

# A Study to Assess the Effectiveness of Video Assisted Teaching Program on Knowledge Regarding Prevention and Management of Postpartum Hemorrhage among Staff Nurses at Selected Hospitals, Lucknow

Jyoti Srivastava

Department of Obstetrics and Gynecology, Hind College of Nursing, Affiliated by King George's Medical University, Lucknow, U.P. India

Email: srijyoti786[at]gmail.com

**Abstract:** Background: Postpartum hemorrhage is one of the four leading cause of maternal mortality. Postpartum hemorrhage is defined as blood loss in > 500ml at the time of vaginal delivery and > 1000 ml at the time of cesarean section. Postpartum hemorrhage may be due to uterine atony (most common cause), genital tract lacerations, retained product of conception, delayed coagulation. Management of Postpartum hemorrhage includes administration of uterotonic drugs, Bimanual compression, NASG, aortic compression, uterine artery ligation, internal iliac artery ligation and hysterectomy. Method: A quantitative evaluative approach using questionnaire on postpartum hemorrhage. Pre experimental one group pre-test & post-test design was used. Non-probability convenient sampling technique was used to select 60 samples from the selected hospitals in Lucknow. The conceptual frame work of the present study was based on Karl Ludwig Von Bertalanffy's General system theory. Initially researcher got permission for study from concern authorities. Pre-test done followed by video-assisted teaching program on postpartum hemorrhage for 50 min followed by 10 min session of question and answer. A post-test was conducted after 2 weeks of video-assisted teaching program. The tools used for data collection, part 1: demographic variables, part 2: assessing knowledge on prevention and management of postpartum hemorrhage. Results: Employing descriptive and inferential statistics, the analysis of the data was done. Data Shows that overall mean of pre-test knowledge score regarding prevention and management of postpartum hemorrhage was 14.35 and SD 3.94. After video-assisted teaching program the overall post-test mean was 24.1 and SD 3.27. The paired 't' test result shows that overall enhancement mean score is 9.75. Paired 't' test value is 19.19 significant at 0.001 level. The result of chi-square presented indicate that there was no significant association between pre-test knowledge score with demographic variables, evidenced that there was no statistically association at  $p < 0.05$  level. Conclusion: Based on the above findings of the study recommendations were drawn for nursing practice, nursing education and nursing research. The study concludes that the video-assisted teaching program was very effective in providing knowledge regarding prevention and management of postpartum hemorrhage.

**Keywords:** Postpartum hemorrhage, NASG, Uterine atony

## 1. Introduction

Postpartum hemorrhage (PPH) is an obstetric emergency. It is one of the top five causes of maternal mortality in both high and low per capita income countries, although the absolute risk of death from PPH is much lower in high-income countries. Timely diagnosis, appropriate resources, and appropriate management are critical for preventing death.<sup>1</sup>

Postpartum hemorrhage is a life threatening situation and an obstetrician's nightmare. It remains a major cause of maternal morbidity and mortality worldwide. It is still an important issue in the developing world. About 13% of all deliveries may result in postpartum hemorrhage with a blood loss of more than one liter while life threatening hemorrhage occurs 1 in 1000 deliveries. There are 600,000 maternal deaths reported worldwide every year and 99% of these occur in developing countries.<sup>2</sup>

The World Health Organization defines postpartum hemorrhage (PPH) as excessive bleeding from genital tract at any time following of delivery up to six weeks after

delivery, during vaginal delivery as blood loss of greater than 500 cc. Alternative definitions of PPH as blood loss greater than 600 cc or greater than 1000 cc caesarean section operation.<sup>3</sup>

PPH can amount from uterine atony, failure of the uterus to contract and retract after birth (Ricci and Kyle). Uterine atony is the most common cause of PPH, accounting for 70% of cases (Sheiner and it is usually delineated by a marked hypotonia of the uterus (Simpson and Creehan).<sup>4</sup>

### 1.1 Objective

- To assess the pre-existing knowledge regarding prevention and management of postpartum hemorrhage among staff nurses.
- To evaluate the effectiveness of video-assisted teaching program on knowledge regarding prevention and management of postpartum hemorrhage among staff nurses.
- To find out the association between the pre-test knowledge score regarding prevention and management of postpartum hemorrhage among staff nurses with their

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selected socio demographic variables.

## 2. Methodology

To evaluate the effectiveness of Video Assisted Teaching Program on knowledge regarding prevention and management of postpartum hemorrhage among staff nurses. A quantitative evaluative approach using questionnaire on postpartum hemorrhage. Pre experimental one group pre-test & post-test design was used. Non-probability convenient sampling technique was used to select 60 samples from the selected hospitals in Lucknow.

The conceptual frame work of the present study was based on Karl Ludwig Von Bertalanffy's General system theory. Initially researcher got permission for study from concern authorities. Pre-test done followed by video-assisted teaching program on postpartum hemorrhage for 50 min followed by 10 min session of question and answer. A post-test was conducted after 2 weeks of video-assisted teaching program. The tools used for data collection, part 1: demographic variables, part 2: assessing knowledge on prevention and management of postpartum hemorrhage.

### 2.1 Description of the tools used in the study

Structured questionnaire was used as the research tool with knowledge questions. After an extensive review of literature, discussion with the experts and based on the investigator's personal experience a structured questionnaire regarding prevention and management of postpartum hemorrhage was developed to elicit responses from the subjects.

The tool consists of two sections:

**Section I:** It consisted of demographic variables such as age of the staff nurses, religion, and qualification and job experience, income per month, living area and source of information.

**Section II:** The structured knowledge questionnaire on prevention and management of postpartum hemorrhage was prepared with a total number of 30 items. Each item having four options for correct answer the score is one and for the wrong answer and no response, the score is zero. The total score is 30.

### 2.2 Scoring technique

The knowledge questionnaire contains 30 items each question carries 1 marks, totally it carried 30 marks.

The level of knowledge was classified as

**Table 1:** Level of knowledge

S.No.	Score	Level of Knowledge on Postpartum Hemorrhage
1.	0- 33.3 %	Inadequate Knowledge
2.	33.4- 66.6%	Moderate Knowledge
3.	66.7- 100%	Adequate Knowledge

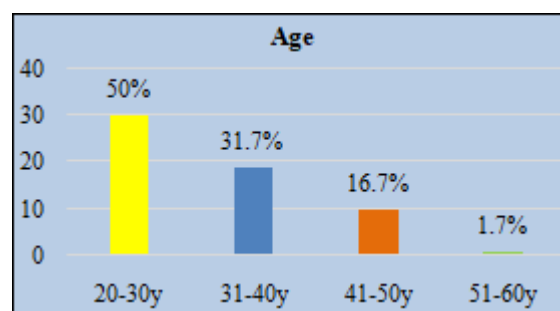
## 3. Statistical Analysis

### 3.1 Frequency and Percentage Distribution of Demographic Variables of Staff Nurses

#### 3.1.1 Distribution of the sample according to their age, religion and qualification, job experience, income per month, living area, source of information.

**Table 2:** Frequency distribution on the different demographic variable, n=60

Sl. No	Demographic variables	Frequency(f)	Percentage (%)
1	Age		
	20-30 years	30	50
	31-40 years	19	31.7
	41-50 years	10	16.7
	51-60 years	1	1.7
2	Religion		
	Hindu	53	88.3
	Muslim	6	10
	Christian	1	1.7
	Others	0	0
3	Qualification		
	GNM	39	65
	B.Sc. (N)	10	16.7
	P.B.B.Sc. (N)	11	18.3
	M.Sc. (N)	0	0
4	Job experience		
	1-10 years	38	63.3
	11-20 years	13	21.7
	21-30 years	8	13.3
	>30 years	1	1.7
5	Income per month (rupees)		
	< 25000	33	55
	>25000	27	45
6	Living area		
	Rural	17	28.3
	Urban	43	71.7
7	Source of information		
	Mass media	8	13.3
	Health care professionals	25	41.7
	Training	27	45
	Friends and Family members	0	0



**Figure 1:** Bar diagram representing percentage distribution of sample according to their age

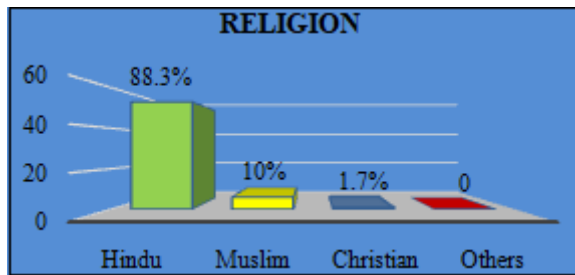


Figure 2: Bar diagram representing percentage distribution of sample on the basis of religion

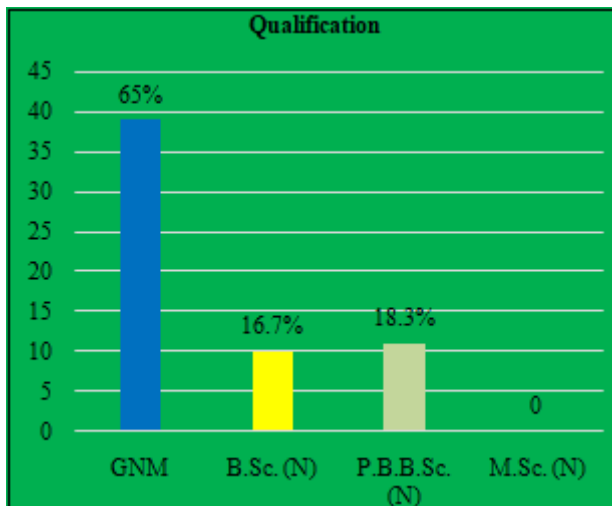


Figure 3: Bar diagram representing percentage distribution of sample on the basis of qualification.

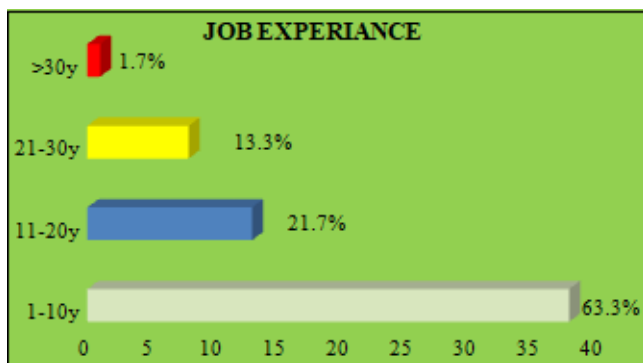


Figure 4: Bar diagram representing percentage distribution of sample as per job Experience

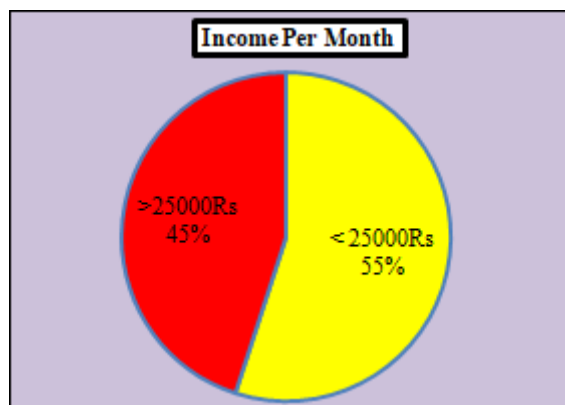


Figure 5: Pie diagram representing percentage distribution of sample as per their income per month

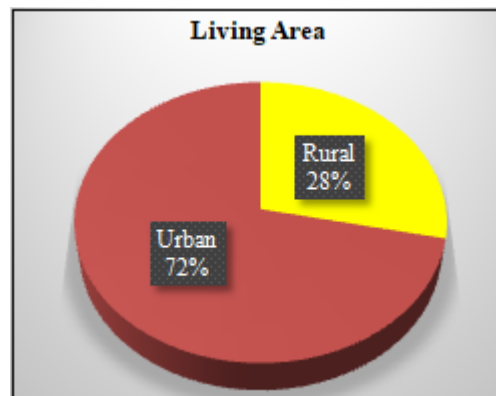


Figure 6: Pie diagram showing percentage distribution of sample according to living area

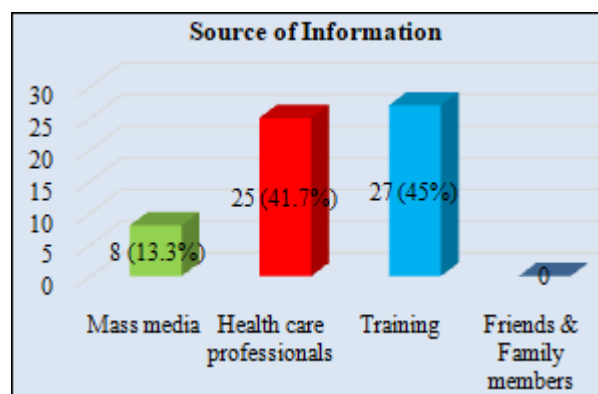


Figure 7: Bar diagram showing percentage distribution of sample according to previous source of information

### 3.2 Data on comparison of pre-test and post-test knowledge scores regarding prevention and management of postpartum hemorrhage among staff nurses by using paired 't'-test.

For the purpose of the study the following research hypothesis was stated as.

**H<sub>1</sub>:** There is a statistically significant difference between pre-test and post-test knowledge level regarding prevention and management of postpartum hemorrhage among staff nurses.

#### 3.2.1 Table Mean, standard deviation, Standard error, t value regarding pre -test and post-test knowledge score among staff nurses

Table 3: Shows that Paired t test value is 19.19 which is significant at P<0.001

Test	N	Mean	SD	SE	t- value	df	sig.
Pre-test	60	14.35	3.94	0.51	19.19	59	P<0.001
Post- test	60	24.1	3.27	0.42			

## 4. Results and Discussion

Employing descriptive and inferential statistics, the analysis of the data was done. Data shows that overall mean of pre-test knowledge score regarding prevention and management of postpartum hemorrhage was 14.35 and SD 3.94. After video-assisted teaching program the overall post-test mean was 24.1 and SD 3.27. The paired 't' test result shows that

overall enhancement mean score is 9.75. Paired 't' test value is 19.19 significant at 0.001 level. The result of chi-square presented indicate that there was no significant association between pre-test knowledge score with demographic variables, evidenced that there was no statistically association at  $p < 0.05$  level.

## 5. Conclusion

Focus of the present study was aimed at improving the knowledge level of staff nurses regarding prevention and management of postpartum hemorrhage. The relevant data was collected and analyzed statistically based on the objective of the study. Among 60 staff nurses, in pretest 25.0% of the staff nurses have inadequate, 71.7% have moderate and (3.3%) have adequate knowledge regarding postpartum hemorrhage, after the administration of video-assisted teaching program in post-test 83.3% have adequate and 16.7% have moderate knowledge and no one have inadequate knowledge regarding prevention and management of postpartum hemorrhage. The research reveals that there was significant difference in pre and post-test knowledge of staff nurses regarding prevention and management of postpartum hemorrhage. The study also reveals that there was no any association between demographic variables with pre-test knowledge level of staff nurses regarding prevention and management of postpartum hemorrhage.

Many studies also supported there was lack of knowledge regarding prevention and management of postpartum hemorrhage among staff nurses.

The following conclusion was drawn on the basis of data analysis.

Video-assisted teaching program is effective in improving the knowledge of staff nurses regarding prevention and management of postpartum hemorrhage.

There was no association between age, religion, qualification, job experience income per month, living area and source of information.

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