

# Dental Aesthetic Perceptions of Dental Interns at Majmaah University in Saudi Arabia: A Pilot Study

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## Abstract

The objective was to assess the perceptions of dental aesthetics among dental interns. A questionnaire study was carried out with dental interns at Majmaah University in Saudi Arabia. The self-administered questionnaire was distributed to the interns enrolled at the College of Dentistry, Majmaah University. The data collection includes socio-demographic information and individuals' perceptions regarding their dental aesthetics. The statistical analysis utilized Pearson's chi-square test, with a significance level established at 5% ( $p < 0.05$ ). A total of 10 students, comprising 5 males and 5 females, participated in the study questionnaire, with an average age of 23 years. The majority of the female students perceived that their peers had more appealing smiles, while also exhibiting greater confidence in their own smiles compared to others ( $p < 0.05$ ). Characteristic Dental students from the Arabian region exhibit a range of perspectives regarding aesthetics. Male students perceive that others possess appealing smiles, whereas female students express confidence in their own smiles. The evaluation of aesthetics in the anterior region among the interns attending Majmaah University appears to be unaffected by gender.

## Keywords

Aesthetics, Dental Interns, Saudi Arabia, Smile, Tooth Color.

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## Introduction

Dental aesthetics plays a crucial role in the overall treatment outcomes and patient satisfaction, influencing both the psychological well-being of individuals and the professional

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success of dental practitioners.<sup>[1]</sup> Understanding the factors that shape these perceptions is essential for developing effective educational strategies and improving clinical practices within dental schools.<sup>[2-4]</sup> The perception of dental aesthetics among dental interns and students is a critical area of study, as it reflects their understanding and attitudes toward smile enhancement and patient satisfaction.<sup>[6,7]</sup> This research synthesis explores the perceptions of dental aesthetics, focusing on gender differences, the influence of education, and the psychosocial impact of dental aesthetics.<sup>[8-10]</sup> In many cultures, the color of a person's teeth is considered essential, and different countries have their cultural preferences for this. <sup>[11]</sup> To validate the results, more studies will be conducted in various regions and scenarios to ensure reliability.<sup>[12,13]</sup> Additionally, the studies will investigate factors associated with confidence in smiling and other significant factors that could change a person's perception of aesthetics.<sup>[6,8,10,11,14]</sup> This will allow dental professionals to focus on these aspects to create a better smile and meet the dental aesthetic expectations of their patients. Individuals' preferences, culture, sociodemographic factors, and perceived dental treatments all influence dental aesthetics, an essential component of beauty concepts.<sup>[15,16-18]</sup> Dental aesthetics aims to make patients satisfied in terms of high self-esteem through the creation of beauty and attraction. Factors such as color, tooth shape, and dental arch shape are the main contributors to dental aesthetics. The undergraduate curriculum includes aesthetic dentistry in the final year.<sup>[6,9,10]</sup> There are various studies reported from Saudi Arabia and worldwide about the self-perceptions of dental students regarding dental aesthetics. However, the self-perceptions of interns in dental aesthetics have not been documented in literature. Therefore, there is a need to understand the self-perceptions of aesthetics among interns from Saudi Arabia. The purpose of the study was to assess perceptions of dental aesthetics among the interns from Saudi Arabia.

## **Methods**

This cross-sectional study aimed to investigate dental and medical interns in Saudi Arabia using an online survey. The survey was conducted at the beginning of the academic year in September 2023. The institutional ethical committee of Majmaah University, Al Majmaah, Kingdom of Saudi Arabia, has approved the study under the Institutional Review Board (IRB) number MUREC-Nov.25/Com/2021-13-1. The study was performed using a questionnaire among the students attending the Faculty of Dentistry, Zulfi, Majmaah University, Saudi Arabia. Only interns were contacted to respond to the survey; those

students who passed the aesthetic dentistry in the fifth year were taken in the study. All the participants were given informed consent before the study. The survey was conducted in person. The questionnaire consists of two sections: (i) section one, which included university ID, gender, and age, and section (ii) Section two included 10 questions (Figure 1) about confidence, smile confidence, mouth-to-mouth contact, perceived superiority, appearance of teeth and gums, and satisfaction with their teeth and gums.

Questions	Responses
Is there someone you believe has a better smile than you?	Yes/No/ Maybe
Are you self-confident about smiling?	Yes/No/ Maybe
Do you look at magazines and wish you had a smile as pretty as the models?	Yes/No/ Maybe
When you look at your smile in the mirror, do you see any defects in your teeth and gums?	Yes/No/ Maybe
Do you wish your teeth were whiter?	Yes/No/ Maybe
Are you satisfied with the way your gums look?	Yes/No/ Maybe
Do you show too many or too few teeth when you smile?	Yes/No/ Maybe
Do you show too much of too little gum when you smile?	Yes/No/ Maybe
Are your teeth too long or too short?	Yes/No/ Maybe
Do you photograph better from one side of your face?	Yes/No/ Maybe

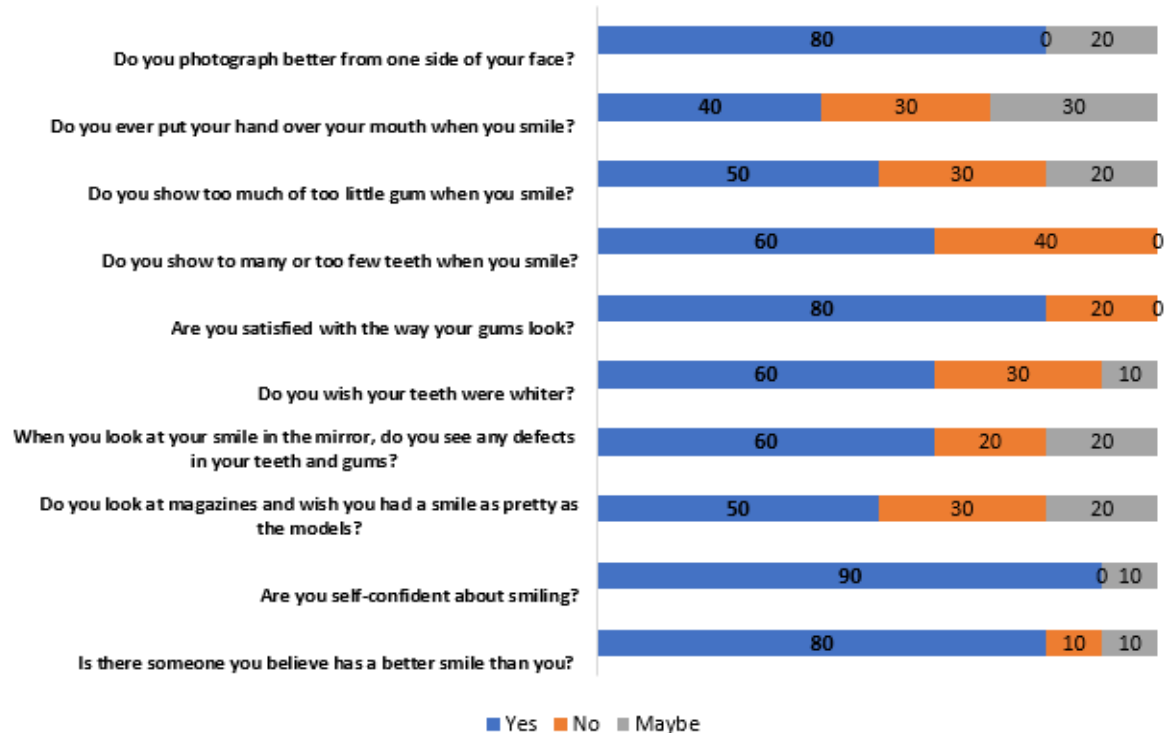
**Figure 1. The questionnaire used in the survey**

Previous studies <sup>[19,20]</sup> tested the reliability of the survey items created by the main investigator, which included a cover page, demographic data, and questions about satisfaction with smiles, causes of dissatisfaction, and the type of smile enhancement treatment received. Participants were also asked about their desire to receive smile enhancement treatment and whether they thought these treatments were harmful. Statistical analyses were performed using IBM SPSS version 22, including descriptive and inferential statistics. Comparisons between groups were made using the Chi-square test with a significance level kept under 0.05.

## Results

Ten interns with  $23 \pm 6$  years of age, were involved in the survey, and among them there was an equal split of five females and five males, creating a perfectly balanced representation of genders in this intriguing study. The overall responses to the questionnaire are summarised in Figure 2. The comparison of the responses based on gender was summarised in Figure 3. Eighty percent of the interns said they thought there were people with smiles that were much better than their own. This belief was shared equally by men and women, with four out of five males and females agreeing, but the statistical significance was not significant ( $p > 0.05$ ). Ninety percent of the participants conveyed a sense of confidence regarding their own smiles,

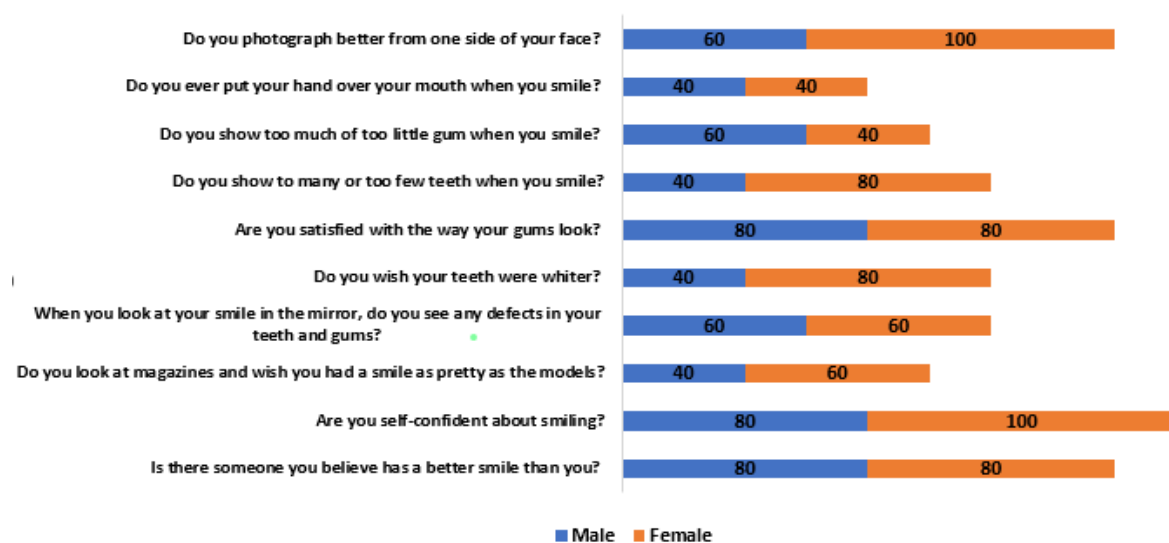
with an astonishing 100% of the females proudly asserting their self-assurance in this regard, while a commendable eighty percent of the males felt a similar sense of confidence radiating from their smiles as well ( $p>0.05$ ).



**Figure 2. The responses of study participants to the overall questionnaire.**

Merely half of the participants, amounting to only 50%, admitted to feeling that their smiles could rival those of models in terms of aesthetic appeal; within this group, 60% were females who felt this way, contrasted by 40% of males who shared the same perspective ( $p > 0.05$ ). In response to the query, “When you gaze into the mirror and behold your smile, do you perceive any imperfections in your teeth and gums?” a notable sixty percent of the interns responded affirmatively, with both males and females representing exactly 60% of this cohort ( $p>0.05$ ). An additional sixty percent of the interns expressed a preference for having teeth that were significantly whiter than they currently were; within this demographic, 40% consisted of males while a larger proportion of 60% were females who desired the same whiteness ( $p > 0.05$ ). A robust eighty percent of the interns conveyed a sense of satisfaction regarding the aesthetic appearance of their gums; within this satisfied group, an equal distribution of males and females reported feeling content with their gum appearance ( $p > 0.05$ ). When contemplating the question, “Do you display an excessive number of teeth or perhaps too few when you smile?” a notable sixty percent of the interns responded positively, comprised of 40% males and 60% females, with males affirming this sentiment as well. In

response to the inquiry, “Do you exhibit too much or too little gum when you smile?” fifty percent of the interns indicated their agreement, with 60% of males echoing this sentiment while only 40% of females felt similarly inclined ( $p>0.05$ ). A modest 40% of the interns reported that they tend to cover their mouths with their hands when they smile, with an equal proportion of 40% among both males and females reflecting this behavior ( $p>0.05$ ). Lastly, a significant eighty percent of the interns felt that their photographs captured their likeness better from one side of the face rather than the other, with an unequivocal 100% of the females affirming this belief, while a slightly lesser but still notable 60% of males responded positively to the same question ( $p > 0.05$ ).



**Figure 3. Comparison among male and females responses.**

### Discussion:

The reported research used facial photos and dental arches for assessment. Prior researchers have studied teeth color, alignment, size, shape, and proportion.<sup>[21-24]</sup> Subsequently, researchers also looked at the horizontal buccal corridor of the gums, the symmetry of the dental arch, the midline deviation diastemata, and the attractiveness of the face.<sup>[22-26]</sup> Ten interns participated in the survey of five males and five females were evenly split, ensuring fair gender representation in this intriguing study. In the present study, eighty percent of interns thought they had better smiles than others, these findings are not in agreement with prior studies.<sup>[19,20]</sup> In the present study eighty of the males and females were agreed with these findings with no significant comparison. An incredible 100% of women confidently expressed their self-confidence in this aspect, while 80% of males sensed the same confidence from their smiles. Surprisingly 90% of participants were confident in their smiles.

Only 50% of participants (60% of females and 40% of males) believed their smiles could rival those of models in aesthetic attractiveness. These findings are in agreement with a n Indian study.<sup>[20]</sup> To ask, "When you gaze into the mirror and behold your smile, do you perceive any imperfections in your teeth and gums?" Many interns said yes since males and females made up 60% of this cohort. Another 60% of interns wanted teeth much whiter while 40% of males and 60% of females wanted the same brightness. These findings are in agreement with a study from Saudi Arabia.<sup>[19]</sup> Of the 80% of interns who liked their gums, males and females were equally delighted. Better aesthetics were linked to marriage, career, and happiness. Early and lifelong aesthetics mentality improves life. Researchers have linked poor oral appearance to social stigma, academic inferiority, and low self-esteem.<sup>[27]</sup> Young people are more aesthetic since they appreciate appearance and a smile.<sup>[28]</sup> However, in the present study, only interns were involved. Comparatively, to males, female patients judged smile aesthetics with higher attention and criticism.<sup>[29-33]</sup> A major determinant of appearance is tooth color, so dental students need to have aesthetic ideas. Dental students are considered the sculptors of a perfect smile for patients; they are future oral healthcare practitioners.<sup>[34]</sup> To recommend or treat, these future dentists should be able to recognize patient expectations, requirements, demands, and aesthetic treatment results. Therefore, the impression these young people have of aesthetics is rather important. Despondently, the research on dentists' opinions on aesthetics is not as thorough as that of common people.<sup>[35]</sup> Therefore, dental students should be encouraged to debate many ideas and concepts in smile design when arranging treatments for their clinical training. When considering the subject, "Do you display an excessive number of teeth or perhaps too few when you smile?" Of the sixty percent of the interns who answered favorably—40% men and 60% females—males also agreed with this viewpoint. In answer to the question, "Do you exhibit too much or too little gum when you smile?" Fifty percent of the interns said they agreed; sixty percent of males said so, while only forty percent of females were similarly inclined. The success of treatment depends much on the agreement of aesthetics in patients' and dentists' perceptions. Dealing with the patient's demands and expectations about aesthetics depends on an awareness of variations in perspective.<sup>[36]</sup> The gingival show or exhibition strongly influences the perception of a smile. A gummy grin or too strong an accumulation of gingival makes a smile uncomfortable. Gender significantly shapes perceptions of dental beauty. Research studies <sup>[37-40]</sup> repeatedly reveal that male and female dental students and interns view their smiles and those of others differently. Female dentistry students frequently show more confidence in

their smiles than their male counterparts. For example, a research study of Saudi Arabian dentistry students revealed that while males were more inclined to view others as having better smiles, female students were more confident about their smiles.<sup>[41]</sup> This is consistent with results from other research, in which females are more critical of their dental look and exhibit usually higher interest in cosmetic procedures.<sup>[42]</sup> Some authors also found that male dentistry students scored higher than female ones on their impressions of facial, dental, and smile aesthetics.<sup>[44,45]</sup> Furthermore, clinical students thought their aesthetic scores were better than pre-clinical ones. Dental experts, dentistry students, laypersons, and Cracel-Nogueira and Pinho<sup>[46]</sup> carried out the investigation, comparing their impressions of the aesthetic smile. The researchers discovered that every one of the subjects had different ideas about smile characteristics and beauty. Additionally, Kokich and colleagues<sup>[47]</sup> conducted a study comparing dental aesthetics between laypeople and dental experts. Finally, with an unambiguous 100% of the females agreeing and a somewhat lower but still noteworthy 60% of males responding positively to the same question, a significant eighty percent of the interns felt that their photographs captured their likeness better from one side of the face rather than the other. Views on others' smiles, on the other hand, often find others to have nicer grins. Males were more likely in Saudi Arabian research to perceive that others had more aesthetically beautiful smiles.<sup>[48]</sup> In a similar vein, research on how Indian dental experts and laypersons see smile aesthetics revealed that males were less judgmental of small changes in smile aesthetics than females.<sup>[49]</sup> These results show the effect of gender on how people portray themselves and view their own appearances since they imply that interns have somewhat different behavioural inclinations and self-perceptions. Developing focused treatments that might improve self-esteem and body image among interns depends on an awareness of these dynamics, which will eventually help to produce more favourable results in their professional growth.<sup>[50,51,52]</sup> Understanding the influence of these attitudes may guide mentoring initiatives and seminars meant to promote a better self-image and inspire interns to value their particular traits while negotiating the difficulties of their career paths. Understanding the influence of these impressions can result in better training courses emphasizing confidence and interpersonal skills development, therefore promoting a more sympathetic attitude to patient treatment.<sup>[53]</sup> This knowledge can result in customized learning courses that improve the training of dental interns so they have skills relevant to different patient preferences and views. Only ten interns were involved in the study and this is pilot study performed among dental interns attending College of dentistry, Majmaah University.

The results cannot be generalised however can be used as reference for further studies. The study also emphasizes interns' need to understand nonverbal communication and self-perception, as these elements might affect patient contacts and general professional growth in the sector.

### **Conclusion**

The study reveals that male and female dental interns at Majmaah University perceive their aesthetic impressions differently. This highlights the complexity of gender relations in the classroom and the influence of societal factors on the work environment. Understanding these differences can help create a more inclusive environment in dentistry education, leading to better educational outcomes and a more harmonious professional community.

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