



A Study to Assess the Effectiveness of Self Instructional Module (SIM) on Knowledge Regarding Evidence Based Nursing Practice Among Staff Nurses Working in Selected Hospitals at Jaipur

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Abstract

Health care professionals including doctors, nurses and paramedical staffs are the guardians of the community. It is the duty of the entire health care establishments to ensure speedy recovery of their patients by providing quality health care.

Statement of the Problem

“A STUDY TO ASSESS THE EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE (SIM) ON KNOWLEDGE REGARDING EVIDENCE BASED NURSING PRACTICE AMONG STAFF NURSES WORKING IN SELECTED HOSPITAL AT JAIPUR”.

Objectives of the Study:

1. To assess the existing knowledge of staff nurses regarding Evidence Based Nursing Practice working in selected hospital.
2. To develop, validate & administer Self Instructional Module.
3. To assess the effectiveness of Self-Instructional Module.
4. To find an association of knowledge with their selected demographic variables like age, gender, experience, professional qualification etc.

Method

An evaluative research approach was adapted in order to assess the knowledge on Evidence Based Nursing Practice among staff nurses in a selected hospital at Jaipur.

A Quasi-experimental design with one group pre-test post-test design was used to evaluate the effectiveness of Self Instructional Module for the present study. The content validity of tool and SIM was established by five experts in the field of nursing. The pilot study was conducted on 35 items for its clarity, unambiguity, feasibility on similar subjects. The main study was carried out on 60 staff nurses at BMCHRC Hospital, Jaipur by non- probability convenient sampling technique. A structured knowledge questionnaire was administered for data collection procedure. The plan of data analysis includes both descriptive and inferential statistics.

The collected data was organized, tabulated and analyzed based on the objectives of the study by using descriptive statistics ie, frequency and percentage, inferential statistics i.e, Chi-square „t” test and correlation coefficient. The paired „t” test was used to find out the difference between pre-test and post-test level of knowledge and the Chi-square was used to find out the association between the demographic variables.

Findings

The sample characteristics revealed that; Regarding age group, out of 60 samples 13.33% respondents were in the age group of 21-30 years, 43.33% respondents belongs to age group between 31-40 years, 36.66% respondents belongs to age group between 41-50 years and 06.66% were found in the age group of 51-60 years. There was no significant association between the age and knowledge scores at $p < 0.05$.

Regarding gender 41.66% respondents were belongs to male and 58.33% respondents belong to female. There was significant association between gender and knowledge scores at $p < 0.05$.

Regarding professional education 30% respondents had completed GNM course, 13.33% completed BSc Nursing, 40% of respondents had completed Post-Basic BSc Nursing and 11.66% respondents had completed MSc Nursing. There was significant association between professional education and knowledge scores at $p < 0.05$.

Regarding professional experience 8.33% respondents had completed 0-5 years of experience, 11.66% of respondent had 6-10 years of experience, 31.66% of respondents had 11- 15 years of experience and 48.33% of respondents had 16 years & above experience. There was no significant association between professional experience and knowledge scores at $p < 0.05$.

Regarding the area of working 23.33% respondents working in General Ward, 13.33% of respondents working in ICU, 38.33% of respondents working in surgical ward and 25% of respondents working in OT. There is no significant association between area of working and knowledge scores at $p < 0.05$.

Regarding the source of knowledge regarding Evidence Based Nursing Practice revealed that majority (61.66%) of the respondents had knowledge through academic education, 10% respondents had knowledge through work shop/ seminar, and 1.66% respondents had knowledge through Newspaper where as 26.66% respondents had knowledge through Journal /research Publications. The result reveals that there was significant association between source of knowledge and knowledge scores at $p < 0.05$.

Distribution of subject's overall pre-test knowledge in Evidence Based Nursing Practice reveals that the majority (83.33%) of staff nurses knowledge score was poor and only 16.66% of staff nurses had an average knowledge score.

Distribution of subject's overall post-test knowledge in Evidence Based Nursing Practice reveals that the majority (70.00%) of staff nurses knowledge score was average and only 30.00% of staff nurses had good knowledge score.

The overall mean knowledge score of pre-test found to be 10.55 and standard deviation of 2.927. The post test knowledge scores have mean of 21.90 and standard deviation of 4.110. The mean enhancement score found to be 11.35. The statistical results established „t“ value at 5%: $t_{(59)} = 3.824$; * Significant; $P < 0.05$) indicated the effectiveness of Self Instructional Module in enhancing the knowledge of respondents.

Conclusion:

The following conclusions were drawn from the present study:

1. The maximum of staff nurses (43.33%) belongs to 31-40 years age group.
2. The majority of staff nurses (58.33%) were male.
3. The maximum of staff nurses (40.00%) had professional education in Post Basic BSc Nursing.
4. The majority of staff nurses (38.33%) were working in surgical ward.
5. The majority of staff nurses (48.33%) professional experience was 16 years & above.
6. The majority of staff nurses (61.66%) had academic source of knowledge.

LIST OF ABBREVIATIONS

EBP	:	Evidence Based Practice
EBNP	:	Evidence Based Nursing Practice
JCAHO	:	Joint Commission on Accreditation of Healthcare Organisation
SIM	:	Self Instructional Module
WHO	:	World Health Organisation
Df	:	Degree of freedom
P	:	Probability
r	:	Correlation Coefficient
SD	:	Standard Deviation
CINAHL	:	Cumulative Index to Nursing & Allied Health Literature. RN Registered Nurses
SMSH	:	Sawai Man Singh Hospital

Introduction

“The first step towards knowledge is to know that we are ignorant”

Richard Cecil-

The past century has witnessed spectacular changes in the way we live and think. Human brilliance and technology have come together to propose solutions we dared not imagine fifty years ago. Many diseases have been conquered, millions of people have been saved from premature death and disability and the search for better solutions to healthcare is on.[1]

Like most disciplines, nursing consists of both scientific knowledge and conventional wisdom (knowledge that has not been empirically tested). Traditionally only what stands the test of repeated measures constitutes truth or knowledge. Classical scientific process however are not suitable for creating and describing all types of knowledge for the caring profession of nursing.[1]

Social sciences and behavioural sciences and the arts rely on other methods to establish knowledge. There is an ongoing emphasis on development of nursing knowledge through research and theory building to

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improve their practice base. Nursing relies on multiple ways of knowledge because it has characteristics of social, behavioural and biological science.[1]

Background of the Study

“The learning and knowledge that we have, is, at the most, but little compared with that of which we are ignorant.”

Plato-

It is believed that theory guided practice is the future of nursing enters into the 21st Century. Theory guided practice must be placed at the core of nursing and must integrate relevant-outcome-driven practice with the art and science of caring and healing.[1]

The concept of EBP in nursing is still in a very primitive stage in many parts of the world. Nursing practice in most parts in India is based on experience, tradition, intuition, common sense and untested theories. Nurses should be encouraged to recognize the theoretical basis for practice and see ways to enhance the knowledge base which supports practice right from the beginning of their working.

Their needs to be an elevated emphasis on increasing reciprocal interaction among theory, research and practice with bridging gap between practices.[1]

Florence Nightingale would probably not recognise the nurse of today. As we move into the next millennium, we expect nurses to care with their hearts and minds; identify patients’ actual and potential problems; and develop research-based strategies to prevent, ameliorate, and comfort.[2]

In today's complex and dynamic patient care environment, nursing interventions and process informed by the best evidence are vital to realizing health care improvements and cost savings.[3]

Numbering more than 2 million and practicing in most health-care settings, nurses make up the largest number of health care professionals, Every patient is likely to receive nursing care. Therefore, nurses are in important position to influence the type, quality, and cost of care provided to patients.[3]

Increased emphasis on efficiency, cost containment and quality in a healthcare system that is rapidly changing and advancement of science and technology have lead to the need for reliable, up to date evidence that could improve the healthcare system is accordance with the advancements.[4]

Today, nurses are actively generating, publishing, and applying research in practice to improve client care

and enhance nursing's scientific knowledge base. Recently, there has been increased emphasis on the importance of evidence based practice, that is, the use of some form of substantiation in making clinical decisions. This substantiation, or evidence, can arise from tradition, authority, experience trial and error, logic or reason or research.[4]

Evidence based practice (EBP) has been described as “the integration of best research evidence with clinical expertise and patient values”. There are various models to provide a frame work for moving evidence and research in to practice.[4]

The demand of healthcare increased dramatically all over the world. This presented new opportunities and changes in the nursing profession. A methodology for clinical practice which is emerging across the nursing discipline is termed as “Evidence Based Nursing Practice”. Evidence based nursing integrates the best evidence from research with clinical expertise, patient preference, and existing resources into decision making about the healthcare of individual patients.[5]

Need of the Study

“Unless we are making progress in our nursing every year, every month, Every week, take my word for it we are going back”.

Florence Nightingale

The generation of empirical knowledge is essential to improve clinical practice. It has been the major focus of researchers since 1980. The generation and diffusion of empirical knowledge are expanding each and every day. With the current changes in the healthcare system, society is demanding more of nurses' involvement than ever before.[6]

Nurses now have the attention of healthcare policy makers and can influence the future delivery system. Meeting policy makers expectations require carrying out of high quality research and the use of those findings in practice.[6]

During the 1980s, the term “Evidence Based Medicine” emerged to describe the approach that use scientific evidence to determine the best practice. The Evidence based practice takes resources, work, time, and effort, but the outcomes make them worthwhile. Every patient deserves care that is based on the best scientific knowledge and that ensures high quality , cost-effective.[7]

The centres for Medicare & Medicaid services; various organizations that represent hospitals, doctors & employers; accrediting organizations; other federal agencies; and the public have combined efforts to develop Hospital Compare and, thus, made key clinical outcome measures available to the public. In this way, the public can monitor performance indicators to related common medical conditions and certain evidence based interventions that are consistent with achieving the best patient outcomes.[7]

A recent study provided in 2005 evidence that most nurses provide care in accordance with what they learnt in nursing school and rarely used journal articles, research reports, and hospital libraries for reference. That finding, combined with the fact that the average nurse is more than 40 years of age, makes it apparent that many nurses' knowledge is probably out-dated. Practice based on such knowledge does not translate into quality patient care or health outcomes. Evidence based practice provides a critical strategy to ensure that care is up to date and that it reflects the latest research evidence.[7]

A study conducted in 2003, that the nurses' most helpful knowledge source was experience or advice from colleagues or patients. Of concern, reports that up to date electronic resources that included evidence-based materials were not useful to nurses in clinical practice. This barrier contributes to significant gaps in clinicians applying research findings to practice and dissemination of innovations. The failure to use evidence results in care that is of lower quality, less effective, and more expensive.[7]

In 2002, the Centres for Disease Control & Prevention published Guideline for Hygiene in Health-Care Settings, which provides healthcare workers with a review of data regarding hand-washing and hand antisepsis in healthcare environments. Furthermore, it makes recommendations to improve hand-hygiene practices and reduced transmission of pathogenic micro organisms to both patients and health care personnel.[7]

Evidence-Based Nursing Practice (EBNP) is the wave of the future. Increasingly, Evidence Based Nursing Practice is being identified as a key to quality and excellence in nursing services. Incorporating evidence into practice is necessary to deliver scientifically sound patient care. Despite the growing popularity of evidence based nursing practice and its documented significant benefits, there is only 15% of the nursing work force consistently practices within the evidence based nursing practice frame work. If evidence based nursing practice adoption is to increase in the profession, it will require the active efforts of nurses to increase their knowledge regarding evidence based nursing practice.[8]

Evidence-Based Nursing Practice, or evidence based decision making, is rapidly developing as a growth

industry in nursing and the health professions more widely. It has its origins in the work of the British Epidemiologist Archie Cochrane and has recently been re-energized in Canada by the National Forum on Health and its call for culture evidence - based decision making. Before we adopt EBN as a Mantra for the 21st Century, we should examine its origins and its consequences, and we should probe related concepts, two of which are the nature and structure of practice-based knowledge and the nature and structure evidence generally.[9]

A survey that was established by the Sigma Theta Tau International, Honor Society of Nursing (2002) and completed by registered nurses provided that 69% have a low to moderate knowledge regarding Evidence - Based Practice and half of those that responded did not feel sure of the steps, the process consist of Evidence-Based Nursing Practice leads to higher quality care, improved patient outcomes, reduced costs and greater nurse satisfaction than traditional approaches to care.[10]

Nurses are responsible for the care they provide to their patients. Evidence- based practice in nursing means making decisions about patient care on the basis of current best available evidence. It helps the nurse to provide high-quality care to her patients based on research and knowledge. Evidence - based practice increases the efficiency of nurses. Making decisions based on knowledge that is backed by research makes it easier for a nurse to choose what care to provide to her patient as opposed to trying something that may or may not be beneficial to her patient. This saves her time, which she can devote to patients who need more intensive care from her.[11] Using Evidence-based practice to provide care to patients increases the nurse's confidence. This is because she knows that she is basing her decisions about patient care on valid information that has been thoroughly researched. For nurses to apply Evidence-based practice in the care they provide, they have to stay informed on any new discoveries that have been made. This encourages them to read materials that cover nursing research thus keeping their practice current. [11]

Evidence-based practice has gained momentum in nursing, and definitions vary widely. Research findings, knowledge from basic science, clinical knowledge, and expert opinion are all considered "evidence", however, practices based on research findings is more likely to result in the desired patient outcomes across various settings and geographic locations. The impetus for Evidence based practice comes from payer and healthcare facility pressure for cost containment, greater availability of information, and greater consumer savvy about treatment and care options. Evidence-based practice demands changes in education of students, more practice-relevant research, and closer working relationships between clinicians and researchers. Evidence-based practice also provides opportunities for nursing care to be more individualized, more

effective, streamlined, and dynamic, and to maximize effects of clinical judgment. When evidence is used to define best practices rather than to support existing practices. Nursing care keeps pace with the latest technological advances and takes advantage of new knowledge developments.[12]

The expectation for high quality, cost-effective care and the rapid expansion of easily accessible knowledge in a competing healthcare market place have driven the need for the daily use of evidence to improve point - of- service care (i.e.; at the bedside). Regulatory and accrediting agencies (i.e, Joint Commission on Accreditation of Healthcare Organization [JCAHO]) now require that practice be based on evidence. All of these factors have led to the need for all healthcare providers to gain knowledge and skills in Evidence-based practice. Evidence-based practice, in which synthesis of the evidence is the key element, encompasses both research utilization and the conduct of research. [13]

The primary task of nursing research is to contribute to the scientific base of nursing practice. Science is needed to determine the effectiveness of nursing interventions and nursing care. Through such research efforts, the science of nursing will grow and a scientifically based rationale for making changes in nursing practice and patient care will be generated. Evidence-based practice will be facilitated, with a resultant increase in the quality of patient care.[14]

So, the researcher felt that it is necessary to impart knowledge through Self Instructional Module on Evidence Based Nursing Practice among staff nurses for quality care in turn to promotion of total healthcare delivery system.

Statement of the Problem:

“A STUDY TO ASSESS THE EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE (SIM) ON KNOWLEDGE REGARDING EVIDENCE BASED NURSING PRACTICE AMONG STAFF NURSES WORKING IN SELECTED HOSPITALS AT JAIPUR”.

Objectives of the Study:

1. To assess the existing knowledge of staff nurses regarding Evidence Based Nursing Practice working in selected hospital.
2. To develop, validate & administer self instructional module.

3. To assess the effectiveness of self instructional module.
4. To find an association of knowledge with selected demographic variables like age, gender, experience, professional qualification etc.

Operational Definitions

1. **ASSESS:** It refers to the measurement of knowledge of the nurses working in hospitals regarding Evidence Based Nursing Practice.
2. **EFFECTIVENESS:** It refers to the gain in the knowledge on Evidence Based Nursing Practice among staff nurses working in selected hospital at Jaipur city.
3. **SELF INSTRUCTIONAL MODULE:** It is planned and documented information given to staff nurses regarding Evidence Based Nursing Practice.
4. **KNOWLEDGE:** It refers to the awareness, amount of information or understanding about Evidence Based Nursing Practice among staff nurses as measured by structured questionnaire. Knowledge will be measured in terms of knowledge scores.
5. **EVIDENCE BASED NURSING PRACTICE:** Evidence Based Nursing Practice means making decisions about patient care on the basis of current best available evidence.
6. **STAFF NURSE:** Is a person who has successfully completed the General Nursing & Midwifery course or Bachelor of Science in nursing and working in selected hospital at Jaipur city.
7. **DEMOGRAPHIC VARIABLES:** The demographic variable is an uncontrolled variable that greatly influences the results of the study. The study also consists of demographic variables such as, gender, age, professional qualification, professional experience, area of working, and source of knowledge etc.

Assumptions:

The researcher assumes that:

- Evidence Based Nursing Practice may improve the quality of patient care.
- Evidence Based Nursing Practice may improve the nurses' confidence to give nursing care.

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- The SIM may enhance the knowledge of staff nurses on Evidence Based Nursing Practice.

Research Hypothesis:

H1: There will be a significant difference between existing and post-test level scores of knowledge regarding Evidence Based Nursing Practice among staff nurses.

H2: There will be a significant association between the level of knowledge and selected demographic variables of staff nurses regarding Evidence Based Nursing Practice.

Delimitations:

The research will be confined to nursing staffs;

- Who are working in selected hospital.
- Who are likely to participate in the study.

Variables:

The independent variable:

The independent variable is the condition or characteristic that is manipulated by the researcher. In experimental studies, the independent variable is the “cause” or the variable that is thought to influence the dependent variable.[15]

In this study the independent variable is the Self Instructional Module on Evidence Based Nursing Practice.

The dependent variable:

The dependent variable is the effect or the variable that is influenced by the researcher’s manipulation of the independent variable. It is the effect of the action of independent variable.[15]

The dependent variable in this study is the knowledge score of the staff nurses.

The demographic variable:

The demographic variable is an uncontrolled variable that greatly influences the results of the study.

The study also consists of demographic variables such as, gender, age, professional qualification, professional experience, area of working, and source of knowledge etc.

Conceptual Framework

Conceptual framework is inter-related concepts or obstructions that assembled together in some rational scheme by virtue of relevance to a common theme. Conceptual framework helps to stimulate research and the extension of knowledge by providing both direction and inputs.¹⁶

The purpose of conceptual is to provide a logical, coherent through which phenomena of concern can be understood and discussed. Conceptual frame wok provides a frame of reference for members of a discipline to guide their thinking; observation and interpretation, propositions of a conceptual framework are abstract and general.

The selected conceptual framework in the present study was based on Context, Input, Process and Product modes by Stuffle Beam (1960). It consists of four steps namely- Context, Input, Process and Product evaluation, in which context refers to goal setting, input refers to information to be processed for the desired outcome, process refers to the method by which the input can be processed and product is released and product refers to the output.

In the present study, Context refers to formulation of objectives and hypotheses to evaluate the effectiveness of self instructional module for staff nurses regarding Evidence Based Nursing Practice.

According to the study, Input includes assessing the knowledge of staff nurses regarding EBNP using pre-test.

In this study, Process involves:

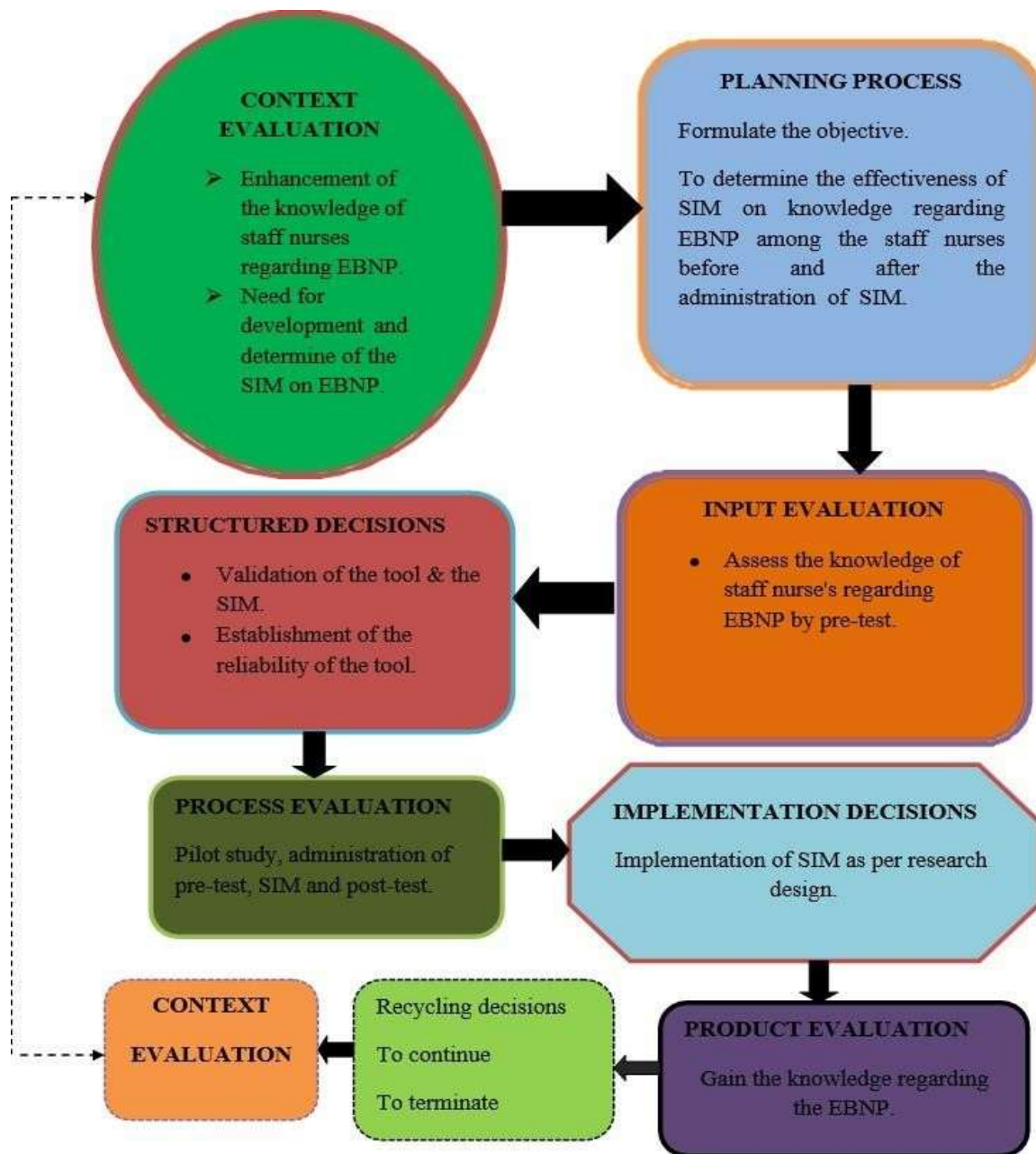
Development of Self Instructional Module Administration of Self Instructional Module

In this study the Product refers to assessment of knowledge of staff nurses regarding Evidence Based Nursing Practice using post test and evaluating the effectiveness of Self Instructional Module.

According to the theory, dysfunction in any one of the steps can cause disturbance in the whole phenomena.

In this study the effectiveness of Self Instructional Module is tested by elements such as context, input,

process and product. The purposes of administration of self instructional module will be assessed in terms of its effectiveness in the product evaluation.



KEY:SIM: Self Instructional Module.

EBNP: Evidence Based Nursing Practice.

Conceptual framework based on evaluation mode by STUFFLE BEAM (1960s) for determine the effectiveness of SIM on knowledge.

Ethical Consideration

1. Written permission was obtained from the concerned hospital authorities, SMSH, Jaipur.
2. Informed written consent was obtained from the individual samples, which were enrolled for the study. Assured them that all the information will be kept confidential and will be used only for the present study.

Summary

This chapter dealt with the contents of introduction about knowledge on EBNP among staff nurses, background of the study, need for the study, statement of the problem, objectives of the study, operational definition, assumptions, hypothesis, conceptual framework, delimitations and ethical consideration.

Research Methodology

RESEARCH Methodology is defined as a way to solve the research problem systematically. It may be understood as a science of studying how research is done scientifically. The scope of research methodology is wider than that of research methods. Research methodology is not only about the research methods but also consider the logic behind the methods use in the context of the research study. It explains why a particular method or technique is used or not used in the study. Thus, research results are capable of being evaluated either by the researcher or by others.[34]

This chapter deals with the methodology adopted for the proposed study and the different steps under taken after gathering and organizing data for investigation. It includes description of research approach, research design, setting of the study, population, sample and sampling technique, development and description of the data collection tool, pilot study, development of Self Instructional Module, procedure of data collection and plan for data analysis.

Research Approach

The selection of approach is the basic procedure for the condition of research enquiry. A research approach tell us what data to collect and how to analysis it. It also suggests possible conclusion to be drawn from the data.

An evaluatory research approach was used to find out the effectiveness of Self Instructional Module on knowledge regarding Evidence Based Nursing Practice.

Research Design

The term Research Design refers to the plan of scientific investigation. The research design helps the researchers in the selection of subjects, identification of variables, their manipulation and control, observations to be made and type of statistical analysis to be used to interpret the data.

The research design selected for the study was Quasi-experimental with one group pre-test and post-test design, in which pre-test is followed by administration of Self Instructional Module and then conducting post- test for the same group after 7 days.

Quasi- experimental design was used in the study to assess the knowledge of staff nurses regarding Evidence Based Nursing Practice and to test the effectiveness of Self Instructional Module for staff nurses.

GROUP	PRE-TEST	INTERVENTION	POST-TEST
I	Assessment of knowledge before administering Self Instructional Module	Administration of Self Instructional Module	Assessment of knowledge after administering Self Instructional Module
	O1	X	O2

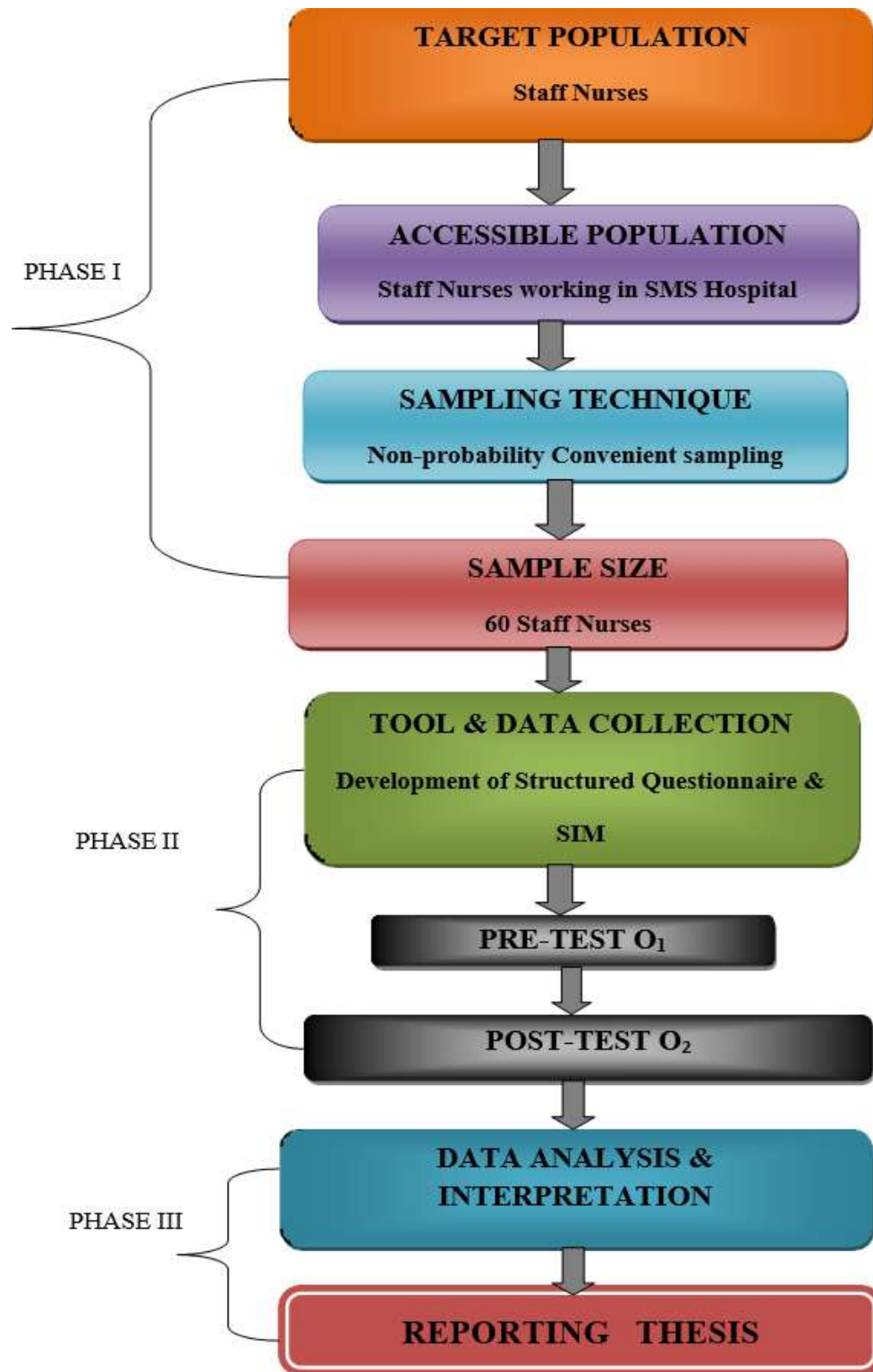


Figure: I Schematic Representation of Research Design

Variables Included in the Study

A variable is a measurable or potentially measurable of an object or event that may fluctuate in quality or quantity from one individual object or event to another individual object or event of the same general class.

Three types of variables were identified in this study:

1. Dependent variable:

If one variable depends upon or is a consequence of other variables, it is termed as dependent variable.³⁵

In the present study it refers to the knowledge level of staff nurses regarding EBNP.

2. Independent Variable:

The variable that is believed to cause or influence the dependent variable is termed as independent variable.

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In this study it refers to the Self Instructional Module on the Evidence Based Nursing Practice for staff nurses.

3. Demographic variables:

The demographic variable is an uncontrolled variable that greatly influences the study. The study also consists of demographic variables;

- Gender
- Age
- Educational Qualification
- Professional experience
- Area of working
- Source of knowledge

Setting of the Study

Setting of the study refers to the area where the study is conducted. The study was conducted in the BMCHRC Hospital, Jaipur.

Population

Population refers to the entire aggregation of cases that meet a designated set of criteria.[36]

In the present study, the population is 60 staff nurses who are working in SMS Hospital, Jaipur.

Sample and Sampling Technique Sample:

Sample is a portion of the population that has been selected to represent the population of interest. [36]

The sample for the present study were 60 staff nurses working in different areas of BMCHRC Hospital, Jaipur.

Sampling technique:

It refers to the process of selecting a portion of the population to represent the entire population. 36

In this study, a Convenient, non-probability sampling technique is used to select the sample. Convenient sampling technique is a strategy in which researcher's knowledge of the population and its elements are used to select sample which are typical to the population.

Convenient sampling technique, a type of non-probability sampling approach was found to be appropriate for this study.

Criteria for the sample Selection Inclusion Criteria:

1. The study is limited only to those staff nurses who are willing to participate in this study.
2. The staff nurses those who are present at the time of the study.
3. The staff nurses who can read, write and understand English language.
4. The study is limited to the staff nurses those who are working in BMCHRC Hospital.

Exclusion Criteria:

1. The staff nurses those who are not willing to participate in the study.
2. The staff nurses those who are not present at the time of the study.

Sample Size

The sample size was 60 staff nurses working in different areas of BMCHRC Hospital, Jaipur.

Description and Interpretation of Tool Selection and Development of Tool

A tool selected in the research should be as far as possible the vehicle that would best obtain data for drawing conclusions, which were pertinent to the study.[37]

The researcher prepared tool with the help of Literature Review and by expert's suggestion and sent for content validation. According to their suggestion and recommendation necessary correction were made. The modified tool was used for data collection. For assessing the reliability of the tool, it was administered to ten samples at BMCHRC Hospital, Jaipur.

(A.) Selection of the Tool

Structured questionnaire was selected for the study to collect the data from staff nurses to assess their knowledge regarding EBNP.

(a) Development of Tool

A structured questionnaire was prepared to assess the knowledge of staff nurses regarding Evidence Based Nursing Practice.

The following steps were carried out in preparing the tool:

- Review of Literature
- Development of the Blue print which consisted of 35 questions.
- Preparation of structured questionnaire on the knowledge regarding Evidence Based Nursing Practice.

-
- Preparation of Self Instructional Module consisting of 6 sections on Evidence Based Nursing Practice.
 - Consultation with guide and subject experts.
 - Establishment of validity and reliability.

(b) Description of the Tool

The structured questionnaire is comprised of two parts;

PART-I: It consists of demographic characteristics of staff nurses seeking information like age, gender, professional qualifications, working experience, working area and source of information regarding Evidence Based Nursing Practice.

PART-II: It consists of 35 structured questionnaires, divided into six sections.

SECTION-A: This section consists of 9 items related to introduction of Evidence Based Nursing Practice.

SECTION-B : This section consists of 4 items related to importance of Evidence Based Nursing Practice.

SECTION-C : This section consists of 10 items related to various steps of Evidence Based Nursing Practice.

SECTION-D: This section consists of 2 items related to sources and barriers to implement Evidence Based Nursing Practice.

SECTION-E: This section consists of 3 items related to key messages for Evidence Based Nursing Practice.

SECTION-F: This section consists of 7 items related to clinical applications of Evidence Based Nursing Practice.

(c) Scores

Knowledge Questionnaire

Among 35 questions, for each item there were four options, out of which one is correct. The maximum score for correct response to each item was one and incorrect was zero. Total score was converted into

percentage and interpreted as <50% poor, 51-75 % average, (>75%) good. Thus for 35 questions there were 35 correct answers with 35 maximum obtainable scores. The collected information was statistically analyzed by using frequency and percentage distribution.

Grade	Actual score
Poor	1-12
Average	13-24
Good	25-35

Table No. I Scoring of Knowledge of Staff Nurses Regarding Evidence Based Nursing Practice

(d) Content Validity

Content validity refers to the determination of whether a measurement instrument actually measures what is purported to measure.[38]

To ensure Content Validity of the tool, the structured questionnaire along with the Self Instructional Module was send to 5 experts. They were requested to give their opinions on the appropriateness, relevance of the items in the tool and the contents of the Self Instructional Module. The experts were from the field of Medical Surgical Nursing.

Modifications were made according to the suggestions made by them.

(e) Reliability

Reliability is the degree of consistency that the instrument of procedure demonstrated whatever it is measuring.[39]

In order to establish the reliability of the tool; the split half technique was used. The reliability coefficient of the tool for knowledge was 0.84 ($r=0.84$). It was statistically significant and reliable.

The reliability coefficient was calculated by using Split Half Method. In the split half method the test is first divided into equivalent “Halves” and the correlation found for these half tests from the reliability of the past half. The reliability was obtained by computing coefficient of correlation by using Karl Person Method, which was found to be 0.84. Hence the tool was found to be reliable.

(B.) Development of sim regarding evidence based nursing practice

The Self Instructional Module was developed based on the review of related research and on research literature.

The following steps are adopted to develop the Self Instructional Module.

- Development of Self Instructional Module.
- Establishment of content validity by subject expert.
- Final draft prepared.

(a) Stating the Objective

The objectives were identified and written in behavioral terms depending on the needs of the learner i.e, staff nurses.

(b) Selection of the Content

The content of the Self Instructional Module on Evidence Based Nursing Practice was selected through review of literature and it's consultation with the experts. Then the content was divided into 6 areas.

(c) Organization of the Content

The content was organized in to the following chapters:

1. Introduction
 - a. Definition of Evidence Based Practice.
 - b. Definition of Evidence Based Nursing Practice.
2. Importance of Evidence Based Nursing Practice.
3. Steps of Evidence Based Nursing Practice.
4. Sources and barriers to implement Evidence Based Nursing Practice.
5. Key messages for Evidence Based Nursing Practice.
6. Clinical questions.

(d) Content Validity of Sim

The initial draft was validated by experts in the field of Medical surgical Nursing.

(e) Determining the Method of Evaluating the Sim.

The SIM was to be evaluated through conducting a post-test after 7 days of administering the module.

(f) Pilot Study

PILOT STUDY is the trial run of the methodology planned for the major project to make improvements in the research projects and to detect problems that must be solved before the major study is attempted.

After obtaining permission from the concerned authority the pilot study was conducted from 19-7-2013 to 25-7-2013 at BMCHRC Hospital, Jaipur, to find the effectiveness of the tool and study in terms of enhancement of knowledge regarding Evidence Based Nursing Practice. The samples choose were similar to population under study. The investigator used non probability convenient sampling technique to select the samples from the total population. Ten samples (10% of the total samples) were selected for the study and these were excluded from the final study.

A pre-test was conducted by administering structured questionnaire, then it was followed by administering Self Instructional Module on Evidence Based Nursing Practice. The pre-test was administered for each staff nurse. On the 8th day a post- test was administered by using the same tool which was used in the pre-test.

The mean knowledge post-test score (73.36%) was higher than the mean knowledge pre-test score (56.54%). The pilot study revealed that tool was feasible and appropriate.

Procedure of Data Collection**(a) Permission from the Concerned Authority**

Formal prior permission was obtained from the ethical committee of BMCHRC Hospital, Jaipur to conduct the study.

(b) Period of Data Collection

The main study was conducted from 6-8-2013 to 20-8- 2013 for a period of 2 weeks at BMCHRC Hospital, Jaipur.

(c) Pre-Test (O1)

The knowledge questionnaire was used to obtain data from staff nurses in BMCHRC Hospital. Questionnaire was administered for each staff nurse.

(d) Post-Test (O2)

The same pre-test questionnaire was used for post-test. It was conducted on the 8 th day after pre-test.

Plan for Data Analysis

Data analysis helps the researcher to organize, summarize, evaluate, interpret and communicate the numerical facts.

The collected data was planned for data analysis in terms of objectives of study by using descriptive and inferential statistics.

The following plan will be developed for data analysis on the basis of the opinion of expert;

1. Organized the data in a master sheet.
2. Frequencies and percentages to be used for analysis of demographic data.
3. Calculation of mean, standard deviation of pre-test and post-test score.
4. Application of paired t-test to test whether there is significant difference in the mean knowledge score of pre-test and post-test values.
5. Chi-square to find out the association between the level of knowledge and their demographic variables.

Summary

This chapter dealt with the methodology undertaken for the study. It includes research approach, research design, setting of the study, variables, population, sample & sampling technique, description and interpretation of tools, pilot study, data collection procedure and plan for data analysis.

Data Analysis and Interpretation

Data analysis is a process of organizing and synthesizing data in such way that research questions can be answered and tested.[40]

Statistical procedure enables the researcher to organize, analyze, interpret, evaluate and communicate numerical information meaningfully. This chapter deals with the analysis and interpretation of the data collected to assess the knowledge of staff nurses regarding Evidence Based Nursing Practice in BMCHRC Hospital.

The data were analyzed based on the following study objectives:

The Objectives of the Study Were:-

1. To assess the existing knowledge of staff nurses regarding Evidence Based Nursing Practice, working in selected hospital.
2. To develop, validate & administer Self Instructional Module.
3. To assess the effectiveness of Self Instructional Module.
4. To find an association of knowledge between the level of staff nurses and with selected demographic variables like age, gender, experience, area of working, professional qualification, and source of knowledge.

Hypothesis

H1: There will be a significant difference between existing and post-test level scores of knowledge regarding Evidence Based Nursing Practice among staff nurses.

H2: There will be a significant association between the level of knowledge and selected demographic variables of staff nurses regarding Evidence Based Nursing Practice.

Presentation of Data

The data are tabulated, analysed, organized and presented under the following headings.

- **SECTION-I :** It deals with the analysis of the demographic data of the samples like age, gender, experience, area of working, professional qualification, and source of knowledge.
- **SECTION-II :** It deals with the analysis of level of knowledge on Evidence Based Nursing Practice among staff nurses.

Aspect wise distribution of scores during the pre-test and post-test. Association between pre-test and post-test scores.

- **SECTION-III:** Association between the level of knowledge of staff nurses on Evidence Based Nursing Practice and their selected variables (age, gender, experience, professional qualification, area of working and source of knowledge).

S.NO.	DEMOGRAPHIC VARIABLES	FREQUENCY(f)	PERCENTAGE (%)
1	GENDER		
	(a) Male	25	41.66%
	(b) Female	35	58.33%
2	AGE		
	(a) 21-30 years	08	13.33%
	(b) 31-40 years	26	43.33%
	(c) 41-50 years	22	36.66%
	(d) 51-60 years	04	06.66%
3	PROFESSIONAL EDUCATION		
	(a) GNM	21	35.00%
	(b) Post Basic BSc Nursing	24	40.00%
	(c) BSc Nursing	08	13.33%
	(d) MSc Nursing	07	11.66%
4	AREA OF WORKING		
	(a) General Ward	14	23.33%
	(b) ICU	08	13.33%

	(c) Surgical Ward	23	38.33%
	(d) O.T	15	25.00%
5	PROFESSIONAL EXPERIENCE		
	(a) 0-5 years	05	08.33%
	(b) 6-10 years	07	11.66%
	(c) 11-15 years	19	31.66%
	(d) 16 years & above	29	48.33%
6	SOURCE OF KNOWLEDGE		
	(a) Academic	37	61.66%
	(b) Workshop/ Seminar	06	10.00%
	(c) News paper	01	01.66%
	(d) Journal, Research Publications	16	26.66%

n=60

TABLE-II Frequency and Percentage Distribution of Samples Based on Demographic Variables

Table-II shows that in the present study, out of 60 samples 13.33% respondents were in the age group of 21-30 years followed by 43.33% respondents belongs to age group between 31-40 years followed by 36.66% respondents belongs to age group between 41-50 years and 06.66% were found in the age group of 51-60 years. 41.66% respondents were belongs to male and 58.33% respondents belongs to female. 30% respondents had completed GNM course, 13.33% completed BSc Nursing, 40% of respondents had completed Post-Basic BSc Nursing and 11.66% respondents had completed MSc Nursing. 8.33% respondents had completed 0-5 years of experience, 11.66% of respondent had 6-10 years of experience, 31.66% of respondents had 11- 15 years of experience and 48.33% of respondents had 16 years & above experience. 23.33% respondents working in General Ward, 13.33% of respondents working in ICU, 38.33% of respondents working in Surgical ward and 25% of respondents working in OT. Majority (61.66%) of the respondents had knowledge through academic education, 10% respondents had knowledge through work shop/ seminar, and 1.66% respondents had knowledge through News paper where as 26.66% respondents had knowledge through Journal /research Publications.

AGE (in years)	FREQUENCY(f)	PERCENTAGE (%)
21-30 years	08	13.33%
31-40 years	26	43.33%
41-50 years	22	36.66%
51-60 years	04	06.66%

TABLE- III Distribution of Respondent According to Age

Table-III reveals that in the present study , out of 60 samples 13.33% respondents were in the age group of 21-30 years followed by 43.33% respondents belongs to age group between 31-40 years followed by 36.66% respondents belongs to age group between 41-50 years and 06.66% were found in the age group of 51-60 years.

PROFESSIONAL EXPERIENCE	FREQUENCY(f)	FREQUENCY (%)
0-5 years	05	08.33%
6-10 years	07	11.66%
11-15 years	19	31.66%
16 years and above	29	48.33%

N=60**TABLE-VI** Distribution of Respondent According To Professional Experience

Table –VI reveals the distribution of respondents by professional experience.

In this study, 8.33% respondents had completed 0-5 years of experience, 11.66% of respondent had 6-10 years of experience, 31.66% of respondents had 11- 15 years of experience and 48.33% of respondents had 16 years & above experience.



FIGURE 6: Percentage distribution of staff nurses by professional experience

WORKING AREA	FREQUENCY (f)	FREQUENCY (%)
General ward	12	23.33%
ICU	08	13.33%
Surgical ward	23	38.33%
OT	15	25.00%

N=60

TABLE-VII Distribution of Respondent According to Area of Working

Table -VII reveals the distribution of respondents by area of working.

In this study, 23.33% respondents working in General Ward , 13.33% of respondents working in ICU, 38.33% of respondents working in Surgical ward and 25% of respondents working in OT.

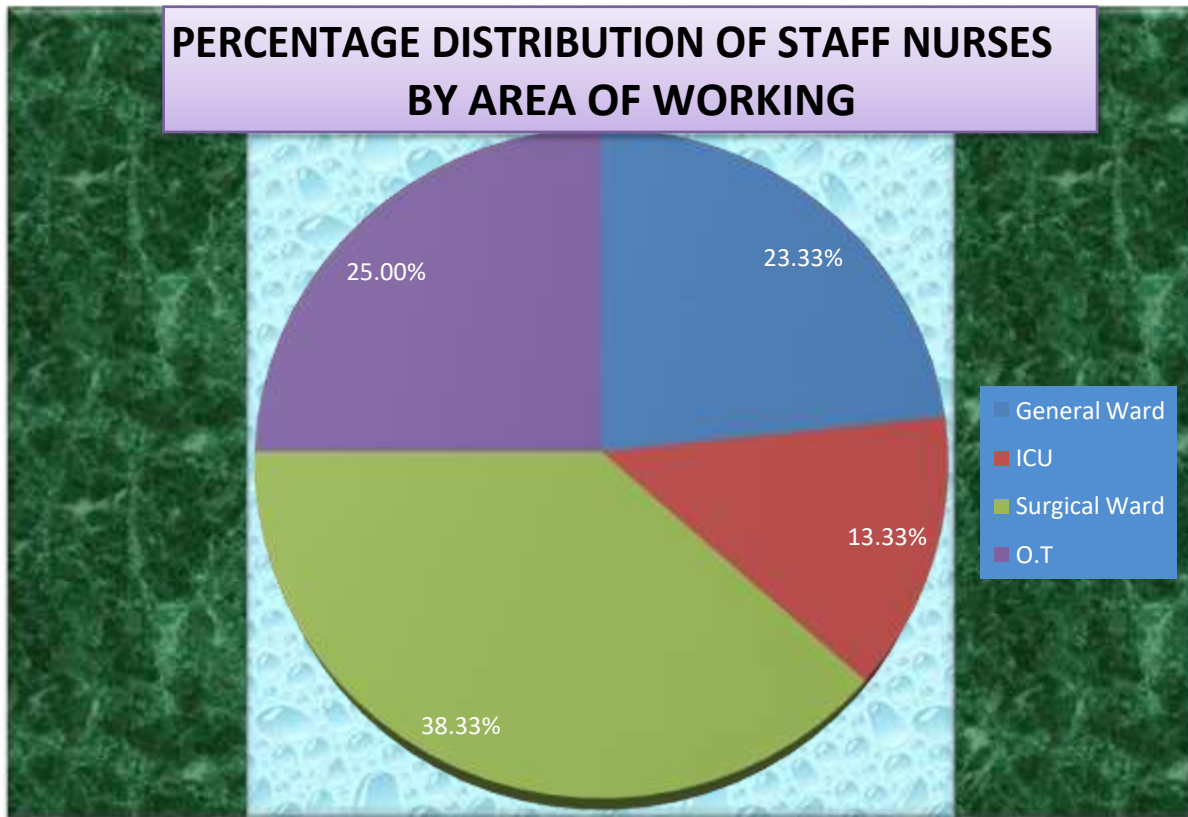


FIGURE-7: Percentage distribution of staff nurses by area of working.

SOURCE OF KNOWLEDGE	FREQUENCY (f)	FREQUENCY (%)
Academic education	37	61.66%
Work shop/ seminar	06	10.00%
News paper	01	01.66%
Journals/ research publications	16	26.66%

N=60

TABLE-VIII Distribution of Respondent According to Source of Knowledge

Table -VIII reveals the distribution of respondents by source of knowledge.

Analysis related to the source of knowledge regarding Evidence Based Nursing Practice revealed that majority (61.66%) of the respondents had knowledge through academic education, 10% respondents had knowledge through work shop/ seminar, 1.66% respondents had knowledge through News paper where as 26.66% respondents had knowledge through Journal /research Publications.

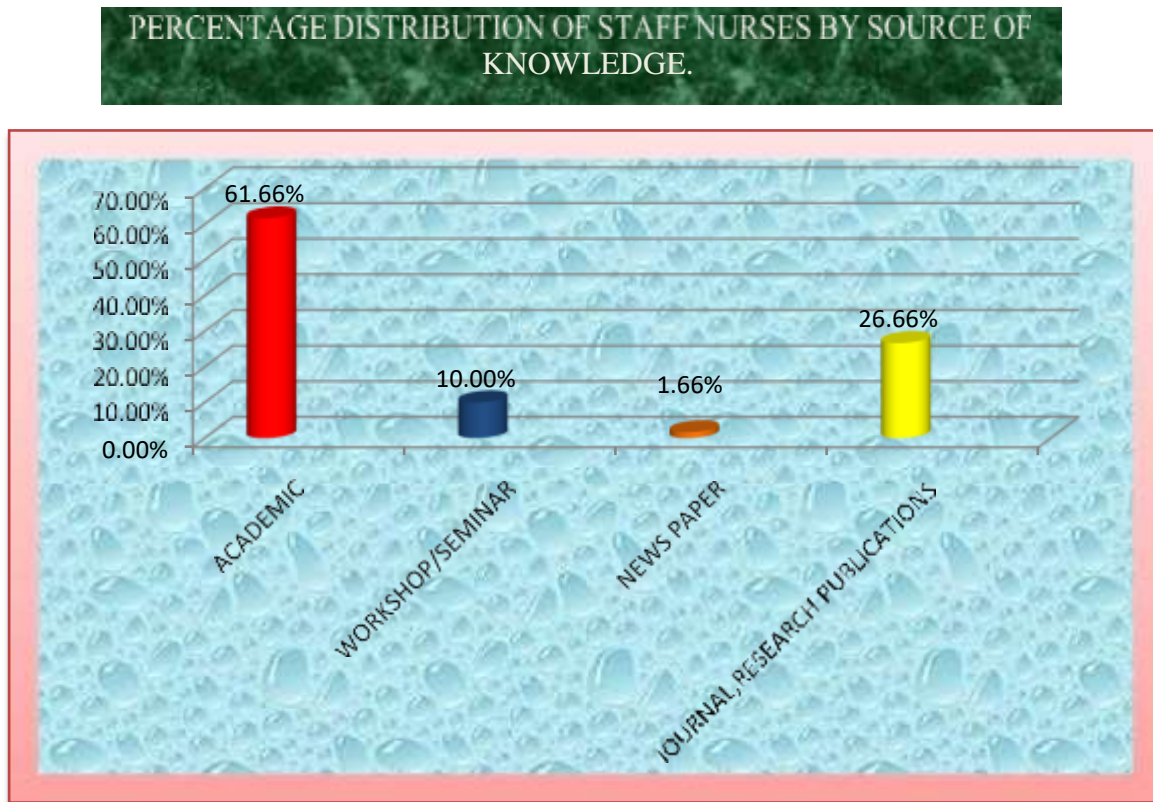


FIGURE-8: Percentage distribution of staff nurses by source of knowledge.

KNOWLEDGE SCORE	PRE-TEST		POST-TEST	
	FREQUENCY (f)	PERCENTAGE (%)	FREQUENCY (f)	PERCENTAG (%)
0-12 (POOR)	50	83.33%	00	00%
13-24 (AVERAGE)	10	16.66%	42	70%
25-35 (GOOD)	00	00%	18	30%
TOTAL	60	100%	60	100%

N=60

TABLE-IX Distribution Of Subjects Overall Pre-Test & Post-Test Knowledge In Evidence Based Nursing Practice

Table-IX shows that the majority (83.33%) of staff nurses in pre-test had a poor knowledge score (0-12) and 16.66% of staff nurses had an average knowledge score (13-24) and 00% having good knowledge score (25-35) where as in post-test the majority (70.00%) of staff nurses had an average knowledge score and 30% had good knowledge score.

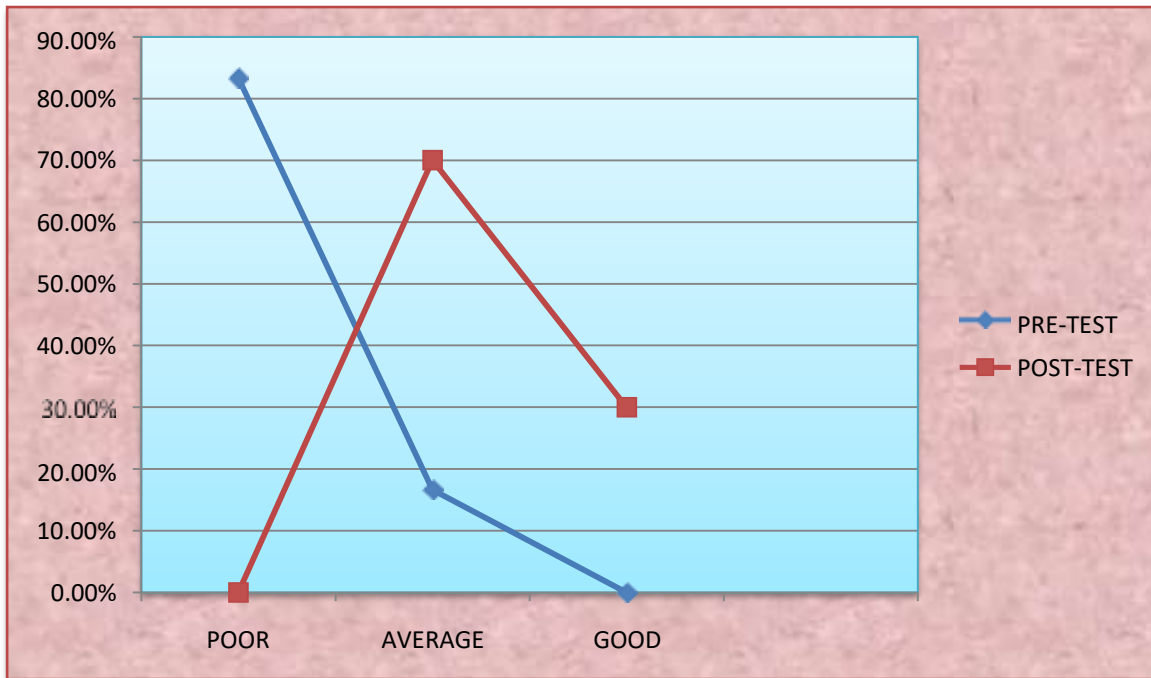


FIGURE-9: Distribution of subject’s overall pre-test & post-test knowledge score in Evidence Based Nursing Practice.

NO	ASPECTS	STATE-MENTS	PRE-TEST MEAN	PRE-TEST S.D.	POST-TEST MEAN	POST-TEST S.D.	MEAN DIFFERENCE	PAIRED t-test
	KNOWLEDGE	35	10.55	2.927	21.90	4.110	11.35	3.824

„t“ value at 5%: $t_{(59)} = 3.824$; * Significant; $P < 0.05$

TABLE-X Overall Pre-Test & Post-Test Mean Knowledge Score of Respondents

Table-X reveals the overall mean pre-test and post-test knowledge score of respondents.

The overall mean knowledge score of pre-test found to be 10.55 and standard deviation of 2.927. The post

test knowledge scores have mean of 21.90 and standard deviation of 4.110. The mean enhancement score found to be 11.35. The statistical results established significant at 5% level ($t=3.824$) indicating the effectiveness of Self Instructional Module in enhancing the knowledge of respondents.

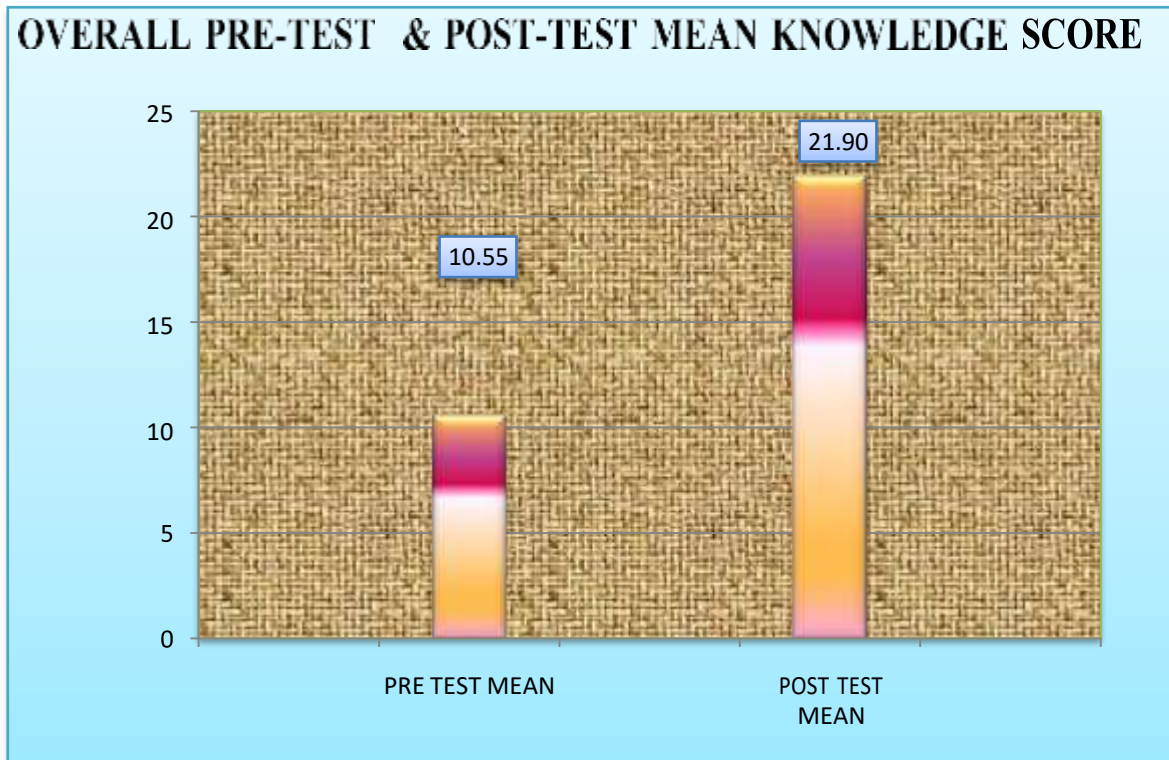


FIGURE-10: overall mean pre-test and post-test knowledge score of respondents.

S. NO .	AREA	MAXIMUM SCORE	MEAN SCORE	KNOWLEDGE SCORE % MEAN
1	Knowledge related to introduction of Evidence Based Nursing Practice	9	2.916	32.36%
2	Knowledge related to importance of Evidence Based Nursing Practice	4	1.333	33.30%
3	Knowledge related to steps of Evidence Based Nursing Practice	10	2.566	25.62%

4	Knowledge related to sources and barriers to implement Evidence Based Nursing Practice	2	0.383	19.10%
5	Knowledge related to key messages for Evidence Based Nursing Practice	3	0.716	23.80%
6	Knowledge related to clinical applications to Evidence Based Nursing Practice	7	2.55	36.39%

TABLE-XI Areawise Analysis of Pre-Test Knowledge Score of Respondents Regarding Evidence Based Nursing Practice

Table-XI reveals area wise pre-test mean knowledge score on Evidence Based Nursing Practice.

Area wise knowledge score regarding Evidence Based Nursing Practice from respondent , score with regard to introduction was 32.36%, regard to importance 33.00%, regard to steps 25.62%, regard to sources & barrier 19.10% regard to messages 23.80%,and regard to clinical applications was 36.39%.

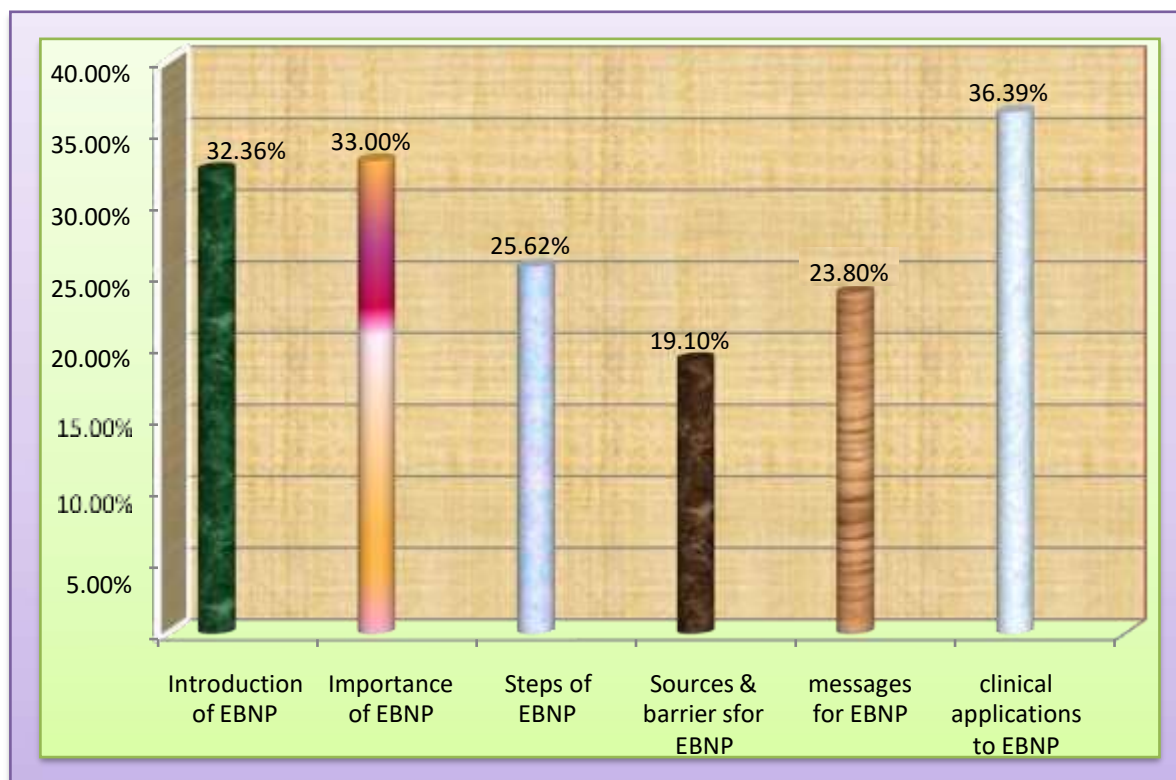


FIGURE-11: Area wise pre-test mean knowledge score on Evidence Based Nursing Practice.

S.NO.	AREA	MAXIMUM SCORE	MEAN SCORE	KNOWLEDGE SCORE % MEAN
1	Knowledge related to introduction of Evidence Based Nursing Practice	9	5.933	70.60%
2	Knowledge related to importance of Evidence Based Nursing Practice	4	2.30	57.45%
3	Knowledge related to steps of Evidence Based Nursing Practice	10	5.933	59.31%
4	Knowledge related to sources and barriers to implement Evidence Based Nursing Practice	2	0.966	48.30%
5	Knowledge related to key messages for Evidence Based Nursing Practice	3	1.75	58.26%
6	Knowledge related to clinical applications to Evidence Based Nursing Practice	7	5.00	71.30%

TABLE-XII Areawise Analysis of Post-Test Knowledge Score of Respondents Regarding Evidence Based Nursing Practice

Table-XII reveals area wise post-test mean knowledge score on Evidence Based Nursing Practice.

Area wise knowledge score regarding Evidence Based Nursing Practice from respondent , score with regard to introduction was 70.60%, regard to importance 57.45%, regard to steps 59.31%, regard to sources & barrier 48.30% regard to messages 58.26%, and regard to clinical applications was 71.30%.

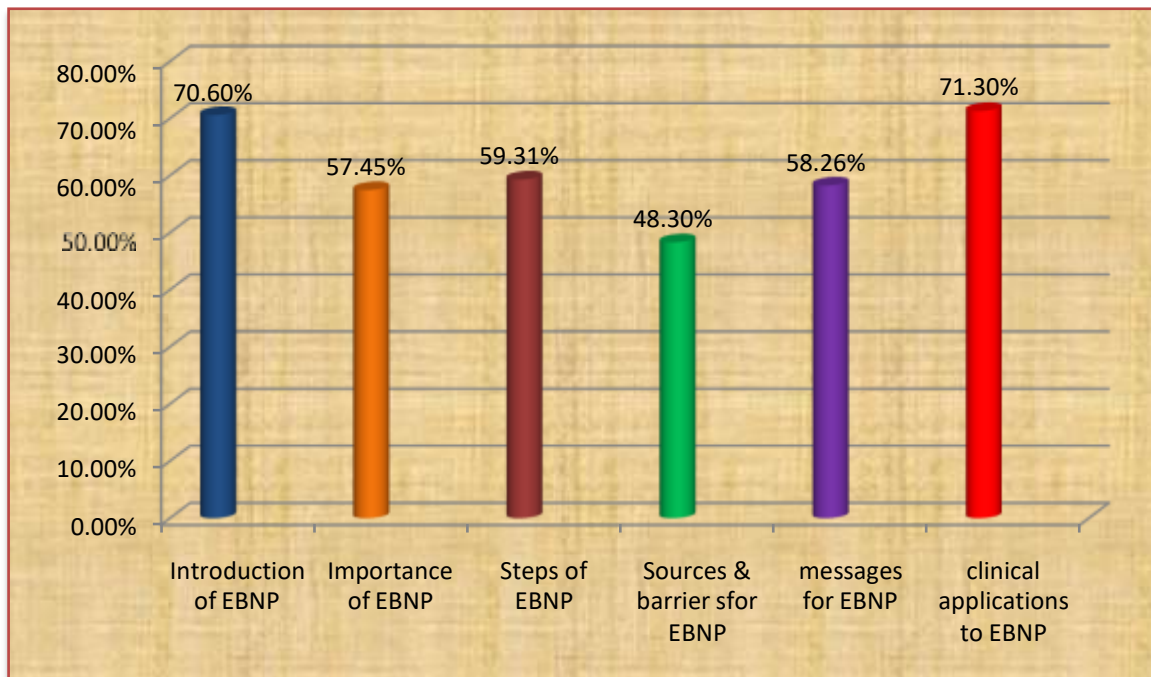


FIGURE-12: Area wise post-test mean knowledge score on Evidence Based Nursing Practice.

Content	Mean difference post test-pre test(y-x)	S.D. difference post test-pre test(y-x)	Calculated value of „t“	Table value of „t“	Level of significance
Knowledge regarding Evidence Based Nursing Practice	11.35	1.183	3.824	1.645	SIGNIFICANT

TABLE-XIII Evaluating the Effectiveness of Sim on Knowledge Regarding Evidence Based Nursing Practice

Table-XIII reveals that calculated value of t is more than the tabulated value at $p < 0.05$.

It is interpreted that the Self Instructional Module is effective on knowledge regarding Evidence Based Nursing Practice so the H1 is accepted.

Variables	Pre-test mean	Post-test mean	Tabulated 2 Value	Calculated 2 value	df	Level of significance
21-30years	9	20.37	5.99	2.735	2	*NS
31-40years	11.31	22.61				
41-50years	10.5	22.00				
51-60years	9	19.75				

* NS- NOT SIGNIFICANT

TABLE-XIV Association Between Age And Knowledge Level Regarding Evidence Based Nursing Practice

Table-IV shows that computed chi-square value for age of the respondents (2.735) is lesser than table value (5.99) at $p < 0.05$. It is interpreted that there is no significant association of age and knowledge level on Evidence Based Nursing Practice. Hence, the research hypothesis H2 is rejected.

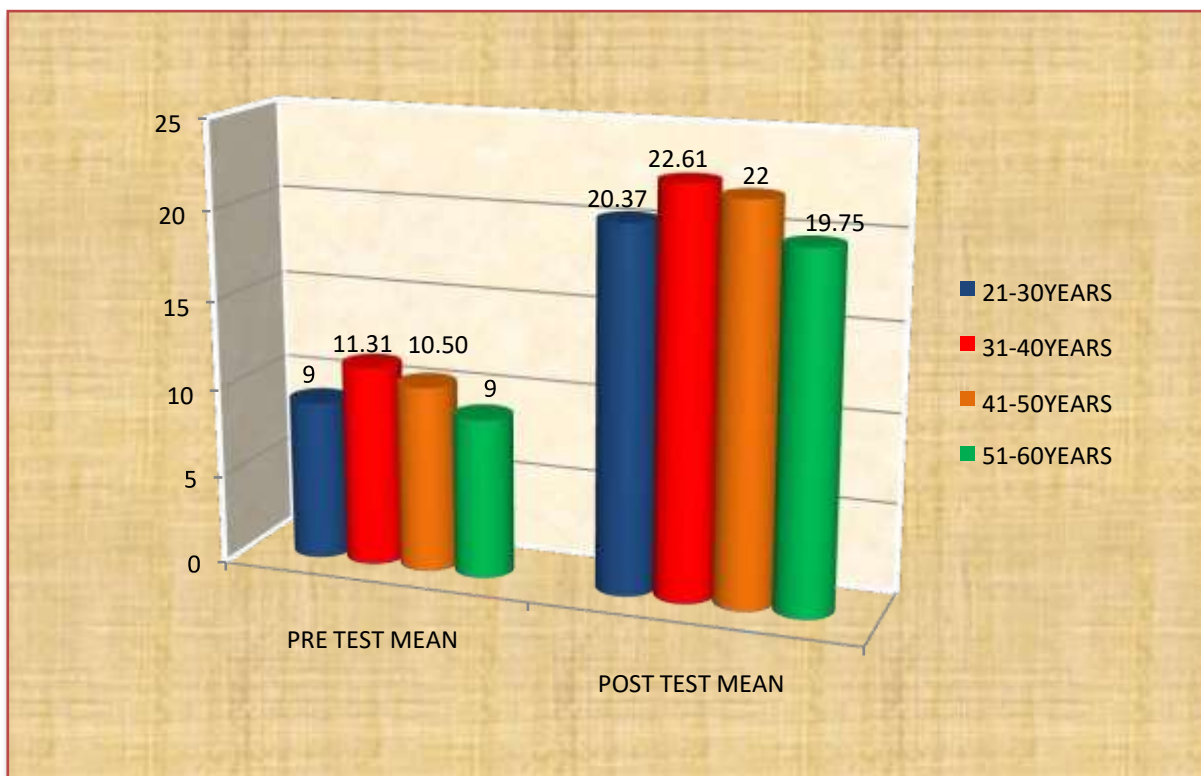


FIGURE-13: Association between age and knowledge level regarding Evidence Based Nursing Practice.

Variables	Pre-test mean	Post-test mean	Tabulated 2 Value	Calculated 2 value	df	Level of significance
Male	10.04	21.08	3.84	6.005	1	*S
Female	10.91	22.48				

* S- SIGNIFICANT

TABLE-XV Association between Gender and Knowledge Level Regarding Evidence Based Nursing Practice

Table-XV shows that computed chi-square value for gender of the respondents (6.005) is greater than table value (3.84) at $p < 0.05$. It is interpreted that there is significant association of gender and knowledge level on Evidence Based Nursing Practice. Hence, the research hypothesis H2 is accepted.

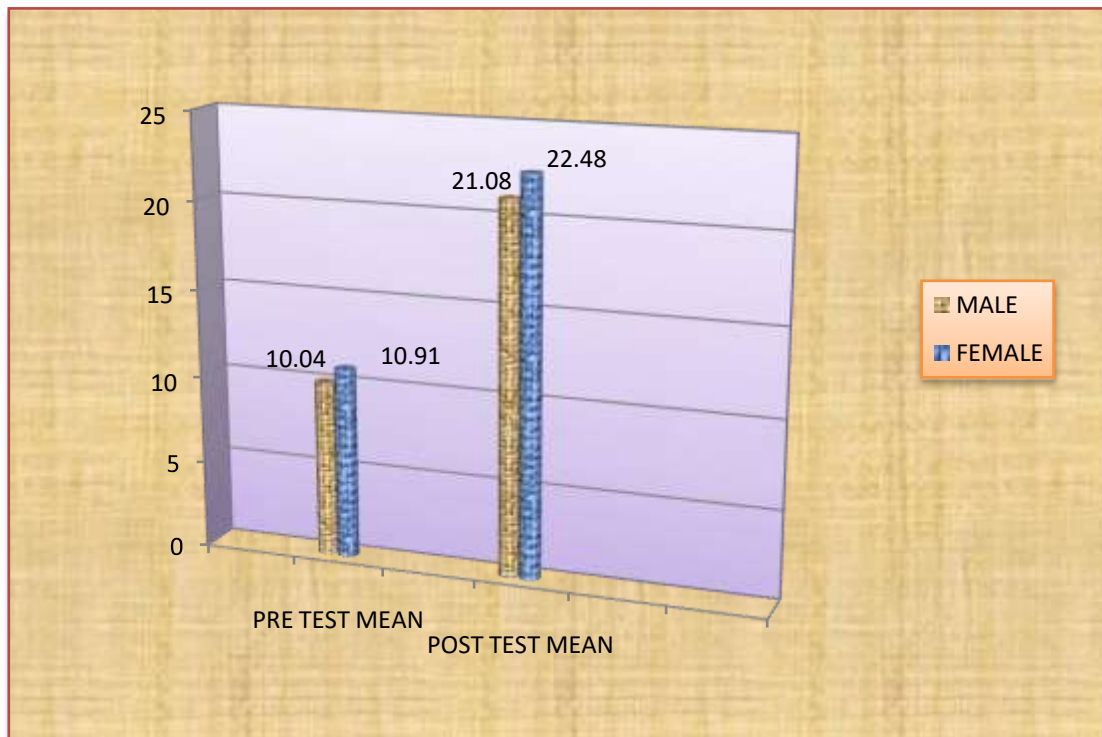


FIGURE-14: Association between gender and knowledge level regarding Evidence Based Nursing Practice.

Variables	Pre-test mean	Post-test mean	Tabulated 2 Value	Calculated 2 value	df	Level of significance
GNM	8.33	19.38	5.99	25.991	2	*S
PBBSc Nursing	10.41	21.75				
BSc Nursing	12.5	21.75				
MSc Nursing	16.85	30.14				

* S- SIGNIFICANT

TABLE-XVI Association between Professional Education and Knowledge Level Regarding Evidence Based Nursing Practice

Table-XVI shows that computed chi-square value for professional education of the respondents (25.991) is greater than table value (5.99) at $p < 0.05$. It is interpreted that there is significant association of professional education and knowledge level on Evidence Based Nursing Practice. Hence, the research hypothesis H2 is accepted.

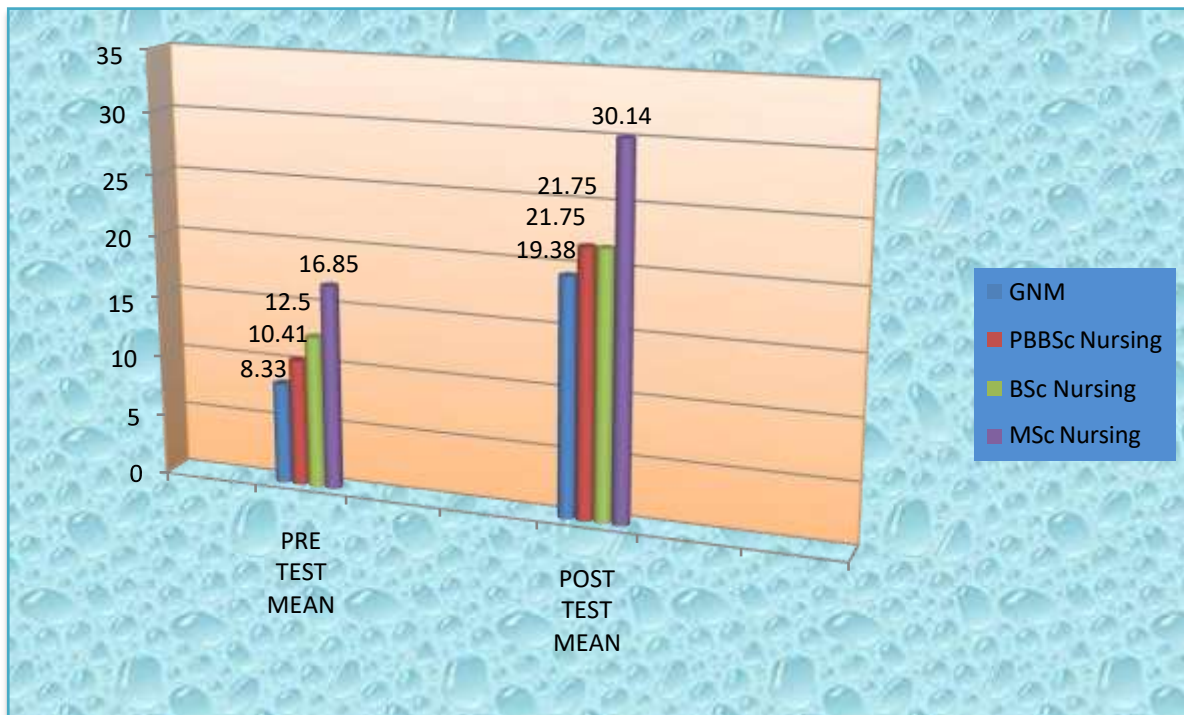


FIGURE-15: Association between professional education and knowledge level regarding Evidence Based Nursing Practice.

Variables	Pre-test mean	Post-test mean	Tabulated 2 Value	Calculated 2 value	df	Level of significance
General Ward	8.78	19.57	5.99	3.174	2	*NS
ICU	11.5	23.75				
Surgical Ward	10.39	21.78				
O.T	11.93	23.26				

* NS- NOT SIGNIFICANT

TABLE-XVII Association between Area of Working and Knowledge Level Regarding Evidence Based Nursing Practice

Table-XVII shows that computed chi-square value for area of working of the respondents (3.174) is lesser than table value (5.99) at $p < 0.05$. It is interpreted that there is no significant association of area of working and knowledge level on Evidence Based Nursing Practice. Hence, the research hypothesis H_2 is rejected.

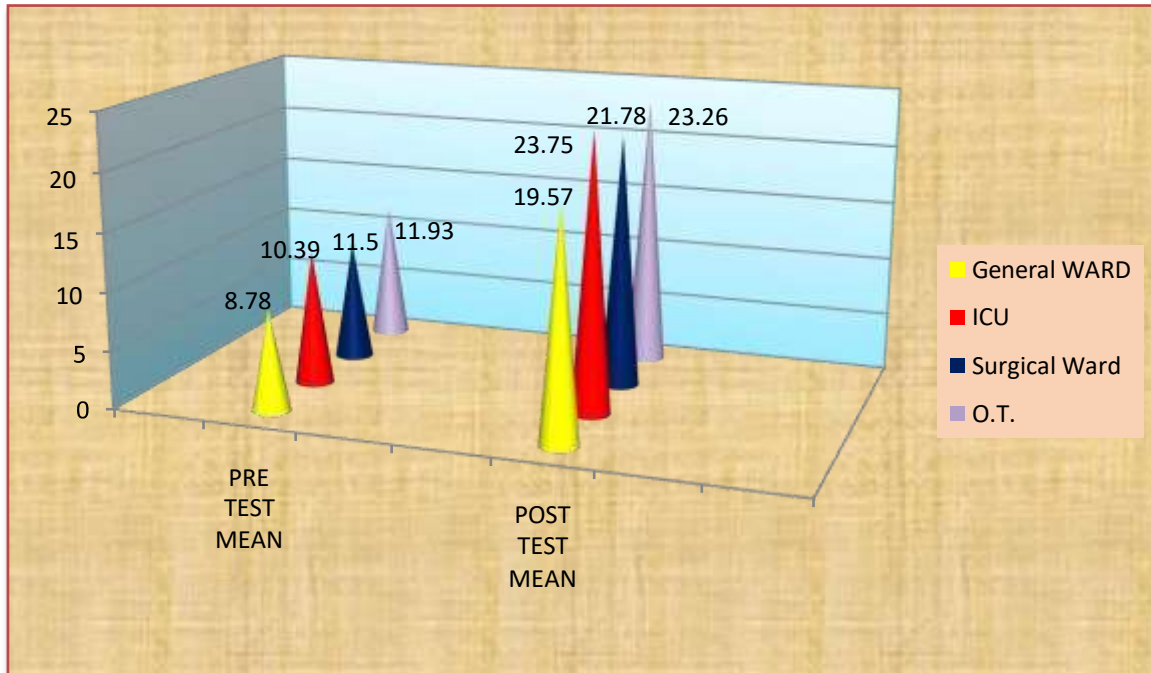


FIGURE-16: Association between area of working and knowledge level regarding Evidence Based Nursing Practice.

Variables	Pre-test mean	Post-test mean	Tabulated 2 Value	Calculated 2 value	df	Level of significance
0-5 Years	9.6	21.20	5.99	1.364	2	*NS
6-10 Years	9.14	19.57				
11-15 Years	11.05	22.52				
16 Years & above	10.72	22.17				

* NS- NOT SIGNIFICANT

TABLE-XVIII Association Between Professional Experience and Knowledge Level Regarding Evidence Based Nursing Practice

Table-XVIII shows that computed chi-square value for professional experience of the respondents (1.364) is lesser than table value (5.99) at $p < 0.05$. It is interpreted that there is no significant association of professional experience and knowledge level on Evidence Based Nursing Practice. Hence, the research hypothesis H_2 is rejected.

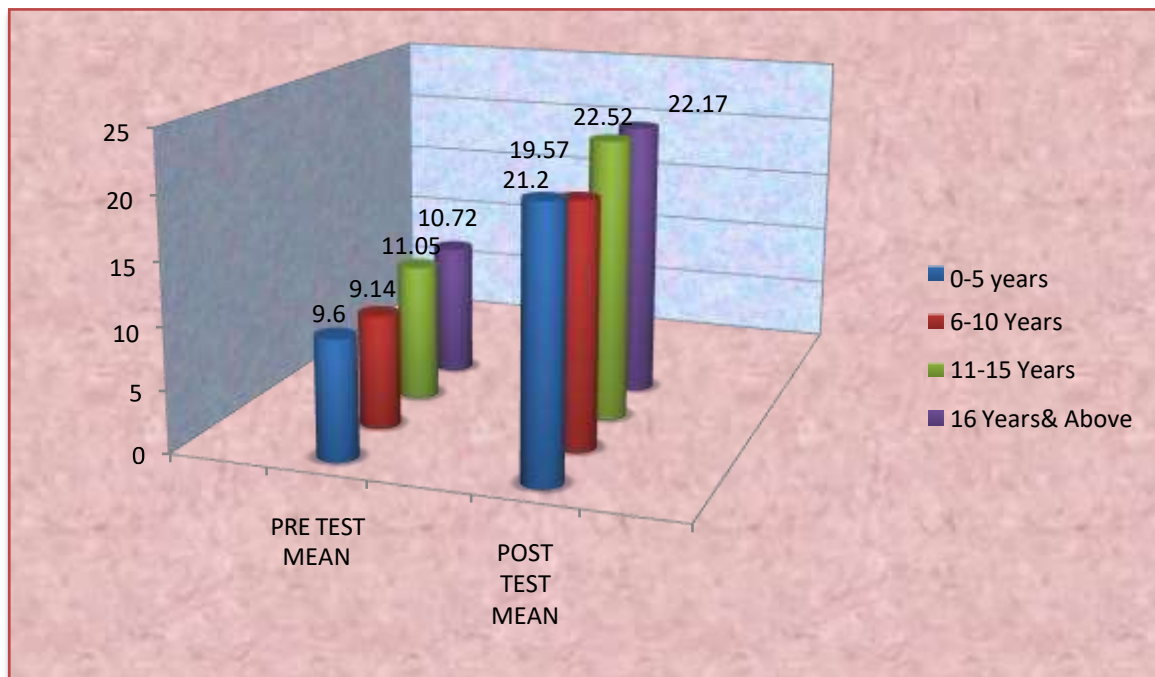


FIGURE-17: Association between professional experience and knowledge level regarding Evidence Based Nursing Practice

Variables	Pre-test mean	Post-test mean	Tabulated 2 Value	Calculated 2 value	df	Level of significance
Academic Education	9.72	20.91	5.99	12.755	2	*S
Work shop/Seminar	15.66	28.33				
News Paper	15	30.00				
Journal/Research Publications	10.25	21.62				

* S- SIGNIFICANT

TABLE-XIX Association Between Source Of Knowledge And Knowledge Level Regarding Evidence Based Nursing Practice

Table-XIX shows that computed chi-square value for source of knowledge of the respondents (12.755) is greater than table value (5.99) at $p < 0.05$. It is interpreted that there is significant association of source of knowledge and knowledge level on Evidence Based Nursing Practice. Hence, the research hypothesis H2 is accepted.

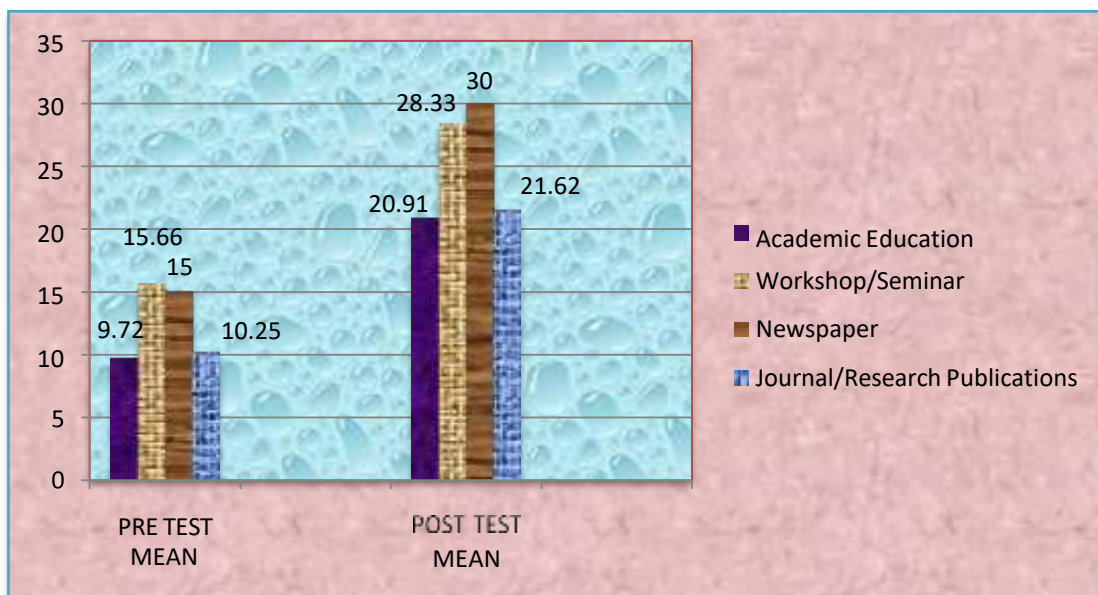


FIGURE-18: Association between source of knowledge and knowledge level regarding Evidence Based Nursing Practice

S.NO.	VARIABLES	DF	CALCULATE D 2 VALUE	TABULATED 2 VALUE	LEVEL OF SIGNIFICANCE
1	Gender	1	6.005	3.84	*S
2	Age	2	2.735	5.99	*NS
3	Professional Education	2	25.991	5.99	S
4	Area of Working	2	3.174	5.99	NS
5	Professional Experience	2	1.364	5.99	NS
6	Source of knowledge	2	12.755	5.99	S

*S – SIGNIFICANT

*NS-NOT SIGNIFICANT

TABLE-XX Abstract Of Chi-Square Result Of Demographic Characteristics And Knowledge Regarding Evidence Based Nursing Practice

Table-XX indicates Chi-square was calculated to find out the association between the knowledge scores and the demographic variables of the staff nurses. There were less than five frequencies in some area that's why merging of cells done and made the 2x2 consistency of cells.

Summary

This chapter dealt with the analysis and interpretation of data collected through the structured knowledge questionnaire. The association between the knowledge on Evidence Based Nursing Practice among staff nurses and their selected demographic variables were also done.

Summary, Major Findings, Implications, Recommendations and Conclusion

This chapter deals with a brief summary of the study undertaken including the discussion, summary, major findings, conclusion from the findings, implications of the study, limitations and recommendations for future research in this field.

Discussion

The findings of the study have been discussed with reference to the objectives of the study. The pre-testing of staff nurses on the knowledge regarding Evidence Based Nursing Practice shows that staff nurses had less knowledge about Evidence Based Nursing Practice in all the area.

Objectives of the study

1. To assess the existing knowledge of staff nurses regarding Evidence Based Nursing Practice working in selected hospitals.
2. To develop, validate & administer self instructional module.
3. To assess the effectiveness of self instructional module.
4. To find an association of knowledge with selected demographic variables like age, gender, experience, professional qualification etc.

Hypothesis

H1: There will be a significant difference between existing and post-test level scores of knowledge regarding Evidence Based Nursing Practice among staff nurses.

H2: There will be a significant association between the level of knowledge and selected demographic variables of staff nurses regarding Evidence Based Nursing Practice.

Assumptions:

- The researcher assumes that:
- Evidence Based Nursing Practice may improve the quality of patient care.

-
- Evidence Based Nursing Practice may improve the nurse's confidence to give nursing care.
 - The Self-Instructional Module may enhance the knowledge of staff nurses on Evidence Based Nursing Practice.

The dependent variable of this study is the knowledge score of staff nurses of the BMCHRC Hospital; Jaipur regarding the Evidence Based Nursing Practice and independent variable is the effectiveness of Self Instructional Module regarding the Evidence Based Nursing Practice.

The present study is focused on evaluating the effectiveness of SIM on EBNP among staff nurses.

The selected conceptual framework in the present study was based on Context, Input, Process and Product modes by Stuffle Beam (1960). It consists of four steps namely- Context, Input, Process and Product evaluation, in which context refers to goal setting, input refers to information to be processed for the desired outcome, process refers to the method by which the input can be processed and product is released and product refers to the output.

In the present study, Context refers to formulation of objectives and hypotheses to evaluate the effectiveness of self instructional module for staff nurses regarding Evidence Based Nursing Practice.

According to the study, Input includes assessing the knowledge of staff nurses regarding Evidence Based Nursing Practice using pre-test.

In this study, Process involves:

- Development of Self Instructional Module
- Administration of Self Instructional Module

In this study the Product refers to assessment of knowledge of staff nurses regarding Evidence Based Nursing Practice using post test and evaluating the effectiveness of Self Instructional Module.

The tool selected for the present study was to collect demographic data and structured knowledge questionnaire to assess the level of knowledge of staff nurses. The tool was validated by 5 experts.

The present study was conducted in the month of July-August. After obtaining the formal permission from the concerned authority, the study was conducted in BMCHRC Hospital.

Reliability of the tool was established by using split half method for structured knowledge questionnaire

and the result was $r = 0.84$. Pilot study was conducted on 10 samples. After pilot study no modifications was made.

Through Non-probability convenient sampling technique, 60 samples were enquired to assess the level of knowledge.

On day 1st, informed written consent was obtained from each sample after explaining the purpose of the study and was given assurance for keeping the information confidential. A pre-test was conducted by administering structured questionnaire, and then it was followed by administering Self Instructional Module on Evidence Based Nursing Practice. The pre-test was administered for each staff nurse. On the 8th day a post- test was administered by using the same tool which was used in the pre-test.

The findings of the study reveal that the mean differences of the pre-test and post-test which is statistically significant at .001 levels. Hence it indicates a significant difference and effectiveness of Self Instructional Module in terms of knowledge gain by the staff nurses.

This clearly indicates that the level of knowledge of post-test among staff nurses was higher than the pre-test. This shows that Self Instructional Module was effective in increasing the knowledge level of the samples regarding Evidence Based Nursing Practice.

Findings of the study result reveals that there is statistically no significant association between the knowledge and the age of the staff nurses at ($p < 0.05$). It is observed that there is association between the knowledge and the professional qualification of the staff nurses ($P < 0.05$).

It is also found that there is no significant association between the knowledge and the year of experience and area of working ($P < 0.05$). Result also found that there is significant association between the knowledge and source of knowledge regarding Evidence Based Nursing Practice ($P < 0.05$).

Major Findings of the Study

I Findings Related to Demographic Variables

- In the present study, out of 60 samples 13.33% respondents were in the age group of 21-30 years followed by 43.33% respondents belongs to age group between 31- 40 years followed by 36.66% respondents belongs to age group between 41-50 years and 06.66% were found in the age group of 51-60 years.

-
- 41.66% respondents were belongs to male and 58.33% respondents belongs to female.
 - 30% respondents had completed GNM course, 13.33% completed BSc Nursing, 40% of respondents had completed Post-Basic BSc Nursing and 11.66% respondents had completed MSc Nursing.
 - 8.33% respondents had completed 0-5 years of experience, 11.66% of respondent had 6-10 years of experience, 31.66% of respondents had 11- 15 years of experience and 48.33% of respondents had 16 years & above experience.
 - 23.33% respondents working in General Ward, 13.33% of respondents working in ICU, 38.33% of respondents working in Surgical ward and 25% of respondents working in OT.
 - The source of knowledge regarding Evidence Based Nursing Practice revealed that majority (61.66%) of the respondents had knowledge through academic education, 10% respondents had knowledge through work shop/ seminar, 1.66% respondents had knowledge through News paper where as 26.66% respondents had knowledge through Journal /research Publications.

II Findings Related to Knowledge Scores Before and after Administering the Self Instructional Modulet

- The majority (83.33%) of staff nurses in pre-test had a poor knowledge score (0-12) and 16.66% of staff nurses had an average knowledge score (13-24) and 00% having good knowledge score (25-35).
- In post-test the majority (70.00%) of staff nurses had an average knowledge score and 30% had good knowledge score.
- Area wise pre-test knowledge score regarding Evidence Based Nursing Practice from respondent , score with regard to introduction was 32.36%, regard to importance 33.00%, regard to steps 25.62%, regard to sources & barrier 19.10% regard to messages 23.80%,and regard to clinical applications was 36.39%.
- Area wise post-test knowledge score regarding Evidence Based Nursing Practice from respondent , score with regard to introduction was 70.60%, regard to importance 57.45%, regard to steps 59.31%, regard to sources & barrier 48.30% regard to messages 58.26%, and regard to clinical applications was 71.30%.

III The Association of Level of Knowledge Scores with the Selected Demographic Variables

- The result reveals that there is no significant association between the age and knowledge scores, as the calculated χ^2 value (2.735) is lesser than table value (5.99) at $p < 0.05$. Hence, the research hypothesis H_2 is rejected.
- The result reveals that there is significant association between gender and knowledge scores, as the calculated χ^2 value (6.005) is greater than table value (3.84) at $p < 0.05$. Hence, the research hypothesis H_2 is accepted.
- There is significant association between professional education and knowledge scores, as the calculated χ^2 value (25.991) is greater than table value (5.99) at $p < 0.05$. Hence, the research hypothesis H_2 is accepted.
- There is no significant association between area of working and knowledge scores, as the calculated χ^2 value (3.174) is lesser than table value (5.99) at $p < 0.05$. Hence, the research hypothesis H_2 is rejected.
- There is no significant association between professional experience and knowledge scores, as the calculated χ^2 value (1.364) is lesser than table value (5.99) at $p < 0.05$. Hence, the research hypothesis H_2 is rejected.
- The result reveals that there is significant association between source of knowledge and knowledge scores, as the calculated χ^2 value (12.755) is greater than table value (5.99) at $p < 0.05$. Hence, the research hypothesis H_2 is accepted.

Implications

Knowledge is a right of every human being and every human has the right to health. Attainment of health by all is proposed by the Alma Ata declaration of WHO. This slogan should be felt by all and every individual should take the responsibility towards promoting health. The findings of the study have implication for nursing practice, nursing education, nursing administration and nursing research.

Nursing Practice

- Several implications can be drawn from the present study for nursing practice. Content of the SIM will help the nursing personnel working in the hospital for reinforcing their knowledge on Evidence Based Nursing Practice.
- Since there is less knowledge regarding Evidence Based Nursing Practice among staff nurses, every nurse should make use of this result to update their knowledge.
- Any teaching strategy which is simple, clear and attractive allows the learner to follow instructions easily. Health informations can be imparted through various methods like lectures, mass media, pamphlets, booklets and display etc. Hence nurses should take keen interest in preparing different teaching strategies suitable for the community.

Nursing Education

- The Nursing education is the key component of improving the knowledge of an individual. Quality care through excellence in advance nursing education is apt to meet the increasing demand of good quality of nursing.
- Education is the integral part of governance agenda. The nursing curriculum should include topics, which enhances knowledge related to Evidence Based Nursing Practice using different methods of teaching.
- The study has improved the importance of knowledge in nursing regarding formulation of Self Instructional Module.
- The finding will help the nursing student to understand about the need to be equipped with adequate knowledge.
- The finding will help the nursing faculty to give more importance for planning and organizing the Self Instructional Module to improve the knowledge of clinical practicing students.

Nursing Administration

- The Nurse administrators should plan, organize and provide materials for the effective awareness programs regarding Evidence Based Nursing Practice, and should be open for discussion and suggestions.
- The Nurse administrators should modify the behaviour of the nurses to match the corporate level of clients, so that everybody will have faith in health teachings given by nurses.
- Nurses as administrators should take great interest in encouraging nurses to learn more about Evidence Based Nursing Practice and to use their knowledge in practice.
- Nurse administrator should formulate policies and adopt various modalities of Evidence Based Nursing Practice.
- This is possible if the nurse as an administrator takes initiatives in imparting the health information through printed materials, in the form of booklets, pamphlets, and posters to staff nurses who can read and write, and arrange for group teaching for staff nurses who cannot use printed materials.
- Nurse administrators should take initiative in organising in-service education programme for nurses and motivate nurses to participate in such activities.
- The nurse administrators should see that enough support is provided in terms of manpower, money and material for disseminating information about Evidence Based Nursing Practice.

Nursing Research

Nursing Research is the most required field to be developed and it is only through research that nurses can prove their proficiency in the field of education, practice and administration in healthcare aspects.

Research can help in increasing the body of nursing knowledge which improve the care provided.

- The study will be a reference for research scholars.
- There is a need for advanced research for improving the nursing services.
- Various methods can be used to strengthen the knowledge of the people by the researcher, which should be published for the benefit of those who are not able to participate in the studies.

Use of research findings should become the part of quality assurance as evaluation to individual performance as a whole.

Delimitations

The research will be confined to nursing staffs;

- Who are working in selected hospital.
- Who are likely to participate in the study.

Recommendations

On the basis of the findings of the study, it is recommended that:

- A similar study may be replicated with a larger population.
- A comparative study can be conducted to assess the level of knowledge between government and private hospitals regarding Evidence Based Nursing Practice.
- A survey to assess the knowledge, beliefs regarding Evidence Based Nursing Practice may be undertaken.
- Similar study can be done to assess the knowledge, attitude and practice of Evidence Based Nursing Practice among staff nurses.
- Similar study can be done to assess the effectiveness of Self Instructional Module on knowledge, regarding Evidence Based Nursing Practice among staff nurses.
- Studies may be conducted to assess the knowledge on Evidence Based Nursing Practice. Structured Teaching programs may be conducted in different groups of staff nurses on Evidence Based Nursing Practice.

Conclusions

The purpose of the study was to assess the effectiveness of Self Instructional Module (SIM) on knowledge regarding Evidence Based Nursing Practice among staff nurses working in selected hospital at Jaipur city.

The whole study was cost effective, simple and carried out in an acceptable way to assess the level of knowledge on Evidence Based Nursing Practice among staff nurses. The result shows that the staff nurses had inadequate knowledge regarding Evidence Based Nursing Practice; hence the researcher felt the need to develop a SIM to enhance the knowledge for Evidence Based Nursing Practice.

Summary

This chapter dealt with a brief summary of the study undertaken including the discussion, summary, major findings, and conclusion from the findings, implications of the study, limitations and recommendations for future research in this field.

References

1. Kathuria Omkumari, "Evidence Based Nursing Practice", *Nursing Journal of India*, Nov 2003 94(11) 251-252, <http://www.onlinelibrary.wiley.com/pubmed/15318846>.
2. Nightingale F. *Notes on nursing what it is and is not*. London Churchill Livingstone, 1946. (First published in 1859), centre for Evidence Based Medicine, TORONTO.
3. Johns Hopkins Nursing, *Evidence Based Practice, Model and Guidelines*.
4. Thilagavathi K, Rajeswari Vaidyanathan. Evidence based nursing practice. *Nightingale Nursing Times* 2009 Nov;5(8):48-50.
5. Umapathi M. Evidence based nursing practice, *Nightingale Nursing Times* 2009 Sept;5(6):7-8,57-58.
6. Santha C N J. Barriers to research utilization and evidence based practice. *Nightingale Nursing Times* 2009 Oct; 5(7):42-44.
7. Suzanne C. Beyea & Mary Jo Slattery, "A Guide to Successful Implementation" published by HCPro. Inc., 2006 Page No. 5- 10.

8. Shirey M R Evidence Based Practice : how nurse leaders can facilitate innovation., *Nursing Administration Quarterly* 2006 July – Sept. 30 (3):252-265, <http://www.ncbi.nlm.nih.gov/pubmed/16878011>.
9. Carole A. Estabrooks, will Evidence-Based Nursing Practice: Make Practice Perfect?, *Canadian Journal of Nursing Research*, 1998,vol.30,No. 1,15-36.
10. Evidence –based nursing. Available from URL:<http://en.wikipedia.org/wiki>.
11. Ngozi Oguejiofo “what are the benefits of evidence based practice in nursing” [http://www.ehow.com/about_5552775_benefits_evidence based-practice-nursing.html](http://www.ehow.com/about_5552775_benefits_evidence_based-practice-nursing.html).
12. Youngblut JM, Brooten D, Evidence-based nursing practice: why is it important? 2001 Nov; 12(4):468-476, <http://www.ncbi.nlm.nih.gov/pubmed/11759419>.
13. Lewis, Heitkemper, Dirksen, O’Brien, Bucher “Medical Surgical Nursing” 7th edition 2011, U.S.A published by Elsevier India Pvt.Ltd., Page No. 6 – 8.
14. Suzanne C. Smeltzer, Brenda Bare “Text book of Medical Surgical Nursing”, Lippincott Williams and Wilkins publications, 10th Edition, page no: 15.
15. Basavantappa BT, *Nursing Research*, second edition ,New Delhi: Jay Pee Brothers, medical publishers pvt.ltd; 2007 pg no 164-165.
16. B.T. Basavanthappa, *Review of Literature, Nursing Research*, 2nd edition, Jaypee publications ,New Delhi 2007, page no.93.
17. Suresh K Sharma, *Nursing Research \$ Statistics*, ELSEVIER 2005, Reprinted 2011, Published by Elsevier, a division of Reed Elsevier India Private Limited, page no: 71.
18. Caroline E. Brown, Mary A. Wickline, Laurie Ecoff, Dale Glaser, “Nursing Practice, Knowledge, Attitudes and Perceived Barriers to Evidence Based Practice at an Academic Medical Center, California”, *The Journal of Advance Nursing* 2009 Feb;65(2):371-81.Epub2008Nov27, <http://www.ncbi.nlm.nih.gov/pubmed/19040688>.
19. Mary L. Koehn & Karen Lehman “Nurses” perception of evidence based nursing practice. *Journal of Advanced Nursing*, 62:209-215, <http://www.ncbi.nlm.nih.gov/pubmed/18394033>.

20. Veeramah V., "Utilization of research findings by graduate nurses and midwives", *Journal of Advanced Nursing* July 2004 volume 47 issue 2, pages 183-191, <http://www.onlinelibrary.wiley.com/pubmed/15196192>.
21. Thiel L. Ghosh Y., "Determining registered nurses' readiness for evidence based practice", *Worldviews Evidence Based Nursing Practice*, 2008.5(4) Page No. 182- 192, <http://www.ncbi.nlm.nih.gov/pubmed/19076919>.
22. Ozdemir L. Akdemir N, "Turkish nurses' utilization of research of research evidence in clinical practice and influencing factors", *Int Nurs Rev*; 2009 Sept; 56(3): 319- 325, <http://www.ncbi.nlm.nih.gov/pubmed/19702805>.
23. Rosaline A. Olade, "Evidence-Based Practice and Research Utilization Activities Among Rural Nurses", *Journal of Nursing Scholarship*, 2 Sep. 2004, <http://onlinelibrary.wiley.com/doi/10.1111/j.1547-5069.2004.04041.x/abstract>.
24. Nadia Zarb, "Clinical Nurses' Knowledge of Evidence-Based Practice: Constructing a framework to evaluate a multifaceted intervention for implementing EBP", <http://www.contemporarynurse.com/archives/vol/19/issue/1-2/article/2113/clinical-nurses-knowledge-of-evidence-based>.
25. Majid Shaheen , Brenden Luyt, Xue Zhang, Yin- Leng Theng, Yun-ke Chang, Intan A Mokhtar , Adopting evidence-based practice in clinical decision making: nurses' perceptions, knowledge, and barriers, *JMA (Journal of the Medical Library Association)* 2011 July; 99 (3): 229-236 doi: 10.3163/1536-5050.99.3.010, PMID: pmc 33901.
26. Melynck, Bernadette Mazureck, Fineout Overholt, Ellen, Stillwell, Susan B, Williamson, Kathleen M, Evidence Based Nursing Practice: step by step: The seven steps of Evidence Based Practice, *AJN, American Journal of Nursing*: January 2010- volume 110-issue 1-pp 51-53, doi:10.1097/01.NAJ.0000366056.06605.d2.
27. Pravikoff, Diane S, Tanner, Annele B, Pierce, Susan T, Readiness of U.S. Nurses for Evidence Based Practice, *AJN, American Journal of Nursing*: September 2005- volume 105-issue 9- pp 40-51 <http://journals.lww.com/ajnonline/ABSTRACT/2005>.

28. Mokhtar IA, Majid S, Foo S, Zhang X, Theng YL, Chang YK, Luyt B. Evidence Based Practice and related information literacy skills of nurses, Nanyang Technological University Singapore. intanazura.mokhtar@nie.edu.sg. Pubmed:22447874.
29. Karen L. Sherriff, Marianne Wallis, Wendy Chaboyer, "Nurses" attitudes to and perception of knowledge and skills regarding evidence based practice", *International Journal of Nursing Practice*, 15 November 2007 volume 13 issue 6 pages 363- 369, <http://www.ncbi.nlm.nih.gov/pubmed/18021165>.
30. Varnell G. Hass B, Duke G, Hudson K, "Effect of an educational intervention on attitudes toward and implementation of evidence based practice", *Worldviews Evidence Based Nursing*, 2008.5(4): Page No. 172-181, <http://www.ncbi.nlm.nih.gov/pubmed/19076918>.
31. Mathew Effectiveness of SIM on knowledge regarding Chest Tube Drainage among staff nurses with different selected hospitals in Mangalore, *Journal of Continuing Education* 1993: 23(5): 8 – 11.
32. Fairoza M A, a study to evaluate the effectiveness of Self Instructional Module on selected drugs used in used in critical care units for the staff nurses, Dissertation, Bangalore-2004.
33. Tulsi T Vasundhara, The effectiveness of Self Instructional Module on self care practices of renal transplant patients, *The Indian Journal of Nursing and Midwifery*, 1999.
34. Kothari C.R. *Research Methodology Methods and Techniques*, 2nd edition, New Delhi, New age international publishers; 2004. March; 1(2); 21-24.
35. Polit WF, Hungler B.P. *Nursing Research Principle and Methods*, 2nd edition, Philadelphia, JB Lippincot co., 1999.
36. Treece Elanoor Mae Walters, Treece William James, *Elements of Research in Nursing* 4th edition, USA, Mosby; 1986.
37. Basavantappa BT, *Nursing Research*, second edition, New Delhi: Jay Pee Brothers, medical publishers pvt.ltd; 2007, pg no:147-59.
38. Basavantappa BT, *Nursing Research*, second edition, New Delhi: Jay Pee Brothers, medical publishers pvt.ltd; 2007 pg no 364-365
39. Nieswiadomy Mary Rose, *Foundations of Nursing Research* 5th edition, Published by Dorling Kindersle (India) Pvt.Ltd.

40. Polit Denice F, Hungler Bernadette P, Nursing Research Principles and Methods, 6th edition, Philadelphia: Lippincott, Williams & Wilkinsons; 1995.
41. Nursing Standard, April 15 ::volume 23 no 32::2009.

