ORIGINAL ARTICLE

Assessment of Parental Knowledge and Attitude Regarding Oral Health Status of their Children in District Mirpurkhas Sindh, Pakistan

FARYAL MANZOOR[1], ZAFAR IQBAL[2], KHALIL AHMED[3], UMER KHAYYAM[4], PERMANAND MALHI[5], MADIHA KHALID[6]
[1,2]Assistant Professor, Department of Community and Preventive Dentistry, Bhitai Dental and Medical College, Mirpurkhas
[3]Assistant Professor, Department of Orthodontics, Bolan University Medical Health Sciences, Quetta
[4]Assosiate Professor, Department of Orthodontics, Bhitai Dental and Medical College, Mirpurkhas
[5]Assosiate, Professor, Department of Operative, Bhitai Dental and Medical College
[6]Assistant Professor, Department of Oral Biology, Isra dental college, Isra University Hospital Hyderabad
Correspondence to: Faryal Manzoor, Email: faryalrajput62@gmail.com

ABSTRACT

Objective: To find out the relationship of parental knowledge and attitude towards their child's oral habits and health status, and to assess whether educational status of parents plays an important role for child's regular dental checkup.

Study Setting: Department of Community and Preventive Dentistry, Bhitai Dental and Medical College, Mirpurkhas.

Study design: Cross-sectional survey

Duration: Six months from February 2019 to July 2019

Methodology: Parents of primary school aged and preschool children aged 4 to 10 years and 6 months to 4 years respectively were included. The parents were selected from a public dental OPD of Dental College. A closed-ended self-designed questionnaire was used, which included 31 questions. Personal information of study subjects were assessed including demographic information, their children's. The awareness and attitude of parents toward oral health were evaluated. Brushing frequency and time, as well as sweet consumption habits, were all recorded as part of the child's oral hygiene status and habits. Statistical data analysis was performed using SPSS 16 version.

Results: Most parents (56.5 %) were graduates or had a higher degree and were from a middle-class family (63%). The oral health awareness level among parents was relatively high. Over three-quarters of parents (74-95%) had positive attitudes toward factors that are critical for maintaining oral health. However, most of parents (89%) were either bottle feeding their children in their sleep or have done so in the past. Despite the parents' high degree of knowledge, 52% of children were still not brushing two times daily and were excessively consuming sweets (73%). Despite their highly positive attitudes, the parents claimed that their children were even now struggling with oral diseases, however low prevalence was recorded (19-33 %). There was a significant association between education and income (P=0.053). The relationship between parents' socioeconomic background and their awareness and attitudes was not particularly significant.

Conclusion: Children appeared to be continually engaged in behaviors that were detrimental to their oral hygiene. Parents claimed that their children's dental health was adequate and that no dental care was needed, however the parents were possibly unaware of the progression of disease. Socioeconomic and educational status was associated to the level of attitude and awareness of parents.

Key words: Parental knowledge, child's oral health, attitude, regular dental checkup

INTRODUCTION

Since oral hygiene is an essential aspect of a child's overall health, it is a significant predictor of the standard of living of children. Dental caries, discoloration, malocclusion, periodontal disease, and other oral conditions and disorders have a negative impact on everyday activities and the oral health of a child. Despite significant progress in preventional and interventional measures, these disorders continue to affect children. In the early age of children, parents are the most influential people in their life. The oral hygiene and health knowledge and behaviors of parents have a direct impact on the oral hygiene and health of their children. As a result, parents must be viewed as a strong social driver in promoting the young children's health, thus influencing future generations' oral well-being outcomes. Their efforts can result in more preventive dental services for children at home as well as greater use of specialized dental services.[1] Parental understanding, cultural values, attitude, and concern about dental health are the main elements that have a direct impact on children's dental health behavior and status. The term "awareness" refers to parental information and education regarding dental health mechanisms and care delivery. There is a significant correlation between mothers' level of education and their children's oral hygiene level.[2-4] As compared to parents with a lower level of education, parents having a higher level of education have a more optimistic attitude toward their children's healthy lifestyles and have greater desire to promote their children's healthy dentition.[5,6] According to a Polish report, having a lower education levels of mothers correlate with having a lower level of awareness regarding oral health.[4] Parents' behavior regarding oral habits of their child's is referred to as attitude. Parents with positive attitude as well as oral health skills by monitoring their children's tooth brushing practices and sugar consumption have led to positive oral health behaviors in their children, showing that attitudes of parents positively affect their children wellbeing.[7-9] Cultural standards pertain to a society's traditions, health principles, and attitudes concerning oral health patterns,

such as using home remedies, feeding practices and infant diet, and treatment seeking behaviours. To address socio-cultural obstacles in promoting healthy oral hygiene among children, it is critical to recognize parents' oral health attitudes and to change practices that are conflicting with empirical evidence.[10] Parents' knowledge regarding oral health of their child, as well as their oral hygiene awareness, such as when to accompany the child to the dentist, is referred to as awareness. Zavras et al.[11] indicated that the level of dental care use was greater among parents who had a higher educational status, however the behaviour of attending the dentist was observed whenever unpleasant symptoms arise. This may be attributed to the subject's ignorance. Nagaveni et al.[12] stated that when asked regarding awareness, most of the parents (82%) were unaware of the value of primary teeth, and 61% chose to have extracted the carious primary teeth . The development of improved brushing behaviors and more regular daily brushing among children was directly related to mothers' knowledge regarding significance of oral hygiene.[13] This aspect of parental impact on oral health of child has been the subject of numerous studies. Most research articles linked parent attitudes to their children's oral habits, while others looked at the impact of education of parents on their children's dental health. In our community in District Mirpurkhas, no research has been performed in this regard. As a result, the aim of this study is to see how parental awareness and attitudes affect their children's oral health and behaviors.

MATERIAL AND METHODS

Study Setting: Department of Community and Preventive Dentistry, Bhitai Dental and Medical College, Mirpurkhas
Study design: Cross-sectional survey
Duration: Six months from February 2019 to July 2019
Sample technique: Convenience sampling technique was used
Methodology: This cross-sectional survey study was performed in Mirpurkhas District Sindh, Pakistan; within three months from March to May. A total of 300 study subjects contributed to the study. Parents of primary school aged and preschool children aged 4 to 10 years and 6 months to 4 years respectively were included in the study. The parents were selected from a public dental OPD of Dental College. The calculation of sample size [12] was done by using a sample size calculator “Raosoft”. Before data collection, an informed written consent was obtained. A closed-ended self-designed questionnaire was used for data collection, which included 31 questions and was written in both Urdu language and English language. Personal information of study subjects were assessed including Demographic data, their children’s age, educational status categorized as primary level (duration of education upto 5 years), secondary level (10 years), college level (12 years), university level (≥16 years), social class as per average of their household monthly income.
Data analysis: SPSS version 16 was used for statistical analysis. The distribution of parameters was expressed using a frequency distribution, and the association between parameters was tested using a Chi-square test with a 95% confidence interval.

RESULTS

Most of the parents (56.5%) were graduate or had a higher level of education and were from a middle-class family (63 %) as showed in table.1

Table 2 reveals that parental awareness regarding oral health was relatively high. In terms of parental attitudes towards oral health of their children, over three-quarters of parents (74-95%) had positive attitudes toward factors that are critical for maintaining oral health. However, a large percentage of parents (89%) were either bottle feeding their children in their sleep or have done so in the past. Despite the parents' high degree of knowledge, 52% of children were still not brushing two times daily and were excessively consuming sweets (73%). Almost all of the parents (95.5%) said that regular dental checkups were necessary, 64.5% of the study subjects did not visit the dentist with their children on a routine basis. However findings regarding parental awareness and attitude as per study questioner have been shown in table 2 &3.

Table 1. Baseline characteristics (n = 300)

Characteristics	n	%
Predominant Age Group		
Parents with children aged between 6 months- 5 years	222	74.0%
Parents with primary school going children	78	26.0%
Parents Education Level:	213	71.0%
Graduate and Masters	66	22.0%
Intermediate	16	5.3%
Secondary school	5	1.6%
Primary school		
Family Income:	226	75.3%
Middle class	40	13.3%
Upper class	34	5.6%
Lower class		

Table 2. Parental knowledge of oral health (n = 300)

	YES		NO	
	n	%	n	%
Do you know brushing the teeth prevents dental problems?	296	99	4	1
Do you know frequent exposure to sweet, sticky and acidic food causes decay?	292	97	8	3
Do you know fluoride prevents decay?	271	90	29	10
Do you know excessive fluoride also affects your child’s dentition?	197	65.5	103	34.5
Do you have any knowledge about dentition sequence and its significance?	269	90	31	10
Do you know problems of primary teeth affect permanent teeth?	235	78.3	65	22
Do you know certain habits during childhood (thumb sucking, tongue thrusting, nail biting) cause misalignment of teeth?	264	88	36	12
Do you think regular dental visit is important for your child’s oral health maintenance?	291	97	9	3

Table 3. Parental attitude towards oral health of children (n = 300)

	YES		NO	
	Frequency	%	Frequency	%
Do you supervise your child while brushing?	277	88.5%	23	11.5%
Do you keep a check on your child's diet?	288	94%	11	5.5%
Is it fine to put baby to sleep with a bottle?	278	89%	22	11%
Do you consider staining of teeth as a matter of concern?	276	88%	23	11%
Do you consider primary teeth as important as permanent teeth?	248	74%	51	25.5%
Would you take any action to stop your child's habits that cause malocclusion?	261	80.5%	26	13%
Do you consider dental knowledge significant?	290	95%	8	4%
Do you take your child for regular dental check-up?	171	35.5%	129	64.5%
Has your own experience at the dentist influenced your decision to take your child to the dentist?	209	54.5%	91	45.5%
Are there other people who influence your dental care decisions taken for your child?	224	62%	76	38%
Does your child need any type of oral health associated treatment?	247	73	53	26.5%

DISCUSSION

The value of parental awareness and attitudes about oral health care, as well as their association with their children's long-term health, was investigated in this research. In terms of parental experience, despite their differing educational levels, most of the parents (98%) were conscious of the value of tooth brushing, while 96% of the parents accepted that unnecessary sweets intake has an effect on an individual's dental wellbeing. These findings differed from the previous research, which showed that different educational status of parents resulted in differences in their awareness levels about dental disease prevention.[2,4,5] In avoiding dental decay, 85 percent of parents understood the importance of fluoridated toothpastes, which was higher than the findings of a research from China [15], where only 48.5 percent of the parents were conscious that even unnecessary fluoride ingestion or exposure was harmful to the architecture of teeth as well as other hard tissues in the body. Erum Sami et al. also noted a lack of knowledge about the source of fluorosis in parents.[16] Awareness in parents and the general public may be a successful way to minimize fluorosis incidence in our population.

in comparison to 41.67 % of the study participants in the study undertaken in the United States, in a research published from Saudi Arabia, most of the parents (84.5 %) were conscious of the appropriate sequencing of primary dentition and its importance in the early age of their child. [17] Just 67 percent of parents believed that complications in their children's primary dentition could influence their children's successors. This may be because of cultural values that primary teeth are only transient and that their early loss because of caries or further diseases is unavoidable. Most of the parents (82%) accepted that parafunctional childhood habits including finger, lip, and thumb sucking, tongue thrusting, and nail biting would negatively affect their children's occlusion, which is higher than the findings of Nagavveni N.B. et al. [12], who reported that most of the parents (86%) had a lack of awareness.

In comparison to the 82% of negative responses in a study conducted in India's Davangere district, notably 88.5% of parents monitored their children while tooth brushing, 88 % found tooth staining to be a problem, 94% held a check on their children's proper diet, and 74% knew the value of primary teeth.[12] This demonstrates parents' positive attitudes toward their children's primary dentition. Irrespective of their understanding of caries causing factors, 89% of parents practiced bottle feeding in their children during their sleep. This suggests that, despite having the expertise, parents did not put it into effect. Other researchers have also mentioned the disparity between awareness and attitude.[18] Despite the reality that 95.5% of parents acknowledged the value of frequent dental checkups, just 35.5% of parents brought their children to the dentist on a regular basis, which is slightly lower than the findings of a Saudi Arabian survey.[19], This may be because of inadequate consciousness about the importance of early dental care. Accessibility issues including cost, fear, or limited resources may also be to reason. As a result, parents must advise their children to seek expert oral health advice as early as their primary teeth begin to erupt. It was also discovered that 54.6% of parents were motivated and inspired to provide quality dental childcare as per their previous dental experiences, while 62% were also motivated by factors apart from personal, with 7.5% showing inspiration from both factors. This reveals that other cultural factors such as peer pressure as well contributes in pursuing expert guidance for their children. On interlinking the findings with one another it was noticed that even though 98 % of parents exhibited understanding that brushing two times daily is crucial in maintaining the oral health, however only 52% of children actually practiced it. Kristina Saldnaite and colleagues conducted a Lithuanian review[20] and established a link between the level of parental education and possibility of brushing habit of their kids twice daily. Parents with more education instill greater oral hygiene habits in their children as compared to the parents with less education. This is supported by the findings of our survey study, which revealed that children's brushing habits of two times daily are more common among parents who had a high educational level. In a Nigerian study, 96% of the study subjects (parents) recognized the connection between high sweet intake and caries growth, in comparison to 51.3% of the parents,[21] Despite this, 73% of children had a history of excessive sweet intake in some way. Even though 82% of children were aware that feverish oral habits may impair dentition, 24% of children were observed to be practicing thumb sucking and other habits. These results may be attributed to a lack of adherence on the part of the infant, as well as negligence on the part of parents to instill good habits in their children during their early life. Because parents are the key social force affecting a child's growth in their early life, measures that address parental values and behaviours regarding oral health appear to be effective in preventing the dental problems.[4]

Despite the fact that 94% of the parents monitored their children's eating habits, as per parents, 33% of the children had indications of dental caries. While 88

percent of parents expressed concern about the existence of stains on their kids' teeth, only 25% of kids had stains. This indicates that the parents were not taking proper precautionary measures regarding oral hygiene or offering a healthy diet. It is important to educate parents on proper brushing practices as well as good eating for their children. Just 19% of children's malocclusion cases were found by parents, indicating that 80.5% of parents agreed that they might stop their children from engaging in parafunctional behaviours that trigger malocclusion. The fact that 73.5% of the parents claim their children do not need clinical care despite the occurrence of these oral issues was a startling finding. This behaviour of parents to ignore established oral disease is due to the absence of adequate knowledge and consultation about recognising the problem, as well as the fact that people usually seek treatment for oral condition when symptoms occur or it causes major aesthetic and functional issues, as described by Zavras et al.[11] Daily dental check-ups however are critical for preventing oral pathogens and parents with a higher educational level were more concerned about these concerns as compared to those with a lower educational level.[20,22] This is supported by our research, which found that children whose parents had an education upto college or greater level went to the dentist more often. Early interventions and guidance in the course of perinatal phase, according to the American Academy of Pediatrics (AAP), are critical for both the mother and the child's oral health.[23] This degree of understanding would encourage parents to seek expert dental guidance early in their children's lives and to implement a healthier lifestyle that they can easily follow. Our study's drawback is that it failed to recognize the differences in dental experience and attitude between the parents.

CONCLUSION

Children appeared to be continually engaged in behaviors that were detrimental to their oral hygiene. Parents claimed that their children's dental health was adequate and that no dental care was needed, however the parents were possibly unaware of the progression of disease. Socioeconomic and educational status was associated to the level of attitude and awareness of parents. It proposes that health related education should emphasis on refining parents' attitude regarding significance of early preventive approach of dental visit during 1 year and dentists must provide guidance to parents individually regarding developing the habits of oral hygiene and modification of diet among children. Moreover studies must be conducted to evaluate the oral health status from the parents' perspective in addition to clinically examining the status of children's dental health.

REFERENCES

1. Inglehart MR, Filstrup SL, Wandera A. Oral health and quality of life in children. In: Oral health-related quality of life, Inglehart, MR, Bagramian R, Carol S. Ill, Quintessence Publishing Company. 2002; 79–88.
2. Abiola Adeniyi, Eyitope Ogunbodede O, Sonny Jeboda O, Morenike Folayan O. Do maternal factors influence the dental health status of Nigerian pre-school children? International Journal of Pediatric Dentistry. 2009;19(6):448–454.
3. Saied Moallemi Z, Virtanen JI, Ghofranipour F, Murtomaa H. Influence of mothers' oral health knowledge and attitudes on their children's dental health. European Archive Paediatric Dentistry. 2008;9:79–83.
4. Szatko F, Wierzbicka M, Dybizbanska E, Struzycka I, Iwanicka-Frankowska E. Oral health of Polish three-year-olds and mothers' oral health-related knowledge. Community Dental Health. 2004;21: 175-80.
5. Elham Bozorgmehr, Abolghasem Hajizamani, Tayebeh Malek Mohammadi. Oral health behavior of parents as a predictor of oral health status of their children ISRN Dentistry. 2013;5. Article ID 741783. DOI: 10.1155/2013/741783
6. Hooleya M, Skouterisa H, Boganina C, Saturb J, Kilpatrickc N. Parental influence and the development of dental caries in children aged 0–6 years: A systematic review of the literature. Journal of Dentistry. 2012;40(10):787–872.
7. Thyath MN, Nishad SG, Sharma M, Zaidi I. Impact of socioeconomic status and parental factors on child oral health- A review of literature. Journal of Advance Medical and Dental Sciences Research. 2015;3(2):153-157.
8. Vanagas G, Mila˘sauskiene Z, Grabauskas V, Mickevi˘ciene A. Associations between parental skills and their attitudes toward importance to develop good oral hygiene skills in their children. Medicina. 2009;45(9):718–723.
9. Jennifer U Dotado-Maderazo, Jona Jocylen Viavian Beloso-delos Reyes. Knowledge, attitude and practices on oral health of public school children of Batangas City. Asia Pacific Journal of Multidisciplinary Research. 2014;2(4):127- 136.
10. Monica Virgo-Milton, Rachel Boak, Alexandria Hoare, Lisa Gold, Elizabeth Waters, Mark Gussy, et al. An exploration of the views of Australian mothers on promoting child oral health. Australian Dental Journal; 2015.
11. Zavras AI, Vrahopoulos T, Souliotis K, Silvestros S, Vrotsos J. Oral health knowledge of Greek navy recruits and their socio economic determinants. BMC Oral Health. 2002;2:12-8.
12. Nagaveni NB, Radhika NB, Umashankar KV. Knowledge, attitude and practices of parents regarding primary teeth care of their children in Davangere city, India. Pesquisa Brasileira em Odontopediatria e Clínica Integrada, (PBOCI). 2011;11(1):129-132.
13. Finlayson TL, Siefert K, Ismail AI, Sohn W. Maternal self-efficacy and 1-5-year-old children's brushing habits. Community Dentistry and Oral Epidemiology. 2007;35: 272-81.
14. Household integrated economic survey(HIES) 2013-14 Government of Pakistan, Statistics division, Pakistan Bureau of Statistics Islamabad May; 2015.
15. Liu M, Zhu L, Zhang B, Petersen PE, Changing use and knowledge of fluoride toothpaste by schoolchildren, parents and school teachers in Beijing, China. International Dental Journal. 2007;57(3):187-94.
16. Erum Sami, Tippanart Vichayanrat, Pratana Satitvipawee. Dental fluorosis and its relation to socioeconomic status, parents' knowledge and awareness among 12-year-old school children in Quetta, Pakistan. Southeast Asian J Trop Med Public Health. 2015;46(2):360-368.
17. Abdulrahman Alshehri, Nasim VS. Infant oral health care knowledge and awareness among parents in Abha city of Aseer Region, Saudi Arabia. The Saudi Journal for Dental Research. 2015;6(2):98–101.
18. Amjad H Wyne, Arham N Chohan, Fahd Hamad Alrowily, Bander Mubarkal Shehri, Oral health knowledge, attitude and practices by parents of the children attending KSUCD clinics. Pakistan Oral Dental Journal. 2004;24(2):145-8.
19. Thakib A Al-Shalan, Basim A Al-Musa, Abdulmoniem M Al-Khamis. Parents' attitude towards children's first dental visit in the College of Dentistry, Riyadh, Saudi Arabia. Saudi Medical Journal. 2002;23(9): 1110-1114.
20. Kristina Saldūnaitė, Eglė Aida Bendoraitienė, Eglė Slabšinskienė, Ingrida Vasiliauskienė, Vilija Andruškevičienė, Jūratė Zūbienė, The role of parental education and socioeconomic status in dental caries prevention among Lithuanian children. Medicina. 2014;50(3):156-161. DOI: 10.1016/j.medici.2014.07.003
21. Orenuga OO, Sofola OO. A survey of the knowledge, attitude and practices of antenatal mothers in Lagos, Nigeria about the primary teeth. African Journal of Medicine and Medical Science. 2005; 34(3):285-91
22. Anita Soni. Children's dental care: Advice and Visits, Ages 2-17, 2011 Statistical brief #432, Medical Expenditure Panel Survey, March; 2014.
23. American Academy of Pediatric Dentistry, Council on Clinical Affairs. Guideline on perinatal oral health care. Adopted. In: Clinical Guideline Reference Manual. Chicago: American Academy of Pediatric Dentistry. 2009-2010;31:90-4.