

CORRELATE THE LEVEL OF PARENTS EDUCATION WITH ORAL CARE IN CHILDREN RIYADH – SAUDI ARABIA

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ABSTRACT:

Background: Dental caries is one of the most common chronic diseases among children. It is well-known that the behavior of parents affects their children's dental health.

Aim of the study to evaluate and find the correlation between the education level of parents and their children's oral care.

Material and method: A random sample of 150 children aged between 5-12 years were enrolled in the study after obtaining the informed consent of their parents. Parents were interviewed to answer a questionnaire that include demographic characteristics, socioeconomic status, their oral health behaviors and that of their children. Oral hygiene habits status of children was also examined.

Results: It was found that children with educated parents have a higher percentage of oral care. On the other hand, missed teeth percentage is higher upon children with uneducated parents. There was a significant correlation between parents' education level and DFM index in their children. There wasn't a significant correlation between the education level of parents and overall oral care including tooth brushing of their children.

Conclusion: The education level and also the economic status of parents has a significant effect on oral care of their children, also there should be more concern about parents knowledge and their oral hygiene attitude of their children including tooth brushing habits.

Key Words: Oral care, children. Level of education



INTRODUCTION:

One of the most common, chronic diseases among children is *Dental caries*. It happens upon the interaction of bacteria, mainly *Streptococcus mutans*, with sugary foods on tooth enamel. These bacteria break down sugars for energy, causing an acidic environment in the mouth and result in demineralization of the enamel of the teeth and dental caries.^[1] World Health Organization reported that 60-90% of school children worldwide had experienced caries, with the disease being most prevalent in Asian and Latin American countries.^[2] The prevalence of dental caries in developed

countries is decreasing, while in underdeveloped and developing countries, the prevalence is on the rise.^[2] In kingdom of Saudi Arabia there is an increase in the prevalence of dental caries has been observed, which can be due to the lifestyle of Saudis, which includes high consumption of sugary food and carbonated drinks, add to these the lack of awareness toward proper oral health maintenance.^[3,4]

It is well-known that the behavior of parents, particular mothers, affects their children's health.^[5] Because they are the

main caregivers of oral health, Parents' attitude with their children is very important during the early stages of their life, even in pre-school; therefore parents are the main supplier of children's oral health.^[6]

Dental care professionals claimed that efforts aimed to improve parental oral health behaviors could result in reduced risk of caries among their children.^[7] Some studies have examined the association between characteristics of parents and their children's oral health. These included parents' oral health behaviors and demographic factors.^[5,7 8,9] Moreover, studies have reported that parental education and family income have a direct impact on children's oral health.^[10,11] Therefore, our study aimed to compare and find the correlation between the education level of parents and their children oral health in Riyadh province.

MATERIALS AND METHODS:

Our cross-sectional study was carried out for six months in Riyadh province of the kingdom of Saudi Arabia. It included Patients that were reported to Muneseya clinic, Olaya, Namuthajiya and general Clinics. A random Sample size of 150 children was selected including both males and females aged between (5-12) years old. Parents and their children with systemic diseases were excluded and replaced with others. Parents signed an informed consent form, which was then collected before they answer the survey.

Parents at the baseline and the 6-month follow-up are interviewed by dentists to answer a structured questionnaire covering socio-demographics, oral-health behaviors and various aspects of oral health. The questionnaire was originally constructed in English, translated to Arabic, and then back-translated into English. Questionnaire was designed comprehensible for the intermediate school children. The comparison was done at the end of the original and the retranslated English questionnaire for adjustments of words and phrasing of questions.

Parents were then interviewed by an examiner using structured questions that included information about their oral hygiene habits along with their dental health knowledge and their brushing attitude with the children.

A clinical examination was carried out by the dentist using Mouth Mirror, Dental Probe, Dental Explorer and light. Dental caries, Decay, Missing Teeth, Filling, Primary teeth and mixed dentition and DMFT was assessed and scored. After a full-mouth clinical examination, a final overall judgment was made by the dentist according to the kind of treatment each participant needed.

After completion of interviews and clinical examinations, Data were analyzed using Chi-square statistics of Pearson to determine the difference in the prevalence rate of para-functional oral caries among different sexes ($p \leq 0.05$), and Kappa statistics used for reliability.

RESULTS:

Our study involved 150 children including both males and females; children were chosen randomly from those reported to Muneseya clinic, Olaya, Namuthajiya and general Clinics. Participating children were in the age group (5-12) years old. Upon the responded parents, 67(44.6%) were educated, and 83(55.3%) were non-educated parents. Regarding the monthly income of parents, it was found that 31.3% of the non-educated parents get less than 5,000RS per month, 34.9% get from 5,000 to 10,000RS per month, while 39.6% get a monthly income in the range of 10,000 to more than 40,000. On the other hand, 14.9% of the educated parents get from 5,000RS to 10,000RS/month, while 22.9% get more 40,000RS per month, with 62.7% get monthly income from 10,000 to 40,000RS. According to chi-square value with a p-value (0.0031), which is less than 0.05, we concluded that there is a correlation between the education level of parents and their income.(table 1)

Taking into consideration the oral hygiene habits of children and if it differs from being having an educated or non-educated parent, 71.6% of the children of educated parents are brushing their teeth versus 48.1% of the children, with non-educated parents, do brushing, with total of 58.6% of the whole participated children brush their teeth. 62.7% of the children with educated parents had visited the dentist, while 34.9% of the children, having non-educated parents,

visit the dentist. According to having an experience with dental care, it was found that the percentage of children is approximately the same whether having educated parents or non-educated ones, which represents about 12% each. (table 2)

When the respondents were examined using DFM charting, children of educated parents (70.1%) showed a higher percent willing to treatment by caries excavation and filling. Missing a tooth was significantly higher in children with a non-educated parent who represented 90.3%. Regarding the p-value (0.001) which is less than (0.05), there is a relationship between the parent's education level and percent of DFM. (table 3)

Table 4 revealed that among the whole sample of our study only one child, foran educated parent, has received ortho tx.

DISCUSSION:

Oral health behaviors affect the general oral health, thus knowing the proper oral health behaviors would affect the general health of the individual. Parents, and mainly mothers are the main influencers on the children's oral hygiene and oral health habits especially in the childhood which often takes place with parents.^[12]

In our study, we assessed some characteristics and behaviors of the children that may affect their oral health behaviors and their parents' education level. There was a significant relationship between the education levels of the

parent and their children's oral habits and hygiene like teeth brushing and visiting the dentist. Those are having educated parents show a higher level of dental care and oral hygiene compared to those children with non-educated parents. This is confirmed in the results of previous studies which reported that parents with higher education level have more positive attitudes and stronger intentions to control children's health behavior than low or non-educated parents.^[13] In a study by Abiola Adeniyi et al., a significant relationship was reported between mothers' educational level and the oral hygiene status of their children.^[12]

Another study by Vanagas et al. has reported that oral hygiene skills and attitudes of parents toward children oral health are significantly associated with the development of oral hygiene skills in their children including tooth brushing.^[10]

The percentage of decayed teeth in both; children with educated parents and those having non educated parents was almost the same, which indicate the general attitude of parents to spoil their children giving them sweets regardless the dental consequences and its bad effect on their teeth.

This was also confirmed in several studies which found that good knowledge and attitudes about dental health are not directly associated with good behavior.^[10,15]

It was found that children from families with a higher monthly income had regular

dental visits and experienced more dental care compared to other children from families with low monthly income. This was in agreement with results from another study done on children from Southeast Asian which confirmed that the monthly income of the parents, as well as their career level, has a great effect on the dental care their children receive.^[14]

CONCLUSION:

In our study, child's oral health was significantly correlated with education level and monthly income of the parents. Therefore socioeconomic factors such as parental education level, monthly income and careers must be taken into consideration when giving oral hygiene education to improve child oral care by parents, this in return will contribute in reducing the caries index rate and will improve the oral hygiene in children.

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TABLES:

Table 1 Showed the monthly income of parents

	Income					Total	Chi-Square	P-value
	>5000RS	5000-10,000RS	10,000-20,000RS	20,000-40,000RS	>40,000RS		48.9	0.00031
Non-Educated parents	26(31.3%)	29 (34.9%)	10 (12%)	15 (18%)	3 (3.6%)	83		
Educated parents	10(14.9%)	0 (0%)	11 (16.4%)	31 (46.3%)	15 (22.9%)	67		
Total	36	29	21	46	18	150		

Table 2 Show the dental care and oral hygiene habits of the children

	Children of Educated Parents	Children of Non- Educated Parents	Total	Chi-Square	P-Value
Brushing	48 (71.6%)	40 (48.1%)	88	1.345	0.601
Visiting	42 (62.7%)	29 (34.9%)	71		
Experience	8 (11.9%)	10 (12%)	18		
Total	98	79			

Table 3 Show the percentage of DFM upon children

	Children of Educated Parents	Children of Non- Educated Parents	Total	Chi-Square	p-Value
Decay	64 (95.5%)	78 (93.9%)	142	12.3	0.001
Filling	47 (70.1%)	41 (49.3%)	88		
Missing	40 (59.7%)	75 (90.3%)	115		
Total	151	194			

Table 4:

	Children of Educated parents	Children of Non- Educated Parents	Total
Children received Ortho Tx	1	0	1
Total	1	0	1