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# Socio-Economic Statues and Oral Health Behaviours in a Sample of Iranian Students

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**Abstract**

**Aim**: Oral health is one of the most important parts of public health which significantly affects on quality of life. The purpose of this study is to assess the socio-economic statues as well as oral health behaviors among a sample of Iranian students studying in elementary level.

**Methods**: This was a cross-sectional study which was conducted from April 2012 to November 2012. Data obtained from a face-to-face interviews with students studying in elementary schools of Chahbahar, Iran. Considering inclusion criteria, 300 eligible students were selected through a two - stage random cluster sampling. Data were analyzed through descriptive statistics using SPSS version 11.5.

**Finding:** Totally 300 students who studying in grade four or five of elementary schools took part in the study. The mean age of subjects was (11± 2.81). Of all students, 11/7% (n = 35) never brush their teeth, 18% (n=54) never floss and 20% (n= 62) never used mouth wash. Furthermore, 94 students (31%) of students had no dental visits regularly. As the results showed, there were significant relationship between lower parents' educational level (P=0.02), not to access to dental caries services (P=0.04) and lower income (P=0.03) and reasons for not doing oral health behaviour.

**Conclusion:** According the results of this study the students who were in lower socio economic levels, doing less dental healthy behaviors.

**Key words:** Oral healthy behavior, Socio-economic, Elementary students, Cross sectional study, Iran

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**Introduction**

Oral health plays an important role in the overall health of the body and the quality of life of individuals [1-3]. Previous studies showed that a large number of school-aged students in developing countries are suffering from tooth decay and have limited access to oral health care services [4, 5]. Crowdly and co-workers found that the increased hours of absence from the school is due to oral health problems [5].

Despite attempts to improve this health problem in children, the evidences show that the mean DMFT (Decayed, Missing, Filled Tooth) has been increased due to poor oral health as well as lack of regularly visits, tooth and tongue brushing, and daily flossing [6]. The studies conducted between 1990 to 2010 show the rate of DMFT among students has been increased from less than 2 teeth to more than 4 teeth [7, 8]. According to the WHO (World Health Organization) reports, the mean DMFT index for 12 - year old children in America, Europe, Africa and the Eastern Mediterranean Region are 2.8, 2.6, 1.3 and 1.7 respectively [9].

It has been argued that the effective techniques for preventing dental decay and periodontal diseases include oral health self-care such as using dental floss and brushing as well as fluoride therapy [10]. The existed evidences recommend more health promotion programs to reduce dental decays and periodontal diseases [11].

The studies revealed that the regular use of the tooth brush and oral health self-care behavior could reduce the tooth plaque [12, 13] and prevent from periodontal disease [14, 15]. However, studies show that usage of these preventive techniques are still limited [16, 17].

It has been reported that %18 to %80 of the adolescents living in Europe and North America, %20 of Nigeria and %30 to %60 of Eastern Mediterranean Region brush their teeth [18, 19]. In south of Iran a significant proportion of adolescents are having poor oral hygiene and the DMFT rate in this region is 1.9 [20]. Moreover, it has been reported that 0.48% of Iranian adolescents brush their teeth irregularly and only 7.5% of this high risk group use inter dental cleaning tools [21]. Previous researches revealed that level of socioeconomic status could be related to oral health behaviors [22, 23]. Freddo and co workers verified that lower socio-economic status was associated with less daily flossing, less brushing and dental visits [24]. With this regard, health promotion programs especially for students with low socio economic status recommended by the researchers [25]. It has been argued that high socio - economic statues could cause better quality of life of families that subsequently

could resulted in better understanding of oral healthy behaviors [26, 27]. As there are limited studies to investigate the association between socio-economic statues and oral health behavior in elementary students studying in Chahbahar city located in south of Iran. Therefore, this study aimed to assess relation between socio-economic statues of the students and oral health behaviors in a sample of students studying in elementary level of Chahbahar schools. However, the results of this study may draw the attention to public health decision makers, ministry of health and other stakeholders to improve policies and programs.

**Materials and Methods**

This cross-sectional study was conducted in Chahbahar , Iran from April 2012 to November 2012. The target group of the study was the students who studying in grade four or five of elementary schools with age range of 10 to 12 years old. Chahbahar is located in south of Iran. As usual, people living in southern provinces of Iran are in low to moderate level of socio economic status [28] and they suffering from lack of accessing to fluoridate water as well as inefficient / insufficient nutrition [29]. In city of Chabahr, from all female elementary schools 3 schools were selected by simple random sampling. Of each school of the selected schools, all eligible students of grade 4 grade 5 classes who were satisfied to enter into the study were selected. Therefore 300 elementary female students of total 1904 students of Chahbahar took part in the study by a two-stage random cluster sampling. The procedure of sample size calculation was according to previous study [30].

Inclusion criteria of the study were being aged between 10 and 12 years, being fluent in understanding and speaking Farsi language and willing to participate in this study. However, the students excluded from the study if their parents did not sign the consent form. At the first, the first author explained the aims and methods of the study for students and their parents and if they were pleased to participate in the study, the consent forms were signed by them. A researcher- made questionnaire including three sections was used in the study. The first section was regarding demographic characteristics, second part was about students' oral health behaviours and the third section was about the sources of students' information regarding oral self - care. The demographic characteristics included questions about age, gender, birth order, family size, parent's education level, parents' job and living area of the students. The second section included of questions regarding the behaviors of brushing, flossing, using mouth wash and regularly dentist visit. The final section includes some

questions about the source of the information about the oral health behaviours and oral self - care. Validity of descriptive researcher-made questionnaire was approved by 10 specialists. To test reliability, internal consistency was assessed using Cronbach's alpha coefficient. An alpha equal to or greater than 0.70 was considered acceptable. The alpha coefficient for this questionnaire was as 0.80. Data were gathered through face to face interviews and analyzed through descriptive statistics and $X^2$ correlation test using version 11.5 of SPSS program

The study was approved by the ethics committee of Tarbiat Modares University. The subjects were informed about the aim and procedure of the study and the informed consent forms were signed by the students' parents.

## Results

Totally, 300 female students aged between 10 and 12 took part in the study. The mean age of subjects was 11± 2.81. The demographic variales of the study population was shown in table 1. Of all students, 11/7% (n = 35) of students never brush their teeth, 18% (n=54) never floss. 20% (n= 62) never used mouthwash. It was observed 31% of students (n= 94) had no dental visits regularly. The student's reasons for not doing oral health behaviour was shown in table 2. The students had received information about oral health and self-care behaviours through sources such as physician (29.3%), health instructor (32%), health care providers (9%), parents (7.3%), radio and television (0.7%), newspapers (3.7%) and school teachers (8%). The result of $\chi^2$ test showed that significant relationship was between socio-economic statues (income) and doing oral health behaviour (p=0.04). There was statistically significant relationship between parents' education level and oral health behaviors (p=0.02).

**Table 1** Demographic characteristics of the studied students (n=300)

| Variable | Number | Percent |
|---|---|---|
| **Age** | | |
| 10 years old | 139 | 46/3 |
| 11years old | 161 | 53/7 |
| **birth orders** | | |
| First | 60 | 20 |
| Second | 70 | 23/3 |
| Third | 59 | 19/7 |
| Fourth / Fifth | 61 | 20/3 |
| Sixth and more | 50 | 16/4 |
| **Number of family member** | | |
| 3 or less individual | 50 | 16/7 |
| 4 individuals | 43 | 14/3 |
| 5 individuals | 51 | 17 |
| 6 individuals | 44 | 14/7 |
| 7 individuals | 33 | 11 |
| 8 individuals | 36 | 12 |
| 9 or more individuals | 43 | 14/3 |
| **Level of fathers' education** | | |
| Illiterate | 64 | 21/3 |
| Primary | 78 | 26 |
| Guidance | 60 | 20 |
| Diploma and above | 98 | 32/6 |
| **Level of mothers education** | | |
| Illiterate | 131 | 43/7 |
| Primary | 95 | 31/7 |
| Guidance | 39 | 13 |
| Diploma and above | 35 | 11/6 |
| **Fathers' job** | | |
| Unemployed | 75 | 25 |
| Worker | 59 | 19/7 |
| Employee | 77 | 25/7 |
| Free | 89 | 29/7 |
| **Mothers' Job** | | |
| Housewives | 229 | 76/3 |
| Non Housewives | 71 | 23/7 |

**Table 2** Student's reasons for not doing oral health behaviors (n = 300)

| **Not brushing the teeth (n=35 ,11/7% )** | **N** | **%** |
|---|---|---|
| I have no brush | 2 | 6 |
| I don't like brushing | 7 | 20 |
| It is not necessary to brush my teeth | 26 | 74 |
| **Not flossing teeth (n=54, 18%)** | | |
| I have no dental floss | 43 | 79.6 |
| I do not like flossing my inter dental | 3 | 5.6 |
| I don't know how to floss | 5 | 9.2 |
| Brushing is enough | 3 | 5.6 |
| **Not using mouthwash (n=62, 20%)** | | |
| I have no mouthwash | 49 | 79 |
| I don't like to use mouthwash | 4 | 6.5 |
| Mouthwash tastes bitter | 5 | 8 |
| Brushing is enough | 4 | 6.5 |
| **Not visiting the dentist regularly (n=94, 31%)** | | |
| I have no enough money | 82 | 87.2 |
| My parents do not have time to take me to the dentist | 6 | 6.4 |
| I have no time to visit the dentist | 6 | 6.4 |

## Discussion

This descriptive study was done to assess the relationship between socio-economic statues and oral health behaviors in Iranian school children in Chabahar, Iran.

The result of this study illustrated that there were significant relationships between socio-economic statues and doing oral health behavior. According to our findings lower socioeconomic status was associated with a lower frequency of daily flossing, fewer annual dental visits and a lower prevalence of dental treatment visits. In line of this finding, Peer Freddo showed that lower socioeconomic status was associated with a lower frequency of daily flossing, fewer annual dental visits and a lower prevalence of dental treatment visits. Also, healthy lifestyle was associated with better oral hygiene habits and more frequent dental visits [24]. Since oral health behaviours can affect the oral health, attempting to construct good oral health behaviours can cause the general health of individuals [31].

Par yab [32] Neamatollahi [33] Amanlou [34] and McDonald [35] found that the student's oral health status with the lower socioeconomic status were worse than the others which were in higher status.

In consistent with present study, the other research showed that parents with higher education and better job have better performance in the field of oral health. Educated mothers usually gain more knowledge, because they have more communication with the community [28]. Hereby, it could be discussed that due to impact of socio - economic factors on the oral health behavior disparities, designing and implanting appropriate interventions and services to the disadvantaged students should

be considered.

The results of this study showed that students had not regular health behaviors to prevent dental decay. According to a study by Yazdani, oral cleanliness and tooth brushing among 15-years old adolescents in Iran were at poor levels. Therefore, intensive attempts need to enhance rates of twice-daily tooth brushing and to improve its' quality [36]. Pakpoor and co- workers reported that not being believed in benefits of oral health behavior to prevent tooth decay was the most important reason for not doing healthy behavior. However, the economic problem was the second reason. Previous researches revealed a significant relation between high DMFT scores and such variables as increasing age, male gender, lower levels of parental education, family income , lower frequency of tooth brushing , less dental flossing, and no dentist visits [2, 37, 38].

The results of present study revealed a strong positive association between income and job statues with doing oral health behaviours.

The other study reported that maternal education and occupation, could provide insights for improving their children's health habits [39]. The main sources of the oral health information for the studied sample were the physicians, school teachers and health care providers as well. In previous research has been conducted in Iran, it has been revealed that the most important sources of the oral health information were dentists and the parents [40]. Loignon and co workers reported that direct and face to face communication with patient will cause more beneficial effects on behavior change [41] and it may develop motivation and appropriate decision-making for doing oral health behaviors [42]. Humphreys and co workers stated that Counseling skills and educational techniques must be considered in designing educational program to prevent dental caries [43]. However the present study approved the hypothesis of the study regarding the relation between socio economic statues and oral healthy behavior.

**Limitation**

Despite this study has its' own strength to highlight the relationships between socio demographic statues and oral health behavior, there are some limitations that might influence on the results. Firstly, in this study the student's or their parents' self-efficacy and other variables related to oral health behaviour such as their attitudes were not investigated. However these factors might influence the oral health behaviour and subjective perception of the school- aged children. Therefore, longitudinal studies are necessary to assess the association between these influencing variables.

Although this study has its' own strength points, being self report data collection especially by students who were not in range of illegal age was the other important limitation in this project. Thus, this might affect the results reported in this study.

**Conclusions**

This study showed doing oral health behaviors seemed to be related to family's socio - economic factors. Lower parents' educational level and poor oral hygiene services were probably associated factors for children dental problem.

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**Conflict of Interest**

This study has not any Conflict of Interest.

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