Prevalence of preschool caries among 6-year-old school children from different socioeconomic backgrounds in Amman, Jordan

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Abstract

Objective: The objectives of the present study were to describe the dental health status among 6-year-old schoolchildren in Amman, Jordan, and to investigate the association between selected sociodemographic, oral health behaviour and attitude variables and the presence of dental caries.

Methods: A cross-sectional sample of 838 (Male = 436, Female = 402) children were examined in primary schools; the prevalence and severity of dental caries were measured using World Health Organization criteria. A two-stage cluster sampling technique was used. Sociodemographic factors and oral health behaviours and attitudes were assessed by a self-administered questionnaire.

Results: The prevalence of dental caries in the primary dentition was 41.6%. The mean number of decayed, missing and filled teeth (dmft) was 2.59 (SD=2.67). The decayed component (d) constituted 67% of the total number of decayed, missing (19%) and filled teeth (14%). The chi-square association test demonstrated that the variables: mother education and employment, type of dental care, type of school, tooth brushing, presence of dental plaque and family size were statistically significant in relation to the presence or absence of dental caries ($P<0.05$). However, there was no significant difference between caries prevalence of children who attended private and public schools and those who had never been to a dentist. The caries experience was lower in females (dmft=2.51) than in males (dmft=2.68), but the difference was not statistically significant ($P>0.05$). Moreover, there was no significant difference between the number of children who had dental plaque on their teeth and others who did not ($P>0.05$).

Conclusions: The present study showed that dental caries level was higher than that of children in industrialized countries and lower than that in children of the Middle Eastern Arab countries. However, the early caries development seen in children from the lower socio-econo mic classes reinforces the need for preventive programs. Dental caries can be largely prevented or controlled in its early stages of development by simple and relatively cheap methods of personal care, involving attention to general nutrition, diet and oral hygiene. Dental care information and oral hygiene instructions should be given as early as possible to the expectant mothers at prenatal counselling. Access to dental care must be improved to enable any preventive care to be implemented.

Keywords: Dental caries in preschool, Socioeconomic backgrounds.

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Introduction

In spite of the decline in dental caries, observed in the last decades, high disease levels have still been identified in a minority of individuals; the high-caries risk individuals. The early identification of these subjects allows health authorities to plan specific measures for caries prevention and to increase the efficiency of preventive programs. Several studies have been conducted in order to provide information on these high caries-risk individuals. Not only clinical variables, but also socioeconomic and behavioral characteristics have been included in the studies on dental caries-related factors. The relevance of these studies lays in the fact that knowledge of the main risk indicators and risk factors of the disease make possible the identification of individuals who would benefit from preventive measures. Recent published studies have shown that caries experience in the primary dentition are associated with gender, the presence of enamel defects, educational level of mothers, socioeconomic status (1), oral hygiene habits (2), access to oral health services, performance in school, sugar consumption, diet habits and area of residence (3).

Dental caries is a public health problem due to its widespread characteristic, leading to pain, chewing difficulties, speech problems, general health disorders, psychological problems, and lower quality of life (4, 5). The treatment of dental caries in childhood is expensive, sometimes requiring general anaesthesia and hospitalisation. Only a minority of disadvantaged children have access to dental services.

In contrast to the caries decline noted in industrialized countries (6, 7), no tendency towards a decline in the prevalence and severity of dental caries among children has been observed in some developing countries where various caries prevention programs have not been established, and caries prevalence according to the WHO criteria is reported as moderate to high (8,9). Most of these countries are characterized by a lack of community health care education and oral health services, as well as limited use of fluoride -containing dentifrices (10). In developed countries not only has caries prevalence decreased, but its pattern of development has also changed, with occlusal caries becoming more predominant relative to smooth surface caries (6, 7). There are various opinions in the literature on decreasing caries experience by improving oral health behaviors with effective oral health education programs and professional preventive applications (6,11), while the effectiveness of tooth brushing is generally accepted with almost no debate.

In low-income countries, the increase in the prevalence of dental caries has been attributed to factors such as high sugar consumption, a shift to a westernized diet, socioeconomic status, the rate of urbanization and the mother's level of education (12, 13). In Jordan, there is no general fluoridation of drinking water, systemic fluoride application is not common, and dental caries is still the most important children's oral health problem. Even the education programs that should be prevalent could not be put into widespread and regular practice. Fluoride in toothpastes has been the major fluoride intake source for children participating in the study, in addition to natural fluoride in drinking water at levels of 0.2-0.4 ppm.

Dental services in Jordan are mostly provided by private dentists since the government

diverts limited resources to finance dental services. A major emphasis is placed on curative rather than preventive services. At present, there are only a few community orientated oral health promotion and organized preventive programs.

In Jordan, only a few surveys on the oral health of 6 year-old schoolchildren have been carried out so far. Decreasing caries experience levels have been reported in 6-year-olds in the period between 1990 and 2009. The mean dmft was decreased from 3.8 in 1990 (14) to 2.15 in 1993 (15) where incisors caries was not included in this study, to 3 in 1997 (16). The number of children without visible caries increased from 37.5% (15) to 39.4% (16) to 52% (17). The prevalence of dental caries in 6-year-old children in Jordan has been reported to be low compared with many other parts of the Middle East (18-22).

The aim of the present study was to examine the prevalence and severity of caries experience among 6 year-old Jordanian children and to study associations between dental caries and various risk factors i.e. mothers' education, oral health behaviours and attitudes. This information was collected with the purpose of developing oral health promoting initiatives and organized preventive programs in school children.

Materials and Methods

Study sample

The sample was taken from 6-year-old children attending primary schools in Amman, the capital city of Jordan. All those included had lived in the kingdom throughout their lives. A list of all schools in the city was obtained from the Department of Education. The schools were stratified according to funding sources (private or public) and by area of the city (north, south, east and west). Twenty public schools and 15 private schools were chosen for the study.

Sampling was achieved in two stages for primary schools; firstly the names of schools from different areas were written on pieces of papers and mixed thoroughly in separate containers for boys' and girls' schools. The names of boys' schools and girls' schools were chosen in each area by drawing out papers. The second stage was the selection of children from lists of names provided by the school administrators, every fifth name was chosen. Within the age group, subjects were chosen to give approximately equal numbers of males and females.

Questionnaires

Parents of the children were asked to answer the pre-tested and validated questionnaire consisting of structured questions covering oral hygiene, oral health behaviors and socio-demographic variables. The questionnaires were distributed to the parents through the teacher and were accompanied by a letter explaining the purpose of the survey. Parents were asked to complete the questionnaire and return it to the teacher. At the same time, permission was asked to have the child examined by a dentist.

Clinical examination

Oral examinations took place in the school medical room if one was available, or some other suitable room. Parents did not know the exact date of the clinical examination in advance in order to minimize potential bias (e.g. by extra brushing). The examinations were performed by two dentist-examiners (MH & GK). Calibration exercises were carried out at the Department for Paediatric Dentistry (Faculty of Dentistry, University of Jordan) prior to onset of data collection according to

the guidelines published by British Association of the Study of Community Dentistry (16).

The dentists were trained in the use of the examination methodology. The dentist-examiners were assisted by a nurse. The oral cavity of children was examined with the child seated on an ordinary chair. Two plain mirrors were used in a non-touch visual examination technique for every subject; blunt probes (0.4mm) were available as an aid to diagnosis if necessary and for removal of debris. Caries experience (dmft) was recorded using the criteria proposed by the British Association for the Study of Community Dentistry. A tooth was considered decayed (d) if there was visible evidence of cavitations, including untreated dental caries and filled teeth with recurrent caries. The missing component (m) included only those missing teeth believed to have been lost through caries. Conventions adopted for missing teeth were that any missing posterior tooth was considered as extracted due to caries, while a missing incisor tooth was considered as exfoliated unless no successor was obvious and definite caries was apparent in adjacent anterior teeth in which case it was regarded as lost due to caries.

The level of oral hygiene was assessed using the method described by Alaluusua et al. (23). This index records the absence/presence of plaque by visual examination. When necessary, teeth were cleaned and/or dried using cotton rolls after plaque index was recorded. No radiographs were taken.

Statistical analysis

Data was entered using a special computer and transferred to the SPSS Version 11·5 program for analyses. Univariate analyses were performed by use of chi-square statistics, student t-test and a one-way analysis of variance (ANOVAs) (with multiple comparisons) were used to assess the statistical significance of the difference in caries status found between groups. The level of significance for all tests was set at $p< 0.05$.

Results

The number of children examined in the present study was 838 (Male=436, Female=402) subjects out of 877. The response rate was 95.5%, 29 subjects were excluded from the study because parents did not give consent and return the questionnaire back and another 12 subjects were absent the day of the examination. The study was carried out in October 2008. To check intra-examiner agreement duplicate examinations were carried out for 10% of the sample. Kappa statistics for the presence or absence of caries were 0.88 for inter-examiner variability and 0.96 for intra-examiner variability.

Table 1 showed the number of children examined (838) and the number of subjects in each variable (gender, socio-demographic, etc). The percentage of children who brush their teeth less than once a day, daily and more than once a day was 23.3%, 57.3% and 19.4% respectively. Whereas, the clinical examination revealed that visible plaque was present in 51.2% of the 6 year-old schoolchildren.

Caries prevalence among 6-year-old schoolchildren in Amman, expressed as dmft=0 was shown in Table 2. The data indicated that the proportion of caries-free 6-year-old children was 58.4%. The caries free was higher in girls (61.4%) than boys (55.7%), but the differences was not statistically significant (p>0.05). A significant trend of increasing caries experience is associated with the children of working mothers.

Testing of statistical significance by the chi-square test was performed between the dependent variable (dmft) and the independent

Table 1. Proportions (%) and numbers (n) of subjects according to each variable and category

Variables	Category	Number	Percentage
Gender	Male	436	52.0%
	Female	402	47.9%
	Total	**838**	**100%**
Mother education	Primary	159	18.9%
	Secondary	411	49.0%
	Post-secondary	268	32.0%
Working mother	Working	290	34.6%
	House wife	548	65.4%
Type of dental care	Private	329	39.3%
	Public	345	41.2%
	Never been to a dentist	164	19.5%
Type of school	Private	420	50.1%
	Public	418	49.9%
Tooth brushing	Less than once a day	195	23.3%
	Daily	480	57.3%
	More than once a day	163	19.4%
Presence of dental plaque	Present	429	51.2%
	Absence	409	48.8%
Family size	1-3	126	15.0%
	4-6	395	47.1%
	>6	317	37.8%

variables. The percentage of children with or without dental caries (dmft=0 or dmft>0) may be observed in Table 2. The chi-square association test demonstrated that the variables; mother education and employment, type of dental care, type of school, tooth brushing, presence of dental plaque and family size were statistically significant in relation to the presence or absence of dental caries (P<0.05). However, there was no significant difference between caries prevalence of children who attend private or public schools or had never been to a dentist. Moreover, there was no significant difference also between number of children who have dental plaque on their teeth and those who did not (P>0.05).

Table 3 shows that the overall mean dmft score of the surveyed children was 2.59, with 58 percent caries free. Caries experience was lower in females (dmft=2.51) than in males

Table 2. Chi-square and p-value for socio-economic variables and risk factors in 6 year-olds according to dmft=0 and dmft>0.

Variables	**Category**	**No.dmft=0**	**Percentage**	**X**	***P*-value**
Gender	Male	243	55.7%	4.42	0.127
	Female	247	61.4%		
	Total	**490**	**58.4%**		
Mother education	Secondary	109	68.5%		
	Post-secondary	290	70.7%	8.52	0.036*
	Primary	111	41.4%		
Working mother	House wife	219	75.5%	8.00	0.048*
	Working	291	53.1%		
Type of dental care	Private	181	55.0%		
	Public	225	68.1%	4.86	0.093
	Never been to a dentist	105	64.0%		
Type of school	Private	195	46.4%	9.94	0.025*
	Public	315	75.4%		
Tooth brushing	Less than once a day	86	44.1%		
	Daily	280	58.3%	6.78	0.048*
	More than once a day	112	68.7%		
Presence of dental plaque	Present	247	57.6%	1.09	0.764
	Absence	263	64.3%		
Family size	1-3	055	43.6%		
	4-6	225	56.9%	7.64	0.037*
	>6	230	72.6%		

*=Significant (p>0.05), **=Highly significant (p>0.01)

(dmft=2.68), but the difference was not statistically significant (P>0.05). There were few missing and filled teeth and, therefore, the overall dmft scores represent the decayed component mainly. Sixty seven percent of the dmft score was contributed by decayed teeth, 18.9 percent by extracted teeth because of caries, and 13.9 percent were caused by filled teeth.

Dental caries experience was also associated with oral health practices (Table 3). When parents brushed their children's teeth, children had lower mean dmft score than those who did not have their teeth brushed (P<0.001).

Children who had regular dental visits had experienced less dental caries than children who had never visited a dentist, while children who had visited dentists irregularly had the highest mean dmft score (P<.05). The dental situation of the surveyed children was found to be linked with their socio-economic background and parents' education. Children whose mothers had attained a higher education level also had a lower dmft scores (P<0.05). Similarly, increased number of children living in the household showed a higher caries experience (P<0.001).

Table 3. Analysis of mean experience (dmft) in 6 year-olds in relation to socio-economic and risk factors using student t-test and ANOVA

Variables	**Category**	**dt**	**mt**	**ft**	**Dmft**	**SD**	**f**	***p*-value**
Gender	Male	1.87	0.48	0.35	2.68	2.07	0.96	0.33 NS
	Female	1.61	0.51	0.39	2.51	2.35		
	Total	**1.74**	**0.49**	**0.35**	**2.59**	**2.67**		
Mother's education	Primary	2.20	0.68	0.23	3.11	3.69		
	Secondary	2.14	0.48	0.33	2.92	3.21	3.20	0.04 *
	Post-secondary	1.47	0.42	0.51	2.40	2.85		
Working mother	Working	2.41	0.56	0.25	3.22	3.33	2.80	0.06 NS
	House wife	1.75	0.31	0.48	2.54	2.71		
Type of dental care	Private	1.20	0.52	0.61	2.33	2.20		
	Public	2.05	0.45	0.33	2.83	2.42	3.10	0.05 *
	Never been to a dentist	3.29	0.00	0.00	3.29	2.06		
		0.75	0.21	0.43	1.39	2.61	2.93	0.05*
Type of school	Private	0.85	0.72	0.26	2.83	3.51		
	Public							
		2.50	0.62	0.19	3.31	3.42		
Tooth brushing	Less than once a day	1.80	0.51	0.33	2.64	2.65	5.83	0.01**
	Daily	1.35	0.31	0.67	2.33	2.64		
	More than once a day							
		2.65	0.50	0.25	3.40	2.38	3.05	0.05*
Presence of dental plaque	Present	1.92	0.25	0.31	2.58	2.61		
	Absence							
		1.45	0.34	0.55	2.34	2.42		
Family size	1-3	1.71	0.51	0.44	2.66	3.21	4.60	0.01 **
	4-6	2.41	0.52	0.46	3.39	4.04		
	>6							

Discussion

The aim of the present study was to record young children's oral health in Amman, Jordan. Data presented in this report originated from four distinct geographical areas in Amman and cannot be regarded as representative for children of that age for the whole of country. Participation levels obtained in this survey, both for questionnaire data and for clinical observations, were high and can be regarded as sufficient to allow valid conclusions.

Results of the present study showed that 42% of 6 year-old schoolchildren suffered from dental caries, and the dmft was 2.59, mostly untreated disease (67%). Earlier work showed that 63% of children from this age group presented with caries and the dmft was 2.15, where caries in primary incisors was not included in that study (15). Moreover, In another earlier study among 6-year-olds in 1997, data were collected at a country level, but using a comparable methodology, at that time, 75% of the children were presented with dental caries in Amman and the dmft was 2.99 (16). A study among 5-year-old children in Amman demonstrated that 48% of the children suffered from early childhood caries and dmft was 3.22 (17). Although comparison should be performed with caution, it appears that a marked decline in caries prevalence has taken place in Jordan.

The caries rate observed in this study was too low, when compared with what has been reported from the Arab neighboring countries; in Saudi Arabia(18-20), where the caries prevalence was 64.8% and the dmft was 6.1 in similar age groups, another study reported 96% the prevalence of caries and the dmft 8.06. In Kuwait, Al-mutawa (21) showed that 85% of children had caries and the dmft was 4.6 which is higher than the present study among the same age group. The dmft is also lower than caries rates observed among 5-year-old Syrian children (dmft =4.5-5.2) (22). Great care should be exercised, however, when comparing the present findings with those of previous studies from Saudi Arabia and other neighboring countries. The age groups considered are not identical and the diagnostic criteria for caries varied among the different studies. This implies that it is difficult to get a clear picture of the caries situation among school children across time and different countries in the Middle East.

The mean dmft in our study population was 2.59. The decayed teeth (d=1.74) and extracted teeth (m=0.49) contributed more than filled teeth (f=0.35). This indicates a high rate of tooth decay and small number attending for dental treatment. The false notion about deciduous teeth exacerbates the situation. Many parents believe that decay and extraction of deciduous teeth is of no importance and permanent teeth will replace the lost teeth when necessary. The decayed component contributed the most to the dmft indicating an unmet need for treatment. The d component of 67% suggested poor coverage of oral health services in Amman. The filled component of our dmft calculation was very low (16%). This is in agreement with previous findings among Jordanian children (15, 16).

Oral health services in Jordan are available to school children through governmental services via hospitals, primary health care centers and the oral school health programme. The provision of dental services is mostly through private clinics service despite the health insurance system provided, thus becoming a burden for some of the population. Jordan has one dentist for every 1800 individuals as of the year 2007, mostly concentrated in major cities, depriving many from professional treatment. From the results of this study, the need for

treatment is emphasized and a suggestion to launch oral health prevention programs is advocated.

Results of this study show that 58% of the examined children were caries free. A similar condition has been observed in other developing countries (24-26).

The WHO target for oral health by the year 2010 (27), which proposes that 90% of 5-year-olds should be caries free is still far from being achieved in the present survey. This is partly due to the lack of an organized preventive oral healthcare system, limited accessibility to preventive and treatment services, and insufficient scientific knowledge or the inability of practitioners to provide care for young children in Jordan. These findings indicate the need for early identification of this high-risk group and clearly demonstrate the requirement for launching professionally applied approaches in this community to reduce childhood caries.

Educational programmes intended to prevent caries in deciduous teeth should begin in the first year of life, before this condition becomes too advanced to prevent and difficult as well as expensive to treat. In the early stages of development, dental caries can be largely prevented or controlled by simple and relatively cheap methods of personal care, involving attention to general nutrition and oral hygiene (17, 28).

Caries experience is often associated with gender. Girls are less likely to experience oral disease by the age of 6 years than boys (29). In this study, boys exhibited higher caries (dmft) compared with girls of similar age. The reason for the increased caries experience in boys is unclear, although it has been claimed that male children who have the same genotype of mutans streptococci as their mother have up to 13 times greater risk of caries development than female children that acquire the same strain of bacteria from their mother (30). Further research of gender specific biological mechanisms of dental caries initiation is required to identify causal relationships and explain gender differences in this area. Other studies reported different results, with caries higher in girls. A possible explanation for this finding remains highly speculative. Earlier emergence of primary teeth in girls than in boys would result in longer exposure times of teeth to the oral environment and this could explain also more advanced disease levels when caries is present. However, this hypothesis needs confirmation.

A significantly higher caries prevalence and mean dmft were observed in children whose mothers presented the lowest level of education. Social inequalities in dental caries reduction may be related to distinct dental health factors, such as low level of mother's education, frequency of tooth brushing, and access to dental care. Low level of education of mothers was found to be a caries predictor, a finding that is in line with other researchers (31, 32). The schoolchildren whose mothers presented up to 8 years of schooling exhibited higher levels of caries. On the other hand, more than 80% of children whose mothers had higher education level at baseline (> 8 years of schooling) did not develop caries. Mothers with insufficient understanding of oral health and caries prevention cannot adequately advise their children on, for instance, adequate tooth brushing and rational intake of sugars.

The independent effect of this variable is consistent with other studies (17, 33) and confirms that maternal level of education is a good predictor of dental caries in children; with children of mothers with low levels of education being more vulnerable to dental caries.

The role of socioeconomic conditions on health outcomes is still poorly understood. It is possible that mothers completing higher levels of education are more responsible regarding health, more likely to maintain good dietary and hygiene behaviours, and are likely to have more positive health attitudes (28). Moreover, the widespread belief that primary teeth are temporary and not as important as permanent teeth is likely to be higher among mothers with low levels of education (34). The recognition that maternal education is a strong determinant of childhood caries confirms that oral health cannot be achieved without educational policies in developing countries (28). Such programs may have an impact on the health of infants and preschoolers, including dental caries. This comprehensive understanding of childhood caries, which consider the factors associated with its development, appears to be the key for developing community-based and professional preventive approaches to provide oral health education.

With regard to the variables of access to dental care, the results demonstrated that subjects who have never been or do not regularly go to the dentist presented lower dmft values. It has been reported that greater access to general dental care does not seem to be directly related to better oral health conditions (35). Nevertheless, subjects often look for dental care following the occurrence of problems, indicating the lack of preventive awareness of the population. In this study, school children who had previous experience with dental visits showed better oral health than their counterparts with no dental visits, unlike other studies in developing countries (35, 36).

The higher caries prevalence observed among children from public schools in Amman and among those who have mothers with a lower level of education is consistent with findings from industrialised as well as non-industrialised countries (25). Even though results in the literature are controversial, some authors have observed high levels of dental caries in students from public schools (37), which was also observed in the present study.

Unfortunately, only 57% of children brushed regularly which has led to a high rate of dental caries among them. A greater mean dmft in poor families was obviously associated with less awareness of the importance of hygiene and failure to seek dental care in a well-timed manner.

Results of this study show that a considerable proportion of school children(23%) do not brush their teeth on a daily basis. This is in agreement with earlier findings with respect to oral hygiene habits of Jordanian children (19). . It is a known finding that children from less educated mothers brush their teeth less frequently than do children with more educated mothers (38). We also found that non-privileged children brushed their teeth less often than privileged children, and this difference was statistically significant (P = <0.01).

When looking at determinants for caries experience, analysis at the age of 6 years indicate that caries experience is significantly associated with visible dental plaque accumulation. This underlines the importance of efficient plaque control. The fact that plaque is a significant factor in the severity of caries experienced in 6-year-olds, confirms the need for more efficient oral health education for children and their parents.

In the present study, 85% of children were from large families with more than four members. These findings tend to agree with Silver and Muller's conclusion that a crowded home seems to favor the development dental caries. The mother, unequal to the task of

coping adequately with an overlarge household, has no time to pay more attention to the dental care of her children. Therefore, she resorts to refined sugar and sweets to calm the children and to give them pleasure.

In agreement with the finding of previous studies (39), the number of children in the household was related to caries experience. A significant greater risk to caries was found when two or more children lived in a household. Resources within larger families appeared to be scantier with limited capacity to comply with professional recommendations.

Conclusions

The study attempted to associate socio-economic and socio-behavioral variables to the prevalence and severity of dental caries, but had some limitations. It was a cross-sectional study, and therefore the exposure and status of the disease were observed at a single moment; longitudinal investigations would be important to elucidate further aspects. Another limitation is that the information obtained using questionnaires is often distorted because of motives of social desirability leading to information bias. Structured questionnaires might have had limitations whereby students and their mothers may tend to report socially desirable answers such as frequent tooth brushing and mother's educational level.

The results of this investigation suggest that,

- Caries prevalence is high among Jordanian schoolchildren, indicating the need for improvement in the public oral health system, including accessibility to preventive and treatment services for young children.
- Mothers with low levels of education may require special attention because their children are at greater risk of caries and would benefit most from preventive efforts.
- Reducing childhood caries also requires addressing socio-economic factors such as general education to promote healthy parental behaviours and attitudes which may have an impact on the general and oral health of their children.

In conclusion, the present study showed that dental caries level was higher than that of children in industrialized countries and lower than that of children in the Middle Eastern Arab countries. However, the early caries development seen in children from the lower socio-economic classes reinforces the need for preventive programs before eruption of teeth. Dental caries can be largely prevented or controlled in its early stages of development by simple and relatively cheap methods of personal care, involving attention to general nutrition, diet and oral hygiene. Dental care information and oral hygiene instructions should be given as early as possible to the expectant mother at prenatal counselling. Access to dental care must be improved to enable any preventive care to be implemented.

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دراسة لمدى انتشار نخر الأسنان لدى الأطفال من عمر ست سنوات ومن بيئات اجتماعية ديموغرافية مختلفة في عمان، الأردن

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الملخص

الهدف: هدفت الدراسة إلى تعرف واقع الصحة السنية للأطفال من عمر ست سنوات في عمان، الأردن. كما هدفت الدراسة إلى بحث العلاقة بين وجود نخر الأسنان والواقع الاجتماعي الديموغرافي والسلوك الصحي لدى الأطفال.

الطريقة: أخذت عينة مستعرضة من 838 طفلاً (ذكور =436، إناث =402) في المدارس الابتدائية. استخدمت طريقة أخذ العينات العنقودية على مرحلتين. تم فحص مدى انتشار و حدة نخر الأسنان لدى الأطفال باستخدام معايير منظمة الصحة العالمية. تم تقييم العوامل الاجتماعية الديموغرافية وواقع السلوك الصحي للأطفال باستخدام استبانة.

النتائج: مدى انتشار النخر في الأسنان اللبنية كان 41.6%. معدل عدد الأسنان المنخورة والمفقودة والمعالجة كان 2.59 (SD=2.67). كانت نسبة الأسنان المنخورة 67% من مجموع الأسنان المنخورة والمفقودة (19%) والمعالجة (14%). كانت هناك علاقات إحصائية مهمة ($P<0.05$) بين وجود نخر الأسنان وبين عوامل عدة، هي: مستوى تعلم الأم، عمل الأم، نوع الرعاية السنية، طبيعة المدرسة، تفريش الأسنان، وجود اللويحة السنية، وحجم العائلة.

الاستنتاجات: كان مستوى نخر الأسنان أعلى من المستوى لدى الأطفال من الدول الصناعية المتقدمة وأدنى من المستوى لدى الأطفال من الدول العربية في الشرق الأوسط. البداية المبكرة لنخر الأسنان لدى الأطفال من الطبقات الاجتماعية الديموغرافية الدنيا يؤكد الحاجة إلى البرامج الوقائية؛ حيث إن نخر الأسنان يمكن منعه أو التحكم به في المراحل الأولية بطرق بسيطة وغير مكلفة نسبيا للعناية الشخصية، مثل: الاهتمام بالتغذية، وحفظ صحة الفم. يوصي بإعطاء التعليمات للأمهات الحوامل تحضيرا للعناية بأسنان الأطفال. يجب تسهيل الوصول إلى الرعاية السنية لتطبيق البرامج الوقائية لدى الأطفال.

الكلمات الدالة: نخر الأسنان لدى الأطفال، بينات اجتماعية ديموغرافية، السلوك الصحي لدى الأطفال.