



Original Article

Gender equity awareness among dentists and students of academic institutions – Knowledge, attitude, and perception study

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ABSTRACT

Objectives: Gender equity has been a long-debated topic pertaining to the growth and development of the society. In the field of dentistry and dental education, achieving gender equity is pivotal for fostering a balanced and inclusive environment that maximizes the potential of all practitioners. The aim of the study was to assess the knowledge, attitude, and perception toward gender equity among dental students and faculty members.

Material and Methods: This questionnaire study was conducted for 1 month among 375 faculties and students of various dental colleges in and around Chennai. The questionnaire was formulated and administered electronically through Google Forms. The survey link was shared through various social media platforms, and the responses obtained were then statistically analyzed. The categorical data were analyzed using the χ^2 test and $P \leq 0.05$ was considered as statistically significant.

Results: Out of the 375 members to whom the questionnaire was distributed, it was found through statistical analysis that 71% were unaware of institutional policies related to gender equity in their workplace, and the majority were unaware of the presence of a gender sensitization committee. It has also been noticed that a greater percentage of women (14.5%) are familiar with gender bias in dental education and practice. However, on the bright side, significant results of ($P < 0.4$) reveal that the majority believe that gender equity has been achieved in dentistry.

Conclusion: No significant relationship exists between the sex of an individual and their awareness and understanding of gender equity, but there were a greater number of responses collected from females. This study concludes that although there are more females in this field, gender disparities still exist, and also there is a potential gap in knowledge about gender equity among dental professionals of all genders regarding institutional policies in the workplace for which awareness and training have to be done in the future.

Keywords: Dental education, Dental students, Gender equity, Institutional policies, Women, Workplace

INTRODUCTION

The World Health Organization (WHO) referred to gender as socially constructed characteristics of men and women, boys and girls. As a social construct, gender can vary from one society to another and can be subjected to changes over time. People's experiences with and access to health care, education, and employment possibilities are influenced by their gender. In 1881, the need for women in academia to unite became evident with the foundation of the American Association

of University Women by Professors Marion Talbot and Ellen Richards.^[1] This “Progressive era” was soon followed by multiple waves of feminism and movements, which lead to the *Women in Science and Technology Equal Opportunity Act* to make sure that “men and women have equal opportunity in education, training, and employment in scientific and technical fields.” This resulted in more women setting their foot into the field of scientific and medical academia and yet there are still a number of career obstacles because of the complexity of the workplace and education.

A report on “*Gender disparity at PhD level*” by the Times of India in August 2019 revealed that despite more women entering the realm of higher studies and academic roles in institutions, the number of women enrolling in PhD programs has been consistently lesser than men, year after year. This may be attributed to the University Grants Commission’s decision to derecognizing PhDs offered in distance learning mode, which makes it a wary commitment of 5 years to make for women as it becomes a challenge to strike a balance between personal and professional life among societal pressures. Adding to this, *Beyond Bias and Barriers* study report conclusively showed that higher standards are expected to be met by women than their male counterparts while being less likely to secure tenure in academic institutions. These are only a handful of the many instances that demonstrate how important the instillation of gender equity is in educational and healthcare institutions and the reality of the absence of gender parity in multiple situations. According to recent data, a number of dental schools did not provide paid leave for parents or grandparents (3.1%), a “tenure clock” that was automatically extended upon births or adoption (13.3%), dual career appointments (21.9%), or required representation on search committees (15.6%). This shows that despite working at par or above their male counterparts, women are not provided with the necessary benefits to be able to balance their personal and professional life, thereby being forced indirectly to choose one of the two, unlike the men of the institution who are not expected directly or indirectly to make such a call. The examination of this data highlights the necessity of important institutional initiatives that will support women in dentistry academia in advancing their careers.^[2]

Every year, the Global Gender Gap Index by the World Economic Forum compares the status of gender parity in four important areas: Political empowerment, health and survival, educational attainment, and economic participation and opportunity. For the year 2023, India has ranked 127 out of 146 countries, which, although it is an improvement by 8 positions compared to 2022, still has a lot of gender gap to close. With respect to educational institutions, steps like introducing a gender sensitization committee have been

seen in the recent past in an attempt to sensitize individuals regarding the gender disparity that exists and bridge the gender gap to move toward a more gender-equitable setting. This is evident with the shift in the paradigm of women in dentistry in India - 50–60% of students in dental schools in India are women and about 15% of the deans in dental colleges in India are females.^[3] However, a look at statistics show that despite the steady increase in the percentage of women dental students, only a small proportion occupies academically significant positions^[4] and is usually placed at the lower end of the academic employment hierarchy, especially in universities^[5] shows that there is still a significant path to traverse in the lane of gender equity. A survey conducted on the potential barriers for women advancing in academic dentistry showed that 67% of the participants feel that women face greater obstacles in their jobs than men do, and more women leaders in the health-care industry are undoubtedly needed to improve the state of women’s health around the world; moreover, 63.5% of women dentists feel that their family responsibilities are a hindrance to career advancement.^[6] This is because women in Indian society occupy a contradictory position: while goddesses are revered for their wealth and power, working women encounter obstacles due to ingrained cultural norms and beliefs.^[7] However, this facet is slowly changing as more women break barriers and are entering into the academic and clinical realm. Out of the 300-odd dental colleges in India, providing undergraduate and postgraduate programs, over 60% of the seats are held by females. However, on the flip side, when we take a look at the percentage of women at higher positions in the hierarchy in institutions, the numbers are extremely low, with a mere 11% of women being the principals and <5% being the vice principals.^[8]

In today’s rapidly evolving world, the pursuit of gender equity, which entails ensuring fair and impartial treatment for individuals of all genders, is a pivotal aspect of fostering inclusivity and diversity across all professional domains. Within the realm of health care, particularly in the field of dentistry, understanding the knowledge, perceptions, and attitudes of both faculty and students toward gender equity is crucial for promoting a more equitable and balanced future. While the number of women in a professional field like dentistry is increasing, they still have to juggle their professional obligations with the conflicting social and familial roles of marriage, childrearing, and homemaking. Hence, this questionnaire study was designed to explore the insights and perspectives of dental faculty and students on the topic of gender equity. By shedding light on the awareness, attitudes, and potential biases within this specific academic and professional setting, we aim to contribute to the ongoing discourse on gender equality, gender equity, and its vital role in shaping the dental profession.

MATERIAL AND METHODS

This research employed a questionnaire-based study design to investigate the knowledge, perceptions, and attitudes toward gender equity among the faculty and students of dental colleges and hospitals in the Chennai metropolitan area. Data collection for this study took place over the course of 2 months, starting from December 2023 to February 2024 with a target sample size of 400 participants, which was determined to be adequate to yield statistically meaningful results.

The questionnaire was designed specifically for this study and administered electronically Google Forms. The survey link was shared through various social media platforms, reaching a diverse audience of dental faculty undergraduate and postgraduate students in the age group of 18 years–50 years. The online format of the questionnaire allowed for efficient data collection and management, facilitating a streamlined analysis of responses. The responses obtained through Google Forms were then compiled and organized for subsequent analysis. Strict confidentiality and data protection measures were observed throughout the data collection process to safeguard participants' privacy and anonymity.

RESULTS

The questionnaire was distributed to 400 members and out of them 375 responded, indicating a response rate of 87.5%. Among the 175 respondents, 69.7% were female, 29.1% were male, and the remaining 0.2% individuals preferred to not reveal their gender. The respondents were almost equally distributed among undergraduate postgraduate students and faculty in dental schools (tutor, assistant professor, associate professor, professor).

Questions 1–7 evaluate the knowledge of the respondents about gender equity: 8–11 regarding the perception of gender equity in dental education and workplace and 11–15 questions assess the attitude of the individuals towards gender equity in dentistry.

Statistical analysis of the questionnaire

Before we go into the significance of each question, on the whole, there has been a greater proportion of responses from the female population, which may be largely attributable to the fact that currently the field of dentistry is female-dominated.

The question no. 4 [Table 1] yielded a statistically significant $P = 0.04$, which largely underscores the relevance of institutional efforts with respect to gender equity awareness. This suggests that addressing the awareness of gender equity policies within dental academic institutions is pivotal and also implies that a potential gap exists in the understanding

and highlights the need for targeted initiatives. This suggests a tangible association, emphasizing the need to prioritize and strengthen policies promoting gender equity in dental schools and workplaces while also acknowledging and addressing the awareness gap that exists can contribute to fostering a more inclusive and equitable environment within these institutions.

The question no. 5 [Table 1] inquiry into awareness of a gender sensitization committee produced a remarkably low $P = 0.00$, indicating an exceptionally high level of statistical significance. This compelling statistical result underscores the profound significance of the existence and recognition of gender sensitization committees within academic settings. The implication here is that there exists a pervasive lack of awareness regarding these committees, signaling a critical need for attention and intervention. In the broader context of the discussion, the negligible P -value suggests a widespread gap in knowledge, emphasizing the urgency for targeted awareness campaigns and educational initiatives aimed at ensuring that individuals within these institutions are not only cognizant of the existence of such committees but also understand their crucial role in advancing gender equity. Increased awareness may lead to greater participation in committee activities, improved reporting of gender-based concerns, and ultimately contribute to a cultural shift towards greater gender sensitivity and equity within the academic landscape.

The question no. 6 [Table 1] assessing familiarity with gender bias in dental education and practice, with a $P = 0.01$, indicates a high level of statistical significance. Notably, a significant proportion of respondents indicated being "Somewhat familiar" with the concept. This suggests a moderate awareness within the dental community but signals room for improvement. Considering the implications, targeted educational interventions can further enhance understanding, ultimately fostering a more informed and equitable environment within dental education and practice.

The question no. 8 [Table 1] probing opinions on the achievement of gender equity in dentistry, with a significant $P = 0.04$ indicates a noteworthy perspective. A considerable number of respondents expressed the belief that gender equity is fully achieved in the field, emphasizing an optimistic outlook. This finding prompts further exploration into the factors contributing to this perception, potentially uncovering valuable insights for sustaining and advancing gender equity initiatives within the field of dentistry.

Questions, including those on understanding gender equity, perceiving differences between gender equity and equality, recognizing its importance in dentistry, barriers to women's leadership advancement, instances of gender bias, belief in the positive impact of gender equity, potential

Table 1: Distribution of responses given by male and female dental students, professionals and faculty to each question of the gender equity questionnaire.

S. No.	Question	Male (%)	Female (%)	P-value
1.	Do you know what gender equity is?			
	Yes	40 (80)	107 (90)	0.76 (NS)
	No	5 (10)	8 (5)	
	Maybe	5 (10)	6 (5)	
2.	Do you feel gender equity and gender equality are different?			
	Yes	29 (58)	66 (55.5)	0.61 (NS)
	No	10 (20)	29 (24.4)	
	Maybe	11 (22)	24 (20.1)	
3.	Do you believe that gender equity is essential in the field of dentistry?			
	Yes	41 (82)	92 (77.3)	0.96 (NS)
	No	2 (4)	8 (6.7)	
	Maybe	7 (14)	19 (16)	
4.	Are you aware of any institutional policies or guidelines related to gender equity in your dental school/workplace?			
	Yes	11 (22)	39 (78)	0.04 (S)
	No	35 (29.4)	86 (70.6)	
5.	Are you aware of gender sensitization committee?			
	Yes	8 (16)	42 (84)	0.00 (HS)
	No	26 (21.8)	93 (78.2)	
6.	How familiar are you with the concept of gender bias in dental education and practice?			
	Very familiar	7 (14)	17 (14.3)	0.01 (HS)
	Somewhat familiar	32 (64)	63 (52.9)	
	Not familiar	11 (22.5)	39 (32.8)	
7.	Please rate your knowledge of gender disparities in the following aspects of dentistry (1=Very low knowledge, 5=Very high knowledge)			
	Representation of genders in dental leadership positions (e.g., department heads, deans)			0.00 (HS)
	Gender-based pay gap in the dental profession			
	Access to opportunities for career advancement based on gender			
	Gender-specific challenges faced by dental professionals in their careers			
8.	In your opinion, do you think that gender equity is currently achieved in the field of dentistry?			
	Yes, completely	41 (82)	92 (77.3)	0.04 (S)
	Yes, to some extent	2 (4)	8 (6.7)	
	No, not at all	7 (14)	19 (16)	
9.	What do you think are the ways in which women are held up from advancing to leadership?			
	Lack of an active network			0.19 (NS)
	Lack of role in highly visible project			
	Lack of potential/performance			
	Lack of time			
10.	What do you think are the inclusive leadership roles within your dental school/organization/workplace?			

(Contd...)

Table 1: (Continued).

S. No.	Question	Male (%)	Female (%)	P-value
	Leading inward (learns, takes ownership of mistakes)			
	Leading outward (thinks in another's point of view, gives opportunity to marginalized people)			
	None of the above	0 (0)	0 (0)	
	All of the above	0 (0)	0 (0)	
11.	Have you observed any instances of gender discrimination or bias in your dental education or workplace?			
	Yes	10 (20)	42 (80)	0.29 (NS)
	No	26 (15)	99 (85)	
12.	Do you believe that promoting gender equity would positively impact the dental profession as a whole?			
	Yes	38 (76)	92 (78)	0.74 (NS)
	No	5 (10)	11 (10)	
	Not sure	7 (14)	17 (12)	
13.	What do you think are the strategies/policies that could be implemented to enhance gender equity within the dental school/organization/workplace			
	Parental leave	29 (58)	66 (55.5)	0.10 (NS)
	Flexible/remote work options	10 (20)	29 (24.4)	
	Sponsorship/mentorship	11 (22)	24 (20.1)	
	Other			
14.	How confident do you feel in addressing gender-related issues within the dental school/workplace?			
	Very confident	29 (58)	66 (55.5)	0.56 (NS)
	Somewhat confident	20 (30)	19 (12.4)	
	Not confident	24 (12)	24 (20.1)	
15.	Have you received any training or workshop on gender equity and diversity in dentistry?			
	Yes	5 (10)	45 (13)	0.71 (NS)
	No	16 (90)	104 (87)	

NS: Not significant, S: Significant, HS: Highly significant

strategies, confidence in addressing gender issues, and receipt of training, collectively yielded high *P*-values (>0.5), indicating no statistical significance. These non-significant results suggest that, based on the surveyed sample, there is no strong evidence of consistent opinions or patterns and a lack of understanding regarding these aspects. This finding underscores the need for further exploration and nuanced investigation into the complexities of gender-related perceptions within the dental community.

DISCUSSION

Gender equity and gender equality and its status in India

According to the European Institute for Gender Equality, Gender equity is the “provision of fairness and justice in the distribution of benefits and responsibilities between

women, men, and all genders.” On the other hand, gender equality has been defined as “Equal rights, responsibilities and opportunities of women and men and girls and boys.”^[1] While gender equality focuses on ensuring equal rights, opportunities, and treatment for all genders, gender equity goes a step further, addressing the unique needs and challenges of different genders to achieve fairness. Its focus lies on customizing approaches to create true parity. In India, strides toward gender equality have been made, with improvements in education and workforce participation for women. However, challenges persist due to deeply entrenched societal norms, reflected in issues like gender-based violence and unequal representation.^[6] The nation is actively addressing these issues through legal reforms and awareness campaigns, yet sustained efforts are needed to achieve genuine gender equity across all sectors of society.

Legal measures for gender equality and equity in India

India has enacted several laws to promote gender equality and equity. The Constitution of India, through Articles 14 and 15, prohibits discrimination on grounds of gender. The Maternity Benefit Act ensures women's rights in the workforce by providing maternity leave and other benefits.^[8] The Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act addresses workplace harassment.^[9,10] In addition, the Prohibition of Child Marriage Act and Dowry Prohibition Act aim to curb harmful practices affecting women. While these legal frameworks are crucial steps, their effective implementation and continued efforts are essential for achieving lasting gender equality in the country.

Importance of gender equity in academic dental institutions

Gender equity is crucial in academic dental institutions to ensure equal opportunities, foster diversity, and create an inclusive learning environment. It addresses gender disparities and ensures that all individuals, regardless of gender, have equal opportunities for education, research, and leadership roles. This not only promotes fairness but also enhances innovation and perspectives in the field of dentistry, which in turn helps prepare healthcare professionals to serve diverse patient populations and aligns with legal and ethical obligations, ultimately contributing to a more equitable and effective dental healthcare system.

Understanding and awareness of gender equity among academic dental institutions

The understanding and awareness of gender equity among academic dental institutions are essential for fostering a more inclusive and equitable environment. This involves recognizing historical imbalances, promoting equal opportunities, addressing gender-based challenges, and actively supporting diversity in all aspects of education, research, and clinical practice. It also requires regular training and awareness programs to ensure that faculty, staff, and students are well-informed and committed to gender equity principles, creating an environment where all individuals, regardless of gender, can thrive and contribute to the field of dentistry. Keeping this in mind, many institutions across the country have initiated committees such as the "gender sensitization committee," which are dedicated to advancing gender equity, fostering a culture of continuous learning and improvement. Apart from this, there have also been other noticeable steps, such as mentorship programs and transparent recruitment processes.

While the knowledge of gender equity and its understanding is constantly improving, this research is an attempt to better

assess the knowledge, attitude, and perception of gender equity among dental students and faculties and work along the hypothesis of "There is a significant relationship between gender equity awareness and sex of a student/faculty."

Barriers hindering women's progression to leadership roles in Indian workplaces

Women in India face formidable barriers when aspiring to leadership roles in the workplace. Deep-seated gender biases, cultural expectations, and stereotypical norms often hinder their progress. Limited access to mentorship and networking opportunities, coupled with a lack of family-friendly policies, can impede career advancement. In addition, pervasive workplace discrimination and unequal opportunities further contribute to the underrepresentation of women in leadership positions. Addressing these barriers requires a multifaceted approach, involving both cultural shifts and organizational reforms to create a more inclusive and equitable professional landscape for women in India.^[6]

Taking a look at the studies that have been performed previously along the lines of gender equity, these have been conducted predominantly on school-going children, adolescents, and teachers. Conducting such a questionnaire based study to understand the realms of equitable gender in a professional field like dentistry has been a first-of-a-kind of this study. In addition, it was also noticed that such a study has not been conducted in prior, with respect to the academic institutions and faculty of a professional course. Hence, our study delved into these unexplored aspects and shows that while there has been an optimistic outlook on the achievement of gender equity in dentistry, the lack of clear awareness regarding the concept of gender equity in dentistry, the presence of gender biases and the absence of women in most leadership roles prove otherwise.

CONCLUSION

The findings of the study suggested that no significant relationship exists between the sex of an individual and their awareness and understanding of gender equity. The study has provided valuable insights into perceptions surrounding gender equity within the dental community. While certain aspects, such as awareness of gender sensitization committees and familiarity with gender bias, were identified as significant. In future, the dental educational institutions should be pioneer to ensure that its members are well-informed and made aware of their rights in a non-threatening and friendly environment. This could include organizing awareness workshops, inviting speakers to classrooms, providing role models, and distributing informative materials to enhance students' awareness on these matters. Education is a powerful tool and studies have shown that gender sensitization through

academic institutions can be a very effective tool in shaping young minds with respect to their perception, awareness, and general thought process of gender.

Ethical approval

The research/study approved by the Institutional Ethics Committee at SRM Medical College Hospital & Research Centre, number 1782/IEC/2023, dated 28th May 2024.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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