

The Effectiveness of Utilizing Video- Assisted and Lecture Cum Demonstration Method on the Nursing Students' Knowledge and Skills in Using Partograph.

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Abstract: This study aimed to evaluate the effectiveness of utilizing video- assisted and lecture cum demonstration method on the nursing students' knowledge and skills in using Partograph.

Design: A quasi experimental design was used.

Subjects: Eighty two students in third year taught the maternity and gynecology nursing course in the first semester of academic year 2016-2017, they divided into video- assisted group and lecture cum demonstration group.

Setting: The study was carried out in the faculty of Nursing, Mansoura University.

Tools: Tool I: A structured interviewing questionnaire schedule which included general characteristics of students and knowledge about partograph. Tool II: WHO partograph chart.

Results: Post intervention there was improvement in the average knowledge score in both groups with significant level. But the improvement in video- assisted group was significantly higher than the lecture cum demonstration (13.82 ± 1.71 compared to 8.37 ± 1.02). Also the video- assisted group had a significant high score of the accepted skills in all domains (Fetal, maternal and labour progress) and also in total skills score than lecture cum demonstration group (15.61 ± 2.02 compared to 10.58 ± 2.45). Else, there were a significant higher percentage of satisfactory skills in video- assisted group (97.4%) than in lecture cum demonstration group (46.3%). Although the average skills score was higher in females than males in both groups, but the difference was not significant.

Conclusion: It was evident that teaching the partograph through video- assisted method brings higher achievement and better method of imparting and transmitting knowledge and acquires the skills to the students than the lecture cum demonstration.

Recommendations: Academic nursing staff should incorporate video-assisted method for teaching at the faculty of nursing to enhance academic performance.

Keywords: Knowledge, Lecture cum demonstration, Partograph, Skills, Video- assisted

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I. Introduction

One of the fundamental principles in education is adopting the teaching method in concordance with objectives, contents, and learners. The individuals can learn more and quicker than once was previously thought by means of improved teaching strategies' aimed specifically at boosting memory storage and cognition, retrieval and learning (Prabhu, 2013).

Multimedia is a mix of numerous digital media types such as pictures, content, sound and video into a coordinated multi sensory interactive application or demonstration to convey information to an audience. The students are able to learn better by incorporating digital media into the system of education since they utilize numerous sensory modalities, which would make them more roused to give careful consideration to the data offered and hold the data better (Singh, 2016).

There are several teaching-learning methods used in education, such as lecture, demonstration, simulation, problem based learning, lecture cum demonstration, and lecture cum video (Basavanthappa, 2011 & Crookes et al., 2013). Choosing an effective teaching strategy is an essential part of educational design. One of the most conventional used educational approaches in institutes is through didactic lectures (Hafezimoghadam et al., 2013). Delivering the lecture is by far the most traditional and frequently used method to impart knowledge to the students despite all the problems that are often attributed to it (Saleh et al., 2013).

Today, video assisted (VA) learning used in education. One of the advantages of video is the voice of the broadcaster can be heard and his figure, movement, illustrations used by him and the demonstration presented by him can be seen. Moreover, educational video combines sight and sound together and thus makes the experience real, concrete and immediate. It offers opportunities of seeing and listening to the scenes and events. It can teach a large number of students at one time. It stimulates and reinforces ideas, beliefs and tendencies already possessed by the onlooker (Neeraja, 2011).

Furthermore, the video may offer several training benefits. First, video models can present a variety of behaviors in realistic contexts. It may be considered a useful medium for learners who cannot take advantage of print out materials. It can effectively display several examples of stimulus and response variations. Moreover, with video recordings, the learner can repeatedly review a model's action if required. Finally, video standardizes the presentation of stimuli in training which strengthens internal consistency and allows more confident comparison of data across learners and sessions (Manju and Prasad 2013).

Cum demonstration approach is one of the practical methods of teaching. It involves displaying, doing and declaring something. The onus is therefore on the educator to show the steps in the process and explain them effectively and clearly. While students are anticipated to practice by repeating the items the teacher did. This method has been observed for bridging the gap between theory and practice. Also, it handles the rate of breakages and accidents as students watch the teacher do it before trying to do the same and permit the teacher to instruct operational and manipulative skills (Daluba, 2013).

Moreover; lecture-cum-demonstration (LCD) includes the merits of the lecture as well as demonstration method. The LCD method is used extensively in teaching sciences and nursing subjects. It attempts to filter out the disadvantages of both. Demonstration means 'to show'. In Lecture method teacher just tells but in demonstration method teacher shows and illustrates certain fundamental phenomena (Amutha, 2013).

Else, there are several advantages of LCD as the teacher illustrates the coordination of head, heart and hands, which is essential for the development and refining of psychomotor skills and observational skill (Sankaranarayanan & Sindu 2009). In addition demonstration provides an opportunity in visual learning tasks from a different perspective, the students develop the power of observation, thinking and reasoning, and also the teacher explains the theoretical portion with the help of lecture method making use of diagrams and statements. As well the students get a clear picture of the topic also the shortcomings of the lecture method are removed by the merits of the demonstration method, thus making it an LCD method (Kumari & Patadia, 2012).

The partograph is a graphic representation of the progress of labor and salient conditions of the mother and fetus plotted against time in hours. When used effectively, the partograph will prevent obstructed or prolonged labor. Its use is crucial in protecting against maternal and perinatal morbidity and mortality. It enables midwives and doctors to plot cervical dilatation, frequency, intensity and duration of uterine contractions, maternal condition as pulse rate, blood pressure and temperature, fetal condition as fetal heart rate and the state of amniotic fluid, descent of the fetal head and other features that aid the progress of labor (Souza et al., 2015 & Egbe et al., 2016).

Moreover, the partograph is a valuable graphical record of labor course for ideal outcomes in labor management. Its adequacy and productivity, cut crosswise over developed and undeveloped nations.. Acquisition of knowledge of its use and guaranteeing the correct application of this knowledge would reach a peak in reduction of the occurrence and outcomes of prolonged and obstructed labor. The World Health Organization (WHO) suggests utilizing the partograph to take after labour and delivery with the objectives to improve health care and reduce maternal and fetal morbidity and fatality (WHO 1994).

Training nursing students on a partograph by using a new method of teaching can assist in behavioral reinforcement and early decision making about augmentation of childbirth, helping to identify maternal and fetal problems during management of labor. So increase knowledge and skills of nursing students are essential in improving labor outcomes and to maintain mother's condition in the labor ward and the delivery rooms (Neal et al., 2010).

Significance of the study

The utilization of the partograph is preferred as an essential first step towards ensuring the safety of women in labour (Sama et al., 2017). The initial detection of the abnormal progress of labor and the avoidance of prolonged labor would considerably reduce the threat of postnatal hemorrhage, obstructed labor, sepsis, uterine rupture and its sequel (Kwast et al., 2008). Inadequate knowledge and utilization of partograph could be part of the reason for high maternal mortality in developing countries (WHO 2012). Lack of detailed knowledge of the partograph and insufficient training is factors that work contrary to the effective utilization of the partograph in the study facility. Usage of this tool for labor monitoring can be enhanced by periodic training (Asibong et al., 2014).

The development of knowledge and skills (KS) is a fundamental segment of expert advancement in nursing education and training. In order to enhance the retention of knowledge and skill, repeated training is needed (Goswami et al., 2015). However, some students have difficulties in developing competence in the partograph. Based on the experience of the researchers in clinical setting showed that nursing students had problems in filling the partograph and they were not able to draw it adequately and correctly by using the a lecture cum demonstration method of teaching. Based on the advancement of video- assisted learning process in various streams the researcher felt a need to adopt the same in teaching partograph .

Aim of the study

This study aimed to evaluate the effectiveness of utilizing video- assisted and lecture cum demonstration method on the nursing students' knowledge and skills in using Partograph through the following:

- Assess nursing students' knowledge and skills regard using of Partograph.
- Assess the effectiveness of utilization of video- assisted and lecture cum demonstration method on the nursing students' knowledge and skills in using partograph.

Study hypothesis

The nursing students who will utilize video- assisted will show more progress in knowledge and skills regarding partograph than to those who use lecture cum demonstration.

Operational definition

Video- assisted: In this study, it refers to teaching the proper steps of using partograph with a help of a video which developed by the researchers.

Lecture cum demonstration: In this study, it refers to teaching the correct steps of using partograph by adequate explanation along with a demonstration by the researchers.

Subjects and method

Study Design

A quasi-experimental design was used.

Study Setting

This study was carried out in the Faculty of Nursing, Mansoura University, Woman' health and Midwifery Nursing department during the first semester of academic year 2016/2017. The faculty gives a traditional and credit hour course. The curriculum depends heavily on the use of lectures. Most of the activities are teacher centered, which consists of information gathering and few open discussions or problem-solving sessions.

Study Subjects

Sample Type

A convenient sample was used.

Sample Size

Eight two male and female nursing students enrolled in the maternity course during the first semester of the academic year 2016-2017; they didn't receive any theoretical lecture or training regarding partograph in maternity lab or clinical area. Students received an explanatory statement detailing the study and were informed that all information collected might remain nameless. They randomly assigned by the lottery method into two groups; according to their group number (odd numbers were represented (VA)group and even numbers were represented (LCD) group.

Video- Assisted Group (VAG): Consisted of 41 students who were taught by video assisted. The actual group number became 38 students due to three students were absent during the post test.

Lecture Cum Demonstration Group(LCDG): Consisted of 41 students who were taught by lecture cum demonstration method.

Data Collection and Scheduling Tools (DCAST)

Tool I: A Structured Interviewing Questionnaire Schedule: It was designed by the researchers after reviewing the related literatures to be filled from each student. It consisted of two parts:

Part 1: It covered the data related to general characteristics as age and gender.

Part 2: It included questions related to students' knowledge about partograph as (definition, benefits, components, proper time of using, fetal heart rate, head descent, uterine contraction, action line, alert line etc.). It consisted of 17 question, six questions "multiple choice", ten questions "true and false", and one picture to detect the analytical ability of the student in detecting the problem in giving partograph.

Scoring system of knowledge:

Each correct answer was given a score of "one" mark and wrong answer 'zero' score. The total knowledge score was poor if $< 60\%$, fair if $\geq 60\% - \leq 75\%$ and good if $\geq 75\%$.

Tool II: WHO Photograph chart: This tool was adopted from (WHO 1994). It is a graphic representation of the events of labour plotted against time in hours. It consisted of three main components:

- The fetal condition (the fetal heart rate, the liquor, and the molding of the fetal skull bones).
- The progress of labour at term of cervical dilatation, effacement, descent of the fetal head and uterine contraction (duration, frequency, interval and intensity etc.).
- The maternal condition (charting maternal temperature, pulse and blood pressure, and urinalysis). The partograph also contains a space to chart administration of drugs, IV fluids, and oxytocin if labour is augmented.

Scoring system of skills:

Each correct answer was given a score of "one" mark and wrong answer 'zero' score. The total skill score was unsatisfactory if $< 60\%$ and good if $\geq 60\%$.

Validity of the Tools:

The tool was reviewed by three juries from experts in maternity nursing field tested the content validity. According to expert's suggestions the tools were modified.

Reliability of the Tools:

Cronbach's alpha was calculated through a pilot study on 10 students. Cronbach's alpha for the knowledge assessment tool was = 0.79, and for the Partograph chart was = 0.74. So both tools were reliable.

Ethical Considerations

Study approval was obtained from the head of woman's health and midwifery nursing department and the ethics committee at nursing faculty. Written consent was retrieved from the students who participated in the sample. They were reassured about the confidentiality of the information. They were informed about their rights to refuse participation or withdraw at any time. The study maneuvers couldn't entail any harm to participants. Meanwhile, the researchers will be filled the students who had assigned in video- assisted to attend the lecture cum demonstration about partograph and via versa after the study to gain the same chance.

Pilot Study

A pilot study was conducted on 10 students in order to test the applicability and relevance of the study tools and to test the clarity of the designed questionnaire as well as to estimate the time needed to answer them and then the necessary modifications were done. These students were excluded from the study sample.

Data collection procedure

- The researchers introduced themselves to the students and explained the aim of the study before data collection.
- A pretest was conducted as a first level of intervention by distributing the structured questionnaire which included general characteristics, students' knowledge about partograph and partograph chart in applying the skills.
- An interactive lecture was conducted for all students to educate them about partograph basic knowledge by using a Power Point presentation, it applied in the classroom (C) of nursing faculty.
- Then they randomly assigned into two groups according to their group number (odd numbers represented video- assisted and even numbers represented lecture cum demonstration.
- The Video- assisted group was acquired education by watching video about applying partograph. A video was shown to 41 students for 45 minutes and repeated two times. After that, each student took the video from the researcher and asked him to watch it and training on it at home.
- The lecture cum demonstration group was acquired education by the lecture cum demonstration method. The researcher demonstrate how to fill the partograph in front of the students. The researchers divided the students into 6 subgroups in the lab (each group included 6-7 students) for re-demonstration. The researcher distributed WHO partograph and the designed scenario

about partograph for the students and begin to read the scenario to plotting in the designed big partograph in the lab and told the students to plotting in each given partograph. Another researcher and co-author observed the plotted partograph by the students and corrected the student mistakes in front of each student. After that, transfer to plot another point in the same manner until finishing. The required time in the lab was 3 hours.

- To minimize the contact between two groups, the post test was given after one week of training to both groups by using the same tools.
- The researchers then compared between the results of both groups.

Statistical Analysis

Collected data were coded, computed and analyzed by using SPSS version 20. Data were presented using descriptive statistics in the form of frequencies & percentages for qualitative variables and means and standard deviations for quantitative variables. Quantitative data were initially tested of normality using the Shapiro-Wilk test. Data will be considered normally distributed if $p > 0.05$. Qualitative variables were compared using (χ^2) test and Fisher Exact test used when the expected cell was less than 5. While paired t test, student (t) test was used for comparison of quantitative data. Statistical significance was considered at p-value < 0.05 .

Results

Table (1): Frequency distribution of the studied sample according to their general characteristics

Items	Video – assisted group (n=38)	Lecture cum demonstration group (n=41)	Significance test
Age (years)			
20	17 (44.7%)	20 (48.8%)	$\chi^2 = 2.726, P = 0.256$
21	16 (42.1%)	11 (26.8%)	
22-23	5 (13.2%)	10 (24.4%)	
Mean ± SD	20.71±0.77	20.76±0.83	t=0.25, P=0.801
Gender			
Male	21 (55.3%)	17 (41.5%)	$\chi^2 = 1.504, P = 0.220$
Female	17 (44.7%)	24 (58.5%)	

Table (1) shows the general characteristics of the studied sample. The students’ age ranged from 20 -23 years. Also, the percentages of male students were 55.3% in the video – assisted group and 41.5% in the lecture cum demonstration group with no significant difference. Both groups were matched as regard age, gender and study grade.

Table (2): Average knowledge score about partograph in the studied sample before and after intervention

Items	Video – assisted group (n=38)	Lecture cum demonstration group (n=41)	Significance test
	Mean± SD	Mean± SD	
Before intervention	3.97 ± 1.30	3.80 ± 0.680	t= 0.729, P 0.468
After intervention	13.82 ± 1.71	8.37 ± 1.02	t= 17.386, P 0.001
Paired t test	t= 30.027, P 0.001	t= 28.468, P 0.001	

Table (2) shows the average knowledge score about partograph in the studied sample before and after intervention. It was revealed that before the intervention, the average score was nearly the same in both groups. After intervention there was improvement in the average score in both groups with significant level. But the improvement in the video – assisted group was significantly higher than the lecture cum demonstration group (13.82 ± 1.71 compared to 8.37 ± 1.02).

Table (3): Level of the knowledge about partograph in the studied groups before and after intervention

	Video – assisted group (n=38)	Lecture cum demonstration group (n=41)	Significance test
Before intervention			
Poor (< 60 %)	38 (100%)	41 (100%)	-----
Fair (≥60%-≤75%)	-----	-----	-----
Good (≥ 75%)	-----	-----	-----
After intervention			$\chi^2 = 50.724, P = 0.001$
Poor (< 60 %)	0 (0.00%)	17 (41.5%)	
Fair(≥60%-≤75%)	10 (26.3%)	24 (58.5%)	
Good (≥ 75%)	28 (73.7%)	0 (00.0%)	

Table (3) shows that before intervention the level of the students' knowledge about the partograph was 100.0% poor. While after intervention there was improvement in the level of knowledge in both groups, but the Video – assisted group had a significant higher percentage of good knowledge (73.7%).

Table (4): Comparison of the percentage of correct answers of study groups of their skills about partograph after intervention

Items	Video – assisted group (n=38)	Lecture cum demonstration group (n=41)	Significance test
Personal data	38 (100%)	41 (100%)	-----
Fetal condition			
Plotting 1 fetal heart rate	37 (97.4%)	23 (56.1%)	$\chi^2= 18.390, P= 0.001$
Plotting 2 Fetal heart rate	34 (89.5%)	23 (56.1%)	$\chi^2= 10.934, P= 0.001$
Liquor	36 (94.7%)	26 (63.4%)	$\chi^2= 11.457, P= 0.001$
Moulding	36 (94.7%)	37 (90.2%)	FET, P= 0.374
Labour progress			
Plotting 1 cervical dilatation	36 (94.7%)	21 (51.2%)	$\chi^2= 16.485, P= 0.001$
Plotting 2 cervical dilatation	35 (92.1%)	19 (46.3%)	$\chi^2= 19.094, P= 0.001$
Plotting 1 head descent	33 (86.8%)	20 (48.8%)	$\chi^2= 12.940, P= 0.001$
Plotting 2 head descent	29 (76.3%)	15 (36.6%)	$\chi^2= 12.616, P= 0.001$
Plotting 1 contraction	35 (92.1%)	22 (53.7%)	$\chi^2= 14.508, P= 0.001$
Plotting 2 contractions	29 (76.3%)	15 (36.6%)	$\chi^2= 12.616, P= 0.001$
Maternal condition			
Oxytocin	36 (94.7%)	35 (85.4%)	$\chi^2= 1.903, P= 0.186$
IV fluid	36 (94.7%)	31 (75.6%)	$\chi^2= 5.601, P= 0.018$
Pulse	35 (92.1%)	18 (43.9%)	$\chi^2= 20.753, P= 0.001$
Blood pressure	34 (89.5%)	17 (41.5%)	$\chi^2= 19.867, P= 0.001$
Temperature	38 (100%)	35 (85.4%)	$\chi^2= 6.018, P= 0.014$
Urine test	36 (94.7%)	36 (87.8%)	$\chi^2= 1.173, P= 0.279$

Tables (4) show that the skills accepted by the students in assessing partograph were differed in both groups. The video-assisted group developed a significantly higher percentage of skills in assessing fetal conditions (heart rate & liquor), but molding assessing skills were nearly the same in both groups (P= 0.374). All skills assessing labour progress were significantly higher in the video- assisted group (P= 0.001). Else, the skills of assessing maternal condition were significantly higher in video- assisted group than the lecture cum demonstration group except oxytocin and urine test skills were nearly the same in both groups (P= 0.186&P= 0.279 respectively).

Table (5): Comparison of the average score of the performance by studied sample after intervention (Level of skills in the studied groups after intervention)

Items	Video – assisted group (n=38)	Lecture cum demonstration group (n=41)	Significance test
	Mean± SD	Mean± SD	
Total fetal condition scores	2.82 ± 0.46	2.02 ± 1.06	t= 4.249, P 0.001
Total maternal condition score	5.66 ± 0.85	4.20 ± 1.32	t= 5.788, P 0.001
Total labour progress scores	6.13 ± 1.38	3.37 ± 1.77	t= 7.701, P 0.001
Total skills score	15.61 ± 2.02	10.58 ± 2.45	t= 9.892, P 0.001

As regards the average scores of the accepted skills, table (5) shows that the video- assisted group had a significant high score in all domains (Fetal, Maternal and labour progress) and also, in total skills score than the lecture cum demonstration group (15.61 ± 2.02 compared to 10.58 ± 2.45).

Figure (1): Levels of accepted skills in the studied students

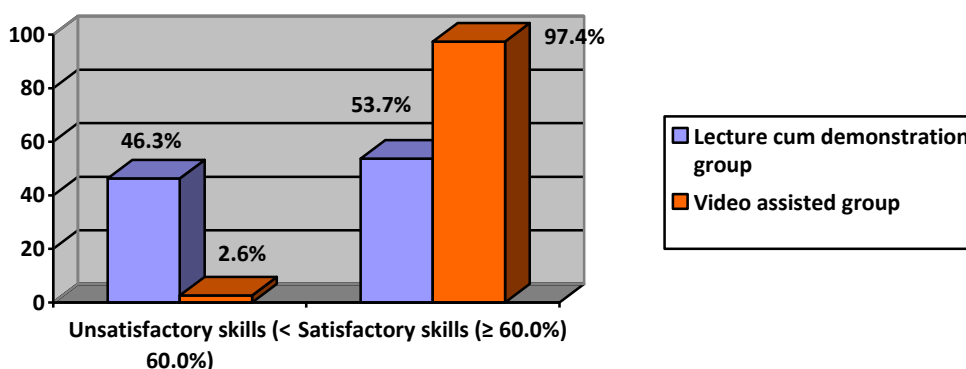


Figure (1) shows a significantly higher percentage of satisfactory skills in video- assisted group than in the lecture cum demonstration group ($\chi^2= 19.928, P= 0.001$).

Table (6): The relationship between age and gender of the studied sample and their average knowledge and skills scores

Character	Items	Video – assisted group (n=38)		Lecture cum demonstration group (n=41)	
		No	Mean ± SD	No	Mean ± SD
Knowledge before intervention					
Age group	20	17	4.17 ± 1.01	20	3.80 ± 0.70
	21	16	3.94 ± 1.52	11	4.27 ± 0.79
	22-23	15	3.40 ± 1.51	10	3.60 ± 0.70
Significance test		F= 0.683, P 0.512		F= 2.505, P 0.095	
Gender	Males	21	3.67 ± 1.59	17	3.53 ± 0.62
	Females	17	4.35 ± 0.70	24	4.13 ± 0.74
Significance test		t= 1.774, P 0.087		t= 2.783, P 0.008	
Knowledge after intervention					
Age group	20	17	14.06 ± 1.71	20	8.10 ± 1.12
	21	16	13.25 ± 1.44	11	8.45 ± 1.13
	22-23	15	14.80 ± 2.17	10	8.70 ± 0.48
Significance test		F= 1.984, P 0.153		F= 1.419, P 0.254	
Gender	Males	21	13.48 ± 1.75	17	8.59 ± 0.80
	Females	17	14.23 ± 1.60	24	8.21 ± 1.14
Significance test		t= 1.380, P 0.176		t= 1.182, P 0.244	
Skills total score					
Significance test		F= 0.136, P 0.874		F= 0.648, P 0.529	
Gender	Males	21	15.19 ± 2.54	17	10.23 ± 2.41
	Females	17	16.12 ± 0.93	24	10.83 ± 2.50
Significance test		t= 1.549, P 0.133		t= 0.771, P 0.446	

Table (6) shows that there were some variations of the average score of knowledge before and after intervention in different age groups and gender. But the difference was statistically significant only for knowledge before intervention among males and females in the lecture cum demonstration group (P 0.087 & P 0.008 respectively). The average score of skills did not show significant difference in different age groups. Although the average skill score was higher in females than males in both groups, but the difference was not significant.

Table (7): The relationship between levels of post intervention knowledge of the studied sample and their average skills scores

Character	Items	Video – assisted group (n=38)		Lecture cum demonstration group (n=41)	
		No	Mean ± SD	No	Mean ± SD
Knowledge level	Poor	0	-----	17	10.71 ± 2.79
	Fair	10	15.00 ± 2.98	24	10.50 ± 2.27
	Good	28	15.82 ± 1.56	0	-----
Significance test		t= 1.107, P 0.276		t= 0.262, P 0.795	

Table (7) reveals that there was an increase in the average score of skills in both groups with increase the level of knowledge but the difference was not significant.

II. Discussion

This study aimed to evaluate the effectiveness of utilizing video- assisted and lecture cum demonstration method on the nursing students' knowledge and skills in using Partograph. The findings of the study indicated that there was a significant difference between posttest knowledge and skills scores of undergraduate nursing students learned by video- assisted than those who learned by the lecture cum demonstration method. So the research hypothesis was accepted.

Concerning to the level of knowledge about partograph, the current study, findings revealed that in the pretest all the students of the study sample in both groups had poor knowledge about partograph. These study findings were inconsistent with **Andarieh et al., (2014)** study among 50 fourth years B.Sc.A nursing student in Iran who reported that the majority of the students had inadequate knowledge in pretest about partograph. Also the present study results were in the same line with **Al-Dainee et al., (2017)** study results concerning the effect of the teaching program regarding partograph on midwives' knowledge in the delivery room in Karbala City Hospitals who reported that midwives have poor knowledge regarding partograph in study and control group.

Similarity **Salama et al., (2010)** in Port-Said and Ismailia Cities in Egypt stated that the majority of nurses had an unsatisfactory total knowledge score about partograph. While the current study results were in contrast with **Yisma et al., (2013)** study in public health institutions of Addis Ababa, Ethiopia who reported that more than half of the obstetric caregivers had a fair knowledge of the partograph while more than one third of them had good knowledge. The difference in finding may be due to difference in study subjects

Regarding to the level of skills about partograph among the study sample, both groups had unsatisfactory skills before intervention. These results were similar to **Salama et al., (2010)** who found that from the reviewed labor sheets, there were incomplete and poor recording of parameters on the partograph against the recommended standards of WHO partograph that reflect poor skills of birth attendances on the use of a partograph.

Concerning to the effect of lecture cum demonstration method on nursing students' knowledge and skills about the partograph, there was improvement in the average score of knowledge and skills among the students learned by lecture cum demonstration. This may be due to students' effective participation, their discussion in the group and the educator's role as facilitator of thought provoking questions might have enhanced students' achievement in using Partograph. The current study results were supported by the study done by **Khalid &Prakash (2013)** who study the efficacy of the lecture cum demonstration method in nursing students' knowledge and skills of using partograph, in the selected nursing institution of Dehradun, Utrakhand and founded that mean post-test knowledge and skills scores were significantly higher than the mean pre-test. Moreover, the current study, findings in agreement with **Ja'afar-furo et al., (2014)** who study the effects of demonstration and lecture methods of teaching Apiculture on the performance of Agric students in Adamawa university, Nigeria and concluded that the application of a combined demonstration lecture method of instruction was more efficient than lecture methods of instruction among the agriculture students.

As regards the effect of video versus a lecture cum demonstration method on nursing students' knowledge and skills about the partograph, there was improvement in the average score of knowledge and skills among the students learned by video assisted and it was significantly higher than the cum demonstration group. This may be related to video can efficiently display various examples of stimulus and response variations and the presentation of stimuli in training lead to strengthen internal consistency and allows more confident comparison of data across learner and sessions. The current study findings were in the same line with **Scaria et al., (2013)** who conducted studies on the effectiveness of video teaching over lecture cum demonstration in increasing knowledge and skill of nursing students on antenatal examination and discovered that there was a significant difference in the pre and post test knowledge scores within experimental and control groups and there was gaining in knowledge in every area in both groups. The study has created enough evidence to summarize that video teaching was a powerful method of educating the students.

In agreement with the study done by **Manju&Prasad (2013)** about video assisted versus lecture cum demonstration on teaching bag technique and revealed that video assisted teaching was more effective than lecture cum demonstration as most of the students had a good practice score on bag technique. Else, in agreement with the study results to assess the knowledge regarding ECG among second year and third year B.Sc. Nursing students attending classroom teaching method with those attending video assisted teaching method in Apollo Institute of Nursing **Gigy et al., (2016)** as there was a significant difference between the post test score after classroom teaching method and video assisted teaching method on ECG among second and third year BSc. Nursing students. Therefore, the researchers concluded that the video assisted teaching method was effective as the majority of the students had better about traditional versus video based teaching on neurological assessment of undergraduate nursing students reported that both the teaching methods (video based teaching and lecture cum demonstration) were found to be similarly effective in improving the knowledge and skill of undergraduate nursing students on neurological assessment.

The present study findings revealed that although the average skills and knowledge score was higher in females than males in intervention groups but the difference was not significant. The present study findings were in the same line with **Omwirhiren and Ibrahim (2016)** who found that there is no significant difference in the academic performance of both male and female students subjected to demonstration training in teaching chemistry in their study related to the effects of two educators' instructional methods (Demonstration and Lecture) on students' learning outcomes in chemistry in Kaduna Metropolis, Nigeria.

Likewise, the current study results were incongruent with **Abhari et al., (2014)** who found that the variables of age and sex had no significance associated with the knowledge score about the partograph of the nursing students. Also, according to **Yohannan & Koshy (2015)** who assessed the efficacy of structured teaching program on knowledge regarding shading of partograph among the nursing students in selected nursing colleges of Vadodara showed that the relationship between level of knowledge scores and selected demographic variables as age and gender was not significant. Furthermore **Maphasha et al., (2017)** confirmed that the association of knowledge of the partogram and demographic variables was insignificant for age and gender.

III. Conclusion

It was evident that teaching through video-assisted method brings higher achievement and better method of importing and transmitting knowledge and acquires the skills to the students than the lecture cum-demonstration method.

IV. Recommendations

In view of the findings arising from the present study, we recommend that:

- Academic nursing staff should incorporate video assisted method for teaching at the faculty of nursing to enhance academic performance.
- Video assisted method can be adopted to enhance the skill development of the students.

For further studies

- Several innovative methods can be tried out in teaching partograph to make it interesting for students.
- Video-assisted teaching method can be extended to other maternity nursing procedures.

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