

Perception of Medical Students Regarding Gender Discrimination in Their Learning Environment

Mahnor Jathol,¹ Irem Rasheed,² Ameelia Sadaqat,³ Amal Rana,⁴ Rameen Arshad⁵, Waleed Ahmad⁶, Sadaf Saddiq⁷

Abstract

Objective: To evaluate perception of gender discrimination among students in medical colleges.

Methods and Materials: A descriptive study was conducted among 316 students in one public and one private medical college of Lahore from December 2023 to March 2024 through a self-administered questionnaire. Associations were determined between background variables and gender discrimination responses using chi-square test of independence with p-value <0.05. SPSS version 22 was used for data analysis.

Results: In our study female students voiced higher rates of dissatisfaction with their medical college experiencing unequal treatment in both lectures (p = 0.001) and in wards (p = 0.007). Female students perceived that there is disadvantage associated with having a child during education (p = 0.038) and expressed greater concerns about parenting during medical studies (p = 0.038). They reported getting lesser opportunities for advancement like applying for doctoral thesis as compared to male students. Both genders felt that females are given preferences in getting scholarships.

Conclusion: Gender disparities persist in medical college experiences, with female students reporting higher dissatisfaction, fewer opportunities, and unequal treatment. Initiatives are needed to address these disparities and promote gender equality in medical education.

Keywords: Gender discrimination, Gender inequality, Gender disparity.

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Introduction

Discrimination based on gender is a common civil rights violation that has many forms. Achieving gender equality is the number 5 goal of the United Nations' 17 sustainable development goals to be fulfilled by year 2030.¹

Gender disparities continue to exist in various societies around the world and medical field is no exception. It

is crucial to understand how individuals perceive and react to them, especially young people. Research has shown that gender-based abuse, denigration, and disrespectful attitude have a detrimental effect on students' and junior professionals' overall satisfaction with the educational experience and thus create an impact on their future careers. Mistreatment has been shown to have negative effects on learners, including post-traumatic stress disorder, depression, low self-esteem, burn-out, and decisions on what specialty to pursue.²⁻⁴

Furthermore, even seeing the mistreatment of other pupils has a negative effect. Medical students report a greater prevalence of gender discrimination and sexual harassment compared to other students and academic staff. Men still hold greater positions of decision-making authority at medical institutions, despite the fact that women make up the majority of medical students.⁵

Dependence on supervisors among students is a known

1-5. Department of Obstetrics & Gynaecology, Lahore Medical & Dental College/Ghurki Trust Teaching Hospital, Lahore.

6. Lahore Medical & Dental College/ Ghurki Trust Teaching Hospital, Lahore.

7. Ghurki Trust Teaching Hospital, Lahore.

Correspondence:

Dr. Ameelia Sadaqat, Associate Professor, Department of Obstetrics & Gynaecology, Lahore Medical & Dental College/Ghurki Trust Teaching Hospital, Lahore. E-mail: ameeliasadaqat7@gmail.com

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risk factor for gender discrimination and sexual harassment and makes students more susceptible to abuse at medical schools. Both sexes are impacted by these factors, but women in particular. One pathway for enhancing chances of resolution and preventing recurrences is to figure out how to increase students' reporting of these instances. A recent systematic review of studies from other countries, the majority of which were conducted in the United States, Canada, Pakistan, and the United Kingdom, revealed that between 49 and 68 percent of all medical students had experienced some form of GD while in medical school, with female students being more affected than their male counterparts. Male students primarily describe such events during their obstetrics and gynaecology training, whereas female students report such encounters across a range of specialties like orthopaedic surgery.^{6,7}

The students painted a picture of a clinical setting where men and women were expected to behave differently and have distinct goals for their families and careers. Although it was supposed that female students would work hard, be conscientious, and be responsible, it was also believed that they would be insecure and put a lot of pressure on themselves. They thought that particular specialties were discouraged because it was frequently assumed that they would be the ones to care for the family and children. Men and women all throughout the world decide to oppose gender inequity and bias. These colleagues and collaborators address a wide range of civil action areas, from food security and sexual rights to economic development, political involvement, and health care. The findings of the study will not only contribute to the existing literature on gender studies but also provide vital insight that can help institutions to improve gender related policies and promote gender equality.

Materials and Methods

Our study was descriptive cross-sectional study which was conducted in one public and one private medical college of Lahore from December 2023 to March 2024. All medical students registered in third, fourth and final year MBBS classes of selected medical colleges. A sample size of 316 students were calculated with convenient sampling technique. A self-designed questionnaire was used and its validity and reliability was determined by a sample run.

After the approval of synopsis, the subjects who gave consent were included in the research. The questionnaire

was composed of two sections. The first section contained background information of medical students and second section contained questions to assess their perception regarding gender discrimination. SPSS version 22 was used for data analysis. Data is presented as tables and graphs. Frequencies and percentages were given for categorical variables. Associations were determined between background variables and gender discrimination responses using chi-square test of independence. P value of less than 0.05 was considered significant. Verbal consent was taken from study participants ensuring confidentiality. IRB\ERC approval was obtained from Lahore medical and dental college before start of study. Permissions from other institutions were also taken. Confidentiality and anonymity was not breached at any stage. Moreover names of institutions are not to be mentioned.

Results

The study delved into the demography of medical students concerning gender discrimination in the learning environment, revealing a balanced distribution between male (47.5%) and female (52.5%) participants. These students, with an average age of 21.50 years and predominantly from urban backgrounds (88.3%), represented various stages of their medical education, with the majority in their 3rd (47.5%), 4th and 5th (34.2%) year. While approximately half of the participants were day scholars (51.3%), the rest resided on campus. Eighty eight percent students belonged to urban background.

Table 1: Demography Of Medical Students Regarding Gender Discrimination In Learning Environment

Parameters	N	%
Gender		
Male	150	47.5
Female	166	52.5
Age (years)		21.50±1.82 (18-27) years
Class		
2 nd year	1	0.3
3 rd year	150	47.5
4 th year	57	18.0
5 th year	108	34.2
Day Scholar		
Yes	162	51.3
No	154	48.7
Background		
Rural	48	11.7
Urban	361	88.3

In analyzing gender disparities within the medical college experiences, notable differences emerged. Female students voiced higher rates of dissatisfaction with their medical college experience compared to males ($p = 0.034$). However, perceptions of gender equality within the college did not significantly differ between male and female students ($p = 0.670$). Nonetheless, concerning opportunities for advancement, females reported significantly fewer perceived opportunities compared to their male counterparts ($p=0.002$). Similarly, female

students perceived that there is disadvantage associated with having a child during education ($p = 0.038$) and expressed greater concerns about parenting during medical studies ($p=0.038$).

Furthermore, female students reported experiencing unequal treatment in both lectures ($p = 0.001$) and in wards ($p = 0.007$) more frequently than males. Interestingly, while male students perceived experiencing gender-based poor treatment more frequently ($p = 0.003$), they found it significantly easier to apply for doctoral theses compared to females ($p < 0.0001$). Additionally, both male and female students displayed significant differences in being preferred for scholarships ($p < 0.0001$). Both genders felt that females are given preferences.

Table 2: Gender Disparities in Medical College Experiences: A Comparative Analysis

	Gender		p-value
	Male	Female	
Student Satisfaction at Medical College			
Very dissatisfied	19	21	.034
Dissatisfied	27	18	
Neutral	40	62	
Satisfied	38	50	
Very satisfied	26	15	
Gender Equality in Medical College			
Yes	85(26.8%)	98(31%)	.670
No	65(20.5%)	68(21.5%)	
Opportunities for Advancement Based on Gender			
Male	8 (2.5%)	6 (1.8)	.002
Female	76 (24%)	117(37%)	?
Not Sure	27 (8.5%)	24 (7.5%)	
Disadvantages of Having a Child During Education			
Yes	88(27.8%)	92(29.1%)	.038
No	45(14.2%)	26(8.2%)	
Concerns About Parenting During Medical Studies			
Never	88	92	
Rarely	45	26	.038
Observations of Unequal Treatment in lectures			
Never	55(17.4%)	87(27.5%)	.001
Rarely	39(12.3%)	50(15.8%)	
Often	56(17.7%)	19(6%)	
Observations of Unequal Treatment on Wards			
Never	57(18%)	94(29.7%)	.007
Rarely	35(11%)	29(9.1%)	
Often	58(18.3%)	43(13.6%)	
Perception of Gender-Based Poor Treatment			
Yes	53(16.7%)	34(10.7%)	.003
No	97(30.6%)	132(41.7%)	
Ease of Applying for Doctoral Theses by Gender			
Male	74(23.4%)	135(42.7%)	<.0001
Female	76(24%)	31(9.8%)	
Preference in Scholarship Applications			
Male	52(16.4%)	111(35.1%)	<.0001
Female	98(31%)	55(17.4%)	

Discussion

Total no. of students in our study was 316 out of that 52.5% were females and 47.5% were males. Mean age was 21.5 ± 1.82 (18-27 years). In our study 40.7% of medical students were satisfied, 23.4 were dissatisfied as a student in their college while 32.2% were neutral. Out of satisfied students 20.2% were male students and 20.5% were females. In Suez canal university the overall mean score of DREEM was also more positive than negative, with females perceiving the educational environment more positive than males.⁸ A total of 57.8% students believed that there is gender equality in their institute and 42.2% thought otherwise. Out of 57.8% students who perceived their institute's environment to promote gender equality 26.8% were males and 31% were females. While the majority of both male and female students believed their medical college promotes gender equality, the difference is not statistically significant (p -value 0.670). In Brazil a cross-sectional study on gender-discrimination showed females disproportionately affected (77% vs 22% of men).⁹ Presents a stark difference from our study group.

Another study conducted in Pakistani medical colleges, it was found that 30.8% of medical students have even faced gender based violence.¹⁰

In terms of better opportunities for advancement, 24% male students think that females are privileged and 37% females perceived that females are given more opportunities. A study conducted in Jordan showed female medical students were more likely to perceive that their gender ($t(634) = 3.58, p < 0.001$) and people's perception of their gender ($t(634) = 4.25, p < 0.001$) are barriers to

their career advancement.¹¹ Interestingly out of female students 70.4% believe that they have an advantage in terms of career opportunities but when it comes to their male counterparts such level of satisfaction is not seen. Only 5.3% male students think they receive better opportunities based on their gender.

It is a general perception that having a child during career building years is a disadvantage specially to females in underdeveloped country like ours. Majority (56.9%) of our students thought the same. Out of these 27.8% (88) were males and 29.1% (92) were females. Female students felt that having a child gives them disadvantage during medical education with a statistically significant difference (p-value 0.038). A study conducted in Toronto, Canada interviewed 23 females and 11 males, students highlighted that childcare during residency is a substantial source of stress to balance with medical career due to unpredictable schedules and financial burden too.¹² Out of 316 students 75 students thought that there is unequal treatment based on gender in their college lectures, out of these 6% were females and 17.7% were males. While 27.5% of females and 17.4% of males perceived that there is no discrimination with a p-value of 0.001. When it comes to the clinical side/wards 58% males mentioned unequal treatment in wards whereas only 43% females reported unequal behaviour. Out of 316 students 57 male students and 94 female students said they never face any discriminatory behaviour in wards with a p-value 0.007 which is statistically significant. A study in England taking large majority of students contrary to our study reported teaching staff privilege male students by focusing on their clinical teaching and giving direct comments based on stereotypical assumptions of females having families later in life. Female students are labelled as nurses by patients.¹³ Male students are more likely to experience gender-based poor treatment, with a statistically significant difference (p-value 0.003).

According to our study 81.3% of female students think that males get more opportunity for postgraduation/doctoral thesis and 51.7% of male students % males think that females have an advantage over males in this regard. If we consider all students 42.7% females and 23.4% males are of the opinion that males have an edge when it comes to be chosen for doctoral thesis/ research projects and this highly statistically significant (p-value <0.001). In a study of data reveal large gender inequality in obtaining a doctoral degree with a cum laude distinc-

tion with 6.57% of all PhD male students compared to 3.68% of all female PhD students.¹⁴

In our study 35.1% females had the perception that males are preferred when it comes to awarding scholarships and 16.4% males think the same (p-value <0.0001). Out of females with 66.8% females thought males are preferred while nominating for scholarships and interestingly 65% of male students think that females are preferred over male students. In comparison A study of Leiden university showed that the number of male students applying for scholarships is more as well as the number of male students finally receiving the grant is also higher. among students applied for LISF student grant has 2 findings i-e males apply more than females, second it was investigated whether the success rate of receiving a LISF grant differed between male and female applicants, by performing a binomial GLMM with gender ASA fixed factor and the decision as dependent variable, with year added as a random factor (Sd=0.501). As expected, the likelihood of receiving a grant was somewhat higher for male applicants than for female applicants (b Gender = -0.176, z = -1.96, p = 0.049).¹⁵

Conclusion

Overall, these findings underscore the existence of gender disparities in various facets of medical college experiences, from opportunities for advancement to concerns about parenting and perceptions of unequal treatment. Addressing these discrepancies is imperative for fostering a more equitable and supportive learning environment within medical colleges.

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Authors Contribution

AS: Conceptualization of Project
AR, RA, WA: Data Collection
MJ, AS, IR: Literature Search
SS, IR, MJ: Statistical Analysis
MS: Drafting, Revision
MJ: Writing of Manuscript