

# Gender Bias Existence: A Qualitative Exploration of Dental Students' Perception of the Impact of their Gender on Learning in Clinical Practice

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## ABSTRACT

**Introduction:** Gender bias in clinical practice is a topic that has received increasing attention in recent years; however, little is known about how dental students perceive and experience gender bias in their training.

**Objective:** To explore dental students' perceptions regarding the existence of gender bias and the impact of their gender on their learning in clinical practice.

**Methods:** The qualitative exploratory research design was used to conduct this study using semi-structured interviews. Data was collected from a diverse group of 15 undergraduate dental students at different stages of studies. Interviews were transcribed and analysed to form themes.

**Results:** Dental students perceive that there is a vital role of gender in the mentorship they receive in clinical practice and learning opportunities.

**Conclusion:** Spreading awareness of gender bias during undergraduate programmes can help supervisors focus on its effect and help them find ways to reduce it. These findings highlight the need for urgent attention to gender bias in dental education and the importance of creating a fair, just and inclusive learning environment for all students.

**Keywords:** Gender Bias, Stereotype, Gender, Dental Student, Clinical Learning

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## INTRODUCTION

Gender bias is a prevalent and persistent problem in healthcare (Samuriwo et al., 2020). Gender discrimination can limit the individual to benefit from opportunities, resources, and rights based on gender stereotypes (Midik et al., 2020). The bias experienced by the students can have a subtle but lasting impact on their emotional and professional well-being and have its own set of educational consequences (Brown et al., 2020).

Gender bias can manifest in numerous ways, from stereotypes about the types of procedures that men and women are capable of performing to biases in the evaluation and mentoring of students (Kramer et al., 2021). Inequalities related to gender can be one of the factors that can decrease the learning opportunities for dental students in clinical practice and it can also hamper the efforts to develop dentists who are equipped to deliver safe, equitable, and fair care (Samuriwo et al., 2020).

Awareness about gender-related disparities has gained increased attention in recent years (Kristofferson et al., 2016). Recognising and acknowledging the presence of bias is the initial step toward working on eliminating it (Sabin et al., 2022). It is fundamental to provide equivalent learning opportunities to stimulate career advancement and patients' positive experiences of care (Brown et al., 2020). Despite the potential negative impact of gender bias on clinical learning and patient care, there is lacking research on dental students' perceptions of gender bias in clinical practice.

This study aims to address this gap in the literature by conducting a qualitative exploration of undergraduate dental

students' experiences and perceptions of gender bias impact on their clinical learning. By exploring these perceptions, this study seeks to contribute to a better understanding of the role of gender in dental education and inform strategies to promote equity and inclusivity in a dental undergraduate program. This will be favourable to those who are on the receiving end of this prejudice as they will feel seen, heard and valued. Our study's principal questions were:

1. Does gender bias exist in undergraduate dental programs?
2. How do dental students perceive the impact of their gender on learning in clinical practice?

## METHODS

A qualitative exploratory research design with a constructivist approach was undertaken for this study. The constructivist qualitative approach highlights participant observation and interviewing for data generation as the researcher aims to understand a phenomenon from the perspective of those experiencing it (Creswell, 2002). Following institutional ethical board approval, undergraduate dental students in their third and fourth year of study from two private dental institutions in Pakistan were invited for interview by their academic tutors. Students who had undergone placements in clinical rotations were selected as they could provide better insight into clinical learning and if at all there was indeed the presence of any form of gender bias along with the impact it might have.

A consent form with a brief description of the study, objectives, methodology and expectations was shared through Google forms with all the participants. We collected qualitative data using semi-structured, one-on-one interviews of the participants conducted by AAR, MAA and OB after obtaining their consent. The format for the semi-structured interview was taken from a pre-validated interview sample (Samuriwo et al., 2020). Open-ended questions were asked during the interview

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to explore students' perception of the influence of gender on learning in clinical practice based on their experiences. Some of the main questions asked were; what gender did the participant identify with? Which interactions with different people within the interprofessional teams of different departments related to gender differentiation and subsequent bias stood out? How did they perceive gender norms and biases during their studies and training? What suggestions do they have to overcome any issues faced?

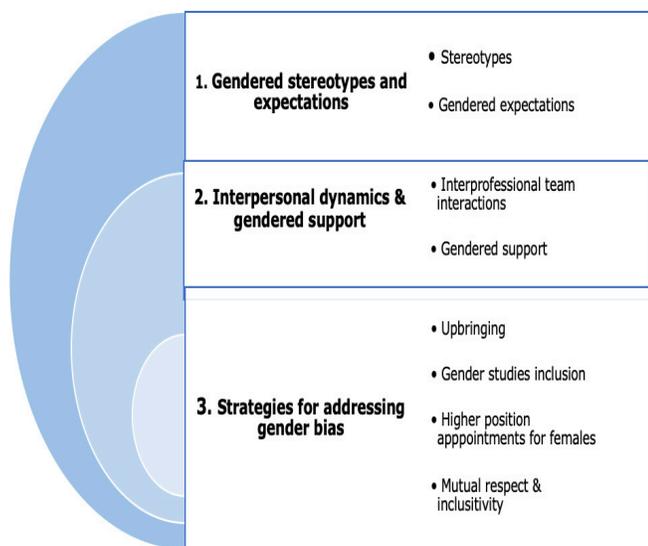
Our one-on-one interviews approach for data collection was appropriate as it helped us with an in-depth exploration of the perspectives and insights of the individual participant. It also established rapport, confidentiality and trust-building between the researcher and participant (Busetto et al., 2020).

Data saturation was achieved after 15 interviews were completed and interviews were ceased at this point. 15 students were interviewed online via Zoom for this purpose which included eight females and seven males. We adopted a purposive sampling approach to ensure that all genders were included. Audio recordings were transcribed and re-examined for accuracy using Otter.ai, which stores data linked to an official account with encryption. Results from the transcripts were only shared between the researchers involved in the study. Anonymity of the participants was maintained as no personal details (such as names, surnames, etc.) were recorded or transcribed.

**RESULTS**

The sample of 8 females and 7 males dental students from the third and fourth year of dental undergraduate studies completed the interviews. These participants were from various cultural and religious backgrounds. We analysed and combined the results to form three main themes which are further divided into subthemes based on students' experiences. The three main themes which emerged are gendered stereotypes and expectations, interpersonal dynamics and gendered support and strategies for addressing gender bias.

**Gendered Stereotypes and Expectations**



Results showed that every participant believed that their gender played an important role in the interaction they had with members of an interprofessional team. They mentioned that it had an impact on their learning in clinical practice because of the presence of preconceived notions that you have to possess certain traits related to their gender to pursue a specific field of dentistry. They also thought that these gendered interactions would have been different if they were of a different gender. All the students stated that women in dentistry were assumed and considered to be less emotionally stable than males. They are good at studies and can be more intellectual but will not be good clinicians, which meant that there were lower expectations from them in more challenging and demanding specialties such as maxillofacial surgery.

I've come across a lot of teachers, who have this opinion, that women are bad clinicians, but they might be good at studies. They might be 'nerds', and have more distinctions than a guy but they can't be good clinicians (P1, Y3D).

Some participants said that it is a common practice to assign patients to students according to a stereotypical approach. Female students are typically assumed to be better with children so they are given paediatric patients subtly guiding them toward that specialty - while indicating the specialty which they thought was better suited for females based on their implicit gender bias. Male students are encouraged to pursue a career in the surgical specialty.

Some people do believe that certain genders aren't able to perform certain tasks. Some people believe that females are better at dealing with children in paediatric dentistry, and in other cases, some people believe that men are better suited for surgical work P2, Y4D).

Most participants also reported that females were explicitly called out and snubbed if they wished to take up surgery as a career. They were told they can't be surgeons because it will be challenging for them if they wanted to have a family and children.

A female colleague of mine mentioned how passionate she is about surgery and that she wants to pursue it later. Our professor ridiculed her and said that it is not very suited for women as they have to later on get married and manage their homes as well. I found it was very misogynistic (P3, Y3D).

Some participants stated that some of their colleagues thought that women had it easier during the clinics as well as during assessment because of their gender. They were subject to banter in which they were told they would pass the assessment, disregarding their intellect. Some students said they were held more accountable unfairly while their female counterparts were shown leniency if something would go wrong during clinical rotations.

My male colleagues, they think that just because you're a female, you can charm your way into getting good grades in your viva and they don't even try to hide it. (P4, Y3D) The students messed up a case, but the only person that was held accountable

was the male student, not his paired female colleague. I feel like females do have it slightly easier in terms of that they don't get held accountable as such for the mistakes they do, compared to males (P5, Y4D).

### **Interpersonal Dynamics and Gendered Support**

Every participant affirmed that the gendered stereotypes and expectations had a bearing on their learning in clinical practice and most of them claimed that the interprofessional team interaction and support was influenced by their gender. While some of the participants thought that their gender did not play any role in their learning, some women participants reported that they were not taken seriously because of their gender.

I think the dental assistants and the helping staff, all of them, they are slightly more lenient, and slightly softer towards women (P6, Y3D).

I was drafting a denture, and I was having a lot of trouble as it was my first time. There was a dental technician and I asked her for help. She gladly helped me out and guided me through the process (P3, Y3D).

I felt that the dental assistants of this university, they are more bias toward the gentlemen (P4, Y3D).

Lab assistants, they do not listen to me. They tend to listen to the boys more. And this is possibly the case because they do not take us seriously. They underestimate us (P7, Y4D).

Most participants were of the view that having mentors, unbiased support, and training from the members of the interprofessional team affected their motivation and learning. However, they felt that gender discrimination is a pressing issue and needs immediate attention as it has an impact on students' learning, passion, and choice of career as well as having a trickle-down effect.

During my studies, my supervisor motivated me a lot. Throughout my time over here, he was the one person who kept on pushing me to become better. He was the reason why I started believing in myself and I realized that if I put in enough work, I could get distinctions (P7, Y4D).

The differences between them will only increase that disparity as long as teachers continue to differentiate between boys and girls merely for being boys and girls. Gender bias can impact your learning, passion and the choice of your career (P1, Y3D).

### **Strategies for addressing gender bias**

Many recommendations were given by the participant as they felt that gender discrimination is affecting their learning and directing them to choose career paths, they are not passionate about. Many of them stated that change and gender equality learning should begin at home and should be inculcated in children which will later reflect the form of interaction they will have with people. Some of them were of the view that gender studies should be included as a course during formal studies. One participant mentioned that appointing females to

higher positions can help address the issues women face in this profession and can bring change. Another participant also said that building an environment of positivity and inclusivity can counter this issue.

Change should occur at home I think the parents should be completely dedicated and they should be devoted to teaching their children to treat everyone equally by remodelling (P3, Y3D).

To avoid any knowledge gaps and to combat the discrimination that is being, you know, promoted in various settings of healthcare, I guess that the gender studies should be included, which can reduce instances of compromised patient care (P5, Y3D).

I feel like it could be challenged or changed by appointing more females in higher positions (P7, Y4D).

I feel respect should be maintained at all levels I feel a positive environment can make a huge difference (P8, Y4D).

## **DISCUSSION**

The results presented shed light on the experiences of female and male dental students concerning gender bias within the field of dentistry. Let's delve into each of these themes and explore the implications and potential solutions:

### **Gendered stereotypes and expectations**

The study revealed that participants perceived gendered stereotypes and expectations to have a significant impact on their interactions and learning experiences. Female students reported facing biases such as being considered less emotionally stable and having lower expectations placed on them in challenging specialties like surgery. On the other hand, male students felt pressure to pursue surgical specialties while female students were subtly guided towards paediatric dentistry. Additionally, women expressed concerns about being discouraged from pursuing surgery due to assumptions about their future family responsibilities.

This highlights the persistence of gendered stereotypes and biases within the dental professions especially the surgical specialties which have traditionally been male-dominated, with a work culture that tends to reflect masculine stereotypes (Kramer et al., 2021). It can hinder career opportunities and limit the potential of both male and female students.

### **Interpersonal dynamics and gendered support**

Participants noted that gender biases influenced their interactions with the interprofessional team. Some female students felt that they were not taken seriously, while others reported being subjected to leniency or higher levels of accountability based on their gender. According to previous data, female undergraduate medical students frequently reported experiencing gender-related discrimination, often in the form of being ignored or not being taken seriously (Kristofferson et al., 2016). The influence of gender bias on the support received from colleagues

and mentors was also highlighted, with some participants emphasizing the importance of unbiased support for motivation and learning.

### Strategies for addressing gender bias

Participants recognized the need to address gender bias and suggested various strategies for change. They emphasized the role of education and upbringing, suggesting that gender equality should be taught and practiced from an early age. Including gender studies as a formal course in dental education was proposed as a means to combat discrimination and promote patient-centred care. The importance of appointing more women to higher positions in the dental field was also highlighted as a way to address the challenges faced by female professionals and studies have shown that women are generally underrepresented in leadership positions (Alzahrani et al., 2022).

Changes can revolve around the implementation of these strategies and explore additional measures that can be taken to address gender bias effectively. They can also delve into the role of professional organizations, dental institutions, and policymakers in promoting gender equality and diversity within the dental profession. Previous studies have emphasized on the importance of mentoring to eradicate any preconceptions related to gender roles and expectations (Westgarth, 2021).

Overall, the results presented in this study provide valuable insights into the experiences of dental students regarding gender bias. By engaging in discussions based on these findings, we can work towards creating a more equitable and inclusive environment in dental education and practice, ensuring that all individuals have equal opportunities to thrive and contribute to the field.

### CONCLUSION

The results of this study highlight the experiences of female and male dental students regarding gender bias in dentistry. Female students face stereotypes and expectations that affect their interactions and career prospects, while male students feel pressure to pursue certain specialties. Gender biases also impact interpersonal dynamics and support within the profession. Strategies for addressing bias include education, gender studies in dental curriculum, and promoting women in leadership roles. Implementing these strategies can create a more inclusive and equitable environment in dental education and practice. Overall, it is essential to challenge biases and provide equal opportunities for all individuals in the field of dentistry.

### DECLARATION OF INTEREST

The author declare no conflict of interest.

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### AUTHOR'S CONTRIBUTION

- A.R:** Created concept and design of the research, prepared initial draft, collected data, interpreted the results and generated discussion and conclusion.
- M.A.A:** Data collection and Proof reading.
- O.B:** substantial contributions to conception and design, & acquisition of data.