

## “A study to assess the effectiveness of video-assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students of selected colleges, Gwalior, Madhya Pradesh.”

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### ABSTRACT

This study was conducted with the objective to formulate video assisted teaching programme regarding stem cells and cord blood banking, to assess the pre-test and post-test knowledge score regarding menstrual disorders and its effect on conception among students, to assess the effectiveness of on knowledge regarding menstrual disorders and its effect on conception among students. To find out the association between pre-test knowledge score regarding menstrual disorders and its effect on conception among students with their selected demographic variables. The study design was an pre-experimental, one group pre-test post-test research design, 302 nursing students who fulfil the inclusive criteria were selected based on non-probability purposive sampling, after getting informed consent from the study participant, the video assisted teaching programme was administered at govt college of nursing Gajra raja medical college, Sophia nursing college (C.G). The analysis of knowledge score revealed a significant improvement in participants' knowledge following the interventions. The mean pretest score was 18.30(43.57%) which increased markedly to mean posttest 25.37(60.41%). The mean percentage was 60.41%. The standard deviation pretest was 5.9047 while that of posttest was 6.7673. The estimated standard deviation of the difference was 1.155. Using statistical values the t-test was applied for large sample analysis, resulting in a t- score of 106.3 which is substantially very high and indicates a statistically significant difference between pretest-post test score at  $P < 0.005$ , level. This conforms the effectiveness of video assisted teaching in enhancing the knowledge of nursing students regarding menstrual disorders and their effects on conception. Accordingly, the research hypothesis there will be significant difference between pretest and posttest knowledge score -is accepted, while the Null hypothesis  $H_0$  is rejected. Additionally, statistical analysis revealed a significant association between knowledge scores and selected demographic variables. Accordingly, hypothesis  $H_1$  is accepted, while the null hypothesis  $H_0$  is rejected. Hypothesis  $H_2$  is also supported, indicating a significant association between pre-test knowledge scores and selected demographic variables

**KEY WORDS:** Assess Effectiveness, Menstrual Disorders, nursing students, video assisted teaching, Effects on conception

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### Introduction

**Krushna Sone.et.al. (2023)** The menstrual cycle is a series of natural changes in hormone production and the structures of the uterus and ovaries of the female reproductive system that make pregnancy possible. The menstrual cycle can cause some women to experience problems that disrupt daily lives. These can include cramps, tender breasts, tiredness, and premenstrual syndrome. More severe problems such as premenstrual dysphonic disorder are experienced by 3–8% of women. The menstrual cycle can be modified by hormonal birth control.<sup>(31)</sup> **Mahajan, Anjali et al (2017)**, Adolescents belong to vital age group not only because they are the entrant population to parenthood but also because they are threshold between childhood and adulthood. As they attempt to cross this threshold, they face various physiological, psychological, and developmental changes. The word “Adolescent” is derived from the Latin word “adolescere” which means to grow to maturity that indicates the defining features of adolescence.

Menstruation is the first indication of puberty. During puberty, the physical changes occur which transform the body of child into that of an adult, changes in body size, and changes in body proportions. A menstrual taboo is any social taboo concerned with menstruation. In some societies, it involves menstruation being perceived as unclean or embarrassing, extending even to the mention of menstruation both in public (in the media and advertising) and in private (among the friends, in the household, and with men). Many traditional religions consider menstruation ritually unclean. Most of the girls receive their gynecological information from their mothers, religious books, older sister, or a peer. However, such information was generally given after menarche rather than before. Hence, there is a need to provide healthy family life education to the woman particularly the adolescent girls (AGs). **Susan Wysockiet. al.(2013)** RNC, NP, FAANP, President and CEO of the National Association of- Nurse Practitioners in Women's Health (NPWH) said that if there is a change in the bleeding

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“A study to assess the effectiveness of video-assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students of selected colleges, Gwalior, Madhya Pradesh.”

pattern, it is an indication that something is wrong in the reproductive cycle. Cycles may become irregular, infrequent, or stop altogether and this is called menstrual disorder.

**Dr. Peter J. al.(2022)** The study was conducted to assess the effectiveness of video-assisted teaching on knowledge of menstrual disorders and its effect on conception among students studying in selected colleges. There was a statistically significant ( $p > 0.01$ ) increase in post-test knowledge scores of menstrual disorders and its effect on conception among students studying in selected colleges. Therefore, it is concluded that providing video-assisted teaching is an effective teaching strategy in increasing the knowledge of menstrual disorders and its effect on conception among students studying in selected colleges. <sup>(51)</sup>

**Emmanuel Odong et.al (2022)** A cross-sectional study design using a self-administered questionnaire. WHO (World Health Organization) QOL-BREF (QOL-Best Available Reference document) questionnaire was used to assess the QOL of participants. Collected data was double entered into EPIDATA, and transferred to STATA for analysis. Data was presented using tables, and analyzed using percentages, frequencies, medians, interquartile range, means and standard deviations, t-test and ANOVA were used to establish statistical significance.  $P < 0.05$  was considered statistically significant. <sup>(50)</sup>

**PendoMussa Ibrahimet.al. (2023)** Cross-sectional study was conducted at a zonal referral hospital in Northern Eastern, Tanzania. Data was extracted from women files who attended the hospital obstetrics and gynaecology clinic retrospectively. Data were analysed using Statistical Package for Social Sciences (SPSS) version 20.0. Descriptive statistics were used to summarize the data. A univariate logistic regression model was fitted to assess the strength of the association between heavy menstrual bleeding and exposure variables. <sup>(52)</sup>

**Bincy Mathew. et.al. (2023)** Pre-experimental research design was used. For total of 60 adolescent girls who met the sampling criteria were selected with a convenient sampling technique from the selected area of DNH. The data were collected using the interview method from a knowledge questionnaire and attitude scale. The result revealed that a significant difference in the knowledge post-test score (27.15) is higher than the pre-test score (6.72) of adolescent girls after administering video-assisted teaching as measured by the ‘t’ test (37.76) which was highly significant at 0.00001 level of significance.

This is an era of advancement in all fields where females have to pass through a lot of stress which affects their body physiology including menstruation.

Since there is a lack of information regarding menstrual disorders among young college students the investigator felt the need to prepare video-assisted teaching based on menstrual disorders, its treatment and how it will affect the conception in future. As a Chinese proverb says, “If I hear, If I see, If I do, If I use I remember”, the investigator has

selected video-assisted teaching as the medium for giving information (education) regarding menstrual disorders and their effect on conception and assessing their effectiveness so that it can be utilized by various centers to educate the young females on menstrual disorders and its effect on conception. <sup>(53)</sup>

## STATEMENT OF THE PROBLEM

**“A study to assess the effectiveness of video-assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students of selected colleges, Gwalior, M.P.”**

## OBJECTIVES

- To assess the pre-test knowledge score regarding menstrual disorders and its effect on conception among students.
- To assess the post test knowledge score regarding menstrual disorders and its effect on conception among students.
- To assess the effectiveness of video-assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students.
- To find out the association between pre-test knowledge score regarding menstrual disorders and its effect on conception Among students with their selected demographic variables.

## HYPOTHESIS

**H0: There will be no significant difference between pre-test and post- test knowledge score regarding menstrual disorders and its effect on conception among students of selected colleges at  $P < 0.05$  level of significance.**

**H1: There will be a significant difference between pre-test and post- test knowledge score regarding menstrual disorders and its effect on conception among students of selected colleges at  $P < 0.05$  level of significance.**

**H2: There will be a significant association between the pre-test knowledge regarding menstrual disorders and its effect on conception with their selected socio-demographic variables at  $P < 0.05$  level of significance.**

## CONCEPTUAL FRAMEWORK-

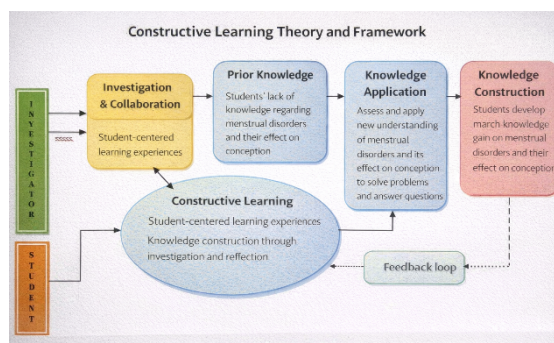
According to Polit and Hungler (1995) Conceptual framework refers to interrelated concepts that are assembled to gather in some rationale scheme by virtue of relevance common theme. They serve as spring board for generation of hypothesis to be tested. It provides guidance for development utilisation and evaluation of video-assisted teaching programme.

Constructivist Learning Theory, pioneered by Jean Piaget and expanded by scholars like Vygotsky and Bruner, emphasizes that learners actively construct knowledge through experience, reflection, and social

“A study to assess the effectiveness of video-assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students of selected colleges, Gwalior, Madhya Pradesh.”

interaction. This framework shifts the focus from passive reception to active engagement, making it ideal

for teaching complex topics like menstrual disorders and conception.



### Stages

#### Prior Knowledge

- Students begin with limited or fragmented understanding of menstrual disorders and their effect on conception.
- Their existing beliefs and experiences form the foundation for new learning.

#### Exploration & Collaboration

- Investigator and student engage in dialogue and collaborative inquiry.
- Mutual goal setting ensures the learning process is student-centered.
- Teaching interventions (e.g., video-assisted programs) encourage active participation.

#### Knowledge Construction

- Students interpret new information in light of prior knowledge.
- Reflection and discussion help them reorganize and internalize concepts.
- Misconceptions are identified and corrected through guided interaction.

#### Knowledge Application

- Learners apply their new understanding to problem-solving and real-life scenarios.
- Assessment tools (pre-test and post-test) measure how knowledge has been reconstructed.
- Feedback loops reinforce learning and highlight areas needing further exploration.

#### Outcome

- Students demonstrate marked knowledge gain regarding menstrual disorders and their effect on conception.
- Learning is not just transmitted but actively constructed, leading to deeper comprehension and retention

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### Materials and methods:

#### Research Design

A pre-experimental, one group pre-test post-test research design was used for the study.

#### Setting

The study was conducted govt college of nursing Gagra raja medical Gwalior, (M.P.)

#### Population

Population of the study comprises of nursing students between age of 18-21 year.

#### Sample

. nursing students who fulfil the inclusive criteria

#### Sample Size

302 nursing students

#### Sampling Technique

A non-probability Purposive sampling technique was used to select the samples. Informed consent was obtained from the participants.

### CRITERIA FOR THE SELECTION OF SAMPLING

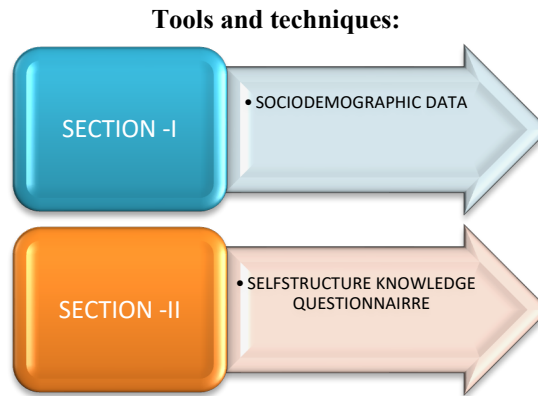
#### Inclusion Criteria's

- Samples who are willing to participate
- Female nursing students in the age group of 18-21years.
- Nursing College students who are available during the period of data collection.
- Undergraduates and unmarried nursing students studying in the selected colleges.
- Nursing students who can read and write English Hindi.

#### Exclusion Criteria

- Male students
- Married students
- College students that was not willing to participate.
- College students who are not available during the period of data collection
- College students who cannot read and write English Hindi.

“A study to assess the effectiveness of video-assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students of selected colleges, Gwalior, Madhya Pradesh.”



**The tool consisted of**

**Section- I** Which include

Part- A Scio-Demographic variables such as age, parity, religion, occupation, area of living, Type of family, family monthly income, education.

**Section - II** which includes

Part- B Knowledge questionnaire regarding menstrual disorders and their effects on conception. Each question carries one mark the total score was 40. It was categorized into Poor (0-10), Average (11-20) and Good (21-30), Excellent (30-40).

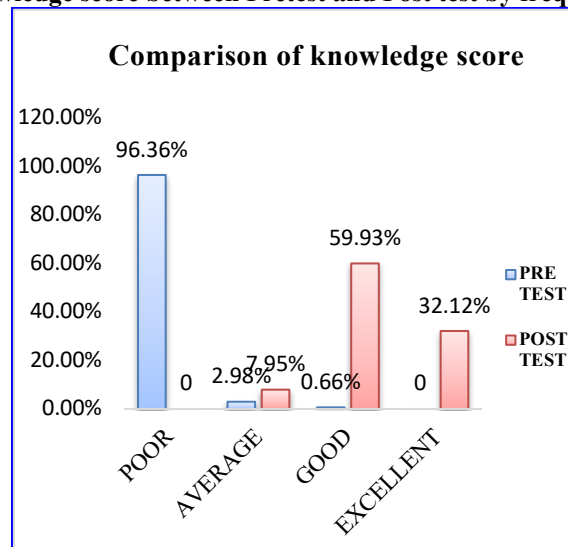
**Procedure for data collection**

The data collection was done for 4 weeks. After informed consent and willing from the study participant the study was conducted at govt college of nursing, Gajra raja medical college Gwalior (M.P).

The total of 302 samples was selected

**SECTION-2**

**TABLE- 11**  
**Comparison of knowledge score between Pretest and Post test by frequency and percentage**



**Figure 4.2.10: Colum diagram showing Comparison of knowledge score between pre test & post test**

<b>PRE TEST</b>	<b>POST TEST</b>
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“A study to assess the effectiveness of video-assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students of selected colleges, Gwalior, Madhya Pradesh.”

SCOR E	FREQ UENC Y	PERCEN TAGE	FREQ UENC Y	PERCEN TAGE
Poor	291	96.36%	00	00
Average	9	2.98%	24	7.95%
Good	2	0.66%	181	59.93%
Excellent	00	00%	97	32.12%
Total	302	100	302	100

**Table4.2. 10**(figure: 4.2.10) Depicts that comparison of knowledge score between pre test & post test in which 291(96.36%) had Poor knowledge, 9(2.98%) had Average knowledge and 2(0.66%) had good knowledge and 0(0%) had excellent knowledge in pretest and 0(0%) had Poor knowledge, 24(7.95%) had average knowledge and 181(59.93%) had good knowledge and 97 (32.12%) had excellent knowledge in post test.

### SECTION: -3

**Table.12**

**Overall Analysis of pre-test and post- test knowledge score by using, Total score, Mean, Mean percentage &Standard deviation.**

KNOWLEDGE	TOTAL SCORE (12684)	MEAN	MEAN%	SD
PRE TEST	5527	18.30	43.57	5.9047
POST TEST	7663	25.37	60.41	6.7673

**Overall Analysis of pre test and post test knowledge score by using Total score, Mean, Mean percentage & Standard Deviation.**

**TABLE -4.11** Depicts that the knowledge scores in pre test and post test was 5527 and 7663 respectively out of 12684.the total mean and means score percentage of pre test and post test was 18.30(43.57%) and 25.37(60.41%) respectively. The standard deviation of pre test was 5.9047 while that of post test was 6.7673.

### SECTION: 4

**Table: No.13**

**Evaluation of data related to effectiveness of video- assisted teaching on knowledge score regarding menstrual disorders and its effect on conception among students by using paired “t” test**

**ANALYSIS OF KNOWLEDGE AND EFFECTIVENESS OF VIDEO-ASSISTED TEACHING PROGRAMME USING PAIRED “t” TEST**

SAMP LES	ME AN	MEAN %	SD	Pai red ‘t’ test	df	Tab le val ue	Signific ance
Pre test Knowledge Score	18.30	43.57	5.9047	13.680	301	1.968	P<0.05 Significant
Post test Knowledge Score	25.37	60.41	6.7673				

“A study to assess the effectiveness of video-assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students of selected colleges, Gwalior, Madhya Pradesh.”

**Table 4.12** Pre-test mean knowledge score was 18.30, mean percentage was 43.57% with SD 5.9047, while post-test mean score was 25.37, and mean percentage was 60.41% with SD 6.7673. The statistical paired t test suggests that there was a statistically significant difference between the knowledge scores before and after the test.  $P < 0.05$ , indicating that the video-assisted

teaching program is effective. Therefore,  $H_0$  is rejected and  $H_1$  is accepted.

**CHI-SQUARE ANALYSIS FOR ASSOCIATION BETWEEN PRE TEST KNOWLEDGE SCORE OF MENSTRUAL DISORDERS AND ITS EFFECT ON CONCEPTION WITH THEIR SELECTED SOCIO-DEMOGRAPHIC VARIABLES.**

**Tab.4.14 Association between pre-test knowledge and socio demographic variable of menstrual disorders and its effect on conception**

Sl. No.	Demographic variables	Excellent	Good	Average	Poor	Calculated chi-square Test value	df	Table value 0.05	Inference
<b>1.</b>	<b>Age in years</b>								
a)	18 Year	0	0	3	132	<b>4.5751</b>	<b>6</b>	<b>12.592</b>	<b>Not Significant</b>
b)	19 Year	0	0	2	63				
c)	20 Year	0	1	2	47				
d)	21 Year	0	1	2	49				
<b>2.</b>	<b>Religion</b>								
a)	Hindu	0	0	4	165	<b>5.8385</b>	<b>6</b>	<b>12.592</b>	<b>Not Significant</b>
b)	Muslim	0	0	1	64				
c)	Christian	0	1	2	35				
d)	Other	0	0	2	27				
<b>3.</b>	<b>Year of study</b>								
a)	First year	0	0	2	86	<b>3.5557</b>	<b>4</b>	<b>9.488</b>	<b>Not significant</b>
b)	Second year	0	1	1	87				
c)	Third year	0	1	6	118				
<b>4.</b>	<b>Type Of Family</b>								
a)	Nuclear	0	1	2	111	<b>1.5682</b>	<b>4</b>	<b>9.488</b>	<b>Not Significant</b>
b)	Joint	0	1	5	142				
c)	Extended	0	0	2	38				
<b>5.</b>	<b>Family income per month</b>								
a)	Up to Rs.5000/-	0	0	2	53	<b>1.8442</b>	<b>6</b>	<b>12.592</b>	<b>Not significant</b>
b)	Rs.5000- to – Rs. 10,000/-	0	1	2	57				
c)	Rs.10,000 –to- Rs.15,000/-	0	1	4	135				
d)	More than Rs.15,000/-	0	0	1	46				
<b>6.</b>	<b>Educational status of the mother</b>								
a)	Illiterate	0	0	0	25	<b>4.3070</b>	<b>10</b>	<b>18.31</b>	<b>Not Significant</b>
b)	Primary school	0	0	0	24				
c)	Middle school	0	0	1	39				
d)	High school	0	0	2	63				
e)	Higher secondary	0	1	3	66				
f)	Graduates	0	1	3	74				
<b>7.</b>	<b>Age at menarche</b>								
a)	Less than 10 years	0	0	1	9	<b>5.3393</b>	<b>6</b>	<b>12.592</b>	<b>Not Significant</b>
b)	11-12 years	0	0	1	94				
c)	13 -14 year	0	2	5	148				
d)	Above 15 years	0	0	2	40				
<b>8.</b>	<b>History of menstrual disorders</b>								
a)	Absence of menstruation	0	0	0	0				
b)	Scanty or less bleeding	0	0	2	15				

“A study to assess the effectiveness of video-assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students of selected colleges, Gwalior, Madhya Pradesh.”

c)	Menstruation with heavy bleeding at regular intervals	0	1	2	6	<b>33.1748</b>	<b>4</b>	<b>9.488</b>	<b>Significant</b>
d)	Menstruation with prolonged bleeding at irregular interval	0	0	0	0				
e)	None	0	1	5	270				
<b>9. Source of information on menstrual disorders</b>									
a)	Elders in the family	0	0	1	13	<b>6.2423</b>	<b>14</b>	<b>23.68</b>	<b>Not Significant</b>
b)	Mother	0	1	3	132				
c)	Sister	0	1	1	43				
d)	Friends	0	0	1	37				
e)	Teachers	0	0	1	39				
f)	News paper	0	0	1	9				
g)	Television/Internet	0	0	1	14				
h)	None	0	0	0	4				

### Result and Findings:

➤ In this study

**There was no association between the pre-test knowledge score and History of menstrual disorders as calculated is 33.1748 is greater than table value of chi-square (9.488) at the level of  $P < 0.05$ . Hence it is significant.**

➤ There was no association between the pre-test knowledge score and Source of information on menstrual disorders as calculated is 6.2423 is smaller than table value of chi-square (23.68) at the level of  $P < 0.05$ . Hence it is not significant

**Data presented in table indicates that there was significant association between the knowledge scores with selected socio-demographic variables. Hence  $H_2$  is accepted.**

Several studies support the findings of the present study. A descriptive study by Kavitha R. (2018) conducted among adolescent girls in Chennai reported inadequate baseline knowledge regarding menstrual disorders and found no significant association between knowledge scores and source of information ( $p > 0.05$ ). Similarly, Sharma S. et al. (2019), in a cross-sectional study among college students in Delhi, observed poor pre-intervention knowledge and no significant association between socio-demographic variables and knowledge scores ( $p > 0.05$ ). A quasi-experimental study by Priya M. (2020) among nursing students in Bangalore also revealed that history of menstrual disorders was not significantly associated with knowledge scores ( $p > 0.05$ ), which is consistent with the present findings. In contrast, a study by Rajeswari K. (2017) conducted among antenatal mothers in Mogappair showed that 72% of participants had adequate knowledge and 28% had moderate knowledge, indicating that knowledge levels can improve with appropriate educational exposure. Thus, these studies collectively support the present study findings by demonstrating inadequate baseline knowledge and lack of significant association

with selected variables, highlighting the need for effective educational interventions.

### LIMITATIONS

- Pre-experimental
- No control group
- Cultural and social sensitivity
- External sources of information
- The study was limited to Govt. College of nursing Gajra Raja medical college Gwalior, (M.P.)

### RECOMMENDATIONS

- A similar study can be replicated in a larger sample where the finding can be generalized.
- Incorporate video-assisted teaching in curriculum.
- video-assisted teaching. In community for improving reproductive health
- A comparable study can be to evaluate long-term behavioral changes and information retention, extend the study time.
- Further research study done with control group and by using mixed methodology.

### CONCLUSION

Based on the findings of the study, it is concluded that:

- The pre-test results indicated that students had inadequate knowledge regarding menstrual disorders and their effect on conception, with a mean score of 18.30 (43.57%) and the majority (96.36%) demonstrating poor knowledge.
- Following the video-assisted teaching intervention, there was a significant improvement in knowledge, as evidenced by an increase in the post-test mean score to 25.37 (60.41%). The paired *t*-test showed a statistically significant difference between pre-test and post-test scores ( $p < 0.05$ ), confirming the effectiveness of the intervention. Hence, the null

“A study to assess the effectiveness of video-assisted teaching on knowledge regarding menstrual disorders and its effect on conception among students of selected colleges, Gwalior, Madhya Pradesh.”

hypothesis (H<sub>0</sub>) was rejected, and the research hypothesis (H<sub>1</sub>) was accepted.

- A comparison of knowledge levels revealed a marked shift from poor knowledge in the pre-test to good (59.93%) and excellent (32.12%) knowledge in the post-test, indicating substantial learning gain among participants.
- Regarding association, only history of menstrual disorders showed a significant relationship with pre-test knowledge scores, while other socio-demographic variables were not significantly associated.
- Overall, the study concludes that video-assisted teaching is an effective method for improving knowledge on menstrual disorders and their impact on conception among college students.

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