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Effectiveness of Video Assisted Structured Teaching Versus Demonstration on Knowledge and Skills Regarding Electrocardiogram among Students of selected Govt College of Nursing, Hyderabad, Telangana.

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Abstract

An experimental study was undertaken to do A Comparative study to assess the effectiveness of Video assisted structured teaching Vs Demonstration on knowledge and skills regarding Electrocardiogram among students of selected Govt. college Nursing ,Hyderabad, TS.

It was conducted by Mrs. P. Roja Rani, Il yr. M.Sc. Nursing student, Government College of Nursing, Hyderabad in partial fulfilment of the requirement for the degree of M.Sc.(N) at K.N.R University of Health Sciences, Warangal, Telangana. The objectives of the study were to 1. Assess the knowledge and skills regarding ECG among Nursing students.2.Plan and conduct video assisted structured teaching for group A and Demonstration for group B on ECG.3.Compare the effectiveness of video assisted structured teaching with demonstration on knowledge and skills regarding electrocardiogram among nursing students.4.Find the association between knowledge and skills of nursing students with the selected demographic variables. The conceptual framework was based on Ludwick Von Beralanfy's General systems theory. An experimental study with one group pre-test and post-test with selected teaching methods were adopted. An instrument was developed in the form of structured questionnaire to assess the knowledge and checklist to assess the skills of students regarding Electrocardiogram, before and after for group-A (Video assisted structured teaching)and to group-B (Demonstration). For Video assisted structured teaching

a video was taken and presented to the group-A and for group-B Demonstration is shown in the lab . The reliability of the tool was found by using Guttman Split-Half Coefficient method, 'r value was .817 and the tool was found reliable. A pilot study was conducted on 10 IInd year Students; five students in group-A (Video assisted structured teaching) who belong to Govt college of nursing, Rajanna, Siricilla. and five students for group-B (Demonstration) who belong to Govt college of nursing ,Warangal. The tool was found practicable, feasible and appropriate. For the main study purposive sampling technique was used to select 50 students in group-A (Video assisted structured teaching) In Govt college of nursing, Secunderabad and 50 students in group-B (Demonstration)) in Govt college of nursing, Hyderabad. Data collection was done in the last week of June 2021, Video assisted structured teaching and Demonstration in the first week of July, 2021. The knowledge of the students was assessed before and after the teaching methods. Analysis and interpretation of data was done with the help of descriptive and inferential statistics. Association between before and after teaching methods, knowledge and skills scores were tested with chi person square test and paired 't test. Results have shown that the overall mean in group-A (Video assisted structured teaching) was 18.360 before and 30.940 after Video assisted structured teaching, for group-B (Demonstration) the mean was 16.3 before and 23.7 after Demonstration. The obtained 't' value for group-B(Demonstration) was -13.9 and for group-B, -6.56 was greater than the table 't' value 2.02. There was an association between Classroom teaching methods and the age, education , previous experience , experience in speciality units of the students.

NEED FOR THE STUDY

In all type of health care organisations, Nursing is the hub the information flow, developing teaching and learning skills of Nursing education will enhance the learning of student nurses for clinical practice, management, education, and research and will facilitate the role of nurses as good educators.

-Patrica F.Brennan [1999]

Demonstration implies the presentation of a pre-arranged series of events or equipment to a group of students for their observation. Demonstration is most commonly used in science and fine arts and more so in Nursing. Learning goes on through observation. The student not only can hear the explanation, but also can see the procedure .As a result, the demonstration method projects a mental image in the student's mind, which fortuities verbal knowledge.

The teaching and learning activity here are video assisted structured teaching and demonstration methods have a good impact on nursing students. The new methods of teaching are emerging as to improve student-learning. The teacher is facing the challenge in teaching techniques for aiding in excellent learning of student nurse.

It is generally agreed by the Nursing profession that the art and science of nursing care can only be learnt in direct delivery of patient care and that , in order to do this students, need to identify with a practitioner

model. The research is arising from the belief that teacher role to mitigate effective teaching in the classroom.

In recent nursing education focused on theoretical and practical. Many nursing researchers reported that nursing students , in spite of good knowledge base, nurses skilful in clinical setting. Hence artful demonstration teaching methods enhance the good learning to a student nurse.

Student Nurses in 2nd year of Nursing course are passing through adjustment phase of a professional training.

The nursing students learning abilities are stimulated by the teacher's skill and methods of teaching and involvement of all sensory organs, auditory, visuals, tactile, olfaction etc; These improve the grasping capacity and remains or leaves a long-term memory in the students' mind.

The researcher interest is motivated by real life situations and thoroughly explain then the information was at a maximum grasp and other teaching methods did not do so. Therefore, the researcher is interested in the study on video assisted structured teaching vs demonstration. As the investigator personal experience there is a routine method of teaching being conducted which sometimes may be becoming monotonous.

Teachers need to check which method of teaching suites the most to the topic to be presented and the participatory group. The evidence based on learning theories and psychological theories of the research helps as to organize and select the best suitable strategy for teaching a particular topic. Especially in the clinical area .This curiosity made the researcher to select the topic.

World Health Organization (WHO) reported the global atlas on cardiovascular disease prevention and control states that cardiovascular disease is the leading cause of the death and disability in the world.

OBJECTIVES:

- Assess the knowledge and skills regarding Electrocardiogram among Nursing students.
- Plan and conduct video assisted structured teaching for group A and demonstration for group B on Electrocardiogram.
- .Compare the effectiveness of video assisted structured teaching with demonstration on knowledge and skills regarding Electrocardiogram among nursing students.
- .Find the association between knowledge and skills of nursing students with the selected demographic variables.

OPERATIONAL DEFINITIONS

Effectiveness : Improvement of post test scores over pre test scores after video assisted structured teaching and demonstration imparted by the investigator on knowledge and skills regarding Electrocardiogram among nursing students.

Knowledge: Responses given by the nursing students regarding Electrocardiogram to the questionnaire prepared by the investigator.

Skill: The ability of performances given by the nursing students regarding Electrocardiogram to the checklist prepared by the investigator.

Video assisted structured teaching : Lesson plan with the help of projected electronic audio-visual aids prepared by the investigator on Electrocardiogram.

Demonstration: prearranged series of steps of procedure with adequate explanation prepared by the investigator on Electrocardiogram.

Students: An individual studying 2nd yr. B.sc nursing course at selected nursing college.

CONCEPTUAL FRAMEWORK

Concept is an abstraction based on observation of certain behaviours and characteristics. It refers to the process of developing and refining abstract ideas.

A conceptual frame work is a set of highly abstract and related constructs that broadly explains the phenomena of interest and express assumptions and reflects a philosophical stance. The overall purpose is to make scientific findings meaningful and generalize. Concepts mean those words describing the mental images of phenomena. They are building blocks of theory.

According to Mc Far lance, the development of conceptual framework is the fundamental process required before conducting actual research. Conceptual framework deals with the interrelated concepts or abstractions that assembled together in same rational by virtue of their relevance to common theme. (Polit and Beck 2015)

A framework is the conceptual understanding of the study that has its roots in the specified conceptual model, the framework is often called conceptual framework. The development of conceptual framework. The development of conceptual framework is a fundamental process required before conducting actual research, because it guides each stage. Polit DF and Hungler B.P 1995 states that a conceptual some rational scheme by virtue of their relevance to a common theme. It is a frame work which provides the investigator the guidelines to proceed in one attaining the objective of the study based on theory. It is a scientific representation of the step and activities and outcome of the study.

Conceptual framework deals with that are assembled by virtue of relevance to a common phenomenon. Theory is the basis of all scientific works. A theory consists of an integrated set of defined

concepts, existence of statements, and rational statements that presents a view of phenomenon and can used to describe, explain, predict and control that phenomenon.

The conceptual framework of the present study is based on

Ludwig Vein Bertalanffs General System's theory.

According to general system theory. A system of interacting components i.e.; input, throughput and output and feedback with in the boundary that fitter the type and rate of exchange within the environment.

Input:

In the study the investigator identifies various demographic variables of the students aged 19- above28 years and conduct a pretest on video assisted structured teaching for group-A and demonstration for group-B on knowledge and skills regarding Electrocardiogram among nursing students.

Through put:

Researcher conducts a video assisted structured teaching to group-A and demonstration to group-B on knowledge and skills regarding Electrocardiogram to those students who participated in pre-test.

Output:

In the study the effectiveness of video assisted structured teaching and demonstration was evaluated by conducting post test on students for knowledge and skills and the scores will be analysed and interpreted.

Feedback:

Feedback is the response of individual which may be positive negative or neutral. The process of feedback enables the individual to evaluate whether the input is processed satisfactory or not and if needed enable.

Assumptions: It is assumed that

.The nursing students may have some knowledge and skills regarding Electrocardiogram .

.Video assisted structured teaching and demonstration will improve the knowledge and skills regarding Electrocardiogram among Nursing students.

Hypothesis:

H1: There will be a significant difference between mean pre and post-test scores on knowledge and skills after video assisted structured teaching method regarding Electrocardiogram among nursing students at <0.05 level of significance.

H2: There will be a significant difference between mean pre and post-test mean scores of knowledge and skills after demonstration regarding Electrocardiogram among nursing students at <0.05 level of significance.

H3: There will be a significant difference between mean post test scores of video assisted structured teaching and demonstration on knowledge and skills regarding Electrocardiogram among nursing students.

H4: There will be significant association between mean post test scores of knowledge and skills regarding Electrocardiogram among nursing students with selected demographic variable.

Delimitations: the study is limited to

.2nd year BSc nursing students in selected nursing colleges.

.Students who are willing to participate in the study.

.The age group between (19- above28) yrs. are taken into the study

Epilogue:

This chapter deals with introduction, need for study, problem statements, objectives, operational definitions, conceptual framework, assumptions, hypothesis, delimitations.

Chapter II

Review of Literature

Review of literature is an integral component of any research study. It helps to discover what is previously been done about the problems .what methods have been used employed in the other research and how the result of the other research in the area can be combined to develop knowledge .It is a key step to the research process.

Review of literature is an essential part of every research project. A Literature involves systematic identification ,scrutiny and summary of written materials that contain information on a research problem.

(Baswanthappa B.T.1998)

An extensive review of literature was done. Reviews are classified as follows:

Studies related to

- Video assisted structured teaching as a teaching method.
- Demonstration as a teaching method.
- Video assisted structured teaching vs demonstration method
- Electrocardiogram.

Mr.M.Raghavendran,sep 2019-A study to assess the effectiveness of video assisted teaching module on knowledge regarding ECG changes in cardiac Arrhythmias among staff nurses at Rama Hospital.

The study aimed to assess the effectiveness of video assisted teaching module on knowledge regarding ECG changes in cardiac arrhythmias among staff nurses in Rama Hospital. A pre-experimental one group pre-test post-test design was used for the study. A non-probability convenient sampling technique was used. Sample size was 50. Self-structured questionnaire was used to collect the data. Data was analysed by using descriptive and inferential statistics. The results shows that in knowledge scores at the time of pre-test 78% of subjects were having poor knowledge 22% were having average knowledge and no one staff nurses were in good knowledge category. At the time of post-test 70% of subjects were having average knowledge and 30% subjects were having good knowledge and no one staff nurses were in poor knowledge category. The test statistics value of the paired t test was 19.74 with p value 0.00. Shows that planned video assisted teaching module was effective. For the variables like qualification and work experience the p value of the association test with knowledge was less than 0.05 concludes that there was significant association of these demographic variables with knowledge of the staff nurses. The finding reveals that the video assisted teaching module was effective in increasing the knowledge of staff nurses.

Kiran Panthri, Kanchan Raturi, Deepika Bisht, Ayushi, Mohit Rawat, Mukesh Chandra Joshi, Sanya Sharma and Shuaiv Khan - A pre-experimental study to assess the effectiveness of demonstration method on knowledge and practice regarding CPR among nursing students of selected nursing college of Dehradun.

Findings revealed that Out of all (87%) subjects belongs to the age group of 18-20 years followed by (13%) belongs to 21- 23 years age group. Majority (84%) subjects were female followed by (16%) male. Maximum (100%) subjects were 12th pass. Majority (96%) subjects had pervious information regarding CPR followed by (4%) did not had previous information regarding CPR. Majority (94%) had curriculum as previous source of information followed by (3%) mass media and (3%) had previously attended seminar. Findings revealed that lowest number 2(7%) of nursing students had good pretest knowledge, followed by 6 (19%) with average and 23 (74%) had below average knowledge regarding CPR, lowest number 0(0%)of nursing students had good pretest level of practice, followed by 6(20%) with average and 25 (80%) had below average practice regarding CPR, highest number 21 (67%) of nursing students had good posttest level of knowledge, followed by 9(30%) with average and 1 (3%) had below average knowledge regarding CPR, lowest number 5 (17%)of nursing students had good posttest level of practice, followed by 19 (62%) with average and 7 (21%) had below average practice regarding CPR. Conclusion: The study findings revealed that nursing students had average pretest knowledge and practice regarding CPR and it had improved with good level of knowledge and practice in posttest. Association was found to be significant between the knowledge of nursing students regarding CPR with their gender and previous source of information and others were found to be non-significant.

Barkha Devi , Bidita Khandelwal Sikkim Manipal University March 2019-Comparison of the Effectiveness of Video-assisted Teaching Program and Traditional Demonstration on Nursing Students Learning Skills of Performing Obstetrical Palpation

Background Teaching methods have failed to keep up with the pace of the changing curriculum. Clinical practice, an essential part of nursing education, links theory with practice, particularly in midwifery nursing. Thus, this study aimed to compare the effects of video-assisted teaching programs and traditional demonstration on nursing students learning obstetrical palpation skills. Materials and Methods This is a quasi-experimental research work with pretest, posttest, control group design in which 60 third-year students of Bachelor of Science in Nursing were selected and assigned randomly, by lottery method, into an experimental group (video-assisted teaching program) and a control group (traditional demonstration) regarding obstetrical palpation. The data were collected through a self-designed rating scale. The validity of the rating scale was established by a panel of seven experts from the field of obstetrical and gynecological nursing, and the reliability was established through Cronbach's α(0.78), which showed the tool was consistent among the population. Results The results showed a significant difference between the pretest and posttest skill scores of students who were exposed to video-assisted teaching program and traditional demonstration ($t = 18.35$, $p < 0.001$). Although both the methods were equally effective in enhancing skill, traditional demonstration scored much better than the video-assisted teaching program when the posttest skills were compared ($t = 36.40$, $p = 0.001$). Conclusions The routine educational method, i.e., demonstration, is more effective in developing skills emphasizing the reinforcement of academicians in enhancing teaching skills by adopting blended teaching technique for enhancing memory storage, retrieval, cognition, and learning.

Epilogue:

This review of literature helped the investigator in selecting and understanding the problem in selecting the research design and conducting the study.

CHAPTER-III

METHODOLOGY

Research methodology deals with the method of investigation to be adopted by the investigator. Methodology is the science of method. It is a set of methods and principles used to perform particular activity; the selection of research methodology is an important step in research as it is concerned with overall frame work for conducting the study. “Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically.”

The methodology of research is how data is gathered in order to answer the question or analyze the research problem. It includes research approach, research design, description of variables, setting of the population, sample, sampling technique, sample criteria, method of data collection, development and description of the tool for data collection, pilot study and plan for data analysis and interpretation.

The present study is aimed to assess the Eeffectiveness of video assisted structured teaching vs demonstration on knowledge and skills regarding Eelectrocardiogram Among students of selected Govt Collegee of Nusing, Hyderabad, Telangana.

Research Approach

The research approach adopted for the present study is the quantitative approach which aims to study the Eeffectiveness of video assisted structured teaching vs Demonstration on knowledge and skills regarding Eelectrocardiogram among students of selected Govt college of Nusing, Hyderabad, Telangana. It is generally applied to understand the cause-and-effect relationship between variables.

Research Design:

Research design is a blue print for the study that maximizes control factors that could interfere with study desired outcome.

In the present study the research design chosen is Quasi-experimental. Two group pre-test-post-test design. This design provides a comparison between two group of subjects before Intervention and after Intervention.The investigator selected video assisted structured teaching vs Demonstration on knowledge and skills regarding Electrocardiogram as intervention and it is provided to the group of subjects. In this O_1 includes assessment of video assisted structured teaching on knowledge and skills regarding Electrocardiogram before Intervention. X was intervention includes Demonstration and video assisted structured teaching and O2 includes return Demonstration of Electrocardiogram after Intervention.

Description of Variables

Variables as an attribute that varies, that takes on different values" In the present study the investigator has identified independent variable, dependent variable.

Independent variable

The independent variable in the study is video assisted structured teaching vs Demonstration regarding Electrocardiogram.

Dependent variables

The dependent variable in this study is knowledge and skills of B.sc nursing students regarding Electrocardiogram.

Research Setting:

The setting of the present study is selected by the investigator is planned to be conducted in Govt. college of nursing, Secunderabad for Group-A video assisted structured teaching. It is a teaching institution established in located at bhoiguda, affiliated to Kaloji Narayana Rao university of health sciences with students and Group -B for Demonstration conducted in Govt. college of nursing, Hyderabad. It is a teaching

institution established in 1959 located at Raj bhavan road, Somajiguda, affiliated to Kaloji Narayana Rao university of health sciences with 320 students.

Population:

The population is the entire aggregate of elements in which the researcher is interested. The population for the present study is Nursing students who are studying BScN IIyr. in the Govt. colleges of Nursing, Hyderabad, Secunderabad, Telangana state.

Sample:

According to polit and Hungler (2008) sample is a subset of a population element selected to participate in a research study.

A sample size in the present study consists of 2nd yr. B Sc nursing students in the age group of 19- above28 years. studying in Govt colleges of nursing, Hyderabad and Secunderabad, Telangana state

Sample size: A sample size is the number of the subjects needed in the sample.

The size of the sample for present study is 100 nursing students studying 2nd yr. B Sc nursing in the age group of 19-above28 years. studying in Govt colleges of nursing, Hyderabad and Secunderabad, Telangana state.

Sampling technique:

Sampling technique refers to the process of selecting a portion of the sample from entire population polit and Hungler 2015

For this study, the sampling technique used is non probability convenient sampling method, was based on researcher's knowledge about the population and used to select the sample. Through this technique the researcher decides purposely to select the widest possible variety of respondents or might choose subjects, who are judged to be typical of the population particularly knowledgeable about the issues under the study.

Purposive sampling technique has manifold advantages of being convenient and economical as the present study intends to assess Effectiveness of VAST vs Demonstration on knowledge and skills regarding Electrocardiogram.

Criteria for sample selection:

Criteria specify the characteristics that the people in the population must possess. Hence the criteria for sample selection for the study are

Inclusion criteria

1. who are studying BScN IIyr
2. who are between the age group of 19 –above 28 years
3. Nursing Students who are willing to participate in the study.

Exclusion criteria

1. Nursing students who are on leave during the time of data collection
2. Who are sick at the time of data collection.
3. Students who are studying B Sc. N 1st yr., 3rd yr., 4th yr.

Method of data collection:

In the present study, the investigator collects the data regarding demographic variables using questionnaire, checklist to know the effectiveness of video assisted structured teaching vs Demonstration on knowledge and skills regarding Electrocardiogram.

Development and description of the tool:

Data collection tools are the procedures or instruments used by the researcher to observe or measure the key variables in the research problem. The tool will be constructed with the help of review of literature from various textbooks, journals, unpublished thesis, internet and discussions with experts in the field of Medical Surgical Nursing. The investigator will adopt tool for assessing the effectiveness of video assisted structured teaching vs Demonstration on knowledge and skills regarding Electrocardiogram.

A structured questionnaire: multiple choice questions developed by investigator.

Checklist: developed by investigator.

VALIDITY

To determine the content validity, the tool is submitted to experts in the medical surgical nursing , medical experts , Electrocardiogram technicians. Valuable suggestions are incorporated ,necessary modifications was done accordingly.

RELIABILITY

Reliability of the tool was tested with Spearman-Brown coefficient correlation method. The reliability r value was which indicate tool was reliable.

PILOT STUDY

Pilot study was conducted in the month of May on 07/05/2021 to group A and 8/05/21 to group B. At Govt college of nursing, Rajanna siricilla , 5 samples selected by purposive sampling for present study for group A (video assissted structured teaching) . At Govt college of nursing, Warangal , 5 samples selected by purposive sampling for present study for group B (demonstration). Explained the study clearly for each student. Investigator collected the demographic data by questionnaire. Followed by pre-test for knowledge by questionnaire and checklist to assess the skills of the students. Video assisted structured teaching was intervened to group A and lesson plan followed by demonstration to group B on Electrocardiogram. After 72 hrs. post-test was conducted on the same group with same structured questionnaire and checklist through zoom meeting . It revealed that the study is feasible, practicable and appropriate to conduct main study .

DATA COLLECTION PROCEDURE

The Investigator obtained prior permission from the Principal and class coordinator, Govt Colleges of Nursing ,Secunderabad and Hyderabad and consent from the II year B.Sc Nursing students.

The total II year B.Sc. Nursing students were 50 from Govt college of nursing ,Secunderabad for group A (Video assisted structured teaching) and 50 students from Govt .college of nursing ,Hyderabad for group B (demonstration). In pre-test, questionnaire was administered to each student between 10 am and 11 am through google forms and skills were assessed by checklist. After pre-test, Video assisted structured teaching was implemented to group A and Lesson plan was intervened by ppt and demonstration was performed to group B through zoom meeting. After 72 hrs.of implementation of Video assisted structured teaching and demonstration, post test was done to the same group to evaluate the effectiveness of Video assisted structured teaching to group A and demonstration to group B.

Pre-test scores was compared with post-tet scores to identify the effectiveness of the study. Throughout the data collection all 100 nursing students were co-operative.

ETHICAL CONSIDERATION

Prior permission letter was obtained from principal , class co-ordinator of Govt. colleges of nursing, Secunderabad and Hyderabad. Consent was taken from samples before intervention. Confidentiality was maintained.

PLAN FOR DATA ANALYSIS

Data analysis is the systematic organization and synthesis of research data and

testing of research hypothesis by utilizing the obtained.

Based on the objectives and hypothesis the obtained data was analysed by using both descriptive and inferential statistics, wherever required the data were shown in graphic representation.

Demographic data analysed by using frequency and percentage distribution . Mean, standard deviation and paired 't' test was used to find the difference between pre-test and post-test knowledge and skills scores on Electrocardiogram among the IIyear B.Sc Nursing students. Chi-square test was used to find the association between selected demographic variables of II year B.Sc Nursing students with their post- test knowledge and skills

CHAPTER – IV

ANALYSIS AND INTERPRETATION

Statistical analysis enables the researchers to organize, interpret and communicate numeric information. This chapter deals with analysis and interpretation of data collected from 100 Nursing students i.e.; 50 from Govt.college of nursing , Hyderabad, and 50 from Govt. college of nursing, Secunderabad, Telangana state. The present study has been taken up to do A Comparative study to assess the effectiveness of video assisted structured teaching Vs demonstration on knowledge and skills regarding electrocardiogram among students in selected nursing colleges, Hyderaba , TS.

The demographic data was collected from students. The students were assessed with the help of structured questionnaire and checklist .

The analysis was done with the help of descriptive and inferential statistics.

Problem statement :

Effectiveness of video assisted structured teaching vs demonstration regarding knowledge and skills on electrocardiogram among students of selected Govt colleges of nursing, Hyderabad, Telangana.

OBJECTIVES:

- Assess the knowledge and skills regarding Electrocardiogram among nursing students.
- Plan and conduct video assisted structured teaching for group A and demonstration for group B on Electrocardiogram.
- Compare the effectiveness of video assisted structured teaching with demonstration on knowledge and skills regarding Electrocardiogram among nursing students.
- Find the association between knowledge and skills of nursing students with the selected demographic variables.

Data analysis and interpretation was done with the help of descriptive statistics such as frequencies, percentage distribution, mean, median, mode, and standard deviation were utilized for the effectiveness of video assisted structured teaching versus demonstration on knowledge and skills regarding electrocardiogram. Inferential statistics such as paired t-test was used to test the significance the effectiveness of video assisted structured teaching versus demonstration on knowledge and skills regarding electrocardiogram and Non parametric test was utilized to test the stated hypothesis with the help of chi-

square test to determine if there was any significant association between the knowledge scores of the students of demonstration regarding knowledge and skills on electrocardiogram and selected demographic variables such as Age, General Education, assisted for ECG procedure and experience in the specialty units. The findings of the study were organized and presented as follows:-

Part -I :

Deals with the frequency and percentage distribution of demographic data of students.

Part- II :

Comparative frequency and percentage distribution of the pre-test and post-test knowledge and skills scores to Group A and Group B

Part- III :

Deals with the cumulative knowledge and skills scores of students ; before and after video assisted structured teaching to Group A and demonstration to Group B.

Part-IV:

Deals with effectiveness of video assisted structured teaching to Group A over

demonstration to Group B.

Part - V

Deals with the association between the knowledge and skills scores of each group and demographic variables.

CHAPTER-V

SUMMARY

In this chapter an attempt was made to present summary, findings, discussion, conclusions, implications, limitations and recommendations of the study.

The present study was undertaken on "Effectiveness of Video Assisted Structured Teaching Versus Demonstration on Knowledge and Skills Regarding Electrocardiogram among Students of selected Govt Colleges of Nursing, Hyderabad, Telangana".

The objectives of the study were:

- ❖ Assess the knowledge and skills regarding Electrocardiogram among Nursing students.
- ❖ Plan and conduct video assisted structured teaching for group A and demonstration for group B on Electrocardiogram.

❖ Compare the effectiveness of video assisted structured teaching with demonstration on knowledge and skills regarding electrocardiogram among nursing students.

❖ Find the association between knowledge and skills of nursing students with the selected demographic variable.

The investigator assumes that the implementation of selected clinical teaching methods will improve the knowledge and skills levels of the nursing students. The main hypothesis of the study was a significant difference in the pre and post-test knowledge and skills scores , and a significant difference between video assisted structured teaching and demonstration on knowledge and skills on Electrocardiogram.

The review of literature helped the investigator to gain an insight into the Present study to gain in-depth knowledge and skills of the content, develop conceptual framework and demographic variables and tools (questionnaire and checklist) for data collection. The research approach selected for the present study was quantitative approach and the research design was experimental design, two group pre-test and post-test design.

The Setting of the study was Government College of Nursing, Secunderabad for Group A and Government College of Nursing Hyderabad, for Group B. The sample consists of 100 students of video assisted structured teaching Vs Demonstration on knowledge and skills regarding Electrocardiogram by the Purposive sampling technique which is a non-probability sampling technique was used to select 50 students in each college of nursing.

The population of the present study consists of BSc N IIyr students studying in Government College of Nursing, Secunderabad for Group A and Government College of Nursing, Hyderabad, for Group B.

Pilot study was conducted on 10 samples at 5 students from Government College of Nursing, Rajanna, Siricilla for Group A and 5 students from Government College of Nursing, Warangal for Group B through zoom meeting. It revealed that the study is feasible, practicable and appropriate to conduct main study. The main study was conducted in Government College of Nursing, Secunderabad for Group A and Government College of Nursing Hyderabad, for Group B.

The data collected from the sample was organized, tabulated and analysed with the help of descriptive and inferential statistics like frequencies, percentage, mean, standard deviation, paired t test and chi square test.

FINDINGS OF THE STUDY:

The findings of the study showed that there was a significant difference in before and after teaching methods and a significant difference between group A (video assisted structured teaching) and group B (demonstration) knowledge and skills scores.

Part – I- Deals with the demographic data of the students

The analysis with the distribution of demographic data of group A (video assisted structured teaching) shows that Electrocardiogram knowledge scores out of 50 nursing students , majority of the students age between 19 -21(90%), were with intermediate (92.0%), were not assisted for ECG procedure (86%), were not having experience in the specialty units (96.0%). Similarly in Group-B (demonstration)majority of the students age between 19 -21(92%), were with intermediate (92.0%), were not assisted for ECG procedure (72%), were not having experience in the specialty units (100.0%).

The results of the present study revealed that, in Group-A and in pre-test 62.0% were in below average, 38.0% were average and above average were nil, whereas in post-test, below average were nil, 56.0% were average and 44.0% were above average. Similarly in group-B explains that, in pre-test 68.0% were in below average, 32.0% were average and above average were nil, whereas in post-test, below average were nil, 48.0% were average and 52.0% were above average. These differences indicate that group-B is better than the group-A. Hence the Demonstration is more effective than the Video Assisted Structured Teaching programme among students.

The results of the present study revealed that, Electrocardiogram skill Level shows that, in group-A and in pre-test reveals that,92.0% were poor performance, 8.0% were fair and good and excellent were none of them, whereas in post-test, poor performance were nil, 2.0% were fair, 12.0% were good and 86.0% were excellent. Similarly in Group-B, in pre-test shows that, 66.0% were poor, 4.0% were fair, 30.0% were good and excellent were nil, after demonstration, poor and fair performance were nil, 24.0% were good and 76.0% were excellent. These differences indicate that group-B is better than the group-A.

Part- II- Comparative frequency and percentage distribution of the pre-test and post-test knowledge and skills scores to Group A and Group B

The total knowledge scores of the students on Video assisted structured teaching and Demonstration regarding ECG. The pre-test knowledge scores; out of 50 students in Group-A, 31 of them (62.0%) , is below average, 19 of them (38%) average, and 0 of them (0%) are above average (nil) knowledge scores.

In post-test knowledge scores; out of 50 students in Group-A, 0 of them (0%) is below average, 28 of them (56%) average, and 22 of them (44.0%) are above average knowledge scores.

The pre-test knowledge scores; out of 50 students in Group-B, 34 of them (68.0%) is below average, 16 of them (32%) average, and 0 of them (0%) are above average (nil) knowledge scores.

In post-test knowledge scores; out of 50 students in Group-B, 0 of them (0%) is below average, 24 of them (48%) average, and 26 of them (52.0%) are above average knowledge scores.

From the above table we observed that, group-B is better than the group-A.Hence the Demonstration is more effective than the Video Assisted Structured Teaching programme among students.

The total skills scores of the students on Video assisted structured teaching and Demonstration regarding ECG. The pre-test skill scores; out of 50 students in Group-B, 46 of them (92.0%) , had poor skills, 4 of them (8%) fair, and 0 of them (0%) are good and 0 of them (0%) had excellent skills scores (nil) scores.

The post-test skill scores; out of 50 students in Group-B, 0 of them (0%) had poor skills, 1 of them (2%) fair, and 6 of them (12%) are good and 43 of them (86%) had excellent skills scores .

The pre-test skill scores; out of 50 students in Group-A, 33 of them (66.0%) had poor skills, 2 of them (4%) fair, and 15 of them (30%) are good and 0 of them (0%) had excellent skills scores (nil).

The post-test skill scores; out of 50 students in Group-B, 0 of them (0%) had poor skills, 0 of them (0%) fair, and 12 of them (24%) are good and 38 of them (76%) had excellent skills scores .

From the above data analysis clearly shows that the Electrocardiogram skills is better in Group-B than group-A.

Part-III- Deals with the cumulative knowledge and skills scores of students ; before and after video assisted structured teaching to Group A and demonstration to Group B.

The above table shows that the overall knowledge of students, in Group-A (Video Structured Teaching programme), the pre-test mean scores was 18.36(45.9%) with 6.685 standard deviation and that of post-test mean scores was 30.94(77.35%) with 5.622 standard deviation. The calculated' value was 9.71, which is higher than the table 't' value 2.021 at 48 df with 0.005 level of significance. It shows that there is significant difference ($p<0.005$) in pre-test and post-test knowledge scores. Hence H_1 hypothesis is accepted.

Whereas in Group-B (demonstration) the pre-test mean scores was 18.60(46.5%) with 5.46 standard deviation and that of post-test mean scores was 31.24(78.1%) with 4.609 standard deviation. The calculated' value was 10.85, which is higher than the table 't' value 2.021 at 48 df with 0.005 level of significance. It shows that there is significant difference ($p<0.005$) in pre-test and post-test knowledge scores. Hence H_2 hypothesis is accepted.

From the above table we observed that demonstration is better than the video structured teaching programme. Here H_1 and H_2 hypothesis is accepted.

As shown above table Electrocardiogram skills represents that in Group-A, the pre-test mean scores was 3.84(11.27%) with 2.698 standard deviation and that of post-test mean scores was 25.14 (83.80%) with 2.921 standard deviation and 0.381 standard error. The calculated t value was -38.62 at 49 df with 0.005

level of significance. Similarly in Group –B in, the pre-test mean scores was 2.60 (8.67%) with 4.199 standard deviation and0.593 standard error. that of post-test mean scores was 24.04 (79.07%) with 2.294 standard deviation and 0.324 standard error. The calculated t value was -37.75 at 49 df. It shows that there is significant difference ($p<0.005$) in pre-test and post-test skill performance scores. Hence H_3 is accepted.

PART IV- Deals with the association between the knowledge and skills scores of each group and demographic variables

The analysis of association between knowledge scores and demographic variables. The association between selected teaching methods on knowledge and skills on electrocardiogram and demographic variables were obtained by using chi square test. There was significant association between selected teaching methods on knowledge and skills on Electrocardiogram.

For group A (Video assisted structured teaching) in knowledge .The chi square value of age 4.160 was greater than the table value with df 1 at 0.041 level of significance. The chi square value of education 7.094 was greater than the table value with df 1 at 0.008 level of significance. The chi square value of assisted for Electrocardiogram 3.861 was greater than the table value with df 1 at 0.049 level of significance. The chi square value of experience in speciality units 3.399 was greater than the table value with df 1 at 0.065 level of significance in pre -test whereas in post test The chi square value of age 7.071 was greater than the table value with df 1 at 0.008 level of significance. The chi square value of education 5.534 greater than the table value with df 1 at 0.019 level of significance. The chi square value of assisted for ECG 0.571 was greater than the table value with df 1 at 0.450 level of significance. The chi square value of experience in speciality units 0.030 greater than the table value with df 1 at 0.861 level of significance.

In group B (Demonstration) in knowledge ,The chi square value of age 9.239 was greater than the table value with df 1 at 0.002 level of significance. The chi square value of education 9.239 was greater than the table value with df 1 at 0.002 level of significance. The chi square value of assisted for ECG 9.314 was greater than the table value with df 1 at 0.002 level of significance in pre -test whereas in post-test The chi square value of age 4.013 was greater than the table value with df 1 at 0.045 level of significance. The chi square value of education 4.013 greater than the table value with df 1 at 0.045 level of significance. The chi square value of assisted for ECG 2.066 was greater than the table value with df 1 at 0.151 level of significance.

For group A (Video assisted structured teaching) in skills .The chi square value of age 0.483 was greater than the table value with df 1 at 0.487 level of significance. The chi square value of education 0.378 was greater than the table value with df 1 at 0.539 level of significance. The chi square value of assisted for ECG 0.437 was greater than the table value with df 1 at 0.509 level of significance. The chi square value of experience in speciality units 0.181 was greater than the table value with df 1 at 0.670 level of significance in pre -test whereas in post-test The chi square value of age 1.511 was greater than the table value with df 2 at 0.470 level of significance. The chi square value of education 1.777 greater than the table

value with df 2 at 0.411 level of significance. The chi square value of assisted for ECG 0.640 was greater than the table value with df 2 at 0.726 level of significance. The chi square value of experience in speciality units 0.252 greater than the table value with df 2 at 0.882 level of significance.

In group B (Demonstration) in skills ,The chi square value of age 14.976 was greater than the table value with df 2 at 0.001 level of significance. The chi square value of education 14.976 was greater than the table value with df 2 at 0.001 level of significance. The chi square value of assisted for ECG 0.562 was greater than the table value with df 1 at 0.755 level of significance in pre -test whereas in post-test The chi square value of age 0.023 was greater than the table value with df 1 at 0.880 level of significance. The chi square value of education 0.023 greater than the table value with df 1 at 0.0880 level of significance. The chi square value of assisted for ECG 0.489 was greater than the table value with df 1 at 0.484 level of significance.

In group A overall knowledge is 1 and skills is 0.767 and in group B overall knowledge is 1 and skills is 0.746.the correlation is significant at the 0.01 level (2-tailed).

DISCUSSION:

The results of the present study were discussed according to objectives of the study:

OBJECTIVE-1: Assess the knowledge and skills regarding ECG among nursing students.

The knowledge and skills levels was assessed with the help of structured questionnaire and checklist. Questionnaire includes **SECTION – 1** Knowledge regarding Anatomy and Physiology of the heart. **SECTION II -** Knowledge regarding definition, purpose, indications, pre, during, and post care of the client, interpretation of normal Electrocardiogram. The checklist includes identification data, pre procedure care, placement of chest and limb leads, during procedure care, post procedure care and care of articles

OBJECTIVE-2: Plan and conduct video assisted structured teaching for group A and demonstration for group B on ECG.

The selected teaching methods was prepared by the investigator with the help of text books, journals, and other related literature on related subjects and in consultation with the experts. The study was conducted on 100 students 50 nursing students from govt college of nursing Secunderabad as Group-A (Video assisted structured teaching) and 50 students from govt college of nursing Hyderabad as Group-B (Demonstration) T S. The selected teaching methods includes knowledge and skills regarding electrocardiogram. Administered video assisted structured teaching to group A and demonstration to group B on Knowledge and skills regarding electrocardiogram among nursing students.

OBJECTIVE-3: find the effectiveness of video assisted structured teaching to group A and demonstration to group B on knowledge and skills regarding electrocardiogram among nursing students.

The results of the present study revealed that the overall knowledge of students, in Group-A (Video Structured Teaching programme), the pre-test mean was 18.36(45.9%) with 6.685 standard deviation and that of post-test was 30.94(77.35%) with 5.622 standard deviation. The calculated' value was 9.71, which is higher than the table 't' value 2.021 at 48 df with 0.005 level of significance. It shows that there is significant difference ($p<0.005$) in pre-test and post-test knowledge and skill scores. Hence H_1 hypothesis is accepted.

Hence it concluded that after video assisted structured teaching programme on Electrocardiogram the knowledge and skill scores of group-A students have been increased. The formulated hypothesis for present study H_1 "There will be a significant mean difference between pre and post-test mean scores on knowledge and skills after video assisted structured teaching method regarding electrocardiogram among nursing students. which is evident by the significant t value $P<0.05$ level of significance.". Hence H_1 was accepted.

Whereas in Group-B (demonstration) the pre-test mean was 18.60(46.5%) with 5.46 standard deviation and that of post-test was 31.24(78.1%) with 4.609 standard deviation. The calculated t value was 10.85, which is higher than the table 't' value 2.021 at 48 df with 0.005 level of significance. It shows that there is significant difference ($p<0.005$) in pre-test and post-test knowledge and skill scores. Hence H_2 hypothesis is accepted.

Hence it concluded that after video assisted structured teaching programme on Electrocardiogram to group A and demonstration to group B the knowledge and skill scores of students have been increased. The formulated hypothesis for present study H_1 "There will be a significant mean difference between pre and post-test mean scores on knowledge and skills after video assisted structured teaching and demonstration method regarding electrocardiogram among nursing students. which is evident by the significant t value $P<0.05$ level of significance.". Hence H_2 was accepted.

OBJECTIVE-4: Compare the effectiveness of video assisted structured teaching with demonstration on knowledge and skills regarding electrocardiogram among nursing students.

The effectiveness of the teaching methods obtained knowledge mean scores of sample in group-A were 18.3 before and 30.94 after video assisted structured teaching , where as in group -B the mean scores were 18.60 before and 31.24 after demonstration ; standard deviation in group-A were 6.68 before and 5.62 after video assisted structured teaching, whereas in group-B the standard deviation were 5.46 before and 4.60 after Demonstration ; and standard Error mean is 0.94 before and 0.79 after video assisted structured teaching whereas 0.77 before and 0.65 after demonstration. The calculated 't' value was -9.71 was greater than the table 't' value 2.02 at df 48 with 0.05 level of significance for group A. Whereas The calculated 't' value was 10.85 was greater than the table 't' value 2.02 at df 48 with 0.05 level of significance for group B. It shows that the Demonstration is more effective than video assisted structured teaching.

The effectiveness of the teaching methods obtained skills mean scores of sample in group-A were 3.84 before and 23.72 after video assisted structured teaching , where as in group -B the mean scores were 2.60 before and 24.04 after demonstration ; standard deviation in group-A were 2.69 before and 2.65 after video assisted structured teaching, whereas in group-B the standard deviation were 4.19 before and 2.29 after Demonstration ; and standard Error is 0.38 before and 0.37 after video assisted structured teaching whereas 0.59 before and 0.32 after demonstration. The calculated 't' value was 38.62 was greater than the table 't' value 2.02 at df 48 with 0.05 level of significance for group A. Whereas The calculated 't' value was 37.75 was greater than the table 't' value 2.02 at df 48 with 0.05 level of significance for group B. It shows that the Demonstration is more effective than video assisted structured teaching.

OBJECTIVE-5: Find the association between knowledge and skills of nursing students with the selected demographic variables

There was significant association between age of the student and knowledge Scores since the obtained chi square value for video assisted structured teaching was 7.01 which Was lower than the table value 2.776 with df 1 at 0.05 level of significance. for demonstration was 4.01 which was lower than the table value 4.303 with df 1 at 0.05 level of significance. There was significant association between education of students on knowledge scores since the obtained chi square value for video assisted structured teaching was 5.53 which was lower than the table value 2.44 with df 1 at 0.05 level of significance. for demonstration was 4.01which was lower than the table value 4.303 with df 1 at 0.05 level of significance.

There was significant association between the assisted for electrocardiogram of student on knowledge scores since the obtained chi square value for video assisted structured teaching was 0.571 which was lower than the table value 2.44 with df 1 at 0.05 level of significance. for demonstration was 2.06 which was lower than the table value3.18 with df 1 at 0.05 level of significance.

There was significant association between age of the student and skills Scores since the obtained chi square value for video assisted structured teaching was 1.511 which Was lower than the table value 2.776 with df 2 at 0.05 level of significance. for demonstration was 0.02 which was lower than the table value 4.303 with df 1 at 0.05 level of significance. There was significant association between education of students on skills scores since the obtained chi square value for video assisted structured teaching was 1.77 which was lower than the table value 2.44 with df 2 at 0.05 level of significance. for demonstration was 0.023 which was lower than the table value 4.303 with df 1 at 0.05 level of significance.

There was significant association between the assisted for electrocardiogram of student on skills scores since the obtained chi square value for video assisted structured teaching was 0.64 which was lower than the table value 2.44 with df 2 at 0.05 level of significance. for demonstration was 0.48 which was lower than the table value3.18 with df 1 at 0.05 level of significance.

There is significant association between level of knowledge on Electrocardiogram among students with demographic variables such as age in years, general education, were significant in pre-test and post-test knowledge level and assisted for ECG procedure was in post-test only where they obtained chi square values were significant at 0.005 level of significance.

There is significant association between level of Electrocardiogram skills on Electrocardiogram among students with demographic variables such as age in years, general education, were significant in and post-test knowledge level in group-B and where they obtained chi square values were significant at 0.005 level of significance.

Hence there is improvement of knowledge and skills from pre-test to that of post-test knowledge and skills scores in both groups and that Demonstration is more effective than the video assisted structured teaching among B sc N students.

CONCLUSION:

The following conclusions were drawn on the basis of the findings of the study:

1. There is significant difference ($p<0.005$) in pre-test and post-test mean knowledge scores and electrocardiogram skills levels of students on Electrocardiogram. Hence Video assisted Structured teaching programme was effective in group-A and demonstration is effective in group-B. By comparing Group-A and Group –B, group B (demonstration) is more effective than Group-A (video assisted structured teaching)

2. There is significant association between knowledge level among nursing students on Electrocardiogram in Group-A and Group-B with demographic variables such as Age in years, general education, assisted in Electrocardiogram where they obtained chi square values were significant at 0.05 level of significance.

3. There is significant association between Electrocardiogram skills level among nursing students on Electrocardiogram in Group-A and Group-B with demographic variables such as Age in years, general education, assisted Electrocardiogram, where they obtained chi square values were significant at 0.05 level of significance.

IMPLICATIONS:

Nursing is a dynamic process, which involves quality-based practice, scientific knowledge and dissemination of research knowledge in to practice. Nursing professional find that the health promotion is very relevant useful in a variety of settings. So, the present study adds major implications in to various areas of nursing to help students on Electrocardiogram.

Nursing Practice:

- WHO says nursing has wide scope in primary health area. Health care cannot be provided by one agency. It is up to the individual to take care. A timely enlighten bring numerical changes in health behaviour.
- The field of Critical care nursing has great responsibility to protect the health to identify the health problems
- Critical Care nurses should be equipped with updated knowledge on current Electrocardiogram schedule to impart appropriate knowledge on Electrocardiogram .
- Nurses can take responsibility by conducting planed health education program to teach the students to provide adequate knowledge on Electrocardiogram.
- Nurse can educate the students about important of Electrocardiogram.
- Nurses working in various health care settings are key persons who play a major role in health promotion, health maintenance and prevention of disease.
- Nurses should organize health education campaign to all health care settings about Electrocardiogram to identify the problem.

Nursing Education:

The nurse educator has to plan a tentative schedule as to provide knowledge and skills to the nursing students. The nurse-educator need to first give the background of the topic and then give skill training in the similational set-up and then take the students into the actual clinical area and assist the nurses to identify the relation between the class room theory knowledge and the simulation-learned skills and then teach at the bed side i.e. give an examplinary study such as Demonstration which will enable to untangle the fears and doubts in the students mind and set free grounds to improve knowledge and freedom in skill acquision.

- Nurse educators should encourage the nursing students to conduct Electrocardiogram awareness programme in the selected colleges as well as in the hospital.

Nursing Administration:

- Nurse administrator can disseminate the research knowledge into practice, so that the students can be benefited.
- Nurse administrator can conduct seminar/ workshop on Electrocardiogram for the students to improve the knowledge and skills regarding Electrocardiogram
- Nursing administrator motivate the Critical Care Nurse to prepare pamphlets / other A.V aids to impart knowledge regarding Electrocardiogram.

Nursing Research:

- The study can be a baseline for future studies to build upon.
- Future researcher study could be done to identify the factors influencing adherence / non adherence of Electrocardiogram.
- Extensive research can be conducted regarding Electrocardiogram by using demonstration method.
- The nurse researcher should publish her study results in the conferences, workshops or through other media thereby more studies can be conducted in this area in order to strengthen the role of nurse.

LIMITATIONS:

The following points were beyond the control of the investigator:

- Since the sample size is only 100, generalization should be done with caution
- The study was limited to the experience of the investigator
- The Study was confirmed to only on students in selected colleges, which obviously imposed limits to larger generalizations.
- The study had only one group to prove the effectiveness of demonstration of ECG.
- Findings are limited to the statistical results which are used for the study.

RECOMMENDATION:

On the basis of the findings of the present study, following recommendations are made

- A Similar study may be conducted on a large sample
- A similar study can be replicated to see the effectiveness of selected nursing clinical teaching methods for Vs. nursing students.
- A comparative study can be undertaken within the same college using different teaching methods .
- A comparative study can be undertaken between Government and Private colleges.
- A single teaching method can also be tested to see its effectiveness on knowledge and skills.
- A similar study can be conducted to assess the knowledge and skills of staff nurses in critical care units knowledge assessment following skill assessment.
- A similar study can be conducted using different nursing educational theory
- A descriptive study can be conducted among nursing personnel.

EPILOGUE

This chapter dealt with summary, conclusions, implications, limitations , and recommendations.