plausible to expect a heightened gender preference in situations where the personal nature or gravity of the presented condition becomes more pronounced.¹ With the

increasing presence of female staff in dentistry, dentists should be attentive to the potential influence of gender stereotypes on patients' outlooks. Understanding how these perceptions relate to a patient's preference for either a male or female dentist is crucial.²

These false stereotypes can lead to certain generalizations being made about gender roles. For instance, females might be considered to be more emotional while expressing distress, joy and grief. According to a few studies, females are often perceived as more compassionate and empathetic, though they may be viewed as less competent than male dentists. In contrast, males are generally regarded as more skilled and are often associated with assertiveness and a more aggressive approach.³

Various studies have been carried out to explore the preferences patients have while selecting a health care provider.⁴ Some of this literature has been written to show patients preference while selecting a dental practitioner.⁵

The preference for a dentist's gender appears to vary across different countries. In Sudan⁶ and Turkey, two separate studies found that patients tended to prefer dentists of their own gender, particularly favouring female practitioners.⁷

Conversely, a study conducted in India discovered that half of the participants did not express any gender preferences when selecting a dentist.⁸ Research in England revealed a preference for female dentists among partakers.⁹ In Saudi Arabia, specifically in Riyadh, a previous study indicated that 40% of respondents had no gender preference, while 33% preferred a male dentist, and 26% preferred a female dentist.¹⁰ Another study in Saudi Arabia revealed that nearly half of the participants had no preferences for a dentist's gender while seeking treatment, the other half preferred male dentists over female dentists especially for surgical procedures.¹¹

While patient-centred care has gained prominence in modern-day healthcare, the influence of gender in the patient-provider relationship in Pakistan remains a relatively unexplored dimension, particularly

within the dental context. This study addresses this gap by investigating the extent to which a dental practitioner's gender affects patients' choices and the underlying factors that contribute to these preferences.

Methodology

This study employed a descriptive cross-sectional design and was conducted at the Outpatient Department (OPD) of the Institute of Dentistry, CMH Lahore Medical College, from April to July, 2024. Ethical approval was sought from the Ethical Review Committee of CMH Lahore Medical College and Institute of Dentistry, Lahore (ERC#.13/ERC/CMH/LMC). The target population consisted of patients visiting the dental OPD at the Institute of Dentistry, CMH Lahore Medical College. Open-Api software was used to calculate the sample size. Expected frequency of outcome factor was taken as 73.6% by using research conducted by Sara Zafar as reference.¹² The sample size was calculated to be 300 participants, however 303 participants were included in the study, owing to availability. The study included all patients presenting to the Dental OPD aged 16 to 70 years. Individuals with a background in the medical or dental fields, including MBBS doctors, BDS dentists, and current medical or dental students, were excluded. This exclusion was made to avoid any potential bias that could influence the results and limit the generalizability of the findings. A non-probability convenience sampling technique was used for participant selection.

Data collection was carried out using a self-designed questionnaire developed after a comprehensive review of various studies and questionnaires. The face and construct validity of the questionnaire had been evaluated by subject specialists from different fields of dentistry. Following necessary adjustments, a pilot study with 24 participants was conducted, and the reliability of the questionnaire was determined using Cronbach's Alpha, yielding a value of 0.832.

Section 1 of the questionnaire included a consent form, Section 2 gathered demographic information such as age, gender, marital status, and level of education, categorized as having no schooling, primary education, secondary education, bachelors, post-graduation, and Section 3 contained questions arranged in a matrix pattern to determine patients' preferences for dental practitioners based on gender across various fields of dentistry. Additionally, some questions addressed factors other than gender that may have influenced a patient's choice of dentist.

Data analysis was performed using the latest version of SPSS, with results presented as frequencies and percentages. The Chi-square test was used to assess the significance of differences between variables, with a P-value of less than 0.05 considered significant.

Results

The total number of participants for this study was 303. The questionnaire started with asking the participants about their age, gender, education and marital status. Table 1 shows the demographic data obtained by the sample population. The mean age was 32.4 years, where the minimum age was 16, and maximum was 76 years. The majority of participants were married, employed, and held a bachelor's degree.

Table 1: Demographic characteristics of participants (n=303)

Character	Variables	Frequency (%)
Gender	Male	118 (38.9)
	Female	185 (61.1)
	Single	145 (47.9)
Marital status	Married	147 (48.5)
	Divorced	3 (1)
	Widow/er	8 (2.6)
	Student	82 (27.1)
Profession	Employed	108 (35.6)
	Unemployed	30 (9.9)
	Business	37 (12.2)
	Other	46 (15.2)
Highest level of education	No schooling	7 (2.3)
	Primary school	27 (8.9)
	Secondary school	55 (18.2)
	Bachelors	146 (48.2)
Mean Age + Standard deviation	Post-graduation	68 (22.4)
	32.4 + 13.34	

Figure 1 shows the basic choice of dental practitioner based on gender selected by the participants. More than half of the sample (166 out of 303) had no specific preference, followed by a preference for female dentists (85 out of 303).

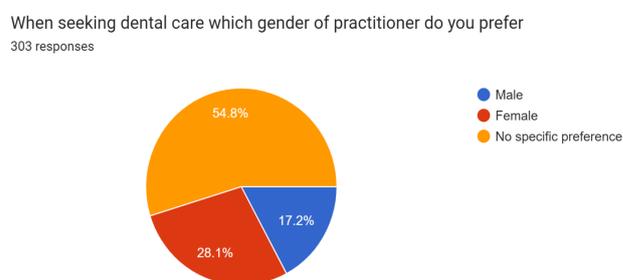


Figure 1: Gender preference when seeking dental care. (n=303)

Dentists were categorized by the types of procedures they conducted. The findings indicated that about half of the participants showed no specific gender preference across all procedures. Among those who did express a preference, female dentists were favoured for general check-ups (20.8%), scaling (31.7%), fillings (25.4%), braces (23.8%), and paediatric procedures (27.4%), while male dentists were more preferred for extractions (27.7%) and prosthetic procedures (23.8%) like crowns and bridges. Root canals showed a nearly equal distribution between male and female dentists. Table 2 summarizes the patients' choice of dentist based on gender for various dental procedures. It was observed that there was significant difference in gender preference for general dental check-up, within various levels of education ($p=0.018$). Similarly, different professions had a significant effect on gender choice, example, for the purpose of root canal treatment ($p=0.044$). However, marital status had no significant impact on the choice of practitioners according to their gender.

Gender Preferences in Choosing a Dentist.

Table 2: Patients' choice of dentist based on gender for various dental procedures. (n= 303)

Procedure	Male Preference		Female Preference		Doesn't matter		P value
	n	%	n	%	N	%	
General Dental Check up	52	17.2	63	20.8	188	62	.000
Scaling (cleaning of your teeth)	49	16.2	96	31.7	158	52.1	.000
Filling	65	21.5	77	25.4	161	53.1	.000
Root Canal treatment	76	25.1	75	24.8	152	50.2	.000
Extraction (removal of your teeth)	84	27.7	69	22.8	150	49.5	.000
Crown / Bridge (capping of teeth)	72	23.8	69	22.	162	53.5	.000
Braces	64	21.1	72	23.8	167	55.1	.000
Treatment for your child's teeth	50	16.5	83	27.4	170	56.1	.213

N: Total population, n:Frequency, %:Percentage

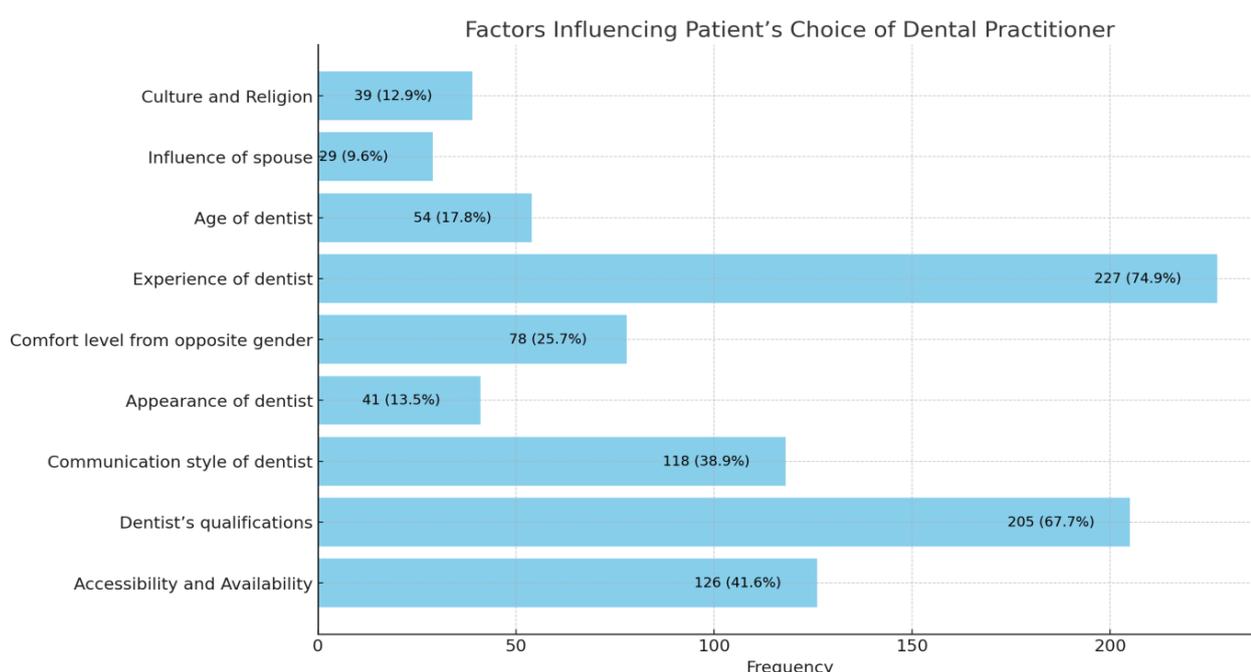


Figure 2: Factors influencing patient's choice of dental practitioner

We also questioned the participants regarding factors other than the dentists' gender which may influence their choice of dentist. Participants could choose more than one option. Figure 2 summarizes these results as a bar graph. It is note-worthy that most participants chose the experience and qualification of the dentist as an important factor playing a part in their selection of a dentist, followed by communication style and accessibility of the dentist. The least chosen factor was influence of their spouses.

Among the female patients, 51 out of 185 observed hijab as part of their religious/cultural belief. Out of these participants, 59.7% indicated that it did not prevent them from seeking treatment from a male dentist.

Discussion

This study investigates factors influencing patients' preference for the gender of their dentist, focusing on the Lahore region. Despite an increasing emphasis on patient-centered care¹³, research into the influence of a dentist's gender on patient choice remains limited in dental healthcare. Understanding

these preferences is crucial for optimizing dental practice administration, improving patient satisfaction, and fostering a more positive healthcare experience. Gaining insight into the determinants influencing patient preferences is essential for optimising dental practice administration, improving patient contentment, and cultivating a more pleasant healthcare encounter. The study seeks to understand the complex relationship between patient preferences, societal viewpoints, and cultural influences, providing insight into the diverse impact of gender on interactions between patients and dentists in dental settings.¹⁴

According to our findings, over half of the participants (54.8%) expressed no specific preference for the gender of their dentist (Figure 1). These trends align with studies conducted in India, Saudi Arabia, and Nepal, where the majority showed no specific gender preference^{8,10}. Among those with a preference, a larger portion favoured female dentists (28.1%) compared to male dentists (17.2%), especially for certain procedures like general check-ups, scaling, and pediatric dentistry as summarized in Table 2. These results reflect societal perceptions associating female dentists with compassion, especially in non-invasive

procedures. For instance, 32% of participants preferred female dentists for scaling, while only 16% favoured male dentists (Table-2)

Conversely, participants tended to prefer male dentists for more complex procedures like extractions and prosthetic treatments, potentially reflecting cultural norms and gender stereotypes that associate males with technical proficiency. Approximately 28% of participants preferred male dentists for extractions, while 23% preferred female dentists, whereas 32% preferred female dentists for scaling, compared to only 16% preferring male dentists (Table-2). The study explored how societal norms and gender stereotypes might influence patient preferences. Historically, stereotypes associating males with technical proficiency and females with compassion may shape patient expectations and preferences in dental care settings.

Beyond gender, factors that influenced dentist selection included the dentist's experience, qualifications, and communication style. A substantial 74.9% of participants ranked the experience of the dentist as the most crucial factor, followed by qualifications (67.7%) and communication style (38.9%) (Figure 2). This aligns with studies showing that clinical expertise and effective communication are vital in improving patient satisfaction and adherence to treatment plans.¹⁵ The importance of communication style emphasizes that clinical knowledge alone is insufficient; patients benefit from a clear understanding and involvement in decision-making. As a result, patient-centered communication, including the use of visual aids and counselling, can improve treatment outcomes by increasing patient compliance.¹⁶

Effective, patient-centered communication significantly enhances adherence to dental and overall healthcare treatments, leading to improved outcomes and satisfaction. Clear information and shared decision-making boost patients' motivation to follow treatment plans.¹⁷ Dental practices can counteract gender stereotypes influencing patient preferences by promoting diverse representation of dentists and staff, educating patients about the full range of skills possessed by both genders, fostering inclusive environments, ensuring transparent communication about provider qualifications, and continuously evaluating and improving their practices based on patient feedback and research on gender bias in healthcare. These strategies aim to create a more equitable and inclusive environment for all patients, ultimately leading to improved patient care and better health outcomes. The research aims to make a substantial contribution to the advancement of inclusive and patient-centered models of dental treatment by exploring these intricate interactions. Its goal is to foster equity in healthcare environments and enhance the overall quality of dental treatments.¹⁸ This research aims to close the current gap in literature by offering valuable insights into how gender affects patient choices in dental practitioners. It provides a basis for enhancing dental care models and creating healthcare environments that meet the diverse needs of patients.

The study limitations include participant selection from a single institution, limiting generalizability. Future research could explore these dynamics across diverse healthcare settings and incorporate longitudinal or qualitative methods to delve deeper into patient perspectives. Even though the data was collected using Urdu and English Questionnaires to include a diverse sample, the exclusion of illiterate patients from the study due to their inability to complete questionnaires

presented a significant limitation. Future research should consider alternative data collection methods such as in-depth interviews, observations, focus groups, the use of visual aids, and collaboration with community health workers. These approaches will ensure the inclusion of illiterate patients and provide a more comprehensive understanding of their preferences and experiences in dental care.

Conclusion

At CMH Lahore Medical College, most patients had no gender preference for dentists. Female dentists were preferred for preventive and paediatric care, while male dentists were favoured for invasive procedures like extractions and prosthetics.

Author Contributions: AAB: Conceptualized, designed and interpreted the study; FW: Manuscript writing, draft work and data analysis; ZY & ZI: Data acquisition and interpretation; ARC: Critically revised the article for intellectual content; SZ: Supervised and approved the final version.

Conflict of Interest: The authors declare no conflict of interest.

Use of Generative AI and AI-Assisted Technologies: AI (ChatGPT 3.5) was used for grammatical accuracy and sentence structures along with linguistic clarity.

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Patient Perceptions of Surgeon Attire, Professionalism, and Gender Bias in Pakistani Public Hospitals

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Abstract

Objective: Surgeon attire significantly influences patient perceptions of professionalism, competence, and trust. This study aims to assess public perceptions of formal and informal surgeon attire and to analyze gender biases in these perceptions among male and female surgeons.

Methodology: A cross-sectional survey of 300 individuals aged 18 to 60 years was conducted in Lahore, Pakistan, from January to March 2024. Eligible participants, excluding healthcare professionals to avoid bias, were adults who had visited a tertiary care hospital and could understand the survey questions. Gender-balanced participants rated male and female doctors shown in photographs wearing various surgeon attires, including white coats with scrubs, business attire, fleece jackets, and casual clothing. Ratings were based on perceived professionalism, experience, and friendliness using a 5-point Likert scale. Participants also identified the doctors' likely professions and indicated their preferred gender for seeking medical assistance.

Results: Of the 300 surveys completed, respondents significantly preferred doctors wearing white coats, particularly when paired with scrubs, rating them higher in professionalism and experience. Doctors in fleece and softshell jackets were rated lower in these categories ($p < 0.001$). Gender biases were apparent, with female doctors consistently receiving lower professionalism ratings compared to their male counterparts, regardless of attire. They were also less likely to be chosen as the preferred gender for seeking assistance and were more frequently misidentified as nurses or medical technicians.

Conclusion: Both attire type and gender bias significantly shape public perceptions of a surgeon's professionalism and approachability. These findings highlight the importance of addressing gender biases in patient perceptions and developing culturally sensitive dress codes that align with expectations for both male and female surgeons to enhance trust and equity in healthcare settings.

Keywords: Gender Bias, Professionalism, Patient Perceptions, Public Hospitals, Surgeon Attire,

Introduction

The attire of healthcare professionals has long been a subject of debate, given its impact on patient perceptions of competence, professionalism, and trustworthiness. The white coat, traditionally worn by doctors, has been emblematic of medical professionalism for over a century, often viewed as a symbol of cleanliness, authority, and expertise.¹

However, as healthcare settings evolve, there is a growing trend towards more casual attire among surgeons, including scrubs with fleece jackets, softshell jackets, etc instead of traditional white coats.² These changes raise important questions about how such attire is perceived by patients, particularly in diverse cultural contexts, such as Pakistan, where traditional gender roles are prevalent.

Studies show that patients generally prefer healthcare providers in formal attire, associating it with higher professionalism and competence.³ In countries such as the United States and Japan, formal attire has consistently been linked to increased patient trust, as well as a perception of greater reliability and professionalism.^{4,5} In Pakistan, where cultural norms deeply influence social interactions, the white coat remains a strong symbol of medical authority, and deviations from this standard attire could potentially alter patient perceptions.⁶

While attire plays a critical role in shaping these perceptions, research has also highlighted the influence of gender bias on public views of healthcare professionals. Studies suggest that female surgeons often face greater scrutiny concerning their appearance and may be perceived as less authoritative than their male counterparts, regardless of attire.⁷ This bias can influence patient interactions, perceptions of competency, and even career progression for female surgeons.^{8,9} In Pakistan, where traditional gender roles are prevalent, these biases may be particularly pronounced, impacting the way patients perceive male and female surgeons based on their attire.¹⁰

This research explores patients' perceptions of surgeon attire in a tertiary care hospital of Pakistan, emphasizing gender biases and the cultural dynamics that shape these views. It evaluates how formal attire (e.g., white coats) and informal attire (e.g., jackets) influence perceptions of professionalism, competence, and friendliness.

Additionally, it examines gender-related differences in the evaluation of male and female surgeons based on their attire. There is limited research addressing the interplay between attire, professionalism, and gender biases within Pakistan's unique cultural and societal framework and understanding these

biases is crucial for ensuring equitable patient care. This study seeks to explore these dynamics in a public hospital in Lahore, Pakistan, and provide actionable insights to improve hospital policies, inform hospital dress codes, enhance patient trust, and promote gender equity in the medical profession.

Methodology

Study Design and setting: This cross-sectional survey was conducted between January and March 2024. A total of 300 participants (150 males and 150 females) aged 18 to 60 years were randomly selected, after some initial screening questions, from various outpatient departments of a tertiary care hospital in Lahore, Pakistan. The primary aim was to evaluate public perceptions of surgeon attire, with a focus on formal (e.g., white coats) versus informal (e.g., jackets) attire and to explore potential gender biases in these perceptions. This study was approved by the Ethical Committee of Lahore General Hospital (Department of General Surgery) with approval no. Ref:218/SU-III.

Participants: A total of 300 participants were recruited using convenience sampling.

Inclusion criteria- The eligibility criteria included adults aged 18 to 60 years who had visited tertiary care hospitals in Lahore and were literate enough to understand the survey questions.

Exclusion criteria- Exclusion criteria included healthcare professionals, to minimize biases related to prior knowledge of medical attire.

Participants were approached during their visits to outpatient departments at Lahore General Hospital, where the study was conducted. Efforts were made to ensure demographic diversity, although the sample predominantly comprised individuals with college-level education. The survey was carried out in person to ensure clarity and uniformity in responses. The sample was evenly divided between males and females to ensure gender representation in responses.

Survey Instrument: Participants were shown a series of colored photographs depicting male and female doctors dressed in various types of surgeon attire: white coats with scrubs, white coats with business attire, fleece jackets with scrubs, and softshell jackets with casual attire. The participants were informed only of their relation to medical profession without specifying the rank or specialty.

Also, the doctors' faces were obscured to focus solely on attire. Participants were asked to rate each doctor on perceived professionalism, experience, and friendliness using a 5-point Likert scale (1 = very low, 5 = very high). Additionally, participants were asked to identify the most likely profession/rank of each doctor, choosing from surgeon, family physician, nurse, medical technician, or other and their preferred gender of professional for seeking assistance.

Data Analysis: Data were analyzed using SPSS version 25. Descriptive statistics were calculated to summarize participant demographics and survey responses. Chi-square tests were used to assess differences in perceptions based on gender and attire, with a significance level set at $p < 0.05$.

Results

Demographics: The survey included 300 respondents, evenly divided between males (50%) and females (50%). The mean age of participants was 35.4 years, with a range from 18 to 60 years. The majority of participants (60%) had completed at least a college-level education (see Table 1).

Table 1: Participant Demographics.

Demographic Variable	Frequency (n = 300)	Percentage %
Gender		
Male	150	50%
Female	150	50%
Age Group		
18-29 years	75	25%
30-39 years	90	30%
40-49 years	75	25%
50-60 years	60	20%
Education level		
School	60	20%
College	180	60%
University	60	20%

Perceptions of Professionalism and Experience: Respondents rated doctors wearing white coats with scrubs as the most professional and experienced, followed by those in white coats with business attire (Table 2). Doctors dressed in fleece and softshell jackets were rated significantly lower in professionalism and experience ($p < 0.001$). The preference for white coats aligns with findings from studies conducted in the United States, Japan, and Singapore, where similar associations between formal attire and professionalism were observed.^{11,12,13}

Table 2: Professionalism and Experience Ratings using a 5-point Likert scale.

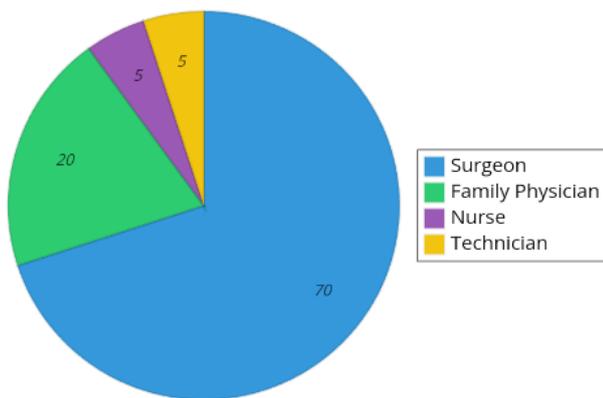
Attire Type	Professionalism Score (Mean ± SD)	Experience Score (Mean ± SD)
White Coat with Scrubs	4.7 ± 0.5	4.8 ± 0.4
White Coat with Business attire	4.4 ± 0.6	4.5 ± 0.5
Fleece Jacket with Scrubs	3.1 ± 0.8	3.2 ± 0.7
Softshell Jacket with Casual attire	2.0 ± 0.9	2.1 ± 0.8

Gender Biases: The study revealed significant gender biases in the perception of surgeon attire. Female doctors were consistently rated as less professional compared to male doctors, regardless of the attire they wore ($p < 0.01$) and were also less likely to be chosen as the preferred gender for seeking assistance (Table 3). Additionally, female doctors were more likely to be mistaken for non-physician roles such as nurses or medical technicians (Figure 1a & 1b). These findings echo previous research indicating that female surgeons often face challenges related to gender stereotypes and biases, which can impact their professional image and patient interactions.^{14,15}

Table 3: Gender Preference based on Public Perception.

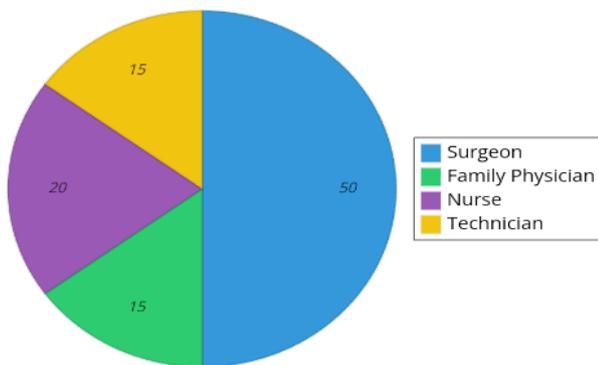
Preferred Gender	Male Respondent (n = 150)	Female Respondent (n = 150)	Total (n = 300)	Percentage (%)
Male Surgeons	105	90	195	65
Female Surgeons	45	60	105	35

Perception of Professional Roles by Gender (Male)



(1a)

Perception of Professional Roles by Gender (Female)



(1b)

Figure 1a & 1b: Perception of Professional Roles by Gender - These pie charts compare the public’s perception of professional roles for male and female doctors based on their attire. The data show that male doctors were more frequently perceived as surgeons (70% vs 50%), while female doctors were more often associated with roles such as nurses and technicians (35% vs 10%), highlighting a gender bias in professional role identification.

Discussion

This study explored how the public perceives surgeons based on their attire and gender in a tertiary care hospital setting

in Lahore, Pakistan. The goal was to understand whether formal clothing, like white coats, or informal attire, such as fleece jackets, influenced opinions about professionalism, competence, and friendliness. We also examined whether male and female surgeons were viewed differently by patients. The results showed that surgeons wearing white coats, especially with scrubs, were considered the most professional and competent. However, significant gender biases were evident, with male surgeons often being perceived as more professional than their female counterparts, regardless of attire. These findings highlight the importance of addressing such biases to ensure equal treatment and trust for all healthcare professionals.

The findings of this study offer significant insights into how the public perceives surgeon attire in tertiary care hospitals in Lahore, Pakistan. The data strongly indicate a preference for traditional white coats, particularly when paired with scrubs (Table 2), aligning with global trends that associate formal medical attire with higher professionalism, competence, and trustworthiness. This is consistent with research from various countries, including the United States, Japan, and the United Kingdom, where the white coat is viewed as a symbol of medical authority and professionalism.¹⁶⁻¹⁸ In contrast, surgeons wearing fleece or softshell jackets were rated significantly lower in professionalism and competence, likely due to the perception of informality associated with these attire types (Table 2).

However, this study also highlights pervasive gender biases in the perception of surgeon attire. Female doctors, irrespective of their attire, were consistently rated as less professional compared to their male counterparts. This finding mirrors those from studies in other regions, such as Canada and Sweden, where female physicians often face challenges due to gender stereotypes and biases, impacting their professional image and patient interactions.^{19,20} The data demonstrates that male doctors were more frequently perceived as surgeons, whereas female doctors were more commonly associated with roles such as nurses or technicians, reflecting a clear gender bias in professional role identification (Figures 1a and 1b). These biases are deeply rooted in societal norms and cultural expectations, which can be particularly pronounced in countries like Pakistan, where traditional gender roles are still strongly upheld.

Public preferences for gender in seeking medical assistance further highlight these biases. As the data suggests (see Table 3), 65% of respondents preferred male surgeons, while only 35% chose female surgeons. This disparity reflects deep-rooted cultural stereotypes regarding gender roles and professional capabilities in healthcare. The implications of these biases are profound, not only for individual female surgeons but also for the broader medical profession in Pakistan. If patients consistently perceive female surgeons as less professional or competent, this could lead to a range of negative outcomes, including reduced patient satisfaction, lower levels of trust, and potentially poorer clinical outcomes due to weakened patient-provider relationships. Furthermore, these biases could discourage women from pursuing careers in surgery, perpetuating the gender imbalance in this already male-dominated field.²¹

To address these challenges, healthcare institutions must consider implementing standardized dress codes or color codes that emphasize professionalism while being sensitive to gender

and cultural dynamics. Policies that encourage the wearing of white coats or other formal attire, regardless of gender, could help mitigate the impact of these biases by creating a uniform standard of professionalism that is recognized and respected by patients. Additionally, interventions such as gender sensitivity training, public awareness campaigns, and the promotion of female role doctors in surgery could help shift societal perceptions and reduce the impact of gender biases on female surgeons.^{22,23}

The cultural context is also crucial in shaping these perceptions. In Pakistan, where traditional values and cultural expectations heavily influence public views, the white coat is not just a symbol of medical authority but also an embodiment of societal norms regarding what a doctor should look like. Therefore, healthcare policies must be culturally sensitive and take into account the expectations and preferences of the local population. This cultural sensitivity is essential for ensuring that dress codes and other professional standards resonate with patients and contribute to better healthcare outcomes.²⁴

Limitations

While this study provides valuable insights into public perceptions of surgeon attire, professionalism and potential gender bias, certain limitations warrant consideration. First, the sample was limited to a single urban center, potentially restricting the generalizability of the findings to other regions or cultures. Second, the study relied on static photographs without context, which may not fully capture real-world dynamics in professional settings.

Furthermore, the study did not explore the impact of demographic factors such as respondents' age, education level, or socioeconomic status, which could have provided deeper insights into variations in perception. Lastly, the cross-sectional design limits the ability to draw causal inferences about the observed trends. These limitations provide avenues for future research to validate and expand upon our findings across diverse settings and methodologies.

Conclusion

Understanding public perceptions of surgeon attire in Lahore's tertiary care hospitals is essential for enhancing the professional image of healthcare providers and improving patient trust and satisfaction. This study has highlighted a strong preference for traditional white coats, particularly when paired with scrubs, and has also revealed significant gender biases that disadvantage female surgeons. These findings underscore the need for healthcare institutions to adopt standardized, culturally sensitive dress codes and to implement strategies to address gender biases in the medical profession.

Promoting gender equity in medicine is not only a matter of fairness but also a critical factor in ensuring that all healthcare providers are respected and trusted by their patients, regardless of gender. By addressing these issues, hospitals can create a more supportive and inclusive environment for female surgeons, ultimately leading to better patient care and outcomes.

Future research should continue to explore these dynamics in different regions of Pakistan and in other cultural contexts. Additionally, studies that investigate the impact of surgeon

attire on specific patient outcomes, such as compliance with medical advice and overall satisfaction, would provide valuable insights into the broader implications of these findings for healthcare practice.

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Gender Disparities in Medical and Dental Admissions: Students' Perspectives on Barriers

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Abstract

Objective: : To explore the gender distribution trends in the MDCAT test, MBBS, and BDS admissions at Bolan Medical College (BMC), Quetta, from 2019 to 2024, and to gather students' perceptions regarding the barriers faced by female students in medical education.

Methodology: This qualitative study was conducted in 2024 at BMC, Quetta, to examine gender inequity in MBBS and BDS admissions from 2019 to 2024. Thirty-two first-year female students from the 2024 batch were purposively selected for focus group discussions (FGDs) to explore their personal experiences regarding gender-specific challenges. The themes that emerged were safety concerns, transportation issues, cultural norms and social pressures, lack of female role models, and family support. In addition, the study examined the availability and accessibility of MDCAT preparation resources, specifically for students from rural backgrounds, who reported more challenges in accessing coaching and educational materials.

Results: : The five-year data analysis revealed persistent gender inequity, with female admissions consistently lower than male admissions. In MBBS, female admissions ranged from 39.2% (n=89/227) in 2019-2020 to 30.62% (n=105/343) in 2023-2024, while female enrollment in BDS remained relatively equal, at 61.36% (n=27/44) in 2019-2020 and 52.27% (n=23/47) in 2023-2024. Among the surveyed students, 37.5% (n=15) reported encountering barriers in pursuing health sciences. The primary obstacles identified were safety concerns and transportation issues at academic institutions (47.5%, n=19), followed by cultural norms and social pressures (20%, n=8), and a lack of female role models in college (12.5%, n=5). While most participants identified inadequate family support and limited access to MDCAT preparation as the primary obstacles, they found educational resources and coaching centers to be generally sufficient. However, a subset of students from rural areas reported restricted access.

Conclusion: There was a persistent gender inequity in MBBS and BDS admissions in BMC with female students facing considerable challenges both pre and post-admission.

Keywords: Aptitude Test, Family Support, Gender Inequality, Rural Residence, Social Support.

Introduction

Gender inequity in medical education has been a topic of increasing concern,

particularly in the regions of Balochistan and Khyber Pakhtunkhwa (KP), where cultural, financial, and institutional barriers are prevalent.^{1,2} In Balochistan, poverty and lack of financial resources are other contributing factors to gender inequity. Parents due to low-income sources prefer their male children for higher studies.² Institutional gender discrimination is also observed.³ In remote areas, gathering males and females in one place, even for educational purposes, is against cultural norms. The representation of females in medicine has increased compared to the past, particularly after the 1960s,⁴ when a female quota in public sector medical colleges was replaced with open merit in the 1990s. Since then, nearly 50% of medical college seats have been filled by female students. The last decade has been a milestone, with female enrollment surpassing 70% in most institutions.⁴ However, only 34.4% of females are working in fields.⁵ In Balochistan, there are 2,806 male and 1,962 female medical professionals, along with 285 female dentists and 260 male dentists.⁶ Baluchistan's healthcare system is marked by the underrepresentation of female students in Bolan Medical College and three other medical colleges in the province, including Makran Medical College Turbat, Jhalawan Medical College Khuzdar, and Loralai Medical College. This disparity has significant implications for the healthcare sector, where a diverse workforce is crucial for meeting the healthcare needs of all societal segments.⁷

Females play a crucial role in creating more inclusive and effective healthcare systems, particularly in addressing the healthcare needs of women. This is especially important in regions like Balochistan, where cultural norms often prevent women from seeking medical and dental care from male physicians.⁸ Consequently, addressing gender inequities in medical education is not only an issue of educational equity but also a critical factor in improving healthcare outcomes for women and underserved populations.

This study explores the barriers faced by female medical students during MDCAT preparation and throughout their professional journey. By analyzing trends in male and

female admissions, it examines the gender gap in MBBS and BDS admissions over multiple years, focusing on factors such as social and family support, perceived challenges before and during the MDCAT test, cultural norms, and institutional factors contributing to gender inequity. The study aims to fill a gap in the literature concerning the specific challenges faced by female students in medical education, particularly in the context of Pakistan’s cultural and educational settings.^{1,8} The findings will provide valuable insights for policymakers and educational institutions to develop targeted interventions and support systems that promote gender equity in medical education, ultimately contributing to a more diverse and inclusive healthcare workforce.

Methodology

A qualitative study was conducted from September to October 2024, after obtaining ethical approval from the Institutional Review Board of Bolan University of Medical and Health Sciences, Quetta (IRB No. 0043/BUMHS/24, Dated: 6th November 2024). Confidentiality was confirmed to the participants. Before starting qualitative data collection, a record of total admissions of males and females from the past five years (2019 to 2024) was obtained directly from the administration office of Bolan Medical College (BMC) admissions section to assess gender trends in MBBS and BDS admissions. The research staff was trained about the research topic, conveyed questions to the participants clearly, told to listen to participants’ views intently and reported the findings. To check the validity (face and construct) of this questionnaire, a pilot study on 10 female students was done. Two medical educationists confirmed the face validity of the questionnaire, whereas construct validity was confirmed by applying the questionnaire to the participants of the pilot study and taking their responses to the questionnaire. Validity and reliability were satisfactory (reliability index was 0.75). Before starting data collection written consent was taken from the participants and also before the start of audio recording for the discussions, verbal consent was taken.

Data Collection Procedure: Data was collected from purposefully selected 32 female students, 20 from MBBS and 12 from BDS female professional year. Questions were asked orally and were audio-recorded (tape-recorded) by the trained staff from the participants. The semi-structured open-ended questionnaire (Annexure I) included social and family support, residence, and perceived challenges before and during the MDCAT test and after admission to MBBS and BDS impacting gender inequity in MBBS and BDS admissions.

Discussions were conducted in an isolated place within the premises of the Oral Pathology Department in a total of 4 focus groups, with 8 participants in each group. The participants were briefed about the topic of research and the discussion, and their written consent was obtained. To ensure anonymity during recording, note-taking, and analysis, each participant was assigned a unique numerical code. Twenty minutes are allotted for each participant.

The discussions were conducted in Urdu. The first author moderated all four discussions, a support staff took the notes, and the last author observed the discussions. The audio recordings were translated into English, and the transcriptions were checked with the recordings to verify accuracy. The notes and the recordings were used during various stages of data

analysis. The notes provided information on the discussion setting, as well as the verbal and nonverbal expressions of the participants. The notes helped to assess the impressions, emphasis, and feelings of the participants during the discussions. The discussions used pre-formulated discussion guides with open-ended questions on gender inequalities, Social Constraints, and Perceived Barriers/challenges Pre-Post MDCAT and after admission in MBBS and BDS. Probing was done on several occasions during the discussion to gain more clarity on the issue. Cross-checking among the participants and between the groups was done to triangulate the received information. The transcript was formatted and analyzed using thematic analysis to identify recurring themes related to admission challenges in Figure 1.

Frequency and percentages were calculated through SPSS (version 26.0) to present descriptive data on gender trends in admissions from 2019 presented in Table 1 (MBBS) and Table 2 (BDS).

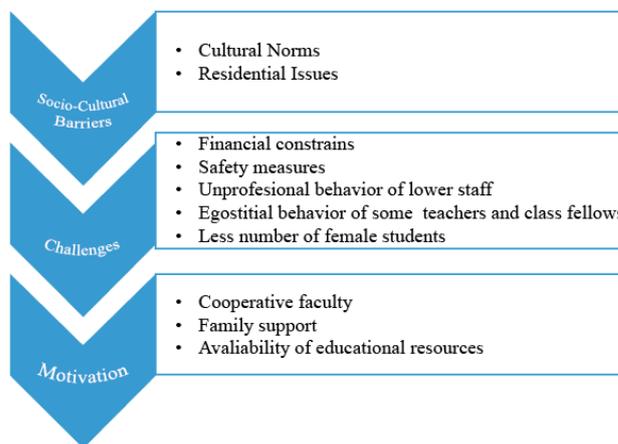


Figure 1: Themes and Subthemes extracted from the FGDs of First Year students.

Cultural Norms persenting Gender Inequity	Behavior of Discrimination	Proposed Solutions
<ul style="list-style-type: none"> • Domestic role for females • Worthlessness of female education • Safety concerns • Restrictions on mobility • Conservative culture • Social stigma 	<ul style="list-style-type: none"> • Family members • Finicial constrains • Religious misinterpretations • Lack of female role model 	<ul style="list-style-type: none"> • Community awareness programs • Provision of safety • Provision of scholarship for the poor • Transportation facility

Figure 2: Themes and sub-themes related to admission challenges and their proposed solutions.

Results:

In the study, participants reported safety and transportation, social pressure/cultural norms, lack of female role models and financial and educational resources as barriers to their academic progress. MBBS admissions at BMC from 2019 to 2024 revealed a gender gap trend showing a consistently higher male enrollment ratio than female enrollment across the five years of MBBS fluctuating slightly with the highest in 2022-2023 at 70.67% detailed in Table 1.

Table 1: Gender-wise distribution of 1st-year MBBS students during the past 5 years

Academic Year	Total Students	Male Students (n=)	Female Students (n=)
2019-2020	227	138	89
2020-2021	323	201	122
2021-2022	320	214	106
2022-2023	324	229	95
2023-2024	343	238	105

Admissions percentages in BDS are demonstrated in Table 2. The table shows a fluctuating gender distribution over the past five years, with a noticeable increase in male students in the 2022-2023 academic year, while female enrollment has varied slightly.

Table 2: Gender-wise distribution of 1st year BDS students during the past 5 years

Academic Year	Total Students	Male Students (n=)	Female Students (n=)
2019-2020	44	17	27
2020-2021	40	15	25
2021-2022	40	20	20
2022-2023	41	28	13
2023-2024	47	24	23

Pre-Admission Challenges

Residential and Family Issues: During the qualitative phase of the study participant's perceptions of the accessibility to coaching institutes varied, with those residing in urban Quetta reporting better access compared to those from surrounding areas of Balochistan. Students from the periphery complain that *"it is very difficult for us to prepare for the MDCAT test as we came from far away from Quetta and have issues in accommodation."* (R.1-8) They declare that *"we belong to poor families and don't have much money to pay hostel fee, we face problems in buying two meals a day for ourselves, as our parents cannot afford it. Many of us miss out on medical admission due to the inability to prepare for this test and afford it."* (R.1-22)

The majority of students from outside Quetta faced difficulties in coaching, household responsibilities were also identified as a substantial burden for female students preparing for the MDCAT test. Notably, Lack of family support was the least concerning factor (n=3/40) as almost all female respondents indicated strong family support during their academic pursuit, suggesting that support networks might aid in mitigating some of these barriers.

Safety Measures: During the interview, participants identified deficient safety measures that didn't match the cultural norms during the MDCAT test. One of them said *"There were too many students, all boys and girls were gathered in one place which is against our cultural norms¹⁰ and this causes a lot of rush. We were getting nervous because of the tension of the test and secondly, we had not eaten anything and we did not sleep all night because of exam tension."* (R-1)

When asked about their perspectives on the most significant hindrances for female MDCAT test aspirants, safety concerns ranked the highest, followed by gender inequity and financial constraints.

Cultural Norms: *Another reason was that we came from distant areas and were not used to such crowded and mixed-gathering, which makes a big problem for us."* (R-22) They agreed that cultural values in areas like Quetta, and the interior of Balochistan don't change. The social life of females is limited with no communication with males, and this is the reason for our stress during the MDCAT test and after admission to the MBBS and BDS course study. Others admit *"that we face a language barrier."*

Post-Admission Challenges

These were primarily associated with gender discrimination, followed by cultural expectations and societal norms.

Safety and Financial Barriers: Participants recognize safety and financial barriers in their academics. They informed us that *"there are deficient rooms in girl's hostel and we were asked to accommodate ourselves privately till college administration provide accommodation in college hostels. We feel unsafe and financially burdened due to this issue, many of us moved back to our homes as we were unable to afford private hostel fees and our family didn't allow them to live alone in private rooms/hostel. They further said, "How can we live alone, we are scared and it is against our cultural norms"*. (R-15)

Educational Resources: When the researcher asked about resource accessibility, most of the participants agreed that educational resources and books were equally accessible to both genders. They informed us that *"though we were not accepted the atmosphere here is very motivating, despite rude lab staff behavior of library staff and many of the faculty is very co-operative and books and net is available easily."* (R-40)

Unprofessional behavior of Lower Staff: Female students admitted the unprofessional behavior of some lower staff during their lab practical, they said; that during our practical work when we started and were in the initial stages the male staff always used to say, *'Come on, do it you're a man, take it like a man', though it was my first time in performing it ... I was also told that I should man up and shouldn't be as feminine."* (R-22)

Number of Female Students: Another student said *"In our class, the low number of female students makes us feel the need to raise our voices to be heard, and sometimes it is necessary to be more aggressive with our tone."* (R-30)

The behavior of some Male Students and Faculty Members: *"Some male students as well as faculty are egotistical and feel good when girls show lack of confidence and they are always so ready to help them."* (R-25)

Discussion

This study investigates the gender distribution trends during the MDCAT test, MBBS, and BDS admissions at Bolan Medical College, Quetta, from 2019 to 2024, examine barriers to female academics and perceptions of students to

barriers, and explore possible strategies to promote gender equity in medical education. Five-year data analysis (MBBS admissions presented in Table 1 and BDS in Table 2) revealed a persistent gender inequity in MBBS admissions in BMC with female students facing considerable challenges both pre and post-admission including facing barriers to pursuing health sciences, citing safety and transportation in academic institutions as the primary barriers, cultural norms and social pressures, lack of female role models in college. On the other hand, students were satisfied regarding family support and accessibility to MDCAT preparation and educational resources and coaching, although a subset from rural areas reported limited access. Gender inequities still exist worldwide in medical education, although equality is institutionalized in many developing countries. In Pakistan, the constitution of the country guarantees equal rights to female education in all of its aspects inequality still exists.⁹ Awareness programs can resolve this problem.¹⁰ College/National organizations should match female medical students with mentors and icons who are not only a source of inspiration but also provide networking opportunities.¹¹ Dahal (2022)¹² from Nepal disclosed differences in educational opportunities for males and females in his community. Families usually support male children's education by enrolling them in private schools while girls are set in community schools together with early marital engagements and household work." The same inequity was observed in our study. Participants of the current study informed gender inequity during MDCAT preparation, examination, admission and in studying MBBS. To resolve issues related to MDCAT test preparation awareness programs can help change societal norms regarding gender inequity. Providing transportation and accommodation to female students during the MDCAT test, improving access to coaching centers, or providing online alternatives could bridge this gap.

The government of Pakistan has made positive efforts to curb gender inequality. During admissions, PM&DC notifies an equal distribution of seats in MBBS and BDS to both male and female students,¹⁴ still the ratio of male students admitting to MBBS was high in the current study (Table 1). This suggests structural or social barriers impacting female education. Our findings are consistent with prior research indicating that gender biases and societal expectations can limit educational opportunities for women in traditionally male-dominated fields.^{11,14,15} In a controversial finding, Rehman (2018) observed that 55% of female students were enrolled in her study conducted at Punjab Medical College, Pakistan.¹⁶ The disparity between Punjab Medical College and Bolan Medical College can be attributed to the higher literacy rate in Punjab (61%) compared to Balochistan where 39% of males and only 16% of females are literate.¹⁷ Whereas, in the case of the BDS profession previous studies confirm a high female percentage.^{18, 19, 20} This difference in female population in MBS versus BDS is due to the low number of students in dentistry (n=40) as compared to the strength of MBBS students (n=277-374 during 2019-2024). Additionally, the short duration of professional study (4 years) in BDS as compared to 5 years MBBS is also a factor. Samuriow et al. (2019) reported that study participants observed gender inequity in their clinical settings, noting that healthcare professionals' experiences were influenced by their gender.²¹ Similarly, participants in the present study identified gender disparities during their academic journey, highlighting the impact of gender on their educational experiences. The notion of a gendered culture in clinical practice has been previously reported about the

impact that it had on the development of the professional identity of third-year female medical students.²¹ In the current study, some female participants reported that female faculty members exhibited favoritism towards male medical students, offering them more support in their learning and practical work. However, the majority shared that nurses tended to be more supportive of female medical students, perceiving them as more vulnerable. Interestingly, two participants noted that male nurses were more supportive of female medical students than their female counterparts. Several participants also experienced unprofessional behavior from support staff during exams and admissions.

This aligns with findings from Dawood's study, where participants similarly reported unprofessional conduct from lower-level staff.²² To address this issue, implementing staff training programs, particularly for support staff, could help promote professionalism and improve the experience for female students. Females are usually reluctant to report incidents of gender inequality because of stigmatization. Awareness-raising strategies are needed to put in place appropriate for a work environment that is more conducive and approachable for female medical student workers.⁴

Due to deficient female teaching staff students are deprived of role models/mentors and even some female students didn't pay attention to learning as they felt "exhausted, disappointed, unprotected and insecure in the pre-clinical years."²³ Female teachers act as role models motivate, provide support and learning opportunities to female students, provide them with a safe and learning environment, provoke their creativity, assist them to be competent and professional.^{24, 25} Our study participants recognized the importance of female faculty.

Regarding the availability of educational resources, the finding of the current study demonstrated equally accessible educational resources to both genders suggesting progress in educational equity. However, the limited access to coaching facilities in rural areas highlights a geographical disparity that may hinder female MDCAT test aspirants from these regions, exacerbating the gender inequality or gap. Participants recognized deficient safety measures and transport issues during the MDCAT test. Males and females were gathered in one place that was against the cultural norms of our province. Similarly, a nationwide study conducted by Malik in 2023 in different cities of Pakistan found culture as a barrier to gender equity. In his study, gathering males and females in one place against cultural norms highlights how societal expectations influence gender equity, especially in KPK and Balochistan, providing an insightful discussion on cultural and societal influences related to gender inequity and the stress associated with medical admissions. Cultural constraints significantly affect the admission process for both genders. Controversially, cultural diversity was not a matter of discussion in the study conducted by Alyia in 2022 in some public and private sector medical colleges of Peshawar, Pakistan.³ Subjects of this study detected no cultural bias in their learning environment. However, they observed gender bias in some clinical departments.

The desire to become a doctor is at its peak in Pakistani society and most students face academic stress due to social and family pressures.²⁶ The strong family support, as observed in this study, lessened the pain and discomfort students experienced during the MDCAT test and admission process

among the respondents may reflect changing family dynamics, with families increasingly valuing higher education for their daughters. This support could mitigate some of the identified barriers, such as financial or societal constraints. However, the prominence of post-admission challenges, particularly gender inequity and cultural expectations, suggests the need for policies that foster gender equity within academic institutions.

Strengths and Limitations

This research work benefits from a systematic data collection methodology using BMC's MBBS and BDS admission records over five years. This is a targeted survey among female students to enhance the reliability of findings within a city/province and encourage readers to highlight the reference once working for a nationwide survey. Clear patterns of gender inequities emerged, highlighting the challenges faced by female students in accessing medical education in Balochistan. These include accommodation issues, cultural restrictions, financial constraints, and limited educational resources, particularly in rural areas. By incorporating students' perspectives, this study offers valuable insights into the systemic barriers within the region's medical education landscape, emphasizing the need for targeted interventions to promote gender equity. However, the study focuses on a very small group of participants in a single institution which may limit the generalizability of results. For more reliability in results, other medical colleges in Pakistan or regions beyond Balochistan may be included. Additionally, the reliance on self-reported data from female students introduces the possibility of response bias.

Recommendations

Future research can mitigate these limitations by incorporating data from multiple institutions and broadening the sample size to include a more diverse representation of participants. Longitudinal studies can assess whether recent interventions or policy changes impact the gender gap in MBBS admissions over time. Additionally, interdisciplinary collaborations—combining insights from sociology, psychology, and education—could offer a more nuanced view of gender disparities in medical education. Lastly, exploring additional variables, like parental education levels or rural vs. urban backgrounds, could provide a more comprehensive view of the factors influencing female MBBS admissions in Balochistan.

Conclusion

The study highlights a persistent gender gap in MBBS and BDS admissions at BMC. Notably, female students face challenges both pre- and post-admission, particularly in the areas of safety, gender discrimination, and social expectations. Despite these obstacles, strong family support was a prevalent factor in aiding female students in pursuing their education. The findings underscore the need for targeted measures, such as enhancing safety and transportation options and promoting community awareness programs, to address the structural barriers limiting female participation in medical education.

Authors' Contributions

NFK: Conceptualized and designed the study, supervised the research process, and contributed to manuscript writing and final approval; MI: Assisted in study design, contributed to qualitative data analysis, and provided critical revisions to the manuscript; USU: Conducted

data collection, facilitated focus group discussions, and contributed to data interpretation; MS & MS:: Assisted in literature review, data compilation, and manuscript drafting.; RM: Provided expert input on gender disparities in medical education, reviewed the manuscript, and approved the final draft.

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Challenging Gender Norms: Male Physicians' Perspectives on Family Planning in Rural Islamabad

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Abstract

Objective: To explore male physicians' perceptions of how family planning (FP) training, supportive supervision, and access to educational materials impact their knowledge, confidence, and ability to provide FP services in rural areas of Islamabad, Pakistan, where FP is traditionally considered a female domain.

Methodology: This qualitative study involved 12 in-depth interviews with male family physicians practicing in rural communities of the Islamabad Capital Territory (ICT). The interviews explored their experiences and perceptions of engaging in FP service provision, a field predominantly led by female healthcare providers due to cultural norms and gendered divisions in healthcare roles. Interviews were transcribed, categorized, and thoroughly analyzed. Participants were informed about the study's objectives, procedures, and confidentiality measures to ensure voluntary participation.

Results: The findings revealed significant gender-based barriers to male physicians' involvement in FP services. Many reported that their medical education placed minimal emphasis on FP, reinforcing the perception that it falls outside their professional scope. Cultural norms further restricted their engagement, as FP counseling and provision were widely regarded as responsibilities of female healthcare workers. However, FP training, supportive supervision, and access to educational materials enabled male physicians to develop essential skills, increasing their confidence in counseling and service delivery. Participants noted a rise in client numbers and referrals, attributing this shift to improved competence and community acceptance. They also emphasized the need for stronger pharmacy linkages and accessible informational materials to enhance service provision.

Conclusion: In Pakistan, gender inequality in healthcare limits male physicians' participation in FP, reinforcing traditional gender roles and restricting access to comprehensive reproductive health services. Providing male physicians with structured FP training, counseling tools, and institutional support can help challenge these barriers, fostering their role as key contributors to expanding FP access in rural communities.

Keywords: Family planning service provision, Islamabad, In-depth interviews, Male family physicians, Qualitative study,

Introduction

Pakistan, boasting a population of 241.5 million in 2023, stands as the fifth most populous country globally.¹ With an annual population growth rate of 2.55%,

projections indicate an increase to 263 million by 2030 and a staggering 338 million by 2050.² A substantial population surge is therefore anticipated. Over the past two decades, there has been a discernible stagnation in the decline of the country's total fertility rate (TFR), with a marginal decrease from 3.8 in 2013 to 3.6 in 2018.³ Meanwhile, an alarming 51.5% of the total demand for FP remains unmet, placing an estimated 6 million (17.3%) married women at the risk of unwanted pregnancies.⁴ Addressing this unmet need and improving access is pivotal to reducing unwanted pregnancies and enhancing contraceptive uptake.⁵

Family Planning (FP) services provision that prioritizes human rights emphasize equal opportunities for both men and women to make decisions about the number and spacing of their children.⁶ This approach is also supported by the International Conference on Population and Development (ICPD), which encourages equal access to FP information, products, and services for both men and women. The Sustainable Development Goals (SDGs) and FP 2030 agenda, highlight the importance of men's involvement in FP programs. These initiatives aim to create a supportive environment that engages men as partners in reproductive health decision-making.⁷

High-income countries have adopted a couple-centered approach to promote FP services by involving men in reproductive health decision-making. This approach has shown promise in increasing involvement of men in FP. Although many low-and middle-income countries (LMICs) are working to promote equality in FP by implementing services and programs that involve men,⁸ in Pakistan, FP has traditionally been considered a women's issue.

Social and cultural barriers pose challenges to involve men in FP service provision. Studies have shown that engaging male family physicians could play a pivotal role in enhancing FP services, as evidenced by initiatives in Punjab and Sindh that demonstrated the positive impact of male involvement on contraceptive continuation rates.⁹ This qualitative study addresses a significant research gap by assessing the

extent of FP services provision for men in rural areas of Islamabad. The premise for the current study implemented in rural Islamabad was that given the current state of FP in Pakistan, the engagement of male family physicians in the provision of FP services emerges as a pivotal strategy. By involving male family physicians, FP services can be enhanced. Moreover, their involvement can lead to more informed decision-making, enabling individuals and couples to choose contraceptive methods aligning with their preferences and circumstances.¹⁰ Engaging the private sector, especially male family physicians, would have a significant impact on improving family lives and empowering vulnerable women in Pakistan.¹¹

This qualitative study explored the perspectives, narratives, and experiences of male family physicians in providing FP services, a domain traditionally dominated by female healthcare providers. Through in-depth interviews, we examined the gendered barriers that limited their involvement, including cultural norms, professional stigma, and inadequate training in reproductive health. Additionally, we identified facilitators that enabled their engagement and gathered insights on policy reforms and supportive measures to promote gender-inclusive FP service provision. By integrating male physicians into FP services, this study highlights a critical step toward addressing gender disparities in reproductive healthcare, ensuring equitable decision-making, and empowering women and couples to make informed choices about their FP needs in rural Islamabad.

Methodology

This qualitative study was conducted to determine the perspectives and experiences of male family physicians in the year 2023, in the rural areas of Islamabad, Pakistan. At the time of the study, Islamabad - the capital city of Pakistan, had a total population of 2,363,863 people with 53.1% (1,254,991) people living in the rural areas. In Pakistan, primary health care needs including family planning are mainly met by general practitioners (GPs) in the private sector.¹²

This study involved conducting 12 in-depth interviews with male family physicians in September 2023. Family physicians who were aware of the FP intervention in the past six months were purposively selected for interviews. In-depth Interviews (IDIs) were used to gain comprehensive insights into the perspectives and experiences of male family physicians regarding their involvement in family planning services provided within the specified rural context.

A set of pre-set questions was constructed to guide in-depth interviews (IDIs) with male family physicians, focusing on their experiences and perspectives in providing family planning (FP) services. The IDI guidelines covered five key thematic areas, including constraints to FP provision, perceptions of male physicians engaging in FP services, experiences of FP service providers, continuity or proactive promotion of FP services, and suggestions for scalability or expansion.

Developed by the principal investigator and co-investigators, these questions explored challenges faced

by male physicians, their role in integrating FP into regular services, and their future engagement in this field. Each question included probes to elicit detailed and comprehensive responses, ensuring a deeper understanding of gender-related barriers, client receptivity, and trust issues.

The interview guide underwent pretesting before actual interviews, with adjustments made to enhance clarity, language, and communication on FP concepts and practices. Additionally, recommendations for improving male physician participation in FP services, including policy changes, training, and resource allocation, were also addressed.

Ethical approval for the study was obtained from the Internal Review Board (IRB) of Population Council and the Ethical Review Committee of Health Services Academy (HSA), Islamabad, Pakistan (No. 7-82/IERC-HAS/2022-40), approved on October 31, 2022. Informed consent was obtained from respondents after a clear explanation of the study objectives, procedures, potential benefits, risks, and the right to withdraw at any stage without consequence. Respondents had the opportunity to ask questions, and participation in IDIs was voluntary. Participants signed a consent form, and data collected as part of IDI transcripts was anonymized to ensure respondent privacy and confidentiality.

In-depth interviews were conducted ensuring privacy within the clinics of family physicians. The interview time was allotted before clinic hours to allow flexibility. Efforts were made to proactively mobilize enthusiastic participation in the interview process. Each interview lasted from approximately 30 to 45 minutes.

Two qualified and trained field team members, including a moderator and a note-taker, conducted the interviews. Demographic information related to age, healthcare cadre, and years of clinical practice, was collected from respondents. All IDIs were audio-recorded after obtaining written and recorded consent from family physicians, and the audio recordings were manually transcribed verbatim into Urdu and then translated into English.

Data analysis employed inductive thematic analysis. Two independent reviewers thoroughly reviewed each transcript to enhance the reliability and robustness of the findings. They initiated the review process by identifying initial codes to elicit the actual opinion of respondents. Axial coding was then applied to concepts, quotes, and sub-themes associated with these codes, refining categories, and grouping them together. Similar categories were merged to construct overarching themes. Subsequently, selective coding was employed to key themes and findings, providing a comprehensive and structured analysis of respondents' perspectives.

Results

A total of 12 respondents were invited to participate in this study. All the respondents were male family physicians. The minimum age of the respondents was 30 years, and the maximum age was 67 years. The respondents' years of clinical practice ranged from 2 years to 39 years.

Table 1: Family Physicians' Perspectives on Gender and Family Planning

Themes Generated	
Theme 1: Constraints to provision of family planning service	
42 years	<i>'I used to feel hesitant discussing family planning, fearing it was not my place to address FP concerns because of cultural norms. Over time, I have become more comfortable and confident in engaging with clients on this topic.'</i>
67 years	<i>'I provide basic information about family planning to my clients, but mostly refer my female clients to medical facilities for family planning services, such as polyclinic, PIMS, and Holy Family Hospital.'</i>
Theme 2: Evolving Role of Male Physicians in Family Planning	
44 years	<i>'Over time, I have developed the knowledge and skills needed to provide comprehensive family planning services. I can now confidently counsel clients on various contraceptive methods, their effectiveness, benefits, potential side effects, and contraindications.'</i>
50 years	<i>'Yes of course, I am properly equipped to tend to the needs of my clients and respond to their queries and give advice as needed. I am now confident in my ability to address any family planning questions or issues from my clients.'</i>
55 years	<i>'Training relating to family planning can be quite beneficial. When you train the doctor on how to counsel people, you get better results. Initially, I was not trained for this role.'</i>
34 years	<i>'Ongoing guidance, access to comprehensive training resources, regular discussions, and field visits would help bridge the gap in family planning services, especially by supporting male physicians in a field traditionally dominated by female healthcare providers.'</i>
Theme 3: Challenging Gender Norms in Family Planning Services	
67 years	<i>'In my practice, I have noticed that cultural and religious sensitivities make family planning a challenging topic, particularly for male physicians. Many patients perceive family planning as a subject meant for female healthcare providers, reinforcing gender norms that limit open discussions and access to services.'</i>
38 years	<i>'Since I started providing family planning services, I have noticed a growing number of clients seeking guidance from me. As a male physician, earning their trust in this traditionally female-led domain has been significant. Over time, clients have developed a more positive attitude toward family planning and have even referred others to my clinic, indicating a shift in perceptions about who can provide these services.'</i>
30 years	<i>'Integrating male family physicians into family planning services challenges traditional gender roles and improves accessibility. As primary healthcare providers, they can foster trust and encourage open discussions, helping to reduce gender-based barriers in reproductive healthcare.'</i>
Theme 4: Continued provision of family planning service in future	
38 years	<i>'Yes, I would like to continue this practice, to cater to those who want to avail family planning services especially male clients to address gender disparity. It is my duty to provide the service to my clients and others who are interested in opting for family planning.'</i>
55 years	<i>'Yes, I would like to provide family planning services to my clients if the required training and technical aid is provided to me.'</i>
Theme 5: Enhancing Male Involvement in Family Planning to Address Gender Disparities	
38 years	<i>'Providing education and training to male family physicians in remote rural areas can help engage them in family planning, challenging gender norms and expanding access to reproductive healthcare for both men and women.'</i>
48 years	<i>'Engaging government officials, local healthcare providers, community leaders, and NGOs is crucial in gaining support for gender-inclusive family planning services, ensuring that both male and female healthcare providers are equipped to meet the reproductive health needs of the community.'</i>
48 years	<i>'Launching community outreach initiatives, facilitating open discussions, and organizing awareness campaigns can help increase public knowledge and understanding of family planning, while also challenging gender biases and encouraging both male and female participation in reproductive health decisions.'</i>

Theme 1: Constraints to Provision of Family Planning Services

Respondents highlighted several challenges that limited their ability to provide FP services, including limited knowledge and expertise, inadequate training opportunities, and lack of ongoing professional development. These gaps initially hindered their confidence and engagement in FP service provision. Furthermore, cultural norms and social expectations were also identified as major challenges to male involvement in FP. Some respondents noted that their FP knowledge was largely based on basic medical education, rather than continuous professional development.

Theme 2: Evolving Role of Male Physicians in Family Planning

The respondents mentioned that the evolving role of male physicians in FP highlights a gradual shift towards greater male involvement in reproductive healthcare, helping to address gender disparities in FP service provision. Initially, FP services were mainly associated with female healthcare providers, limiting the engagement of male physicians in contraceptive counseling and service delivery. However, the respondents highlighted that their experiences reflect a transformative journey, where male physicians have gained the knowledge, confidence, and skills needed to offer FP services. The respondents emphasized that this shift demonstrates a growing acceptance of male physicians' role in FP and their ability to counsel clients—both men and women—by providing accurate and informed counseling. While many male physicians have adapted to this role, some respondents stressed the importance of training in FP, highlighting that their initial medical education did not adequately prepare them for FP counseling. Moreover, the respondents also emphasized the need for ongoing support mechanisms to sustain and enhance their participation in FP.

Theme 3: Challenging Gender Norms in Family Planning Services

The involvement of male physicians in FP services indicates a significant challenge to traditional gender norms, which have historically considered FP as the domain of female healthcare providers. These gendered expectations limit the engagement of male physicians and restrict open discussions about FP services. However, the involvement of male physicians in FP promoting a more inclusive approach to reproductive healthcare. Despite these challenges, some male physicians have successfully gained the trust of their clients, signaling a gradual shift in attitudes toward male involvement in FP. This growing acceptance suggests that male physicians can play an essential role in FP service provision. As trust builds between patients and male healthcare providers, more individuals seek guidance from them, contributing to greater access and broader acceptance of FP services across different communities. Moreover, the integration of male family physicians into FP services is seen as an important strategy to reduce gender disparities and improve overall accessibility.

Theme 4: Continued Provision of Family Planning Service in the Future

The majority of the respondents highlighted that family planning has now become an integral part of their day-to-

day clinical practice. They were dedicated to supporting and promoting any family planning initiative and emphasizing its positive impact on health and general welfare of the people. This suggests a strong commitment from family physicians regarding the importance of engaging male family physicians in family planning services provision in improving public health outcomes.

Theme 5: Enhancing Male Involvement in Family Planning to Address Gender Disparities

The respondents highlighted several strategies to enhance male involvement in FP and reduce gender disparities in reproductive healthcare. One of the key suggestions was the establishment of an integrated network of family physicians who would be actively engaged in FP service provision. The respondents emphasized the key role of the Government in expanding FP services nationwide. They suggested that government-led initiatives could strengthen FP accessibility, particularly in underserved areas where gender norms and cultural expectations often limit male physicians' involvement. By providing institutional support, the government can create an enabling environment for male healthcare providers to participate more effectively in FP services. By making FP services more accessible, male physicians may feel more empowered to engage in this domain, ultimately contributing to a more gender-balanced approach in reproductive healthcare.

Discussion

This qualitative study provided key insights into the perspective and experiences of male family physicians in delivering FP services in rural areas of Islamabad. Engaging male family physicians in FP service provision is crucial for several reasons, including promoting inclusivity, ensuring wider access to FP services for men, and developing shared responsibility in reproductive healthcare.¹³⁻¹⁵ This study highlights the key challenges faced by male physicians, the evolving nature of their role, and strategies for improving their involvement in FP services to address gender disparities.

Respondents highlighted several challenges to male physicians' involvement in FP service provision, including limited knowledge, inadequate training, and lack of professional development opportunities. These findings align with studies conducted in Cape Town¹⁶ and Turkey,¹⁷ which reported that a lack of training and ongoing support limited healthcare providers' confidence in delivering FP services. Additionally, cultural norms and social expectations act as significant barriers to male involvement in FP. The perception that FP is primarily a female concern discourages male physicians from actively engaging in service provision. Previous studies in Karachi and Tanzania similarly identified cultural constraints as a major obstacle in integrating male providers into FP services. Overcoming these barriers requires culturally sensitive interventions that promote gender-inclusive approaches to FP. The study indicates a gradual shift in the role of male physicians in FP services. Initially, FP was perceived as the domain of female healthcare providers, limiting male physicians' engagement. However, respondents mentioned that, with comprehensive FP training and ongoing support, they gained confidence in providing FP counseling and services. A qualitative study in Nigeria¹⁸ demonstrated that targeted training programs and technical support significantly improved male physicians' confidence in FP service provision.

Similarly, our study found that capacity-building initiatives led to increased competence and motivation among family physicians to offer FP services. To ensure sustainability, structured training programs and mentorship opportunities should be integrated into professional development frameworks for male physicians.

The integration of male physicians into FP services challenges traditional gender norms, contributing to a more inclusive reproductive healthcare system. Respondents emphasized that, despite initial resistance, they have successfully gained the trust of their clients, leading to increased FP uptake. Studies in Ghana¹⁹ and Malawi²⁰ reported similar findings, indicating that male healthcare providers can play a crucial role in expanding FP services by building trust within their communities. Furthermore, male physicians' involvement in FP facilitates greater male engagement in reproductive health discussions, addressing a critical gap in service delivery. By fostering an environment where men feel comfortable seeking FP counseling from male providers, healthcare systems can promote shared responsibility and improve overall accessibility to FP services.

Many respondents expressed a strong commitment to supporting and promoting FP initiatives, recognizing their impact on public health. By integrating FP service provision within primary healthcare settings of Pakistan, male physicians can contribute to long-term improvements in reproductive health outcomes. To further enhance male involvement in FP, respondents suggested several strategies, including the establishment of an integrated network of male family physicians dedicated to FP service provision. Government-led initiatives were identified as crucial in expanding FP accessibility, particularly in underserved areas where cultural norms limit male physicians' participation. A study in Nigeria²¹ emphasized the importance of multi-stakeholder collaboration, including government agencies, civil society organizations, and local health authorities, to strengthen FP services. Additionally, respondents advocated for the implementation of policies that ensure free contraceptive distribution, thereby increasing accessibility and affordability. Providing institutional support for male physicians through government-led programs can create an enabling environment for their active participation in FP services.

The findings of this study have significant implications for policy development and healthcare system strengthening in Pakistan. To achieve the national target of a 50% contraceptive prevalence rate (CPR) by 2025, Pakistan must increase FP service utilization through both public and private healthcare sectors.²² Our study highlights the need for targeted efforts to engage male family physicians in FP service delivery, optimizing community-based outreach and strengthening the private healthcare sector's role in FP initiatives. Furthermore, community awareness and educational programs should be implemented to engage males in FP and encourage open discussions about reproductive health. Government support for private sector engagement in FP services can lead to improved accessibility, ensuring that both men and women have equitable access to quality FP services.

Limitations of the Study

The findings of the study may not be representative or applicable beyond the specific conditions or circumstances

in which the study was conducted. The reported effectiveness of the intervention by the respondents opens avenues for further explorations in other regions of Pakistan. This implies broader geographical applicability and generalizability of the positive outcomes of the intervention.

Conclusion

We have highlighted the substantial, yet largely untapped potential for the expansion of FP services and increasing the access to quality healthcare services. In Pakistan, the predominant focus on curative care within medical education and health service provision has resulted in limited attention to preventive care, including FP. Consequently, it is imperative to prioritize training in FP methods and counseling to enhance the participation of family physicians in delivering FP services. Physicians trained through the project exhibited a strong motivation to incorporate family planning into their routine practice.

They found IEC materials on FP to be instrumental in raising awareness and interest among their clients. The interviewed physicians emphasized the crucial role of coordination among stakeholders and advocated for increased government involvement to further expand FP services. By focusing on male physicians' involvement in family planning—traditionally viewed as a women's domain—the study addresses how gender roles and biases influence healthcare delivery. It explores the impact of interventions aimed at engaging male physicians, thereby challenging gender norms and promoting a more inclusive approach to family planning services. This contributes to reducing gender inequalities by encouraging male participation in areas typically associated with female healthcare.

Conflict of Interest: None

Author Contributions: JJ: Conceptualization, Thematic Content Analysis, Identification of Key Themes and Patterns, Manuscript Writing, and Final Review; RS: Data Visualization, Manuscript Editing, and Review; MHL: Data Collection, Initial Coding, and Contribution to Thematic Analysis.

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Addressing Gender Disparities in Adolescent Sexual and Reproductive Health: A Scoping Review of Life Skills-Based Education in Pakistan

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Abstract

Objective: Adolescents in Pakistan face significant health risks due to factors such as sexual violence, forced marriages, and limited access to reproductive health education. Life Skills-Based Education (LSBE) and Comprehensive Sexuality Education (CSE) have been explored as strategies to enhance awareness and improve reproductive health outcomes. This scoping review examines existing research on LSBE programs in Pakistan, with a focus on gender disparities in their implementation and impact.

Methodology: A systematic search was conducted across PubMed, Medline, Google Scholar, Web of Science, PakMediNet, and Popline for randomized, quasi-randomized trials, and evaluation studies on LSBE programs published in the past two decades. Studies included were those conducted in schools or communities to improve adolescents' life skills and reproductive health knowledge. Two independent reviewers assessed the papers to minimize bias. Given the limited availability of peer-reviewed studies (only three articles), relevant non-peer-reviewed literature was also incorporated into the final analysis.

Results: Six studies met the inclusion criteria, consisting of research articles and NGO reports evaluating LSBE programs. These programs were associated with increased confidence, higher school attendance—especially among girls—and improved awareness of reproductive health rights. However, most interventions primarily targeted female adolescents, with limited focus on addressing the needs of boys, highlighting a gender disparity in program outreach.

Conclusion: While LSBE programs in Pakistan have demonstrated positive effects, the existing data is insufficient to conclusively determine their effectiveness in improving adolescent health outcomes. More rigorous research, including controlled experimental studies with reliable assessment tools, is needed to evaluate the impact of LSBE and CSE. Additionally, addressing the gender imbalance in program implementation is crucial to ensure equitable access to reproductive health education for all adolescents.

Keywords: Adolescent Reproductive Health, Comprehensive Sexuality Education, Family Life Education, Gender Disparities, Life Skills-Based

Introduction

The generation of teenagers aged 10 to 19 living in the world now is the largest in human history. The highest number of

youth (aged 15 to 24) will be attained in the year 2035, making up a large proportion of population in Pakistan.¹ Adolescence is an age characterized not only by physical, psychological and mental changes but also with the desire to experiment and undertake risks. These attributes coupled with the absence of reliable sources of information and guidance about sex education or health education can expose teenagers into drugs, HIV/AIDS, trafficking, abuse etc. At the same time, parents may be ill-prepared to deal with such issues as these activities are often done in secrecy or there might be a communication gap between the parents and children. This renders the parents unprepared to foresee or prevent the adolescents from such risky behavior.^{1,2}

Therefore, during this transition phase young people must be equipped with the proper education, skills, decision-making power, and information to understand their emotional and physical changes to function as responsible adults in society.^{1,3} Adolescent's education and protecting their sexual and reproductive health and rights has been globally recognized as central to implementation of the 2030 Agenda for Sustainable Development. The ability of societies to harness the dividends of demographic transition will be largely dependent on their engagement with adolescent's wellbeing.⁴

Unfortunately, the promotion and fulfillment of sexual and reproductive health rights are currently experiencing marked resistance around the world.⁵

In Pakistan due to very strict and deeply felt societal and religious norms girls and boys are often denied access to information about their bodies and health risks. Mothers are often uneducated and shy away from discussing such information. Children grow up getting information from friends and media.⁶ This right of children to get the right information about themselves remains unrealized, making them even more vulnerable to abuse and exploitation. Poverty and marginalization further increase their vulnerability by driving them into the labor market.⁷ This is how

risky behavior takes roots appearing as early sexual debut, watching pornographic materials, homosexuality, non-marital sex (29% urban males in Pakistan) and female sex trade.⁸ Gender norms and inequalities significantly influence access to sexual and reproductive health information and services in Pakistan. Girls, in particular, face severe disadvantages due to societal expectations and restrictions that limit their mobility, education, and access to health services.⁹ These restrictions often result in a lack of comprehensive sexual education for girls, making them more vulnerable to early marriages, sexual abuse, and reproductive health issues. Boys, on the other hand, might encounter different challenges such as peer pressure to adopt hyper-masculine behaviors and misinformation regarding sexual health.¹⁰ Addressing these gender-specific barriers is crucial for effective adolescent sexual and reproductive health interventions.

Many female sex workers report a history of sexual abuse in their childhood and it's an increasingly alarming situation that, between 2013-18 in Pakistan, 17,862 children reported of being sexually abused.^{11,12} A report in 2014 found that nearly 70,000 cases of violence against children were reported in one year though the number of unreported incidents were estimated to be higher.¹³

Life skills-based education (LSBE), is an evidence-based intervention that, reduces gender inequalities, builds the ability to negotiate, communicate and ensure safety from sexual harassment, STIs and AIDS, thus creating an enabling environment that supports youth's reproductive health and rights.¹⁴⁻¹⁷ It is delivered mostly "informally" in Pakistani education sector as "in-school extra-curricular" activities,² offered with limited coverage by non-government organizations such as Aahung, Rutgers World Population Federation (WPF), Plan International, Rozan, Oxfam-Novib and Rahnuma FPAP, etc. It is seen as a donor driver agenda and not given priority in political settings.¹⁵ A situation assessment survey was carried out for Life Skills Based Education (LSBE) which is the education regarding life skills including emotional regulation, decision making, communication, and healthy relationships, which revealed that most Pakistani youngsters face difficulty in coping with emotions/ stress, communicating and decision making.⁷ One third youngsters fear discussing sexual matters with anyone.¹⁶ Owing to these weaknesses, our children have become open victims for their predators who are brutally exploiting them sexually.¹⁷

LSBE is now being advocated for achieving goals of many international agreements in Pakistan. The National Education Policy, Punjab Youth Policy are also now incorporating life skills-based education. Yet for millions of young people in Pakistan, access to sexual and reproductive health information and treatment continues to be a significant barrier. To identify vulnerabilities and hazards to create program frameworks, a solid evidence base is needed.²

World Health Organization WHO has called upon all countries to play a role in this effort and has given recommendations in a recent document to guide about what research is needed in this field. Policymakers urgently need such evidence to justify policies and governments need evidence to make decisions on where to spend limited resources.¹⁸ This document presents an overview of available evidence on evaluation of life skills education efforts in Pakistani community. Adolescent sexual

and reproductive health issues are being prioritized globally, with LSBE widely studied for its role in improving adolescent health outcomes. Research from various countries has shown LSBE to be an effective tool for enhancing both mental and reproductive health among adolescents. However, in Pakistan, life skills education remains an under-researched area despite its growing necessity. This paper explores the need for LSBE in Pakistan, identifies the challenges in its implementation, highlights gaps in research methodologies found in existing studies, and insufficient representation of diverse adolescent populations. By addressing these gaps, the findings aim to inform policymakers with evidence-based recommendations for designing more impactful programs to enhance adolescent health and well-being.

Methodology

A scoping review was carried out to assess the literature gap and identifying scope of literature available on effectiveness of LSBE in Pakistan, published between 2013-2022. Arksey and O'Malley approach was used by incorporating five elements of 1) identifying research question 2) searching relevant studies 3) study selection 4) charting of data and 5) collating data.

Identifying the Research Question

In consensus with the research team, the following research questions were formulated: (i) What studies have been published evaluating the effectiveness of adolescent health education programs focused on life skills building or comprehensive sexuality education, aimed at improving reproductive health and behaviors of adolescents in Pakistan? (ii) Is there any gender gap in the interventions being utilized? (iii) What study designs have been employed for such interventions? (iv) What effects have been consistently reported for life skills-based education or comprehensive sexuality education in Pakistan?

Search Strategy

The search strategy included date restrictions (from 2005 to 2020), age restrictions (10-24 years) and "Adolescent" OR "adolescents" OR "teen" OR "teens" OR "teenager" OR "teenagers" OR "teenaged" OR "juvenile" OR "preteen" OR "pre-teen" OR "minor" OR "minors" OR "youth" OR "youths" OR "young people" OR "young person" OR "young persons" OR "young adult" OR "young adults" AND "Life Skills Based Education" OR "Family Life Education" OR "Adolescent Reproductive Health" OR "Comprehensive Sexuality Education" OR "Generic Life Skills" OR "LSBE" OR "CSE" OR "HIV prevention" OR "Adolescent Sexual Reproductive Health" OR "Adolescent SRH Services" AND Pakistan. The search strategy for the review was to use for the target population a search string which included variations of terms "adolescents", "young people" or "teenagers". The target intervention was defined by variations of "Sexuality Education" being introduced in Pakistan.

Charting the data

Data abstraction form was developed which included program title, population, intervention objective and design, type of intervention and outcomes of the studies included. Two researchers carefully reviewed the articles and extracted data. Methodology appraisal was not done as scoping review aims to find scope and gap of literature and suggest topics for future

Collating, summarizing and reporting results

Data was collated and summarized to assess effectiveness of life skills or comprehensive sexuality education in improving life behaviors and reproductive health in youth. In our review process, special attention was given to analyzing gender-specific outcomes and interventions. Studies were assessed to determine if they addressed the unique needs of boys and girls and whether the outcomes were disaggregated by gender.²⁰ This approach ensures a comprehensive understanding of how LSBE programs impact different genders and highlights any disparities in the effectiveness of these interventions. PRISMA guidelines were utilized for reporting as applicable in scoping review.

Results

The search strategy yielded a total of 194 search results from PubMed, Medline, PakMediNet, Google scholar and PopLine during May to July 2022. Except for one study, none of the publications reported a completed randomized controlled trial assessing effect of LSBE, with a control/alternate intervention within the context of Pakistan. Since

many organizations working in SRHR are not working solely for academic purposes, many of their research initiatives are not published by the most popular search engines. Hence, to circumvent publication bias, we included non-peer-reviewed and non-published grey literature. It has been documented that the use of such grey literature obtained from citations and snowballing can lead to an efficient review of the existing evidence base. Screening of the retrieved search results was done manually by going through the titles and the abstracts by two investigators independently. Considering the inclusion and exclusion criteria, 13 full papers were reviewed by two researchers before being included in the review. Only 3 papers from non-peer reviewed literature were included in the review process and 3 were peer reviewed papers.

The authors decided upon specific criteria for exclusion of the studies that were obtained from the respective search engines. The articles were supposed to be published no earlier than 2005. The study population was restricted from 10-24 years of age. Also, since the review was focused on Pakistan, the study must be on the Pakistani population. First the titles, then the abstracts and finally the whole article was reviewed for the theme of the research.

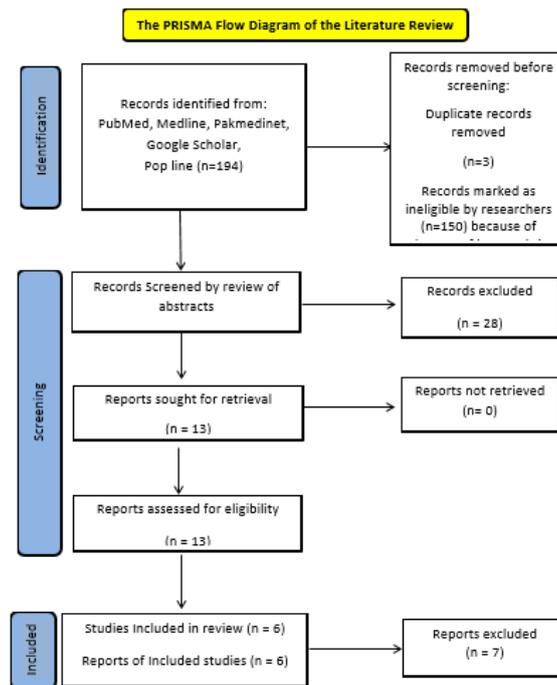


Figure 1: PRISMA Flowchart for literature review

In reviewing the studies, we found varying gender-specific outcomes. The analysis revealed that most LSBE programs in Pakistan predominantly target female adolescents. For instance, initiatives like COMPASS by IRC and projects by Aahung and Rutgers WPF focus on improving reproductive health and preventing gender-based violence among girls. Only about 30% of the reviewed programs included boys, often with a broader scope rather than tailored to their needs. Girls reported higher increases in self-confidence and knowledge about reproductive health, with the COMPASS program showing a rise in girls feeling safer in school from 86.7% to 96.6%. In contrast, boys' programs reported improvements in communication and negotiation skills, such as the LSBE project by World Population Foundation, where boys' ability to protect themselves from risky situations increased from 44% to 54%. These findings

underscore the need for more gender-sensitive LSBE programs to ensure equitable outcomes for both boys and girls.

The analysis showed that more literature was published in the last 10 years (6 out of 6 papers) and 3 out of them were published in the review focused on different aspects of adolescent health education on reproductive and sexual health matters, improving mental health and guidance on general matters related to health. Majority included focus on multiple areas of their health.

Pre-post design was the most used method for evaluation of LSBE interventions. Only one RCT for life skill education research was registered in Pakistan with WHO registry of clinical trials and was started in 2018.

Table 1: Summary of Projects for LSBE implementation in Pakistan

Category	Project title	Study methods	Effects of LSBE
	“Effect of Micronutrients and Life Skills Education on the Health and Nutrition of Adolescent and Young Women in Pakistan.” Location: Karachi	Randomized Controlled Trial Focus of education was on life skills throughout the preconception period.	Results of trial not published yet.
	Creating Opportunities through Mentoring, Parental involvement And Safe Spaces (COMPASS) – by IRC in humanitarian situations Location: Peshawar	Pre-post-test quantitative assessment of a project Focus on reproductive health rights, preventing harassment and violence.	Girls feeling safer in school rose to 96.6%. Self-esteem increased (30→34), hope scale (3.67→4). Knowledge of violence services improved (22%-30.9%). Job interest grew by 26%, but LSBE discussions with parents remained unchanged .
Peer Reviewed	Access, Services and Knowledge (ASK) by Sukh Initiative (Aman healthcare services, 2018) Geographic Outreach: Squatter settlements in Karachi	Pre-post quantitative assessment. Focused on life skills in students and family life education to adults for SRH awareness	It successfully engaged youth by providing LSBE to school students and SRH knowledge including family planning methods to adults and in community through Community Health Workers providing family life education.
	Life Skills Based Education 2006 -2010 project by World Population Foundation (WPF), Pakistan Geographic location: Multiple cities in Pakistan	Pre-post assessment using mixed method design of a project Focus on basic health and hygiene, SRH, gender roles and life skills.	Improvements were seen in family opinions (16%), communication (13-14%), decision-making (15%), peer pressure (22%), and anger management (14%). Self-protection increased in boys (44% to 54%) and girls (22% to 32%). Gender equality and harassment reporting also increased. Teachers reported positive behavioral changes.
	Aahung-United Nations Girls’ Education Initiative, UNGEI (2016) Geographic location: Karachi based, expanded to other cities	Pre-post assessment with mixed method design. Focused on SRH issues, rights, life skills, and hygiene	Parents of female students noticed that they have become confident in making their own decisions.
Non-peer reviewed reports of NGOs program	Hamara Kal Rutgers WPF (2009-2012) in Pakistan funded by European Union Pakistan funded by European Union Geographic location: Multan, Matiari and Karachi	Pre-post quantitative assessment of a project Focused on SRH rights education Focused on SRH rights education	36% of adolescents showed improved SRH knowledge, 52% had attitudinal gains, and 12% improved practices. 92% found the LSBE program beneficial, with 97% reporting increased self-belief and 91% feeling confident discussing SRH. Teachers noted improved academic performance due to reduced stress.

Discussion

Life skills-based education (LSBE) programs in Pakistan have shown positive effects on adolescents’ confidence, school attendance—particularly among girls—and awareness of reproductive health rights. However, the available evidence is limited, with most studies being NGO reports rather than rigorous experimental research. A notable gender disparity exists, as these programs primarily target female adolescents, with fewer initiatives addressing the needs of boys. To ensure equitable access and accurately assess LSBE’s impact on adolescent sexual and reproductive health, more robust, gender-inclusive studies using reliable evaluation tools are needed.

The dearth of studies on LSBE in Pakistan is evident from the small number that we found in our review (Figure-1). Out of the six relevant studies, only one was an RCT published in the last two decades, and only two studies employed qualitative research tools to explore ‘why’ and ‘how’ of LSBE effects, also

indicating the lack of robust methodology being used to generate evidence for such interventions.

The RCT done in Karachi aimed to provide 15–24-year-old adolescents with life skills education and micronutrient supplementation throughout the preconception period for assessing impact on prevalence of low birth weight (LBW) births, nutritional status of mothers, age at marriage, completion of 10th grade education and menstrual hygiene, use of sanitary pad during last menstrual period, and dietary intake.²² Another study was conducted in the Northwestern areas of Pakistan, focusing on reproductive health rights (COMPASS program, Creating Opportunities through Mentoring, Parental involvement And Safe Space) by International Rescue Committee in humanitarian. It provided life skills education and mentorship by peers, to girls 12-19 years old on topics related to female reproductive health, social assets, services for protecting victims of violence for reducing the effects of gender-based violence among adolescent girls (Table 1).²³

A similar but limited program was the ASK run by Sukh Initiative (Aman healthcare services) which imparted life skills education to 12–15-year age secondary school students.²⁴ Study done by World Population Fund (WPF 2006-10) provided LSBE education for students of class 7th to 10th with sessions on different issues surrounding basic health and hygiene, adolescents' sexuality, communicable diseases like HIV & AIDS, gender roles and communication and negotiation skills.²⁵

Another intervention introduced by UNESCO and Aahung collaboration - focused on adolescent reproductive health and rights. This program focused on improving the communication between teachers and adolescents by training of teachers in LSBE subjects and involving parents in advance by taking permission before imparting this information to their children.²⁶ Hamara Kal (2009-12)–project focused on improving sexual and reproductive health by educating about SRH rights, bodily changes during puberty, STIs, and distinguishing between good and bad touch and skills to protect oneself.²⁷

Other reviews also indicate that LSBE studies have been less frequently done in developing country contexts as compared to developed countries.²⁸ More high-quality, randomized-controlled evaluations of CSE programs are needed to test multi-component programs and to study curriculum design and teacher effectiveness, as recommended by WHO.¹⁷ Also use of qualitative evidence syntheses is needed in decision making regarding interventions as it helps assess if people view them as acceptable, ethical, accessible, feasible and cost-effective.^{29,30}

The analysis revealed significant gender disparities in the implementation and outcomes of LSBE programs. These disparities highlight the need for gender-sensitive interventions that cater to the specific needs of boys and girls.³¹ The lack of gender-disaggregated data in many studies hampers the ability to fully understand and address these differences. Future research should prioritize collecting and analyzing gender-specific data to develop more effective LSBE programs. Additionally, understanding how cultural norms and societal expectations influence the experiences of boys and girls can help create more inclusive and impactful interventions.³²

All NGO projects studied were 4-5 year long and the trial registered in Pakistan was set to measure outcomes in a time frame of 2 years²⁰ which is longer as compared to many internationally conducted trials where outcomes were measured mostly at one year post intervention.²⁰ There have been limited rigorous studies in other regions also, assessing outcomes such as reducing gender-based and intimate partner violence and discrimination; increasing gender equitable norms, and building stronger and healthier relationships¹⁷

Most LSBE programs in Pakistan were centered around communication skills and emotional health. Reviews by other countries suggest that LSBE program content reflects the countries' priorities and areas of concern. Programs in developed countries have more focus on promoting positive behaviors around risky and thrill-seeking behavior, safe sex, contraception, and condom use.^{33,34} Whereas, programs in developing countries often emphasize the development of cognitive and communication skills, protecting from harassment and changing attitudes towards sexual activities.³⁵
³⁶

In Pakistan, foreign-funded projects have been linked with negative notions of undermining local culture and values. However, the results presented in our review favored the use of LSBE in Pakistani setting. It was deemed as a beneficial program by 92% students in program “Hamara kal” in Sindh. Success factors recounted in these studies include following the World Health Organization (WHO) key guidelines for LSBE, and an age-appropriate, relevant curriculum, advocacy activities, parent sensitization sessions, and partnerships with organizations, teachers' training and developing an enabling environment for ASRH.³⁰

Life skills programs including Aahung, WPF (2006-10) project and Hamara kal (2009-12), all faced media backlashes, which was dealt by Rutgers WPF and its partner organizations by engaging all the major stakeholders with the program by sharing information on outcomes. They reached parents, religious leaders and out of school students. The results of Rutgers program showed that some girls were even able to convince their parents to allow them to continue education, postpone marriage and end abuse. The project also realized the need to focus on local language (Sindhi, Urdu) and cooperated with Sindh government (bureau of curriculum) to introduce age- and culturally appropriate LSBE messages in the curriculum of schools on provincial level, and trained teachers in guiding students and teaching of LSBE topics.¹⁴⁻³⁰

The interest in LSBE is growing worldwide to achieve SDGs and health for all but the main challenge in Pakistan is building the needed government and societal interest. In January 2018, the Sindh government approved life skills education with efforts of organizations such as WPF and in the wake of rising child sex abuse, to be integrated into the syllabus of grade 6-9 students.³⁸ In this regard, organizations like Aahung have a role in focusing efforts not just on including LSBE for youngsters, but also on gaining commitments from decision-makers such as the Board of Curriculum, the Sindh Education Department, the Private School Association, and Sindh Education Foundation (SEF).¹⁴ It is encouraging that LSBE previously termed a taboo and anti-religious subject, is now being mainstreamed through provincial and national platforms. However, more efforts are needed in the province of Punjab which faces resistance due to conservative societal norms to institutionalize LSBE in the right direction.^{13, 33}

Limitations

This review has some major limitations, which includes analysis and inclusion of non-peer reviewed articles, which might challenge the credibility of results of the studies included. Moreover, most programs in our review had studied self-reported behavior change, the reliability of which is questionable. One study (COMPASS) also used Rosenberg Self-Esteem Scale and Children's Hope Scale. Some other tools can help in this regard to validate the findings such as “The Problem Oriented Screening Instrument for Teenagers” (POSIT) used in Canada to measure ten dependent variables (problems related to substance use, health, mental health, family relations, peer relations, education status, vocational status, social skills, leisure and recreation, and aggression). Future researchers in Pakistan should focus on assessment using validated tools for different LSBE outcomes. Another limitation observed is lack of adequate local studies in this context.

Conclusion

There is a glaring lack of strong evidence on LSBE in Pakistani community. No rigorous clinical trials data is yet available for Pakistan comparing the short-term outcomes or long-term impacts of LSBE on the social, cognitive or sexual behavior of adolescents in comparison with controls as recommended by World Health Organization (WHO). Literature supporting LSBE could be found only in the form of evaluation summaries of some projects, with self-reported changes in behavior, the reliability of which can be questioned. Trials on LSBE impact are needed in Pakistani population to support the ongoing efforts for institutionalizing LSBE in Pakistan. The findings highlight the importance of designing interventions that are sensitive to the specific needs of boys and girls. Gender-sensitive approaches can enhance the effectiveness of LSBE programs and ensure that both genders benefit equally from sexual and reproductive health education. Future research should focus on generating robust, gender-disaggregated data and developing interventions that address the unique challenges faced by adolescents in Pakistan. Such efforts will contribute to development of well-designed interventions aimed at achieving more equitable and effective health outcomes for all adolescents.

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Bridging the Gap: Strengthening Mental Health Support for Female Health Professionals in Pakistan and Türkiye

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Abstract

Being a part of a demanding and high-pressure field like Medicine, healthcare workers are bound to face mental health challenges. These challenges are particularly pronounced among female healthcare providers, likely due to gender-based inequalities within the system. This paper addresses the mental health challenges faced by female physicians in Turkey and Pakistan, highlighting the impact of gender-based inequalities in the healthcare system. It proposes a framework aimed at improving mental health support for female healthcare workers, emphasizing the need for equitable access to mental health services and the implementation of workplace policies that promote peer support groups. By addressing these concerns, the paper aims to enhance the professional and personal well-being of female healthcare providers, ultimately contributing to improved healthcare delivery.

Introduction

This communication focuses on the mental health challenges faced by female healthcare workers in Pakistan and Turkey, two countries with similar social, religious, and socioeconomic contexts.¹ Gender-specific expectations and structural obstacles haunt the health professional workforce even today, causing mental health issues to arise more frequently for female healthcare professionals.² Stress created due to long work hours and burnout continue to take a greater toll on women, as these are amalgamated with societal expectations of being the primary caregiver at home.² This situation is even more acute in Pakistan and Turkey, where systemic barriers, cultural norms and gendered expectations all exacerbate the above-mentioned scenario, hence causing a pervasive sense of burnout.^{2,3}

Key Challenges in Turkiye and Pakistan

Female health professionals in both countries face comparable issues regarding mental health and gender disparities. They encounter workplace, cultural, and societal challenges, which we will discuss further. (Table 1)

Harassment and Burnout

One of the most significant challenges in

health care setups remains to be harassment. In Pakistan, a substantial number of the female healthcare work force, in particular surgical trainees, report such mistreatment like verbal abuse, discrimination, and sexual harassment.³ Over half of the female surgical trainees in Pakistan (54.4%) have faced harassment during their training, with 46.9% reporting severe depression thereafter.⁵ Not only has this situation led to a stereotyping of surgery as a “Mens Only” field, but it has also led to a decreased number of female applicants for surgical training, giving a massive blow to a major and very important component of the healthcare force.⁶

In Turkey, we see a similar landscape, where harassment is coupled with gender-based violence and objectification.⁷ A study by Karacam et al. highlighted that Turkish female healthcare workers face both psychological and physical violence, often feeling reduced to their gender rather than recognized for their professional roles.⁸ These experiences create further inequity and lead to a sense of incompetence.² Burnout not only affects individual workers but also compromises the quality of patient care and leads to higher turnover rates. Symptoms among female workers include chronic fatigue, detachment from work, and decreased job satisfaction. These are all increased due to the pressures of juggling domestic and professional responsibilities. The so called elusive “work-life” balance.⁹

Lack of Mental Health Facilities and Stigma

Accessibility to mental health facilities is scarce for female healthcare workers in both Pakistan and Türkiye, largely owing to cultural stigma and systemic neglect.¹⁰ In Pakistan, resources for mental health are sparse, and those that exist do not cater to the needs of health professionals and specifically women. Onsite counselling services cater to only meagre 10% of health care institutions in the country and even fewer provide services especially addressing the unique stressors faced by female employees.¹¹

In contrast, mental health services are more abundantly available in Turkiye, however health care workers face difficulty to access

Table 1: Key Challenges and Mental Health Impacts on Female Healthcare Workers in Turkiye and Pakistan

Challenge	Description	Country	Impacts on Mental Health	References
Harassment	High rates of verbal abuse, discrimination, and sexual harassment in workplaces, with limited reporting due to fear of retaliation.	Pakistan	Severe depression in 46.9% of affected workers, contributing to burnout.	Martins et al. ⁴
	Psychological and physical violence, gender-based objectification, and reduced to caregiving roles over professional identity.	Turkiye	Feelings of incompetence, anxiety, Karaçam et al. ³ and job dissatisfaction.	
Burnout	Chronic stress from professional demands coupled with limited support and systemic issues, including inadequate institutional response to harassment.	Both	Chronic fatigue, emotional exhaustion, decreased patient care quality.	Turk et al. ² , Martins et al. ⁴
Lack of Mental Health Facilities	Insufficient access to mental health resources, compounded by stigma around mental health, preventing healthcare workers from seeking help.	Pakistan	Unaddressed mental health issues, reluctance to seek help, increased stress.	Iqbal et al. ⁵
	Services exist but are not readily accessible due to long hours, cultural stigma, and perception of incompetence if seeking help.	Turkiye	Increased anxiety, social isolation, untreated mental health symptoms.	Kose et al. ³
Work-Family Spillover	Conflict between professional responsibilities and traditional domestic roles, particularly caregiving duties, with inadequate institutional flexibility.	Both	Chronic stress, decreased job satisfaction, reduced personal well-being.	Turk et al. ² , Iqbal et al. ⁵
Societal Expectations	Patriarchal norms dictating that women prioritize family over career, leading to high attrition rates among female healthcare professionals.	Pakistan	Reduced professional representation, low job satisfaction, mental strain.	Iqbal et al. ⁵
	Cultural biases that undervalue women's professional contributions and limit their advancement opportunities.	Turkiye	Feelings of marginalization, disempowerment, and job dissatisfaction.	Karaçam et al. ⁸

them because of the prevailing stigma around mental health related matters and also because of the nature of work in the medical field i.e. long working hours, less holidays etc.¹² In both countries seeking mental health is also often viewed as an inability to keep up with workplace demands, as a weakness or a mark of incompetence, hence further discouraging most people from seeking the required help.^{4,7} This is more pronounced for women, as societal expectations to “suffer in silence” prevail in both cultural setups.

Work-Family Spillover

Juggling both professional and personal responsibilities may cause the pressures of one side to overflow into other and cause a profound impact on the health and well being of a person. In Turkey, approximately 70% of female healthcare workers report work-family conflicts, often due to long hours and the demands of caregiving roles at home such as caring for children or elderly relatives.⁸

The issue is similar in Pakistan where despite women making

up approximately 65% of medical graduates in the country, many leave the workforce due to an inability to reconcile these conflicting demands.¹⁰ This dual burden contributes to high levels of stress and limits the ability of female healthcare workers to engage in self-care or seek professional development opportunities, further affecting their mental health and job satisfaction.¹¹

“QUAD-A” Mental Health Support Model for Female Healthcare Workers

Based on our literature search, the contextual needs of our region and existing interventions for mental health and burnout mediation, we compiled interventions and best possible solutions into a framework. Our proposed model is designed to support and empower mental health for women workers, and addresses the unique challenges faced in the context of Pakistan and Turkiye. This model serves to promote resilience, reduce stereotyping and stigma and foster supportive environments at work through four core concepts: awareness, accessibility, advocacy and allyship, hence named “QUAD-A”. (Table-2)

Table 2: QUAD-A Framework for Supporting Mental Health Among Female Healthcare Workers

Support Area	Objective	Strategies
Awareness	Reduce stigma, increase mental health literacy, and offer coping skills	-Conduct workshops on resilience and stress management. - Integrate gender-sensitive mental health training.
Accessibility	Provide convenient access to mental health support resources	- Establish on-site counseling and telemedicine for remote support. -Develop peer support networks.
Advocacy	Establish policies for a safer, more inclusive workplace	-Implement strict anti-harassment policies. -Advocate for flexible work arrangements and maternity leave.
Allyship	Empower women through shared experiences and professional guidance	-Develop mentorship programs pairing junior staff with experienced female leaders. -Foster peer networks.

Awareness

The first and foremost step is to increase literacy related to mental health issues and equip all healthcare workers with gender-specific coping mechanisms. The key to do this is by figuring out what’s causing the feeling and how to handle, which often involves meetings where staff talk about their feelings, learn how to manage stress, and find ways to fix the problem. This needs to be dealt at the level of trainees and faculty. Integration of gender sensitive mental health training into medical curricula can create greater insight into understanding how cultural norms and contextual challenges contribute to mental health problems.¹² For faculty, regular workshops on resilience and stress management can provide pivotal points to navigate workplace challenges.

Accessibility

Establishment of support networks to help women are imperative. These must be designed in a way to cater to busy work lives while also catering to privacy and confidentiality. Proper counselling cells with experienced staff should be present at all healthcare facilities. Telemedicine options should be available for those who are not able to attend face to face sessions. Additionally, establishment of peer support networks, their patronage and encouragement are all very valuable. These networks may be organized by speciality or department with the purpose to give a protected space to vent out, develop coping mechanisms for stress and burnout management. Perception that the leadership is supportive reduces work related exhaustion. For example, how employees see their local leaders affects how they feel at work. If leadership ratings go up by just 1 point, the chances of employees feeling burned out decrease by 3.3%. Health care workers involved in medical errors had significantly higher levels of burnout, but this was mitigated when they received support from their seniors, instead of punitive actions.¹³

Advocacy

To truly create a safer and more supportive workplace for women in healthcare, we must first establish strong anti-harassment policies with clear, accessible procedures for reporting and addressing incidents. Alongside this, it’s essential to offer flexible work arrangements—whether its part-time hours, job sharing, or extended maternity leave—to allow women to manage the demands of both their careers and personal lives. By prioritizing these steps, healthcare organizations can foster an environment where women not only feel protected from discrimination but also empowered to thrive. A sense of community and the ability to maintain a healthy work-life balance will ultimately benefit both the individual and the system.

Allyship

Empowering the female healthcare worker demands a great deal of allyship and equity. It is imperative to create events and safe spaces where women can discuss, share and contribute to their stories and strengthen each other. Women must be represented at workshops, panel discussions (to escape the dreaded “Manel”)¹¹ and all scholarly events, cultivating a societal acceptance. Creation of societies and organizations that can rally for this cause can also be a great initiative. Senior female healthcare workers can establish mentoring networks to help the rest navigate through the tumultuous channels of work-life balance and mental health pressures.

Conclusion

The “QUAD-A” framework—comprising Awareness, Accessibility, Advocacy, and Allyship—offers a targeted, adaptable approach to addressing the mental health challenges faced by female healthcare workers in Pakistan and Türkiye. By systematically tackling issues such as workplace harassment, burnout, lack of mental health resources, and work-family spillover, the framework provides a comprehensive strategy to foster resilience and well-being. The model’s strength lies in its adaptability, allowing it to be implemented across diverse healthcare settings beyond Pakistan and Türkiye, ensuring that female healthcare professionals worldwide can benefit from its structured support system. Healthcare institutions can leverage the “QUAD-A” framework to develop policies and interventions that not only promote mental health but also contribute to a more equitable and inclusive work environment. By adopting this approach, organizations can create sustainable change, improving both workforce retention and the quality of patient care.

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