Research Article

Comparative Study to Assess Effectiveness of Video-Assisted vs Demonstration Method for Teaching Bag Technique to Student Nurses

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I N F O

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A B S T R A C T

Introduction: The public health bag is an essential and indispensable equipment of a public health nurse which she has to carry along during home visits. The technique of using the bag can be taught to student nurses in different ways. The aim of the study was to assess the effectiveness of video-assisted vs. demonstration method of teaching bag technique to student nurses from selected nursing colleges, Delhi.

Methods: The conceptual framework was based on the systems model. The quantitative approach was adopted for the study with quasi experimental only post-test research design. Variables were age, gender and previous academic performance of students. The sample of present study comprised of 90 second year B. Sc. Nursing student nurses from selected nursing colleges of Delhi. The simple random sampling technique (lottery method) was used for selecting 90 B. Sc. Nursing II year students. The structured observation check list was used to assess the effectiveness of video assisted and demonstration method. A total of 11 experts from different fields established the content validity of the tool. Reliability was established through inter observer, percentage agreement method and it was found to be reliable. The method of data collection was direct observation technique.

Result: The data were analyzed using descriptive and inferential statistics in accordance with the objectives of the study. The obtained mean difference between video assisted and demonstration groups was found to be statistically significant as evident from t value of 12.11 for df (60) at 0.05 level.

Conclusion: The study findings revealed that the Video assisted and Demonstration groups were homogenous and comparable. It is inferred that the video assisted method of teaching was more effective than demonstration method of teaching among student nurses. There is no association between age, gender and previous academic performance with post-test score in video assisted group and demonstration group.

Keywords: Bag Technique, Community Nursing Bag, Video Assisted Teaching and Demonstration Method

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Introduction

In a country like India, the health care organization and people are still in a condition where they do not have an easy access to facilities. While working in the community we come across the fact that most of the times people are not aware of the health care facilities or they are not in a state to reach the health institutions easily. In these situations, community/ public health bag is helpful. Since most of the nursing procedures are taught, using demonstration and other attractive ways of teaching methods, most of the time the technique of using a community health bag is just taught using the traditional methods of teaching. It can be made more effective and interesting using newer methods like using a video on bag technique.[1]

The term "Community health nursing'' denotes preventive services and the scope includes delivery of nursing services to population group, families and individuals in the community settings. The public health bag is an essential and indispensable equipment of a public health nurse which she has to carry along during her home visits. To prevent the transmission of micro-organisms, a practice called "bag technique" is deployed by home care and to minimize the spread of microorganisms.[2]

Kishore Kumar P, Jolly J conducted a study to assess the effectiveness of an interactive CD Rom on technique of using a newly designed community health nursing bag.[3] They felt that innovative alternate design of community health nursing bag and a computer assisted programmed instruction for learning bag technique would be useful. The interactive CD-ROM contained information for health care nurses in terms of knowledge, skills and performance and this method was compared to traditional method of teaching via lecture and demonstration in two randomly selected groups of Graduate nursing students.

Davis PL[4] surveyed a stratified random sample of 104 National League of Nurses, Result indicated that 66 percent of responding schools used public health nursing bags when students provided home care. It can be concluded that teaching of bag technique continues to be an applicable component of many nursing education program.

Based on the advancement of video-assisted learning process in various streams the investigator felt a need to adopt the same in the teaching of bag technique. Therefore, the researcher felt a strong need to assess the effectiveness of video assisted vs. demonstration method of teaching bag technique. Being a community health nurse, researcher decided to compare two methods of teaching bag technique to the undergraduate nursing students. The researchers envision that the study results will provide knowledge and skill to student nurses regarding care at home using bag.

Objectives of the Study

- To assess the practice scores of student nurses taught by video assisted and demonstration method of teaching bag technique using practice check-list.
- To compare the practice scores of student nurses taught by video-assisted teaching and demonstration method of teaching bag technique.
- To identify the association between practice score of student nurses with their age, gender and previous academic performance.

Materials and Methods

Quantitative research approach using quasi experimental only post-test design was selected for the study. The setting for the study was Holy Family College of Nursing, Raj Kumari Amrit Kaur College of Nursing, Laxmi Bai Batra College of Nursing and Rufaida College of Nursing, Jamia Hamdard, Delhi. In the present study, the sample comprised of 90 second year B. Sc. (Hons) Nursing students from selected nursing colleges in Delhi. Simple random sampling technique (Lottery method) was adopted to select the students for data collection.

An observation checklist was prepared by the researcher to assess the effectiveness of video assisted vs. demonstration method of teaching on bag technique. To ensure the validity of tool, lesson plan for demonstration and video film, it was given to eleven experts selected from the fields of nursing, community medicine. The reliability of the tool was established through inter observer, percentage agreement method and was found to be reliable (0.90). Descriptive and inferential statistics were used for data analysis.

After obtaining ethical permission from the Institutional Ethical Committee of Jamia Hamdard, New Delhi, to conduct the research study, a formal permission for conducting research was obtained from the selected nursing colleges of Delhi. A written informed consent was taken from each study subject.

Result

The results of the study are presented under the following sections:

Demographic characteristics of the sample subjects

The sample consisted of total 90 student nurses i.e. 45 subjects in each group studying in B.Sc. (Hons) Nursing second year students from selected nursing colleges of Delhi.

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Table 1.Frequency and percentage distribution of sample subjects by their age, gender and previous academic score

(n1+n2=90)

S. No.	Sample characteristics	Video assisted (Group 1)		Demonstration (Group 2)		Test used	p-value
		Frequency	Percentage	Frequency	Percentage		
1.	**Age**						
	<19 years	5	11.1	1	2.2	Fisher's exact test	0.089
	19-21 years	40	88.9	42	93.3		
	22-24 years	0	0	2	4.4		
2.	**Gender**						
	Male	0	0	8	17.8	Fisher's exact test	0.003*
	Female	45	100	37	82.2		
3.	**Previous academic score**						
	>80%	5	11.1	3	6.7	Fisher's exact test	0.711
	71-80%	23	51.1	22	48.9		
	61-70%	15	33.3	19	42.2		
	50-60%	2	4.4	1	2.2		

*Significant at 0.05 level of significance, p<0.05.

Findings related to difference between mean post test score of Video assisted and Demonstration method of teaching among student nurses

H_{01}: There will not be a difference in the mean practice scores of using bag technique among student nurses between video assisted and that of the demonstration method of teaching as assessed by observational check list at 0.05 level of significance.

The data presented in Table 2, shows that in video assisted group (Group 1), the mean post-test practice score was higher than the mean post-test practice score Group 2. The obtained mean difference between video assisted and demonstration groups was found to be statistically significant as evident from t value of 12.11 for df (60) at 0.05 level. Therefore, the difference observed in the mean post-test practice score of two groups was a true difference and was not by chance. Hence, the null hypothesis (H_{01}) was rejected and the research hypothesis (H_1) was accepted indicating that video assisted method of teaching bag technique was more effective than demonstration method.
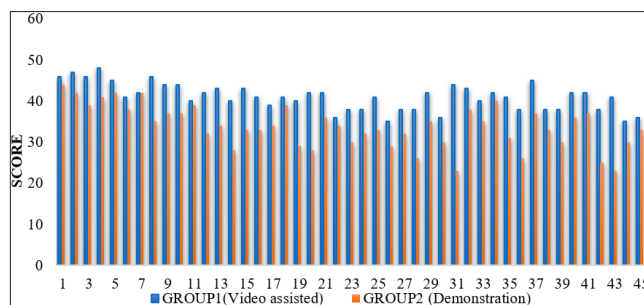
Figure 1.Columndiagram showing comparison between Group 1 (video assisted) and Group 2 (Demonstration) as their post-test practice score

Findings Related to Significant Association between Post-test Practice Score in Video Assisted Group (Group 1) and Demonstration Method of Teaching Group (Group 2) with the Selected Demographic Variables

H_{02}: There will not be a significant association between post-test level of practice with selected demographic variables such as age, gender and previous academic score.

Table 2.Mean, standard deviation, mean difference and paired t test to determine the significant difference between mean post-test score level among student nurses between video assisted (Group 1) and demonstration method of teaching (Group2)

(n1+n2=90)

Video assisted group (Group 1) n_1 = 45		Mean	Standard deviation	Mean difference	t-value
	Post-test Practice Score	41.04	3.25	7.27	12.11*
Demonstration group (Group 2) n_2 = 45	Post-test Practice Score	33.77	5.20		

Calculated t value (12.11) > table value at $df_{(44)}$ (1.67), *significant at 0.05 level.

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The data presented in Table 3, shows that the p value is greater than the calculated value at 0.05 level of significance of the variables age, gender, previous academic scores in both groups with post-test score. Hence null hypothesis (H_{02}) is accepted and research hypothesis (H_2) is rejected.

(ALCV). The controls were taught with ALCD and the experimental groups of students were taught using ALCV. It was observed that the mean post-test knowledge score of the experimental groups after the competency program on drug administration using active lecture cum video

Table 3.Chi-square value to determine the association between post-test practice score with demographic variables in video assisted and demonstration method groups

(n1+n2=90)

Category		Group 1 (Video assisted method)	Post-test practice score				χ^2 value	Df	p-value
			Poor 0-20	Average 21-30	Good 31-45	Excellent 46-50			
Age	< 19 years		0	0	4	1	0.450	1	0.50
	19-21 years		0	0	36	4			
Gender	Male		0	0	0	0	0.056 (χ with yates)	3	0.99
	Female		0	0	40	5			
Previous Academic Score	>80%		0	0	4	1	1.037	3	0.450
	71-80%		0	0	20	3			
	61-70%		0	0	14	1			
	50-60%		0	0	2	0			
Category		Group 2 (Demonstration method)	Post-test practice score				χ^2 value	Df	p-value
			Poor 0-20	Average 21-30	Good 31-45	Excellent 46-50			
Age	< 19 years		0	1	0	0	3.482	2	0.20
	19-21 years		0	10	32	0			
	22-24 years		0	1	1	0			
Gender	Male		0	3	5	0	0.584	1	0.50
	Female		0	9	28	0			
Previous academic score	>80%		0	0	3	0	4.250	3	0.20
	71-80%		0	5	17	0			
	61-70%		0	6	13	0			
	50-60%		0	1	0	0			

Discussion

The present study results revealed that video assisted method of teaching more effective than demonstration method of teaching among student nurses. The findings are in agreement with a study by El-Sayed HM et al. who conducted a study to evaluate the effectiveness of utilizing video-assisted and lecture cum demonstration method on the nursing student knowledge and skill in using partograph. Results shows a significant higher percentage of satisfactory skills in video- assisted group than in lecture cum demonstration group.[5]

Another study was conducted on 80 undergraduate nursing students for teaching pharmacology using Active Lecture Cum Demonstration (ALCD) and Active Lecture Cum Video

were apparently higher than the control group. Hence, the competency program on drug administration using ALCV proved to be more effective than ALCD. The findings of the present study were in line with the above study.[6]

Conclusion

In this present study, the researcher has identified that there was a significant difference between mean video assisted (Group 1) and demonstration (Group 2) it is inferred that the Video Assisted Method of teaching (VAM) more effective than Demonstration Method (DMT) of teaching among student nurses. The video assisted and demonstration methods of teaching bag technique contributes to the improvement of practice of nursing students in community area, thereby, ensuring the provision of quality nursing

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care to people. This teaching programme will also help the future nurses to practice the general steps of community health bag technique while caring their clients in their home setting/ visit. Video assisted method of teaching can be applied for induction programmes, continuing education and other clinical practices. The students can be motivated to create awareness on importance of video assisted teaching programme in various fields.

Conflicts of Interest: None

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