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Self-Perception of dental problems among intermediate school children in Abha, KSA

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Abstract

Background and objective: Oral health is one of the essential elements of the overall health status of the people. Dental hygiene and dental diseases concern to have a major public health problem. The aim of this study was to know the proportion self-perception of dental problems and their relation with the socio-demographic characteristics among female students at intermediate governmental schools in Abha.

Methods: A cross-sectional study was conducted among girls students of two intermediate government schools of Abha city during October 2016 to April 2017 academic year by using self-administered questionnaire and informed verbal consent was obtained, using simple random sampling techniques for choosing 400 students.

Results: Mean age of the students was 12.30±1.82, 163(41%) of students were 12-13 years of age and 200(50%) from 1st year of intermediate scholastic year. Almost all students belong to nuclear family system and 64%lived in rented houses. Working status of father and mothers was 94% and 53% respectively, 88% family's monthly income >10000 SAR/per month, 203 (51%) fathers and 171 (43%) mothers had secondary school or higher education. Illiteracy was 13% among fathers and 19% among mothers. The proportion of self-perceived dental problems was 43% among students, malocclusion of teeth was most frequent while bad smell was the least frequent complaints among all dental problems. Only 38% of the students were considering dental problem as a serious problem. Dental problems were found to have significantly (*P* value <0.001) associated with age, scholastic year, father's education and occupation, and income.

Conclusion: It is concluded that although prevalence of dental problems were higher but frequency of self-perceived problems were much lower which highlighted that there is need to increase the awareness of dental problems among population to have a better general health status.

Keywords: Dental problems; Oral health and self-perceived.

Introduction

Oral health is one of the essential elements of the overall health status of the people. Dental hygiene and dental diseases concerns to have a major public health problem hence dental problems are one of the major part of oral health to be taken care of.[1]

Saudi Arabia is one of the well developed country and belongs to high socioeconomic group of Eastern Mediterranean region (EMRO) of World Health Organization (WHO), it is one of the country in the region where prevalence of dental problems is very high and has a history of poor oral health for being ages despite of having high standard of living.[2] According to WHO worldwide prevalence

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of dental problems is 60-90% among all school age group children.[3]

Despite of having free dental checkups dental problems is so much and people are reluctant to visit doctors to seek medical advices. Whereas being less educated is found to be a factor of dental problems.[4] Common dental problems are halitosis (22%),[5] carries (83%),[6] dental pain (34.5%),[7] teeth sensitivity (12.3%)[8] and malocclusion traits of teeth (78%).[9]

Many studies have been found to know the knowledge, attitude and practices of people regarding oral health and oral problems. Many researchers are being putting a lot of efforts to find the factors related to dental problems. In this regards, many measures have been taken by the government to cure the burden of problems including provision of free services for dental care, still problem is keep on rising.[10]

Age, gender, social class and clinical status may play an important role in understanding how an individual perceives his/her oral health status.[11] This study aims to explore the self-perceived dental problems among female intermediate school children because this age group is explored very less yet regarding dental problems. The student's age group were 10 to 14 years who enrolled in the intermediate schools in Saudi Arabia. This age group is the transformative period for risk behaviors, physical and psychosocial development also known as early adolescent, this may affect long term health of the children and their quality of life.[12] This is the age group where parents used to shift their responsibilities on the kids or wants to trained them for taking care of their self-care responsibilities, therefore we select this age group to see how much they can perceive about their dental problems and what are the factors contributing to their problem.

Methods

Abha is a city in Aseer Province of Saudi Arabia on the slopes of the Sarawat Mountains (Al-Sarawat Mountains). In Abha city there are 22 female governmental intermediate school and 5232 students. Following a simple random sampling technique, the following governmental female intermediate schools in Abha city were selected:

Al- Thamina Ashar school in Al-mansak, (out of 320 total students, 280 forms were filled).

Al-Thamina school in Alwardatain (out of 235 total students, 121 forms were filled).

A cross-sectional study was conducted and data collected over a period of six months from October 2016 to April 2017. Female students of two government intermediate schools (levels 1, 2 and 3) who agree to participate in the study after obtaining verbal consent from them. Whereas girls from primary or secondary schools and those who refuse to participate in the study were excluded.

Sample size and Sampling:

In the current study, the Raosoft online sample size calculator was used. The sample size was calculated on the assumption of the total population of female governmental intermediate school students which was 5232, the expected prevalence of oral healthy behavior among them is 50%, 95% confidence interval and 5% acceptable errors, the sample was 384, this sample was increased to 400 to compensated for non-response.

Two schools were chosen among the 22 schools by simple random sampling technique, and then from the two selected schools: all 1st, 2nd and 3rd level students were recruited to participate in the study..

Data collection:

The data was collected through self-administered questionnaire distributed by principle investigator to the target population by directly contact with students. Care was taken not to disturb students' classes.

The researcher rendered herself available to participated students to clarify any issue related to their questions. The questionnaires were collected on the same day. Which was consisted of

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socio-demographic characteristics (e.g., age, scholastic year, parental education and occupation, type of housing and monthly income), self-perceived presence of dental problems, frequency of some common dental problems, family history of dental problems and the believe of seriousness of dental problems.

Moreover, the study questionnaire was modified according to the findings of the pilot study, in which 30 samples were taken and analyzed but not included in the study.

Data entry and Statistical analysis

Collected data were verified by hand then coded before computerized data entry. The Statistical Package for Social Sciences (SPSS version 20) was used for data entry obtained prior to conduct this research. and analysis. Descriptive statistics (e.g., frequency, percentage) were calculated. Statistical significance of differences between groups was assessed by using chi-square (χ^2) test. *P* values <0.05 were considered as statistically significant.

Ethical considerations:

Permission from the Joint Program of Family Medicine of Aseer Region was obtained prior to conduct this research.

Results

Frequency of self-perceived dental problem found was 170 (43%) out of 400 intermediate school girls. (Figure 1)

Table 1 illustrated the socio-demographic distribution of the participants. Mean age±SD of the participants was12.30±1.82. Majority of the students were of 12-13 years of age 163(41%) from 1st year 200 (50%) of intermediate scholastic year. Almost all students belong to nuclear family system and majority lived in rented house (64%). Monthly income of the family was more than 10000 SAR among 88% while 94% of fathers were employed and 53% of mothers were also working whereas 203 (51%) of fathers were having secondary school or higher education nearly same as mothers 171 (43%).

Illiteracy was found 13% among fathers and 19% among mothers. Almost half of the participant's family members were having some dental problem. Whereas only 38% of the students were considering that dental problem is a serious problem. Preferable to put this result/table first.

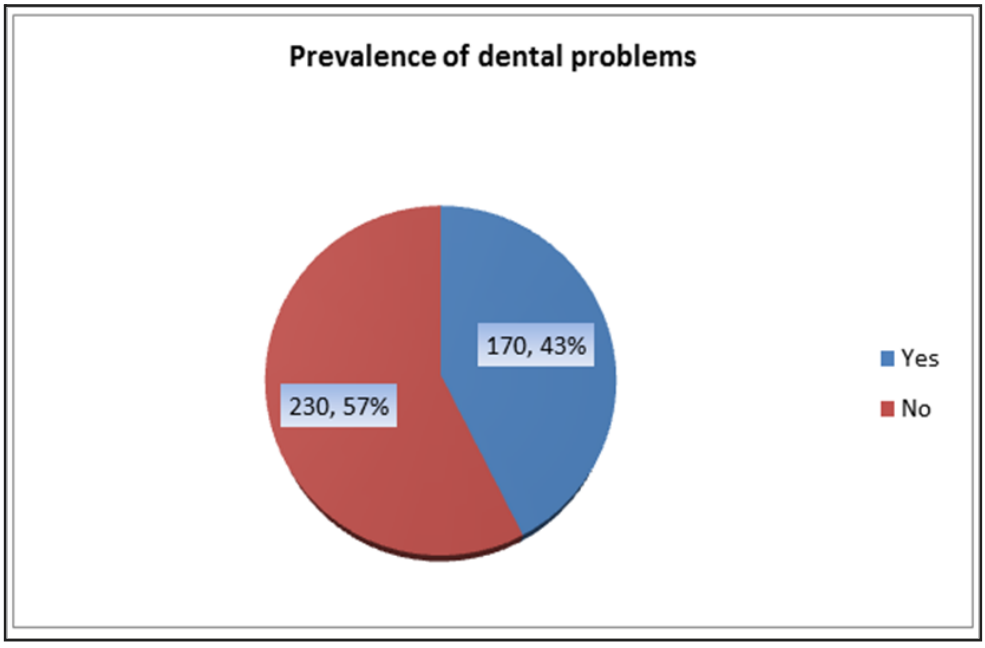

Figure 1: Prevalence of self-perceived dental problems among participants n=400

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Table 1 Basic characteristics of participants n=400

	Frequency	Percentage %
Age		
10-11	143	(35.8)
12-13	163	(40.8)
14 and above	94	(23.5)
School years		
1st year	200	(50.0)
2nd year	61	(15.3)
3rd year	139	(34.8)
Housing type		
Own house	145	(36.3)
Rented house	255	(63.8)
Family system		
Nuclear	382	(95.5)
Extended	18	(0.5)
Family income in Riyals		
Up to 10000	49	(12.3)
10000	351	(87.8)
Father's education		
Illiterate	52	(13.0)
Primary and intermediate	145	(36.3)
Secondary and higher	203	(50.8)
Mother's education		
Illiterate	78	(19.5)
Primary and intermediate	151	(37.8)
Secondary and higher	171	(42.8)
Father's occupation		
Employee	377	(94.3)
Unemployee	23	(5.8)
Mother's occupation		
Employee	211	(52.8)
Unemployed	189	(47.3)
Presence of dental problem		
Yes	170	(42.5)
No	230	(57.5)
Family history of dental problem		
Yes	198	(48.5)
No	202	(50.5)
Personal believe that dental problem is a serious problem		
Yes	152	(38.0)
No	248	(62.0)

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Table 2 demonstrated frequency of dental problems among students who reported some sort of dental problems. Mal occlusion of teeth was the most frequent complaint (76%) whereas bad smell was the least (25%) frequent among all.

Table 3 demonstrated the relationship of perceived dental problem with socio-demographic characteristics. *P*-values were significant (*P* <0.001) for the age 14 years (84,89%) and above and 3rd year of scholastic year (68,49%).

Dental problems were also more among low socioeconomic status families; *P* value was significant (*P* <0.001) for up to 10K monthly income families (36,74%) as compare to those of more than 10K income families (134,38%).

It is also illustrated that dental problems were more common (59,39%) among students whose father's education was primary or intermediate (*P* <0.001), whereas more common (48,62%) among those whose mothers were uneducated (*P* = 0.001).

The results of the current study were also showed that 165 (83%) of those who have dental problems, their family members were also having dental problems (*P* <0.001).

The association was also significant (*P* <0.001) for the unemployed fathers (21,91%). Moreover, no association was found for the students who have dental problems with their living style and type of housing. There is also a significant association between the presence of dental problem (79,52%) with their believe of seriousness of the problem as well (*P* = 0.002).

Table 2 Frequency of common dental problems n=170

Common dental problems	Frequency	(%)
Malocclusion of teeth	129	(75.9)
Tooth ache	86	(50.6)
Tooth decay	83	(48.8)
Bad smell	69	(40.6)
Bleeding gums	47	(27.7)
Teeth sensitivity	43	(25.3)

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Table 3 Association of perceived dental problems with the socio-demographic characteristics (n=400)

	Dental problems			
	Yes	**No**	**Total**	***P* value**
Age				
10-11	65(46)	78(54)	143	
12-13	21(13)	142(87)	163	< 0.001
14 and above	84(89)	10(11)	94	
School years				
1st year	93(47)	107(53)	200	
2nd year	9(15)	52(85)	61	< 0.001
3rd year	68(49)	71(51)	139	
Housing type				
Own house	58(40)	87(60)	145	0.446
Rented house	112(44)	143(56)	255	
Family system				
Nuclear	164(43)	218(57)	382	0.421
Extended	6(33)	12(67)	18	
Family income				
Up to 10000	36(74)	13(26)	49	< 0.001
10000	134(38)	217(62)	351	
Father's education				
Illiterate	10(19)	42(81)	52	
Primary and intermediate	113(78)	32(22)	145	< 0.001
Secondary and higher	47(23)	156(77)	203	
Mother's education				
Illiterate	48(62)	30(38)	78	
Primary and intermediate	59(39)	92(61)	151	0.001
Secondary and higher	63(37)	108(63)	171	
Father's occupation				
Employee	149(40)	228(60)	377	< 0.001
Un employee	21(91)	2(9)	23	
Mother's occupation				
Employee	84(40)	127(60)	211	0.250
Un employee	86(46)	103(54)	189	
Family history of dental problem				
Yes	165(83)	33(17)	198	< 0.001
No	5(2.5)	197(97.5)	202	
Personal believe that dental problem is a serious problem				
Yes	79(52)	73(48)	152	0.002
No	91(36.7)	157(63.3)	248	

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Discussion

Good oral health necessitates, daily teeth brushing, good diet and regular dental checkups. It has been estimated by the World Health Organization (WHO) that oral health diseases is found in 60–90% of all school going children.[13] However, among the students who were assessed in this study dental problems was established in only 43% of the school going girls. Also, in our study the prevalence study population had a similar age group of 10 - 15 years and majority of them belonged to the age group 12-13 years.

It was also found that the dental problems were more common among 14 years and above age group. Socioeconomic status (SES) is a multifaceted concept that is composed of number of variables that are interlinked. In this study we found that the dental problems were higher among those families where their monthly income was less than 10000SR.

A statistically significant correlation between unemployment, and the dental problems were also perceived. Further illiteracy also seemed to play a significant role in determining the dental health, it was found that the problems were more common among girls whose parents were illiterate. Positive correlation between self-perceived dental problems and a family history of dental problems also was significant in the current study. Significant association was established between the presence of the dental problems and the belief of the seriousness of the health problems. A study done by Khodadadi E et al, has shown that parents having low oral health literacy, unemployment and living in rural areas are significantly associated with the less rate of children's dental fillings and increased rate of dental caries which is in correlation with the present study findings.[14]

The prevalence rate of malocclusion in this study was 76%, making it the most common complaint. Study done by Nuha H. Fatani1 et from Saudi Arabia has shown to have a similar rate of 74% and a few other studies show that reported rates between 40% to 70% respectively.[3,9,15-17] Studies have shown that malocclusion is attributed to misaligned dental arches or due to the indiscrete arrangement of the teeth. [18] Further studies have established that the evolving situation was due to the age factor rather than a pathological one.[19] However, halitosis was reported to be the least common problem with a prevalence rate of 25% and was in correlation with the findings from another study from nearby region.[5]

Strength and limitations:

Study population of intermediate school age group was studied much in the past although gender difference cannot be illustrated because this study conducted only among female students.

Conclusion

This study concluded that the prevalence of self-perceived dental problems is much lesser than the prevalence of dental problems itself. Although, it is reflecting only female intermediate school children but it highlights the relationship with few important socio-demographic factors. In future such studies should be conducted among males as well to see the gender difference of the concerned problem. Furthermore, low percentage of self-perception of dental problems is an eye opener for health authorities so in future some measures should be taken to increase the awareness of the topic among general population through teaching sessions or mass media communication to increase public awareness and implementation of good practices regarding oral hygiene.

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Competing interests

The authors declare that they have no competing interests.

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