

# Knowledge and Practice of Pediatric Dentists Regarding the Management of Oral Piercings in Adolescents

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## Abstract

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**Objective:** This study aimed to assess pediatric dentists' comfort and confidence providing educational information to patients and caregivers regarding oral piercings.

**Methods:** An electronic questionnaire was emailed on 3 occasions to nearly 6,700 AAPD member pediatric dentists. The survey focused on knowledge of oral piercings, related state laws, and comfort in starting the conversation with 12-17 year old adolescent patients and their guardians.

**Results:** Nearly 90% self-reported encountering patients with oral piercings. Although not significant, this increased with years in practice from 83% with <5 years to 93% with 20+ years (P=.0932). Only 5% identified as "not familiar" with adverse effects of oral piercings. Respondents indicated their knowledge was gained most often in residency (61%) and through experience (52%). Only 31% agreed or strongly agreed that the amount of education in dental school was sufficient for becoming competent providing oral piercing related information. Awareness of the AAPD policy on intraoral/perioral piercings was not significantly associated with knowledge of state laws (P<.0001), with 60% of respondents reporting awareness of the policy, but no knowledge of state laws. Self-reported experience with patients with piercings was not significantly associated with knowledge of state laws (P=.1554) or AAPD Policy (P=.9991). Ninety percent agreed or strongly agreed that it's within their responsibilities as a pediatric dentist to educate patients on potential adverse effects.

**Conclusion:** Pediatric dentists are highly likely to encounter patients with oral/perioral piercings and consider themselves responsible for educating patients and guardians on potential risks.

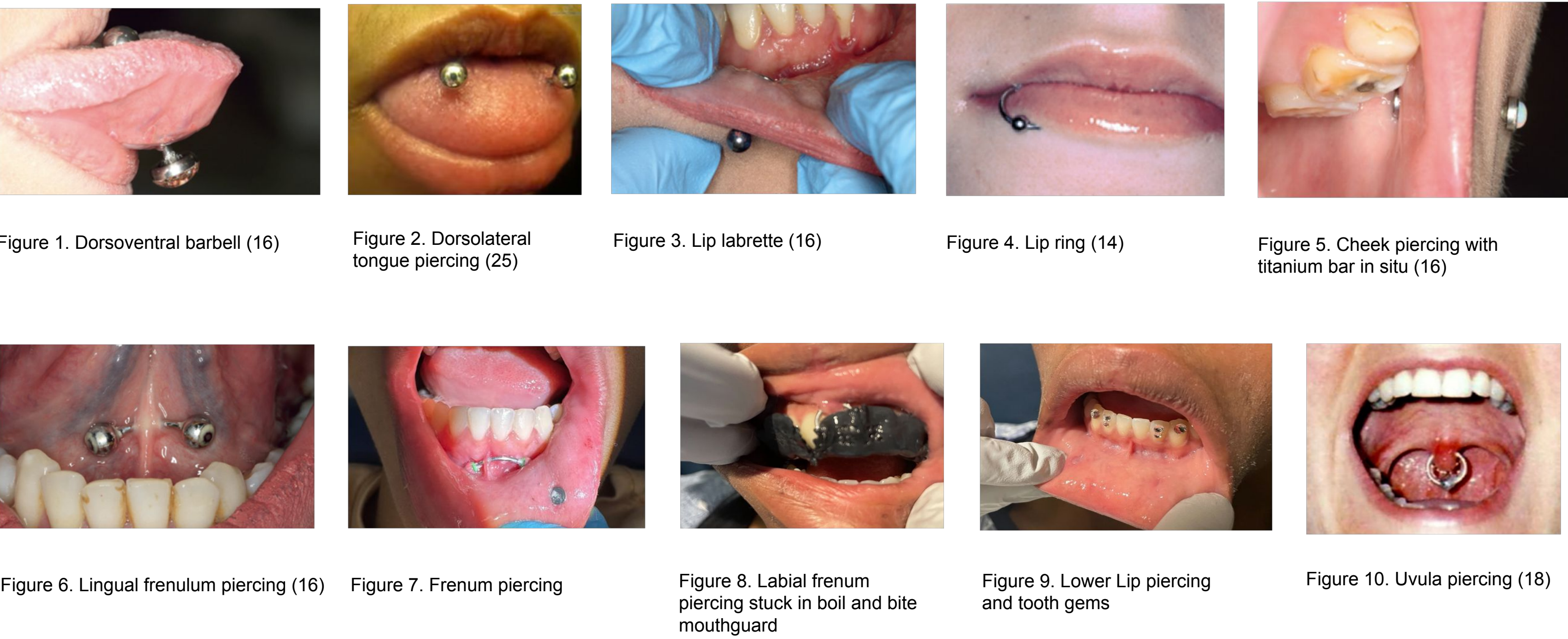
## Introduction

Body piercings have a long history. In the ancient past, they were a representation of status, culture and were used in religious ceremonies(1-4). During the 1970s–1980s, body piercings lost their mostly religious association and were considered as an indicator of rebellion and behavioral problems. Drug and alcohol abuse, anger issues and aggression were associated with those who had tattoos and body piercings (5-7). However, nowadays it has increasingly gained popularity among adolescents and young adults as a form of body art for esthetic reasons and as a self-expression practice (8-10). Among these, oral piercings are the subject of interest in the profession of dentistry. Popular sites for oral piercings are cheeks, lips, tongue, uvula, frenulum or a combination of these sites with tongue being the most popular among those with oral piercings (10,11).

Many adverse effects related to oral piercings have been reported including pain, infection, gingival trauma, severe local gingival destruction, edema, gingival recession, periodontal complications, chipping or fracturing of the teeth, hypersensitivity to metals, keloid formation, salivary flow elevation, airway obstruction, bacterial/viral disease transmission, and speech and swallowing interferences (1,8,11-13,15).

The concern regarding these complications increases with the low level of understanding of the general public regarding these adverse effects (8). This shows the importance of educating the piercing wearer regarding the complications and maintenance of the oral piercing. Dental professionals are in a unique position from educational, preventive and treatment standpoints to address this issue, and their comfort and confidence in providing professional advice is important. The AAPD strongly opposes the practice of piercing intraoral and perioral tissues and the use of jewelry on them due to the potential for pathological conditions and sequelae associated with these practices (17). Early exposure to educational information can result in more knowledgeable decision making by both patients and parents of adolescent patients.

With our focus on adolescent patients, the aims of this study are to (i) assess AAPD pediatric dentists members' comfort and confidence level in providing educational information to patients and their parents/guardians; (ii) ask about the opinion of participating AAPD pediatric dentist members regarding the appropriate time to start the conversation about oral piercing with patients and parents/guardians; (iii) see what percentage of participants are aware of the AAPD's Policy on oral/perioral piercings and their respective state laws regarding oral piercings; and (iv) advocate for measures intended to increase public knowledge regarding oral piercings and contribute to the effective prevention of possible negative outcomes.



## Methods

This study was conducted through a national electronic survey which was sent out to the American Academy of Pediatric Dentistry (AAPD) member pediatric dentists. Upon IRB approval, we requested the purchase of the Active Member Roster email list from the AAPD . A research participation invitation including a brief summary of the study and the link for the electronic survey was emailed to the aforementioned prospective participants in August 2024. Two reminder emails were sent out in September and October 2024. Therefore, the duration to enroll all study subjects was 3 months. There were nearly 9,800 members of the AAPD email registry with 6,900 pediatric dentists. The sample included AAPD member pediatric dentists who replied to the electronic survey. The pilot testing of the questionnaire was conducted through the attendings and residents of VCU pediatric dentistry residency program. The survey invite and introductory text included the necessary information.

The survey consisted of 21 questions. The majority of the questions followed multiple choice and Likert scale formats. Two questions regarding the method of obtaining knowledge about oral piercings and educational resources for patients provided the respondents with free text explanation option in the multiple choice format.

The following were addressed in the questions:

- Practice experience of respondent AAPD member pediatric dentists
- The level of knowledge of the respondents regarding oral piercings
- The adverse effects of oral piercings
- Methods of obtaining the knowledge regarding oral piercings
- The level of comfort and confidence of respondents in interviewing patients regarding oral piercings and providing educational information to them and their parents/guardians
- Knowledge about AAPD policy regarding oral piercings
- Awareness of respective state laws regarding oral piercings
- Whether pediatric dentists would like a more expanded AAPD policy statement regarding oral piercings
- Whether pediatric dentists feel responsible about educating the patients

Responses were summarized using counts and percentages. Chi-squared tests were used to test for associations among the responses to various questions. Significance level was set at 0.05. SAS EG v.8.3 (SAS Institute, Cary, NC) was used for all analyses.

## Results

- A total of 364 participants responded to the survey, for a 5.4% response rate. Respondents were approximately equally distributed across the 5 AAPD districts.
- Nearly all respondents (89%) indicated they have encountered patients under the age of 18 with oral piercings in their practice.
- Seventy-nine percent indicated awareness of the AAPD policy on oral piercings while only 20% indicated knowledge of their state's laws on oral piercings.
- Only 5% felt "not familiar" with the adverse effects of oral piercings.
- Among those who felt somewhat or very knowledgeable, they most commonly indicated experience and pediatric residency as the course for their knowledge.
- Seventy-two percent agreed or strongly agreed that they feel comfortable navigating a patient and parent interview regarding oral piercings and providing information related to issues arising from oral piercings.
- Familiarity with the adverse effects of oral piercings was significantly associated with awareness of the AAPD policy on oral piercings (p-value=0.0003) and the state's laws on oral piercings (p-value<0.0001) but not with AAPD region (p-value=0.8211) or years in practice (p-value=0.4990).
- Comfort navigating a patient and parent/guardian interview regarding oral piercings and providing information related to issues arising from oral piercings was significantly associated with awareness of the AAPD policy (p-value<0.0001), knowledge of the state's laws (p-value=0.0017), knowledge about the adverse effects (p-value<0.0001), and marginally associated with having encountered piercings in patients under 18 (p-value=0.0549).
- There was a significant association between these responses with those agreeing that it's within their responsibilities reporting a higher likelihood of educating their patients (p-value<0.0001).

	n	%	Statement	Mean	SD
AAPD Region	Northeast	63	18%	The amount of education in dental school is sufficient for becoming competent in providing oral piercing related information to patients and parents/guardians.	-0.03
	Northeastern	85	24%		
	Southeastern	78	22%		
	Southwestern	55	15%		
	Western	78	22%		
Years in Pediatric Practice	Less than 5 years	70	19%	I have acquired the knowledge to provide quality information regarding oral piercings to patients and their parents/guardians.	0.74
	5-10 years	53	15%		
	11-20 years	72	20%		
	More than 20 years	169	46%		
General Practice Experience Prior to Residency	Less than 5 years	94	26%	I feel comfortable navigating a patient and parent/guardian interview regarding oral piercings and providing information related to issues arising from oral piercings.	0.81
	5-10 years	30	8%		
	11-20 years	6	2%		
	Does not apply	232	64%		
			I feel comfortable talking about oral piercings in the presence of the patients' parents/guardians who themselves have oral piercings.	0.86	0.95

Table 1: Respondent Demographics

Table 2: Average Agreement Regarding Statements of Knowledge, Confidence, and Education

## Results

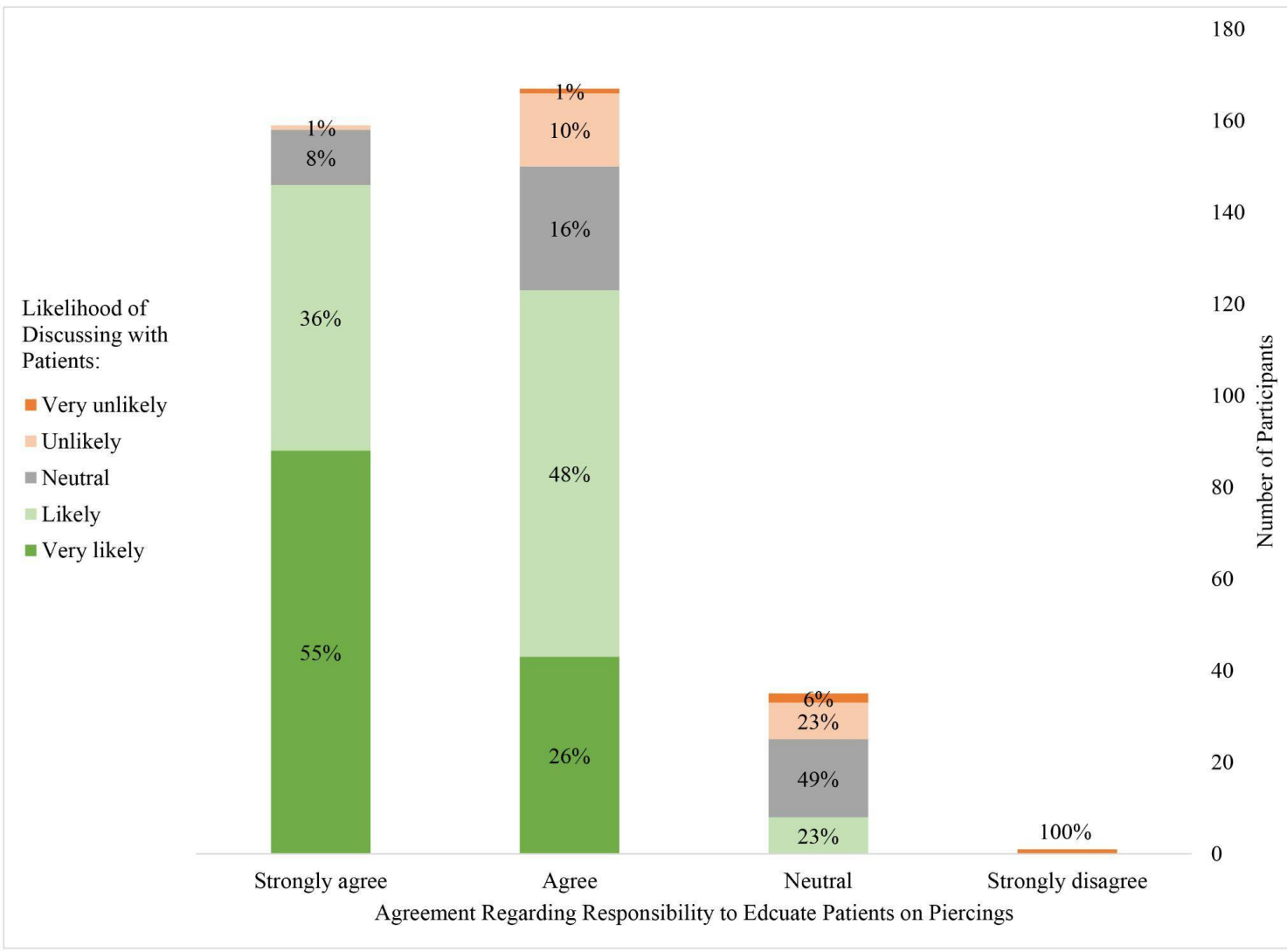


Figure 1: Association between Agreement of Responsibility to Education on Oral Piercings and Likelihood of Discussing with Patients

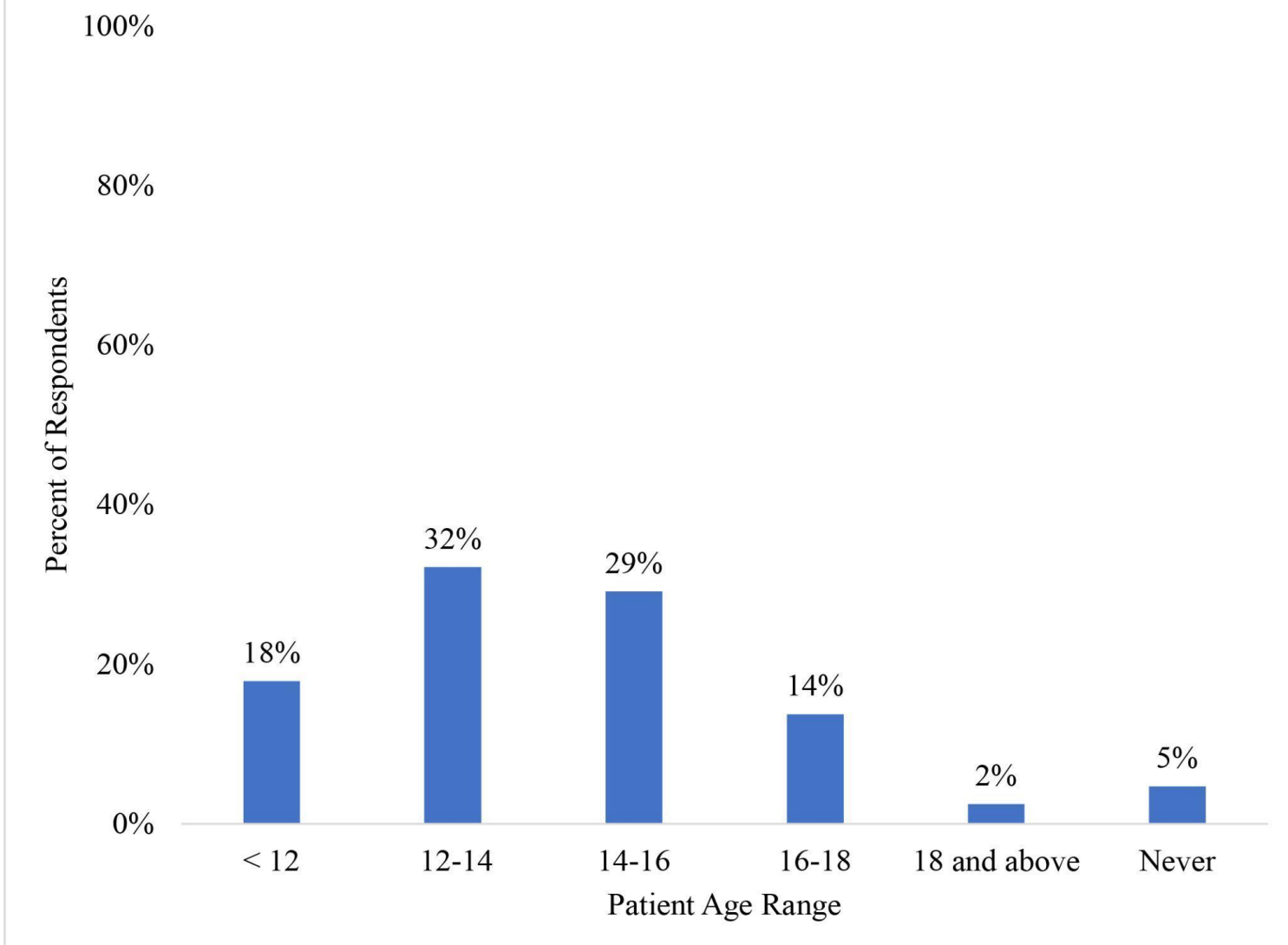


Figure 2: Respondents' Indication of the Patient Age to Being Talking about Oral Piercings

## Discussion

- Intraoral piercings clearly have implications for patients' oral health and have become more prevalent among adolescents and young adults during the last few decades. While some pediatric dentists might feel uncomfortable about interviewing adolescent patients about oral piercings, it is still important to educate patients in a non-judgmental and objective manner.
- This research showed that the majority of pediatric dentists encounter oral piercings in their practices. Although 80% of respondents were aware of the related AAPD policy, only 20% were aware of their respective state laws.
- Even though 79% reported being confident about providing oral care to patients with oral piercings and 72% reported being comfortable to begin oral piercing related conversations with their patients, these are still considered unsatisfactory numbers taking into account the prevalence of oral piercings among adolescents.
- Respondents reported a need for more comprehensive education regarding oral piercings in dental school and pediatric dentistry residency programs. This was an important finding since knowledge about AAPD policy and respective state laws showed significant association with knowledge of adverse effects and comfort and confidence level of dental providers in addressing oral piercings related issues and care.
- There are no similar surveys of pediatric dentists practicing in the United States regarding oral piercings in the literature. Consequently, comparing results to previous years to evaluate any change in pediatric dentists' knowledge and confidence in addressing issues related to oral piercings and comfort and confidence in educating their patients was challenging.
- Reported insufficient educational content regarding oral piercings in dental school and pediatric dentistry residency programs indicate the need for future research to recognize most effective means of addressing this lack of knowledge.
- Ninety percent of the respondents agreed that it is within their responsibilities to educate patients on oral piercings. Yet, almost 80% reported no forms of educational resources regarding oral piercings in their practices. This indicates that there is more need for effective ways of educating adolescent patients and their parents/guardians regarding oral piercings.
- A limitation of the study was that the participants were not asked about the awareness of the available educational resources and the reason these resources are not used by the vast majority of them.
- Another limitation of the study was that the patient and /or parent/guardian self-reported knowledge regarding oral piercings, the associated adverse effects, the preferred means of obtaining information, and the level of acceptance of the provided information to them was not addressed. These are important pieces of information in effectively increasing public knowledge regarding oral piercings and their associated negative outcomes.
- Future research focused on the forms of education and outreach that can help in expanding this knowledge will clarify the most effective measures and approaches to increase public knowledge.

## Conclusion

- Intraoral piercings clearly have implications for patients' oral health and have become more popular.
- Pediatric dentists play an important role in educating patients and their respective parents/guardians for informed decision making.
- Awareness of AAPD policy, state laws, knowledge on oral piercings affect comfort, confidence and likelihood of pediatric dentists in starting conversations regarding oral piercings and their management.
- It is imperative to have trained pediatric dentists who are confident and knowledgeable to educate patients and parents/guardians and accept the sense of responsibility to do so.

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