

# A Pre-Experimental Study to Assess the Effectiveness of Oral Health Teaching Programme (OHTP) on Knowledge and practice of Oral Hygiene Habits in School going Children of Selected Schools of Haldwani Block, Uttarakhand

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**Abstract:** “Mouth is the mirror of the body” Good oral health is important for our well-being. Daily preventive care includes proper brushing which help to improve oral hygiene. The research design adopted for this study was one group pre-test- posttest design. The simple non-probability purposive sampling technique was used for the selection of the subject. This include a sample of 60 school going children in the age group of 8 to 12 year in Haldwani Block, Uttarakhand. **Result:** The Result of this study that pre-test knowledge and practice had no significant difference. The significant difference between pre-test and post-test knowledge and practice due to the OHTP (Oral Health Teaching Program). **Conclusion:** In the present study OHTP (Oral Health Teaching Program) on Oral Health was found to be effective for the students as it lead to improvement in knowledge and practice regarding oral health hygiene

**Keywords:** Knowledge, Practice, OHTP (Oral Health Teaching Program), Oral hygiene habits, School going children, School

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## 1. Introduction

Children are vital part in our society and maintaining health of school age children is a challenging issue.<sup>1</sup> Oral health also contributes to overall health of children and also develops confidence in children. Thus, oral health is an integral part of the general health. If we don't maintain proper oral health, it diminishes one's social interaction, self-esteem and self-image. In developing countries and refugees, people do not give proper attention on oral health.<sup>2</sup>

Dental caries remain one of the commonest disorders affecting the teeth, starting right from the early age; hence it is important to prevent dental caries in the school age. Dental caries affects more than half of the school age children and it is most common disease for this age group. About 11% to 72% of poor children have been found to have early childhood dental caries. Studies found that dental decay in school age children could be predicted in toddler by determining the frequency of brushing and other variables. Thus, it is important to teach children about the importance of regular brushing.<sup>3</sup>

## 2. Objectives

- 1) To assess the knowledge and practice of the oral hygiene habits in school going children.
- 2) To assess the effectiveness of Oral Health Teaching Programme (OHTP) on knowledge and practice in school going children.
- 3) To find co-relation between knowledge and practice of school going children on oral hygiene habits.

- 4) To find out the association between selected socio demographical variables with knowledge and practice of the post-test score.

## 3. Methodology

In order to achieve the objectives of the study, evaluative approach (Quantitative) was used. Pre-experimental one group pre- test post- test research design was adopted. A total of 60 school going children in the age group of 8-12 years were selected through non – probability purposive sampling technique

## 4. Result

The finding of the study showed:

### Section- 1: Distribution of sample characteristic

The data shows that, out of 60 samples, Majority of the 52% children were in the age group of (8 to 10) years. Maximum 62% female children. Majority of the 72% children were studying in 4<sup>th</sup> standard. Most of 53% children were having nuclear family. Maximum 41.6% of fathers were graduate. The mothers were having 48% mothers were high school Most of the 47% fathers were private employees. Majority of the 82% mothers were housewives. Majority of 72% children did not have any previous experience related to oral health problem. Most of 57% children had information related to oral hygiene through parents/ Teacher and. Maximum number of 57% children had learnt.

The pre-test knowledge level majority of the 93% (56) students had average knowledge scores and only 7% (4) of the students' had low knowledge scores regarding oral health and post-test knowledge level, majority of the 72% (43) students had high knowledge scores and none of the students' had low knowledge scores regarding oral hygiene.

The Pre-test practice level majority of the 92% (55) students' were having average practice and none of the students' were having low practice and post-test practice level majority of 97% (58) the students' were having high practice; none of the student's was having low practice scores.

The effectiveness of OHTP on knowledge and practice. The pre-test & post-test knowledge mean percentage was obtained 29.01% & 40.9% respectively with an enhancement of 22.33%. The t- value obtained was 12.646 and was found to be significant ( $p=0.000$ ) and pre-test and post-test practice scores obtained for mean percentage was 53.33% & 87% respectively with an enhancement of 33.67%, the t- value obtained was 18.004 and was found to be significant ( $p=0.000$ ).

The correlation between the pre-test knowledge and practice on oral hygiene, the data inferred that there was a negative low co-relation with a value of ( $r=0.236$ ) and correlation between the post-test knowledge and practice on oral hygiene, the data inferred that there was a negative low co-relation with a value of  $r=-0.038$ .

Data shows that association between Sociodemographic data and knowledge, practice. The type of family ( $\chi^2=6.307$ ,  $p>0.05$ ) was associated with post-test knowledge score whereas, variables like age ( $\chi^2=0.767$ ,  $p>0.05$ ), gender ( $\chi^2=0.745$ ,  $p>0.05$ ), class ( $\chi^2=1.103$ ,  $p>0.05$ ), father's education ( $\chi^2=0.746$ ,  $p>0.05$ ), mother's education ( $\chi^2=3.322$ ,  $p>0.05$ ), father's occupation ( $\chi^2=3.189$ ,  $p>0.05$ ), mother's occupation ( $\chi^2=2.30$ ,  $p>0.05$ ), residence place ( $\chi^2=0.110$ ,  $p>0.05$ ), previous experience ( $\chi^2=0.019$ ,  $p>0.05$ ), information source ( $\chi^2=4.585$ ,  $p>0.05$ ) and brushing technique taught ( $\chi^2=2.151$ ,  $p>0.05$ ) was found to be non significant with post-test knowledge scores and In practice, age ( $\chi^2=0.024$ ,  $p>0.05$ ), gender ( $\chi^2=0.271$ ,  $p>0.05$ ), class ( $\chi^2=0.091$ ,  $p>0.05$ ) types of family ( $\chi^2=0.866$ ,  $p<0.05$ ), father's education ( $\chi^2=3.285$ ,  $p>0.05$ ), mother's education ( $\chi^2=3.915$ ,  $p>0.05$ ), father's occupation ( $\chi^2=3.373$ ,  $p>0.05$ ), mother's occupation ( $\chi^2=0.980$ ,  $p>0.05$ ), residence place ( $\chi^2=1.927$ ,  $p>0.05$ ), previous surgical experience ( $\chi^2=0.987$ ,  $p>0.05$ ), information source ( $\chi^2=2.053$ ,  $p>0.05$ ) and brushing technique taught ( $\chi^2=1.644$ ,  $p>0.05$ ) was not significant with post-test practice scores.

## 5. Discussion

**"Children are our most valuable human resources"** School health education services are an economical and powerful means of raising standard of community health, especially for the future generations. School is considered as a best setting for the positive health and prevention of diseases.

### Knowledge and practice of the oral hygiene habits

The present study shows that in pre-test knowledge level majority of the 93% (56) of students had average knowledge scores and only 7% (4) of the student's had low knowledge scores regarding oral health and In post-test knowledge level, majority of the 72% (43) of students had high knowledge scores and none of the student had low knowledge scores regarding oral hygiene and pretest and post – test practice level regarding tooth brushing. In Pre-test practice level majority of the 92% (55) of student's were having average practice and none of the students' were having low practice and In post-test practice level majority of 97% (58) the students' were having high practice, none of the students' were having low practice scores.

The finding of the present study was supported by Abu-Elenen M, Ali Abdella H, Elkazaz H. (2017) on effect of an oral care educational program on the knowledge, practice and self-efficacy among school age children in Madinah Saudi Arabia. The aim of the study was to assess the effectiveness of program on knowledge, practice and self – efficacy in school going children. The study covered 203 children. The results showed that the children had 23.2% poor knowledge, 46.8% fair knowledge and 30.0% good knowledge of the children before intervention. And after intervention children had a 16.7% poor knowledge, 37.9% fair knowledge and 45.3% good knowledge of the children. The study concluded that the training program has a positive impact on the children's knowledge, practice regarding oral health hygiene.<sup>4</sup>

### Effectiveness of OHTP on knowledge and practice among school going children.

The study shows the effectiveness of OHTP on knowledge and Practice. The pre-test & post-test knowledge mean percentage was obtained 29.01% & 40.9% respectively with an enhancement of 11.89%. The t- value obtained was 12.646. Hence, it is inferred research hypotheses is accepted at the 0.05 level of significance and Pre-test and post-test practice scores obtained for mean percentage was 53.33% & 87% respectively with an enhancement of 33.67%, The t- value obtained was 18.004.

The finding of the present study is also supported by Naidu J, NB (2017) on evaluation of the effectiveness of a primary preventive dental health education programme on knowledge and practice of 926 primary school children in Mysore city. The results showed that the DHEP (Dental Health Education Program) was effective on knowledge and practice. The Mean and SD of the study group was  $1.44 \pm 0.35$  whereas in control group Mean  $\pm$  SD was  $1.62 \pm 0.40$ . The t- value was 5.40 with significance at 0.05 levels. The study concluded that the present study supports the implementation of similar programmers in schools and the contention that school teachers are suitable personnel for imparting dental health education to school children on a regular basis.<sup>5</sup>

### Correlation between the knowledge and practice of school going children.

The present study related that there was negative low correlation ( $r=-0.236$ ) between knowledge & practice of the school going children on oral hygiene habits. There was

also a negative low correlation ( $r = -0.038$ ) between the post – test knowledge and practice on oral hygiene habit.

The findings of the present study is also supported by Singh A, Dhawan P, Gaurav V, Rastogi P, Singh S (2017) on assessment of oral health-related quality of life in (9-15) year old children with visual impairment in Uttarakhand, India. The aim of the study was to assess oral health practice in visual impaired children. The result showed that the correlation between practice related to caries experience (Present and absent) of oral health, the data inferred that there was a negative co-relation with a value of  $-0.106$ . Hence, it was inferred that there was negative correlation between present and absent caries experience.<sup>6</sup>

#### Association between selected socio demographical variables and post-test knowledge and practice scores

The present study shows that type of family ( $\chi^2 = 6.307$ ,  $p > 0.05$ ) was associated with post-test knowledge score whereas variables like age ( $\chi^2 = 0.767$ ,  $p > 0.05$ ), gender ( $\chi^2 = 0.745$ ,  $p > 0.05$ ), class ( $\chi^2 = 1.103$ ,  $p > 0.05$ ), father's education ( $\chi^2 = 0.746$ ,  $p > 0.05$ ), mother's education ( $\chi^2 = 3.322$ ,  $p > 0.05$ ), father's occupation ( $\chi^2 = 3.189$ ,  $p > 0.05$ ), mother's occupation ( $\chi^2 = 2.30$ ,  $p > 0.05$ ), residence place ( $\chi^2 = 0.110$ ,  $p > 0.05$ ), previous experience ( $\chi^2 = 0.019$ ,  $p > 0.05$ ), information source ( $\chi^2 = 4.585$ ,  $p > 0.05$ ) and brushing technique taught ( $\chi^2 = 2.151$ ,  $p > 0.05$ ) was found to be non-significant with post-test knowledge scores and Post –test practice scores was not found to be associated with socio – demographic variables like age ( $\chi^2 = 0.024$ ,  $p > 0.05$ ), gender ( $\chi^2 = 0.271$ ,  $p > 0.05$ ), class ( $\chi^2 = 0.091$ ,  $p > 0.05$ ) types of family ( $\chi^2 = 0.866$ ,  $p < 0.05$ ), father's education ( $\chi^2 = 3.285$ ,  $p > 0.05$ ), mother's education ( $\chi^2 = 3.915$ ,  $p > 0.05$ ), father's occupation ( $\chi^2 = 3.373$ ,  $p > 0.05$ ), mother's occupation ( $\chi^2 = 0.980$ ,  $p > 0.05$ ), residence place ( $\chi^2 = 1.927$ ,  $p > 0.05$ ), previous surgical experience ( $\chi^2 = 0.987$ ,  $p > 0.05$ ), information source ( $\chi^2 = 2.053$ ,  $p > 0.05$ ) and brushing technique taught ( $\chi^2 = 1.644$ ,  $p > 0.05$ ).

The findings of the present study were also supported by Datt P & Pratim P (2013) on prevalence of dental caries among school children in Sundarban, India. The aim of the study was to assess the association between socio-demographic variables with practice. The socio-demographic variables like age of children ( $\chi^2 = 4.88$ ,  $p < 0.05$ ), gender ( $\chi^2 = 0.73$ ,  $p > 0.05$ ), class ( $\chi^2 = 1.15$ ,  $p < 0.05$ ), religion ( $\chi^2 = 0.09$ ,  $p < 0.05$ ) per capital monthly income ( $\chi^2 = 8.52$ ,  $p > 0.05$ ), sibling ( $\chi^2 = 4.56$ ,  $p < 0.05$ ), toothache ( $\chi^2 = 42.96$ ,  $p < 0.05$ ) brushing the teeth ( $\chi^2 = 6.81$ ,  $p > 0.05$ ), wash mouth after taking food ( $\chi^2 = 7.07$ ,  $p < 0.05$ ) was found associated with practice.<sup>7</sup>

## 6. Conclusion

Brushing properly can prevent most of the oral diseases in children. It is not only the responsibility of the parents' but also of the teachers' to inculcate good oral hygiene habits in children, thus proper brushing technique helps to improve oral health hygiene.

In the present study OHTP (Oral Health Teaching Program) on Oral Health was found to be effective for the students as

it lead to improvement in knowledge and practice regarding oral health hygiene.

## 7. Implications

The findings of the present study have implications only in nursing practice and nursing research. OHTP (Oral Health Teaching Program) are just a part of the process of improving the knowledge and practice of the school going children. The OHTP (Oral Health Teaching Program) process is a collaboration between nurse educator, principal, teacher and students. The OHTP program is an ongoing process of initial development to improve knowledge and practice of the oral health hygiene in the school going children.

## 8. Limitations of the Study

The study is delimited to: -

- 1) The samples were selected using purposive sampling, which limits generalized the study.
- 2) Extraneous variables in the study could not be controlled by researcher.
- 3) The present study is limited only to school going children (8 to 12 year), and relatively small sample size.

## 9. Recommendations

1. Similar study can be replicated on a large sample of school going children.
2. A comparative study can be conducted among children of government & private schools.
3. Similar study can be conducted using different teaching method like video, computer assisted method etc.
4. Follow up study can be conducted to evaluate long term effect of OHTP (Oral Health Teaching Program).

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