

Original Research Article

Awareness and attitude of Saudi parents towards pulp therapy of the primary teeth: survey based study

Mashaël Monzer Tayeb^{1*}, AlHanouf Ali AlSaif¹, Alaa Eidan AlZahrani¹,
Buthayna Abdullah AlJuhani¹, Shahzeb Hasan Ansari²

¹Dental Intern, ²Department of Preventive Dentistry, Riyadh Elm University, Saudi Arabia

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*Correspondence:

Dr. Mashaël Monzer Tayeb,

E-mail: meshael.m.taeb@student.riyadh.edu.sa

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ABSTRACT

Background: Some parents believe that it's not worth to treat and spend money on this tooth because they will shed after all. Many of them are not aware that primary dentition should be maintained in the dental arch in a healthy state for the overall health of the child.

Methods: The survey included questions related to demographics, such as gender and educational level. Further investigative questions included the need of pulp therapy in primary teeth, knowledge about pulp treatment, importance of pulp treatment, number of dental visits, reason of dental visit, filling of carious tooth and preference of pulp therapy.

Results: The total number of questionnaires filled by participants was n=736. Out of which, 104 (14%) were males and 632 (86%) females. As far as the educational levels were concerned, 81 (11%) had completed primary school, 110 (15%) had completed high school and 545 (74%) were graduates from university.

Conclusions: Overall there was no statistically significant difference between the subgroups of gender and educational level.

Keywords: Pulp therapy, Parental perceptions, Primary dentition

INTRODUCTION

Dental pulp is a vital part of the tooth, which consists of the soft tissues and components including blood vessels and nerve supply. Pulp is important because it supplies the tooth with nutrition through blood vessels. The overall quality of children's oral health is dependent on several factors, which include parents' knowledge and awareness. Higher level of positive attitudes from the parents plays a vital role in improving and maintaining the oral health of children.¹

Some parents believe that it's not worth to treat and spend money on this tooth because they will shed after all.² Many of them are not aware that primary dentition should be

maintained in the dental arch in a healthy state for the overall health of the child.³

Further investigations linked to this issue have been done and it was revealed that the parent's own oral health has a great impact on the outcome of the oral health of their children. A study conducted in Nigeria disclosed that the awareness and personal health of the mother greatly influenced the oral health of child.⁴ Another study conducted in a dental school in Riyadh, Saudi Arabia determined the level of awareness of parents towards the possible pulp therapy procedure done in their children. It was found out that the parents preferred to make a visit to the dentist not before the age of 3. Similarly, their overall

knowledge on pulp therapy was seen to be poor and needed further clarifications and counseling.⁵

Pulp therapy in pediatric dentistry serves as a conservative branch of treatment performed on the carious tooth by removing either the coronal part of the pulp or both coronal and radical parts. However, this procedure is done to save the tooth for functioning normally instead of extracting it.⁶ Primary and permanent teeth are equally important. Once the primary teeth start to erupt, dental plaque, the major cause of dental caries begins to adhere to the teeth and regular dental care for the child becomes essential.⁷

Factors among the population have obviously been noticed that among the poor families and disadvantaged families, dental caries prevalence rate is still high and the oral health is poor. In countries like India listed under the developing countries have a very less rate of awareness and research work documented in the country regarding the dental health of infants and as well as adults.⁸ Stabilizing the medical condition of children and saving them from dental caries is obviously a need, as among youngsters dental caries is the most common. Besides chewing, another important use of the teeth is phonation which also helps in socialization of children.⁹

In recent years according to the studies, industrialized countries have improved when it comes to pediatric oral health. As modernization in every sector of the industry, development in medical sector has also persuaded to make improvements regarding the dental health. Countries which are still under development mode, need to have higher awareness regarding the oral health specially among the infants and their parents should be warned more frequently. India being a land having a population of more than a billion contains people of several religions, socio economic strata and diverse cultures.¹⁰

Living around the children all day, their family members and their parents can be the only and the most important source of information which is to be collected regarding the child's healthy or non-healthy habits and it will be assessed that how because of all this their oral health has been affected. How parents decide regarding the health of their child depends on their attitude towards such concerns of oral health and overall health.¹¹

Authors aim to evaluate that how the parents react to the disease the children suffer while they have deciduous teeth. Parents should be exhilarated that how should they deal with such oral health problems of their children.¹²

Parents who practice the proper hygiene methods are likely to have same habits in their children with time as they will imply those habits in their young children too. As a result, this study will help us to analyze the position where the parents stand when it comes to their knowledge and how do they deal with the dental methods in their lives as well as their children's life.¹³

At a young age, oral health in children will be very important to set up a good footing towards healthy permanent teeth. Moreover, mother's knowledge and her attitude and also her own habits towards the oral health help the child at a very young age. The more positive attitude and proper oral health knowledge of the parents the more children's health will be positively influenced.¹⁴

Some parents have a concept in their minds that the milk teeth or deciduous teeth would be replaced by the permanent ones and another reason was that they were not and today too many are not aware of the Caries at a young age. They are not aware of how such caries is to be treated and what care has to be taken in order to stay away from such diseases.¹⁵

This study will also help us to organize the past results and compare the level of dedication and awareness of the guardians and the parents of the infants regarding their oral health to the earlier studies' results. Authors will be able to compute whether today the parents are interested in the oral health of their child and its betterment and whether they will imply the things they have been guided.¹⁶

Many parents are not aware that even the primary tooth might go for pulp therapy; their knowledge about the primary teeth is little. They do not know how important they are to the child and how bad it is to the child health if they become infected.

Authors goal is to determine the level of parents' knowledge and attitude towards pulp therapy in primary teeth and to improve their awareness towards keep the baby teeth healthy and not considering extraction as the first choice if there are alternative treatments.

METHODS

This is a cross sectional study, which utilized a closed ended questionnaire. Target population was male and female Saudi adults. Total sample size was 736.

Inclusion criteria

- All adults Saudi males and females.

Exclusion criteria

- All non-Saudis
- Participants below the age of 18.

Study duration

- Proposal writing, and survey design took approximately one month.
- Data collection was achieved in approximately two months.
- Statistics and analysis were done using the software and it took 1 week to accomplish.

- Report writing was then started, which took approximately one month.
- Therefore, the total duration of this study was 4 and a half months.

This study was registered to the research center of Riyadh Elm University (previously known as Riyadh Colleges of Dentistry and Pharmacy). Ethical approval was also acquired from the institutional review board.

The survey included questions related to demographics, such as gender and educational level. Further investigative questions included the need of pulp therapy in primary teeth, knowledge about pulp treatment, importance of pulp treatment, number of dental visits, reason of dental visit, filling of carious tooth and preference of pulp therapy. These questions were compared on the basis of gender and educational levels. Survey was sent using the social media.

The survey was designed using an online link (Google forms), which was then distributed among the target population using social media and emails. The survey included the details on the topic with a consent request to participate in the study. All this information including the questions was translated into Arabic as the target population’s first language is Arabic.

The options for each question were nominal in nature. Collected data was subjected to statistical analysis using SPSS program version 16. Descriptive statistics was achieved using the frequencies and percentages. The inferential statistics were done using the non-parametric test (Chi-square), which compared the results on the basis of gender and educational levels. In order to achieve the comparisons, a p-value of 0.05 was kept as significant.

RESULTS

The total number of questionnaires filled by participants was n=736. Out of which, 104 (14%) were males and 632 (86%) females (Figure 1). As far as the educational levels were concerned, 81 (11%) had completed primary school, 110 (15%) had completed high school and 545 (74%) were graduates from university (Figure 2).

On the other hand, 45% of the participants were from Riyadh city, 14% from Jeddah, and 8% each from AlBaha, Dammam and Jubai. Rest of the participants belonged to other cities such as Hail, Madina, Yanbu, Alkharj, Dahrhan, Qatif, Aljuf, Hofuf, Makkah, Alkhobar and Taif.

It can be noted from Table 1 that there was a statistically significant comparison achieved between genders when inquired about the pulp treatment for primary teeth being important (p-value: 0.004). Another significant comparison was observed when asked the participants about the need of treatment in primary dentition (p-value: 0.015). All other comparisons were found to be statistically insignificant as the p-values exceeded 0.05.

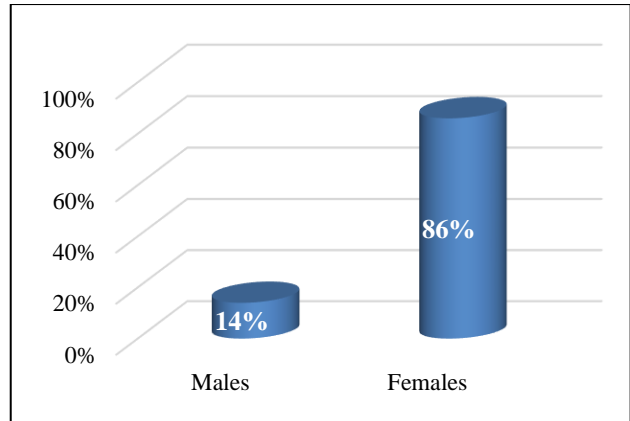


Figure 1: Male vs. female ratio of study participants.

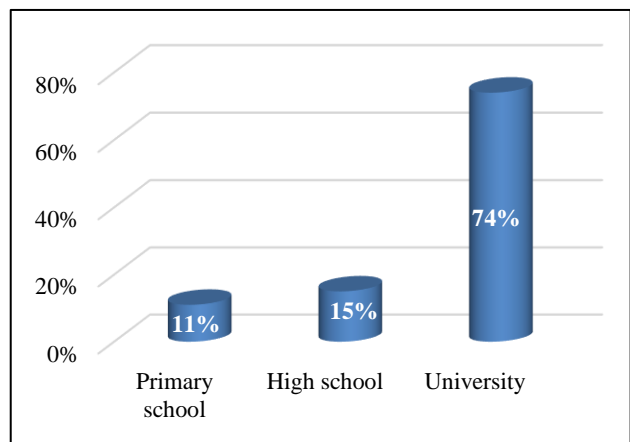


Figure 2: Educational levels of study participants.

As far as educational levels comparison was concerned, it can be noted from Table 2 that the knowledge about the pulp treatment increased among the participants having university degree. This comparison to other educational levels was statistically significant (p-value: 0.035). Furthermore, there was also a significant difference among the groups when inquired about their visits to dental clinic (p-value: 0.017). Finally, authors also inquired about the history of pulp treatment among the participants’ children and there was a significant difference among the groups (p-value: 0.047). However, all the other questions did not show any significant comparisons among the groups as the p-value was exceeding 0.05.

DISCUSSION

This study aimed to determine the knowledge of Saudi parents towards the pulp therapy procedures in deciduous teeth among their children. A study determined to assess the awareness of parents regarding the rehabilitation of children’s oral cavity.

They disclosed the unwillingness of parents to opt for pulp therapy, which is an essential component of oral rehabilitation. However, parents in present study were found to be more knowledgeable regarding this issue.¹⁷

Table 1: Survey questions comparison on the basis of gender.

Item	Males	Females	P-value
Primary teeth need pulp treatment?	Yes: 41%	Yes: 44%	0.314
Know what pulp treatment is?	Yes: 52%	Yes: 56%	0.260
Pulp treatment for primary teeth is important?	Yes: 65%	Yes: 78%	0.004
Why pulp treatment is important?	Relieve pain: 33%	Relieve pain: 40%	0.815
	Space maintenance: 35%	Space maintenance: 33%	
	Preserve esthetics: 3%	Preserve esthetics: 4%	
	Don't know: 28%	Don't know: 24%	
Do you visit dental clinic?	Yes regularly: 37%	Yes regularly: 27%	0.056
	Sometimes: 44%	Sometimes: 54%	
	Never: 19%	Never: 19%	
Reason for visiting dental clinic?	Pain: 62%	Pain: 59%	0.443
	Trauma: 2%	Trauma: 1%	
	Checkup: 8%	Checkup: 6%	
	Caries: 5%	Caries: 8%	
	Malocclusion: 0%	Malocclusion: 1%	
All of the above: 22%	All of the above: 26%		
Children's teeth should be checked regularly?	Yes: 87%	Yes: 89%	0.163
Primary teeth need dental treatment?	Yes: 66%	Yes: 76%	0.015
Will you agree for filling carious tooth?	Yes: 83%	Yes: 86%	0.188
Agree for pulp treatment on badly carious tooth?	Yes: 78%	Yes: 75%	0.349
If no, what is the reason?	No time: 3%	No time: 4%	0.602
	No need: 41%	No need: 27%	
	Expensive: 10%	Expensive: 10%	
	Child is too young: 31%	Child is too young: 41%	
	No qualified dentist: 16%	No qualified dentist: 17%	
Do you prefer pulp treatment or extraction?	Pulp treatment: 56%	Pulp treatment: 53%	0.372
	Extraction: 44%	Extraction: 47%	
History of pulp treatment in your children?	Yes: 25%	Yes: 27%	0.460
Item	Males	Females	P-value
Primary teeth need pulp treatment?	Yes: 41%	Yes: 44%	0.314
Know what pulp treatment is?	Yes: 52%	Yes: 56%	0.260
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Do you visit dental clinic?	Yes regularly: 37%	Yes regularly: 27%	0.056
	Sometimes: 44%	Sometimes: 54%	
	Never: 19%	Never: 19%	
Reason for visiting dental clinic?	Pain: 62%	Pain: 59%	0.443
	Trauma: 2%	Trauma: 1%	
	Checkup: 8%	Checkup: 6%	
	Caries: 5%	Caries: 8%	
	Malocclusion: 0%	Malocclusion: 1%	
All of the above: 22%	All of the above: 26%		
Children's teeth should be checked regularly?	Yes: 87%	Yes: 89%	0.163
Primary teeth need dental treatment?	Yes: 66%	Yes: 76%	0.015
Will you agree for filling carious tooth?	Yes: 83%	Yes: 86%	0.188
Agree for pulp treatment on badly carious tooth?	Yes: 78%	Yes: 75%	0.349
If No, what is the reason?	No time: 3%	No time: 4%	0.602
	No need: 41%	No need: 27%	
	Expensive: 10%	Expensive: 10%	
	Child is too young: 31%	Child is too young: 41%	
	No qualified dentist: 16%	No qualified dentist: 17%	
Do you prefer pulp treatment or extraction?	Pulp treatment: 56%	Pulp treatment: 53%	0.372
	Extraction: 44%	Extraction: 47%	
History of pulp treatment in your children?	Yes: 25%	Yes: 27%	0.460

Table 2: Survey questions' comparison on the basis of educational level.

Item	Primary School	High School	University	P-value
Primary teeth need pulp treatment?	Yes: 43%	Yes: 35%	Yes: 46%	0.132
Know what pulp treatment is?	Yes: 53%	Yes: 45%	Yes: 58%	0.035
Pulp treatment for primary teeth is important?	Yes: 75%	Yes: 72%	Yes: 78%	0.410
Why pulp treatment is important?	Relieve pain: 38%	Relieve pain: 42%	Relieve pain: 37%	0.090
	Space maintenance: 43%	Space maintenance: 23%	Space maintenance: 32%	
	Preserve esthetics: 4%	Preserve esthetics: 5%	Preserve esthetics: 31%	
	Don't know: 16%	Don't know: 31%	Don't know: 25%	
Do you visit dental clinic?	Yes regularly: 21%	Yes regularly: 20%	Yes regularly: 31%	0.017
	Sometimes: 64%	Sometimes: 61%	Sometimes: 49%	
	Never: 15%	Never: 19%	Never: 20%	
Reason for visiting dental clinic?	Pain: 58%	Pain: 67%	Pain: 58%	0.122
	Trauma: 2%	Trauma: 0%	Trauma: 1%	
	Check up: 2%	Check up: 4%	Check up: 8%	
	Caries: 8%	Caries: 6%	Caries: 9%	
	Malocclusion: 1%	Malocclusion: 0%	Malocclusion: 1%	
All of the above: 26%	All of the above: 24%	All of the above: 25%		
Children's teeth should be checked regularly?	Yes: 84%	Yes: 87%	Yes: 90%	0.174
Primary teeth need dental treatment?	Yes: 73%	Yes: 68%	Yes: 76%	0.201
Will you agree for filling carious tooth?	Yes: 86%	Yes: 86%	Yes: 85%	0.835
Agree for pulp treatment on badly carious tooth?	Yes: 70%	Yes: 73%	Yes: 76%	0.476
If No, what is the reason?	No time: 10%	No time: 0%	No time: 4%	0.123
	No need: 25%	No need: 41%	No need: 26%	
	Expensive: 15%	Expensive: 10%	Expensive: 9%	
	Child is too young: 31%	Child is too young: 29%	Child is too young: 45%	
No qualified dentist: 18%	No qualified dentist: 20%	No qualified dentist: 17%		
Do you prefer pulp treatment or extraction?	Pulp treatment: 53%	Pulp treatment: 54%	Pulp treatment: 54%	0.989
	Extraction: 47%	Extraction: 46%	Extraction: 46%	
History of pulp treatment in your children?	Yes: 36%	Yes: 32%	Yes: 25%	0.047

There is a need of educating the parents about pulp therapy procedures and their effectiveness in preventing future dental problems in permanent dentition. The caretakers especially parents are considered to be the key towards a good future of oral health of a kid and how does the kid achieve good results assuring their better future.¹⁸

Normally the parents are not focused towards the pediatric dental service, and they do not give importance to the child's primary tooth and how crucial it is towards the

development of a good oral health. Because they are not aware of its importance they tend to ask questions related to why it is important for such maintenance and treatment to save the milk tooth while its functioning.¹⁹ The dentists say that there is no reasonable purpose of leaving the primary tooth untreated and decaying in a child's mouth. No branch of medicine would let one leave a tooth left untreated and decaying. There is no good reason for leaving primary teeth decayed and untreated in a child's mouth.²⁰

In the present study, 82% of parents visited the dental clinic only after their child had complaints of untreated carious teeth; 39% of parents were aware of all the functions of primary teeth. The reason for poor knowledge among parents and low value about primary teeth might be due to cultural-based opinions or the fact that these are temporary teeth and they will shed and be replaced by a new set of secondary teeth. Some authors have reported that certain cultures place little value on primary teeth and that caries and early loss of the primary dentition is an accepted occurrence.²¹

Although in the present study, 55.7% parents felt a regular visit to the dentist is important, whereas 33% felt regular dental check is not important and 11.3% had no idea about the regular dental checkup.

Earlier studies revealed that earlier and regular dental care among children is uncommon in developing countries. Many studies found that these recommendations are not taken by the parents in the developing countries and the reasons behind may be a lack of importance of the primary teeth, socioeconomic, and educational status, besides cultural beliefs.²²

When questioned about treating the primary teeth, 71.7% said it is necessary to treat the primary teeth, whereas 20.8% said treating primary teeth was not necessary as they would shed down and also waste of money and 7.5% had no idea about the necessity for treating primary teeth. Another study found that a better dental health among the children was due to the positive attitude of parents toward oral health of their children.²³

In case of treatment of primary teeth, 57.5% of them preferred to leave the treatment decisions to the dentist and 21.7% wanted to relieve the symptoms and monitor the tooth, whereas 12.3% wanted to extract the tooth and 8.5% wanted to restore the teeth. When questioned about reasons for not treating the primary teeth, 79.2% said it is a waste of time and money as primary teeth is temporary.²⁴

About 79.2% of children brushed their teeth only at morning and 20.8% of the children brushed twice daily. It was observed that 81.1% of children used adult toothpaste and 10.4% used baby toothpaste. About 96.2% did not use mouthwash and 3.8% used it. Around 95.3% did not use dental floss and 4.7% used it. Regarding brushing technique, 44.3% of children followed horizontal brushing, 28.3% followed circular brushing, and 27.4% followed vertical brushing. Around 38.7% took 2-3 min duration for brushing, 33% took more than 2-3 min, and 28.3% took <2-3 min. About 10.4% parents brush their child's teeth, whereas 74.5% parents supervised their child while brushing and about 15.1% parents advised but not supervised their child while brushing. Some studies outcomes are similar to the results of the present study, and these studies concluded that tooth brushing less than twice daily and sugars snacking between meals are key factors, developing caries in children.²⁵

The majority of the parents were not aware of the oral habits such as thumb sucking, mouth breathing etc., and causing harm to the developing dentition. After permanent teeth come in, sucking may cause problems with the proper growth of the mouth and alignment of the teeth. It can also cause changes in the roof of the mouth. Providing anticipatory guidance regarding dental and oral development, fluoride status, non-nutritive sucking habits, teething, injury prevention, oral hygiene instruction, and the effects of diet on the dentition are also important components of the initial visit.²⁶

This present study has gathered information on the oral health knowledge and attitude of parents regarding their child/children's deciduous teeth. Some of the answers were appropriate but it was evident that parents were still uneducated about some important facets of their child's oral health.²⁷

CONCLUSION

Overall there was no statistically significant difference between the subgroups of gender and educational level. However, the knowledge and attitudes of parents in general regarding the pulp therapy were low.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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