

IMPACT OF PLANNED EDUCATIONAL INTERVENTION (PEI) ON DENTAL HYGIENE KNOWLEDGE AND PRACTICES IN SCHOOLCHILDREN: A CHILD-TO-CHILD APPROACH

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ABSTRACT

Background of the study: Dental caries is considered, the most, ignored chronic diseases among children. About 40% of pre-school children have dental caries by 5 years of age. Dental caries is the leading dental problem of children 90% of all children have some tooth decay by 12 years of age. 95% of all cavities are caused by specific eating sugar habits like candies, ice creams, canned juice which usually develops during early childhood as a result of changing life style the aim of the study was to assess the effectiveness of Structured Teaching Programmed (STP) on knowledge and practice regarding dental hygiene among school children of selected schools. **Methods:** Research design adopted for the study was pre experimental, one group pre-test, post-test design. Convenience sampling method was used to select 60 school children for the study. The level of knowledge and level of practice regarding dental hygiene was assessed using SKQ and Structured Practice Check list. Planned Education Intervention was organized for the school children and posttest knowledge and practice was assessed. Result shows that in the pre- test, the majority of school children 14 (23%) had poor knowledge, 22 (37%) had average knowledge and 24 (40%) had good knowledge regarding dental hygiene. Data also revealed that in the post test, there was an increase in the level of knowledge of school children i.e., 19(31.66%) scored average knowledge, 38 (63.33%) scored good knowledge and only 3 (5%) of them scored poor knowledge regarding dental hygiene. With regard to practice score, in the pretest, majority of school children 49 (81.66%) were not having good practice regarding brushing techniques and 11 (18.33%) of school children were having good practice. Data also revealed that in the post test, there was an increase in the level of practice of school children i.e., 53 (88.33%) were having good practice and 07 (11.66%) of them were having no good practice regarding brushing techniques. A child to child approach Planned Education Intervention on knowledge ($t_{59}=3.86$) and practice ($t_{59}=3.56$) regarding dental hygiene was an effective strategy to increase the level of knowledge and practice of school children as indicated by the computed 't' value which was statistically significant at 0.05 level of significance. **Conclusion:** A child to child approach Planned Educational Intervention (PEI) was effective in increasing the level of knowledge and practice of school children regarding dental hygiene and the study findings stresses the increasing responsibility of health professionals in planning and implementing various educational strategies to improve the knowledge and practice of schoolchildren.

KEYWORDS: Dental hygiene, a child to child approach.

METHODOLOGY

Formal administrative permission for conducting the study was obtained. By using Convenience sampling, 60 school children were selected for the study. An informed consent was obtained from each sample indicating their willingness to participate in this study. Structured knowledge questionnaire and structured practice checklist was administered to 60 selected participants to assess the existing knowledge and practice of students

regarding dental hygiene. A child to child approach Planned Educational Intervention (PEI) on dental Hygiene was given. Children were divided into 6 groups and from each group one child was identified as the group leader. And they were trained for proper brushing technique and remaining children in the 6 groups by the trained group leader. post-test knowledge and practice was assessed.

RESULTS

Table 1: Frequency and percentage distribution of school children according to the selected personal variables n=60

Sl. no	Sample characteristics	Frequency	Percentage
1.	Age		
	1.1. 10 years	0	0%
	1.2. 11 years	26	43.33%
	1.3. 12 years	34	56.66%
2.	Gender		
	2.1. Male	38	63.83%
	2.2. Female	22	36.66%
3.	Class		
	3.1. 5 th std	15	25.0%
	3.2. 6 th std	45	75.0%
4.	Religion		
	4.1. Hindu	32	53.33%
	4.2. Muslim	16	26.66%
	4.3. Christian	8	13.33%
	4.4. Others	4	6.66%
5.	Parents Education		
	5.1. No Formal Education	7	11.66%
	5.2. Higher Primary & Sec School	36	60.0%
	5.3. Graduation	17	28.33%
6.	Type of Family		
	6.1. Joint	13	21.66%
	6.2. Nuclear	47	78.33%
7.	Monthly Income Family (Rupees)		
	7.1. Less Than 9000	6	10.0%
	7.2. 9000	21	35.0%
	7.3. More Than 9000	33	55.0%
8.	Exposure to Any Previous Educational Classes Regarding Dental Hygiene		
	8.1. Yes	19	31.66%
	8.2. No	41	68.33%

Table 2: Description of frequency and percentage distribution of level of knowledge of school children regarding dental hygiene n=60.

Level of knowledge	pre-test score F %	post-test score F %
Good knowledge	14 23.33%	38 63.33%
Average knowledge	22 36.66%	19 31.66%
Poor knowledge	24 40%	03 5%

Table 2 shows that in the pre- test, the majority of school children 24 (40%) had poor knowledge, 22 (36.66%) had average knowledge 14 (23.33%) had good knowledge regarding dental hygiene. Data also revealed that in the

post test, there was an increase in the level of knowledge of school children. Majority 38(63.33%) had good Knowledge, 19 (31.66%) scored average knowledge, 3 (5%) had poor knowledge.

Table 3: Description of frequency and percentage distribution of the level of practice of school children regarding dental hygiene n=60.

Level of Practice	Pre-test score F %	Post-test score F %
Good practice	11 18.33%	53 88.33%
No good practice	49 81.66%	07 11.66%

Table 3 shows that in the pretest, majority of school children 81.66% you should include both no and percentage were having good practice regarding brushing techniques and 18.33% of school children were not having good practice. Data also revealed that in the post

test, there was an increase in the level of practice of school children i.e., 88.33% were having good practice and 11.66% of them were having no good practice regarding brushing techniques.

Table 4: Mean, median, range and standard deviation of pre-test and post-test knowledge of primary school children.

Test	Mean	Median	Range	standard deviation
Pre-test	10.73	11	5-15	±1.14
Post-test	12.03	12	7-15	±1.31

The data presented in table 4 shows that, the pre test knowledge scores ranged from 5-15 and the post test knowledge score from 7-15. The mean pre- test knowledge score was 10.73 with standard deviation of

±1.14 and the mean post-test knowledge score was 12.03 with standard deviation of ±1.31. This indicates that there was increase in knowledge scores of school children after the structured teaching programme.

Table 5: Mean median, range and standard deviation of pre-test and post-test practice of school children.

Test	Mean	Median	Range	standard deviation
Pre-test	8.13	8	5-11	0.84
Post-test	9.27	9	5-11	1.01

The data presented in table 5 shows that, the pretest practice score ranged from 5-11 and the post test practice score from 5-11. The mean pretest practice score was 8.13 with standard deviation of ±0.84 and the mean

posttest practice score was 9.27 with the standard deviation of ±1.01. This indicates that there was an increase in practice scores of school children after the Structured Teaching Programme.

Table 6: Mean, Mean difference and standard deviation difference of pre-test and post-test knowledge scores of school children n=60.

Knowledge	Mean	Mean difference	S.D difference	“t” value
Pre-test	10.73	1.3	0.17	3.86
Post-test	12.03			

$$t_{(59)} = 3.56 \text{ } p \leq 0.05$$

The data presented in table 6 shows that the mean difference between pre-test knowledge score and post-test knowledge score is 1.3. To find the significance of difference between the mean knowledge scores, paired ‘t’ was computed and obtained value of paired $t_{(59)} = 3.86$, it is found to be significant. Hence the result does not support null hypothesis H_{01} . It is inferred that there

was statically significant difference between the mean pre-test and post-test knowledge scores of school children regarding dental hygiene. Hence, it is inferred that structured teaching programme was effective in improving the knowledge of school children regarding dental hygiene.

Table 7: Mean, Mean difference and standard deviation difference of pre-test and post-test practice scores of school children n=60.

Test	Mean	Mean difference	S.D difference	‘t’ value
Pre-test	8.13	1.14	0.17	3.56
Post-test	9.27			

$$t_{(59)} = 3.36 \text{ } p \leq 0.05$$

The data presented in table 7 shows that the mean difference between pre-test practice score and post-test practice score is 1.14. To find the significance of difference between the mean practice scores, paired t was computed and value obtained value of paired $t_{(59)} = 3.56$, it is found to be significant. Hence the result does not support null hypothesis H_{01} . It is inferred that there was

statically significant difference between the mean pre-test and post-test practice scores of school children regarding dental hygiene. Hence, it is inferred that Structured Teaching Programme was effective in improving the practice of brushing techniques in school children regarding dental hygiene.

Table 8: Relation between level of knowledge and level of practice regarding dental hygiene among school children.

	Level of knowledge	level of practice
Karl’s Pearson’s Co-relation	0.81	0.81

Table - 8 shows that there is significant positive correlation between knowledge and practice of School children.

DISCUSSION

Oral hygiene implies sound teeth and healthy gums with healthy surround tissues. The world health organization defines oral health as a “state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores birth defects such as cleft lip and cleft palate, periodontal (gum) disease, tooth decay and tooth loss and other diseases and disorders that affect the oral cavity”. The WHO has considered dental caries and periodontal disease as the two most important global dental health diseases because of high worldwide prevalence of both conditions.^[2]

Dental health is often neglected by a vast majority of population in the developing countries like India the prevalence of dental caries is very high particularly among the children and adolescents.^[3] Dental diseases or public health burden in India, with periodontal diseases effecting an estimated 50-90% of the general population depending on age and the higher rates of dental diseases occur mostly in rural areas it was supported by another survey in 2004 with shows the prevalence of the dental caries in children aged 5 years was 50%, 52.5% in 12 year olds, 61.4% in 15 year olds 79.2% in 35-44 years old and 84.7% in 65-74 year olds in a survey.^[2]

Result shows that in the pre- test, the majority of school children 14 (23%) had poor knowledge, 22 (37%) had average knowledge and 24 (40%) had good knowledge regarding dental hygiene. Data also revealed that in the post test, there was an increase in the level of knowledge of school children i.e., 19 (31.66%) scored average knowledge, 38 (63.33%) scored good knowledge and only 3 (5%) of them scored poor knowledge regarding dental hygiene.

With regard to practice score, in the pre test, majority of school children 49 (81.66%) were not having good practice regarding brushing techniques and 11 (18.33%) of school children were having good practice. Data also revealed that in the post test, there was an increase in the level of practice of school children i.e., 88.33% were having good practice and 11.66% of them were having no good practice regarding brushing techniques. A child to child approach Planned Education Intervention on knowledge ($t_{59}=3.86$) and practice ($t_{59}=3.56$) regarding dental hygiene was an effective strategy to increase the level of knowledge and practice of school children as indicated by the computed ‘t’ value which was statistically significant at 0.05 level of significance. In one of the study conducted in Delhi study results revealed that basic oral hygiene knowledge and practice of the studied participants were good and study suggested to improve advanced knowledge in children.

CONCLUSION

The findings of the study revealed that the school children had inadequate Knowledge and poor practice regarding Brushing technique and planned intervention was effective in increasing the knowledge and practice of school children regarding dental hygiene as evidenced by computed ‘t’ test ($t_{59}=3.56$) which was significant at 0.05 level of significance.

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