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Effectiveness of video assisted teaching on knowledge regarding periodontal diseases as a risk for preterm delivery among adolescent girls: Pre-experimental one group pre-test post-test research design

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#### **Abstract**

**Background of the study:** Periodontal diseases are a group of infectious diseases caused by predominantly Gram-negative and anaerobic bacteria that induce local and systemic elevations of proinflammatory prostaglandins (PGE2) and cytokines <sup>[1]</sup>.

**Aim of the study**: To assess the effectiveness of videos assisted teaching on knowledge regarding periodontal diseases as a risk for preterm delivery among adolescent girls.

**Materials and Methods:** The study was a Pre-experimental one group pre-test post-test research design. Structured knowledge questionnaire was developed in order to assess the knowledge regarding periodontal diseases as a risk for preterm delivery. It was conducted at PU College with the sample size of 60 adolescence girls, selected by using simple random sampling technique and the collected data were analyzed and interpreted based on descriptive and inferential statistics

**Results:** The findings of the study revealed that before implementation of video assisted teaching program, majority 38 (63.3%) of adolescence girls had poor knowledge, 22 (36.7%) adolescence girls had average knowledge. After the implementation of the video assisted teaching program, majority 41 (68.3%) adolescence girls had excellent knowledge, 19 (31.7%) of them scored good knowledge regarding periodontal diseases as a risk for preterm delivery.

The Mean and Standard Deviation of the level of knowledge before implementation of video assisted teaching program regarding periodontal diseases as a risk for preterm delivery is  $9.30\pm2.7$  and mean and standard deviation of the level of knowledge after implementation of video assisted teaching program was  $27.08\pm2.2$ . There was highly significant between the mean level of knowledge scores before and after implementation of video assisted teaching program (t=43.33, df=59) at a 0.05 level of significance. Hence, the accepted research hypothesis H1 and null hypothesis H01 was rejected in this study. Therefore, it was concluded that video assisted teaching program was found effective to enhance the knowledge regarding periodontal diseases as a risk for preterm delivery among adolescence girls.

Conclusion: Based on the research findings, it was concluded that the video assisted teaching program gained and improved the knowledge regarding periodontal diseases as a risk for preterm delivery among adolescence girls.

**Keywords:** Video assisted teaching programme, adolescents girls, knowledge, periodontal diseases, preterm delivery

#### Introduction

Periodontal disease is generally caused by the bacteria in the mouth infecting the tissue around the teeth <sup>[2]</sup>. Smoking, diabetes, HIV/AIDS, family history, and certain medications are the important risk factors. Diagnosis of periodontal disease is usually done by closed inspection of gum tissue around the teeth through visual method and with a probe and by using X-rays looking for bone loss around the teeth.

# Methodology

The objective of the study was to assess the effectiveness of video assisted teaching program on knowledge regarding periodontal diseases as a risk for preterm delivery among adolescence girls. The study was based on pre-experimental one group pre-test post-test research design.

Corresponding Author: Kshetrimayum Scynthia Devi M.Sc. Nursing Obstetric and Gynecological Nursing, Columbia College of Nursing, Bengaluru, Karnataka, India It was conducted among adolescence girls, PU College Bangalore, Karnataka. Formal permission was obtained, privacy and confidentiality of each adolescence girls was maintained.

# M Sample size

The sample size of this study was 60 adolescents studying in PU College at Bangalore.

## **Sampling Technique**

Non-probability purposive sampling techniques were used for the study.

#### **Tools for Data Collection**

The tool consisted of three parts

Part- 1 Demographic proforma:

Part-II Checklist to assess dental problems

Part-III Structured knowledge questionnaire on periodontal diseases as a risk for preterm delivery:

## **Methods of Data Collection**

A Structured knowledge questionnaire on knowledge regarding periodontal diseases as a risk for preterm delivery among adolescence girls was used for the data collection in the study.

## **Procedure for Data Collection**

The data was collected between 22/02/21 to 22/02/21. Investigator introduced herself to the samples and explained the purpose of the study and ascertained the willingness of the participants and adolescents girls were assured about the anonymity and confidentiality of the information provided by them. Purposive sampling technique was used to select the sample. The adolescents girls who were available at the time of data collection were screened using check list to assess dental problems and those who had the scores 4 and above out of 20 were selected for knowledge assessment. 60 adolescents with lowest scores were selected as samples. Pre- test was performed for the group by using structured knowledge questionnaire which was developed by the investigator and validated by the experts. Video assisted teaching programme was conducted with the help of AV aids soon after the pre-test. From eighth day onwards posttest was done with the same set of questions (as on day 1).

# **Data Analysis**

Analysis and interpretation of data were done in accordance to the objectives of the study by using descriptive and inferential statistics. Paired 't' test was used to compare the effectiveness of video assisted teaching program.

#### Results

Description and analysis of samples based on their pre-test and post-test level of knowledge

**Table 1:** Distribution of samples according to their pre-test level of knowledge (N=60)

Level of knowledge	Category	Pre-Test		
		Frequency (f)	Percentage (%)	
Poor	0-10 Score	38	63.3%	
Average	11-15 Score	22	36.7%	
Satisfactory	16-20 Score	0	0.00%	
Good	21-25 Score	0	0.00%	
Excellent	26-30 Score	0	0.00%	

**Table 2:** Distribution of samples according to their post-test level of knowledge (N=60)

Level of knowledge	Category	Post Test	
		Frequency (f)	Percentage (%)
Poor	0-10 Score	0	0.00%
Average	11-15 Score	0	0.00%
Satisfactory	16-20 Score	0	0.00%
Good	21-25 Score	19	31.7%
Excellent	26-30 Score	41	68.3%

Significant at 0.05 levels

Table 3: Over all Pre-test and Post-test Mean Knowledge on periodontal disease as a risk for preterm delivery and its Management N=60

Aspects	Max. Score	Adolescents Knowledge		Paired t' Test	
		Mean	SD	Mean (%)	raired t Test
Pre-test	30	9.30	2.7	31.0	43.33*
Post-test	30	27.08	2.2	90.3	43.33**

<sup>\*</sup> Significant at 0.05, t=1.96 (df = 59)

#### **Discussion**

The study showed that video assisted teaching program regarding periodontal diseases as a risk for preterm delivery among adolescence girls was found effective (t=43.33, p<0.05).

The findings of this study was strongly supported by a study conducted in Kuwait to find out oral health knowledge and oral health behaviour of male Health Sciences College students. Data were collected from 128 male students at the male Health Sciences College in Kuwait. The study results showed that oral health knowledge seemed to be limited and very few background factors were associated with it. Majority of the students had visited a dentist during the last 12 months, but only one third of them were brushing twice a day or more often [3].

#### Conclusion

The findings of the study concluded that knowledge regarding periodontal diseases as a risk for preterm delivery among adolescence girls was highly effective after implementation of video assisted teaching program. Therefore, it was proven that the application of video assisted teaching program enhance the knowledge among adolescence girls.

# References

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