

A STUDY TO ASSESS THE EFFECTIVENESS OF THE PLANNED TEACHING PROGRAMME REGARDING EXPRESSION AND REGULATION OF VASCULAR ENDOTHELIAL GROWTH FACTOR DURING MENSTRUATION AMONG B.SC. NURSING 4TH YEAR STUDENTS IN SELECTED COLLEGE OF NURSING KANPUR

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Abstract: Reproductive system a variety of cyclical methods within the direction of an ovulatory cycle, and angiogenesis has a vital position in those methods. Follicular increase and formation of a functioning corpus luteum relies upon the improvement of a wealthy capillary network. Growth of the endometrium is likewise followed with the aid of using massive angiogenesis. The cyclical evolution and decline of those ovarian and endometrial vascularized systems show that there are programmed moves of angiogenesis regulators. Vascular endothelial increase factor (VEGF) is a mighty mitogen for the vascular endothelium and additionally stimulates vascular permeability. The present study aimed to assess the effectiveness of the planned teaching programme regarding expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students. The objectives of the study were to assess the effectiveness of the planned teaching programme regarding expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students & to find the association between the pre-test knowledge score with the demographic variables. The research approach used was Quantitative approach & quasi experimental (one group pre-test and post-test) design was adopted for this study. The setting of the study was Rama college of nursing Kanpur Uttar Pradesh & the sample size was 70 B.Sc. Nursing 4th year students selected by purposive sampling technique. The data was collected & analysed on the basis of objectives. The finding of the study showed that mean value is 10.48 and standard deviation value 3.51 of pre-test level of knowledge and shows mean value is 21.41 and standard deviation value 2.98 of post-test & the majority 35 (50.00%) had inadequate knowledge, 35 (50.00%) had moderate knowledge and 00 (00.00%) had adequate knowledge in pre-test & 00 (00.00%) had inadequate knowledge, 24 (34.28%) had moderate knowledge and 46 (65.72%) had adequate knowledge in post-test. The association was assessed with demographic variables. It showed that gender & any previous knowledge, if yes source of information the age in year, place of stay, educational status, type of family, dietary habits, religion was the no significant level of knowledge. It concluded that the acquired t-value (57.42) was table value <.00001 at DF 69 which was <0.05 level of significance, which shows that there is a significant difference between pre-test and post-test. Thus, from the above findings, the formulated research hypothesis, H1 was accepted.

Keywords: vascular endothelial growth factor, Menstruation, Corpus luteum, planned teaching programme, B.Sc. Nursing 4th year students

Introduction

The endometrial reproduction in the cycle during a female's reproductive age needs a careful controlled angiogenic response. ¹The loss and restoration of the functioning endometrium in the course of the menstrual cycle reason for awesome physiological adjustments within the higher ape. ²In humans, the spongy layer of the endometrium sheds all through menstruation. In reality, tissue breakdown and damage to the encircling superficial endometrial arteries reason menstrual bleeding. ³ 5 days after the commencement of menstruation, the broken endometrial vessels had been repaired. As a result, all through each the proliferative length and the past due stages of month-to-month bleeding, the early ranges of innermost layers of uterus angiogenesis require a recovery of the vascular base ⁴ While the productive cycle depicts the growth of the coils arteries, and veins generated by progesterone, the advancement of endometrial angiogenesis patterns addresses the augmentation of the vasculature under the involvement of sex hormone. ⁵ The best-known function of VEGF is its angiogenic activity. In the female reproductive system, however, it plays more than an angiogenic role, as it's involved in a number of key events in the course of an ovulatory cycle. In the endometrium, where the primary role of VEGF is to induce angiogenesis to form receptive endometrium for embryo plantation, VEGF expression promoted by both E and P. However, in ovarian GCs and mucosal cells of the oviduct, where VEGF not only promotes angiogenesis but also increases permeability, VEGF expression isn't influenced by ovarian sex steroids but is stimulated by gonadotropin. The different modulation of VEGF expression in the different reproductive tissues might be related to the specific functions of VEGF at these different sites, although the details aren't yet clear. In the menstruating and cyclical phases of the menstrual cycle, we evaluated the mRNA protein expression among all identified vascular endothelial growth factor (VEGF) enhanced expression in human endometrium. ⁶

Problem of the statement

A study to assess the effectiveness of the planned teaching programme regarding expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students in selected college of nursing Kanpur.

Objectives of the study

1. To assess the effectiveness of the planned teaching programme regarding expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students in selected college of nursing Kanpur
2. To associate the pre-test knowledge score with the demographic variables.

Operational definition

- **Assess-** checking the knowledge of the B.Sc. Nursing 4th regarding expression and regulation of vascular endothelial growth factor during menstruation
- **Effectiveness-** In this study it refers to the extent to which the planned teaching programme increased the level of knowledge regarding expression and regulation of vascular endothelial growth factor during menstruation
- **Planned teaching programme-** In this study it refers to a planned teaching programme by lecture cum discussion method on knowledge regarding expression and regulation of vascular endothelial growth factor during menstruation
- **Vascular endothelial growth factor-** A substance made by cells that stimulates new blood vessel formation. Also called VEGF
- **Menstruation-** Menstruation, or period, is normal vaginal bleeding that occurs as part of a woman's monthly cycle. Every month, your body prepares for pregnancy. If no pregnancy occurs, the uterus, or womb, sheds its lining. The menstrual blood is partly blood and partly tissue from inside the uterus.
- **Nursing student-** Those students who are pursuing B.Sc. 4th year.

Hypothesis

H0 – There is no significant association between the pre- test knowledge score and selected demographic variables

H1- There is a significant association between the pre-test and post -test knowledge score among B.Sc. nursing 4th year students.

H2- There is significant association between the pre- test knowledge score and selected demographic variables.

Methodology

Research approach- In this study Quantitative approach was used

Research design- In this study quasi experimental (one group pre-test and post-test) was adopted for this study

Variables

- **Research variables-** effectiveness on the expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students in selected college of nursing Kanpur.
- **Demographic variables-** In this study the demographic variable was Age, religion, education, occupation, family, socio-economic status etc.
- **Extraneous variables-** In this study extraneous variables was Mass media education, peer group discussion.

Population

In this study the population consist of all B.Sc. Nursing 4th year students studying in selected nursing college at Kanpur

Targeted population- It comprised of all B.Sc. Nursing 4th year students.

Accessible population- It comprised of B.Sc. Nursing 4th year students at selected nursing college.

Method of data collection

Sample technique- During this study the sample were selected through purposive sampling technique

Sample size- The sample size of present study comprises of 70 B.Sc. Nursing 4th year student

Sample criteria

Inclusion criteria- students who are studying in the nursing college

- Students who are willing to participate

Exclusion criteria- B.Sc. Nursing 4th year students who are not available during data collection.

Method of data collection

Data collection was done within one week in Rama college of Nursing Kanpur Uttar Pradesh. 70 sample was collected who fulfilled the inclusion criteria of the study before data collection oral consent was taken from participants. Data was analysed according to the objective of the study by descriptive and inferential statistics.

Development of tool

Construction- The tool was constructed after reviewing literature and in consultation with concept.

Description and scoring- The tool consist of two sections

Section A- It deal with demographic data such as age, education, religion, socio economic status etc.

Section B- It consist of multiple-choice question to assess the expression and regulation of vascular endothelial growth factor during menstruation.

It consists of 20 multiple choice questions. Each question contains 1 score for given right answer.

Result findings**Section-A****Table 1. Frequency and percentage wise description of demographic variables B.Sc. Nursing 4th year students**

n=70

Demographic variables	Frequency	Percentage
Gender		
Male	5	7.14%
Female	65	92.85%
Age in years		
17-18	4	5.8%
19-20	21	30.00%
21-22	28	40.00%
Above 22	17	24.28%
Place of stay		
Hostel	44	62.85%
As a paying guest	2	2.85%
Home	24	34.28%
Type of family		
Joint family	45	64.28%
Nuclear family	25	35.72%
Any previous knowledge, if yes source of information		
Mass media	29	41.42%
Health worker	15	21.42%
Textbooks	26	37.14%
Dietary Habits		
Vegetarian	36	51.42%
Non vegetarian	24	34.28%
Ovo vegetarian	10	14.28%
Religion		
Hindu	61	87.14%
Christian	4	5.71%
Muslim	5	7.14%

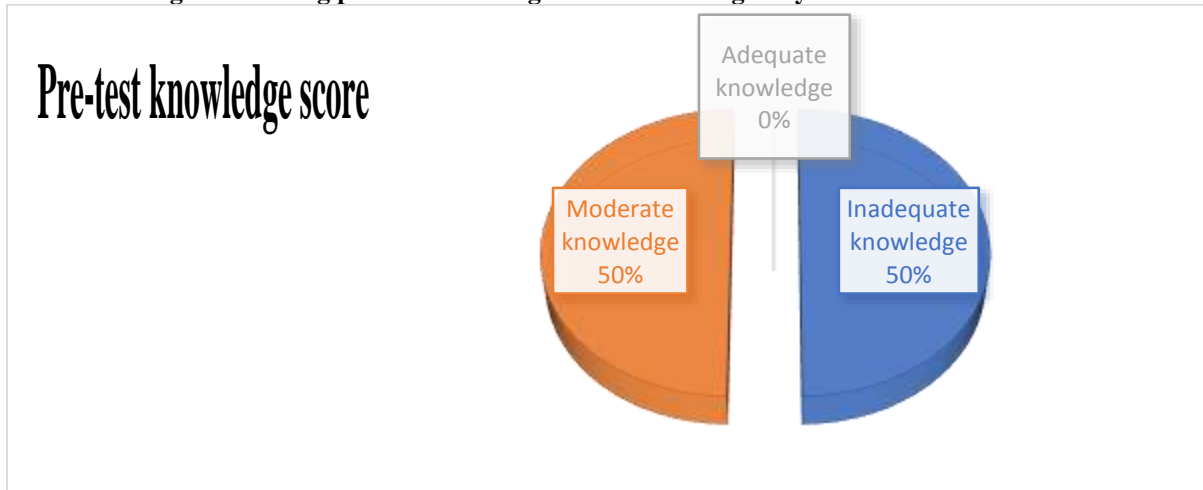
(Above Table No.1) Shows percentage wise distribution of B.Sc. Nursing 4th year students according to their gender. The data represents that 5 (7.14%) are male and 65(92.85%) are female. Shows percentage wise distribution of age. The data represents that 4(5.8%) are in 17-18 years, 21 (30.00%) are in 19-20 years, 28 (40.00%) are in 21-22 years and 17 (24.28%) are above 22 years age group. Shows percentage wise distribution of place of stay. The data represents that 44 (62.85%) stay in hostel, 2 (2.85%) are stay in P.G. and 24 (34.28%) live in home. Shows percentage wise distribution of type of family. The data represents that 45 (64.28%) live in joint family and 25 (35.72%) live in nuclear family. Shows percentage wise distribution of previous knowledge. The data represents that 29 (41.42%) knowledge by mass media, 15 (21.42%) have knowledge by health works and 26 (37.14%) have knowledge by textbooks. Shows percentage wise distribution of Dietary habits. The data represents that 36 (51.42%) are vegetarian, 24 (34.28%) are non- vegetarian and 10 (14.28%) are Ovo vegetarian. Shows percentage wise distribution of religion. The data represents that 61 (87.14%) are Hindu, 4 (5.71%) are Christian and 5 (7.14%) are Muslim.

Section-B**Table 2. Frequency and percentage wise description of B.Sc. Nursing 4th year students according to their pre-test level**

n=70

Pre-test knowledge score	Frequency	Percentage
Inadequate knowledge	35	50.00%
Moderate knowledge	35	50.00%
Adequate knowledge	00	00.00%

FIG-1: Pie diagram showing per-test knowledge of B.Sc. Nursing 4th year students.

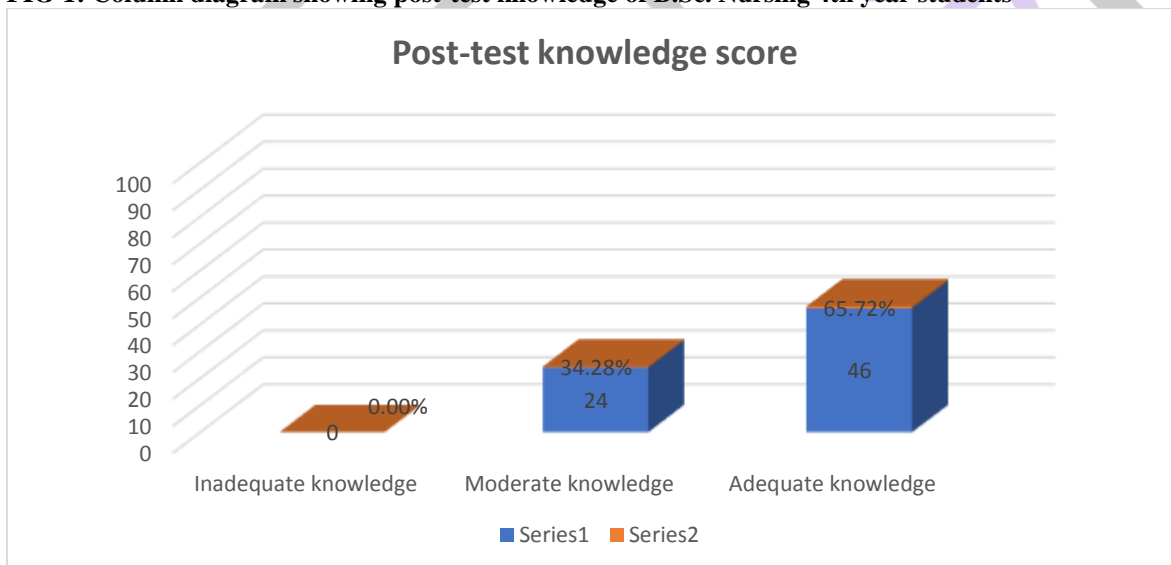


(Above Table No.2) Pie diagram shows that out of 70 B.Sc. Nursing 4th year students, 35 (50.00%) had inadequate knowledge, 35 (50.00%) had moderate knowledge and 00 (00.00%) had adequate knowledge in pre-test.

Table 3. Frequency and percentage wise description of B.Sc. Nursing 4th year students according to their post-test level n=70

Pre-test knowledge score	Frequency	Percentage
Inadequate knowledge	00	00.00%
Moderate knowledge	24	34.28%
Adequate knowledge	46	65.72%

FIG-1: Column diagram showing post-test knowledge of B.Sc. Nursing 4th year students



(Above Table No.3) Column diagram shows that out of 70 B.Sc. Nursing 4th year students, 00 (00.00%) had inadequate knowledge, 24 (34.28%) had moderate knowledge and 46 (65.72%) had adequate knowledge in post-test.

SECTION- C

COMPARISON OF PRE-TEST AND POST-TEST KNOWLEDGE REGARDING EXPRESSION AND REGULATION OF VASCULAR ENDOTHELIAL GROWTH FACTOR DURING MENSTRUATION AMONG B.SC. NURSING 4TH YEAR STUDENTS

Table 4. Mean and Standard deviation of knowledge scores on the expression and regulation of vascular endothelial growth factor during menstruation.

Knowledge score	Mean	Standard Deviation
Pre-test	10.48	3.51
Post-test	21.41	2.98

(Above table no-4) shows mean value is 10.48 and standard deviation value 3.51 of pre-test level of knowledge and shows mean value is 21.41 and standard deviation value 2.98 of post-test level of knowledge the expression and regulation of vascular endothelial growth factor during menstruation.

SECTION- D

EFFECTIVENESS OF THE PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING EXPRESSION AND REGULATION OF VASCULAR ENDOTHELIAL GROWTH FACTOR DURING MENSTRUATION AMONG B.SC. NURSING 4TH YEAR STUDENTS

Table 5. Paired “t” test of structured knowledge questionnaire

n=70

Area	Calculate “t” value	DF	Significant
Planned teaching programme on knowledge regarding expression and regulation of vascular endothelial growth factor during menstruation	57.42	69	Significant

when the mean of SD of pre-test and post -test were compared and the obtained “t” value (57.42) was table value $<.00001$ at DF 69 which was <0.05 level of significance, which shows that there is a significant difference between pre-test and post -test level of knowledge regarding expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. nursing 4th year students. Thus, from the above findings, the formulated research hypothesis, H1 was accepted.

Section-E

Association Between the level of knowledge score with the selected demographic variables of B.Sc. nursing 4th year students

Table 4. Association of the knowledge level of B.Sc. nursing 4th year students with their demographic variables

Demographic variables	Knowledge level			DF	Chi square X ²	Table value 0.05	Inferences
	IA	MA	A				
Gender							
Male	2	2	00	02	0.02	5.99	Non Significant
Female	36	30	00				
Age in years							
17-18	2	2	00	04	1.64	9.48	Non Significant
19-20	10	6	00				
21-22	20	20	00				
Above 22	7	3	00				
Place of stay							
Hostel	24	20	00	03	6.76	7.81	Non Significant
As a paying guest	2	0	00				
Home	20	4	00				
Type of family							
Joint family	28	17	00	02	2.33	5.99	Non Significant
Nuclear family	20	5	00				
Any previous knowledge, if yes source of information							
Mass media	11	18	00	06	9.80	12.59	Non Significant
Health worker	13	2	00				
Textbooks	14	12	00				
Dietary Habits							
Vegetarian	20	16	00	06	4.92	12.59	Non Significant
Non vegetarian	19	5	00				
Ovo vegetarian	8	2	00				
Religion							
Hindu	33	28	00	06	1.28	12.59	Non Significant
Christian	2	2	00				
Muslim	4	1	00				

The above table showed that association between the knowledge regarding expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students with their selected demographic variables. Genders, previous knowledge, and source of information & religion the age in years, Place of stay, educational status, occupation, Dietary Habits, Type of family, is the non- significant level of knowledge, Hence H₀ hypothesis was accepted.

DISCUSSION- The study aimed to assess the knowledge regarding expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students in selected college of nursing at Kanpur. The findings were discussed in relation to the objectives of the study. The purpose of the study to assess the knowledge expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students The overall knowledge scores regarding the knowledge expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students showed 35 (50.00%) had inadequate knowledge, 35 (50.00%) had moderate knowledge and 00 (00.00%) had adequate knowledge in pre-test & 00 (00.00%) had inadequate knowledge, 24 (34.28%) had moderate knowledge and 46 (65.72%) had adequate knowledge in post-test. The mean value is 10.48 and standard deviation value 3.51 of pre-test level of knowledge and shows mean value is 21.41 and standard deviation value 2.98 of post-test level of knowledge.

All demographic variables were not significant at 0.05 levels Thus, it can be inferred that there is no significant association between knowledge levels of B.Sc. Nursing 4th year students with demographic variables. Therefore, the hypothesis stated was no significant association between the knowledge level of B.Sc. Nursing 4th year students with demographic variables therefore H₀ was accepted.

RECOMMENDATION-

The recommendation is made on the basis of present study are

- The study can be done by using other methods of data collection.
- The similar can be done on large sample size
- The study can be repeated in community area.

CONCLUSION- The study was aimed to assess effectiveness & knowledge on expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students in Rama college of nursing at Kanpur Uttar Pradesh. The sample size 70 by purposive sampling technique. The overall knowledge scores regarding the knowledge on expression and regulation of vascular endothelial growth factor during menstruation among B.Sc. Nursing 4th year students showed that 35 (50.00%) had inadequate knowledge, 35 (50.00%) had moderate knowledge and 00 (00.00%) had adequate knowledge in pre-test & 00 (00.00%) had inadequate knowledge, 24 (34.28%) had moderate knowledge and 46 (65.72%) had adequate knowledge in post-test. The mean value is 10.48 and standard deviation value 3.51 of pre-test level of knowledge and shows mean value is 21.41 and standard deviation value 2.98 of post-test level of knowledge. and the association between level of knowledge with their selected demographic variables Genders, previous knowledge, and source of information & religion, the age in years, Place of stay, educational status, occupation, Dietary Habits, Type of family.

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