

Assessment of Parents' and/or Caregivers' Knowledge About Their Children's Oral Health: A Cross-Sectional Study

Avaliação do Conhecimento de Pais e/ou Cuidadores Acerca da Saúde Bucal de Seus Filhos: Estudo Transversal
Evaluación del Conocimiento de los Padres y/o Cuidadores Sobre la Salud Bucal de sus Hijos: Estudio Transversal

RESUMO

Objetivo: Avaliar e discutir o nível de conhecimento de pais e/ou cuidadores acerca da saúde bucal de seus filhos. **Método:** Trata-se de um estudo transversal, avaliando uma população de 250 pais de crianças na faixa etária de zero a três anos de idade, matriculadas em escolas públicas e privadas do município de Aracajú –SE –Brasil. Aplicou-se em todos os pais o instrumento CAP, composto por questionário estruturado e validado. O estudo foi aprovado pelo CEP da Faculdade de Odontologia São Leopoldo Mandic. Foram realizadas análises estatísticas baseadas em uma variedade de métodos estatísticos, incluindo medidas descritivas e testes de hipóteses. **Resultados:** Os resultados mostraram nas dimensões conhecimentos, atitudes e práticas diferenças significativas entre pais e/ou cuidadores que utilizam as escolas públicas e privadas, com melhores scores naqueles usuários de serviço privado. **Conclusão:** Pais e/ou cuidadores cujos filhos frequentam escolas privadas detêm um maior conhecimento a respeito da saúde bucal de seus filhos. Além disso, é relevante inferir que o instrumento empregado na metodologia mostrou-se como uma alternativa para gestores de saúde pública implementarem políticas públicas destinadas às crianças na faixa etária de zero a três anos de idade.

DESCRIPTORIOS: Saúde bucal; Cuidador; Conhecimentos; Crianças

ABSTRACT

Objective: To evaluate and discuss the level of knowledge of parents and/or caregivers regarding their children's oral health. **Method:** This is a cross-sectional study assessing a population of 250 parents of children aged zero to three years, enrolled in public and private schools in the city of Aracaju, SE, Brazil. The CAP instrument, consisting of a structured and validated questionnaire, was applied to all parents. The study was approved by the Research Ethics Committee of São Leopoldo Mandic School of Dentistry. Statistical analyses were conducted using a variety of statistical methods, including descriptive measures and hypothesis tests. **Results:** The results showed significant differences in the dimensions of knowledge, attitudes, and practices between parents and/or caregivers whose children attend public versus private schools, with higher scores observed among those using private services. **Conclusion:** Parents and/or caregivers whose children attend private schools possess greater knowledge regarding their children's oral health. Furthermore, it is relevant to infer that the instrument used in this methodology proved to be a viable tool for public health managers to implement public policies aimed at children aged zero to three years.

DESCRIPTORS: Oral Health; Caregivers; Knowledge; Child.

RESUMEN

Objetivo: Evaluar y discutir el nivel de conocimiento de los padres y/o cuidadores acerca de la salud bucal de sus hijos. **Método:** Se trata de un estudio transversal que evaluó una población de 250 padres de niños de entre cero y tres años de edad, matriculados en escuelas públicas y privadas del municipio de Aracaju, SE, Brasil. Se aplicó a todos los padres el instrumento CAP, compuesto por un cuestionario estructurado y validado. El estudio fue aprobado por el Comité de Ética en Investigación de la Facultad de Odontología São Leopoldo Mandic. Se realizaron análisis estadísticos basados en diversos métodos, incluyendo medidas descriptivas y pruebas de hipótesis. **Resultados:** Los resultados mostraron

diferencias significativas en las dimensiones de conocimientos, actitudes y prácticas entre los padres y/o cuidadores que utilizan escuelas públicas y privadas, con mejores puntuaciones entre aquellos que recurren a servicios privados. Conclusión: Los padres y/o cuidadores cuyos hijos asisten a escuelas privadas poseen un mayor conocimiento sobre la salud bucal de sus hijos. Además, es relevante inferir que el instrumento empleado en la metodología se mostró como una alternativa útil para que los gestores de salud pública implementen políticas públicas dirigidas a niños de entre cero y tres años de edad.

DESCRIPTORES: Salud Bucal; Cuidador; Conocimiento; Niño.

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INTRODUCTION

It is recognized that health education and the knowledge of parents and/or caregivers regarding care for child growth and development plays a significant role in promoting the health and quality of life of children, especially in early childhood.^{1,2} Early childhood is defined as the period from gestation to six years of age, and scientific evidence has shown that this life cycle is the most opportune time to establish healthy habits and behaviors that tend to persist throughout an individual's life.^{3,4}

The Nurturing Care Model, which outlines the necessary actions for comprehensive child health, emphasizes five areas of care: nutrition,

health, safety and protection, early learning, and responsive care.⁵

Specifically, responsive care can be understood as the ability or capacity of parents and/or caregivers to understand and respond to the signals emitted by their children and to attend to them promptly and appropriately. Responsive care aims to create an emotional bond in the parent/child dyad, in such a way as to build affective development and comprehensive protection for the child, defining positive parenting.^{6,7}

Regarding the promotion of oral health in early childhood, parents and/or caregivers are motivating factors and the main agents of socialization, as well as instructors of oral health care for their children.⁸ Therefore, it seems evident that par-

ents and/or caregivers should possess knowledge and information that are essential for the general and oral health of their children, considering that research has emphasized that the health habits of parents and/or caregivers have repercussions on the oral health of their children.^{9,10} However, the dental literature does not present a significant body of bibliographic work that identifies and analyzes the knowledge and attitudes of parents and/or caregivers regarding oral health in early childhood.

In line with this reasoning, the purpose of this research is to ascertain, evaluate, and discuss the level of knowledge of parents and/or caregivers regarding the oral health of their children.

METHOD

Ethical Aspects and Study Location

The study was submitted to the Ethics Committee of the Faculty of Dentistry - São Leopoldo Mandic - Campinas, through the Brazil Platform, meeting the ethical and fundamental requirements of Resolution 466/2012 of the National Health Council (standards for research involving human beings), and approved with the CAAE opinion number: 80759724.2.0000.5374. The research was conducted in public and private schools in the municipality of Aracaju, state of Sergipe. The municipality is part of the Northeast region of Brazil, with a Human Development Index (HDI) of 0.77.

Study Design and Sample Size Calculation

This is a cross-sectional study with an analytical component. The sample calculation initially considered involving parents of children aged zero to three years old enrolled in public and private schools in the city of Aracaju, with 02 schools (01 public and 01 private) randomly selected to represent the four different regions of

the municipality, totaling 08 schools.

The number of children aged zero to three years old regularly enrolled was approximately forty-one children in public schools and twenty-one in private schools, making up a sample of 250 parents and/or caregivers as research subjects.

Inclusion and Exclusion Criteria

Only parents and/or caregivers who live in the same house as the child and who agree to sign the Informed Consent Form were included in the study. Parents and/or caregivers with visual impairments, who did not have Portuguese as their native language, who presented signs or symptoms of cognitive impairment, or who used drugs/alcohol were excluded.

Instruments and Methods for Data Collection.

A validated instrument on knowledge, attitude and practice of parents and/or caregivers for promoting the health of children up to 36 months, developed by Praxedes, R.C.S. et al (2023)¹¹, the data was adopted in its original or complete form, with the addition of identification of the parents and/or caregivers and the so-

ciocultural and economic profile, in accordance with the objective of this research.

The instrument was systematically applied to each parent and/or caregiver at a single time by the researcher herself, in a private setting on school premises, at times previously scheduled in agreement with the school administration, parents, and the researcher.

Data analysis procedures:

The data obtained were subjected to the Shapiro-Wilk test, which showed that the data did not present a normal distribution. Therefore, non-parametric tests were used for statistical analysis. The Chi-square and Fisher's exact tests were used to evaluate categorical variables. The Wilcoxon and Mann-Whitney tests were employed for comparison between response variables. Spearman's rank correlation coefficient (χ^2) was used to assess the strength of association between the different variables, and the relative risk was evaluated by Poisson regression. The tests were performed considering a 5% significance level.

Table 1 - Sociodemographic characteristics of those responsible for childcare, according to the type of service used (private or public).

Characteristics	Service			
	Total, N = 250	Private, N = 84	Public, N = 166	p-Value
Sex, n / N (%)				
Female	200 / 250 (80%)	66 / 84 (79%)	134 / 166 (81%)	0,688 ¹
Male	50 / 250 (20%)	18 / 84 (21%)	32 / 166 (19%)	
Age of caregiver				
Mean (SD)	35 (10)	38 (6)	34 (11)	<0,001 ²
Median [IQR]	34 [28, 40]	38 [34, 40]	31 [26, 39]	
Age of baby				
Mean (SD)	31 (8)	31 (8)	31 (8)	0,578 ²
Median [IQR]	36 [24, 36]	36 [24, 36]	36 [26, 36]	

Marital Status, n / N (%)				
Married	130 / 250 (52%)	73 / 84 (87%)	57 / 166 (34%)	<0,001 ³
Divorced	6 / 250 (2,4%)	3 / 84 (3,6%)	3 / 166 (1,8%)	
Single	108 / 250 (43%)	5 / 84 (6,0%)	103 / 166 (62%)	
Stable Union	6 / 250 (2,4%)	3 / 84 (3,6%)	3 / 166 (1,8%)	
Education level (years of studies completed), n / N (%)				
Over 12 years old	120 / 250 (48%)	77 / 84 (92%)	43 / 166 (26%)	<0,001 ¹
Up to 04 years	33 / 250 (13%)	2 / 84 (2,4%)	31 / 166 (19%)	
Between 05 and 08 years	26 / 250 (10%)	4 / 84 (4,8%)	22 / 166 (13%)	
Between 09 and 11 years	71 / 250 (28%)	1 / 84 (1,2%)	70 / 166 (42%)	
Family income (based on the number of MW), n / N (%)				
Above 8 minimum wages	52 / 250 (21%)	51 / 84 (61%)	1 / 166 (0,6%)	<0,001 ¹
Up to 1 minimum wage	105 / 250 (42%)	0 / 84 (0%)	105 / 166 (63%)	
From 1 to 3 minimum wages	64 / 250 (26%)	8 / 84 (9,5%)	56 / 166 (34%)	
From 4 to 8 minimum wages	29 / 250 (12%)	25 / 84 (30%)	4 / 166 (2,4%)	

1 Chi-square test of independence

2 Wilcoxon rank-sum test

3 Fisher's exact test

Caption: n – Absolute frequency. N – Valid data. % – Percentage. SD – Standard deviation. IQR – Interquartile range

Table 2 - Distribution of caregiver responses in the field of practice in children's oral health, according to the type of service used (private or public).				
Characteristics	Service			
	Total, N = 250	Private, N = 84	Public, N = 166	p-Value
1. In the last week, how often did you offer your child sugary foods?, n / N (%)				
A. I offered them on some days, but not every day of the week.	133 / 250 (53%)	38 / 84 (45%)	95 / 166 (57%)	<0,001 ¹
B. I offered them one to three times a day during the week.	43 / 250 (17%)	12 / 84 (14%)	31 / 166 (19%)	
C. I offered them four or more times a day during the week.	40 / 250 (16%)	9 / 84 (11%)	31 / 166 (19%)	
D. I did not offer any of these foods during the week.	34 / 250 (14%)	25 / 84 (30%)	9 / 166 (5,4%)	
2. Has your child's mouth ever been examined by a dentist?, n / N (%)				
A. Yes	138 / 250 (55%)	59 / 84 (70%)	79 / 166 (48%)	<0,001 ¹
B. No	112 / 250 (45%)	25 / 84 (30%)	87 / 166 (52%)	
3. Does your child have teeth yet?, n / N (%)				
A. Yes	249 / 250 (100%)	83 / 84 (99%)	166 / 166 (100%)	0,336 ²
B. No	1 / 250 (0,4%)	1 / 84 (1,2%)	0 / 166 (0%)	
4. Has your child ever suffered a blow to the teeth?, n / N (%)				
A. Yes	62 / 249 (25%)	23 / 83 (28%)	39 / 166 (23%)	0,468 ¹
B. No	187 / 249 (75%)	60 / 83 (72%)	127 / 166 (77%)	
5. What do you do to relieve the itching caused by your child's teething?				
A. Pacifier with honey or sugar	2 / 249 (0,8%)	0 / 83 (0%)	2 / 166 (1,2%)	0,047 ²
B. I give a chilled teething ring	109 / 249 (44%)	41 / 83 (49%)	68 / 166 (41%)	
C. I give some chilled food	33 / 249 (13%)	15 / 83 (18%)	18 / 166 (11%)	
D. I apply anesthetic ointment to my child's gums	61 / 249 (24%)	12 / 83 (14%)	49 / 166 (30%)	
E. Others	44 / 249 (18%)	15 / 83 (18%)	29 / 166 (17%)	

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6. Do you clean your child's teeth?, n / N (%)				
A. Yes	244 / 249 (98%)	83 / 83 (100%)	161 / 166 (97%)	0,173 ²
B. No	5 / 249 (2,0%)	0 / 83 (0%)	5 / 166 (3,0%)	
7. What do you use to clean your child's teeth?, n / N (%)				
A. Diaper or gauze	2 / 244 (0,8%)	1 / 83 (1,2%)	1 / 161 (0,6%)	>0,999 ²
C. Finger cot	2 / 244 (0,8%)	1 / 83 (1,2%)	1 / 161 (0,6%)	
D. Toothbrush	237 / 244 (97%)	80 / 83 (96%)	157 / 161 (98%)	
E. Others	3 / 244 (1,2%)	1 / 83 (1,2%)	2 / 161 (1,2%)	
8. In the last week (last 7 days), how many times did you clean your child's teeth?, n / N (%)				
A. Never	1 / 244 (0,4%)	1 / 83 (1,2%)	0 / 161 (0%)	<0,001 ²
B. A few times, but I didn't brush my child's teeth every day	14 / 244 (5,7%)	4 / 83 (4,8%)	10 / 161 (6,2%)	
C. Once a day	56 / 244 (23%)	8 / 83 (9,6%)	48 / 161 (30%)	
D. Two or more times a day	173 / 244 (71%)	70 / 83 (84%)	103 / 161 (64%)	
9. In the last week (last 7 days), how often did you floss your child's teeth?, n / N (%)				
A. Everyday	21 / 244 (8,6%)	12 / 83 (14%)	9 / 161 (5,6%)	0,017 ¹
B. Almost every day	20 / 244 (8,2%)	9 / 83 (11%)	11 / 161 (6,8%)	
C. A few days	46 / 244 (19%)	19 / 83 (23%)	27 / 161 (17%)	
D. Never	157 / 244 (64%)	43 / 83 (52%)	114 / 161 (71%)	
10. Do you brush your child's teeth with fluoride toothpaste?, n / N (%)				
A. No, I don't use toothpaste on my child's teeth.	8 / 244 (3,3%)	0 / 83 (0%)	8 / 161 (5,0%)	<0,001 ²
B. No, the toothpaste I use on my child's teeth does not contain fluoride.	60 / 244 (25%)	12 / 83 (14%)	48 / 161 (30%)	
C. Yes, the toothpaste I use on my child's teeth contains fluoride.	148 / 244 (61%)	71 / 83 (86%)	77 / 161 (48%)	
D. I don't know if the toothpaste I use on my child's teeth contains fluoride.	28 / 244 (11%)	0 / 83 (0%)	28 / 161 (17%)	
11. Do you know the fluoride concentration of the toothpaste you use on your child's teeth?, n / N (%)				
A. 1100 PPM/FLUORIDE	62 / 148 (42%)	49 / 71 (69%)	13 / 77 (17%)	<0,001 ²
A. 2000 PPM/FLUORIDE	1 / 148 (0,7%)	1 / 71 (1,4%)	0 / 77 (0%)	
C. No	85 / 148 (57%)	21 / 71 (30%)	64 / 77 (83%)	
12. How much fluoride toothpaste do you usually put on your child's toothbrush?, n / N (%)				
A. The equivalent of a grain of uncooked rice	63 / 147 (43%)	37 / 70 (53%)	26 / 77 (34%)	<0,001 ²
B. The equivalent of a pea	42 / 147 (29%)	25 / 70 (36%)	17 / 77 (22%)	
C. Half the brush head	32 / 147 (22%)	6 / 70 (8,6%)	26 / 77 (34%)	
D. The entire brush head	10 / 147 (6,8%)	2 / 70 (2,9%)	8 / 77 (10%)	
13. Do you breastfeed your child?, n / N (%)				
A. Yes	54 / 250 (22%)	11 / 84 (13%)	43 / 166 (26%)	0,020 ¹
B. No	196 / 250 (78%)	73 / 84 (87%)	123 / 166 (74%)	
14. Has your child ever drunk any liquid from a bottle?, n / N (%)				
A. Yes	209 / 250 (84%)	69 / 84 (82%)	140 / 166 (84%)	0,658 ¹
B. No	41 / 250 (16%)	15 / 84 (18%)	26 / 166 (16%)	

*14. If yes, around what age did your child start using a bottle?, n / N (%)				
A. During the first 6 months of life	76 / 209 (36%)	37 / 69 (54%)	39 / 140 (28%)	<0,001 ¹
B. After 6 months of life	25 / 209 (12%)	15 / 69 (22%)	10 / 140 (7,1%)	
C. I don't remember	108 / 209 (52%)	17 / 69 (25%)	91 / 140 (65%)	
15. Does your child still use a bottle?, n / N (%)				
A. Yes	149 / 250 (60%)	42 / 84 (50%)	107 / 166 (64%)	0,028 ¹
B. No	101 / 250 (40%)	42 / 84 (50%)	59 / 166 (36%)	
*15. If not, answer around what age your child stopped using a bottle and started using a cup?, n / N (%)				
A. During the first 12 months of life	19 / 101 (19%)	16 / 42 (38%)	3 / 59 (5,1%)	<0,001 ²
B. After 12 months of life	7 / 101 (6,9%)	5 / 42 (12%)	2 / 59 (3,4%)	
C. I don't remember	75 / 101 (74%)	21 / 42 (50%)	54 / 59 (92%)	
16. In the last week, how often did you offer your child a bottle to fall asleep or go back to sleep during the night?, n / N (%)				
A. 2 or more times per night during the week	52 / 149 (35%)	10 / 42 (24%)	42 / 107 (39%)	0,021 ¹
B. 1 time per night during the week	53 / 149 (36%)	23 / 42 (55%)	30 / 107 (28%)	
C. I offered my child a bottle on some nights, but not every night of the week.	19 / 149 (13%)	3 / 42 (7,1%)	16 / 107 (15%)	
D. No nights of the week	25 / 149 (17%)	6 / 42 (14%)	19 / 107 (18%)	
17. In the last week, how often, when preparing your child's milk, porridge, smoothie or juice, did you add products such as Neston, Mucilon, Milnutri, Cremogema, chocolate powder, honey or sugar?, n / N (%)				
A. 2 or more times a day during the week	57 / 149 (38%)	5 / 42 (12%)	52 / 107 (49%)	<0,001 ¹
B. 1 time a day during the week	31 / 149 (21%)	4 / 42 (9,5%)	27 / 107 (25%)	
C. I added such products on some days, but not all days of the week	19 / 149 (13%)	4 / 42 (9,5%)	15 / 107 (14%)	
D. No days of the week	42 / 149 (28%)	29 / 42 (69%)	13 / 107 (12%)	
18. Has your child ever used a pacifier/nipple?, n / N (%)				
A. Yes	122 / 250 (49%)	35 / 84 (42%)	87 / 166 (52%)	0,108 ¹
B. No	128 / 250 (51%)	49 / 84 (58%)	79 / 166 (48%)	
*18. If yes, answer around what age your child started using a pacifier/dummies?, n / N (%)				
A. During the first 6 months of life	47 / 122 (39%)	23 / 35 (66%)	24 / 87 (28%)	<0,001 ²
B. After the 6th month of life	7 / 122 (5,7%)	2 / 35 (5,7%)	5 / 87 (5,7%)	
C. I don't remember	68 / 122 (56%)	10 / 35 (29%)	58 / 87 (67%)	
19. Does your child still use a pacifier/dummies?, n / N (%)				
A. Yes	80 / 122 (66%)	23 / 35 (66%)	57 / 87 (66%)	0,983 ¹
B. No	42 / 122 (34%)	12 / 35 (34%)	30 / 87 (34%)	
*19. If not, answer around what age your child stopped using a pacifier/dummies?, n / N (%)				
A. During the first 12 months of life	5 / 41 (12%)	2 / 12 (17%)	3 / 29 (10%)	0,121 ²
B. After the 12th month of life	7 / 41 (17%)	4 / 12 (33%)	3 / 29 (10%)	
C. I don't remember	29 / 41 (71%)	6 / 12 (50%)	23 / 29 (79%)	
B. Não				

1 Chi-square test of independence

2 Fisher's exact test

Caption: n– Absolute frequency. N – Valid data. % – Percentage. SD – Standard Deviation. IQR – Interquartile Range.

Table 3 - Distribution of caregivers' responses in the domain of attitude towards children's oral health, according to the type of service used (private or public).

Characteristics	Service			
	Total, N = 250	Private, N = 84	Public, N = 166	p-Value
1. There is no problem in offering a child sugary foods during their first two years of life., n / N (%)				
A. I agree	36 / 250 (14%)	5 / 84 (6,0%)	31 / 166 (19%)	<0,001 ¹
B. I don't know	45 / 250 (18%)	1 / 84 (1,2%)	44 / 166 (27%)	
C. I disagree	169 / 250 (68%)	78 / 84 (93%)	91 / 166 (55%)	
2. Some children's medications, such as antibiotics, can cause tooth decay in children.				
A. I agree	128 / 250 (51%)	40 / 84 (48%)	88 / 166 (53%)	0,004 ¹
B. I don't know	101 / 250 (40%)	30 / 84 (36%)	71 / 166 (43%)	
C. I disagree	21 / 250 (8,4%)	14 / 84 (17%)	7 / 166 (4,2%)	
3. Taking care of a child's baby teeth isn't that important, as they will fall out and be replaced by permanent teeth. n / N (%)				
A. I agree	39 / 250 (16%)	6 / 84 (7,1%)	33 / 166 (20%)	<0,001 ¹
B. I don't know	23 / 250 (9,2%)	0 / 84 (0%)	23 / 166 (14%)	
C. I disagree	188 / 250 (75%)	78 / 84 (93%)	110 / 166 (66%)	
4. It is only necessary to take a child to the dentist when there is a problem with their teeth..., n / N (%)				
A. I agree	19 / 250 (7,6%)	3 / 84 (3,6%)	16 / 166 (9,6%)	0,004 ¹
B. I don't know	19 / 250 (7,6%)	1 / 84 (1,2%)	18 / 166 (11%)	
C. I disagree	212 / 250 (85%)	80 / 84 (95%)	132 / 166 (80%)	
5. Parents or guardians should start using dental floss on their child's teeth when a tooth erupts next to another tooth., n / N (%)				
A. I agree	109 / 250 (44%)	50 / 84 (60%)	59 / 166 (36%)	0,001 ¹
B. I don't know	108 / 250 (43%)	26 / 84 (31%)	82 / 166 (49%)	
C. I disagree	33 / 250 (13%)	8 / 84 (9,5%)	25 / 166 (15%)	
6. The child should start using fluoride toothpaste when their first baby tooth comes in., n / N (%)				
A. I agree	93 / 250 (37%)	48 / 84 (57%)	45 / 166 (27%)	<0,001 ¹
B. I don't know	78 / 250 (31%)	14 / 84 (17%)	64 / 166 (39%)	
C. I disagree	79 / 250 (32%)	22 / 84 (26%)	57 / 166 (34%)	
7. The use of pacifiers and bottles can misalign teeth and hinder a child's breathing and speech..., n / N (%)				
A. I agree	215 / 250 (86%)	79 / 84 (94%)	136 / 166 (82%)	0,033 ²
B. I don't know	29 / 250 (12%)	5 / 84 (6,0%)	24 / 166 (14%)	
c	1 / 250 (0,4%)	0 / 84 (0%)	1 / 166 (0,6%)	
C. I disagree	5 / 250 (2,0%)	0 / 84 (0%)	5 / 166 (3,0%)	
8. Offering a pacifier and bottle to a child can make it difficult for him/her to breastfeed., n / N (%)				
A. I agree	172 / 250 (69%)	69 / 84 (82%)	103 / 166 (62%)	0,001 ¹
B. I don't know	48 / 250 (19%)	6 / 84 (7,1%)	42 / 166 (25%)	
C. I disagree	30 / 250 (12%)	9 / 84 (11%)	21 / 166 (13%)	

9. O nascimento dos dentes do bebê pode causar febre alta ou diarreia., n / N (%)				
A. Concordo	167 / 250 (67%)	59 / 84 (70%)	108 / 166 (65%)	<0,001 ¹
B. Não sei	55 / 250 (22%)	7 / 84 (8,3%)	48 / 166 (29%)	
C. Não concordo	28 / 250 (11%)	18 / 84 (21%)	10 / 166 (6,0%)	
10. Os bebês já nascem com a vontade de sugar, por isso precisam de chupetas/bicos para serem acalmados., n / N (%)				
A. Concordo	46 / 250 (18%)	11 / 84 (13%)	35 / 166 (21%)	<0,001 ¹
B. Não sei	40 / 250 (16%)	4 / 84 (4,8%)	36 / 166 (22%)	
C. Não concordo	164 / 250 (66%)	69 / 84 (82%)	95 / 166 (57%)	

¹ Chi-square test of independence

² Fisher's exact test

Caption: n– Absolute frequency. N – Valid data. % – Percentage. SD – Standard Deviation. IQR – Interquartile Range.

Table 4 - Distribution of caregivers' responses in the domain of knowledge in children's oral health, according to the type of service used (private or public).

Characteristics	Service			
	Total, N = 250	Private, N = 84	Public, N = 166	p-Value
1. . Check one or more foods that you think may contribute to the appearance of cavities in your child's teeth:				
Filled cookies, biscuits, candies, sweets and lollipops, n / N, n / N (%)	223 / 250 (89%)	81 / 84 (96%)	142 / 166 (86%)	0,009 ¹
Meat, chicken and fish, n / N (%)	11 / 250 (4,4%)	3 / 84 (3,6%)	8 / 166 (4,8%)	0,755 ²
Soft drinks, n / N (%)	185 / 250 (74%)	72 / 84 (86%)	113 / 166 (68%)	0,003 ¹
Chocolate milk, n / N (%)	157 / 250 (63%)	71 / 84 (85%)	86 / 166 (52%)	<0,001 ¹
Beans, n / N (%)	11 / 250 (4,4%)	1 / 84 (1,2%)	10 / 166 (6,0%)	0,105 ²
Boxed fruit juice, n / N (%)	114 / 250 (46%)	58 / 84 (69%)	56 / 166 (34%)	<0,001 ¹
Honey, n / N (%)	94 / 250 (38%)	45 / 84 (54%)	49 / 166 (30%)	<0,001 ¹
Vegetables, n / N (%)	1 / 250 (0,4%)	1 / 84 (1,2%)	0 / 166 (0%)	0,336 ²
Eggs, n / N (%)	6 / 250 (2,4%)	1 / 84 (1,2%)	5 / 166 (3,0%)	0,667 ²
Fried goodies, n / N (%)	56 / 250 (22%)	7 / 84 (8,3%)	49 / 166 (30%)	<0,001 ¹
2. Check one or more signs that you believe are caused by the baby's teething:				
Fever above 38 degrees, n / N (%)	160 / 250 (64%)	42 / 84 (50%)	118 / 166 (71%)	0,001 ¹
Diarrhea, n / N (%)	166 / 250 (66%)	43 / 84 (51%)	123 / 166 (74%)	<0,001 ¹
Vomiting, n / N (%)	38 / 250 (15%)	7 / 84 (8,3%)	31 / 166 (19%)	0,031 ¹
Ear problems,, n / N (%)	16 / 250 (6,4%)	5 / 84 (6,0%)	11 / 166 (6,6%)	0,837 ¹
Runny nose, n / N (%)	74 / 250 (30%)	28 / 84 (33%)	46 / 166 (28%)	0,358 ¹
Itchy gums, n / N (%)	184 / 250 (74%)	67 / 84 (80%)	117 / 166 (70%)	0,116 ¹
Want to bite, n / N (%)	154 / 250 (62%)	65 / 84 (77%)	89 / 166 (54%)	<0,001 ¹
Increased saliva, n / N (%)	146 / 250 (58%)	52 / 84 (62%)	94 / 166 (57%)	0,424 ¹
Irritable baby, n / N (%)	163 / 250 (65%)	68 / 84 (81%)	95 / 166 (57%)	<0,001 ¹
Putting hands in mouth, n / N (%)	185 / 250 (74%)	68 / 84 (81%)	117 / 166 (70%)	0,075 ¹
3. What is most related to the appearance of cavities in a child's teeth?, n / N (%)				
A. Blowing on the child's food and kissing them on the mouth.	5 / 250 (2,0%)	0 / 84 (0%)	5 / 166 (3,0%)	0,117 ²
B. Giving the child foods high in sugar and not brushing their teeth before bed.	222 / 250 (89%)	80 / 84 (95%)	142 / 166 (86%)	
C. Letting the child become malnourished.	2 / 250 (0,8%)	0 / 84 (0%)	2 / 166 (1,2%)	
D. I don't know	21 / 250 (8,4%)	4 / 84 (4,8%)	17 / 166 (10%)	

Original Article

Barreto MAC, Barreto IDC, Bottesini VC, Duarte DA

Assessment of Parents' and/or Caregivers' Knowledge About Their Children's Oral Health: A Cross-Sectional Study

4. When should a child be taken to the dentist for the first time?, n / N (%)				
A. When the child feels a toothache.	12 / 250 (4,8%)	0 / 84 (0%)	12 / 166 (7,2%)	<0,001 ²
B. Right after the child is born, regardless of whether the first tooth has erupted.	116 / 250 (46%)	53 / 84 (63%)	63 / 166 (38%)	
C. When all the baby teeth are in the mouth.	80 / 250 (32%)	26 / 84 (31%)	54 / 166 (33%)	
D. I don't know	42 / 250 (17%)	5 / 84 (6,0%)	37 / 166 (22%)	
5. t what age should cleaning a child's teeth begin?, n / N (%)				
A. When the first baby tooth erupts.	182 / 250 (73%)	77 / 84 (92%)	105 / 166 (63%)	<0,001 ²
B. When the baby is one year old.	42 / 250 (17%)	5 / 84 (6,0%)	37 / 166 (22%)	
C. When all the baby teeth are in the mouth.	12 / 250 (4,8%)	1 / 84 (1,2%)	11 / 166 (6,6%)	
D. I don't know	14 / 250 (5,6%)	1 / 84 (1,2%)	13 / 166 (7,8%)	
6. What is the recommended amount of fluoride toothpaste to brush the teeth of a child under 3 years old?, n / N (%)				
A. The amount of a grain of uncooked rice	119 / 250 (48%)	60 / 84 (71%)	59 / 166 (36%)	<0,001 ¹
B. The amount of a small pea.	64 / 250 (26%)	20 / 84 (24%)	44 / 166 (27%)	
C. The amount that covers the entire head of the brush.	18 / 250 (7,2%)	3 / 84 (3,6%)	15 / 166 (9,0%)	
D. I don't know	49 / 250 (20%)	1 / 84 (1,2%)	48 / 166 (29%)	
7. How many times should a child under 3 years old brush their teeth with fluoride toothpaste?, n / N (%)				
It is not necessary to brush the baby's teeth every day.	3 / 250 (1,2%)	1 / 84 (1,2%)	2 / 166 (1,2%)	0,008 ²
B. Once a day.	27 / 250 (11%)	7 / 84 (8,3%)	20 / 166 (12%)	
C. Twice a day.	182 / 250 (73%)	71 / 84 (85%)	111 / 166 (67%)	
D. I don't know	38 / 250 (15%)	5 / 84 (6,0%)	33 / 166 (20%)	
8. What is the recommended concentration of fluoride in toothpaste to be used on the teeth of children under 3 years old?, n / N (%)				
A. The concentration should be zero parts per million (ppm) of fluoride.	22 / 250 (8,8%)	3 / 84 (3,6%)	19 / 166 (11%)	<0,001 ¹
B. The concentration should be 500 ppm of fluoride	19 / 250 (7,6%)	8 / 84 (9,5%)	11 / 166 (6,6%)	
C. The concentration should be at least 1,000 ppm of fluoride	52 / 250 (21%)	43 / 84 (51%)	9 / 166 (5,4%)	
D. I don't know/never heard of	157 / 250 (63%)	30 / 84 (36%)	127 / 166 (77%)	
9. If a baby bottle needs to be prescribed by a professional, until what age is it advisable for the child to stop using it and start using a cup?, n / N (%)				
A. Up to 1 year	79 / 250 (32%)	31 / 84 (37%)	48 / 166 (29%)	0,033 ¹
B. Up to 2 years	53 / 250 (21%)	24 / 84 (29%)	29 / 166 (17%)	
C. Up to 3 years.	35 / 250 (14%)	9 / 84 (11%)	26 / 166 (16%)	
D. I don't know	83 / 250 (33%)	20 / 84 (24%)	63 / 166 (38%)	
10. If the baby uses a pacifier, from what age is it advisable for the child to stop using it?				
A. From 1 year	100 / 250 (40%)	31 / 84 (37%)	69 / 166 (42%)	0,664 ¹
B. From 2 years	58 / 250 (23%)	23 / 84 (27%)	35 / 166 (21%)	
C. From 3 years	15 / 250 (6,0%)	4 / 84 (4,8%)	11 / 166 (6,6%)	
D. I don't know	77 / 250 (31%)	26 / 84 (31%)	51 / 166 (31%)	

¹ Chi-square test of independence

² Fisher's exact test

Caption: n- Absolute frequency. N - Valid data. % - Percentage. SD - Standard Deviation. IQR - Interquartile Range.



Table 5 - Distribution of mean scores and classification of caregivers in the domains of practice, attitude and knowledge, according to the type of service used (private or public).

Characteristics	Service			
	Total, N = 250	Private, N = 84	Public, N = 166	p-Value
Prática				
Mean (DP)	11,5 (3,2)	13,6 (2,7)	10,5 (3,0)	<0,001 ¹
Median [AIQ]	11,0 [9,0, 14,0]	14,0 [12,0, 15,3]	10,0 [8,0, 12,0]	
Classified Practice, n / N (%)				
Adequate	71 / 250 (28%)	44 / 84 (52%)	27 / 166 (16%)	<0,001 ²
Inadequado	179 / 250 (72%)	40 / 84 (48%)	139 / 166 (84%)	
Atitude				
Mean (DP)	5,18 (1,87)	6,44 (1,50)	4,54 (1,72)	<0,001 ¹
Median [AIQ]	5,00 [4,00, 6,00]	7,00 [6,00, 7,00]	5,00 [3,25, 6,00]	
Classified Attitude, n / N (%)				
Adequate	118 / 250 (47%)	66 / 84 (79%)	52 / 166 (31%)	<0,001 ²
Inadequate	132 / 250 (53%)	18 / 84 (21%)	114 / 166 (69%)	
Knowledge				
Mean (DP)	10,2 (3,3)	12,2 (2,9)	9,2 (3,1)	<0,001 ¹
Median [AIQ]	11,0 [8,0, 13,0]	13,0 [10,0, 14,0]	10,0 [8,0, 11,0]	
Classified Knowledge, n / N (%)				
Adequate	91 / 250 (36%)	57 / 84 (68%)	34 / 166 (20%)	<0,001 ²
Inadequate	159 / 250 (64%)	27 / 84 (32%)	132 / 166 (80%)	

1 Chi-square test of independence

2 Fisher's exact test

Caption: n– Absolute frequency. N – Valid data. % – Percentage. SD – Standard Deviation. IQR – Interquartile Range.

DISCUSSION

The family unit is considered an extremely important ecosystem for acquiring good health practices, especially for parents and/or caregivers who have knowledge of and support healthy lifestyles.¹²

It is widely recognized that family interactions shape the behavior of its members, with particular emphasis on the influence of parents on children, who are considered passive recipients of parental influence.¹³

Therefore, parents and/or caregivers who possess knowledge about health education assume the role of guiding their children through affective, cognitive, and behavioral atti-

tudes. However, studies indicate that parents and/or caregivers are often unfamiliar with the concept of promoting children's health.^{14,15}

Given this, it becomes crucial to develop tools that allow for the assessment of parents' and/or caregivers' knowledge regarding their children's oral health, as well as to raise their awareness of the importance of this knowledge. All the above assertions justify the implementation of this research, which aims to test a KAP (Knowledge, Attitude, and Practice) type instrument for parents and/or caregivers on promoting children's oral health¹¹, assessing the knowledge of parents and/or caregivers regarding their children's oral health.

Initially, the research results demonstrated that parents and/or caregivers whose children attend private schools obtained higher scores in all domains, exhibiting a greater proportion of knowledge, attitudes, and

practices considered adequate, when compared to those who attend public schools. Although not the main focus of the research, it is possible to suggest that the methodology used can be applied in future studies, reinforcing the viability of the validated instrument.

Regarding the sociodemographic profile of the studied population, the predominance of female parents and/or caregivers is notable in both schools (public and private). This fact aligns with research indicating that mothers are the primary caregivers and role models for their children, playing a fundamental role in building healthy lifestyles for them.^{16,17}

A significant difference is observed in the dimensions of education and income, with better indicators among parents and/or caregivers using the private service. This result is somewhat unsurprising, given that more privileged cultural and economic

conditions suggest more adequate levels of knowledge.¹⁸

Analysis of oral health care practices among the studied population reveals significant differences between public and private schools. While users of private schools adopt preventive practices, such as less sugary food, more frequent tooth brushing, greater use of dental floss, and the use of fluoride toothpaste, users of public schools did not exercise adequate dietary control, adopted less frequent oral hygiene practices, were unaware of fluoride concentration, and introduced bottles with sugary products prematurely. These results highlight a direct relationship between low family income, low knowledge, and low perception of children's oral health. Recent studies have confirmed the concept that parental practices strongly influence children's oral health, which, in a way, our results demonstrate.^{19,20}

In general, this study highlights that although parents and/or caregivers demonstrate a reasonable level of knowledge, this fact is not reflected in consistent attitudes and practices. Therefore, it is important to emphasize continuous educational support and implement accessible public

health policies, particularly for socially vulnerable populations.^{21,22}

Some limitations of this research must be considered, such as its cross-sectional nature and also because it is possibly unprecedented, the discussion and comparison with other bibliographic productions proved to be quantitatively affected. However, original studies are precursors for the construction of hypotheses and bases for the design of future research on the subject.

In addition, the questionnaire proved to be a reliable and valid tool for assessing the knowledge of parents and/or caregivers regarding the oral health of their children. Its psychometric properties allow it to be considered a valuable instrument for research as well as a pedagogical support for public managers.

The relevance of this research is remarkable, especially because it focuses on parents and/or caregivers of children aged zero to three years old. This is a crucial period of life, given that neuroscience shows that synapses develop rapidly, creating the basis for cognitive, social and emotional functioning. This early development is fundamental for the acquisition and formation of good general and oral

health practices, reflecting throughout the individual's entire life cycle.^{23,24}

Thus, in addition to fulfilling its scientific objectives and provoking reflection on the knowledge of parents and/or caregivers about their children's oral health, the research also has the potential to contribute to raising awareness and educating parents and/or caregivers about adopting healthy behaviors from the child's first years of life.

CONCLUSION

It is possible to conclude that there were notable variations between parents and/or caregivers whose children attended public and private schools, with those in the private sector showing a higher level of knowledge performance. Beyond this knowledge, the combination of knowledge and attitudes favors more responsive care practices. It is also concluded that there is an urgent need to develop specific educational actions, mainly directed at parents and/or caregivers who use the public school system, in order to improve their knowledge and practices for promoting their children's oral health.

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