

Level of Knowledge about Oral Health of Parents and its Relationship with Oral Hygiene Habits of their Children from 8 to 10 Years Old.

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Keywords: Oral health; Oral hygiene; oral health surveys; Knowledge.

ABSTRACT

Aim: To determine the relationship between the level of oral health knowledge of parents and the oral hygiene habits of their children aged 8 to 10 years. **Material and methods:** This cross-sectional study was applied to a sample of 200 parents (70% men and 70% aged 24-40 years) and their respective children (52.5 men; 44% aged 8 years) from two private schools in Lima. in 2021. Two questionnaires were applied, one with 20 items on oral health knowledge aimed at parents and another with 4 items on oral hygiene applied to their children. The statistical analysis was carried out with the Mann-Whitney U or Kruskal Wallis tests with a significance level of $P < 0.05$. **Results:** The majority presented a regular level of oral hygiene habits (59%) and oral health knowledge (53%). The age of the child was related to the frequency of daily brushing ($P = 0.004$) and the elements of oral hygiene ($P = 0.0024$), while the level of education of the parents was related to the level of oral health knowledge ($P = 0.000$). Higher levels of parental knowledge were associated with higher levels of oral hygiene over weekly toothbrushing frequency ($P = 0.012$). **Conclusion:** Both oral hygiene and the level of knowledge in oral health were regular, showing a positive relationship with a higher frequency of weekly brushing.

Introduction

Oral diseases are related to the roles of parents, in addition to knowledge, beliefs, culture and education, since these are transmitted to their children. Adequate understanding of the disease by the father is important in its prevention. Quality of life and socioeconomic level are also considered important factors in the development of diseases, since having a low income leads to not having access to a good health service, as well as limited access to information on health prevention [1-3].

The level of knowledge about oral health is related to the education that parents have. It corresponds to the ability to understand and use correct information and guidelines related to oral health. These include the identification of risk and factors that affect oral health, in addition to the knowledge and application of oral hygiene measures [4].

Knowledge is studied from certain points of view through disciplines such as logic, psychology, anthropology or philosophy. However, it is agreed that, in general terms, knowledge is a human relationship of truth with known reality. All people throughout their lives acquire it in different ways, whether through sensations, experiences or studies [5]. As people's educational level increases, so does their knowledge about oral health. Everyone has the capacity to transmit them and this has been demonstrated in adults where knowledge about oral health is associated with educational level and certain oral hygiene habits [6].

It is important to establish oral hygiene habits as a preventive measure against oral diseases. The close relationship that exists between family attitudes regarding oral hygiene has been demonstrated, observing that children follow the habits and behaviors of their parents [7,8].

A stage where these habits can be better established and reinforced is between 8 and 10 years old. In this age range, the transitions of fundamental motor skills are more refined, presenting greater motor development and the acquisition of gross and fine motor skills due to the progressive maturity of the central nervous system. However, the literature is

scarce when relating this age to oral hygiene practices or habits. In contrast, in preschool children, oral health practices have been shown to be strongly influenced by parents, especially mothers [9,10].

It is of interest to have a clear perspective of the relationship between parents' oral health knowledge and their children's oral hygiene habits in this age range. A similar study carried out in the San Miguel district in Lima has not been found. Therefore, this study aimed to determine the relationship between the level of oral health knowledge of parents and the oral hygiene habits of their children aged 8 to 10 years in Lima-Peru.

Materials and Methods

The design of this study was prospective cross-sectional. The study was approved by the Institutional Research Ethics Committee of the Universidad Científica del Sur (N°166-CIEI-CIENTÍFICA-2022). The study was carried out in accordance with the requirements of the Declaration of Helsinki. Informed consent and assent were obtained physically from the study participants.

The population was 414 parents and their respective children aged 8 to 10 from two private schools (n1=200 and n2=214) in the district of San Miguel (located west of Lima and medium/medium-high socioeconomic level). A non-probabilistic sample was selected from 200 parents and their respective 200 children enrolled in the 3rd, 4th and 5th grade of primary school in 2021. The exclusion criteria were: children with illnesses or who took medications because they could alter habits., children with deficiencies in psychomotor skills, cognitive alterations, incomplete questionnaires or those filled out incorrectly according to the instructions provided, parents with more than one child in the same age range.

The questionnaire directed towards parents was taken from the study of Coupé-Araujo and García-Rupaya¹¹ where there were 20 knowledge questions about the oral health of their children distributed in four dimensions (prevention, dental caries and diet), and four alternatives with only one correct answer (1 point each). The total score from 0 to 20

points was categorized into: poor (0-10 points), regular (11-14 points), good (15-17 points) and very good (18-20 points)11 (Ministry of Education of the Peru).

The oral health knowledge questionnaire was validated in the previous study [11] by expert judgment (pediatric dentists and research methodology specialists), showing content validation with Aiken's V=0.95 (acceptable) and construct validation with factor analysis whose Item analysis ranged from 0.36 to 0.77. Test-retest reproducibility of 0.89 (very good) and Cronbach's alpha reliability of 0.64 (fair). The questionnaire aimed at children aged 8 to 10 years was taken from the study on oral health behavior by Karamehmedovic et al. [1]. where four questions related to oral hygiene habits were selected (frequency of daily and weekly brushing, brushing time and oral hygiene elements used), with unique responses that indicated levels of ordinal habits (from 2 to 5 points). The total score from 0 to 20 points was categorized into: poor (0-10 points), fair (11-14 points), good (15-17 points) and very good (18-20 points).

The researchers previously received training from a primary school teacher to ask the questions to children in a simple and understandable way. Likewise, they received training for behavioral management in

children. The application of the questionnaire to children was carried out in school environments, while the questionnaire to parents was sent to parents through notices from classroom teachers to be returned completed if they accepted participation in the study.

The data was analyzed with the statistical software IBM SPSS Statistics (Statistical Package for Social Sciences). The variables were presented with descriptive statistics. The tests applied to compare levels of habits or knowledge against dichotomous variables were analyzed with U of Mann Whitney and against polytomous variables with Kruskal Wallis. The P<0.05 indicated statistically significant differences.

Results

The child participants (n=200) were distributed similarly by sex (52.5% males and 47.5% females) and age (44% 8 years old; 23.5 9 years old; and 32.5% 10 years). The level of oral hygiene habits in children was mostly regular (59%) followed by good (21%). Age was related to habits in the items on the frequency of daily brushing (P=0.004) and the oral hygiene elements used (P=0.0024), with a higher level of oral hygiene habits being observed at older ages [Table 1].

Table 1. Oral hygiene habits in children between the ages of 8 years (n=88), 9 years (n=47) and 10 years (n=65).

Questions about oral hygiene habits in children (n=200)	Child's age (years)	Level of oral hygiene habits in children, n (%)				Q
		Deficient	Regular	Well	Very good	
How many times do you brush your teeth a day?	8	12 (6%)	59 (29.5%)	11 (5.5%)	6 (3%)	*0.004
	9	5 (2.5%)	20 (10%)	18 (9%)	4 (2%)	
	10	5 (2.5%)	39 (19.5%)	13 (6.5%)	8 (4%)	
How many times do you brush your teeth a week?	8	12 (6%)	59 (29.5%)	11 (5.5%)	6 (3%)	0.923
	9	5 (2.5%)	20 (10%)	18 (9%)	4 (2%)	
	10	5 (2.5%)	39 (19.5%)	13 (6.5%)	8 (4%)	
How long do you brush your teeth?	8	12 (6%)	59 (29.5%)	11 (5.5%)	6 (3%)	0.542
	9	5 (2.5%)	20 (10%)	18 (9%)	4 (2%)	
	10	5 (2.5%)	39 (19.5%)	13 (6.5%)	8 (4%)	
What do you use to brush your teeth?	8	12 (6%)	59 (29.5%)	11 (5.5%)	6 (3%)	*0.024
	9	5 (2.5%)	20 (10%)	18 (9%)	4 (2%)	
	10	5 (2.5%)	39 (19.5%)	13 (6.5%)	8 (4%)	
Total		22 (11%)	118 (59%)	42 (21%)	18 (9%)	

Kruskal-Wallis test (*Q<0.05).

The sex of the children was not associated with oral hygiene habits ($P \geq 0.05$) [Table 2].

Table 2. Oral hygiene habits in children among women ($n=95$) and men ($n=105$).

Questions about oral hygiene habits in children ($n=200$)	Sex	Level of oral hygiene habits in children, n (%)				Q
		Deficient	Regular	Well	Very good	
How many times do you brush your teeth a day?	Female	16 (8%)	50 (25%)	23 (11.5%)	6 (3%)	0.341
	Male	6 (3%)	68 (34%)	19 (9.5%)	12 (6%)	
How many times do you brush your teeth a week?	Female	16 (8%)	50 (25%)	23 (11.5%)	6 (3%)	0.156
	Male	6 (3%)	68 (34%)	19 (9.5%)	12 (6%)	
How long do you brush your teeth?	Female	16 (8%)	50 (25%)	23 (11.5%)	6 (3%)	0.434
	Male	6 (3%)	68 (34%)	19 (9.5%)	12 (6%)	
What do you use to brush your teeth?	Female	16 (8%)	50 (25%)	23 (11.5%)	6 (3%)	0.059
	Male	6 (3%)	68 (34%)	19 (9.5%)	12 (6%)	

Mann-Whitney U test (* $P < 0.05$).

The majority of parent participants ($n=200$) were male (70%), aged 24 to 40 years (70%), and had a higher/technical educational level (63%). The level of knowledge of parents about predominant oral health was regular (53%) followed by good (39.5%). Only the

demographic variable level of education was related to the level of parents' knowledge about oral health, showing that a higher level was found in parents with a higher/technical degree than compared to those in secondary school ($P=0.000$) [Table 3].

Table 3. Parents' level of knowledge about oral health according to age, level of education and sex.

Parent demographics ($n=200$)	Parents' level of knowledge about oral health, n (%)				Q
	Deficient	Regular	Well	Very good	
Father's age					
24-40 ($n=140$)	twenty-one%	50 (25%)	78 (39%)	10 (5%)	0.058
41-57 ($n=60$)	1 (0.5%)	29 (14.5%)	28 (14%)	twenty-one%	
Father's sex					
Female ($n=63$)	0 (0%)	28 (14%)	33 (11.5%)	twenty-one%	0.429
Male ($n=137$)	3 (1.5%)	51 (25.5%)	73 (36.5%)	10 (5%)	
Degree of instruction					
Secondary ($n=74$)	3 (1.5%)	45 (22.5%)	24 (12%)	twenty-one%	*0.000
Higher/technical ($n=126$)	0 (0%)	34 (17%)	82 (41%)	10 (5%)	
Total	3 (1.5%)	79 (39.5%)	106 (53%)	12 (6%)	

Mann-Whitney U test (* $P < 0.05$).

Oral hygiene habits predominated in tooth brushing two to three times a day (65%), every day of the week (73.5%), 30 to 1 minute (75%), and using a toothbrush and toothpaste. dental (81%). Parents' knowledge levels were associated with children's oral

hygiene habits only in the weekly tooth brushing frequency item, showing a higher brushing frequency associated with higher levels of their parents' knowledge about oral health ($P=0.012$). [Table 4].

Table 4. Parents' level of knowledge about oral health according to their children's oral hygiene habits.

Questions about oral hygiene habits in children ($n=200$)	Parents' level of knowledge about oral health, n (%)				Q
	Deficient	Regular	Well	Very good	
How many times do you brush your teeth a day?					0.437
I don't brush ($n=0$)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	
Once a day ($n=22$)	0 (0%)	12 (6%)	8 (4%)	twenty-one%	
Two or three times a day ($n=130$)	3 (1.5%)	51 (25.5%)	70 (35%)	6 (3%)	

More than three times a day (n=48)	0 (0%)	16 (8%)	28 (14%)	4 (2%)	
How many times do you brush your teeth a week?					
I don't brush (n=0)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	*0.012
Once a week (n=12)	0 (0%)	6 (3%)	6 (3%)	0 (0%)	
Two or three times a week (n=41)	1 (0.5%)	24 (12%)	16 (8%)	0 (0%)	
Every day of the week (n=147)	twenty-one%	49 (24.5%)	84 (42%)	12 (6%)	
How long do you brush your teeth?					
I don't brush (n=2)	0 (0%)	twenty-one%	0 (0%)	0 (0%)	0.197
30 seconds (n=81)	3 (1.5%)	33 (16.5%)	39 (19.5%)	6 (3%)	
One minute (n=69)	0 (0%)	27 (5.4%)	42 (21%)	0 (0%)	
More than one minute (n=48)	0 (0%)	17 (8.5%)	25 (12.5%)	6 (3%)	
What do you use to brush your teeth?					
I don't brush (n=0)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0.191
Toothbrush only (n=2)	0 (0%)	twenty-one%	0 (0%)	0 (0%)	
Toothbrush and toothpaste (n=162)	3 (1.5%)	67 (33.5%)	82 (41%)	10 (5%)	
Toothbrush, toothpaste, and floss (n=36)	0 (0%)	10 (5%)	24 (12%)	twenty-one%	

Kruskal-Wallis test (* $Q < 0.05$).

Discussion

In this study, a relationship was found between the level of knowledge about oral health of the parents with the frequency of weekly tooth brushing of their children aged 8 to 10 years, but not with respect to frequency, time and elements used for brushing. A study also carried out in Lima by Ruiz and Campos [12] found a relationship between the level of oral health knowledge of mothers and their children aged 3 to 5 years. However, this relationship would not be completely seen at older ages as in this study, since younger children are more dependent on their parents with respect to the development of their habits.

Another study with which we do not agree was the one carried out by Sosiawan et al. [13] who found a significant relationship between parents' oral hygiene knowledge and children's oral hygiene. Nadazyova et al. [14] also found the influence of parents' knowledge on inappropriate hygienic behaviors of children aged 7 to 13 years. In this sense, it is feasible to establish a certain relationship between the level of knowledge of the parents and the oral hygiene habits of their children, emphasizing that when there is a higher educational level of the parents, fewer oral health difficulties develop [15].

It is important to consider what Ghattas et al. [16] stated, who indicate that good oral hygiene habits should be instituted at an early

age. However, it has been shown that children between 8 and 10 years old are capable of acquiring knowledge efficiently, and they also acquire a sense of responsibility while developing their independence [17].

Regarding the relationship between children's oral hygiene habits and sex, the present study did not coincide with a research carried out in Spain, where found that the group with the highest risk of suffering from oral diseases was men [20].

The present study did not find differences between the level of knowledge of parents about oral health and their age. However, there was a greater participation of young parents (24 to 40 years old) in the surveys carried out and with a good level of knowledge about oral health. In contrast to the study by Moriyama et al. [21], who determined that mothers aged less than or equal to 30 years had adequate oral health literacy, this may be due to the greater mastery of young parents with technology and the digital world.

The level of knowledge of parents about oral health was related to the level of education where there was a higher percentage of parents with a higher/technical degree. Higher educational levels such as higher education leads to a greater understanding of oral hygiene instructions, coinciding with Bogovska and Kabaktchieva [23]. On the other hand, Elamin, et al. [24] found that

parents with lower levels of education reported less favorable oral hygiene behaviors, as did Dahlan, et al. [25].

This study presented limitations such as some variables that were not evaluated: living conditions, sociodemographic characteristics and socioeconomic level. However, we chose to focus the study on the level of knowledge. Parents and children may have already received training sessions before conducting the study; this could have altered the results. The study was carried out only in an urban area and in three levels of parental education: primary, secondary and higher education.

The survey technique could have affected the result obtained by not performing a clinical evaluation. In addition, The instrument chosen for parents was created for oral health of preschoolers, which differed with the age range evaluated. This study began its application in 2020, so the data collection technique had to be adapted to the COVID-19 restrictions established by the country. However, these results are considered reliable since, at ages 8 to 10, children show greater parental independence in discerning their responses.

The results of this study contribute to focusing oral health promotion campaigns comprehensively on both minors and parents, since evidence has been found of the influence of parents' hygiene habits. towards children at an early age. We toastFuture research data that will allow parents to evaluate oral health problems and their impact on their children's quality of life through the analysis of sociodemographic and cultural factors.

Conclusions

Based on the results of this study, it was concluded thatA greater frequency of weekly brushing in children was related to higher levels of oral health knowledge in their parents. An older age of the children was associated with higher levels of oral hygiene regarding the frequency of daily brushing and oral hygiene elements, while a higher educational level of the parents was associated with higher levels of knowledge about oral health.

Annexes

Appendix 1. Consistency matrix.

Issues	Goals	Hypothesis	Methodology
Is there a relationship between the level of knowledge about oral health of parents and the oral hygiene habits of their children from 8 to 10 years old?	To determine the relationship between the level of knowledge about oral health of parents and the oral hygiene habits of their children aged 8 to 10 years.	H0: There is no relationship between the level of knowledge about oral health of parents and the oral hygiene habits of their children aged 8 to 10 years.	<p>Research design: Observational, analytical, transversal and prospective.</p> <p>Population: 414 parents and their respective 414 children from 8 to 10 years old, belonging to the Private Educational Institution “Corazón de Jesús” and “Hogar del Niño Santa María Madre de Dios” located in the district of San Miguel, Lima.</p> <p>Sample: 200 parents and their respective 200 children enrolled in educational institutions that met the selection criteria.</p> <p>Sampling: Non-probabilistic for convenience</p> <p>Techniques: Structured survey</p> <p>Instruments: A questionnaire was applied to the children, consisting of 04 questions regarding their oral hygiene habits and for each question only one answer had to be chosen. Likewise, a questionnaire was applied to the parents consisting of 20 questions regarding their knowledge about oral health and for each question only one answer had to be chosen.</p>
Specific problems	Specific objectives		
1. Is there a difference in oral hygiene habits depending on sex?	1. Determine the oral hygiene habits of children according to sex.	H1: There is a relationship between the level of knowledge about oral health of parents and the oral hygiene habits of their children aged 8 to 10 years.	
2. Will older children have better oral hygiene habits?	2. Determine the oral hygiene habits of children according to age.		
3. At older age, is there a higher level of knowledge about oral health among parents?	3. Determine the level of knowledge of parents about oral health according to age.		
4. Is there a relationship between the level of education of parents and the oral hygiene habits of their children aged 8 to 10?	4. Determine the level of knowledge of parents about oral health according to their level of education.		

Appendix 2. Variable operationalization table.

Variable	Conceptual definition	Operational definition	Dimension	Indicator	Category or value	Type and scale of measurement
Level of knowledge about oral health of parents	Body of truths or facts accumulated over time associated with issues related to oral health such as diseases or pathological processes, their prevention and treatment. (DeCS)	Body of truths associated with children's oral health such as prevention, dental cavities, diet and hygiene obtained through responses to a valid and reliable questionnaire aimed at parents. naos regarding oral health.	Prevention	Five questions about prevention in oral health.	Score from 0 to 20 where each question is worth 1spot: 1=Poor 0 to 10 2=Regular 11 to 14 3=Good 15 to 17 4=Very good 18 to 20	Qualitative ordinal
			Dental caries	Five questions about tooth decay.		
			Diet	Five questions about diet in oral health.		
			Hygiene	Five questions about hygiene in oral health.		
Children's oral hygiene habits	Practice of personal oral hygiene. It includes the maintenance of oral cleanliness, tissue tone, and the general preservation of oral health. (DeCS)	Oral hygiene behaviors or practices in relation to daily or weekly frequency, time, and elements used in tooth brushing.	-	4 question quiz:4questions about the respondent's oral hygiene habits, and 1 question about the respondent's oral hygiene items.	Score from 0 to 20 where eachresponse alternative had a value from 0 to 5 points 1=Poor 0 to 10 2=Regular 11 to 14 3=Good 15 to 17 4=Very good 18 to 20	Qualitative ordinal
Age	Time that the individual has lived counting from his birth.	Years completed until current date	Parents	Birthdate	1= From 24-40 2= From 41-57	Qualitative nominal
			Children	Birthdate	1=At 8 years old 2= 9 years old 3= 10 years old	Qualitative Ordinal
Sex	The totality of the characteristics of the reproductive structures and their functions, phenotype and genotype, which differentiate the male and female organism. (DeCS)	Organic condition that distinguishes the male and female organism.	Parents	National identity document	1= Male 2= Woman	Qualitative nominal
			Children	National identity document	1= Male 2= Woman	Qualitative nominal
Parents' educational level	Educational or educational level of an individual. (DeCS)	Highest level of education completed to date	-	Ask about your educational level	1=Primary 2=Secondary 3=Highertechnical or university	Qualitative ordinal

Annex 3. Instrument used in the research.

Quiz for Children

General Information

Hello, I am Alex Jair Clavijo Valladares, student of the Stomatology Department at the Scientific University of the South. I am studying: Stomatology, which is why I thank you for the 5 minutes it will take you to complete the following questionnaire, which has two parts: The first is to collect your data and the second deals with questions about your oral hygiene habits.

Before starting you must accept the following informed assent.

I, I agree to be part of the study by answering the questions about my oral hygiene habits. They have told me that this data will not be shared with anyone (Law 29733). If I have questions, they will gladly answer me.

Below, you will find questions and we ask for your collaboration by answering as you feel.

Variable: Children's oral hygiene habits

This quiz includes 4 questions. To answer, choose a single answer for each question and mark with an X. You must answer all questions.

QUESTIONNAIRE

Surnames and names: _____

Sex: Child Little girl

How old are you?

- a) 8 years
- b) 9 years
- c) 10 years



II. Circle the answer that you consider most appropriate.

1. How many times do you brush your teeth a day?

- a. I don't brush
- b. Once a day
- c. Two or three times a day
- d. More than three times a day

2. How many times do you brush your teeth a week?

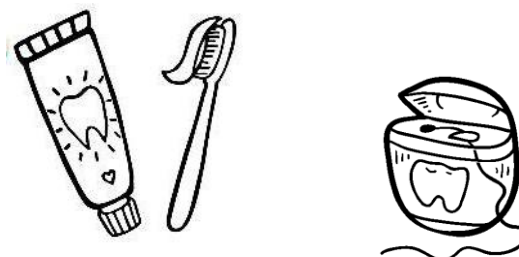
- a. I don't brush
- b. Once a week
- c. Two or three times a week
- d. Every day of the week

3. How long do you brush your teeth?

- a. I don't brush
- b. 30 seconds
- c. 1 minute
- d. More than 1 minute

4. What do you use to brush your teeth?

- a. I don't brush



- b. toothbrush only
- c. Toothbrush and toothpaste
- d. Toothbrush, toothpaste and dental floss

THANK YOU VERY MUCH FOR YOUR HELP

Questionnaire for Parents

General Information

Hello, I am Alex Jair Clavijo Valladares, a student of the Stomatology Department at the Scientific University of the South, which is why I thank you for the 15 minutes it will take you to complete the following survey that has four groups of questions about knowledge about oral health of your children. Below you will find statements in relation to what was explained. We ask for your collaboration by answering as you feel, that is, the one you think best fits your answer. There are no good or bad questions. What is interesting is your opinion on the topics mentioned. It is important that you provide a single answer to all questions and do not leave alternatives unchecked. The results of this questionnaire are strictly confidential, in no case accessible to other people and the protection of your data in the study is guaranteed.

Date: _____

Your child's age:

- a) 8 years
- b) 9 years
- c) 10 years

Who answers the questionnaire?

- a) Father
- b) Mother

Age of informant: _____

Father's educational level:

- a) None
- b) Primary Education
- c) Secondary Education
- d) Technical and/or Higher Education

Level of knowledge about oral health of parents

This quiz includes 20 questions. To answer, choose a single answer for each question and mark with an X. You must answer all questions.

DENTAL CARIES

1.- What is dental caries?

- a.- It is a disease that appears in malnourished children.
- b.- It is not a disease
- c.- It is a disease caused by lack of oral hygiene and consumption of sugars.
- d.- It is a disease caused by lack of oral hygiene and consumption of fried foods.

2.- The microorganisms that cause dental caries can be transmitted by

- a) Share utensils
- b) Share toothbrushes
- c) Kisses on the mouth
- d) All of the above

3.- What is dental plaque?

- a.- It is a hard layer that forms on the surface of the teeth
- b.- It is a soft plaque that forms on the surface of the teeth
- c.- It is the tartar that forms on the teeth
- d.- It is a mass that is only found in the teeth of adults

4.- Are baby teeth important?

- a) Yes, because they save space for permanent teeth
- b) No, because they do not fulfill any function
- c) No, because in the end they are going to fall
- d) No, because they are not permanent teeth

5.- At what age do children have all their baby teeth?

- a) 2 years
- b) 4 years
- c) 6 years
- d) 8 years

PREVENTION

6.- The first visit to the dentist is recommended from:

- a) From 2 years old
- b) When the first baby tooth appears
- c) When we have adult teeth
- d) Only when there is pain

7.- What benefits do you know of fluoride?

- a) Strengthens teeth and prevents cavities
- b) Heal teeth to prevent extractions
- c) Fluoride has a whitening action in children
- d) Strengthens the child so that he grows healthy and strong

8.- It is necessary to visit the dentist when you have healthy teeth:

- a) Yes, for a routine clinical examination
- b) Only if you have crooked teeth
- c) No, since it has nothing, it is not necessary
- d) I only go if my son has mouth discomfort

9.- If your child loses a baby tooth early because it has cavities, do you think it could affect the position of the teeth?

So

- b) It depends, only if you lose your baby teeth
- c) No
- d) Baby teeth are not important

10.- What preventive measures do you know to combat dental caries?

- a) Fluorine
- b) Correct oral hygiene
- c) Avoid excessive consumption of sugars
- d) All of the above

DIET

11.- What foods do you think are best for having healthier teeth?

- a) Fruits and vegetables
- b) Soft drinks and fruits
- c) Fruits and cookies
- d) All of the above

12.- What is recommended that your child carry in the lunch box?

-
- a) Cheese, quinoa, fruits, egg, bread, meat.
 - b) Sweet cookies, chocolates, cakes, boxed soft drinks.
 - c) Frugos, chocolate milk, chizitos
 - e) All of the above

13.- Regarding the consumption of sugars, check the correct ones

- a.- The child should never consume sugar
- b.- The child can consume sugar at various times during the day
- c.- The child can consume sugar at certain times and then brush his teeth
- d.- All of the above

14.- Up to what age is it recommended to breastfeed the child?

- a.- Up to 15 days old
- b.- Up to 3 months of age
- c.- Up to 6 months of age
- d.- Until the first month of birth

15.- Letting the child have a bottle with sugary liquids throughout the night, what would it cause?

- a.- You will be stronger when you wake up
- b.- You will be stronger and healthier
- c.- You will be more exposed to cavities
- d.- Nothing happens

ORAL HYGIENE

16.- How many times a day should the child brush his teeth?

- a.- 1 time
- b.- 2 to 3 times
- c.- From 5 to more times
- d.- Children should not brush their teeth

17.- From what age can you use toothpaste with fluoride?

- a) From 2 years old
- b) From 5 years
- c) From adolescence
- d) In children under 2 years of age

18.- Is brushing recommended after each meal?

- year
- b) Only before going to sleep
- c) Just using a rinse aid is enough
- d) Yes

19.- How often should you change your toothbrush?

- a) Every 3 months
- b) Every 8 months
- c) Per year
- d) Never

20.- Regarding tooth brushing

- a.- Tooth brushing can only be done by the child himself
- b.- Parents should supervise their children's tooth brushing at this age
- c.- Tooth brushing should be done in children over 3 years old.
- d.- In children, tooth brushing should be done without toothpaste.

THANK YOU VERY MUCH FOR YOUR HELP

Annex 4. Validation and reliability of the knowledge questionnaire.

Results found in a previous study aimed at validating the questionnaire used in this study: Cupé-Araujo Ana Cecilia, García-Rupaya Carmen Rosa. Parents' knowledge about the oral health of preschool children: development and validation of an instrument. Rev. Estomatol. Herediana [Internet]. 2015 Apr [cited 2023 Sep 03];25(2):112-121. Available in: http://www.scielo.org.pe/scielo.php?pid=S1019-43552015000200004&script=sci_abstract

Artículo Original / Original Article

Rev Estomatol Herediana. 2015 Abr-Jun;25(2):112-121.

Conocimientos de los padres sobre la salud bucal de niños preescolares: desarrollo y validación de un instrumento

Parental knowledges of preschool children's oral health: development and validation of the instrument

Ana Cecilia Cupé-Araujo¹, Carmen Rosa García-Rupaya²

RESUMEN

Objetivo: Validar un instrumento para medir los conocimientos sobre salud bucal en madres y padres de niños que asisten a Instituciones Educativas Iniciales en zonas urbano marginales de la provincia de Lima en el año 2012. **Material y métodos:** Estudio observacional, prospectivo, descriptivo y transversal. La principal técnica de recolección de datos fue la encuesta, mediante un cuestionario estructurado. **Resultados:** La obtención de la validez de contenido se obtuvo mediante la prueba estadística V de Aiken, la reproducibilidad, fue calculada con el CCI en una muestra de 30 madres y/o padres de familia, para la validez de constructo se analizaron las respuestas del cuestionario de 312 padres y/o madres de familia con el análisis factorial. Finalmente, se evaluó la confiabilidad de los resultados obtenidos con la prueba estadística Alfa de Cronbach. Dentro de los resultados se pudo observar que se obtuvo una validez de contenido de 0.95, reproducibilidad de 0.89, validez de constructo el resultado menor de 0.36 en el ítem de amamantamiento nocturno y el más elevado 0.77 en el ítem de lactancia materna y finalmente la confiabilidad de 0.64. **Conclusión:** El instrumento es seguro y confiable en la medición de los conocimientos sobre salud bucal en los padres de familia de niños que asisten al nivel inicial.

PALABRAS CLAVE: Conocimiento, validación, preescolar, salud bucal. (DeCS, BIREME)

Annex 5. Authorization of Educational Institutions.

"Año del Fortalecimiento de la Soberanía Nacional"

**I.E.P. Hogar del Niño, Santa María
Madre de Dios**



San Miguel, 17 de junio del 2022

Sr.
Alex Jair Clavijo Valladares
Estudiante de Pregrado
Universidad Científica del Sur

Presente. -

Estimado Alex Jair Clavijo Valladares, esperando se encuentre bien, el motivo de la presente tiene por objeto dar respuesta a su solicitud, en el cual solicita la autorización para el desarrollo de investigación y recolección de datos en vuestra institución educativa.

Al respecto debemos precisar que mediante el presente estamos procediendo a darle cumplimiento a su solicitud. Deseándole los éxitos para el estudio a realizar en vuestra casa de estudios.

Esperando haber cumplido con su solicitud, me despido de Ud.

Atte.

Marleny Rojas Cabrera
Directora

I.E.P. CORAZÓN DE JESÚS

San Miguel, 19 de mayo del 2022

Señor
Alex Jair Clavijo Valladares
Tesista
Universidad Científica del Sur

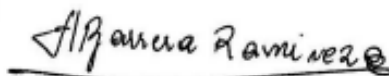
Reciba un cordial saludo,

El motivo de la presente es brindar respuesta a su requerimiento, en el cual solicita la autorización del desarrollo de investigación y recolección de datos en vuestra institución. En relación con ello, debemos contestar que, si será atendida la solicitud, por lo que será de mucho beneficio para la educación en nuestro país.

Cabe mencionar que nos pondremos en contacto con usted, para la coordinación de horarios en la que pueda acudir de manera presencial.

Esperando haber cumplido con su solicitud, sin otro particular quedamos de usted.

Atentamente,



Alicia Consuelo Barrera Ramírez
Directora I.E.P. Corazón de Jesús

Annex 6. Photos of the execution.



Annex 7. Consents and informed assents approved by the Ethics Committee.

Título: Nivel de conocimiento sobre salud oral de padres y su relación con hábitos de higiene oral de niños de 8 a 10 años. Lima.
Investigador/a principal: Alex Jair Clavijo Valladares

Estimado(a) padre de familia nos dirigimos a usted para solicitar su participación y la de su menor hijo para conocer el «Nivel de conocimiento sobre salud oral de los padres y su relación con hábitos de higiene oral de niños de 8 a 10 años. Lima». Este estudio es desarrollado por investigadores de la Universidad Científica del Sur como parte de la Carrera de Estomatología. En la actualidad, pueden existir problemas en los hábitos de higiene oral de los niños. Por tanto, consideramos importante conocer el nivel de conocimiento de los padres sobre salud oral. Sin duda, será un punto de partida para poder prevenir muchas enfermedades en la cavidad oral de los pequeños. El estudio consta de una encuesta voluntaria para usted y su niño de datos generales. Brindamos la garantía de que la información que proporcione es confidencial, conforme a la Ley de Protección de Datos Personales – Ley 29733 del gobierno del Perú. No existe riesgo al participar, no tendrá que hacer gasto alguno durante el estudio y no recibirá pago por participar del mismo. Si tienen dudas, les responderemos gustosamente. Si tiene preguntas sobre la verificación del estudio, puede ponerse en contacto con el investigador al correo 100080780@cientifica.edu.pe. También puede dirigirse al Comité Institucional de Ética en Investigación de la Universidad Científica del Sur al correo electrónico ciei@cientifica.edu.pe. Si decide participar del estudio solo deberá firmar y llenar sus datos, posteriormente deberá realizar un cuestionario de 20 preguntas. De igual forma su menor hijo realizará un cuestionario de cuatro preguntas de manera presencial en su salón de clases. Los resultados agrupados de este estudio podrán ser publicados en documentos científicos, guardando estricta confidencialidad sobre la identidad de los participantes.

Declaración de consentimiento

Entendemos que las personas dan su conformidad firmando antes de resolver el cuestionario. La utilización de los datos se dará en los términos detallados previamente. Agradecemos anticipadamente su valiosa colaboración.

Declaración de Investigador:

Yo, Alex Jair Clavijo Valladares, declaro que el participante ha leído y comprendido la información anterior, asimismo, he aclarado sus dudas respondiendo sus preguntas de forma satisfactoria, y ha decidido participar voluntariamente de este estudio de investigación. Se le ha informado que los datos obtenidos son anónimos y ha entendido que pueden ser publicados o difundidos con fines científicos.


Firma del Investigador

Alex Jair Clavijo Valladares
Tesisista de la Carrera de Estomatología
Universidad Científica del Sur

Firma del encuestado

Nombre:

DNI:

Annex 8. Ethics committee approval document

COMITÉ INSTITUCIONAL DE ÉTICA EN INVESTIGACIÓN

UNIVERSIDAD
CIENTÍFICA
DEL SUR

CONSTANCIA N° 166-CIEI-CIENTÍFICA-2022

El presidente del Comité Institucional de Ética en Investigación de la Universidad Científica del Sur (CIEI-CIENTÍFICA) da constancia que el proyecto de investigación, cuyos datos se registran a continuación, ha sido **aprobado** por el CIEI-CIENTÍFICA.


Código de registro: **008-2022-PRE8**
Título: **Nivel de conocimiento sobre salud oral de padres y su relación con hábitos de higiene oral de niños de 8 a 10 años. Lima**
Investigador(a): **Alex Jair Clavijo Valladares**

La aprobación del proyecto de investigación implica que el documento presentado a evaluación cumple con los lineamientos de Universidad en materia de investigación y ética, los cuales se sustentan en la normativa internacional vigente. Adicionalmente, en el contexto de la pandemia de enfermedad por COVID-19, le recomendamos cumplir con las normas publicadas por el estado peruano (accesos, medidas de bioseguridad, etc.) y tener los permisos de las instituciones en las que realizará el estudio antes de ejecutarlo.

En tal sentido, esta aprobación carecerá de valor si es que el proyecto de investigación arriba indicado es modificado de cualquier forma. Toda enmienda, añadido, eliminación o eventualidad (eventos adversos, etc.) posterior a la fecha de aprobación debe ser reportado al CIEI-CIENTÍFICA.

La vigencia de la aprobación de este documento es de dieciocho (18) meses (**hasta el 06 de noviembre del 2023**), periodo en el que puede desarrollarse el proyecto. Cualquier trámite para su renovación deberá ser enviado antes del término de la vigencia de este documento, debiendo suspenderse todo desarrollo hasta que la renovación sea aprobada. La presente aprobación sería ratificada en la sesión del CIEI más próxima.

Villa El Salvador, 06 de mayo de 2022



Mg. Fulton Paul Rivera Albinagorta
Presidente
Comité Institucional de Ética en Investigación

T. (051) 680 6738 | Asesoría al postulante
informes@ciefica.edu.pe | - Campus Villa 2 - Páramo de la Cruz 19
Calle Cantuarías 300, Miraflores

Annex 9. Directorial resolution approving the thesis project



**RESOLUCIÓN DIRECTORAL DE ACEPTACIÓN DEL PROYECTO DE TESIS
Y NOMBRAMIENTO DEL ASESOR**

**RESOLUCIÓN DIRECTORAL DE LA CARRERA DE ESTOMATOLOGÍA
N° 068-DACE-DAFCS-U. CIENTÍFICA-2022**

Lima, 11 de mayo del 2022.

VISTO:

El informe técnico del Comité Institucional de Ética en Investigación de la Universidad Científica del Sur con código N° 008-2022-PRE8, se aprueba el proyecto de Tesis Titulado: **"NIVEL DE CONOCIMIENTO SOBRE SALUD ORAL DE PADRES Y SU RELACION CON HABITOS DE HIGIENE ORAL DE NINOS DE 8 A 10 ANOS. LIMA"** presentado por **ALEX JAIR CLAVIJO VALLADARES**.

CONSIDERANDO:

Que, de acuerdo al Reglamento General de la Universidad Científica del Sur y los reglamentos de pre/posgrado para obtener el Título de **CIRUJANO DENTISTA** en la Carrera de Estomatología de la Universidad Científica del Sur, se debe desarrollar un trabajo de investigación.

Que, de acuerdo con la normativa vigente de la Universidad Científica del Sur, en uso de las atribuciones conferidas al Director Académico de Carrera.

SE RESUELVE:

ART. 1°: APROBAR E INSCRIBIR el Proyecto de Tesis titulado: **"NIVEL DE CONOCIMIENTO SOBRE SALUD ORAL DE PADRES Y SU RELACION CON HABITOS DE HIGIENE ORAL DE NINOS DE 8 A 10 ANOS. LIMA"** de **ALEX JAIR CLAVIJO VALLADARES** con registro: N° 008-2022-PRE8 y establecer el inicio de periodo de ejecución del mencionado proyecto, 06 de mayo del 2022.

ART. 2°: NOMBRAR Asesor/a del trabajo de tesis señalado, a al/la Mg. Esp. **Katherine Jeanette Campos Campos**.

Regístrese, comuníquese y archívese.

Dr. Claudio Peña Soto
Director Académico de la Carrera de Estomatología



T//00000000
informes@cientificadelsur.pe
cientificadelsur.pe

Nivel de conocimiento sobre salud oral de los padres y su relación con hábitos de higiene oral de sus hijos de 8 a 10 años

Level of knowledge about oral health of parents and its relationship with oral hygiene habits of their children from 8 to 10 years old



SOCIEDAD PERUANA DE ODONTOPEDIATRÍA

Resumen

Objetivo: Determinar la relación del nivel de conocimiento en salud oral de los padres con los hábitos de higiene oral de sus hijos de 8 a 10 años.

Artículo recibido: 24/04/2023
Revisado por pares
Artículo aceptado: 02/08/2023

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Materiales y Métodos: En este estudio transversal y prospectivo se encuestaron a 200 padres y sus 200 hijos de ambos sexos, estudiantes de Instituciones Educativas Particulares del distrito de San Miguel, Lima -Perú. Se aplicaron dos cuestionarios, uno para determinar el nivel de conocimiento sobre salud oral de los padres de familia; y otro para determinar los hábitos de higiene oral de sus hijos. Se determinó la relación entre el nivel de conocimiento sobre salud bucal de los padres y el hábito de higiene oral de sus hijos mediante las pruebas de U de Mann Whitney y Kruskal Wallis. El $p < 0,05$ precisó el nivel de significancia en ambas pruebas.

Resultados: La mayoría de los cuestionarios fueron respondidos por los papás (68,5 %). El 53 % de los padres presentaron un nivel bueno de conocimiento sobre salud oral. Los niños que se cepillaban 3 veces/día y todos los días de la semana evidenciaron una relación positiva respecto al nivel de conocimiento bueno de sus padres.

Conclusión: El nivel de conocimiento en salud oral de los padres de familia no se relacionó con los hábitos de higiene oral de sus hijos de 8 a 10 años. Sin embargo, el nivel de conocimiento bueno de los padres de familia estuvo relacionado a una mayor frecuencia de cepillado de 3 veces/día y todos los días de la semana..

Palabras clave: Salud oral; Higiene oral; Encuestas de salud oral; Conocimiento.

Citar como Clavijo A, Campos K.
Nivel de conocimiento sobre salud oral de los padres y su relación con hábitos de higiene oral de sus hijos. *Odontol Pediatr* 2023;23 (1): 26 - 38.

1. Bachiller en Estomatología. Egresado de la Universidad Científica del Sur. Lima - Perú.

2. Especialista en Odontología Pediátrica, Magister en odontología con mención en Odontología Pediátrica. Docente en la Universidad Científica del Sur, Carrera de Estomatología, Universidad Científica del Sur. Lima - Peru.

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