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## Knowledge and attitude of dental postgraduate students towards oral and peri-oral piercing in Davanagere city: A cross-sectional survey

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### Abstract

**Background:** Oral and perioral piercing when performed under unhygienic conditions, can cause certain complications. Hence, a study was conducted in dental colleges of Davanagere city among postgraduate students with the aim to assess their knowledge and attitude towards oral and peri-oral piercing.

**Methods:** Across-sectional survey involved 212 dental postgraduate students of dental colleges in Davanagere city who consented to participate. A pretested, validated, self-administered questionnaire containing 15 multiple-choice items assessing the postgraduate students' knowledge and attitude towards oral and peri-oral piercing practices was used for data collection. Data was presented in the form of frequencies and percentages.

**Results:** Participants had fair knowledge regarding oral and perioral piercing. Majority of participants (75%) felt oral and peri-oral piercing practices as a sign of style /fashion statement. Around 45-50% felt tongue piercing and nose piercing (66%) as most prevalent type among oral and perioral piercing practices and canine was the most preferred tooth for piercing (43%). Majority (55%) felt that piercing practices were performed by unlicensed people. Many (79%) were aware of complications associated with piercing and suggested removal of pierced metal in such conditions (58%). Around 76.7% said they preferred Cosmetic dentist for piercing and 94% felt that dentists with oral and perioral piercing strongly influence the perception of their patients towards oral piercing.

**Conclusion:** Dental postgraduates had fair knowledge regarding oral and peri-oral piercing practice and its possible complications. However, the attitude towards the practice which is highly prevalent in the society was affirmative and positive among postgraduates which is a cause of concern.

**Keywords:** Perioral, lip piercing, esthetic surgery, facial, dental

### 1. Introduction

The increased prevalence of highly visible body modifications is of interest to all health care professionals. Body modification is defined as (semi-) permanent, deliberate alteration of the human body like body piercing [1]. Piercing is the process of creating a hole in the skin, subcutaneous tissue or cartilage in order to be able to insert jewellery [1]. In developed countries, the prevalence of body piercing including oral and peri-oral piercing among adolescents and young adults is reported to be between 4.3%-51% [2]. The most frequently mentioned motivations in the literature are the expression of individuality and the embellishment of one's own body [1]. Other major reported motivations for the acquisition of body piercings include self-expression, beauty, art and fashion, pleasure, personal narrative, physical endurance, group affiliations and commitment, resistance, spirituality and cultural tradition, provocation, a daring attitude, addiction, sexual motivation, 'just for kicks', etc and new social and cultural movements continue to support the popularity of such practices [1].

Oral and facial piercings have seen a rapid increase in popularity [1]. Oral piercing is a practice that is gaining acceptance as a sign of individuality, marginality, decoration, or group membership [1]. Oral and peri oral piercing that is performed under unhygienic conditions, however, can cause certain complications. Some of these are nerve injuries, allergic reactions, infections, bleeding, aspiration, Hepatitis B, C and D, human immunodeficiency virus (HIV), syphilis and tetanus.

Infection, pain, bleeding, edema, inhalation, dental trauma, contact lesions, and oral interferences, are all complications of lingual piercing [3, 4]. The proportion of the different complications that present with oral piercing varies. In one study, 70% of subjects with piercing had some type of complication compared with 17% in another study. It has been suggested that there might be an association between risk behaviors and piercing practices [5]. It is for this reason that health professionals must be aware of the issues that are caused by piercing, which are fads that are steadily increasing among young people today, and also of their association with risk-taking behavior. They must provide young people, families and teachers education and guidance [5, 6]. Dental professionals need to be aware of the issues surrounding this subject and be able to provide correct information to those who are considering an oral or perioral piercing.<sup>1</sup> Dental professionals may also be confronted by complications to oral health and/or general health resulting from these piercings. As postgraduates are constantly in contact with patients as a part of their clinical exercises, they are at a higher chance of coming across certain complications of oral and peri-oral piercing cases. Dental postgraduates are also faced by knowledge seeking adolescents especially college going students as they perceive it to be our area of specialty. They are usually at the rear end of being asked about safety and complications of oral and perioral piercing. The attitudes of postgraduates' students towards piercing practices are also pertinent as it influences their apprehensions, decisions and queries raised regarding them. Literature search revealed very few studies in this area, therefore a study was planned to assess the knowledge and attitudes of dental postgraduate students towards oral and perioral piercing practices.

## 2. Methodology

A cross sectional survey was conducted in dental colleges of Davanagere city. A detailed list of postgraduate students studying in all the nine specialities of dentistry in two dental colleges of Davanagere was obtained from the respective administrative & examination sections of the colleges. After obtaining the ethical clearance from "Institutional Review Board" and written consent from the post graduate students of both the dental colleges, a self-administered questionnaire was used as the data-collection instrument. Developed on the basis of literature, it consisted of socio-demographic information (institute, department of post-graduation, year of post-graduation, years of clinical experience) and 15 multiple-choice questions to evaluate their knowledge and attitude towards oral and peri-oral piercing practices encountered in their day-to-day practice and learning.

## 2.1 Questionnaire validity

The questionnaire was subjected to pilot testing involving 10 postgraduate students for ensuring its feasibility. Modifications were made accordingly. Questionnaire validation was tested by an expert panel of 8 in the relevant fields. Content Validity Index was calculated to be 0.76 reflecting favorable validity. Cronbach's alpha was calculated ( $\alpha = 0.87$ ) and test-retest analysis showed a good reliability of the questionnaire.

## 2.2 Data collection

A total of 212 subjects agreed to participate in the study. Data was collected at the college premises. Each participant was given a time period of 15 minutes to fill up the questionnaire after which the questionnaire was collected by the investigators. The partially filled/incomplete questionnaires were excluded during data analysis.

## 2.3 Statistical analysis

Data were compiled and tabulated systematically in Microsoft Excel Spreadsheet and subjected to statistical analysis (SPSS version 20.0 (IBM Corporation, SPSS Inc., Chicago, IL, USA). Descriptive statistics were employed to analyze data which was presented in the form of frequencies and percentages.

## 3. Results

A total of 212 questionnaires, that were completely answered were considered for data analysis. Participants had fair knowledge regarding oral and perioral piercing. Majority of participants (75%) felt oral and peri-oral piercing practices as a sign of style /fashion statement. Around 45-50% felt tongue piercing and nose piercing (66%) as most prevalent type among oral and perioral piercing practices and canine was the most preferred tooth for piercing (43%). Majority (55%) felt that piercing practices were performed by unlicensed people. Many (79%) were aware of complications associated with piercing and suggested removal of pierced metal in such conditions (58%). Many felt that piecing would interfere in speech, mastication, deglutition and breathing problems (38%). (Table 1)

Participants had a favorable attitude towards oral and perioral piercing practice. Many felt that being unconventional and dare devil (60%) was the reason for undergoing piercing. Around 75% would treat the patient depending upon the type of complication associated with piercing. Surprisingly many agreed for recommending piercing for their relatives and friends (55%). Around 76.7% said they preferred Cosmetic dentist for piercing and 94% felt that dentists with oral and perioral piercing strongly influence the perception of their patients towards oral piercing. (Table2)

**Table 1:** Distribution of responses to knowledge related questions

Item No	Question	Response	Response rate (%)
1	What do you think is the most common reason for oral and perioral piercing	Self-expression	13
		Symbol of fashion	38
		Beauty	12
		Style statement	37
2	Which is the most common type of oral and perioral piercing practice	Buccal piercing	8
		Tongue piercing	46
		Tooth piercing	36
		others	10
3	Which is the most preferred site for intra oral piercing	Tongue	50
		Lip	36
		Floor of the mouth	7
4	Which is the most preferred site for peri-oral piercing	frenum	7
		Lower lip border	21
		Corner of the mouth	7

		cheek	6
		Nose	66
5	Which is the most preferred tooth for piercing	Central incisors	16
		Lateral incisors	35
		Canines	43
		Premolars/molars	6
6	Who performs oral/perioral piercings	Doctors	9
		dentists	30
		Unlicensed /self-trained people	55
		Self-administered	6
7	Common complication of oral and perioral piercing	Infection	41
		Oedema	6
		Gingival recession	11
		Prolonged bleeding	3
		All the above	39
8	How would you treat a patient with complication of piercing	Prescribe mouthwash	5
		Debridement and irrigation of site	15
		Remove pierced metal/ornament	58
		Prescribe analgesics and antibiotics	22
9	Perioral/oral piercing will interfere with	Speech	29
		Deglutition/Mastication	28
		Airway obstruction	4
		All the above	39

**Table 2:** Distribution of responses to attitude related questions

Item No	Question	Response	Response rate (%)
10	Probable reason for undergoing oral/perioral piercing	Sign of rebellion/emancipation	38
		Daredevilry	32
		Feel unconventional	30
11	Would you treat a patient with complication of perioral piercing	Yes	20
		No	5
		Depends upon type of complication	75
12	Would you recommend oral/perioral piercing to your friends and relatives	Yes	55
		No	32
		Not sure	13
13	your reaction when you see your colleagues with oral/perioral piercing	Inform them about complications	88
		Advise them to get it removed	11
		Stay ignorant	1
14	Whom do you prefer to get an oral /perioral piercing done	Aesthetic/cosmetic dentist	90
		Famous but un licensed person at piercing parlor	10
15	Do you feel dentists with oral and perioral piercing influence the attitude and perceptions of their patients towards oral piercing?	Yes	94
		No	6

#### 4. Discussion

The ancient practice of oral and perioral piercing has been common in western cultures in the past decades, particularly among adolescent and young adults of all socioeconomic levels. Cultural ideals largely influence the type of piercing that is common in different parts of the world. Piercing is done for self-expression, pleasure, individuality and spirituality. Common intra-oral and perioral location for piercing include the tongue, lips and less common sites include the cheek, labial and lingual frenula and uvula [5]. These practices have also seen the rise among the Indian population as well, especially among the adolescents and younger people. However, complications associated with piercing include infection, bleeding and local trauma which are frequent enough to question the safety and dangers of oral piercing [7]. Majority of complications are associated with tongue piercing followed by lip piercing and other forms. Tooth fracture is mostly reported during tongue piercing. Food debris and calculi that accumulate in the piercing area and on surface of the jewelry promote infection. The present study results highlighted the knowledge of postgraduate students regarding piercing and its possible complications faced by patients in day-to-day clinical practice. Study results

could not be compared with other studies as authors could not find any study done among postgraduate students. Garcia-Pola *et al.* in their study found high prevalence of postoperative pain and hemorrhage which were commonly encountered complication in patients with oral and peri-oral piercing [8]. Inflammation was the most frequently self-reported complication associated with piercing. In spite of potential problems, there is a lack of awareness among and even among piercers [9]. Dental professionals are in a unique position to detect dental complications early and to provide information about prevention and maintenance of oral piercings. In fact, the need for education programs targeted at dental students in dental schools is beneficial [1]. A study done by Junco *et al.* showed significant improvement in the scores for the oral piercing knowledge among dental students immediately after completing a training programme which integrated support material, an online platform and an interactive DVD [1]. So, it is recommended for dental schools to assess the knowledge of dental students regarding oral and perioral piercing practices and its complications and design educational models which would improve their skills of identifying the possible complications of such practices and its management in dental practice.

The present study being cross sectional in nature at best can represent the views of a small dental postgraduate sample hence, further studies involving various health professionals' views and opinions on oral piercing would provide the necessary data to influence the policy makers to licentiate only trained and qualified health professionals to carry out oral and perioral piercing practices.

## 5. Conclusion

The present study highlights the varied opinions of the dental postgraduate students about the practice of oral and peri-oral piercing. Dental postgraduate students had fair knowledge regarding oral and perioral piercing practices and their possible complications. This study re-surfaces the willingness of the postgraduate students to treat a patient who reports with a post-operative complication of piercing. Majority stressed on the need for licensed dental practitioners to provide the oral and perioral piercing services.

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