

A Pre-Experimental study to assess the effectiveness of video assisted teaching on knowledge of antenatal examination among nursing students in College of Nursing, CMC & Hospital, Ludhiana, Punjab

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ABSTRACT

Education is the first line defence in the present day world with all its revolutions. Area of knowledge and technology is increasing day by day. Students demand best technology for learning. Technology in teaching and learning (method of teaching) is expanding at a faster rate. The expanding knowledge in many fields have its modifying effect on the curriculum and the advancing technologies with their effect on the instructional media leave no choice to education but to review its practices and to make the major changes necessary for today's world. The main of study is to assess the effectiveness of video assisted teaching on knowledge of antenatal examination. **Methodology:** In this study a quantitative approach used .pretestposttest design was adopted. Purposive sampling technique was used to select 40 samples Self-administered structured questionnaire was used to collect the demographic variables and to assess knowledge on antenatal examination. **Result:** Result showed that video assisted teaching on antenatal examination among nursing students (G.N.M interns) was effective to improve the knowledge of the students. In pre test, before the implementation of video assisted teaching the students had below average knowledge (72.5%) and average knowledge (25%), and after the implementation of video assisted teaching, in the post test the students had good knowledge (70%) and excellent and average knowledge (15%) respectively regarding antenatal examination which shows the effectiveness of video assisted teaching. Significant difference was found between the pre and post-test knowledge scores of antenatal examination among nursing students. **Conclusion:** Result concluded Video assisted teaching brought a significant change in the knowledge of antenatal examination among nursing students .that the significant difference in the pre test knowledge was statistically significant at $p < 0.01$ level of significance in selected socio demographic variables. This indicates that performance is a result of video assisted teaching.

KEY WORDS: Effectiveness, video assisted teaching, knowledge, antenatal examination, and nursing student

INTRODUCTION

Education is the first line defence in the present day world with all its revolutions. Area of knowledge and technology is increasing day by day. Students demand best technology for learning. Clinical practice is an essential part of the nursing student's education. This preparation allows the students the opportunity to link theory with practice of caring for clients. Research has demonstrated that students experience problems and difficulties throughout their clinical practice. **(Neeraja K P, 2003).**¹

The expanding knowledge in many fields have its modifying effect on the curriculum and the advancing technologies with their effect on the instructional media leave no choice to education but to review its practices and to make the major changes necessary for today's world. More important than the curriculum is the question of the methods of teaching and the spirit in which the teaching is given **(Heidgerken EL, 2003).**²

One of the advanced teaching methods of today's era is video assisted teaching. Video assisted teaching provides a big avenue for research on innovative methods of enhancing knowledge in day to day life. **(Koch PE, Ryder HF, 2008)**³

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 large number of students at one time. It stimulates and reinforces ideas, beliefs and tendencies already possessed by the onlooker Wilbur Schramm, Director of the Stanford institute for communication research, an analysis of the findings of 393 comparisons of video and conventional teaching methods in schools and colleges, reported that in these comparisons 86% of them showed learning by video teaching **(Loretta EH, 2002).**⁴

Pregnancy is one of the important events in a woman's life. Pregnancy can be exciting and scary time as well, because the journey of the fetal growth in uterus needs to be monitored. There are a number of steps a woman can take to reduce high risk delivery. One important step is regular antenatal visits to her health care provider. A nurse midwife plays a liaison role for early identification of at risk women in their antenatal period **(James, Sterr J, Weiner J, Goni CP, 2008).**⁵

Good care during pregnancy is important for the health of the mother and the development of the unborn baby. Good antenatal care links the woman and her family with the formal health system, increases the chance of using a skilled nurse midwife at birth and contributes

to good health through the life cycle. Inadequate care during this time breaks a critical link in the continuum of care, and affects both women and babies (**WHO, 2012**).⁶

NEED OF THE STUDY

The field of nursing education is changing everyday to meet the rapidly changing need of the health care industry and the larger society. So the personnel involved in the nursing education should adapt these changes with the right set of skills. There should be mutual trust between teacher and learner. In nursing education the assessment of theory and practice are done often simultaneously and is three dimensional. That is cognitive, psychomotor and affective domain of learning which provides a holistic picture of student's performance. (**Halarik A, 2006**).⁷

Mother and child must be considered as one unit during antenatal period, as the foetus is the part of the mother. The development of foetus in mother's uterus is about 280 days. A healthy mother brings forth a healthy baby; certain diseases and conditions of mother during pregnancy like syphilis, German measles and drug intake are likely to have their effects upon the foetus; hence an antenatal mother must be regularly examined. One quarter of women in developing countries approximately 300 million women today suffer problems during pregnancy and delivery (**Francis, 2011**).⁸

India is behind the target of 103 deaths per live births to be achieved by 2015 under the United Nations-mandated Millennium Development Goals (MDGs). Infant mortality rate declined marginally to 42 deaths per 1,000 live births in 2012 from 44 deaths in 2011. As per the report of 2012 (released in September 2013) Infant Mortality Rate (IMR) of Punjab was 28 per 1000 live births as against 42 at the national level. The Maternal Mortality Ratio (MMR) of Punjab stands at 172 (per 1, 00,000 live births) against the national average of 212. In India, pregnancy related deaths of women have declined over the years. The number of maternal deaths per year has come down from approximately 1, 00,000 deaths (1991-01) to 44,000 deaths in 2015. Though, more than 50% reduction has been registered in the approximate number of maternal deaths in the last two decades in India (**World Health Organization 2015**).⁹

The importance of maternal health in the overall development and wellbeing of the society cannot be over emphasized. The crucial importance of maternal health was understood by 5th goal of the United Nations millennium developmental goals which is aiming at improving maternal health. Maternal health is a basic requirement of fetal health and favorable outcome of pregnancy (**India Country Report, 2015**).¹⁰

A co relational study was conducted to analyse the knowledge and attitude regarding antenatal examination among nursing student at Sikkim, Manipal College of Nursing, Gangtok, Sikkim. 64 nursing students were selected through non probability convenience sampling technique that were undergoing 3rd year GNM 1st year and 3rd and 4th year B.Sc. Nursing programmer. The findings revealed that nursing students had positive attitudes towards antenatal examination with mean score 75.2(89.5%) against a possible score of 84(SD 4.098). The study also reveals that there was poorly positive relationship found between knowledge of nursing students towards antenatal examination (**Das M, Khandelwal, Devi B, 2016**)¹¹

Researcher experienced in hospital that nursing students were not performing the antenatal examination effectively even after lecture cum demonstration and on the other hand sometimes the numbers of students are too many and numbers of antenatal patients are less, it is not practicable to demonstrate the procedure on the same antenatal patient again and again. Students may not get an opportunity for 'hands on care' and to develop skills because of less contact with the patients. Students may not be able to stipulate more number of patients to develop skills. Studying antenatal examination helps the students to identify the problems of antenatal mother related to pregnancy. Students can develop skills by performing abdominal palpation directly on the patients but, to enhance knowledge they have to learn again and again in depth which cannot be possible by demonstration due to shortage of time or patients. So, it was thought that video assisted teaching is a better and convenient option. Within a short duration teacher is able to clear the doubts and queries of the midwifery students. It is one of the latest techniques in teaching technology.

MATERIAL AND METHODS:

In view of the nature of the problem selected for the study and objective to be accomplished Pre-Experimental research approach was considered. The present study was conducted to assess the effectiveness of video assisted teaching on knowledge of antenatal examination among nursing students in College of Nursing, CMC & Hospital, Ludhiana, Punjab. The aim of the study was to assess the effectiveness of video assisted teaching on knowledge of antenatal examination among nursing students by providing teaching with the use of internet video. The objectives of the study were to assess the pre test knowledge of antenatal examination among nursing students, to conduct video assisted teaching on antenatal examination, to assess post test knowledge of antenatal examination among nursing students, to evaluate the effectiveness of video assisted teaching on knowledge of

antenatal examination among nursing students by comparing pre test and post test knowledge scores, to find out the relationship between the pre test and post test knowledge scores with selected variables such as age, gender, residence, source of information, area of posting, frequency of performing antenatal examination. Conceptual model of present study was based on general system theory by **Ludwig Von Bertalanffy(1968)**. A quantitative research approach and a pre experimental research design were used for the study. Knowledge of the nursing students was assessed with structured knowledge questionnaire tool regarding antenatal examination. The total sample size was 40 nursing students (G.N.M interns). Purposive sampling technique was used to collect the data. The tool was modified and pre tested for validity and reliability. Video was also pretested and validated by the panel experts. Pilot study was conducted on 4 G.N.M interns to ensure the reliability and feasibility of the study. The final study was conducted in the third week of February 2017 on a sample of 40 G.N.M Interns. Descriptive and inferential statistics were used to analyze the data. Bar and pie diagrams and tables were used to depict the findings.

MAJOR FINDINGS OF THE STUDY

Table 1
Frequency and Percentage Distribution of Nursing Students According to Sample Characteristics

Sample Characteristics	f	%
N = 40		
1. Age (in years)		
a) 20- 22	26	65
b) 23- 25	13	32.5
c) >25	1	2.5
2. Gender		
a) Male	22	55.0
b) Female	18	45.0
3. Residence		
a) Urban	29	72.5
b) Rural	11	27.5

4. Source of information

a) Demonstration	30	75
b) Theoretical	4	10.0
c) Workshop/conference/in-service education	1	2.5
d) Self study	3	7.5
e) Mass media	2	5.0

5. Area of Posting

a) Obstetric &Gynaecological area	12	30
b) Emergency	3	7.5
c) Other area (specify)	25	62.5

6. Frequency of Performing ANE

a) <10 times		
b) 10 to 20 times	3	7.5
c) >20 times	37	92.5

26 (65%) nursing students were in the age group of 20-22 years, According to gender, 22 (55%) nursing students were male, According to residence, 29 (72.5%) nursing students were from urban area, According to residence, 29 (72.5%) nursing students . According to source of information, 30(75%) nursing students acquired information from demonstration, According to frequency of performing examination, 37 (92.5%) nursing students had performed examinations more than 20 times .

The **first objective** was to assess the pre-test knowledge of antenatal examination among nursing students. According to Pre Test levels of knowledge majority of nursing students (72.5%) had below average knowledge. The **second objective** was to conduct video assisted teaching on antenatal examination. The third objective was to assess post-test knowledge of antenatal examination among nursing students. Majority of the nursing students (70%) had good knowledge after the video assisted teaching. The **fourth objective** was to evaluate the effectiveness of video assisted teaching on knowledge of nursing students regarding antenatal examination by comparing pre-test and post-test mean knowledge score. According to the objective highly significant difference was found in the mean pre-test and post-test mean knowledge scores ($t=16.31^{**}$)

TABLE: 2

Comparison of Pre Test and Post Test Level of Knowledge Score related to Antenatal Examination among Nursing Students

N=40

Nursing Students						
			Pre test		Post test	
Levels of knowledge	%	Score	n	%	n	%
Excellent	≥ 80	≥30	0	0.00	6	15
Good	65-79	24-29	1	2.50	28	70
Average	50-64	18-23	10	25.00	6	15
Below Average	<50	<18	29	72.50	0	0

Maximum score = 36, Minimum score = 0

The **fifth objective** was to find out the association between levels of knowledge of nursing students with selected variables such age, gender, residence, area of posting, frequency of performing antenatal examination and source of information. The findings according to the source of information showed significant difference between pre-test and post-test mean knowledge scores who exposed to demonstration, theoretical and self-study($t=13.07^{**}$, 9.62^{**} and 4.13^* respectively) of antenatal examination among nursing students.

DISCUSSION

The present study was conducted to assess the effectiveness of video assisted teaching on knowledge of antenatal examination among nursing students in College of Nursing, CMC & Hospital, Ludhiana, Punjab. The aim of the study was to assess the effectiveness of video assisted teaching on knowledge of antenatal examination among nursing students by providing teaching with the use of internet video. A quantitative research approach and a pre experimental research design were used for the study. Knowledge of the nursing students was assessed with structured knowledge questionnaire tool regarding antenatal

examination. The total sample size was 40 nursing students (G.N.M interns). Purposive sampling technique was used to collect the data. The tool was modified and pre tested for validity and reliability. Video was also pretested and validated by the panel experts. Pilot study was conducted on 4 G.N.M interns to ensure the reliability and feasibility of the study. The final study was conducted in the third week of February 2017 on a sample of 40 G.N.M Interns. Descriptive and inferential statistics were used to analyze the data. Bar and pie diagrams and tables were used to depict the findings. Result showed 26 (65%) nursing students were in the age group of 20-22 years, According to gender, 22 (55%) nursing students were male, According to residence, 29 (72.5%) nursing students were from urban area, According to residence, 29 (72.5%) nursing students . According to source of information, 30(75%) nursing students acquired information from demonstration, According to frequency of performing examination, 37 (92.5%) nursing students had performed examinations more than 20 times. pre-test knowledge of antenatal examination among nursing students. According to Pre Test levels of knowledge majority of nursing students (72.5%) had below average knowledge. post-test knowledge of antenatal examination among nursing students. Majority of the nursing students (70%) had good knowledge after the video assisted teaching. evaluate the effectiveness of video assisted teaching on knowledge of nursing students regarding antenatal examination by comparing pre-test and post-test mean knowledge score. According to the objective highly significant difference was found in the mean pre-test and post-test mean knowledge scores. Age, gender, residence, source of information, area of posting and frequency of performing antenatal examination showed no significant relationship with antenatal examination knowledge among nursing students,

CONCLUSION

The midwifery students should be educated about the antenatal examination in detail so that they can strengthen their theoretical knowledge and use it in practice to examine antenatal mothers. The students should be guided in the clinical areas to develop skills in antenatal examination so that they can determine problems and plan appropriate nursing interventions.

Video assisted teaching brought a significant change in the knowledge of antenatal examination among nursing students. The significant difference in the pre-test knowledge was statistically significant at $p < 0.01$ level of significance in selected socio demographic

variables. This indicates that performance is a result of video assisted teaching. It is thus concluded that the video assisted teaching is effective in bringing about the desired changes in the knowledge of antenatal examination among nursing students..

Conflict of Interest: The authors certify that they have no involvement in any organization or entity with any financial or non-financial interest in the subject matter or materials discussed in this paper.

Funding Source: There is no funding Source for this study"

Acknowledgement: I most sincerely convey my deep sense of gratitude to my guide/Organisation for her/their remarkable guidance and academic support during this study

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