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**Bhalla Mounika**  
MSc(N), Department of  
Obstetrics and Gynecological  
Nursing, NRI College of  
Nursing, Chinakakani, Guntur,  
Andhra Pradesh, India

**Joseph Mary Meena**  
Assistant Professor,  
Department of Obstetrics and  
Gynecological Nursing, NRI  
College of Nursing,  
Chinakakani, Guntur, Andhra  
Pradesh, India

## A study to assess the effectiveness of structured teaching programme on knowledge regarding menstrual blood banking among 3<sup>rd</sup> year B.Sc., nursing students at selected college, Chinakakani, Guntur district, Andhra Pradesh

**Bhalla Mounika and Joseph Mary Meena**

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### Abstract

**Objective:** To assess the effectiveness of Structured Teaching Programme of knowledge regarding Menstrual Blood Banking among 3<sup>rd</sup> year B.Sc., Nursing students.

**Materials and Methods:** A pre-experimental research design was adopted and a total of 80 3<sup>rd</sup> year B.Sc., Nursing students were selected by using probability simple randomized sampling technique by using lottery method. Data were collected by using a pre-tested structured knowledge questionnaire. The data was analysed by descriptive and inferential statistics.

**Results:** Majority (82.5%) of 3<sup>rd</sup> year B.Sc., Nursing students had poor knowledge in the pre-test regarding Menstrual Blood Banking. In the post test (18.75%) of 3<sup>rd</sup> year B.Sc., Nursing students had excellent knowledge. A paired 't' test was done and was found significant (6.23\*). Association between the pre-test knowledge level of 3<sup>rd</sup> year B.Sc., Nursing students with their age, gender ( $\chi^2 = 0.02$ ), religion ( $\chi^2 = 5.63$ ), place of residence ( $\chi^2 = 0.2$ ), education of mother ( $\chi^2 = 0.55$ ), education of father ( $\chi^2 = 0.38$ ), occupation of father ( $\chi^2 = 0.52$ ), occupation of mother ( $\chi^2 = 0.28$ ), previous knowledge regarding Menstrual Blood Banking ( $\chi^2 = 0.16$ ), if yes, source of information ( $\chi^2 = 2.40$ ) was found not significant.

**Conclusion:** The health care professionals can adopt various other teaching strategies to impart knowledge to 3<sup>rd</sup> year B.Sc., Nursing students regarding Menstrual Blood Banking in a view to improve and practice the new advancement in women's life.

**Keywords:** Structured teaching programme, menstrual blood banking, B.Sc., nursing students

### Introduction

Menstruation is a unique phenomenon in girls and consists of uterine bleeding and discharge between successive ovulations [1]. Women experience menstruation for most of their lives [2]. Women experience menarche at different ages [3]. The average age at menarche can occur as early as the age of 10 or as early as the age of 16, [4] which varies in length, the average cycle is taken to be 28 days long.

Till date women have been discarding menstrual blood as an unwanted and sanitary waste and menstruation as something polluted, shameful, impure, and sometimes dangerous. But now menstruation turned out to be a "monthly boon". researchers have now discovered and successfully harvested stem cells from menstrual blood through the menstrual blood banking [5]. This was first introduced by American CryoCell company in November 2007 by Internationally [6].

These stem cells from Menstrual Blood were first discovered by Australian researcher Carline Garget of Monash University [7]. The Menstrual Bank was helpful for women to keep their Menstrual Blood in a preserved condition for the future at a minimal annual fee (Rs. 1500/-) for storage and preservation in -196°C. These Menstrual Blood Banks have brought lifelong benefits to women up to age 60 [8].

Marking the 100th International Women's Day celebration as yet another remarkable milestone, LifeCell International, pioneers in stem cell banking, launched LifeCell Femme-Menstrual Blood Stem Cell Banking service in India on 8<sup>th</sup> March, 2011 by film actress Lisa Rani Ray, who won the battle with cancer and recovered from deadly disease and they offer this service under the brand name in other countries "C'Elle" [9].

**Corresponding Author:**  
**Bhalla Mounika**  
MSc(N), Department of  
Obstetrics and Gynecological  
Nursing, NRI College of  
Nursing, Chinakakani, Guntur,  
Andhra Pradesh, India

More than a quarter (26%) of the World's Population are women and of reproductive age, and most menstruate monthly <sup>[10]</sup>. During a woman's life, the lining of the uterus loses and degenerates no less than 400 times <sup>[4]</sup>.

Menstrual Blood Banks are like a safeguard of your health against future disasters <sup>[11]</sup> The Menstrual Blood Banking process is silent, painless, natural and harmless with high patient safety <sup>[12]</sup>. It is important to note that these blood stem cells can be easily collected, processed and processed during menstruation affordable and inexpensive way collected. Painless and non-invasive <sup>[6]</sup>.

“When it comes to making life choices, there is no time like the present and when it comes to something as important as collecting potentially lifesaving stem cells found naturally in Menstrual Blood the ideal time now today” <sup>[13]</sup>.

### Objectives

1. To assess the existing knowledge of 3<sup>rd</sup> year B.Sc., Nursing students regarding Menstrual Blood Banking.
2. To evaluate the effectiveness of Structured Teaching Programme by comparing the pre-test and post-test knowledge regarding Menstrual Blood Banking among 3<sup>rd</sup> year B.Sc., Nursing students.
3. To find out the association between pre-test knowledge of 3<sup>rd</sup> year B.Sc., Nursing students regarding Menstrual Blood Banking with their selected demographic variables.

### Materials and Methods

**Research approach:** Quantitative research approach.

**Research design:** pre-experimental one group pre-test posttest research design.

**Setting of the study:** NRI college of Nursing, Chinakakani, Guntur district, Andhra Pradesh.

**Sample and sampling technique:** 80 3<sup>rd</sup> year B.Sc., Nursing students was selected using probability simple randomized sampling technique by using lottery method.

**Method of data collection:** A structured knowledge questionnaire on Menstrual Blood Banking was used.

### The tool was organized under the following sections

**Section A:** Socio-demographic data

**Section B:** 40 objective type questions regarding effects of teenage pregnancy.

### Validity

The structured knowledge questionnaire for the present study was validated by 11 experts in Obstetrics and Gynecological Nursing.

### Reliability

The reliability of the test obtained was 0.95 using test re-test method. Hence the tool was considered highly reliable for proceeding with the study.

### Pilot study

Pilot study was conducted on 8 3<sup>rd</sup> year B.Sc., Nursing students on April 16, 2021.

**Data collection:** The data were collected in the following phases:

**Phase I:** In this phase, pre-test was conducted on a total of 80 respondents using a structured knowledge questionnaire regarding Menstrual Blood Banking on April 24, 2021 through google form.

**Phase II:** In this phase, a Structured Teaching Programme regarding Menstrual Blood Banking was conducted to the subjects after the completion of the pre-test. All the questions and queries that the subjects had were clarified.

**Phase III:** In this phase, post test was conducted on April 30, 2021 being the 7th day from the conduction of the Structured Teaching Programme.

### Plan for data analysis

Descriptive statistics

- Frequency and percentage was used to analyze the socio-demographic data.

Mean and standard deviation were used to analyze the knowledge of 3<sup>rd</sup> year B.Sc., Nursing students.

### Inferential statistics

- Paired' test was used to evaluate the effectiveness of STP.
- Chi-square was used to analyze the association between the knowledge of 3<sup>rd</sup> year B.Sc., Nursing students with their selected demographic variables.

### Results

**Table 1:** Frequency and percentage distribution of 3<sup>rd</sup> year B.Sc., Nursing students. N=80

S. No	Socio-Demographic Variable	F	%
1.	Age		
	a) 20-22years	80	100
	b) 23-25 years	0	0
	c) 26 and above	0	0
2.	Gender		
	a) Male	18	22.5
	b) Female	62	77.5
3.	Religion		
	a) Hindu	32	40
	b) Muslim	3	3.75
	c) Christian	45	56.2
	d) Any other	0	0
4.	Place of residence		
	a) Rural	46	57.5

	b) Urban	28	35
	c) Slum	0	0
	d) Others	6	7.5
5.	Education of father		
	a) Non- Literate	7	8.75
	b) 1st – 5th class	6	7.50
	c) 6th – 10thclass	17	21.2
	d) Intermediate and above	36	45
6.	Education of mother		
	a) Non- Literate	8	10
	b) 1st – 5th class	7	8.75
	c) 6th – 10thclass	22	27.5
	d) Intermediate and above	29	36.2
7	Occupation of father		
	a) Private	21	26.2
	b) Government job	3	3.75
	c) Daily wage laborer	25	31.2
	d) Any other specify	27	21.2
8	Occupation of mother		
	a) Private	12	15
	b) Government job	1	1.25
	c) Daily wage laborer	14	17.5
	d) Any other specify	39	48.75
9	Previous knowledge regarding effects of TP		
	a) Yes	20	25
	b) No	46	57.5
10.	If yes, sources of information		
	a) Parents	2	2.50
	b) Friends	6	7.50
	c) Health personnel	5	6.25
	d) Mass media		

**Table 2:** Frequency and percentage distribution of Pre-test and posttest knowledge scores of 3<sup>rd</sup> year B.Sc., Nursing students N=80

Knowledge	Pretest		Posttest	
	F	%	F	%
Poor	66	82.5	39	48.7
Good	14	17.5	26	32.5
Excellent	0	0	15	18.7

**Table 3:** Mean, standard deviation and paired’ test N=80

Item	Pretest		Posttest		Paired ‘t’ test P=0.05
	M	SD	M	SD	
Knowledge	16.7	4.1	22.4	8.1	6.23*

**Table 4:** Association between knowledge on Menstrual Blood Banking with socio-demographic variables N=80

S. No	Socio-Demographic Variable	$\chi^2$ value (p=0.05)
1.	Age	—
2.	Gender	0.02 <sup>NS</sup>
3.	Religion	5.63 <sup>NS</sup>
4.	Place of residence	0.2 <sup>NS</sup>
5.	Education of father	0.55 <sup>NS</sup>
6.	Education of mother	0.38 <sup>NS</sup>
7.	Occupation of father	0.52 <sup>NS</sup>
8.	Occupation of mother	0.28 <sup>NS</sup>
9.	Previous knowledge regarding Menstrual Blood Banking	0.16 <sup>NS</sup>
10.	If yes, sources of information	2.40 <sup>NS</sup>

NS denotes Non-Significant, \* denotes significant

### Discussion

The present study was conducted to assess the effectiveness of Structured Teaching Programme on knowledge regarding Menstrual Blood Banking among 3<sup>rd</sup> year B.Sc., Nursing students.

In the present study, majority (82.5%) of 3<sup>rd</sup> year B.Sc., Nursing students had poor knowledge in the pre-test regarding Menstrual Blood Banking. This finding is supported by a study conducted by Kavitha Pawar, Premalatha J (2015) on effectiveness of Computer assisted teaching program on menstrual blood banking among 3<sup>rd</sup> year Basic B.Sc. Nursing students in which 96% had inadequate knowledge in the pretest [14].

In the posttest, 15% of 3<sup>rd</sup> year B.Sc., Nursing students had adequate knowledge A paired’ test was done and was found significant (6.23\*) at the 0.05% level of significance. This finding is supported by a study conducted by Neelam Hans, Sandeep Kaur (2016) on effectiveness of Structured Teaching Programme on knowledge regarding Menstrual Blood Stem cells Banking among nursing student in the selected nursing college in which it was found that the posttest knowledge was by a mean of 20.04% and the paired ‘t’ test was found significant (19.19) at 0.05% level of significance [15].

In the present study association between the pretest knowledge level of 3<sup>rd</sup> Year B.Sc., Nursing students were not found significant at the level of 0.05% with their sociodemographic variables. Hence, the research hypotheses H<sub>2</sub> was rejected. This finding is supported by a study conducted by Lily Podder (2019) on assessment of knowledge regarding menstrual blood stem cell banking among nursing students studying in nursing colleges in which the association between the socio demographic variables was not found significant at 0.05 level of significance [16].

### Conclusion

The study concluded that the 3<sup>rd</sup> year B.Sc., Nursing students did not have excellent knowledge regarding

Menstrual Blood Banking before the Structured Teaching Programme and increased after the STP. Therefore, it is the responsibility of the nursing personnel to create awareness and practice on Menstrual Blood Banking in an attempt to safeguard the women's health for future.

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