

IMPACT OF PARENTAL LITERACY ON DENTAL CARIES OF SCHOOL - GOING CHILDREN IN LANDI KOTAL DISTRICT KHYBER

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ABSTRACT

OBJECTIVES

Education plays a profound role in lessening dental caries. This study assesses the impact of parental education on dental caries of school-going children.

METHODOLOGY

This was a cross-sectional study conducted on four hundred and fifteen (415) students of public and private schools. The study duration was six months. A simple random sampling technique was used. A semi-structured questionnaire was used as a data collection tool.

RESULTS

The children were questioned in designated and comfortable zones of schoolyards. The results depicted that children of educated parents had better dental hygiene and reduced dental caries whereas children of uneducated parents showed a remarkable increase in dental caries.

CONCLUSION

The study concludes that parental literacy influences and plays an important role in reducing the prevalence of dental caries in school-going children.

KEYWORDS: Dental Caries, Parental Literacy, Oral Health, School, Prevalence

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INTRODUCTION

Dental caries is one of the most common global diseases that can occur at any phase of life. A report by World Health Organization states that dental caries if not treated in time can gradually infect other teeth and can probably be a cause of tooth loss.² Dental caries besides, damaging the primary function of teeth-mastication can cause a severe blow to the speech, smile, and psychological and social environment of the children.³ Unprivileged socio-economic factors intensify dental caries.⁴ Parental literacy plays a crucial role in oral hygiene thereby minimizing the

chances of dental caries in children.⁵ It has been reportedly shown that parental literacy and family income have a direct and good impact on the oral health of children whereas low-income and uneducated parents are found to have no attention to the oral hygiene of their children, thus dental caries in such children persists.⁶ Parents with educational background and dental knowledge have a long-lasting positive effect on children's oral health whilst children having no such opportunity remains affected by dental caries. socioeconomic factors including education have a massive influence on caries as out of 231 children, 70.46% of those children had caries whose father and mother have lower educational level.⁷ 589 Saudi Arabian Children including males and females, ages 3 – 14, showed that 70% of children having a lower parental literacy rate are suffered from caries while in case of children having higher parental literacy are less susceptible to dental caries.⁸ the association of various socioeconomic

parental factors and dental caries in 3 years old 3615 Japanese children. the prevalence of dental caries was 14.7% in children having professional and educated parents. The higher the parental literacy the lower caries and vice versa.⁹ Similarly, the authors have shown that socioeconomic factors such as income, education level and family size have a direct impact on caries prevalence i.e., the lower the educational level of parents the higher will be the rate of caries in children.¹⁰ Moreover, in studies children of high-educated and high-income families have better oral health as compared to children lacking such facilities.¹¹ Children of less-educated fathers have more dental caries and DMFT scores.¹² Our research is also in line with the article of Diaz Cardenas et.al which states that educated mothers have a greater impact on a child's caries as compared to educated father.¹³ According to Chen, Liangwen et.al, children of educated parents tend towards more dental hygienic practices.¹⁴ There is an association between a mother's education and child caries. As the level of a mother's education increases so is the toothbrushing habit in children which leads to minimal or no caries. Katageri et.al performed an assessment on children of Udaipur, Rajasthan and concluded that the prevalence of caries has a higher ratio in children of uneducated parents.¹⁵

METHODOLOGY

This cross-sectional study was conducted on 415 children between the ages of 6 to 14, grades(1-8) from three public and three private schools of Landi Kotal after fulfilling all the ethical and legal formalities. A well-designed semi-structured questionnaire was used, and the students were questioned regarding dental health and parental literacy. The oral examination of students was carried out in their respective schools using a disposable mouth mirror, and dental explorer along with the necessary apparatus. Data collected were analyzed by SPSS version 26.

RESULTS

The data collected from the children of educated and uneducated parents revealed that the level of parental education influences the presence of caries in children, as the percentage of children of educated parents having minimal or, no caries was 72.4 as compared to children of uneducated parents. It was also noted that the children of educated parents have a very lower margin of missed teeth in contrast to the children of uneducated parents. The percentage of teeth-filling

children of educated parents was less compared to that of uneducated parents. Since educated parents do not encourage children to eat more sweets, therefore, it is clear from the table that the children of uneducated parents consume more sweets which then leads to dental caries. Children of educated parents practiced good dental hygiene. (56.9%) of the children of educated parents regularly used toothbrushes and toothpaste, while 34% used Miswak. Amongst the Children belonging to uneducated parents only 24% used toothbrushes or toothpaste, and the majority (56.8%) cleaned their teeth using their fingers only. Most Children belonging to uneducated parents complained of dental pain (78.4%). Fewer children of educated parents complained of dental pain.

Table 1: Comparative Analysis of Educated and Uneducated Parents Under Several Variables

Variables	Parental Literacy	
	Educated f(%)	Uneducated f(%)
Grade / Class		
Grade 1 to 4	65 (36.1) 72 (30.6)	115 (63.8) 163 (69.3)
Grade 5 to 8	65 (36.1) 72 (30.6)	115 (63.8) 163 (69.3)
Age		
6 to 10 years	65 (36.1)	115 (63.8)
11 to 14 years	72 (30.6)	163 (69.3)
Caries Status		
No Caries (Healthy)	100 (72.4)	59 (21.2)
Caries(Decayedteeth)	38 (27.5)	218 (78.7)
1 tooth	18 (47.3)	62 (28.4)
2 teeth	13 (34.2)	81 (37.1)
More than 2	7 (18.4)	75 (34.4)
Missed Teeth		
Yes	12 (8.7)	42 (15.1)
1 tooth	10 (83.3)	36 (85.7)
2 teeth	2 (16.6)	5 (11.9)
More than 2	0	1 (2.3)
No	125 (91.2)	236 (84.8)
Teeth Filling		
Yes	26 (18.9)	33 (11.8)
1 tooth	18 (69.2)	24 (72.7)
2 teeth	6 (23.0)	7 (21.2)
More than 2	2 (7.6)	2 (6.0)
No	111 (81.0)	245 (88.1)
Cleansing Method		
Toothpaste / brush	78 (56.9)	69 (24.8)
Finger	25 (18.2)	158 (56.8)
Miswak	34 (24.8)	51 (18.3)
Consumption of Sweet Foods		
Yes	129 (94.1)	263 (94.6)
Daily	25 (19.3)	196 (74.5)
After 2 – 3 days	78 (60.4)	48 (18.2)
Once a week	26 (20.1)	19 (7.2)
No	8 (5.8)	15 (5.3)
Dental Pain		
Yes	38 (27.7)	218 (78.4)
No	99 (72.2)	60 (21.5)

DISCUSSION

Oral health play's vital role in human life. The attitude of parents has a broad bond with the oral health of children^{16,17}. Poor oral health effect and deteriorates several spheres of life. The studies show that children with poor oral health more certainly experience dental pain, miss school, and perform insignificantly in school¹⁸. Poor oral health deprives children of food tastes and with more tooth loss their chewing power is also affected¹⁹. Briefly, Poor oral health results in various diseases including dental caries, gingivitis, periodontal diseases, bad breath, respiratory and cardiovascular diseases, and chronic kidney diseases. Education has an indispensable role in the elimination and reduction of caries particularly in children. Parents with a high level of education pay more attention to the dental hygiene of their children²⁰. Studies have discovered that more educated parents play a more positive role regarding the oral health of their children whereas less or uneducated parents do not take care of children's dentition / oral health²⁰. In this paper, we have analyzed the impact of parental literacy on dental caries of school-going children under several variables. In our results, the non-existence of dental caries in the children of educated parents was 72.4% while in the children of uneducated parents the percentage was 21.2. Similarly, the ratio of decayed teeth of children with educated parents is 27.5% whereas that of uneducated was calculated as 78.7%. Furthermore, the teeth loss proportion of children having uneducated parents is much higher than that of children of educated parents. While assessing the variable Teeth filling, it was noticed that more children of educated parents due to their dental knowledge have filled their teeth whereas uneducated due to their limited knowledge have a minor proportion of teeth filling. Concerning cleaning methods, on the top level, toothpaste and toothbrush were the mostly used placebo by the children of educated parents. Miswak and finger were the second and third most used cleaning method by the children of educated parents. The common method adopted by most of the children of uneducated parents was finger having a percentage of 56.8. A considerable majority of children from uneducated parents used toothpaste/toothbrushes at a percentage of 24.8. The least commonly used method of children having uneducated parents was miswak having 18.3%. The consumption level of sweets by the children of both educated and uneducated parents was nearly the same, 94.6% and 94.1 respectively however the daily basis consumption of educated

was drastically smaller (19.3%) than the children of uneducated (74.5%). Having sufficient dental knowledge and dental care, children at large (72.2%) answered no to the question of dental pain whereas 78.4% of the children from uneducated parents were the ones suffering from dental pain. In a nutshell, under all variables, the children of educated outperform the children of uneducated ones.

CONCLUSION

This study concludes that parental literacy determines and affects the dental hygiene and prevalence of dental caries in children. The children of educated parents have less dental caries as compared to the children of uneducated parents. This is because educated people inculcated good dental habits and practices in their children thereby minimizing dental diseases in their children.

LIMITATION

In this study the parents were not involved during the data collection process and children were used to make inference.

CONFLICT OF INTEREST: None

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CONTRIBUTORS

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2. **Muhammad Ahmad Orakzai** - Supervision; Final Approval