

## Realities And Challenges For Female Surgeons :An Indian Perspective

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### ABSTRACT

**Background:** In 2022, women accounts for 10.25% of total surgeons registered under ASI. Despite widespread debate on gender disparities, only few recent literatures, regarding situation in India are available. The aim of this survey study is to assess job satisfaction among female surgeons in India and determine the real challenges like gender- based discrimination.

**Study design:** An anonymous,50 item questionnaire based web survey was distributed among female surgeons working in India from November 15- December 15, 2022. Gender equality, job satisfaction and work-life balance were explored.

**Results:** There were 198 volunteer respondents ,102 of whom completed at least 50% of the specific questions and included in the study. Approximately 40% of female Indian surgeons were satisfied with their job but only 21% with their work life balance. The majority of the respondents were responsible for most of the house-chores (70%) and childcare duties (76%) regardless of their partner's help and 78% reported that gender affects the way they are treated at work ,with most of them reporting gender based discrimination.

**Conclusion:** Although Indian female surgeons are satisfied with their professional choices but they face gender discrimination, including fear of failure, incompetency and most times being judged by their colleagues as well as superiors. In view of rising number of female surgeons in India, immediate effective measures are needed to create gender neutral, supportive and co-operative environment.

**Keywords:** Female surgeons, India, Gender-based discrimination, work-life balance, job satisfaction.

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Date of Submission: 14-05-2023

Date of Acceptance: 24-05-2023

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### I. Introduction:

In year 2022 ,women accounts for 10.25% of total surgeons registered under ASI<sup>1</sup>. Women have been involved in surgery throughout the medical history. Although there is rising trend of female opting surgery in our country,male surgeons still significantly outnumber women. To our surprise only few recent literatures, regarding Situations,Realities and Challenges encountered by female surgeons are available in India<sup>2</sup>.

Study design: An anonymous,50 item questionnaire based web survey was distributed among female surgeons working in India from November 15- December 15,2022. Gender equality, job satisfaction and work-life balance were explored based on their responses.

### II. Materials &Methods:

A 50 item multiple choice questionnaire based online survey was conducted from November through December 2022 for a period of one month ,using a web based software platforms designed to support data capture for research purpose. Data were recorded on the following issues: Demographics, Surgical training and Practice, Job Satisfaction, Mentorship, Gender bias and Work life balance. Pre- recorded interviews on various electronic media were assessed to gain clarity, coherence and balance of the survey. Overall ,198 contacts and e-mails of female surgeons were collected from different sources like Google search on institution and surgical department websites and some professional and social media websites. Also the survey was shared on the various electronic media pages dedicated to surgical field[Facebook , Instagram and LinkedIn].

All responses were voluntary and anonymous and recorded after obtaining informed e-consent form explaining the very purpose of the study along with other details. Questions related to private or sensitive issues were made optional. Both qualitative and quantitative data were evaluated statistically.

Statistical analysis: The participants in our survey includes both trainee(residents) and fully trained surgeons(faculties). 198 people responded to the questionnaire .Out of those 102 participants who completed at least 50% of the specificquestions were included in the study.

Data analysis was done based on both categorical analysis measured in terms of absolute and relative frequencies while numerical data was analysed and represented in bars and Charts. Some items were scored using a 5- point Likert Scale. A significance level of 0.05 was used for analyses and  $p < 0.05$  was considered as statistically significant.

Figure 1. Participants included in the study

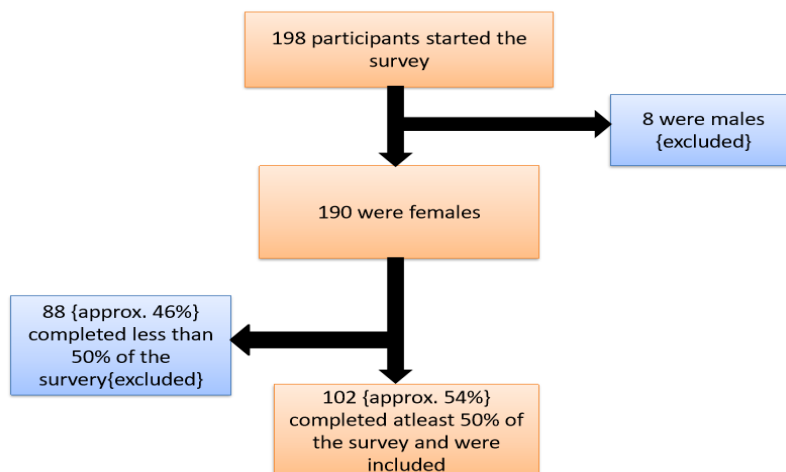


Table 1: Basic general profile including professional status of respondents

Total(n)	JR	SR	Asst./Associate Professor	Consultants	Professors/Unit Heads
Median age(in yrs)	26 yrs	30 yrs	38 yrs	38 yrs	55 yrs
IQR	28-31 yrs	32-46 yrs	32-46 yrs	47-60 yrs	48-65 yrs
Median working yrs	3 yrs	3 yrs	13 yrs	15 yrs	25 yrs
IQR	2-5 yrs	2-5 yrs	8-22 yrs	8-25 yrs	20-30 yrs
<b>Area of practice</b>					
Urban	26	22	14	12	6
Rural	10	8	4	0	0
<b>Surgical field</b>					
General Surgery	19	17	9	3	2
CTVS	0	1	1	0	2
Paed. Surgery	0	2	0	0	0
Plastic Surgery	0	2	2	0	1
OBGY	10	4	3	5	2
Orthopaedics	1	0	1	0	0
Urology	0	3	2	1	0
Neuro Surgery	0	4	3	2	1
Ophthalmology	4	1	2	2	1
ENT	2	2	1	2	1
<b>Qualifications</b>					
MS (Masters in Surgery)	0	22	2	2	1
MS + SS (Super Speciality)	0	0	8	8	1
MS + Fellowship	0	8	8	2	4

Fig 2: Bar graph showing the main sources of dissatisfaction at work

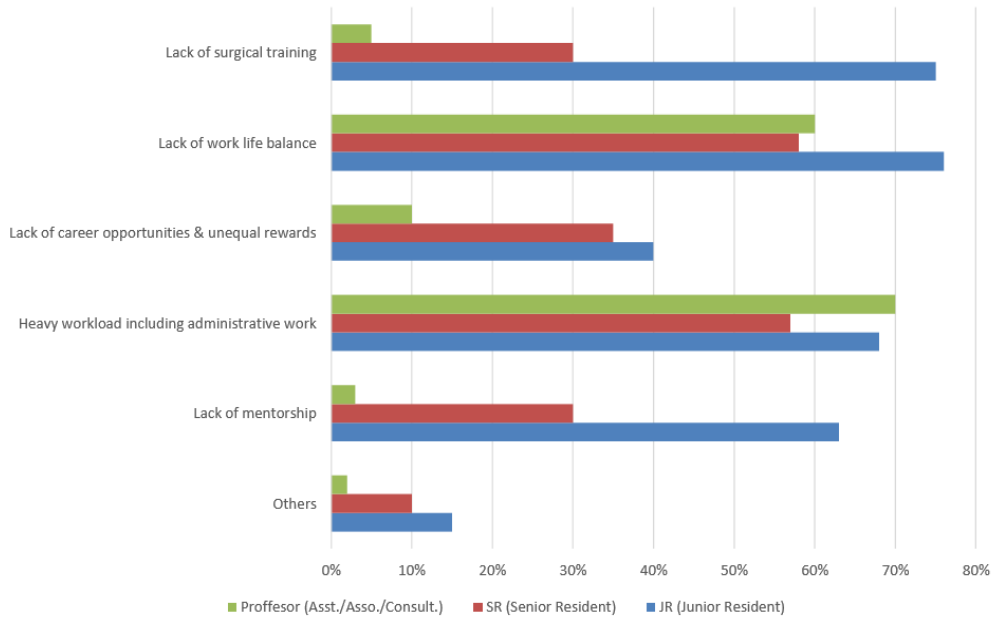
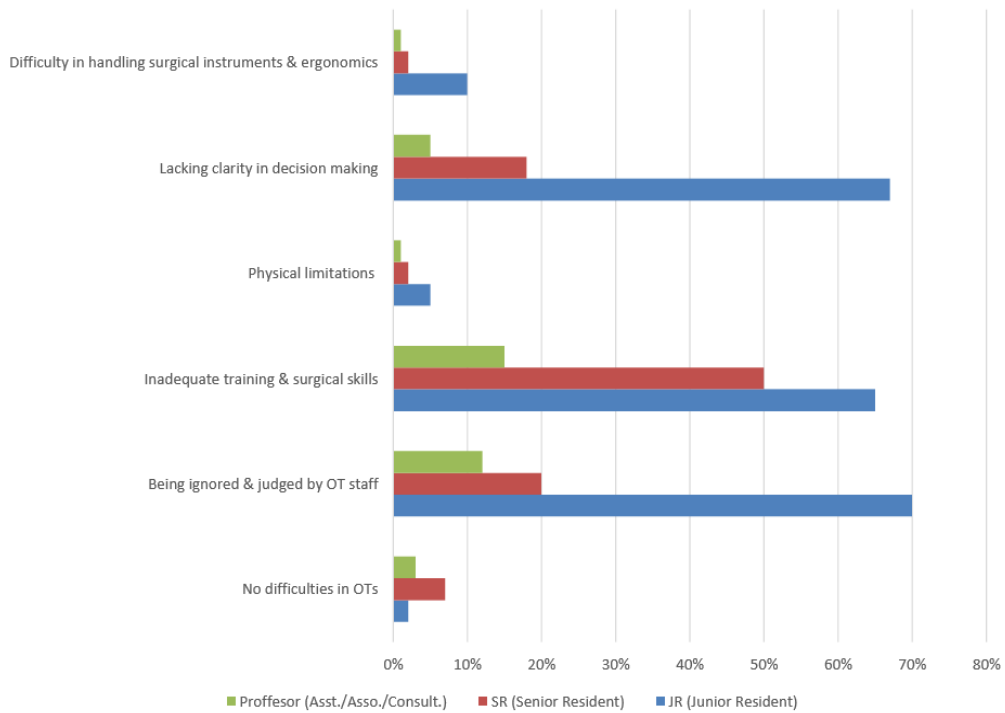
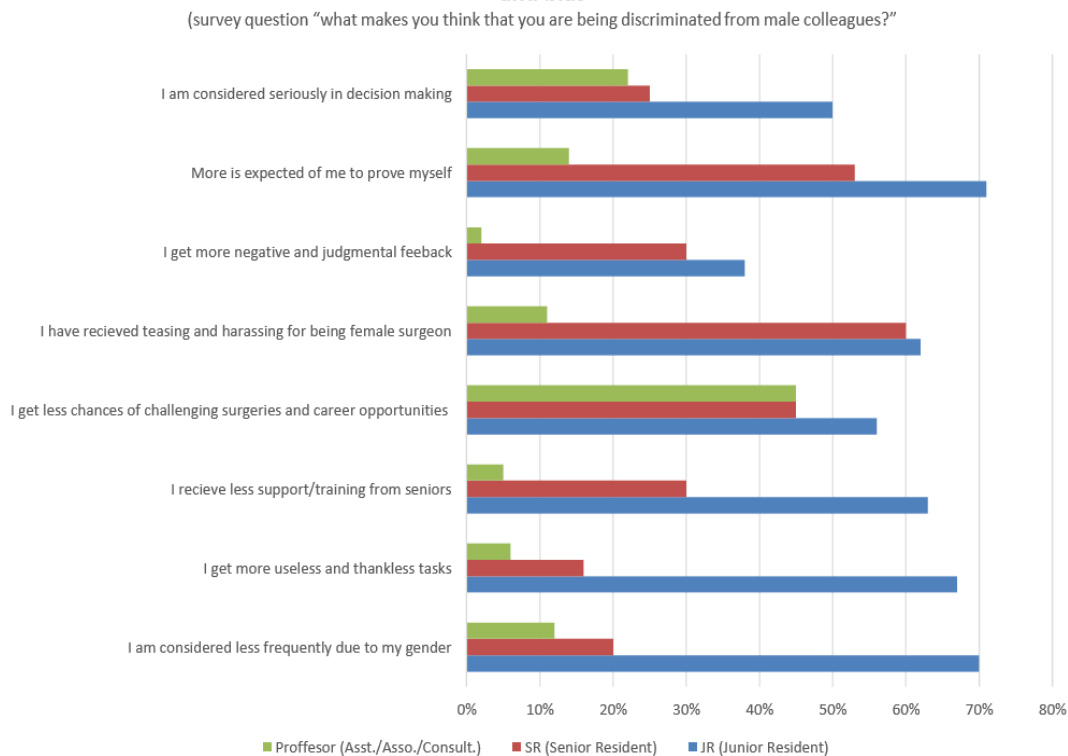


Fig 3: Bar showing the difficulties faced by female surgeons in OTs (survey question, "what major difficulties have you experienced in the OTs? ")



**Fig 4: Bar graph showing respondent perception related to gender discrimination and bias**



### III. Results:

A total of 102 responders, who completed 50% of questions were included in the final analysis. Approximately 40% (41) of female Indian surgeons were satisfied with their job but only 21% (21) with their work-life balance. The majority of the respondents were responsible for most of the house-chores 70% (71) and child-care duties 76% (78) regardless of their partner's help and 78% (80) reported that gender affects the way they are treated at work, with most of them reporting gender-based discrimination.

Basic general profile including professional status and family of respondents: The cohort was composed of 66 (65%) specialist surgeons and 36 (35%) junior surgical residents. Details regarding basic general profile, experience, demographics, professional status and training are summarized in table-1.

The majority of responders were married. 50% of specialist surgeons and 1% of residents had at least one child. 50% of respondents declare that they don't want second child due to professional reasons. 60% of respondents declare that they needed to delay the 1st pregnancy because of professional reasons.

The majority of the respondents were responsible for most of the house-chores (70%) (71) and child-care duties (76%) (78) regardless of their partner's help.

Professional satisfaction and difficulties: Approximately 40% (41) of female Indian surgeons were satisfied with their job but only 21% (21) with their work life balance. The job satisfaction was higher among surgeons compare with residents. Among surgeons 56% of those working in urban area declared that they were often satisfied compared with only 47% of those working in rural areas.

Lack of adequate surgical training and work life imbalance were the most common sources of professional dissatisfaction. Most of the residents and consultants considered inadequate practical training as the foremost cause of professional struggle. The lack of work life balance was the 2nd most common source of dissatisfaction among 40% of fully trained surgeons and 60% of residents. 70% of those with higher positions (specially professors and Heads) considered administrative work load as the most common source of dissatisfaction.

The lack of mentorship was an important source of frustration among 30% of senior residents and 63% of junior residents. 45% of surgeons (both senior residents and consultants) considered lack of good career advancement opportunities and unequal payments as major source of professional dissatisfaction.

Difficulties experienced in the operation theatre: 10% of the surgeons found no difficulty in operating theatre. Being inadequately trained was the most frequent complaint especially for 65% of general surgeons and 40% of gynaecologist.

70% of junior residents, 20% senior residents and 12% of professors reported being ignored or considered less frequently by the OT staff usually or sometimes in OTs. Only a minority of surgeons considered physical limitations including built to be a source of difficulty during surgeries.

23% of female Surgeons (mostly senior residents) identified that they sometimes lack clarity in decision making and judgement during surgeries while almost 67% of junior residents felt so. Difficulty in surgical instrument handling during surgeries was considered as source of difficulty by 3% of surgeons and 10% of residents.

Gender discrimination and bias: Most respondents in the study felt that they were treated differently because of their gender . Gender discrimination was observed by 50% of surgeons (including SR , Consultants & Professors) and 60% of residents .(Fig 4) describes the responses about the question based on gender inequalities and microaggrations. All the three groups in our study frequently felt and asked about, why they have chosen surgery as branch.62% of junior residents & senior resident,50% of Asst. professors and consultant while 80% of professor /unit heads faced this question.

All three groups have experienced that their co-workers and other OT staff mentioning ‘surgery is not the women thing’ frequently (30% of surgeons and 61% of residents) or occasionally (60% of surgeons and 38% of residents).

#### **IV. DISCUSSION:**

Our results showed that most female surgeons in India are facing issues with job satisfaction and lack of good carrier advancement opportunities. It was more in those working in rural areas and women working in masculine surgical field.

The major sources of dissatisfaction and frustration are lack of adequate surgical training, mentorship and profound work life imbalance suggesting that family responsibilities of Indian female surgeons is a major source of stress and is making surgery undesirable for most of them. Study conducted by Babcock L et al. has similar findings as us.<sup>3</sup>

Our result showed that most of female surgeons and residents feel that they are often ignored and treated differently because of their gender and are often questioned for their career choice. Most female surgeons in our study have highlighted that they receive less consideration, less opportunities inadequate training and more thankless tasks than their male counterparts which is an alarming and serious issue .This has also being described by Tiwari M et al.<sup>1</sup>

To our surprise only few female surgeons affirmed with existence of physical limitations during surgeries. This finding contradicts and prejudice claiming physical inadequacies of female in facing long hours standing and physically challenging weakness during surgery. However research suggest that this may be a limitation in minimally invasive surgery.<sup>5,6</sup>

Majority of our respondents in the study were responsible for most of the house keeping and child rearing responsibilities . This indicates that an unequal distribution of labour and traditional gender based roles continue to be prevalent in Indian household.This reality continues to be ignored by most of the hospitals and reflects in a way that very few hospitals provide adequate child care facilities in India .

Our study suggest tangible career advancement opportunities ,a reduction in thankless and administrative work load ,better training and better pay as the most important changes needed to make surgery more attractive and satisfying for females in India. Another important concern in female inclusion highlighted by this survey is the high prevalence of microaggression (in form of repeated gender based negative comments or acts).This affects individual’s self esteem and is particularly dangerous for residents in the training . In a view of more number and rising trend of female pursuing surgery in India,women’s inclusion in the workplace should be considered.<sup>7,8</sup>

#### **V. CONCLUSION:**

Our study showed that inadequate surgical training ,work life imbalance lack of opportunities are major concern among our respondents. Most of the female surgeon working in India face gender discrimination at work including microaggression .These factors are leading to dissatisfaction among female surgeons. Looking at the trend, as more females are pursuing surgery as professional choice, nearly half of the surgeons working in Indian hospitals will be female in coming decade. In the view of our study results, actions are needed to build a culture that supports gender neutral and inclusive environment ,policies and creating awareness regarding microaggression and training on gender inclusion at both personal and administrative levels.

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