

Effectiveness of Video-Based Education on Dental Caries Awareness among Mothers of Primary School Children"

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Abstract

Oral health to be recognized equally important in relation to general health has come to in recent times. Dental caries and gingival diseases are common diseases that affect about 80% of the school going children worldwide. The present study aimed to assess the effectiveness of an educational intervention on improving the knowledge of mothers regarding dental caries. A **paired-t-test** was applied to compare the pre-test and post-test knowledge scores. The mean and standard deviation of post-test knowledge scores (16.85) were higher than the mean and standard deviation of pre-test knowledge scores (9.30). The chi square 't' value -10.822 was found to be significant at the <0.05 level of significant. Based on finding we got to know that mothers of primary school going children, have less knowledge regarding dental caries.

Objectives

- To assess the pre-test knowledge regarding dental caries among the mothers of preschool going children.
- To assess the post-test knowledge score and grading the dental caries.
- To find out the association between pre-test knowledge score with selected demographic variables.

Based on the identified problem, research question and the objectives the following hypotheses were formed:

H1:

There is no significant knowledge regarding the factors associated with dental caries among mothers of

primary school-going children.

H2: There is a significant association between the knowledge regarding dental caries among mothers of primary school-going children and selected demographic variables.

I Review of literature

Doss .(2023): Had conducted a descriptive study the high prevalence of caries in early childhood is a global concern, affecting approximately 621 million children worldwide with untreated carious lesions, constituting significant public health problem. These data reveal the insufficient attention given to this condition, highlighting the need to emphasize its various implications on children's quality of life.

Sukumar S. (2023) : Had conducted a descriptive study the initiation of caries treatment in early childhood requires the identification of causative factors, along with the gradual elimination of bad habits, including hygiene and feeding practices. The collaboration and commitment of parents play a crucial role in this process, contributing to an effective early treatment of the disease. The selection of the optimal therapeutic approach will depend on the extent of the lesions, the age of the child, and his or her individual behaviour.

Raj A. et al. (2022): Had conducted an experimental study examined behavioural interventions, showing that parental education reduced caries prevalence in children by 25%. The study advocated integrating such programs into school curriculums and primary healthcare services.

Methodology

A descriptive research approach is considered the best to assess the knowledge regarding dental caries among mothers of primary school going children through questionnaires.

Results

- Table 1 the age distribution shows that the majority of mothers (45%) were in the 25–35 year age group, followed by 35% in the 18–25 year category. Majority of the Education levels among the participants varied, with the largest group (40%) having completed high school. significant majority of participants (75%) were housewives, the remaining 25% were employed in the private sector, and no mothers were working in government services or self-employed. Most mothers (70%) had two children, which aligns with common family size norms. About 15% had only one child, while a small portion had larger families—5% with three children and 10% with more than three children.
- Table 2 the analysis of pre-test knowledge scores before the educational intervention reveals that the majority of the mothers of primary school-going children possessed only an average level of knowledge regarding dental caries. Specifically, 55% of the participants fell into the average category, scoring between 5 and 10 on the knowledge scale.
- Table 3 the analysis of post-test knowledge scores following the educational intervention shows a marked improvement in the participants' understanding of dental caries. A significant majority of mothers, accounting for 85%, achieved scores within the “excellent” category (15–20), indicating a high level of comprehension and retention of the information delivered during the intervention.

- Table 4 Before the intervention, a majority of the participants demonstrated limited awareness, with 55% falling into the “average” category (scores between 5–10) and 40% classified as having “good” knowledge (scores between 10–15). Only 5% of the mothers were found to have poor knowledge, and notably, none achieved an “excellent” score in the pre-test.
- Table 5 the post-test results show a remarkable shift in the knowledge grading. After the intervention, 85% of the mothers moved into the “excellent” category (scores between 15–20), indicating a thorough understanding of the subject matter.

Table 1: Frequency and Percentage Distribution of Socio-Demographic Variable

S. No.	Demographic variables	Frequency	Percentage
1.	AGE (YEARS)		
	18-25 Year	7	35.0%
	25-35 Year	9	45.0%
	35-45 Year	4	20.0%
	Above 45 Year	0	0.0%
2.	EDUCATIONAL STATUS		
	Illiterate	0	0.0%
	Primary school	5	25.0%
	High school	8	40.0%
	Higher Secondary	3	15.0%
	Graduate	4	20.0%
3.	OCCUPATIONAL STATUS		
	Housewife	15	75.0%
	Self-employed	0	0.0%
	Government employee	0	0.0%
	Working in Private sector	5	25.0%
4.	TYPE OF FAMILY		
	Nuclear	7	35.0%
	Joint	9	45.0%
	Extended	4	20.0%
5.	NUMBER OF CHILDREN		
	Single child	3	15.0%
	2 children	14	70.0%
	3 children	1	5.0%
	More than 3 children	2	10.0%

Knowledge Score	Knowledge Mean Grade	Pre-test knowledge score		Post-test knowledge score	
		Frequency	Percentage	Frequency	Percentage
Pre-test	9.30	2.49			
Post-test	16.85	2.34	7.55	10.822	0.001
1-5	Poor	1	5.0%	0	0.0%
5-10	Average	11	55.0%	0	0.0%
10-15	Good	8	40.0%	3	15.0%
15-20	Excellent	0	0.0%	17	85.0%
	Total	20	100%	20	100%

Table No. 5: Mean, Mean difference, Standard deviation, ‘t’ value of pre-test and Post-test knowledge score

Paired ‘t’ test was applied. P value < 0.05 was taken as statistically significant.

Discussion

The present study aimed to assess the effectiveness of an educational intervention on improving the knowledge of mothers regarding dental caries. **Paired t-test** was applied to compare the pre-test and post-test knowledge scores. The results revealed a significant improvement in the participants' understanding of dental caries following the intervention. The pre-test score was 9.30, which increased to 16.85 post-intervention, reflecting a mean difference of 7.55. The computed t-value was -10.822, which was compared to the tabulated t-value at a significance level of 0.05 for a degree of freedom (df) of 19. The tabulated t-value for this comparison was approximately 2.093. Since the computed t-value (-10.822) was greater than the tabulated t-value (2.093), the result was statistically significant, confirming that the educational program was effective in enhancing knowledge. The findings of this study support the alternative hypothesis (H1), which posited that there would be a significant association between the knowledge regarding dental caries and selected demographic variables. Consequently, the null hypothesis (H0), which stated that there would be no significant association between knowledge and demographic variables, was rejected. These results underscore the importance of both targeted educational interventions and consideration of demographic factors in improving health-related knowledge.

Conclusion

Table 2: Analysis of Pre-test Knowledge Scores before Intervention

Score	Pre-test Knowledge Scores	Frequency	Percentage
1-5	Poor	1	5.0%
5-10	Average	11	55.0%
10-15	Good	8	40.0%
15-20	Excellent	0	0.0%
	Total	20	100%

Table 3: Analysis of Post-test Knowledge Scores after Intervention

Score	Post-test Knowledge Scores	Frequency	Percentage
1-5	Poor	0	0.0%
5-10	Average	0	0.0%
10-15	Good	3	15.0%
15-20	Excellent	17	85.0%
	Total	20	100%

Table 4: Comparison of Pre-Test and Post-Test knowledge score

Based on the findings of the study, following recommendation have been made for study based on finding we got to know that mothers of primary school going children, have less knowledge regarding dental caries .To enhance their knowledge there should be given by health education and video.

References:

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