

ORIGINAL ARTICLE

Parents/Guardians' Gender Preferences, Confidence, and Empathy for their Children's Dentist

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Academic Editor: Alidianne Fábia Cabral Cavalcanti

Received: March 23, 2024 / Review: August 27, 2024 / Accepted: October 21, 2024

How to cite: Carvalho G, Prado IM, Moura LK, Cardoso-Santos Y, Freitas TC, Nogueira RF, et al. Parents/guardians' gender preferences, confidence, and empathy for their children's dentist. Pesqui Bras Odontopediatria Clín Integr. 2025; 25:e240047. https://doi.org/10.1590/pboci.2025.066

ABSTRACT

Objective: To analyze the factors that influence parents'/guardians' gender preference, confidence level, and empathy level in the dentist treating their child, as well as the factors associated with parents'/guardians' preference for the dentist's gender identification. Material and Methods: A total of 104 parents/guardians of patients from the pediatric dental clinic of a Brazilian University participated in this cross-sectional study. Data collection occurred in the clinical waiting room by applying a questionnaire about sociodemographic information, characteristics of the dentist that most caught parents'/guardians' attention, whether the child's dentist's gender identification matters to parents'/guardians', and analog scales designed by the research team gauging preferences in dentist's gender, confidence level and empathy level in their child's dentist. Statistical analysis was performed using Mann-Whitney U and Kruskal-Wallis tests (p<0.05). Results: Most participants were female (74%) and mothers of patients (63.5%). The proportion of parents/guardians lacking confidence about their child's dentist was higher among those who considered the dentist's gender identification significant (p=0.045). The empathy scores of parents/guardians toward their child's dentist were higher among female parents/guardians (p=0.012). Parents/guardians who reported caring about the dentist's gender identification had lower preference scores for an LGBTQ+ dentist (p=0.018). Conclusion: There was no significant difference in the preference for female or male dentists. A low preference for LGBTQ+ dentists was observed among parents/guardians, demonstrating homophobic behavior.

Keywords: Dental Care; Homophobia; Sexual and Gender Minorities; Professional-Patient Relations.



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Introduction

The relationship between healthcare professionals and patients strongly impacts adherence and positive behavior during dental care [1]. In pediatric dentistry, the role of parents/guardians is of utmost importance, given that the parents/guardians take care of their children's health, with the mother being incredibly influential in this caregiving role [2].

Sociodemographic disparities can interfere with the health promotion of children and adolescents [3]. One American study demonstrated that the ethnicity of the dentist influences the preference of parents/guardians in techniques to manage their children's behavior during dental care [4]. When parents don't trust the dentist, they may disregard the instructions during the appointment, which can turn simple lesions into more complex cases of oral health comorbidities [5].

Physical appearance, hair type, gender identification, and clothing during clinical care are some factors patients observe that can influence the level of confidence between health professionals and patients [1,6]. A good professional/child patient/guardian relationship, understanding the perception of those responsible [7], can increase the chance of good health promotion and behavior during clinical care [8]. In contrast, a negative dental experience in childhood can follow the patient into adulthood [9]. Therefore, the responsibility of first dental care is key and can influence an individual's or community's quality of life and health promotion [10]. The data from this study can be used to influence the humanization of dental care from childhood onwards, providing adequate health promotion. The results encourage anti-discrimination policies within universities.

Given the relevance of this topic, the present study aimed to analyze the association between parents'/guardians' preference for the dentist's gender identification related to the confidence in, empathy for, and characteristics of dentists serving their children at a dental school within a public university of Brazil.

■ Material and Methods

Study Design and Scenario

A cross-sectional study was developed with parents/guardians of patients at the Pediatric Dentistry clinic of a public university (Universidade Federal de Minas Gerais - UFMG) located in the southeast region of Brazil. The dentistry course lasts five years, consisting of ten semesters. Students begin dental care in the course's third semester, and the Pediatric Dentistry discipline's clinical-practical activities take place in the third and sixth semesters. Furthermore, at the end of the course, in the tenth semester, students do their residency in rural and urban areas of the region, which also includes children's dental care.

Patients treated at the university do not pay for dental treatment, which is financed by the Brazilian Unified Health System (SUS). Most SUS users declare themselves non-white and are in a situation of social vulnerability [11].

Data collection took place from August to December 2023. Three undergraduate dentistry students (LKM, YCS, and TCF) were previously trained to standardize data collection, carried out with participants in the waiting room of the university's Pediatric Dentistry clinic.

Eligibility Criteria

Parents/guardians of children receiving dental care at the UFMG Pediatric Dentistry clinics were included in the study. Parents/guardians with neurological conditions and/or syndromes were excluded, as were those with difficulty reading Brazilian Portuguese, factors that compromised the understanding of the data collection instrument.





Data Collection Instrument

Participants responded to a self-administered questionnaire containing sociodemographic information, such as the age of the guardian, degree of kinship with the child, gender of the guardian, gender of the child, selfdeclared skin color, child's skin color, monthly family income (in Brazilian minimum wage that was converted to US dollars), and educational level of the guardian.

In addition to sociodemographic data, participants answered a series of questions created by the research team based on a previous study [6], where they were asked which characteristics of the dentist most caught their attention when the guardian met the dentist who would treat their child, such as physical characteristics (hair type, height, weight, skin color, tattoos, clothing) or non-physical (friendliness, politeness, kindness). Parents/guardians also answered a question about whether their child's dentist's sexuality matters to them (it doesn't matter or it matters).

Analog scales developed by the research team varying from zero to ten were used to assess the preferences of parents/guardians about the gender identification of their child's dentist. The parents'/guardians' empathy level, based on their child's dentist appearance, was also evaluated using an analog scale.

Those questions are shown below:

- · Rate from zero to ten how much empathy you felt, based only on the appearance of your child's dentist, with "zero" being no empathy and ten being "a high level of empathy."
- Rate your preference for your child's care to be provided by a female dentist from zero to ten, with "zero" being "no preference" and ten being "very much preferred."
- · Rate your preference for your child's care to be provided by a male dentist from zero to ten, with "zero" being "no preference" and ten being "very much preferred."
- Rate your preference for your child's care to be provided by a dentist who identifies with LGBTQ+ from zero to ten, with "zero" being "no preference" and ten being "very much preferred."
- The questionnaire also included questions assessing the level of confidence in the dentist and the level of collaboration of the child, according to the perception of parents/guardians:
- · What level of confidence would you feel regarding your child's dental care from the dentist you are currently working with? The response options were: "not confident," "somewhat confident," "confident," and "very confident."
- · What would be your assessment of the level of collaboration in your child's dental care? The response options were: "not collaborative," "mildly collaborative," "collaborative," and "very collaborative."

Pilot Study

A pilot study was conducted to test the methodology. Cronbach's alpha coefficient was used to assess the validity of the conceptual model of the instruments used, and the values ranged from 0.78 to 0.86. The values demonstrated good internal consistency. Therefore, there were no modifications to the methodology for the main study. The participants in the pilot study were not included in the main study.

Ethical Statement

This study was conducted following the Declaration of Helsinki and was approved by the institutional ethics committee (Opinion No. 5.583.873). All participants were informed about anonymity and data confidentiality and gave informed consent to participate in this study.





Statistical Analysis

Data were analyzed using the Statistical Package for the Social Sciences (version 21.0, SPSS Inc., Chicago, IL, USA). The dependent variables were the parents'/guardians' confidence level in the child's dentist, their empathy score towards the child's dentist, and whether the child's dentist's gender identification mattered to the parents/guardians. The independent variables included participants' sex, age, and self-declared skin color (white or non-white); child's sex, age, and skin color (white and non-white); parents'/guardians' educational level (less than eight years or eight years and over); and family's monthly income (up to U\$245.84 or over U\$245.84). The family's monthly income was evaluated based on the Brazilian minimum monthly wage at the time of data collection - U\$245.84.

The distribution of numerical variables was evaluated using the Kolmogorov-Smirnov test. Mann-Whitney U, Kruskal-Wallis, Fisher exact, and Student T-tests were used to analyze statistical differences between dependent and independent variables. The level of statistical significance was set at 5% for all statistical analyses (p < 0.05).

Results

A total of 140 parents/guardians were approached in the waiting room of the Pediatric Dentistry Clinic and invited to participate in the study, of which 104 agreed to participate (74.3%). The average age was 40.6 years (± 10.7). Most participants were female (74%) and patients' mothers (63.5%). A large percentage of participants declared themselves "non-white" (76.9%), had more than eight years of education (74%), and received a monthly family income higher than US\$245.84 (65.4%). The majority of parents reported that their children were "non-white" (62.5%) and believed that their children were very cooperative during dental care (57.7%). A high level of confidence in the professional was reported by parents/guardians (56.7%), and the dentist's gender identification did not matter to most parents (90.4%) (Table 1).

Table 1. Descriptive analysis of the sociodemographic characteristics of the sample.

Variables	N (%)
Gender of the guardian	
Male	26 (25.0)
Female	77 (74.0)
Guardian's Age	
Mean [±SD]	40.6 [10.7]
Median [Min. – Max.]	10.5 [17 - 72]
Relationship with the child	
Mother	66 (63.5)
Father	23 (22.1)
Grandmother/grandfather	8 (07.7)
Other	7 (06.7)
Guardian's self-reported skin color	
Non-white	80 (76.9)
White	24 (23.1)
Education of the guardian	
< 8 years of study	27 (26.0)
≥ 8 years of study	77 (74.0)
Family income	
Up to US\$245.84	34 (32.7)
More than US\$245.84	68 (65.4)
Child's Gender	
Male	57 (54.8)
Female	47 (45.2)
Child's age	





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Mean [±SD]	8.2 [2.7]
Median [Min – Max]	8.0 [2 - 15]
The child's self-reported skin color	
Non-white	65 (62.5)
White	39 (37.5)
Level of child collaboration perceived by parents	
Non-collaborative	2 (1.9)
Mildly collaborative	4 (3.8)
Collaborative	38 (36.5)
Very collaborative	60 (57.7)
Characteristics of the dentist that caught attention first	
Behavioral	26 (25.0)
Physical	67 (64.4)
Did not notice	11 (10.6)
For me, the dentist's gender doesn't matter.	
It doesn't matter what the dentist's gender is	94 (90.4)
The gender of the dentist matters	5 (4.8)
Confidence in the dentist	
Not confident	2 (1.9)
Confident	42 (40.4)
Very confident	59 (56.7)

SD = Standard Deviation; Min. = Minimum; Max. = Maximum; Not all participants answered all questions in the questionnaire.

In analyzing the degree of confidence that the parents/guardians felt about the dentist who treated their child, it was observed that the proportion of parents who were not confident about the dentist was significantly higher among parents who cared about the dentist's gender identification when compared to the proportion of very confident parents (p=0.045) (Table 2).

Table 2. Association between level of confidence in the dentist and sociodemographic variables.

	Cor	nfidence in the Dent	ist	
Variables	Not Confident	Confident	Very Confident	p-value
	N (%)	N (%)	N (%)	
Gender of guardian				
Male	0 (0.0)	11 (42.3)	15 (57.7)	0.999^{+}
Female	2 (2.6)	31 (40.8)	43 (56.6)	
Guardian's age				
Mean [±SD]	-	40.0 [9.7]	41.2 [11.5]	0.583#
Median [Min – Max]	-	38.0 [17 - 72]	41.0 [18 - 69]	
Guardian's skin color/race				
Non-white	2(2.5)	31 (15.0)	46 (58.2)	0.791^{+}
White	0 (0.0)	11 (45.8)	13 (54.2)	
Guardian's educational level				
< 8 years of study	1 (3.7)	11 (40.7)	15 (55.6)	0.727^{+}
≥ 8 years of study	1 (1.3)	31 (40.8)	44 (57.9)	
Family income				
Up to US\$245.84	2(5.9)	13 (38.2)	19 (55.9)	0.185^{+}
More than US\$245.84	0 (0.0)	27 (40.3)	40 (59.7)	
Child's Gender				
Male	0 (0.0)	21 (44.7)	26 (55.3)	0.522^{+}
Female	2 (3.6)	21 (37.5)	33 (58.9)	
Child's age				
Mean [±SD]	7.0 [1.4]	8.3 [3.0]	8.2 [2.6]	0.736=
Median [Min – Max]	7.0 [6 - 8]	8.0 [2 - 15]	8.0 [3 - 13]	
Child's skin color/race				
Non-white	1 (1.6)	26 (40.6)	37 (57.8)	0.999^{+}
White	1 (2.6)	16 (41.0)	22 (56.4)	





Child's level of collaboration				
Non-collaborative	O (O.O)	1 (50.0)	1 (50.0)	0.329+
Mildly collaborative	0 (0.0)	2 (50.0)	2 (50.0)	
Collaborative	0 (0.0)	20 (52.6)	18 (47.4)	
Very collaborative	2 (3.4)	19 (32.2)	38 (64.4)	
Characteristics of the dentist that first caug	ht the attention			
Behavioral	0 (0.0)	11 (42.3)	15 (57.7)	0.466^{+}
Physical	2 (3.0)	24 (36.4)	40 (60.6)	
Did not notice	0 (0.0)	7 (63.6)	4 (36.4)	
The dentist's gender matters	1 (1.1) ^a	39 (41.9) ^{a, b}	53 (57.0)b	0.045^{+}
The dentist's gender doesn't matter	1 (20.0)	3 (60.0)	1 (20.0)	

Fisher Exact Test; T-Test; Kruskal-Wallis Test; SD = Standard Deviation; Min. = Minimum; Max. = Maximum; Values in parentheses refer to percentages between columns; Different letters indicate statistically significant differences; Not all participants answered all questions in the questionnaire.

The empathy scores of parents/guardians toward their child's dentist were higher among female parents/guardians (p=0.012) and among parents/guardians who felt very confident about their child's dentist (p<0.001) (Table 3).

Table 3. Association between parents'/guardians' empathy scores for the dentist and sociodemographic variables.

Variables	En	Empathy Score	
	Average (±SD)	Median [Min. – Max.]	
Guardian's gender			
Male	8.9 (1.7)	10.0 [5 - 10]	0.012*
Female	9.6 (1.0)	10.0 [5 - 10]	
Guardian's skin color/race			
Whites	9.5 (1.0)	10.0 [6 - 10]	0.810*
Non-white	9.4 (1.3)	10.0 [5 - 10]	
Guardian's educational level			
< 8 years of study	9.3 (1.5)	10.0 [5 - 10]	0.873*
≥ 8 years of study	9.5 (1.1)	10.0 [5 - 10]	
Family income			
Up to US\$245.84	9.6 (1.9)	10.0 [5 - 10]	0.285*
More than US\$245.84	9.3 (1.3)	10.0 [5 - 10]	
Child's Gender			
Male	9.2 (1.5)	10.0 [5 - 10]	0.196*
Female	9.6 (1.0)	10.0 [5 - 10]	
Child's skin color/race			
White	9.4 (1.2)	10.0 [5 - 10]	0.372*
Non-white	9.5 (1.2)	10.0 [5 - 10]	
Child's collaboration			
Collaborative	9.1 (1.6)	10.0 [5 - 10]	0.167*
Very Collaborative	9.5 (1.1)	10.0 [5 - 10]	
First Impression of the Dentist			
Behavioral	9.4(1.5)	10.0 [5 - 10]	0.699=
Physical	9.5 (1.1)	10.0 [5 - 10]	
Did not notice	9.1 (1.6)	10.0 [5 - 10]	
Dentist's gender	,		
The gender does not matter	9.4 (1.3)	10.0 [5 - 10]	0.383*
The gender matters	9.6 (0.5)	10.0 [9 - 10]	
Confidence in the dentist	· ,		
Confident	8.9 (1.7)	10.0 [5 - 10]	<0.001*
Very confident	9.8 (0.5)	10.0 [7 - 10]	

SD = Standard Deviation; Min. = Minimum; Max. = Maximum; *Mann-Whitney U test; *Kruskal-Wallis test;





Regarding the importance given by parents/guardians to the dentist's gender identification, it was found that parents/guardians who reported caring about the dentist's gender identification had lower preference scores for an LGBTQ+ dentist as compared to parents/guardians who reported not caring about dentist's gender identification (p=0.018). No statistically significant differences were observed in preference scores for female dentists (p=0.509) and for male dentists (p=0.770) (Table 4).

Table 4. Association between importance scores of the dentist's gender for parents/guardians and the sociodemographic variables

Variables	Dentist's Gender does	Dentist's Gender	p-value
	not Matter	Matters	•
	N (%)	N (%)	
Guardian's gender	, ,		
Male	22 (88.0)	3 (12.0)	0.103+
Female	71 (97.3)	2 (2.7)	
Guardian's age (years)	,	,	
Mean [±SD]	40.1 [10.5]	51.0 [14.2]	0.102*
Median [Min. – Max.]	39.0 [17 - 69]	45.5 [41 - 72]	
Guardian's self-reported skin color			
Non-white	70 (93.3)	5 (6.7)	0.332^{+}
White	24 (100.0)	0 (0.0)	
Guardian's educational level			
< 8 years of study	24 (88.9)	3 (11.1)	0.123^{+}
≥ 8 years of study	70 (97.2)	2 (2.8)	
Family income	,	,	
Up to US\$245.84	30 (93.8)	2 (6.3)	0.999^{+}
More than US\$245.84	62 (95.4)	3 (4.6)	
Child's Gender	,	,	
Male	43 (95.6)	2 (4.4)	0.999^{+}
Female	51 (94.4)	3 (5.6)	
Child's age (years)	,	,	
Mean [±SD]	8.3 [2.7]	7.0 [2.9]	0.296*
Median [Min. – Max.]	8.0 [2 - 15]	7.0 [4 - 11]	
The child's skin color, as reported by the guardian			
Non-white	59 (96.7)	2(3.3)	0.369^{+}
White	35 (92.1)	3 (7.9)	
Preference for a female dentist	· ,	, ,	
Mean [±SD]	8.8 [2.0]	9.8 [0.4]	0.509*
Median [Min. – Max.]	10.0 [0 - 10]	10.0 [9 - 10]	
Preference for a male dentist			
Mean [±SD]	08.1 [2.5]	8.8 [2.1]	0.770*
Median [Min. – Max.]	10.0 [0 - 10]	10.0 [5 - 10]	
Preference for an LGBTQ+ dentist			
Mean [±SD]	7.7 [2.8]	3.8 [4.1]	0.018*
Median [Min. – Max.]	10.0 [0 - 10]	04.1 [0 - 10]	

SD = Standard Deviation; Min. = Minimum; Max. = Maximum; +Fisher's Exact Test; *Mann-Whitney U test.

Discussion

Knowing parents'/guardians' preferences concerning their children's dental care is essential to strengthening the relationship of confidence between the professional and the family and, consequently, promoting family health. The findings of this research demonstrated a high prevalence of confidence among parents/guardians in the dentist, which is in line with the findings of another study conducted in Brazil [6]. However, in the present study, a lower confidence level was observed among participants who reported caring about the dentist's gender identification. Low levels of confidence can compromise the relationship of complicity





between the health professional and the family [6], and gender prejudice can be one of the triggers that create disparities in professionals' personal lives [12]. Although some countries have laws that protect the LGBTQ+ community, there is still a lot of disrespect and prejudice that tends to affect the emotional health of these individuals [13].

Regarding the importance of the dentist's gender identification given by parents/guardians, it was found that there was no significant difference in the preference for female dentists nor for male dentists; however, LGBTQ+ dentists received lower preference scores among parents/guardians who said that the dentist's gender matters. Homophobic and discriminatory attitudes are frequently observed in society and different cultures [14]. One study evaluating homophobia and discriminatory attitudes among Turkish healthcare professionals observed high homophobia and discrimination scores among participants, who were influenced by their personal and professional characteristics, beliefs, and attitudes [15]. When it comes to parents/guardians, it is crucial to consider their influence on their children. Another study conducted with parents of nursing students observed that parents who did not live directly with or know any homosexual individuals were more homophobic and that parental prejudice can affect the child's perspective [16]. In addition to these aspects, discriminatory attitudes compromise the professional/family relationship [17,18].

There are reasons to promote lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ+) competency, training, and ethical care for healthcare professionals within a multidisciplinary paradigm [19]. There is an evident lack of diversity in the community of healthcare professionals associated with discriminatory interactions between patients/coworkers and LGBTQ+ professionals [20]. Moreover, LGBTQ+ individuals face severe psychosocial and health disparities. Furthermore, these inequalities can be amplified when other aspects of diversity, such as race, ethnicity, age, gender, religion, disability, and socioeconomic status, intersect with sexual orientation. The origins of LGBTQ+ psychosocial disparities are multiple; deficiencies in ethical care and clinical competence are also associated contributors. Furthermore, those who practice in different health and human services fields should not be considered less competent or unprofessional merely because of their gender [14]. It is precisely this ethical and humanized care that this work aims to defend. Anti-homophobic and inclusive public policies must be encouraged in oral health [21]. The empathic relationship must be directed from the professional to the patient and from the patient to the professional [22,23]. The concept of empathy involves putting yourself in someone else's shoes. Feeling empathy for the professional who provides the child's dental care consolidates the complicity of health promotion between the parties [24].

Considering the level of empathy for the dentist, the present study found that female guardians reported higher empathy scores in their child's dentist than male guardians. This result can be justified by the value women give to those taking care of their children's health, added to the difficulty of access and cost of dental services, thus providing value to the treatment received at the institution [2]. Furthermore, in this sample, most guardians who took their children for treatment were mothers, highlighting the mother's role as a caregiver for her children's health in our society [5].

The roles delegated to different genders confer different behaviors that society itself establishes [25]. In the division of family tasks, women are still delegated domestic chores and childcare, while men are delegated to provide financially for the family [26]. Association with the maternal figure among women who work with children has already been the subject of a Canadian study. Gender female was significantly related to perceptions of the skills and abilities necessary to perform their jobs when working with children in American and Canadian educational institutions [27]. By contrast, one Brazilian study revealed a recognizance of the patient's gender with the dentist's gender, in which female patients and their mothers preferred female dentists. In contrast, boys





and their fathers preferred male dentists [6]. Although it is common for society to establish different roles for different genders, individuals must have opportunities to choose their professions and roles despite their gender, race, beliefs, and age [28-30].

An individual's gender identification does not determine their professional abilities, and prejudices can lead to a negative judgment of professionals. It is important to note that the present study was conducted within an educational institution that provides free dental services to the population, funded by the Brazilian government through SUS. At the same time, students undergo training to become dentists. In such an educational setting, patients and their families do not select the professional to provide care. Establishing complicity between the health professional and the family is essential for promoting health. Any discomfort, lack of confidence, absence of empathy, or discrimination from either party can negatively affect the necessary complicity required to promote general and oral health. Therefore, evaluating the perceptions of parents/guardians regarding dentists is important, and actions should be taken against homophobia and prejudice. These efforts can begin with training students in the educational environment and extend to collaboration with highly skilled professionals [30]. Anti-prejudice training within the academic institution impacts the professional who will work in the job market. The work of these professionals and their relationship with guardians and child patients involves mutual respect for the parties' gender identifications. This alert is crucial for proper health promotion.

The cross-sectional design of this study does not enable a causal inference; therefore, other study designs should be encouraged, in addition to the qualitative assessment of the parents'/guardians' perception of the dentist. Analog scales were used to measure the guardians' empathy level, a method already used by other authors [28]. However, different assessment methods can be used in future studies, such as interviews or focus groups [31]. Also, there was discriminatory behavior regarding the dentist's LGBTQ+ gender, which proved to be an important variable in this study and deserves investment in anti-homophobic educational campaigns, and further studies are necessary.

Conclusion

Mothers were more empathetic towards the dentist when compared to male guardians. The degree of confidence in the dentist was lower among parents who cared about the dentist's gender, as compared to parents who considered that the dentist's gender did not matter; however, male dentists who identify as LGBTQ+ received lower preference scores, demonstrating homophobic behavior.

Authors' Contributions

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All auth	All authors declare that they contributed to a critical review of intellectual content and approval of the final version to be published.			

■ Financial Support

This project received funding from the Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) (Grant number 405190/2021-2).





■ Conflict of Interest

The authors declare no conflicts of interest.

■ Data Availability

The data used to support the findings of this study can be made available upon request to the corresponding author.

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