

## Gender Discrimination against female surgeons: a myth or a reality?

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### ABSTRACT

**Background:** Gender discrimination is a prevalent concern among female physicians, particularly in male-dominated specialties. Manifesting as aggression, unequal opportunities, and lack of same-sex mentors among others, its effects translate as obstacles to personal well-being, and professional growth of female surgeons. This article is aimed to study the prevalence, nature and source of gender discrimination among female surgeons, country wide, in Pakistan.

**Methodology:** We conducted the study from 20<sup>th</sup> July, 2020 to 20<sup>th</sup> December, 2020. Convenient random sampling was used and our sample size came out to be 72 in the given time period. Our participants included female surgeons and female surgery residents. A self-administered questionnaire was used.

**Results:** Out of 72 female surgeons and surgery residents that participated in the study, 60(83%) participants reported facing gender discrimination at the work place, while only 12(17%) said that they did not. When inquired about the source, 24(40%) reported consultants of opposite gender, 12(20%) reported male nursing, 14(23.3%) reported fellow male residents, 8(13.3%) reported patients, and 2(3.3%) reported students as the source of the discrimination. Furthermore, 44(73.3%) stated having felt that they had to work harder than their male peers to achieve the same positions.

**Conclusions:** Our study shows that gender discrimination is encountered by majority of female surgeons, across Pakistan. This discrimination interprets as increased effort on part of female surgeons in order to achieve the same career milestones as their male counterparts. This study highlights the need for further study and increased efforts to alleviate all and any gender bias in surgical fields.

**Keywords:** Gender discrimination, female surgeon's discrimination, bias against female surgeons, male and female surgeons

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### INTRODUCTION

Surgery, historically, has been known widely as a male-dominated field. In countries around the world, increased importance is being given to gender discrimination faced by women in various fields, particularly those previously or currently dominated by males<sup>1</sup>.

Discrimination faced by females in the field of surgery has manifested over the years, subjectively, in the form of accusations of incompetence by fellow coworkers, micro and macro aggression by patients, and more objectively, in the form of pay inequalities<sup>2,3</sup>. The discrimination translates to and is further intensified by the lack of female mentors, and a paucity of females in surgical academics which is a factor that influences the decision of female medical students to opt for surgery as a career path<sup>4,5,6</sup>.

Studies in the United States of America have shown that female surgeons experience gender-based discrimination during residency, as well as in practice from superiors, physician peers, clinical staff as well as patients<sup>7</sup>. Studies have also shown that overt and implicit bias faced by female surgeons result in a sense that sex is a barrier to their career development<sup>5</sup>. Other studies have shown that while overt bias has largely disappeared, implicit bias is a significant problem that needs to be addressed<sup>8</sup>.

In Pakistan, gender distribution within the field of medicine has seen a swift change over the years whereby more than 70% of current medical school students comprises of females<sup>9</sup>. However, surgery continues to be a male-dominated speciality within the country<sup>9</sup>. This fact, intertwined with the patriarchal themes of society and an unfriendly post graduate training systems for women may translate to discrimination against females particularly those pursuing surgery<sup>9</sup>.

Our study aims to explore the presence of any discrimination and gender bias against female surgeons in Pakistan, and the factors that may contribute towards them, so that those factors can be addressed and efforts can be made to alleviate all or any gender bias in surgical specialties.

### MATERIALS & METHODS

A cross-sectional study was conducted from 20<sup>th</sup> July, 2020 to 20<sup>th</sup> December, 2020. Convenient sampling technique was used and 72 participants agreed to participate in the study in this time period after obtaining informed written consent. Our participants included female surgeons and female surgery residents from various cities of Pakistan. Google forms were used for data collection. SPSS-22 was used for data analysis. A self-administered questionnaire consisting of two parts was used to collect information. The first part included consent and demographic information, whereas the second part

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consisted of questions regarding the prevalence, nature, and source of discrimination participants faced as female surgeons.

## RESULTS

Our study included a total of 72 female participants, which included 24 consultants and 48 surgery residents. 60(83%) participants reported that they face gender discrimination at work place and 12(17%) participants reported that they do not face any kind of gender discrimination.

Among those 60 participants who reported facing gender discrimination, we asked further questions regarding this discrimination. On inquiring about the source of this gender discrimination, 24(40%) female participants said that it came from consultants of opposite gender, 12(20%) participants reported male nursing staff being the source of discrimination, 14(23.3%) reported that source of discrimination was from fellow male residents. 8(13.3%) participants reported that patients was the source of gender discrimination and only 2(3.3%) participants reported students being the source of such discrimination.

On probing further the details of this discrimination, we inquired about the details of this discrimination. On asking if they have ever been called incompetent relative to their male surgeons by the patients, 14(23.3%) participants stated yes and 46(76.7%) answered no. 44(73.3%) participants reported that they had to work harder than their male peers in order to get the same position. 18(30%) participants reported that they find their workplace environment to be less female friendly. 12(20%) participants reported that they have faced the idea/concept that female surgeons lack physical strength required in the profession of surgery, 10(16.7%) have been faced with the idea that females can't handle emergency and other emergency conditions as good as their male peers. 12(20%) participants reported that they have faced cultural barriers and stereotypes being implied against them.

## DISCUSSION

The aim of our study was to investigate the prevalence of gender discrimination among female surgical residents and consultants throughout Pakistan. We further aimed to probe into the source and nature of this discrimination, and if the surgeons believed that it hindered or affected their career. Women are now being empowered to report and confront all and any forms of discrimination including that at the work place; this is especially crucial for male-dominated fields<sup>7</sup>.

Our study has shown that 83% of females experienced some form of gender discrimination at their work place. These number are higher than those reported by Hu et al. which showed that 65.1% of female surgeons faced gender-based discrimination, and Bruce et al. which reported 53%, 67% and 68% of respondents experienced some to very frequent discrimination during medical school, residency, and practice respectively<sup>2,7</sup>. Our numbers could be higher due to cultural and social barriers, which are more pronounced in a predominantly Muslim and South-Asian countries<sup>10</sup>.

An important finding of our study was that 73.3% female surgeons reported that they had to work harder than their male peers in order to get to the same positions in their careers. Several factors could contribute to difficulties in career advancement with social and cultural expectations being a significant factor<sup>11</sup>. Even though only 20% of our participants reported facing cultural stereotypes, this could be due to a failure of recognition and desensitization towards such attitudes and practices<sup>12</sup>. Other obstacles would include lack of same-sex mentors<sup>13</sup>. This holds especially true given the paucity of female surgeons at senior posts and positions of leadership<sup>14</sup>. These findings are also at par with other studies which show that female surgeons face obstacles in vital aspects of their career<sup>15</sup>.

Our study showed a steady decline in gender discrimination with the coming generations with 33% and 23% of the source of discrimination being attributed to surgical consultants and residents, respectively. Compared to this, only 3.3% of the discrimination felt by the participants came from medical students. This decline in numbers could reflect the positive impact of globalisation, fluidity in gender roles and changed attitudes in the younger population regarding female surgeons. Females are expected to make up almost half of all surgical trainees by the year 2026, and such changes are not only applauded but imperative<sup>16</sup>.

Our study was limited by small sample size due to lesser number of female surgeons, and a limited number of centers from where data was collected.

This study is the first of its kind to collect data from multiple centers across Pakistan and therefore explores gender discrimination across the country in contrast to previous single-center studies. Further cross-sectional research can be done regarding gender-discrimination among health-care staff in general, as well as patients in the healthcare setting. Such researches can pave way for legislative protection of women's rights at the workplace, and bring into attention, implicit bias which may be subtly detrimental to the career progression of female surgeons.

The Pakistani female surgeon is dynamically overcoming social and cultural stereotypes in addition to occupational obstacles and the well-acknowledged glass ceiling in a male-dominated field. Even though, demographics, perceptions and ambiances are changing slowly for in the field of surgery, there is still a long way to go. Identifying the prevalence and causes of discrimination is a vital step, and further effort must be made to ensure equity and progress for female surgeons.

## CONCLUSIONS

Our study concludes that gender discrimination is encountered by an overwhelming majority of female surgeons, across Pakistan, more so, perpetrated by senior colleagues as compared to junior ones. This discrimination interprets as increased effort on part of female surgeons in order to achieve the same career milestones as their male counterparts. Even though the trends of discrimination are gradually declining with the coming generation, further research needs to be done to eradicate overt and implicit bias faced by female surgeons who will continue to make

up an increasing amount of the surgical work force in the future.

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