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RESEARCH ARTICLE

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Perspective of Female Residents Working within a Traditionally Male Dominated Department in a Tertiary Care Hospital: An Observational Study

Ashwitha Ravi, Lileswar Kaman, Siddhant Khare*
Department of General Surgery, Post Graduate Institute of Medical Education and Research, Chandigarh, India

ABSTRACT

Introduction: General surgery has traditionally been a male dominated field. Only about 20% of postgraduates enrolling in general surgery are women. It is vital to understand the challenges and barriers to their growth to ensure an optimal working environment. This study was performed to identify the challenges and barriers faced by the female General Surgery residents at our institute.

Methods: This was an observational study. All female residents working in the department of General Surgery were invited to take part in the study. Mean and SD were used for the normally distributed data and data was expressed in percentages.

Results: A total of 27 women took part in the study. The mean age of the participants was 26.0 ± 1.9 years (Range 23–31 years). Only 7 (25.9%) residents said that they didn't face any discouragement from anyone and only 6 (22.2%) never felt any discrimination from male residents. Two (7.4%) were sure to have faced sexual harassment and 2 (7.4%) had probably faced sexual harassment. The most common perpetrator of sexual harassment was another colleague (100%). Still, 24 (88.9%) respondents had either excellent or good support from male colleagues and 25 (92.6%) had no preference in working with either males or females.

Conclusion: Mentorship models during basic medical training may be useful in encouraging female doctors to take up general surgery. For making working environment more conducive for working, workplace gender sensitization and awareness programs for workplace sexual harassment should be made mandatory for members of the surgical team.

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KEYWORDS
Tertiary care; surgery; female; medical training

Introduction

Although the number of female doctors entering the healthcare sector is increasing, only a dismal 16% of all practising allopathic doctors in India are women [1]. It has been observed that although as many as half the numbers of undergraduate medical students are women, the number of women who are actually practising medicine drops substantially [2,3]. This number may be much lower in departments such as general surgery and orthopaedics that have traditionally been considered male dominated. It is estimated that only 20% of postgraduates enrolling in general surgery are women, with further reduction to approximately 15% in the number of practicing female surgeons [4, 5]. Perceived hindrance to family life, gender discrimination, and lack of effective mentors play a role in deterring women from taking up a career in surgery [2, 4-6]. As more women take up surgery, it is vital to understand the challenges and barriers to their growth (by virtue of their gender) in these departments and address them to ensure an optimal working environment. Hence, this study was conducted to identify the challenges and barriers, if any, faced by the female residents in the department of general surgery at our institute.

Materials and Methods

After Institutional Ethics Committee approval, an observational study was conducted in the Department of General Surgery. The department has a total of 129 residents of which 110 are junior residents (year 0-3) and 19 are senior residents (>3 years of surgical training).

The study was conducted from 16th to 31st of August 2020. All female junior and senior residents working in the department during the study period (except from the resident who took part in the conduction of this study), were invited to take part in the study. After explaining

Contact: Khare S, E-mail: khare.siddhant@gmail.com

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the aims and objectives of the study and taking written informed consent, female residents of the department of general surgery were interviewed. The questionnaire used was similar to the one used by Palaniswamy et al. [2] and modified for the department of General Surgery. Data was expressed in percentages.

Results

There are currently 29 female residents working in the department of General Surgery, making a total of 22.5% of the resident workforce. Among Junior and Senior Residents, there are 26 (23.6%) and 3 (15.8%) female residents, respectively.

Twenty-eight residents fulfilled our inclusion criteria and were given an invitation to participate in the study. One resident declined from participating in the study citing it may offend her co-workers, despite reassurance that the identity of the respondent would remain confidential. A total of 27 female residents participated in the study. The mean age of the participants was 26.0 $\pm$ 1.9 years (Range 23–31 years, median 26 years). The mean number of months into surgical training at the time of interview was 15.3 $\pm$ 11.4 months (range 2-50 months). Only 1 of the participants (3.7%) was a senior resident (>3 years of surgical training), while the remaining 26 (92.3%) were junior residents (0-3 years of surgical training). Out of the Junior Residents, 10 (38.5%) had less than 1 year in surgical training whereas rest 16 (62.5%) had received 1-3 years of surgical training. Two residents (7.4%) were married and one resident (3.7%) had children (Tables 1-3).

Table 1. Response to questions on interest and discouragement.

S No	Question and Options	Response
1	Why did you join General Surgery?	
	Special Interest	27 (100%)
	No Special Interest	0
	No Other Viable Option	0
2	Who inspired your interest in General Surgery?*	
	Medical Professional (Mentor)	11 (40.7%)
	Family	4 (14.8%)
	Friends	0
	Own Interest	16 (59.3%)
3	Have you faced discouragement from joining General Surgery?*	
	Yes, from General Surgeons	10 (37%)
	Yes, from other medical professionals	11 (40.7%)
	Yes, from family	7 (25.9%)
	Yes, from friends	5 (18.5%)
	No	7 (25.9%)
Note: *: Multiple answers allowed		

Table 2. Response to questions on Support, Discrimination and harassment.

S No	Question and Options	Response
1	Support from parent department during residency	
	Excellent	7 (25.9%)
	Good	18 (66.7%)
	Poor	2 (7.4%)
	None	0
2	Do you feel discriminated from male residents?	
	Yes	6 (22.2%)
	No	6 (22.2%)
	Maybe	15 (55.6%)

3	If yes, by whom?*#	
	Faculty	4 (19.0%)
	Colleagues	9 (42.8%)
	Para-medical Staff	7 (33.3%)
	Non-medical Staff	3 (14.3%)
	Patients	11 (52.4%)
4	Have you faced sexual harassment at the workplace?	
	Yes	2 (7.4%)
	No	23 (85.2%)
	Maybe	2 (7.4%)
5	If yes, by whom?*#	
	Faculty	0
	Colleagues	4 (100%)
	Para-medical Staff	1 (25%)
	Non-medical Staff	0
	Patients	0
6	Support from female colleagues	
	Excellent	13 (48.1%)
	Good	14 (51.9%)
	Poor/None	0
7	Support from male colleagues	
	Excellent	4 (14.8%)
	Good	20 (74.1%)
	Poor	2 (7.4%)
	None	1 (3.7%)
8	Support form family	
	Excellent	21 (77.8%)
	Good	6 (22.2%)
	Poor/None	0
Note: *:Multiple answers allowed, #: percentages as percent of respondents answering yes or maybe to the previous question		

Table 3. Response to miscellaneous questions.

S No	**Questions and Options**	**Response**
1	With whom do you feel comfortable working?	
	Male Colleagues	0
	Female Colleagues	2 (7.4%)
	No Preference	25 (92.6%)
2	Have any of your colleagues left the department because of heavy workload?	
	Male	5 (18.5%)
	Female	0
	Both	16 (59.3%)
	None	6 (22.2%)

3	Difficulty managing work and personal life	
	No difficulty	2 (7.4%)
	Some difficulty	12 (44.4%)
	Moderate difficulty	11 (40.7%)
	Severe difficulty	2 (7.4%)
4	Satisfaction with professional life	
	Yes	14 (51.9%)
	No	6 (22.2%)
	Maybe	7 (25.9%)
5	Satisfaction with personal life	
	Yes	8 (29.6%)
	No	8 (29.6%)
	Maybe	11 (40.7%)
6	In what way will an organisation for female surgeons help?*	
	Academic Support	21 (77.8%)
	Collaboration	23 (85.2%)
	Moral Support	24 (88.9%)
	No help	1 (3.7%)
Note: *: Multiple answers allowed		

Tables 1- 3 consolidate the responses of the residents to the questionnaire. All the participants stated that they had taken the field of general surgery by choice and not for lack of other options. Regarding gender-based discrimination, 60% (6 out of 10) of first year residents had faced discrimination compared to 88.3% (15 out of 17) of the residents in senior years. Out of 4 (2 definite and 2 maybe) incidences of sexual harassment, only 1 (25%) was reported. None out of 10 first year residents had faced any and sexual harassment compared to 23.5% (4 out of 17) in residents of senior years. Despite this, most residents did not have any preference between male of female colleagues with respect to comfort of working. Even though majority of the residents (51.9%) maintained that they were satisfied on a professional front, only 8 (29.6%) were satisfied with their personal lives.

Lastly, the participants were allowed to remark on any aspect not touched upon by the questionnaire. It was mentioned that the camaraderie between male residents and their seniors may put them in a better position for operative chances and more leeway in their work. Residents also mentioned that lack of designated duty doctors' rooms for women made staying in the hospital during night duties an uncomfortable experience. It was also mentioned that their male colleagues are sometimes held to different standards. Poor dressing habits were also tolerated less amongst male residents compared to their female counterparts.

Discussion

Women face barriers to both entry and progress in all fields and medicine is no exception. It took roughly 125 years, after the first two female medical graduates from India, Anandibai Gopal Joshi, trained at the Woman's Medical College of Pennsylvania and Kadimbini Ganguly, trained at Calcutta Medical College, joined their respective colleges, for the females to outnumber males in medical college admissions [7-9]. Despite this, our department of general surgery had only 29 women residents, constituting only 23.6% and 15.8% of junior and senior residents respectively.

It is encouraging to note that in this study, all the participants had joined the field out of special interest and 40.7% of the participants also had a mentor who encouraged them to take up general surgery as career choice. This finding corroborates with the findings of previous studies of the significance and influence of role models for women choosing surgery [4-6]. However, only 25.9% participants were not discouraged by someone from joining general surgery. This may, in general, represent an overall declining interest in pursuing branches that allow little control over an individual's lifestyle, or in specific, represent the social compel requiring women to take up branches which allow easier juggling of work, family and parenthood [10,11]. Another finding of the study that 59.3% participants had seen both men and women leave general surgery due to the heavy workload suggests that combination of the two reasons may be driving factor women in India away from general surgery as their career option.

Most residents found the support from the department satisfactory (good or excellent) with only 2 residents (7.4%) considering it poor. This appears to be a vital element for a secure and healthy work environment. However, as the number of married women residents and of women residents with children was few (3.1% and 7.4% respectively), the concern of women who become pregnant and have children during their training may not have been identified. In a study by Rangel et al. on pregnancy and motherhood during surgical training, many women felt that asking for a lighter schedule during pregnancy may put them in poor standing in front of their consul-

tants or cause resentment amongst their co-workers [12]. They also felt that strict working hours during pregnancy may prove to be a health hazard both to them or the baby and that if they left for home to take care of their baby rather than staying in the hospital for a case, they may be considered as an uncommitted resident [12]. Many women in the study also thought that they had to take less than desired maternity leaves [12]. Even though, in our system, women get 6 months of maternity leaves, the same is adjusted by extending their tenure by 6 months. The concerns raised by women in the above-mentioned study may be very valid in our system, and although we didn't investigate it, these may be the reasons why most female residents choose to delay marriage and childbirth until after their training years.

All the residents interviewed stated the support from female colleagues was satisfactory (good or excellent), however 11.1% of the residents perceived poor or no support from their male colleagues, thus hampering their work environment. This observation shows that it is important to avoid the 'Old Boys Club' attitude, often present in surgical departments, that make the environment uncomfortable for women to work in [6,13,14]. This attitude also prohibits women from reporting gender-based discrimination or sexual harassment. Studies have shown that women have often found reporting harassment more troubling than not reporting, thus affecting their work satisfaction [6].

Women in multiple fields of medical practice have perceived gender-based discrimination or abuse against them, starting from an undergraduate level. Studies have shown that gender-based discrimination is one of the most important hindrances in the professional career of women, especially in general surgery. This includes unprofessional remarks, fewer promotions, lower income, lesser funding for research and fewer opportunities to present ones' work [6,15-17]. This discrimination is not only seen in general surgery, but also in other surgical specialties [2,14,17]. In the current study, 22.6% of the residents felt they were discriminated on the basis of their gender. Amongst the female residents we interviewed, 55.6% felt they had faced uncomfortable situation which probably amounted to discrimination that they had not realized at that point of time. The propagation of stereotypes and acceptance of discriminatory comments in workplace probably results in the confusion in female residents on whether to call out discriminatory behavior or let it slide. The source of discrimination is often not just superiors, but also fellow colleagues as well as patients. In this study, 52.4% of the residents who faced discrimination were discriminated against by their patients, while faculty, colleagues, para-medical and non-medical staff also contributed to sexism in the workplace. Ashton-James et al. noted in their study that patients often perceived male surgeons to be more competent, although female surgeons were considered more approachable and "warm" [18]. While the opinions of patients mirror the opinion of the society, unless surgeons themselves do not try to achieve gender equality, this cannot be expected from the patients.

Sexual harassment is another aspect of professional life that often affects both the entry and progress of women in departments like general surgery, that have significant disparity in male and female numbers. Unwanted sexual advances (verbal as well as physical) has been reported in more female general surgeons than male, and has been cited as a key cause of burnout and attrition of female surgeons [14,16]. In our study it was noted that 2(7.4%) residents had faced outright sexual harassment, while 2(7.4%) stated that they "may have" been subject to such harassment. The ambiguity in whether or not one has faced sexual harassment probably stems from the culture of desensitization that occurs in male dominated fields, where women feel they have to hide perceived signs of weakness to progress in the department [6]. This probably explains why in this study, only 1 of 4 incidences of harassment was reported. It is also noteworthy that all the instances of sexual harassment occurred in residents who had completed more than 1 year of training, probably indicating that as women reached areas of responsibility, harassment against them increased. It is also possible that gestures by male colleagues with no sexual intention may be perceived as inappropriate by women. Thus, it is essential to educate all the members of team, males and females, about acceptable and unacceptable behavior.

Although, it has been shown in previous studies that female surgeons in fact maintain a reasonable work-life balance [6], in this study only 7.4% of the participants had no difficulty maintaining a balance between their professional and personal lives and although 51.9% had job satisfaction, only 29.6% were satisfied with their personal life. This contradictory finding may be because of the difference in the study population. Participants in our study were residents at a relatively early phase in their career, where training often eats into personal time. Fixed and reasonable working hours with accommodation for leave, would probably help residents strike a satisfying work-life balance and improve perception towards their career choice. This holds true for men as well.

At present there are few groups dedicated to the welfare of female surgeons. Except one, all participants were of the opinion that an organization for female surgeons would provide both academic and moral support as well as help with collaborations often difficult to maneuver in a male dominated field. Since, there is a common entrance test at the time of joining surgical residency and again at the time of joining super-specialty courses in India, the problem of 'Sticky Floor' is negated to a large extent by the system. Similarly, at least in public sector,

the problem of 'Glass Ceiling' is also taken care of as the women are as likely to progress in their career as their male counterparts without having to face any pay or promotion disparity. However, many studies have noted that the number of women who join General Surgery far outweigh the number of women who progress and reach positions of leadership and responsibility[5,13,16] and even with these inbuilt anti-discriminatory mechanisms, the so called 'Leaky Pipeline' still exists in General Surgery in India. In the current study itself we noted that the proportion of female senior residents fell to 15.3% from 23.6% of female junior residents, showing a significant attrition in numbers. A study from AIIMS, New Delhi showed that only 5% of faculty positions in surgical departments (excluding departments of OBG and Ophthalmology) were occupied by women [11].

The above discussion suggests that there are many steps that will be needed to reduce the disparity between men and women in the field of surgery. There are a few limitations of this study. This study focused primarily on the perceptions of female residents in General Surgery. We did not interview residents who have had left the field. So, it was not possible to list all the factors that caused women to leave general surgery. Secondly, the difficulties faced by female surgeons at leadership positions were not looked into. Thirdly, this study interviewed residents belonging to general surgery not those of other surgical specialties such as neurosurgery, urology or plastic surgery where gender disparity also exists. Lastly, these women have been interviewed at a relatively early phase of their career, thus burdened with a higher physical workload compared to those with an established practice which may have affected their perspective towards their work and work-life balance.

Conclusion

This study has highlighted a few problems namely mentorship in medical training, gender discrimination and sexual harassment at workplace. Workplace gender sensitization sessions and awareness sessions for workplace sexual harassment should be made a mandatory for doctors, para-medical and non-medical staff of the surgical team, along with mechanisms to deal with instances of sexual harassment in a compassionate and confidential way may prove to be first baby steps in the direction of tackling the problems highlighted by this study. Moreover, there may be many more aspects which may not have been assessed in our study. More such studies on the plight of female surgical residents and female surgeons are the need of the hour to identify other problems faced by them which can be tackled in a more empathetic way and make general surgery a non-discriminatory branch.

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