“To Brush or not to Brush” – Parental knowledge about their child’s oral health

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According to general regulation of MsC of University of Porto and the Studies Cycle of Integrated Master of Faculty of Dental Medicine of University of Porto, this work follows the *International Journal of Paediatric Dentistry* format which the author wishes to use to submit his investigation.

Resumo

Introdução: O hábito de escovar os dentes é introduzido pelos pais nos primeiros anos de vida e com o passar do tempo eles permanecem na vida da criança até a idade adulta. A saúde oral das crianças pode ser influenciada pelos conhecimentos dos pais, pelas suas atitudes e pelas suas crenças. Porém, indivíduos que pertencem à mesma classe social podem ter diferenças crenças e atitudes relativamente ao mesmo assunto. Apesar das atitudes terem uma tendência para serem estáveis, elas podem vir a ser modificadas quando a mensagem que é transmitida ao indivíduo é de fonte credível e com uma linguagem apropriada.

Objetivo: Indentificar as crenças, atitudes e o conhecimento dos pais sobre a saúde oral das crianças e verificar qual é a influência deste comportamento na saúde oral das crianças.

Métodos: Participaram neste estudo 100 pais de crianças entre os 6 e 7 anos de idade que fazem de um programa de saúde oral: "Paranhos Sorridente". Como instrmento de recolha de dados foi utilizado uma entrevista por via telefónica, realizada entre Janeiro e Abril de 2014.

Resultados: Entre os entrevistados, 86% dos pais dizem-se muito preocupados com o fato da criança poder ter cáries nos dentes de leite. 40% das crianças observadas, têm história de cárie nos dentes de leite. Apesar da maioria dos pais acharem que a pasta de dentes deve conter flúor (51%) e 92,2% não sabe a concentração recomendada.

Conclusão: Há necessidade de chegar informação sobre saúde oral até os pais. Os Médicos Dentistas têm um papel fundamental na transmissão de conhecimento aos pais, uma vez que a família tem grande impacto no desenvolvimento de hábitos de saúde oral das crianças.

Palavras-chave

Pais, conhecimento, Psicologia, saúde oral, Crianças em idade escolar

Abstract

Introduction: The habit of tooth brushing is introduced to children by parents in the first years of life and it can persist through adulthood. The oral health of children may be affected by parental dental knowledge, attitudes and cultural beliefs. Also can be related to parent's oral health behavior and lifestyle. Even though, individuals with the same cultural background may have different beliefs and attitudes. Although the attitudes have a tendency to be stable, it can be modified when the message is appropriate and trustworthy

Objective: identify parent's oral health knowledge, attitudes and beliefs about children's dental care and the association between these beliefs and attitudes with the oral health of the children.

Methods: In this study participated 100 caregivers of children aged 6-7 which participates on "Paranhos Sorridente" oral health programme. Data collection was performed between January and April 2014 by telephone.

Results: 86% of parents are very concern about children having a decayed temporary teeth. However 40% of children's observed have dental history of caries in temporary dentition. Although the majority thinks toothpaste should contain fluoride (51%) 92.1% don't know the fluoride ppm contain that is indicated to their children

Conclusion: This study reports the importance of an earlier involvement of parents on dental health care. Dentists, play an important role to transmit the dental care information to children and their family.

Keywords

Parents, knowledge, psychology, oral health, school children

Resumen

Introducción: El hábito del cepillado de dientes es transmitido por los padres durante los primeros años de vida y con el paso del tiempo estas costumbres permanecen. La salud oral de los infantes puede verse influenciada por conocimientos, actitudes y creencias de los padres. Sin embargo, individuos que pertenecen a la misma clase social pueden tener diferentes creencias y actitudes relativamente a este asunto. A pesar de que las actitudes tienden a ser estables, ellas pueden ser modificadas cuando el mensaje que es transmitido al individuo proviene de una fuente con credibilidad y en un lenguaje adecuado.

Objetivo: Identificar creencias, actitudes y conocimientos de los padres sobre la salud oral de los niños y verificar cual es la influencia de este comportamiento en la salud oral de estos.

Métodos: Participaron en este estudio 100 padres de niños con edades comprendidas entre los 6 y 7 años que hacen parte del programa de salud oral: "Paranhos Sorridente". Como instrumento de recolección de datos, fue realizada una entrevista por vía telefónica, efectuada entre enero y abril del 2014.

Resultados: Entre los entrevistados, 86% de los padres dicen estar muy preocupados con el hecho de que los niños puedan tener caries en los dientes de leche. 40% de los niños observados, tienen historia de caries en los dientes de leche. A pesar de que la mayoría de los padres creen que la pasta de dientes debe contener flúor (51%), 92,2% no saben la concentración recomendada.

Conclusión: Hay necesidad de informar a los padres sobre la salud oral. Los médicos dentistas tienen un papel fundamental en la transmisión de los conocimientos a los padres, una vez que la familia tiene un gran impacto en el desarrollo de los hábitos de higiene oral de los niños.

Palabras clave

Padres, conocimentos, psicología, salud oral, niños en edad escolar

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To my brother

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Introduction

Brushing ones teeth is a simple and effective way to remove plaque to prevent caries and periodontal disease [1, 2]. The habit of tooth brushing is introduced to children by parents, and this behavior starts developing in the first years of life and becomes ingrained in the children's mind later on in life [1]. In many developed countries, there have been improvements regarding the oral health of school children, however dental caries still affect a considerable amount of children [3, 4].

It is a well-known fact that dental caries is an infectious and multi-factorial disease associated with sociocultural and socioeconomic factors [3, 5-10]. Oral health in children may be affected by their parent's dental knowledge, attitudes as well as cultural beliefs [1, 5, 7, 11-17] , It can be related to parent's oral health behavior and lifestyle [8], considering that individuals with the same cultural background may have different beliefs and attitudes [8].

A parent is someone that influences the development of children in different ways: directly with biological characteristics, as parents contribute to genetic makeup of their children and indirectly by virtue of each partner's influence on the other and their associations with larger social networks[18].

Parent's beliefs – their ideas, values, knowledge, goals, and attitudes - may contribute to generate and shape parental behaviour and to the "continuity of culture" by helping to define culture and the transmission of cultural information across generations [18].

Attitude can be defined as a mental position particularly stable and sustainable on an idea, object, or person [19, 20]. All attitudes are a combination of beliefs, emotions, and evaluations to act in accordance with one´s beliefs and feelings [19, 20].

People who differ on their attitudes such as taking the child to dentist, will very likely have different beliefs about dentist appointments [20]. These differences will shape their way of thinking leading to certain actions instead of another [20]. Although the attitudes have a tendency to be stable, it can be modified when the message is appropriate and trustworthy [19].

As Branden and collaborators describes, there are a few examples of parental attitudes that have a positive impact on the child oral health such as: minimizing snacks and beverages containing sugar, help with tooth brushing, and taking the child regularly to the dentist for a preventive oral examination [21].

It is believed that dental caries and traumatic dental injuries in children can be prevented when the caregivers are aware of how their children's oral health is their responsibility [6, 22].

Children do not and cannot grow up as solitary individuals; parenting constitute the initial and all-encompassing ecology of child development [18]. According to the Parke, Burks, Carson, Neville, and Boyum tripartite model, parents influence their children through the directly interaction parent-child, as directional instructor and as provider of opportunities [23].

In this direct interaction, parents serve as role models and children pay attention to their actions and follow in their footsteps. As instructors, parents may serve as teachers and supervisors providing information for them, for example about dental care. In this third role, parents grant all the conditions and necessities for their children so that they can have an adequate oral health (ex. toothbrush, toothpaste and dentist regular visits) [23].

Parents influence child development both by their beliefs and by their behaviors. Similarities as well as differences in parent's attitudes and actions affect the nature and course of child development [5, 18].

Improving and promoting oral health programs can help to change parental beliefs and attitudes and to establish good routines and behaviors in childhood so once established, can endure throughout adulthood [24, 25].

The aim of this study is to identify parent's oral health knowledge, attitudes and beliefs about children's dental care and the family-related factors associated with their behaviour and oral health. The aim is also know if there's an association between these beliefs and attitudes with the oral health of the children.

Material and Methods

Instruments

This study and the questionnaire was based and adapted from the studies of Chhabra [15] and Phrabhu and collaborators [14]. The questionnaire covered demographic characteristics such as age, gender, marital status, occupation, education level and family structure;

The questionnaire about parent knowledge on children's oral health covered questions about:

-Caregiver's self-perception on their own dental health ("What is the importance that you give to your teeth in a scale from 0 to 5, in which 0 means not important and 5 very important"; "How do you rate your overall dental health" and "How often do you think is well-considered that children should go to dentist?);

- Self-belief on the dental health of their children ("What is the importance that you give to the fact that your children could have a decay on temporary teeth using a scale from 0 to 5", "If your children have a decay, which treatment you think it is more appropriate?", "Do you think that parents should help children brushing their teeth? If yes, how frequently?", "Which position do you think is more suitable to help your child to brush their teeth?");

- Questions to test their knowledge about oral health care ("Using a scale from 0 to 5, in which 0 means no contribution and 5 contributes a lot, in which measure do you think the following types of drinks such as "soda", "juice", "fruit juice", and on the other hand "sugary foods", "candies" and "chocolate" contribute to dental caries?");

- Knowledge about children's oral health ("When do you think it should be the first dental visit of your child?", "How frequently do you think children should brush their teeth?", "When do you think children should brush their teeth?", "When do you think children should start to brush their teeth?", "Do you think children should use toothpaste with fluoride? If yes, in which concentration?")

- Oral habits of their children ("Did your child visit the dentist before age 5?").

Some variables were grouped by percentile ranking into categories for better statistical analysis.

The questionnaire was translated into the local language for better understanding by the subjects and after the study started, some questions were reworded to improve clarity.

Participants

From an amount of 223 children aged 6 to 7 years, which participated on Faculty of Dental Medicine of University of Porto oral health programme – "Paranhos Sorridente", 100 caregivers accepted to participate in this study. In table 1 are stated the reasons that the remaining 123 caregivers presented in order to refuse to participate in the study.

Table 1 - Reasons for not participating

	Total (n=123)	
Reason	***n***	**%**
Refusal after phone call	7	5.7
No data to contact	53	43.1
Did not answer the phone call	33	26.8
Asked to phone later and did not answer the phone call	30	24.4

Out of the total of caregivers that did not participate in the study (123), a minority refused to participate (7). Fifty three did not provide a phone number to contact and 33 caregivers did not answer the call. A smaller percentage asked to phone later and then, they didn't answer the call (24,4%).

In table 2 there is a resume of the characteristics of the caregivers that participated in this study.

Table 2 - Characterization of participants

		Total (n=100)	
		N	***%***
Gender	Male	18	18.0
	Female	82	82.0
Age*	25 – 34	26	25.0
	34 – 38	23	25.0
	34 – 42	27	25.0
	42 – 60	23	24.0
Educational level	Elementary School	30	30.0
	High School	37	37.0
	University	33	33.0

* n=99, one participant did not provide the date of birth

All the participants in this study were parents which 82% were mothers. The age ranged between 25-60 years. Participant's educational level was measured, according to level of education, as elementary school, high school or university level. Although the most of the participants have high educational level, 30% still have low educational level.

Procedure

Data collection period was from January 2014 to early April 2014. The caregivers that provided a phone number were asked whether they would be willing to take part in telephone. Before the real interviews were performed there was a trial with a resident Professor resulting in minor amendments. All the interviews by phone were performed by the author and they lasted between 7 and 10 minutes.

The information about the children's clinical examination was obtained from "Paranhos Sorridente" database. In the table 3 and table 4 there are the resume of the oral examination performed in children that collaborated.

Table 3 – Mean number of decayed, missing and filled teeth in the permanent dentition (DMFT index), in the primary dentition (dmft index) and its components.

		Total (n=99)*			
		Minimum	***Maximum***	***Median***	***Mean(sd)***
DMFT index		0.00	4.0	0.00	0.15*(0.63)*
dmft index		0.00	14.0	0.00	1.51(2.57)
Decayed	Permanent dentition	0.00	4.00	0.00	0.14(0.62)
	Primary dentition	0.00	13.00	0.00	1.40(2.48)
Missing	Permanent dentition	0.00	0.00	0.00	0.00(0.00)
	Primary dentition	0.00	1.00	0.00	0.20(0.14)
Filled	Permanent dentition	0.00	1.00	0.00	0.01(0.10)
	Primary dentition	0.00	2.00	0.00	0.08(0.34)

* 1 children didn't collaborate on the oral examination and they were excluded from the analysis.

Table 4 - Frequency of the gingival inflammation in children

	Total (n=99)*	
Gingival Inflammation	***N***	**%**
Yes	5	5.1
No	94	94.9

* 1 children didn't collaborate on the oral examination and they were excluded from the analysis.

Ethical and Deontological Questions

This study was approved by Ethical Committee of Dental Faculty of University of Porto (Portugal). Interviewee's permission were obtained by telephone.

Statistical analysis

All statistical analysis was performed with the Statistical Package for Social Sciences (SPSS) version 21.0 programme. The level of statistical significance was set at $P = 0.05$.

Results

In this study, a low percentage of children had gingival inflammation (5.1%). Plus, 40% have history of tooth decay on temporary dentition (*Median* = 4.0; Minimum = 1.0; Maximum = 14.0) and 9% on the permanent dentition (*Median* = 1.0; Minimum = 1.0; Maximum = 4.0)

Reporting the results of this study, firstly we will present data about parental beliefs and after that about the association between those beliefs and children's oral health.

Parental beliefs about oral health

In order to to identify parent's oral health knowledge, attitudes and beliefs about children's dental care, first we asked participants about their perception of their own dental health and 54% of the participants consider it as "Good" and only 2% thinks it is "Excellent". Figure 1 shows the distribution of Parent's self-perception on their own oral health.

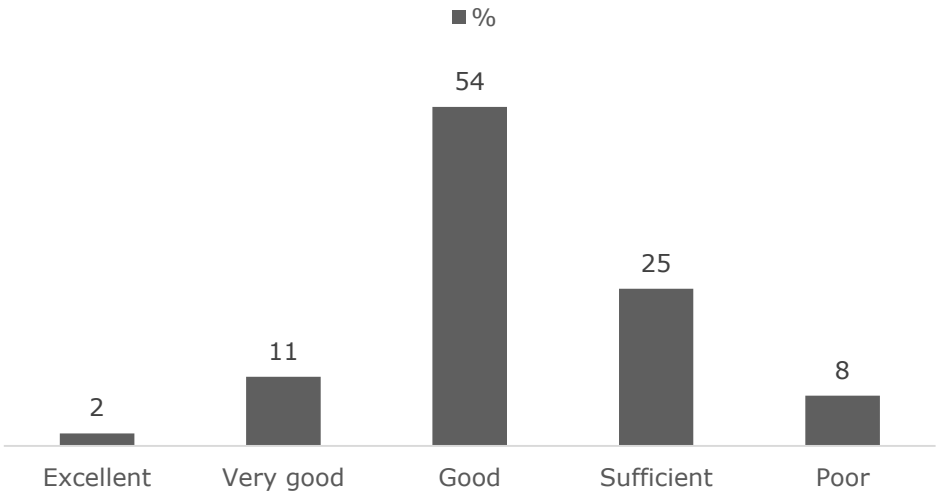

Figure 1 – Distribution of participants self-perception of their own oral health

When parents were asked about the importance of their teeth and the dental visit, 88% felt teeth were very important (*M*=4.83; SD= 0.57) and 77% of parents thinks dental visit is also very important (*M*=4.67; SD=0.7). When they were inquired about how often should be the dental visit, 55% thinks that they should visit the dentist twice a year (Figure 2).

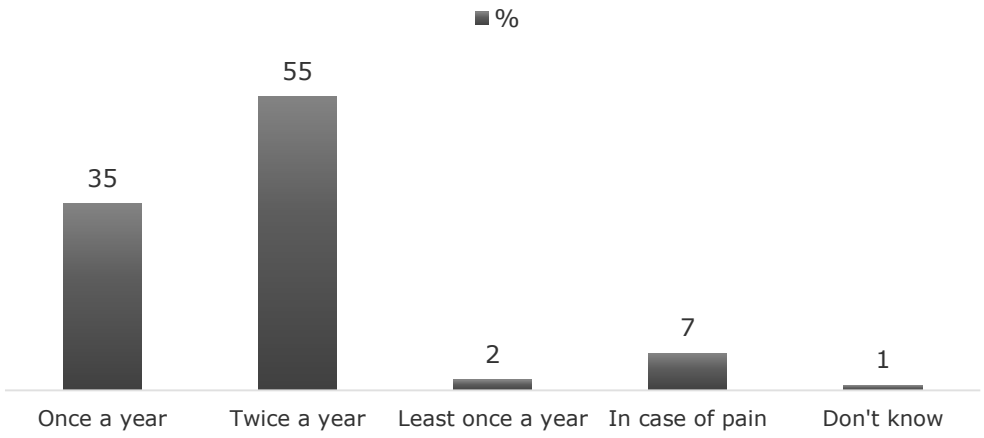

Figure 2 - Participants view of how often they think it should be the dentist visit

In the present study, 86% of parents are very concern about children having a decayed temporary teeth (*M*=4.78; SD=0.65) and supposing that they have a decay, 35% thinks the treatment more suitable is to restore the teeth although 44% thinks the dentist should decide.

When asked when they think it should be the child's first dental visit, some parents were not so sure (*n*=66): 15% thinks on getting first baby teeth and 9% on having all baby teeth but 13% don't know (Figure 3). Besides, some parents responded to the question giving an interval in months of when they think it should be child's first dental visit (*n*=79; *M*=49,00; SD=24,63).

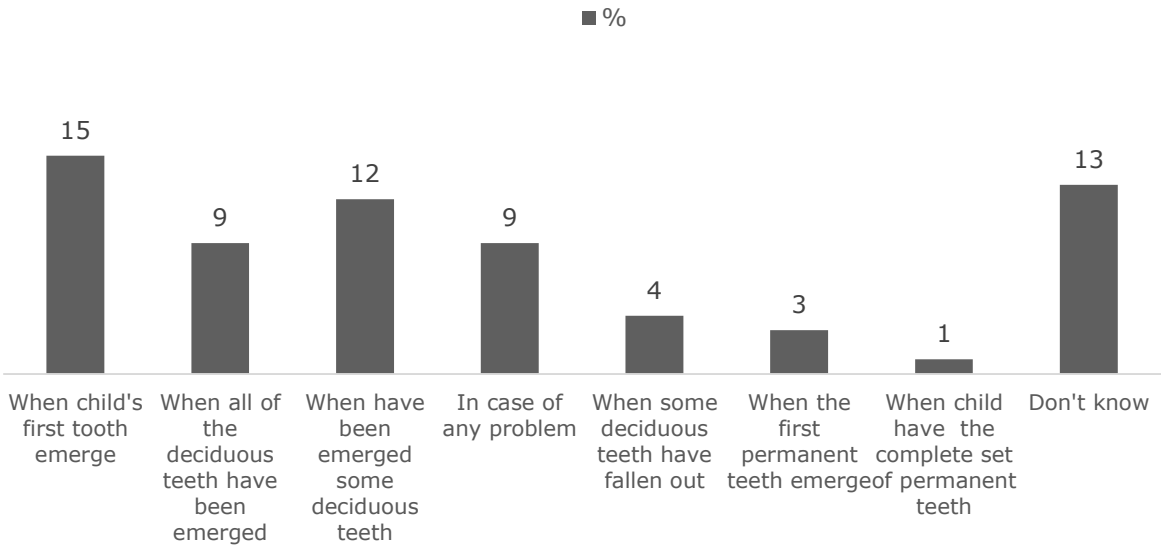

Figure 3 - Parental knowledge of when should be child's first dental visit

A Spearman's Rank order correlation was run to determine the relationship between the age (in months) that should be children's first dental visit, the importance parents attributes to the dentist visit and the importance parents gives to the fact children could have a decay on temporary teeth.

Table 5 – Correlation between age of child's first dental visit, importance of dental visit and importance of dental decay on temporary teeth

	1	**2**	**3**
1 – Age in months should a child visit a dentist for the first time	1		
2 – Importance of dental visit	-0.14	1	
3 – Importance of dental caries on temporary teeth	0.06	0.29**	1

** correlation significant at the level 0,01

We can see there is a positive moderate correlation (p<0.01) between the importance that parents attributed to the dentist visit and the importance of children could have a decay on temporary teeth, which was statically significant (r_s = 0.288, p = 0.004). It also reports a negative correlation but not statically significant between the importance parents give to the dentist visit and the age in months that a child should visit the dentist for the first time.

The Kruskal-Wallis Test was used to see if parents who refer brought children to the dentist before age 5 believes that children should go early. In fact, a Kruskal-Wallis test revealed a statistically significant difference between parents who take children to dentist before age 5 and thinks that children should go to the dentist early (H(2) = 8.757, p = 0.013) with a mean rank of 33.72 for "Yes", 49.28 for "No" and 48.25 for "Don't Know".

To evaluate parents knowledge about the cariogenic potential of some foods a list of food items was presented and the respondents attributed a high probability to soda (M=4.58; SD=0.69), juice (M=4.15; SD=0.91), sugary foods (M=4.67; SD=0.68), candies (M=4.89; SD=0.39) and chocolate (M=4.70; SD=0.70) to cause dental caries. However, parents attribute a low rate to fruit juice (M=2.53; SD=1.32).

When asked about brushing habits, parents responded according the following figure (n=66)

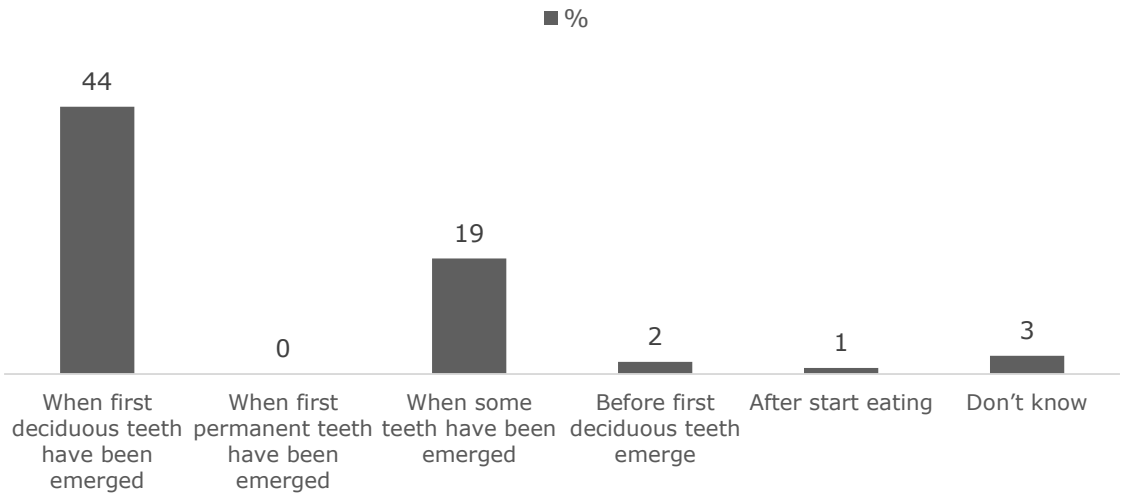

Figure 4 - Parent's perception of when children should start brushing their teeth

Also about brushing habits, the majority of parents (94%) thinks they should help children brush their teeth and 71% agree children should brush their teeth more than twice a day. Parents considers the position more comfortable to help children to brush their teeth is by side of the child (41.2%). Parents also thinks toothpaste should contain fluoride but 92.2% don’t know the fluoride ppm contain that is indicated to their children. Besides, 33% of parents thinks they should use a size of a pea of tooth paste to cover the child’s toothbrush. Figure 5 shows parents perception about the amount of paste to be used by a children

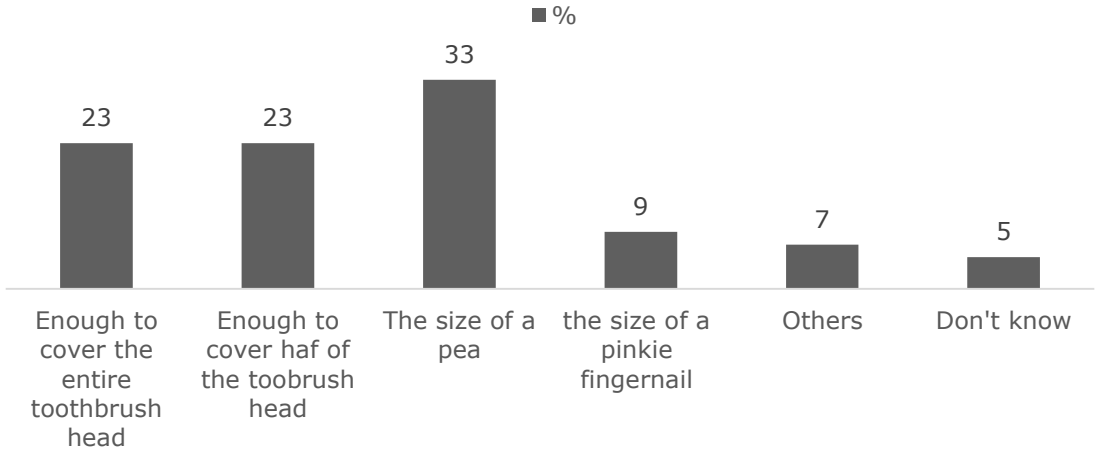

Figure 5 - Parent’s answer about the quantity of paste to be used

It was asked to parents when they think children should brush their teeth. The results are on table 6.

Table 6 – When children should brush their teeth

		Total (n=100)	N	%
Brush after breakfast	Yes	100	51	51.0
	No	100	49	49.0
Brush after lunch	Yes	100	30	30.0
	No	100	70	70.0
Brush after dinner	Yes	100	15	15.0
	No	100	85	85.0
Brush before going to sleep	Yes	100	40	40.0
	No	100	60	60.0
Brush always after the meals	Yes	100	45	45.0
	No	100	55	55.0

Most of parents thinks children should brush their teeth after breakfast, 45% of participants answered always after the meals and 40% believe they should brush before going to sleep.

In the table 7 there are a resume of other aspects of parental knowledge about their child's oral health.

Table 7 - Parents knowledge about their children oral health

		Total (n=100)	**N**	**%**
Which frequency do you think children should brush their teeth	Twice a day	100	29	29.0
	More than twice a day	100	71	71.0
Do you think parents should help children brush their teeth?	Yes	100	94	94.0
	No	100	3	3.0
	Maybe	100	3	3.0
If yes, which frequency	One a day	96	8	8.3
	Twice a day	96	24	25.0
	Thrice a day	96	29	30.2
	Everytime they brush	96	34	35.4
	Once a week	96	1	1.1
Which position you think is more suitable to brush your child's teeth	Front of the child	97	21	21.7
	Behind the child	97	22	22.7
	By the side of the child	97	40	41.2
	Don't know	97	14	14.4
Do you think your child toothpaste should have fluoride?	Yes	100	51	51.0
	No	100	21	21.0
	Don't know	100	28	28.0
If yes, which concentrate do you think it should be	1500 ppm	51	3	5.9
	250 ppm	51	1	1.9
	Don't know	51	47	92.2

Association between parental beliefs and children oral health

A Mann-Whitney U Test was used in order to understand the association between the parental perception of their own oral health and children's oral health. For statistical analysis the five conditions of the self-perception were grouped in two categories "excellent, very good or good" and "Sufficient or Poor" (Table 8).

Table 8 - Association between Children's DMFT and dmft index with parent's own oral health perception

	Total (n=99)	**Excellent, very good or good (n=66)**		**Sufficient or Poor (n=33)**		
	N	N	Mean Rank	N	Mean rank	z
DMFT index	99	66	50.50	33	49.00	-0.52ns
dmft index	99	66	49.02	33	51.95	-0.54ns

** - p<0.01; * - p<0.05; ns – non significant

A Mann-Whitney U Test revealed no significant difference in the parents that attribute "excellent, very good or good" or "sufficient or poor" to their own dental health and DMFT index (*Md*=00, n=99) U = 1056, *z* = -0.52 *p* = 0.60 r = 0.05.

Also reports indicate there is no difference between those who attributed "excellent, very good or good" or "sufficient or poor" to their own dental health and dmft index (*Md*=00, n=99) U = 1024.5, *z* = -0.54, *p* = 0.59 r = 0.05.

To test the association between parental education level and DMFT index and dmft index and its components a Kruskal-Wallis test was used (table 9).

Table 9 – Association with parent's education level and children's DMFT and dmft index and its components

	Total (n=99)	Elementary school level (n=30)			High school level (n=37)			University level (n=32)			
	N	*N*	Median	Mean rank	*N*	Median	Mean rank	*N*	Median	Mean Rank	Z
DMFT index	99	30	0.00	51.05	37	0.00	48.59	32	0.00	50.64	0.723
dmft index	99	30	0.00	63.37	37	0.00	42.86	32	0.00	45.72	0.002*
Permanent decayed	99	30	0.00	51.52	37	0.00	49.09	32	0.00	49.63	0.727
Deciduous decayed	99	30	0.00	64.42	37	0.00	41.96	32	0.00	45.78	0.001*
Permanent missing	99	30	0.00	50.00	37	0.00	50.00	32	0.00	50.00	1.000
Decidous missing	99	30	0.00	50.65	37	0.00	49.00	32	0.00	50.55	0.546
Permanent filled	99	30	0.00	49.50	37	0.00	49.50	32	0.00	51.05	0.351
Deciduous filled	99	30	0.00	48.62	37	0.00	51.09	32	0.00	50.03	0.697

** - p<0.01; * - p<0.05; ns – non significant

A Kruskal-Wallis Test revealed a statistically significant difference in dmft index across there different education levels (Elementary school, n = 30, high school, n = 37, university level, n = 32), x2 (2, n = 100) = 12.24, $p = 0.002$.

Also revelled a statically significant difference in deciduous decayed teeth between groups levels (Elementary school, n = 30, high school, n = 37, university level, n = 32), χ^2 (2, n = 100) = 15.04, $p = 0.001$.

To see if there are a difference between children that have a decay and the interval of months parents thinks children should go to the dentist for the first time (Table 10) and the time children should start to brush their teeth (Table 11), it was used the Mann-Whitney U Test For statistical analysis children were grouped in two categories "have a tooth decayed" "don't have tooth decayed".

Table 10 – Relation between children that have or not decay and the period should be child's first dental visit

	Total (n=63)	**Decayed**	**Not decay**		
	N	Mean Rank	N	Mean rank	z
Age in months should be children's first dental visit	26	36.17	37	41.82	-1.09ns

ns – non significant

Table 11 –Relation between children that have or not decay and the interval in month children should start to brush their teeth

	Total (n=79)		**Decayed**	**Not decay**	
	N	Mean Rank	N	Mean rank	z
Interval in months children should start to brush their teeth	32	32.13	46	31.91	-0.054ns

ns – non significant

A Mann-Whitney U test revealed no significant difference in the intervals of month it should be child's first dental visit of children that have a decayed teeth (Md = 48.0, n = 32) and children that don't have a decayed teeth (Md = 24.0 , n = 46), U = 629.5, z = -1.09 , p = 0.28, r = 0.12.

It also revealed there's no significant difference in the interval of month that children should start brushing their teeth and between children who have dental cavities (Md = 48.0, n = 26) and children who doesn't have dental caries (Md = 24.0, n = 37) U = 477.5, z = -0.05, p = 0.96, r = 0.006.

Discussion

It has been well documented that lower educational level is commonly associated with poorer oral health and less favourable attitudes towards dental care [3, 5-9]. It has been suggested that parents with improved levels of education may be able to assess appropriate source of information and understand that information more completely, [10] and the results confirm parents with low educational level have a tendency to have children with more oral health problems.

In this study, it seems that parents with perception of low oral health tend to have children with more caries in temporary teeth. Also it seems there is a relationship between ambivalence toward the importance attributed to one's own dental health and to dentist visits. Plus, parents attributed high importance to the possibility of children can have caries on temporary teeth, although 40% of children have dental history of caries in temporary teeth. It can be related to the fact parents know they are participating in a study from a Dental Faculty.

Despite some confusion about when to take a child for their first dental visit, the role of fluoride, and the age children start brushing their teeth, most participants understand the cariogenic potential of various foods. However, the role diet plays on development of dental caries is not clear to parents as they attributed to fruit juice a low probability of having caries.

The American Academy of Paediatric Dentistry (AAPD) recommends that oral hygiene should be implemented no later than the time of eruption of the first primary tooth and reports the frequent consumption of sugar-containing snacks between meals increase the risk of caries [2]. Also, AAPD has recommended children six years of age consume no more than four to six ounces of fruit juice per day, from a cup and as a part of a meal or snack [2].

The majority of participants responded that children should brush their teeth more than twice a day (71%). Although the benefits of more frequent cleanings are not well established [14] In Portugal, the Directorate-General Health (DGH) suggest toothbrushing should be performed twice a day being one of them before sleep [25]. DGH also recommend that the amount of toothpaste that children with six and seven years old should use is one centimetre and in this study 33% of subjects thinks the amount of toothpaste that should be used is pea size (approximately to one millimetre of diameter) [25]. Besides, 51% of parents think toothpaste should contain fluoride but they don't know the appropriate level of fluoride in the paste (1000 ppm for at-risk children) [14].

It is a positive aspect that parents think they should help children brush their teeth (94%), every time they brush (34%) standing next to their children (40%). Prahbu et all refers based of AAPD guidelines, it is best for parents to stand behind the child when brushing their teeth[14].

Results confirm Rubin and Chung's[18] assumption that parental beliefs influence children's behaviour. In this case, parents that believe children should visit the dentist earlier in life have a greater probability to take them before age 5. On the other hand, the present study showed no significant difference in the intervals of month it should be child's first dental visit and children's oral health.

Although there's no statically significant difference, results showed two opposite tendencies: children with dental caries have low mean rank of months that parents thinks children should go earlier to the dentist. On the other hand, in cases when mean rank of children's dental caries is higher, parent's thinks they should start brushing their teeth later.

This study reports the importance of an earlier involvement of parents on dental health care. Pregnancy offers an opportunity to educate and perform dental treatment on expectant mothers. Additionally, doing more research can help to understand the impact of parental beliefs and behaviour with time in children's development. Moreover, it reveals the importance of conducting educative programmes about oral health to children and can cover all family members.

Conclusion

Parents need to realize that their child's oral health is their responsibility. Additionally, children have to be motivated, which means that the educator must stimulate interest for the subject.

If oral health promotion efforts are to be effective in improving the oral health of young children, it is essential that there be a good understanding of parental and caregiver knowledge and attitudes.

Dentists, as a part of their instruction, need to know beyond technical knowledge, social sciences and psychology.

If changes are possible, dentists can work with this issue to change oral health habits in the family and improve oral health in children.

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