

# A Study to Evaluate the Effectiveness of Structured Teaching Programme on Knowledge Regarding Menstrual Blood Banking among Nursing Students in Selected College of Nursing at Gonda

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**Abstract:** Menstrual blood stem cell banking is the process of banking of menstrual blood for the purpose of cell therapy. Menstrual blood banking helps the women to store their menstrual blood and preserve it for future. Menstrual blood banking is an innovative, promising, cost effective, novel and ethically acceptable alternative concept. This needs to be popularised in the field of medicine. The Objective of the study was to evaluate the effectiveness of structured teaching Programme on knowledge regarding Menstrual Blood Banking among third year GNM students. **Methods:** Research design selected for this study is Pre experimental one group pre-test post-test. Non-Probability - purposive sampling technique was used to select the sample. Structured knowledge questionnaire was used to assess the knowledge of third year GNM students regarding menstrual blood banking. **Results:** Findings of the study revealed that in pre-test, majority 23 (46%) of nursing students had inadequate knowledge regarding menstrual blood banking and in post-test, majority 34 (68%) of nursing students had adequate knowledge. Mean Post-test knowledge was higher than the mean pre-test knowledge score of 10.62. In order to test the difference between the 2 means, t-test was computed and the obtained 't' value of 7.44 was found to be statistically highly significant at 0.01 level. **Conclusions:** Structured teaching programme was effective to enhance the knowledge of nursing students regarding menstrual blood stem cells banking.

**Keywords:** Structured Teaching Programme, Knowledge, Nursing Students, Menstrual Blood banking.

## 1. Introduction

Monthly miracle of the women is the menstrual blood naturally shed during each menstrual cycle. The menstrual cell comes from a woman's endometrium, or lining of the uterus, derived from her monthly menstrual cycle. So far, menstrual blood has been discarded as an unsanitary waste. However, current research has established that the menstrual blood contains large number of self-renewing stem cells. These cells multiply fastly and can differentiate into many other types of

cells such as neural, cardiac, bone, fat, cartilage and possibly others, demonstrating great potential for cell therapy. New research has shown that menstrual stem cell banking provides women with a unique opportunity to collect and preserve vital stem cells that can be harvested from the body's menstrual blood. It involves collection of stem cells from specialized sterile cups on the first day of a woman's menstrual cycle.

The process of Collection of Menstrual blood is simple and painless. The collection can be done at the privacy and convenience of home using a 'Menstrual Cup' – a conical shaped medical grade silicon cup which can collect up to 30 ml of menstrual blood. The menstrual cup is a reusable product, approved by US FD and is used as an alternative to the sanitary napkin or tampon globally. A cup that is inserted into the vagina just like a tampon. It is inserted during the heavy flow day of a woman. The cup gets perfectly fixed in place for about three hours and has the capacity to collect up to 10-20 millilitres blood. The blood is then collected into a container available in the kit. A kit is available in the market, especially for menstrual blood collection.

Life Cell is the first company offering menstrual blood stem cell banking in India. Life Cell introduced the menstrual blood banking in India after entering into a collaboration with Cryo-Cell International, who owns the patent for this technology Actor and former model Lisa Ray, who recently pursued a successful battle against blood cancer with stem cell transplant, launched a menstrual blood banking service in Mumbai. Actress & Model Lisa Ray disclosed this innovative service at the launch function at Mumbai in March 8th 2011. Menstrual Blood Banking has a huge scope as the need for regenerative therapies incorporating cells that can disseminate and transform is vast. Research has proved the advantageous of these cells and their effective use in treatment of several medical conditions like atherosclerosis, diabetes, stroke, rheumatoid arthritis, Parkinson disease, Alzheimer's disease and many more.

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Menstrual blood banking has one more advantage that there is no immune rejection during the transplant. So Menstrual Blood Banking has an extensive scope in future. Hence the researcher felt enhancing the knowledge regarding menstrual blood banking is important among nursing students.

#### 1) Statement of the problem

A study to evaluate the effectiveness of Structured teaching Programme on knowledge regarding Menstrual blood banking among nursing students in selected College of nursing, at Gonda.

### 2. Objectives

- To assess the pre-test and post-test knowledge of third year GNM students regarding Menstrual blood banking.
- To evaluate the effectiveness of Structured Teaching Programme on knowledge of third year GNM students regarding Menstrual Blood banking by comparing pre-test and post-test knowledge.
- To associate the pre-test knowledge score of third year GNM students on Menstrual blood banking with their selected socio demographic variables.

#### 1) Hypothesis

- H1: There will be a significant difference in pre-test and post-test knowledge score of third year GNM students regarding menstrual blood banking.
- H2: There will be a significant association between pre-test knowledge score of the third year GNM students on menstrual blood banking with the selected demographic variables.

### 3. Materials and Methods

- Research Approach:** Quantitative evaluative research approach was selected for this study
- Research Design:** Pre-Experimental one group pre-test post-test design.
- Independent Variable:** In this study structured teaching programme on knowledge regarding menstrual blood banking is the independent variable.
- Dependent variable:** knowledge of third year GNM students regarding Menstrual blood banking
- Setting:** The study was conducted in a college of nursing, Gonda
- Sample:** Third year GNM students who fulfilled the inclusion criteria
- Sample Size:** 50

Sampling Technique: Non probability purposive sampling

### 4. Data Collection Procedure

The data collection procedure was carried out for a period of 1 week. The investigator herself performed both pre-test and post-test data collection and also implemented the STP. Pre-test was conducted with help of structured knowledge questionnaire. Structured Teaching Programme was administered. Post test was conducted after 7 days. The same structured questionnaire was used to assess the post-test also.

**Data Analysis:** The data obtained was analysed in terms of the objective of the study using descriptive and inferential statistics.

### 5. Results and Discussion

Assessment of the level of knowledge regarding menstrual blood banking among third year GNM students before and after STP.

Table 1

Frequency and percentage distribution of pre and post-test level of knowledge on Menstrual Blood banking among third year nursing students.

S.no	Level of Knowledge	Pre Test		Post-Test	
		N	N%	N	N%
1	Inadequate Knowledge	23	46%	0	0
2	Moderate Knowledge	21	42%	16	32%
3	Adequate knowledge	6	12%	34	68%

The table 1 shows that in Pre-Test among 50 samples, 23 (46%) students had Inadequate Knowledge, 21 (42%) students had Moderate knowledge, only 6 (12%) students had adequate knowledge. In Post-test, 16 (32%) students had moderate knowledge, 34(68%) students had adequate knowledge. None of them had inadequate knowledge.

Table 2

Mean and standard deviation of knowledge score of pre-test and post-test among third year GNM students

	Mean	Standard Deviation	Paired t Test
Pre -Test	10.62	4.51	7.44**
Post-Test	17.36	1.66	

Significant at  $p < 0.01$

The table 2 shows that Mean and standard deviation of the knowledge on Menstrual blood banking in pre-test is 10.62 and 4.51 in post-test 17.36 and 1.66. Mean difference in the knowledge score is significant at  $p < 0.01$ .

#### 1) Discussion

The first objective of the study was to evaluate the pre-test & post-test knowledge of third year GNM nursing students regarding menstrual blood banking. In pre-test, 23 (46%) students had Inadequate Knowledge, 21 (42%) students had Moderate knowledge, only 6 (12%) students had adequate knowledge. But In Post-test, 16 (32%) students had moderate knowledge, 34(68%) students had adequate knowledge. None of them had inadequate knowledge.

The second objective of the study was to assess the effectiveness of structured teaching programme on knowledge regarding menstrual blood banking by comparing pre-test and post-test. Mean and standard deviation of the knowledge score on Menstrual blood banking in pre-test is 10.62 and 4.51 in post-test 17.36 and 1.66. Paired t test value was 7.44. Mean difference in the knowledge score is significant at  $p < 0.05$ . It shows that there is a significant increase in knowledge of third year GNM students after the structured teaching programme. So, the structured teaching programme on knowledge regarding menstrual blood banking was effective to promote the knowledge of third year GNM students.

The third objective of the study was to associate the pre-test knowledge score of third year GNM students regarding

menstrual blood banking with their socio demographic variables. It was found that there was no association between pre-test knowledge score and socio demographic variables.

### 6. Conclusion

The study concluded that the structured teaching programme was effective in gaining the knowledge of third year GNM students regarding menstrual blood banking. So, structured teaching programme can be utilized in the nursing profession to spread health related information.

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