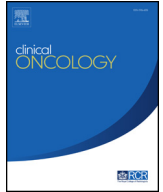




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Editorial

Reducing Gender Disparity in Oncologists in India: An Opportunity to Address Workforce Challenges

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Cancer is the fourth leading cause of death and accounts for 10% mortality in India. By 2020, the cancer incidence is expected to increase to 130–170 per 100 000. While the Government of India aims towards universal health coverage, there is shortfall in the oncology workforce [1] and despite training women in equal numbers at undergraduate and postgraduate level [2,3], only 17% of practicing physicians are women [4], suggesting that there is a leaky pipeline. Training one physician at undergraduate level costs the Indian government \$260, 000 [5]. Therefore, it is imperative that as India moves towards universal health coverage, the country should not lose its highly trained workforce.

Historically, like in many other countries, the pursuit of medicine has not been easy for women. The Indian Medical Services established in 1858 appointed only men and it was not until 1883 that women were allowed to enrol. However, the marginality of women in medicine was reinforced by placing them behind curtains or outside doors when classes were in session. In 1916, the Lady Hardinge Medical College was opened exclusively for women [6]. After almost a century, the Government of India announced its equity policy in science and technology, with gender parity as its stipulated goal [2]. Various policies to support integration of women were proposed. This included 26 weeks of paid maternity leave, childcare leave of up to 2 years and day care facilities [7,8] as compared with only 2 weeks of

paternity leave for fathers. Although supportive, these policies ironically strengthened the patriarchal nature of Indian society, which believes that a woman's role in building families should be greater than that of men. A recent international men and gender equality survey reported that Indian men are least supportive of gender equality and perceived it as an externally imposed agenda [9]. A survey among educated Indian women reported a 40% domestic abuse rate [10] and an increasing number of unmarried women in science as compared with men (14% versus 2.5%) [2].

In an attempt to understand the performance of women oncologists we designed a 15-question online survey modelled on a European Society of Medical Oncology survey [11] (see Appendix). This was circulated across oncology specialties in India. Although the survey had questions related to gender disparities and pay gap, it also asked for potential strategies to facilitate 'gender neutrality'.

The survey had a 22.8% (171/750) response rate. More than half the respondents (63%) were <40 years old and were practicing in an academic institute (58%), with only 36% women in private sector. A very small proportion of women were working part-time or freelancing (3%). Age >40 years was associated with women occupying an intermediate to high rank ($P < 0.001$). Although 44% of departments reported >50% representation of women, in only 27% of departments was a woman the team leader. It was noteworthy that teams with female leads had higher representation of women in their department (55.8% versus 38.3%, $P = 0.05$) and higher proportion of women at senior ranks (70% versus 42%, $P < 0.002$). Almost one in four women (28%) also reported facing gender discrimination.

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Although 80% of respondents said that they received equal opportunities for training, 33% could not utilise them due to personal or family reasons. Another 17% stated that they never received the same overseas training opportunities as their male colleagues. A lack of equal opportunities also correlated with the respondent's perception of gender discrimination at their institution (55.5% versus 19.3%, $P < 0.0001$). On multivariate analysis, an increased proportion of women in the working environment predicted reduced gender discrimination ($P = 0.001$).

In the present survey, almost 40% women stated that they do not get equal patient referrals. Low referrals among women were more common at the early stages of their career (46% versus 32%, $P < 0.003$), suggesting that women in the early stages of their career may find it difficult to gain the trust of co-professionals. On multivariate analysis, higher professional ranking ($P < 0.002$), advanced training ($P < 0.009$) or working in a team with a women lead ($P < 0.01$) independently predicted for improved referrals.

Although overall 85% of women reported receiving equal pay, it is likely that they work in health care set-ups where the take home salary is not affected by the number of patients seen. On analysing pay parity as a function of working set-up, it was clear that a higher proportion of women in private set-up were paid much less than their male counterparts (25% versus 11%, $P = 0.01$).

Two-thirds of women in this survey reported 'domestic responsibilities' as the main obstacle in professional growth (Figure 1). Other common obstacles were lack of trust of co-professionals and inability to network and attend professional advancement courses. When asked about strategies to promote career advancement, 52% of women favoured short-term intense fellowships. Although 32% asked for flexible hours, an additional 20% believed that digital platforms will improve their professional productivity. The responders also stated the need for dedicated leadership positions for women in the organisation. A need for female

mentorship and a strong anti-gender discrimination institutional policy were also identified (Table 1).

Like many other international surveys and reports [12–14], in the present survey women listed domestic responsibilities as the main obstacle to professional performance. An international report noted lower work productivity of women among dual physician couples wherein women with children worked fewer hours as compared with men [15]. A phase III trial designed to improve the success of women randomised 27 departments to intervention versus none, wherein interventions focused on professional development, changes in departmental level and engagement of institutional leaders. Although this intervention improved the productivity of PhD faculty there was no difference in the MD group, suggesting a need for specific programmes for MD faculty that take into cognisance their longer and unpredictable working schedules [16]. An American survey reported an increase in flexible working arrangements not only among women but also in younger two physician families [15]. A large cluster randomised trial also reported that flexible working hours are associated with non-inferior patient outcomes [17]. Academic and private hospitals should therefore initiate such

Table 1

Respondent suggested thrust areas for improving professional performance of women oncologists

Potential thrust areas for improving work performance	
Short-term intensive fellowships programmes	52%
Part-time or flexible job timings	32%
Dedicated seats for women in leadership positions in organisations and national scientific bodies	24%
Increased work from home digital platforms	20%
Female mentorship programmes	19%
Strong anti-gender discrimination policies at workplace	18%
Others	8%

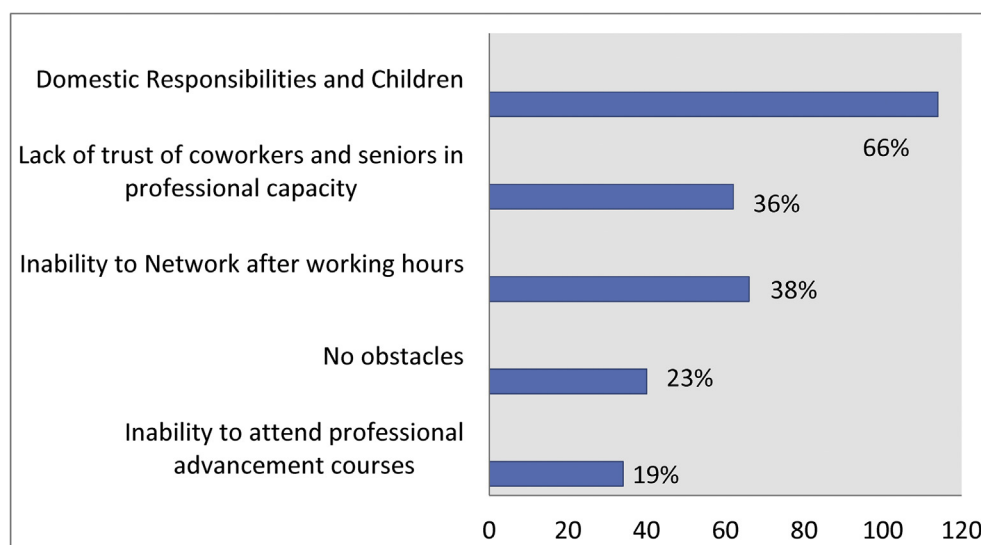


Fig 1. Common obstacles that women oncologists reported as limiting factors for their optimal professional performance.

strategies. Another tested methodology is the development of digital home working platforms. Since 2014, Tata Memorial Centre NCG Navya Online has been used to provide oncology opinion to meet a shortage of expert oncologist workforce and has reported high acceptability [18]. Therefore, a system of virtual physician practice could be piloted. If found to be successful, such interfaces may not only allow flexibility in physician working hours but also help to improve the deficit in the oncology workforce.

Participating in leadership development programmes is associated with increased performance [19]. Short-term intensive training workshops, as initiated by the National Academy of Sciences and Department of Science and Technology [20], may be increasingly utilised to develop leadership and soft skills. In the present survey, respondents reported gender discrimination in the workplace, lower patient referrals and pay. Structured training efforts may be required to reduce the prevalent bias. A cluster-randomised trial that focused on breaking gender bias habit in medicine allocated 92 departments to either a 2.5-h workshop or control. Workshop attendees reported an increase in their awareness of implicit bias, motivation to act without bias and self-efficacy to engage in bias reduction techniques. Departments wherein >25% faculty attended reported more actions to reduce bias and increased hiring of women employees. Although these strategies could reduce explicit bias, it did not reduce implicit bias [21]. This suggests that the gender bias introduced in early childhood is difficult to break, wherein men are perceived to be strong, decisive, risk taking and independent, whereas women are seen as kind, supportive and nurturing but not performers or leaders.

The societal implicit bias in India is also exemplified in a survey undertaken almost a decade ago wherein Indian national curriculum school textbooks had illustrations mostly featuring men, with women predominantly in a caregiver role [22]. Although women in India have been the head of state, defence minister, space scientist, Olympic medallist, fighter pilot and international lead at the World Health Organization, they are not frequently included in illustrations. It is not surprising that in the last five decades only a few women have led premiere oncology hospitals as directors or as heads of oncology societies. Similarly, there are only 16 (of 535) female recipients of India's prestigious Shanti Swarup Bhatnagar Award, with only 4.9% in medical sciences [23]. Structured government strategies will therefore be required in India to encourage gender neutrality and reduce implicit bias right from childhood. At the institutional level, organisations that build a culture for the development of women should be scored competitively and awarded in public forums (e.g. Culture Conducive to Women's Academic Success [CCWAS] measure). Reporting on institutes, the CCWAS or a similar index could be considered as a mandatory index of organisational performance [24].

Although in 2017 India slipped down on the overall global gender indices [25], we sincerely hope that in years to come government policies like the Paternity Bill 2017

[26] and other proactive initiatives will take cognisance of the needs of working women. We hope that these initiatives will help to plug the leaky pipeline in medicine and in future the Indian health system will be empowered to meet the mandate of universal health care by strong integration of women physicians.

Conflict of interest

The authors declare no conflict of interest.

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Appendix

We are presently doing a survey of women oncologists in the country to better understand their needs for academic and professional development at a national level. We sincerely urge you to complete this survey form. The contents of this survey do not have any identifying information and the results will be summarised as a report.

We hope that the results will help various organisations to design specific programmes keeping the needs of women academicians, clinicians and leaders in mind. Therefore, a quick response from you would be appreciated.

1. How old are you?

- a. Less than 30 years
- b. 30–40 years
- c. 40–50 years
- d. >50 years

2. What is your professional ranking?

- a. Research fellow or senior resident
- b. Professor or senior consultant
- c. Assistant professor or junior consultant
- d. Associate professor or intermediate consultant
- e. In training
- f. Other: _____

3. Where do you practice?

- a. Academic university hospital full-time appointment
- b. Private hospital full-time appointment
- c. Freelancing oncologist full-time
- d. Working part-time
- e. On sabbatical
- f. Not working due to personal and family reasons
- g. Other: _____

4. In your working environment are women oncologists equally represented?

- a. Yes women constitute half or more than half the workforce
- b. No Women constitute 25–50% of the workforce
- c. There are only 10–25% women in the workforce
- d. Occasional employee is a women
- e. Other:_____

5. The lead of your team is?

- a. Male
- b. Female

6. Did you receive equal academic development opportunities as compared with your male contemporaries?

- a. Yes
- b. No
- c. Maybe

7. Do you receive equal financial emoluments as your male contemporaries?

- a. Yes
- b. No I receive 75–80% of what my male contemporaries receive for equal work
- c. No I receive less than 75% of what my male contemporaries receive for equal work
- d. No I receive less than 50% of what my male contemporaries receive for equal work

8. Are women in your fraternity equally represented in leadership positions?

- a. Yes
- b. No but there are a reasonable number of women leaders
- c. No there are hardly any women leaders

9. Do you have a leadership position in your institution?

- a. Yes
- b. No

10. Did you get equal opportunities for overseas or training abroad as compared with your male contemporaries?

- a. Yes
- b. No
- c. Yes but I could not make the most of it due to personal or family reasons
- d. Other:_____

11. Do you have equal patient referrals as your male contemporaries?

- a. Yes

- b. No
- c. Other:_____

12. Are you able to attend academic events outside working hours and on weekends as you desire?

- a. Yes
- b. No
- c. Yes but I wish I could do more
- d. Other:_____

13. What do you think are the main obstacles to your professional performance?

- a. Domestic responsibilities
- b. Inability to attend professional advancement courses nationally
- c. Inability to network after working hours
- d. Hesitancy of senior leadership to designate high performance tasks to women
- e. Children
- f. Lack of patient trust in female doctors
- g. Lack of colleagues' trust in your professional ability
- h. No obstacles
- i. Other:_____

14. Have you faced gender discrimination at your workplace?

- a. Yes
- b. No

15. What programmes will improve your professional career development?

- a. Short-term intensive fellowship programmes
- b. Female mentorship programme
- c. Dedicated seats for women in leadership positions in organisations and national bodies
- d. Part-time or flexible working positions
- e. Increased work from home digital platforms
- f. Strong anti-gender discrimination policy at workplace
- g. Other:_____

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