



ADDRESSING GENDER DISPARITIES IN SURGICAL TRAINING

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ABSTRACT

Introduction: Gender bias has long plagued the medical field, with the surgical domain bearing a disproportionate burden. Although the existence of gender discrimination in surgery is recognised, its impact on career progression and the absence of documented mitigation policies present ongoing challenges. Surgical careers demand significant personal commitment, with the evolving landscape of the surgical workplace for women largely unknown. **Aim and Objective:** This study aims to assess the prevalence of gender bias and explore perceptions of gender disparities affecting surgeons' careers across Karnataka. **Methodology:** A questionnaire was distributed to general surgery postgraduates in Karnataka, yielding 126 responses (70 females, 56 males). Responses were anonymised, providing candid insights into the experiences of surgeons. **Results:** Of the respondents, 42.5% of female surgeons acknowledged experiencing gender discrimination (GD) compared to 17% of males. Work-related harassment was reported by 40% of females, affecting their mental or physical well-being. Interestingly, 11.52% of males and 6.38% of females reported no experience of GD during their training. Furthermore, 52% noted a detrimental impact on confidence levels, while 19% reported adverse effects on technical skills. **Conclusion:** Despite a positive trend of increased female participation in surgical residencies, gender based discrimination and career obstacles persist. The study underscores the urgent need to create an environment free from gender bias in surgical training. Residency, being pivotal for skill development, requires equal opportunities for all surgeons. Addressing gender disparities is not only crucial for individual fulfilment but is also integral to the progress and success of surgical careers.

KEYWORDS : Gender discrimination, surgical training, women in medicine.

INTRODUCTION:

Gender discrimination like in all workplaces has been a grievous part of the medical field from the beginning with the surgical side suffering the brunt of it. (1)

Gender-based discrimination in surgery is acknowledged, but their predicted influences on career progression and policies to mitigate them have not been well documented. (1) Implicit gender bias is the result of complex interplay of cultural and societal expectations learned behaviours.

As such, both male and female surgeons are subject to its influence.(2) A career in surgery has significant lifestyle implications:

- high degrees of patient acuity,
- significant on-call responsibility
- irregular work hours

All requiring a significant commitment of personal time. (3) This however has not deterred female doctors' interest in a surgical career as more women are entering surgical training.

However the specialty is still male dominated, with the workforce being only 10-20% of women. The extent to which the surgical workplace has evolved to accommodate women and their role in family life is unknown to the public, in general, and to the upcoming generation of women surgeons, in particular.

Addressing these issues is fundamental not only in maintaining a diverse community of surgeons and promoting the well being of residents but also in growing our work force to accommodate the increasing demands of women surgeons.

Aim:

To determine the prevalence of gender bias

Objective

To determine perceptions of gender disparities affecting the careers of young surgeons across tertiary care hospitals in Karnataka.

Inclusion Criteria

- General surgery residents in Karnataka
- Consented and responded to the survey

Exclusion Criteria

All Super-speciality branches.
Other Surgical branches

Methodology:**Setting, timeframe, and sample size:**

We conducted a multi centre cross sectional study at tertiary care centres all across Karnataka from October 2023 to December 2023.

We used convenience sampling to approach all the residents in the study population.

Data collection tool:

A online survey questionnaire was prepared using Google Forms with a 20 question based survey and sent to all postgraduates pursuing surgical training social media platforms in the State of Karnataka.

Demographics :

Demographics surveyed included the following : age, gender, year of residency, and marital status.

Experiences of gender bias:

Responses to gender discrimination experience questions included the following : agree, disagree, neutral.

Responses were in the form of Multiple choices and open response
Details were kept anonymous.

Responses were analysed and comprehended in the form of bar diagrams, pie charts, line diagrams and charts.

Statistical Analysis

The collected data were analysed with IBM.SPSS (Statistical Package for Social Sciences) statistics software 23.0 version. To Describe about the data, descriptive statistics , frequency analysis, percentage analysis were used for categorical variables and the mean & S.D were used for continuous variables.

RESULTS

137 Responses received out of 180 surgery residents. 11 excluded due to incomplete response, 126 responses taken for the study, With a completion rate of 70%.

A higher percentage of Female residents responded to the survey, 20% higher than the number of responses received by males. Females (n=70) males(n=56).

The responses gathered by the residents who were unmarried was higher than the responses gathered by the married residents. unmarried females(n=50), unmarried males(n=46) married males(n=0) married females(n=20)

The responses from the 3rd year of PG was highest, with 48 responses and a percentage of 35% of the total, followed by 2nd year with 40 responses and a percentage of 30% and the least from 1st year with 38 responses.

Table 1 : Percentage Of Responses From Female Residents And Male Residents.

FEMALES	60%
MALES	40%

Table 2 : Number Of Married Females And Unmarried Females And Married Males And Unmarried Male Residents.

	MARRIED	UNMARRIED
FEMALES	20	50
MALES	10	46

Table 3 : Year Distribution

YEAR DISTRIBUTION	NO. OF PGs	PERCENTAGE
1ST YEAR	38	29%
2ND YEAR	40	30%
3RD YEAR	48	35%

Table 4 : Gender Bias In A Professional Setting:

In a professional setting	Females	Males
I am perceives as less hard working than someone of the opposite gender	20.3%	18.5%
People are more likely to comment on my physical strength	36.5%	32.5%
I am more likely to be assigned clerical tasks	42.5%	15.3%
Do you feel differences in mentorship because of lack of same gendered leadership	15.5%	12.5%

Agreement With Situations Of Gender Bias In A Professional Setting:

Comparing the responses of males and females in agreement with situations of gender bias in a professional setting, a higher percentage of females agreed that they were perceived as less capable of carrying out work that required physical strength and were more likely to be assigned clerical tasks such as paperwork as opposed to Hands on training in the operating room.

However, they was no significant differences in mentorship with regard to teaching even though the work force of senior surgeons and consultants are mostly males

Table 5: Gender Bias In A Clinical Setting :

Patients in a clinical setting	Females	Males
Being referred to as a non physician	89.9%	10.2%
Receiving inappropriate comments	40.4%	10.2%

Table 6: Gender Bias In A Personal Setting :

IN A PERSONAL LIFE SETTING	Females	Males
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Martial status/ intention to start a family is questioned	30.5%	14.5%
Intention to start a family is more likely to lead others to doubt my professional capabilities	55%	24%
I am more likely to conceal my desire to start a family to avoid professional scrutiny	42%	24%
Lack of support for family obligations in the field	20.5%	12%

Agreement With Situations Of Gender Bias In A Clinical Setting

90 % of female residents recall being referred to as nurses or other members of the treating team by the patients or their attenders. 40% of females also agreed to being on the receiving end of inappropriate comments by patients

Agreement With Situations Of Gender Bias In A Personal Setting

With a higher percentage of unmarried residents responding to the survey, a greater number of females agreed to the issues and problems they faced with a work life balance and the hindrances they faced while starting a family while pursuing a demanding surgical career.

Table 7: Agreement With Situations Of Sexual Harassment :

Questions related to sexual harassment	Females	Males
Jokes with sexual content	40.5%	32.3%
Uninvited comments about body	32.4%	30.2%
Having personal space deliberately infringed	30.5%	0.5%

Agreement With Situations Of Sexual Harassment :

40 % of females agreed to situations of sexual harassment by members of the surgical faculty, their co-workers or superiors.

Table 8 : Incidents Of Bias Impacting Residents In :

TECHNICAL SKILL	19%
CONFIDENCE	52%
ACADEMIC KNOWLEDGE	15%
VOCATIONAL ABILITY	14%

Impact on residents

52% of residents claimed the bias they faced played a role in deterring their confidence levels, 19% claimed the bias impacted their technical skills in negative way, 15% claimed it affected their academic and vocational capabilities.

DISCUSSION:

- Giglio v and co authors documented 75% of healthcare workers experienced at least 1 incident of gender based discrimination in their careers, which is similar to our study
- Journal of Vascular Surgery showed women were more likely than men to report witnessing gender based discrimination (76% vs. 56%) with 38% of residents having personally experienced gender discrimination, which is similar to our study
- Bruce et al, reported that 87% of women experienced gender based discrimination in medical school, 91% in practice with superiors, peers, support staff and patients.

CONCLUSION:

While both male and female doctors can face gender discrimination, our study shows that it's more predominant among females.

Out of 357 General Surgery seats in Karnataka, it is observed that a higher number of women are opting for a surgical residency in the past few years as compared to the past trends.

Female residents have been found to face gender discrimination and obstacles in career development, which can lead to decreased individual fulfilment and progress in their careers It is essential to promote awareness To encourage open dialogue Support initiatives that address gender bias.

More research and recognition need to be given to this issue to provide maximum benefits to the community, future generations of surgeons, and most importantly, to positively affect the care of patients.

- Residency plays a crucial role in a surgeon's life
- It is where they cultivate essential skills for a successful surgical career
- Therefore, it is imperative that they get to work in an environment free from gender discrimination and are provided with equal opportunities.

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