# A Descriptive Study to Access the Awareness Regarding Oral Hygiene and Prevalence of Oral Problems Among School Children at Selected School, Mohali, Punjab

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**Abstract:** Oral health is a part of general health. Oral health also influences the quality of life. Dental caries and periodontal diseases are the common diseases in populations. These diseases are highly irreversible, once occur and also have complex etiology. Although primary preventive techniques exist to total protection. A Descriptive study to access the awareness regarding oral hygiene and prevalence of oral problems among school children at selected school, Mohali, Punjab. Assess the awareness regarding oral hygiene, describe prevalence of oral problems, determine the association between awareness regarding oral hygiene and prevalence of oral problems, find out the association between awareness and prevalence with selected sociodemographic variable. Qualitative approach and descriptive research design is adopted in this study. The study was conducted at BSF, Arya Senior Secondary School, Sohana, Mohali (Punjab). Target population was school children. Study was conducted on 150 school children; sampling technique adapted to this study is purposive sampling technique. Structured questioner and check list were prepared. Tools were validated by various concerned experts before application. The result was interpreted as follows. According to sociodemographic variable the age of 12 years 20% (30) 13 years 44 % (66) 14 years 36% (54), class 7th 20% (30), 8th class 44% (66) 9th 36% (54) sex of the child male 100% female 0%, education of father, illiterate 0%, middle 8% (12), Matric 41% (62), Senior Secondary 41% (62) graduate and above 9% (14). In the present study 150 students participated. The findings of the study revealed that majority of school children show moderate level of awareness about oral hygiene and prevalence of oral problems.

**Keywords:** Assess, Awareness, Prevalence, Dental Problems, Oral Hygiene.

## I. INTRODUCTION

Oral health is a part of general health. Oral health also influences the quality of life. Dental caries and periodontal diseases are the common diseases in populations. These diseases are highly irreversible, once occur and also have complex etiology. Although primary preventive techniques exist to total protection.[1]

Dental caries contributes to be a major problem in many countries, especially in India, where it has consistently reflected an increasing trend in the last couple of decades. The point prevalence surveys have shown persistence of "untreated carious lesions" among children in rural areas. It reflects either non-availability of oral health care services or poor oral health seeking behaviour of rural people.[2]

Dental caries are a leading dental problem of children. 90% of all children have some tooth decay by 12 years of age. Children from socioeconomically deprived areas have more dental caries than those from other groups. Tooth brushing, use of fluorides regular dental check-up, diet and habits are important in the prevention of dental caries.[3]

The children frequently suffer from dental diseases and defects. Dental caries and periodontal diseases are two common diseases in India.[4]

Awareness related to oral health among the children is also found to be poor. It is a common saying mere teaching of cleanliness of body and surrounding is not enough unless it is effectively demonstrated, essential and obligatory "Cleans" to be observed by all children include clean environment, clean hands, clean food, clean water, clean mouth and clean teeth said, and also the house of the most important sense organ,' the tongue'. Therefore, the mouth has to be kept clean and healthy. School age is a period of overall development.[5]

## II. RESEARCH PROBLEM

A Descriptive study to access the awareness regarding oral hygiene and prevalence of oral problems among school children at selected school, Mohali, Punjab. India.

## III. OBJECTIVES OF THE STUDY

1.      To assess the awareness regarding oral hygiene.
2.      To assess and describe prevalence of oral problems.
3.      To determine the association between awareness regarding oral hygiene and prevalence of oral problems.
4.      To find out the association between awareness and prevalence with selected sociodemographic variable.

## IV. METHODOLOGY

Qualitative research approach, Research design selected for the study is descriptive research design. The study was conducted at BSF, Arya Senior Secondary School, Sohana, Mohali (Punjab). Total samples 150 school children of BSF, Arya Senior Secondary School ,Sohana, Mohali (Punjab). Purposive sampling technique is used in this study.

| Chi Square Test | | Levels(N=150) | | | | Association with AWARENESS Score | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Variable | Opts | Excellent | Good | Average | Poor | Chi Test | P Value | df | Table Value | Result |
| Age in Year | 12 Years | 30 | 0 | 0 | 0 | 5.278 | 0.509 | 6 | 12.592 | Not Significant |
| | 13 Years | 57 | 6 | 2 | 1 | | | | | |
| | 14 Years | 49 | 4 | 1 | 0 | | | | | |
| Class | 7th | 30 | 0 | 0 | 0 | 5.278 | 0.509 | 6 | 12.592 | Not Significant |
| | 8th | 57 | 6 | 2 | 1 | | | | | |
| | 9th | 49 | 4 | 1 | 0 | | | | | |
| Sex of the Child | Male | 136 | 10 | 3 | 1 | NA | | | | |
| | Female | 0 | 0 | 0 | 0 | | | | | |
| Education of Father | illiterate | 0 | 0 | 0 | 0 | 3.592 | 0.936 | 9 | 16.919 | Not Significant |
| | Middle | 12 | 0 | 0 | 0 | | | | | |
| | Matric | 55 | 5 | 2 | 0 | | | | | |
| | Senior Secondary | 56 | 4 | 1 | 1 | | | | | |
| | Graduate and Above | 13 | 1 | 0 | 0 | | | | | |
| Education of Mother | illiterate | 0 | 0 | 0 | 0 | 8.704 | 0.465 | 9 | 16.919 | Not Significant |
| | Middle | 36 | 1 | 1 | 1 | | | | | |
| | Matric | 45 | 6 | 2 | 0 | | | | | |
| | Senior Secondary | 44 | 3 | 0 | 0 | | | | | |
| | Graduate and Above | 11 | 0 | 0 | 0 | | | | | |
| Family Monthly Income in Rs. | 5000-10000 | 41 | 6 | 1 | 1 | 11.780 | 0.067 | 6 | 12.592 | Not Significant |
| | 10000-15000 | 89 | 4 | 1 | 0 | | | | | |
| | 15000-20000 | 6 | 0 | 1 | 0 | | | | | |
| | 20000-30000 | 0 | 0 | 0 | 0 | | | | | |
| | More than 30000 | 0 | 0 | 0 | 0 | | | | | |
| Locality of Residence | Rural | 50 | 2 | 1 | 0 | 1.703 | 0.636 | 3 | 7.815 | Not Significant |
| | Urban | 86 | 8 | 2 | 1 | | | | | |
| Type of Family | Joint Family | 29 | 0 | 0 | 1 | 7.399 | 0.060 | 3 | 7.815 | Not Significant |
| | Nuclear | 107 | 10 | 3 | 0 | | | | | |
| Religion | Hindu | 57 | 4 | 2 | 0 | 3.431 | 0.945 | 9 | 16.919 | Not Significant |
| | Sikh | 64 | 6 | 1 | 1 | | | | | |
| | Muslim | 13 | 0 | 0 | 0 | | | | | |
| | Christian | 2 | 0 | 0 | 0 | | | | | |
| Occupation | Govt. Employee | 71 | 4 | 2 | 1 | 1.761 | 0.623 | 3 | 7.815 | Not Significant |
| | Private Employee | 65 | 6 | 1 | 0 | | | | | |
| | Unemployed | 0 | 0 | 0 | 0 | | | | | |
| | Pensioner | 0 | 0 | 0 | 0 | | | | | |

**Table no-4** shows that the age of the children is not significant bur chi-square test was 5.278, p value was 0.509, df was 6 and table value was 12.592. class of the children was also not significant, but the calculation value of chi-square test was 0.509, p value was 0.509, df was 6 and table value was 12.592. Sex of the children was not applicable. Father education level of the children not significant, but the calculation value of chi-square test was 3.592, p value was 0.936, df was 9 and table value was 16.919. Mother education level of children was not significant. but the calculation value of chi-square test was 8.704, p value was 0.465, df was 9 and table value was 16.919. family monthly income, locality of residence, type of family, religion and occupation was not significant.

| Association with F/T Test | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Variable | Opts | Mean | Standard Deviation | N | DF | F/T Test | P Value | Result |
| Age in Year | 12 Years | 19.10 | .92 | 30 | 2/147 | 1.352 | 0.262 | Not Significant |
| | 13 Years | 18.32 | 3.05 | 66 | | | | |
| | 14 Years | 18.93 | 2.39 | 54 | | | | |
| Class | 7th | 19.10 | .92 | 30 | 2/147 | 1.352 | 0.262 | Not Significant |
| | 8th | 18.32 | 3.05 | 66 | | | | |
| | 9th | 18.93 | 2.39 | 54 | | | | |
| Sex of the Child | Male | 18.69 | 2.53 | 150 | | | | |
| | Female | | | | | | | |
| Education of Father | illiterate | | | | 3/146 | 0.501 | 0.682 | Not Significant |
| | Middle | 19.17 | 1.03 | 12 | | | | |
| | Matric | 18.52 | 2.49 | 62 | | | | |
| | Senior Secondary | 18.65 | 2.94 | 62 | | | | |
| | Graduate and Above | 19.29 | 1.38 | 14 | | | | |
| Education of Mother | illiterate | | | | 3/146 | 1.053 | 0.371 | Not Significant |
| | Middle | 18.51 | 2.92 | 39 | | | | |
| | Matric | 18.38 | 2.86 | 53 | | | | |
| | Senior Secondary | 18.98 | 1.96 | 47 | | | | |
| | Graduate and Above | 19.64 | .67 | 11 | | | | |
| Family Monthly Income in Rs. | 5000-10000 | 18.14 | 3.21 | 49 | 2/147 | 2.495 | 0.086 | Not Significant |
| | 10000-15000 | 19.04 | 1.75 | 94 | | | | |
| | 15000-20000 | 17.86 | 4.85 | 7 | | | | |
| | 20000-30000 | | | | | | | |
| | More than 30000 | | | | | | | |
| Locality of Residence | Rural | 19.04 | 1.88 | 53 | 148 | 1.234 | 0.219 | Not Significant |
| | Urban | 18.51 | 2.81 | 97 | | | | |
| Type of Family | Joint Family | 18.67 | 2.83 | 30 | 148 | 0.064 | 0.949 | Not Significant |
| | Nuclear | 18.70 | 2.46 | 120 | | | | |
| Religion | Hindu | 18.68 | 2.41 | 63 | 3/146 | 0.363 | 0.780 | Not Significant |
| | Sikh | 18.58 | 2.83 | 72 | | | | |
| | Muslim | 19.15 | 1.14 | 13 | | | | |
| | Christian | 20.00 | 0.00 | 2 | | | | |
| Occupation | Govt. Employee | 18.67 | 2.68 | 78 | 148 | 0.133 | 0.894 | Not Significant |
| | Private Employee | 18.72 | 2.37 | 72 | | | | |
| | Unemployed | | | | | | | |
| | Pensioner | | | | | | | |

**Table no-5** shows analysis of association of F/T test that the age of the children was not significant but calculation value df 2/147, f/t test 1.352, p value 0.262. class of the children was also not significant, but calculation value of df value 2/147 ,f/t test 1.352,  p.value 0.262. Sex of the children was not applicable. Father education level of the children not significant, but the calculation value of df 3/146, f/t test .0.501 , p value was 0.682, Mother education level of children was not significant. but the calculation value of df. 3/146 , f/t test was 1.053 p value was 0.371, family monthly income

was not significant, df 2/147, f/t test 2.95 , p value was 0.086, locality of residence  was not significant, df 148, f/t test 1.234 , p value was 0.219, Type of family not significant, df 148, f/t test 0.64 , p value was 0.949, Religion df 3/146, f/t test 0.363 , p value was 0.780, occupation  was not significant. But calculated value df 148, f/t, test 0.133, p value was 0.893.

Table No: 6 Item wise analysis of structured questionnaire. (Correct and incorrect scores)

| Area | Item wise Analysis | Correct Score %(f) | Incorrect Score %(f) |
|---|---|---|---|
| Part-B AWARENESS | Qno.1 | 91.3 | 8.7 |
| | Qno.2 | 98.7 | 1.3 |
| | Qno.3 | 95.3 | 4.7 |
| | Qno.4 | 98.0 | 2.0 |
| | Qno.5 | 94.7 | 5.3 |
| | Qno.6 | 92.7 | 7.3 |
| | Qno.7 | 91.3 | 8.7 |
| | Qno.8 | 93.3 | 6.7 |
| | Qno.9 | 92.0 | 8.0 |
| | Qno.10 | 90.7 | 9.3 |
| | Qno.11 | 91.3 | 8.7 |
| | Qno.12 | 90.0 | 10.0 |
| | Qno.13 | 92.7 | 7.3 |
| | Qno.14 | 92.7 | 7.3 |
| | Qno.15 | 90.0 | 10.0 |
| | Qno.16 | 96.7 | 3.3 |
| | Qno.17 | 88.7 | 11.3 |
| | Qno.18 | 95.3 | 4.7 |
| | Qno.19 | 96.0 | 4.0 |
| | Qno.20 | 98.0 | 2.0 |



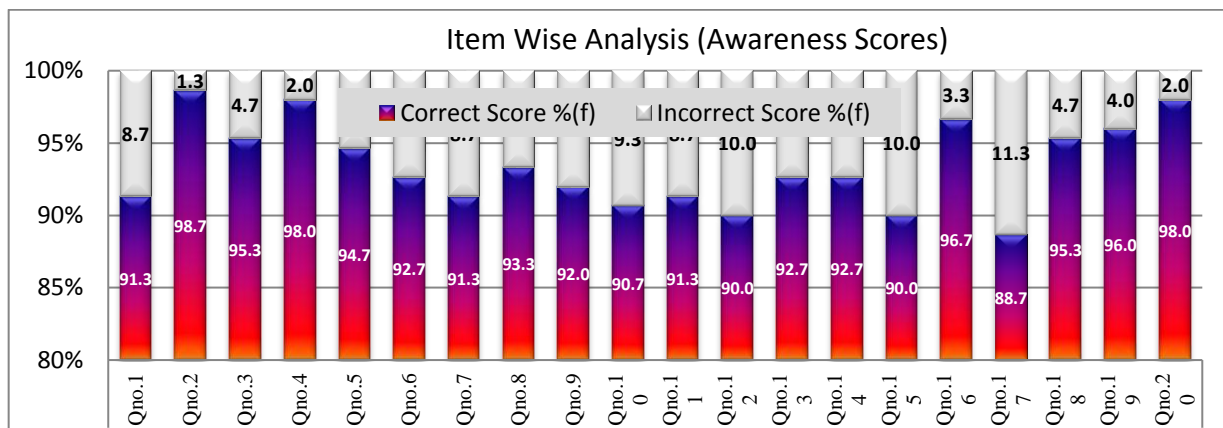Figure No: 16 shows the item wise analysis (awareness score).

**Table No: 7**

| Area | Item wise Analysis | Yes%(f) | No %(f) |
|---|---|---|---|
| PART-B Assessment of oral cavity: | No's of teeth-Molar,-Pre- molar-canines | 0.0 | 100.0 |
| | gingivitis | 6.0 | 94.0 |
| | Dental caries/ Cavities | 86.0 | 14.0 |
| | halitosis | 12.0 | 88.0 |
| | Gum bleeding | 6.0 | 94.0 |
| | Another problem | 0.0 | 100.0 |
| | Color of teeth/ Calculus | 20.7 | 79.3 |

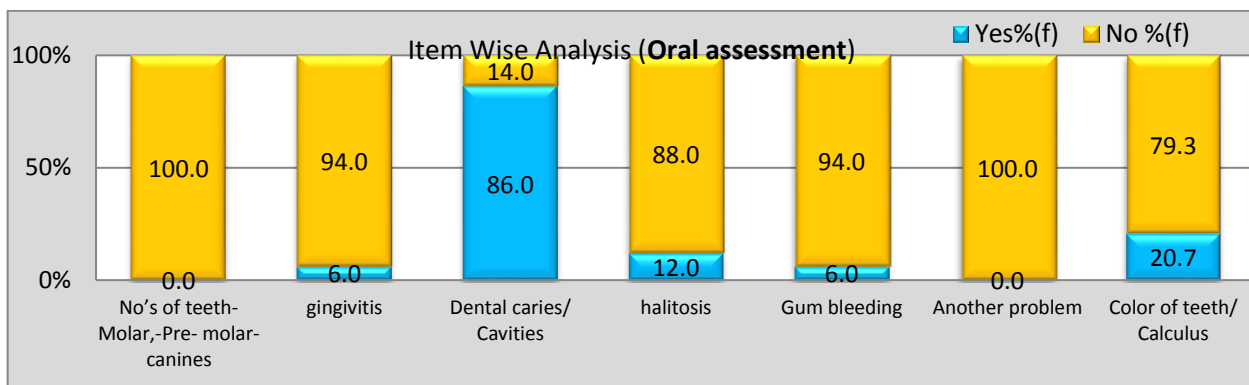Table no:7 shows responses of subject in yes and no.

Figure No: 17

## V. DISCUSSION

The major findings of this study are as follows: According to sociodemographic variable the age of 12 years 20% (30) 13 years 44 % (66) 14 years 36% (54), class 7th 20% (30), 8th class 44% (66) 9th 36% (54) sex of the child male 100% female 0%, education of father ,illiterate 0%, middle 8% (12), Matric 41% (62), Senior Secondary 41% (62) graduate and above 9% (14). Education of mother illiterate 0% Middle 26% (39) Metric 35% (53) Senior Secondary 31% (47) Graduate and Above 7% (11) Family monthly income in Rs.5000-10000 33% (49) 10000-15000 63% (94) 15000-20000, 5% (97) locality of residence rural 35% (53), type of family, joint family 20% (30) nuclear 80% (120) religion Hindu 42% (63), Sikh 48% (72) Muslim 9% (13) Christian 1% (2) , occupation govt. employee 52% (78) private 48% (72).[97]

The findings of the present study was supported by a descriptive study was conducted by **Bajoma *et al* (2004).** Majority of the children that is 44% were 13 yr of age, 36% were 14 year of age. 20% were 12 year of age. The overall prevalence of subjects was 79.4% with high prevalence of oral problems among school children. Majority of the children 90.7% were excellent awareness, 10% were Good awareness, 3% were aver average awareness regarding oral hygiene. And only one % were very poor awareness regarding oral hygiene. Descriptive statistics showing that the mean % age awareness regarding oral hygiene was 93.5%. The calculated value of chi-square is (5.278) which is less than the table value (12.592) at 0.05% level of significance, with (6df). Hence, we can conclude that age of the children and awareness regarding oral hygiene is not significantly associated with each other. This finding may be due to the fact that the less awareness of oral hygiene in school children. The reason for the higher prevalence of dental problems in years may be due to lack of knowledge and awareness about oral care.

Table No 7 shows that prevalence of oral hygiene according to item wise is gingivitis yes 9(f) is 6.0. no (f). fr. Is 94.0. dental caries/ cavities yes (f) is 86.0 , No. (F) is 14.0' halitosis yes (f) 12.0, No (f) is 88.0, gum bleeding yes, (f) is 6.0 , No (f) is 94.0. another problems Yes, (f) ).0.0 No, (f) 100.0. colour of teeth / calculus yes (f) 79.3.

The findings of the present study was supported by a exploratory study was conducted by

**Kulkami SS, Deshpande SD. (2002)** study was conducted on Caries prevalence and treatment needs in 11-15 year old children of Belgaum city. The present study was carried out on 2005 school going children between 11-15years of age, studying at Belgaum city. The sample was selected by stratified random sampling method. The examination was done under natural light and caries was diagnosed according to WHO criteria (1987). The prevalence of dental caries in the present population was 45.12%. The needs for other treatment modalities have been discussed in relation to the dental caries prevalence. The results of this study call for more emphasis on restorative care for these children at primary level.[72]

This study assessed the prevalence of dental problems and evaluated the oral hygiene of schools children. The overall oral prevalence of subjects was 95.3% with high oral prevalence among school children as mentioned above.

Table no-4 shows that association between awareness regarding oral hygiene and prevalence of oral problems according to the age of the children is not significant bur chi-square test is 5.278, p value is 0.509, df is 6 and table value is 12.592. class of the children is also not significant, but the calculation value of chi-square test is 0.509, p value is 0.509, df is 6 and table value is 12.592. Sex of the children is not applicable. Father education level of the children not significant, but the calculation value of chi-square test is 3.592, p value is 0.936, df is 9 and table value is 16.919. Mother education level of children is not significant. but the calculation value of chi-square test is 8.704, p value is 0.465, df is 9 and table value is 16.919. family monthly income, locality of residence , type of family, religion and occupation is not significant.

The findings of the present study was supported by a descriptive study was conducted by

**JOSE at all (2013)** was conducted on association between awareness regarding oral hygiene and prevalence of oral dental problems. The purpose of this study was to know the prevalence and pattern of dental health problems in rural school children and to identify the priority area for dental health education programmes. The children were examined and findings recorded, the findings show that more than 50% of the children in the 12 to 15 years of age group in rural

suffers from some form of dental diseases. Males and females are equally affected and dental caries is the most common problem encountered.[73]

Table no-4 shows the association between awareness and prevalence with selected sociodemographic variable that the age of the children is not significant but chi-square test is 5.278, p value is 0.509, df is 6 and table value is 12.592. class of the children is also not significant, but the calculation value of chi-square test is 0.509, p value is 0.509, df is 6 and table value is 12.592. Sex of the children is not applicable. Father education level of the children not significant, but the calculation value of chi-square test is 3.592, p value is 0.936, df is 9 and table value is 16.919. Mother education level of children is not significant. but the calculation value of chi-square test is 8.704, p value is 0.465, df is 9 and table value is 16.919. family monthly income, locality of residence , type of family, religion and occupation is not significant.

The findings of the present study was supported by a descriptive study was conducted by

**Vinay Kumar Bhardwaj (2012)** the study was conducted in Shimla. The purpose of the study was to assess the prevalence of dental caries among five year old school children. The sample consisted of 800 school going children 421 (52.62%) boys and 379 (47.38%) girls from government primary schools which were selected randomly from four different zones of Shimla. The data obtained was analyzed by SPSS version 15 (Inc., Chicago) using proportion test for comparison. Boys were having higher caries prevalence than girls, (46.8% vs 41.6%) and the difference was statistically significant ($P<0.05$). Caries prevalence was higher in the mandibular arch than in the maxillary arch among both the gender with a difference which was significant statistically. When the caries prevalence of the anterior teeth was compared between the gender, boys showed higher caries prevalence than girls.

**Conclusion:** Oral health is a part of general health. Oral health also influences the quality of life. Dental caries and periodontal diseases are the common diseases in populations. These diseases are highly irreversible, once occur and also have complex etiology. Although primary preventive techniques exist to total protection. Dental care or broadly speaking oral hygiene is an important aspect of the personal health of an individual. Good oral hygiene implies sound teeth and healthy gums with healthy surroundings tissues. The physical act of chewing food promotes saliva and gastric secretions and helps indigestion.

**Implications:** The findings of study are implicated in different areas such as Nursing Practice, Nursing Education, Nursing administration and Nursing research. The findings of study have several implications which are discussed in following areas.

**Nursing practice:** The nursing personnel can give health education both in hospitals and in community areas helps in increasing the information regarding healthy oral practices which will further helps in preventing prevalence of oral problems.

**Nursing administration:** Nurse administrator can conduct health education program on practices of oral hygiene and prevalence of oral problems.

**Nursing research:** The findings need to be disseminated through seminars, conference and published to journals.

**Nursing education:** Nursing curriculum should provide opportunity for students to participate in health promotion and disease prevention programs specifically in dental care.

**Recommendations:** A similar study can be done on subjects with different socio demographic characteristics. A similar study can be done for the school children rural and urban community areas. A comparative study can be done between a higher secondary and college student. Similar study can be done on larger sample for wider generalization.

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