A STUDY TO ASSESS THE EFFECTIVENESS OF EVIDENCE BASED COMMUNICATION PRACTICE ON CLINICAL OUTCOME AMONG NURSING PERSONNEL AT SELECTED INSTITUTION.

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DECLARATION OF THE CANDIDATES

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ABSTRACT

This study examines the effectiveness of evidence based communication that is ISBAR framework, endorsed by the world health organization, to enhance communication among health care providers. Effective communication is crucial for patient safety and outcomes. The present study was an attempt to assess the effectiveness of evidence based communication practice on clinical outcome among nursing personnel at selected institution.

Using a pre -experimental one group pre-test post- test design, the study involved 30 nursing personnel from selected institution. Data collection included demographic information and ISBAR awareness through structured questionnaires, observation checklists for clinical outcomes and likert scale for attitude and experience of evidence based communication practice. The analysis revealed no significant correlation between demographic variables and communication awareness. While some clinical outcomes showed improvement post – implementation, further observations are needed for a comprehensive understanding. Participants expressed favourability towards utilizing the ISBAR method.

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CHAPTER I
INTRODUCTION

"Any communication designed to increase the self-worth of the client or alleviate psychological distress implies unconditional positive regard for the client from the nurse and is done in a caring, concerned, and empathic manner"

-Bradley & Edinberg -

To protect patients and improve patient outcomes, healthcare providers must communicate effectively with one another. The requirement for clear, concise, and structured communication is even more obvious in healthcare settings when quick judgements and intricate information exchanges are frequent occurrences. The communication technique known as ISBAR (Introduction, Situation, Background, Assessment, Recommendations) has been acknowledged as an effective framework for enhancing communication and encouraging uniform Information transmission.

According to the Institute of Medicine's Preventing Medication Errors report, the average hospitalized patient is subject to at least one medication error per day. This confirms previous research findings that medication errors represent the most common patient safety error. More than 40 percent of medication errors are believed to result from inadequate reconciliation in handoffs during admission, transfer, and discharge of patients. Of these errors, about 20 percent are believed to result in harm. Many of these errors would be averted if medication reconciliation processes were in place.[1]

The military and aviation Industries were the first to design the ISBAR tool, which has proven to be successful in facilitating effective communication in pressing circumstances. Since then, it has been modified and is frequently used in hospitals to enhance communication among medical staff members, including doctors, nurses, and other team members. The ISBAR technology offers a way for doctors to exchange crucial patient data, guaranteeing communication's correctness and thoroughness. This study's goal is to determine how the introduction of the ISBAR tool has affected various facets of healthcare

delivery. This study aims to improve communication practices and eventually the caliber of healthcare delivery by studying the efficacy and obstacles to the usage of ISBAR communication tools. Patient safety, medical error reduction, and clinical results are all correlated with effective communication. This study aims to evaluate whether usage of the ISBAR tool results in measurable improvements in patient care and safety by investigating the relationship between ISBAR implementation and patient outcomes. To evaluate effectiveness and pinpoint areas for improvement, it is essential to comprehend the healthcare practitioners' experiences with ISBAR implementation. This study analyses the thoughts, attitudes, and experiences of healthcare professionals with the ISBAR communication tool using surveys, interviews, or focus group discussions, revealing important details about its applicability and acceptance among healthcare professionals. This study also intends to investigate how ISBAR affects interdisciplinary cooperation. Effective interdisciplinary teamwork in healthcare is necessary to deliver all-encompassing care that is coordinated. The ISBAR tool's standardized format can help in communication between various medical specialties, boost teamwork, and encourage a common understanding of the patient's condition.

A systematic search of seven electronic databases was conducted, and retrieved articles were assessed by two independent reviewers. The quality of included studies was assessed using the Mixed Methods Appraisal Tool. Eight studies met the inclusion criteria. The findings of this review indicate that improvements in handover communication had a clinically important positive effect on patient outcomes. Across the studies, reductions in falls varied from 9.3 to 80%, pressure injuries from 45 to 75%, and medication errors from 11.1 to greater than 50%. This review highlights that the implementation of bedside nursing handover and the adoption of standardized handover tools to improve nursing handover communication reduce patient adverse events, specifically falls, pressure injuries, and medication errors. These findings should be considered by clinicians to inform their clinical handover practice.[2]

In order to determine whether ISBAR's adoption enhances collaboration and interprofessional communication, this study will investigate the experiences of interdisciplinary healthcare teams using it. The impact of ISBAR implementation on

organizational processes will also be examined in this study. Workflows can be streamlined and improved through organized communication, which also supports effective healthcare operations. This research intends to discover any potential improvements or obstacles related with the adoption of ISBAR at an organizational level by assessing the impact of ISBAR on organizational processes, such as information flow, handoff procedures, and documentation practices.

In conclusion, this study aims to examine the effects of using the ISBAR communication tool on patient outcomes, healthcare professionals' views, interdisciplinary cooperation, and organizational processes. This study intends to improve communication practices in healthcare settings and ultimately improve the quality of medical care and patient safety by examining the benefits and drawbacks of adopting ISBAR.

NEED OF THE STUDY

Lack of evidence-based communication techniques can have serious and far-reaching effects on the healthcare system. Patients may be given false or partial information regarding their medical illnesses, therapies, or drugs in the absence of a solid evidence base to guide communication. This may result in improper management of health problems, ineffective or delayed therapies, and potentially bad health outcomes. Whether made by individuals or healthcare practitioners, healthcare decisions should be supported by best practices and scientific research. Decisions may become spontaneous or affected by personal experiences without this evidence-based foundation in communication, lowering the standard of care and possibly endangering patient safety. Further, trust is crucial in the healthcare industry. Patients count on their healthcare professionals to offer reliable information. Trust between patients and healthcare providers can be damaged if evidence-based communication techniques are ignored. This can lead to patient discontent, non-compliance with treatment regimens, and even medical malpractice claims. Data and evidence are also used by the healthcare system to guide policy, distribute resources, and improve patient care. The system's ability to respond to public health emergencies, allocate resources effectively, and make evidence-based policy decisions may be hampered by ineffective communication of this data. In the healthcare system, evidence-based communication techniques can literally

mean the difference between life and death. Patient outcomes, healthcare workers' trust, and overall efficacy suffer when these practices are not followed.

In nursing, the definition of a clinical handover is narrowed down to the process of transferring information about a patient's condition and the responsibility of patient care to the nursing staff of another shift. It is recognized as a key component of clinical practice and is the most frequent and vital communication process occurring between nurses in the management of patient care (Eggins and Slade, 2015) [3]

Building relationships with patients requires efficient communication, which is essential for providing nursing care that is both safe and effective. Clinical handover is "the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis"(Australian Medical Association, 2007).[4]

Nurses converse with other nurses on identical or distinct wards, as well as occasionally with doctors or other healthcare workers, during handover. Due to this complexity, a smooth turnover of patient care responsibilities within and across experts, wards, or care teams is essential to ensuring continuation of quality treatment.

According to a study in one UK general hospital which detailed the most common types of handover incidents, unstructured handover is most commonly caused by the incompletion of the transfer process, including outdated or unclear patient forms, unsigned or missing drug charts, and an absence of a clear diagnosis and care plan (Pezzolesi et al., 2010)[5],

Additionally, in terms of communication, it may be caused by inadequate explanations about patient history and procedures to be done to the patient, faulty memory of the medical staff, absence of patients involvement, and more (Eggins and Slade, 2015).[6]At the very least, these problems frequently cause complaints and could even cause patient death.

As a result, creating good communication in healthcare practice has turned into a global policy requirement. The necessity of continuously enhancing handover quality cannot be overstated given the pervasiveness of handover errors worldwide and the potential harm they can cause to patients. The ISBAR handover tool is especially useful in healthcare settings with high demands on time, such emergency rooms and intensive care units. It helps to avoid

essential information being missed or forgotten when handovers by using an organized approach, which can have detrimental effects on patient safety. By encouraging a standardized communication procedure, the implementation of ISBAR lowers the possibility of crucial patient data being miscommunicated or misinterpreted.

Effective communication is a key element of patient-centered care, and the ISBAR handover encourages the transmission of clear, succinct information. It enables medical practitioners to convey important patient information in a logical and structured way, ensuring that the recipient has all the knowledge required to make educated decisions and deliver suitable care.

Additionally, teamwork and interprofessional communication can be facilitated by the ISBAR handover. It makes it possible for medical professionals from various specialties, such doctors, nurses, and allied health professionals, to communicate efficiently and function as an effective team. This cooperative strategy improves treatment continuity and aids in preventing fragmented or inconsistent healthcare delivery. To ensure the ISBAR handover tool is used effectively, training and education are essential. Healthcare organizations might offer workshops, simulations, or other educational opportunities to staff to help familiarize and promote consistent use of the ISBAR framework. In addition to enhancing communication, using ISBAR to standardize the handover procedure encourages a culture of patient safety and quality improvement inside healthcare organizations. Although ISBAR is a well-known and commonly used communication tool, the framework may be altered or modified according to regional or organizational regulations. Healthcare practitioners should be aware of any unique rules or adjustments linked to the implementation of ISBAR in their particular healthcare settings. Therefore, it was decided that there was a need to asses nursing staff member's knowledge, behavior and attitude towards evidence-based communication practices in order to determine how effective they are in improving patient outcomes

BACKGROUND OF THE STUDY

Clinical handover is defined as "The exchange between health professionals of information about a patient accompanying either a transfer of control over, or of responsibility for, the patient".[7]

Phases in a patient's journey and is an essential skill that needs to be taught to students studying to become health professionals and younger clinicians. In a hospital or community environment, a clinical handover done properly should guarantee that gaps in maintaining the continuity of patient treatment, mistakes, and injury are minimized. Enhancing the efficacy of the recipients' actions is the primary goal of clinical handover. Clinical handoffs are frequently done badly, despite their importance, which could have catastrophic effects for the patient.

Australian research suggests that critical detail is often omitted during handover, and included information is sometimes irrelevant . Although essential to safe medical practice and provision of excellence in patient care , training in clinical handover is often inadequate and not always included in university healthcare curricula . Using ISBAR as a framework, the purpose of this paper is to highlight key elements of effective clinical handover, and to explore teaching techniques that aim to ensure the framework is embedded in practice effectively. The perceived quality of handover was found to be directly connected with the understanding of the patient care plan and the level of up-to-date information about the patient that they received. In addition, up-to date information was positively and significantly associated with the understanding of the patient care plan.

However, no significant association was found between participants' knowledge of the ISBAR protocol and the perceived quality of handover. The bivariate correlations between the factors shown In the hypothesized model. Except for the knowledge of the ISBAR protocol, all variables were significantly correlated with each other. Specifically, understanding of the patient care plan was significantly correlated with the perceived quality of handover and up-to-date information that nurses received during the handover [8]

According to Perianesth Nurse Epub 2021 Nov 18 shows that RNs were more prepared to receive the patient (from 84% to 95%), read the patient records more frequently (from 18% to 54%), and were assigned to patients from the start of the day (from 86% to 100%). The content of the oral handover was more structured using the ISBAR, and handovers became more concentrated and undisturbed (from 12% to 86%). At baseline, certified registered nurse anesthetists were more satisfied with the handover than RNs (38% difference).[9]

STATEMENT

A study to assess the effectiveness of evidence based communication practice on Clinical outcomes among nursing personnel at Selected institution

OBJECTIVES

1. To evaluate effectiveness of evidence based communication practice
2. To measure awareness, practice and experience of nursing personnel towards evidence based communication practice
3. To associate selected demographic variables with Evidence based communication awareness

VARIABLES

DEPENDENT VARIABLE: - Patient outcome

INDEPENDANT VARIABLE: -Evidence based communication practice.

HYPOTHESIS

H_1: There is a significant relationship between demographic variables and evidence based communication awareness

H_0: There is no significant relationship between demographic variables and evidence based communication awareness

ASSUMPTIONS

1. Nurses have basic knowledge about the importance of effective communication in patient care.
2. The implementation of evidence-based communication practices is feasible within the hospital's available resources.
3. Enhancing communication practices is expected to have a positive impact on patient outcomes.

OPERATIONAL DEFINITION

EVIDENCE BASEDCOMMUNICATION PRACTICE

LinkedIn defines it as "Evidence-based communication practices are methods and strategies that are informed by reliable and valid research findings. They can help you communicate more effectively, persuasively, and ethically in various contexts and situations".[10]

In our study it refers to "the utilization of the ISBAR framework as a structured and standardized approach to communication among nursing personnel at selected institution "

CLINICAL OUTCOMES

Great Ormond Street Hospital for Children defines it as "Clinical outcomes are broadly agreed, measurable changes in health or quality of life that result from our care. They are primarily measures of treatment effectiveness. However, clinical outcomes may also comprise other elements that can impact treatment effectiveness, such as safety and efficiency".[11]

In our study it refers to the "Measurable changes in patient health status and health care processes resulting from the implementation of evidence based communication practice. Some of the clinical outcomes are:

- Time management
- Reduction in medication error
- Patient feedback

NURSING PERSONNEL

WHO defines it as “Persons who have completed a programme of basic nursing education and are qualified and registered or authorized to provide responsible and competent service for the promotion of health, prevention of illness, care of the sick, and rehabilitation, and are actually working in the country”.[12]

In our study it refers to registered nurses, licensed practical nurses, student nurses involved in direct patient care at selected institution.

DELIMITATIONS OF THE STUDY

- The study is delimited to nursing personnel in a selected hospital setting. This excludes nurses from other hospital units and locations.
- The research exclusively involves nurses engaged in direct patient care, working shift based and doing patient handover excluding other healthcare professionals, such as doctors or support staff.
- The study focuses on the effectiveness of ISBAR as a communication tool, which means other communication methods used in healthcare settings are not considered
- The research is constrained by a limited time frame of two weeks, which may affect the depth and breadth of data collection and analysis.
- The study is designed for a short-term evaluation of the impact of the ISBAR awareness class. Long-term effects and sustainability of improved communication skills among nursing personnel may not be fully addressed due to the relatively brief duration of the research.

ETHICAL CONSIDERATIONS

- Institutional ethical clearance committee approval obtained prior to data collection Permission from selected hospital authority obtained.

- Consent was obtained from the nursing superintendent, demonstrating institutional support and ensuring that the research aligns with the policies and practices of the nursing department.
- Permission was obtained from the principal of the nursing college, indicating institutional support for the research endeavor.
- The research tool's content validity was verified by relevant authorities, and the tool's overall validity was endorsed by the hospital authority, ensuring the quality and appropriateness of the instrument used.
- The research was designed not to disrupt the normal routine of the hospital, allowing for an observational approach without interfering with patient care
- The study obtained consent from nursing personnel, and participation was entirely voluntary, respecting their choice to participate without the requirement of written consent.
- Nursing personnel retained the right to withdraw from the study at any stage without having to provide an explanation to the investigators, upholding their autonomy and comfort.
- Participants were provided with the opportunity to question and seek clarification about any aspects of the research tool or the study, ensuring their comprehension and comfort with the process.

CONCEPTUAL FRAMEWORK

"A well-constructed conceptual framework is the bridge that connects theory to practice."

– Mary Williams

"The conceptual framework assembles interrelated concepts in a rational scheme, chosen for their relevance to the methodology. This study's conceptual model is based on the 'Ideational Model of Communication,' providing a foundation for understanding and analyzing communication processes." Ideation refers to how new ways of thinking (or new behaviors) are diffused through a community by means of communication and social interaction among

individuals and groups. Behavior is influenced by multiple social and psychological factors, as well as skills and environmental conditions that facilitate behaviour. In the ideational model of communication (below), instructive communication can teach the skills and knowledge needed to perform an action, in our study the instructions based on effectiveness assessment, nursing personnel attitudes and Observation of clinical outcomes are done. Directive (one-way influence) and nondirective (entertainment, counselling and interpersonal) communication can affect ideational factors and public communication (such as advocacy) can affect environmental factors. In our study the directive is session on evidence based communication practice (ISBAR Protocol) and non-directive (awareness, staff to staff learning, through sample: the nursing personnel) and the public communication(such as policy changes) can affect environmental factors. The model emphasizes how communication affects the intermediate outcomes that in turn determine behavior change.[13]

Ideational factors are grouped into three categories: cognitive, emotional and social. Cognitive factors address an individual's beliefs, values and attitudes (such as risk perceptions), as well as how an individual perceives what others think should be done (subjective norms), what the individual thinks others are actually doing (social norms) and how the individual thinks about him/herself (selfimage).Emotional factors include how an individual feels about the new behaviour (positive or negative) as well as how confident a person feels that they can perform the behaviour (self-efficacy). social factors consist of interpersonal interactions (such as support or pressure from friends) that convince someone to behave in a certain way, as well as the effect on an individual's behaviour from trying to persuade others to adopt the behavior as well (personal advocacy).[13]

The three categories that are grouped in our study is the cognitive factors (Demographic data, observational checklist), Emotional factor (rating scale) and the social factor (structured questionnaire). The skills and knowledge needed for the study got from review of literature and from ethical presentation. The environment taken for the study is the selected setting (support and constraint).

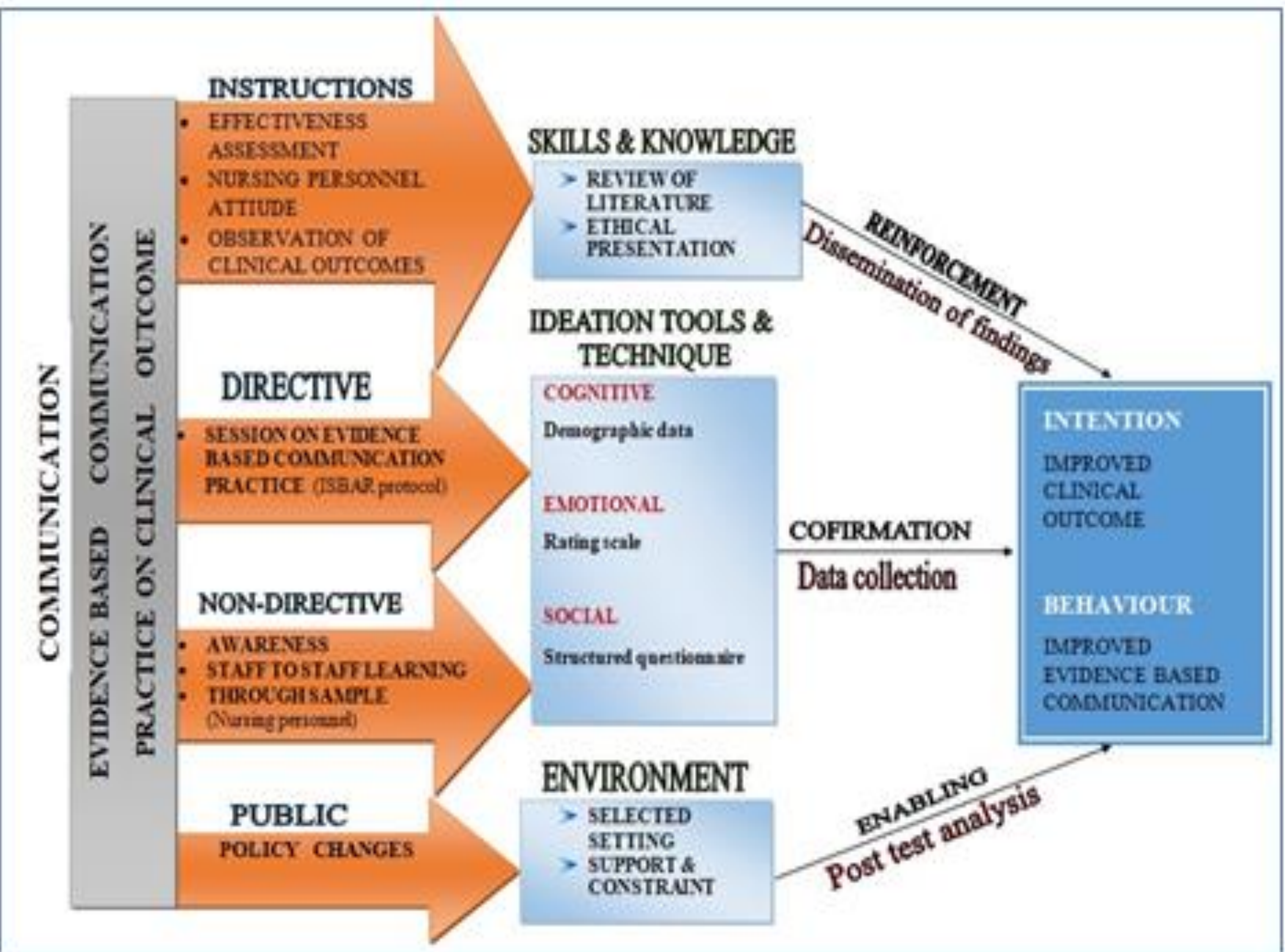

FIG 1.1 CONCEPTUAL FRAMEWORK BASED ON IDEATIONAL MODEL OF COMMUNICATION

CHAPTER II

REVIEW OF LITERATURE

"Those who fail to read history are destined to suffer repetition of its mistake."

-Winston Churchill

Review of literature is one of the most important steps in the research process. It is an account of what is already known about a particular phenomenon. "A literature review is a body of text that aims to review the critical points of knowledge on a particular topic of research" (ANA, 2000)

The main purpose of literature review is to convey to the readers about the work already done and the knowledge and ideas that have been already established in a particular topic of research. A literature review is an account of the previous efforts and achievements of scholars and researchers on a phenomenon. Actually, it is a piece of discursive prose, and not a list describing or summarizing one piece of literature after another.

Literature review is a laborious task, but it is essential if the research process is to be successful. Research studies are usually undertaken within the context of an existing knowledge base, because research can't be conducted in a intellectual vacuum. Before starting a research, a literature review of previous studies and experiences related to the proposed investigation has to be done. One of the most satisfying aspects of the literature review is the contribution it makes to new knowledge, insight, and general scholarship of the researches. Nursing research may be considered as a continuing process in which knowledge gained from earlier studies is an integral part of research in general.

In conclusion a review if literature is a description and analysis of the literature relevant to a particular field or topic. It provides an overview of what work already has been carried out, who are the key researchers who did that work, which of the questions are already answered regarding a particular area of research interest, what methods and methodologies were used to answer the particular questions and what are the prevailing theories and hypotheses.[14]

The review in this study is divided into following sections:
a)Literature review related to effectiveness of ISBAR communication technique
b)Literature review related to effective communication among staff nurses at clinical settings

TABLE 2.1 REVIEW OF LITERATURE TABLE

SN	AUTHOR (YEAR) TYPE OF STUDY	SAMPLE & SAMPLING	TOOL, TECHNIQUE & TEST	RESULT
1	Jack Pun et. al (2013) ➢ Descriptive Survey	206 Nursing staff from a local hospital in Hongkong selected by convenient sampling technique.	❖ Questionnaire ❖ Chi-square test	The path analysis revealed that except the opportunity to ask questions and high perceptions of the ISBAR communication protocol, other factors were significantly correlated with improved quality of handover. In addition, nurses who had updated information were likely to ask more questions and obtain a better understanding of the patient care plan during handover.
2	SeyedehAlmas, FahimYegane (2016) ➢ Clinical audit	EMS staff and EMAs for 178 trauma patients at Imam Hossein Hospital, Iran selected by convenient sampling	❖ Lecture ❖ Frequency and percentage	Clinical audit of the current situation in the ED showed that the clinical handover process does not follow standard ISBAR However, after training, 65.3% of clinical handover processes were performed in accordance with ISBAR. In the current study, there was an increase in all parameters of the ISBAR tool after training, most of which increased significantly compared to the first phase of the study (before the intervention).

3	KR Stewart, Kelli A Hand(2017) ➢ Empirical study	26 articles	❖ Integrated literature review	Utilization of SBAR a) creates a common language for communication of key patient care information. b) increases the confidence of the speaker and the receiver of the handoff report. c) improves the efficiency, efficacy, and accuracy of the handoff report. d) Improves the perception of effective communication between healthcare staff and promotes a culture of patient safety in healthcare organizations.
4	Ancy J Spooner (2017) ➢ Focus group study	17 senior nurses in a medical surgical icu in Australia	❖ Questionnaire ❖ Nominal group technique ❖ Frequencies and percentage method	The result suggest that a minimum dataset for intensive care nursing team leader shift-to-shift handover should contain items within ISBAR along with unit and patient specific information to maintain continuity of care and patient safety across shift changes.
5	Baghai R, Khoshond Shabastari M (2018) ➢ Quasi experimental study	64 nursing staff working in Razi psychiatric 2018 who selected by random sampling	❖ Questionnaire ❖ Frequencies and percentage method. ❖ T-test	The result showed after the training, the lowest average score was in the second phase and highest score was in 4 the phase . Comparing the performance of nurse in special c are departments before and after shift reporting training using ISBAR tool showed statistically significant difference.

6	Martin Muller, Jonas Jurgens,Karsten Winberg,Wolf.E. Hautz (2018) ➢ Systematic review	Nurses and physicians of primary and secondary nursing homes	❖ Questionnaire ❖ Frequencies and percentage method.	In total, 26 different patient outcomes were measured, of which eight were reported to be significantly improved. Eleven were described as improved but no further statistical tests were reported, and six outcomes did not change significantly. Only one study reported a descriptive reduction in patient outcomes.
7	Lia Chew, Selvi Ramakrishnan, Sazelin Binti, AbuBakr (2019) ➢ Cross Sectional Descriptive Study	70 nurses at King Fahad Tertiary Hospital, Dammam, Saudi Arabia selected by convenient sampling technique	❖ Questionnaire ❖ Descriptive analysis ❖ Chi Square	The overall perception mean score achieved was 38.64±1.455 and compliance score was 7.73±0.588. This showed nurses had good perception and compliance on ISBAR tools and none of them had poor perception and compliance regarding the same. There was statistically significant relationship (P=0.001) between perception and compliance on ISBAR tools.

8	Agnette Kaltoft,Yth Inga Jacobson (2021) ➢ Qualitative study	50 Certified registered nurse anaesthetist's and registered nurses (RNs) from postanaesthesia care unit	❖ Questionnaire survey ❖ Frequency and percentage method	Results showed that from baseline to follow-up, RNs were more prepared to receive the patient (from 84% to 95%), read the patient records more frequently (from 18% to 54%), and were assigned to patients from the start of the day (from 86% to 100%). The content of the oral handover was more structured using the ISBAR, and handovers became more concentrated and undisturbed (from 12% to 86%). At baseline, certified registered nurse anaesthetist's were more satisfied with the handover than RNs (38% difference). At the follow-up, there was no discrepancy between the two groups..
9	Jaslina Gnanarani (2022) ➢ Experimental study	98 Bsc Nursing Interns of Apollo College of Nursing, Chennai selected by enumerative sample technique	❖ Questionnaire ❖ Frequency and percentage method ❖ Co-efficient Co-relation	Majority of interns had adequate competence in the post intervention (46.9%) after providing education regarding ISBAR protocol. There is a statistically significant correlation between the previous academic performance and their handover competence. Abou t two third of nurse interns (65.317%) had high level of acceptability towards ISBAR Protocol .
10	Solari E, Sonani L, Ramlet A.S, Schneider A.G (2022) ➢ Observational study	99 nurses form University hospital in French speaking area of Switzerland	❖ Observation ❖ Pre-designed analysis grid	During nurse initiated calls the quality of ISBAR utilization to communicate about patient clinical status changes was poor and found that ISBAR quality was influenced by nurses age and IC U expertise and also found that teaching at the pregraduate level was associated with higher quality score while learning simulation and traditional lectures were not.

11	Kato, H., Clouser, J. M., Talari, P., (2022) ➢ Qualitative study	19 medical unit nurses across two hospitals in one academic medical center in the United States selected by convenience sampling	❖ Questionnaire ❖ Qualitative content analysis ❖ Thematic Analysis	Whilst the handover performed from shift-to-shift is a valuable communication strategy, ambiguities and incomplete information can increase the risks of adverse events. Given the importance of effective communication, its key link to patient safety and the frequency of nursing handover, it is imperative that clinical handover undergo increased scrutiny, development and research.
12	Anat Drach-Zahavy, & Nadim Hadid(2015). ➢ Prospective study	200 randomly selected handovers in five internal wards.	❖ Questionnaire ❖ negative binomial regression analysis	On average, in nearly 1/5 of the patient's files, medication dosage given was inaccurate; in nearly one-third a care order was fulfilled late; and in nearly half, documentation was partially missing. Results of revealed that face-to-face verbal update with interactive questioning, update from practitioners other than the outgoing, topics initiated by incoming and outgoing team, including the latter's stance on care plans and writing a summary prior to handover, were significantly and negatively linked to number of treatment errors ($P < 0{\cdot}05$).

13	Behrouz Pakcheshm (2017) ➢ Quasi experimental study	24 Nurses in 2 coronary care units at Afshar hospital at Yazd	❖ Questionnaire ❖ Frequency and percentage ❖ T-test	Before intervention, frequency of providing information during clinical handoffs was reported as: patient identify 86.9% current position 75.1% clinical history 52.8% system status review 59.9% &recommendations 92.9%. The indexes significantly increased p<0.001 after interventions: Patient identify 100% current situation 94% story 80.1% system status review 92.2% and recommendations 100%
14	Orly Toren,Michal Lipschuetz,Arielle Lehmann,Gil Rege, Dana Arad (2017 ➢ National intervention project	87 process implementers from 17 Israeli general hospital	❖ Questionnaire ❖ Frequency and percentage	Nurses reported higher satisfaction (0.036), Samples with perceived less missing information during handoffs were more satisfied with this process of information flow between wards(84.9%) than perceived more missing information (15.6%) participants who responded that there was no need to improve information flow were more satisfied with the project information flow (95.6%). Compare d to group which responded that it was necessary to improve information flow (58.2%)
15	Adriana Hada,Fiona Coyer (2019) ➢ Focus group study	173 nursing staff of Medical ward at Major tertiary hospital in Australia selected by convenient sampling method	❖ Focus group discussion ❖ Inductive content analysis	Improvements in handover communication findings had a clinically positive effect on patient outcomes. Reduction in fall varied from 9.3-80%, pressure injuries from 45-50% and medication errors from 11.1>50%.The implementation of bedside nursing handover and the adoption of standardised handover tools to improve nursing handover communication reduce patient adverse events.

16	Xialoing Wong, Yi Jung Tung, Sin Yee Peck, Mein Li God (2019) ➢ Practice implementation project	Three adult surgical wards of a tertiary hospital, at Joanna Briggs Institute.	❖ Audit ❖ Frequency and percentage	The results (n=33) showed that handovers using standardized documentation improved from 0-21.0% (p = 0.005), which was significant. Handovers of detailed observations of patients improved from 72.7-87.9% (p=0.215) and handovers of relevant history of patients improved slightly from 93.9-97.0% (p=1.0) but was not significant. Medication error incidents related to handovers was reduced by 72% over a 6-month period.

17	Catherine Amber Welsh,Flanagan M.E. & Patricia Ebright. (2010) ➢ Qualitative descriptive pilot study	20 Nurses	❖ Interview ❖ Thematic Analysis	Inadequate information, inconsistent quality, limited opportunity to ask questions, equipment malfunction, insufficient time to generate reports, and interruptions, limited handoffs. Facilitators were “pertinent” content, notes and space for notes, face-to-face interaction, and structured form/checklist. Recommendations for redesign are defining content pertinent to the unit, structuring handoffs so that information is received in a standard way, embedding an opportunity for questions into the process, planning for all 3 handoff subprocesses, and conducting peer evaluations and education

18	Lee V Jones, Leanne C Jack (2021) ➢ Quasi experimental study	88 nurses and 110 patients in four internal medicine wards in a major tertiary hospital	❖ Observation ❖ Frequency and percentages	The patient adverse outcomes after the intervention were compared to the corresponding period of previous year. A reduction was observed for all adverse patient outcomes with incident rate ratios of 0.762 ($p = 0.027$) for falls, 0.624 for pressure injuries ($p = 0.010$), and 0.782 for medication errors ($p = 0.023$). Replicating this study's methodology across multiple clinical settings will increase the generalizability of findings and provide further evidence to inform nursing practice and policy.
19	Piper, D., Lea, J., Woods, C., & Parker, V. (2018) ➢ Cross sectional online survey	6 rural Local Health Districts in NSW, Australia	❖ Questionnaire ❖ Hierarchical multiple linear regression analysis	The study resulted that, all models all ($p<.001$) with explanatory powers ranging from 29 to 48% within rural health patient safety perceptions. (R square is equal to 29). A strong team work culture and management support culture was found to enhance effective handover of patient information
20	Abou Hashish, Ebtsam Ali, Asiri AA &, Alnajjar Y K. (2023) ➢ Descriptive study	201 nurses working in Saudi hospital CCUs selected by convenience sampling method	❖ Questionnaire ❖ Descriptive statistics ❖ Regression analysis.	The majority of nurses reported good-quality handover. The regression analysis showed that staffing, cognitive capacity, the focus of attention, relationships, and safety climate factors contributed positively to the variance of handover quality. In contrast, intrusions, distractions, anxiety, time stress, and acute and chronic fatigue factors negatively affected the prediction of handover quality ($p < 0.05$). Nurses added types of shifts and languages as barriers to handover while emphasizing training and the use of standardized tools for handover as facilitators.

a) Literature review related to effectiveness of ISBAR communication technique:

Jack Pun (2013) conducted questionnaire survey to identify factors associated with and specific impact paths between the qualities, communication skills and nurses perception on clinical handover on nursing staff from local hospital in Hong Kong. The path analysis revealed that except the opportunity to as questions and high perceptions of the ISBAR communications protocol other factors were significantly corrected with improved quality of handover. In addition nurses who had updated information were likely to ask more questions and obtain a better understanding of the patient care plan during handover.[15]

Seyedesh Almas, Fahim Yegane (2016) conducted a clinical audit study in 3 phases in Imam Hossein Hospital. 1st phase clinical handover between EMS staff and EMAs for 178 trauma patient. Second phase, the correct approach of clinical handover according to ISBAR tool was taught to EMS and EMA using lectures. 3rd phase e again clinical handover between patients admitted to ED was audited using ISBAR tool. The study aimed to audit the current clinical handover according to ISBAR tool and survey effect of training the ISBAR tool in EMS and EMA staff on improvement of the clinical handover of patient to ED. The result showed that clinical handover process doesn't follow standard ISBAR (0.0%). However after training, 65.3% were performed in accordance with ISBAR. In current study there was an increase in all parameters of ISBAR tool after training most of which increased significantly compared to the 1st phase of the study.[16]

KR Stewart, Kelli A. Hand (2017) conducted an empirical study to analyse literature addressing the use of ISBAR framework to determine its effectiveness during patient handoff communication between healthcare providers .The combined search terms of ISBAR communication and patient safety was entered into PubMed, CINAHL complete, and Cochrane library databases to find peerreviewed, English language articles 2012-2017 that evaluated the effect of ISBAR use on patient safety and communication between health care providers .The result of empirical studies were entered in a table to identify recurring themes regarding ISBAR use and the effect on communication and patient safety. Four primary themes identified are, a)

use of ISBAR creates a common language for communication of key patient care information. b) use of ISBAR by nurse and physicians creates a shared mental.c) use of ISBAR tool to guide information exchange resulted in emphasis on situational facts over ancillary information and improvement of overall handoff communication. d) use of ISBAR increases confidence of speaker receiver of handoff report. [17]

Ancy J Spooner (2018) conducted a focus group study to identify key items to include in a minimum dataset for intensive care nursing team leader shift-to-shift handover. The study was conducted in a 21 bed medical surgical ICU in Australia.17 senior nurses participated in 3 focus group. The result shows that participants agreed that ISBAR was useful guide to clinical handovers. Items recommended to be included in minimum dataset included Identify, Situation, Background, Management and Recommendation.[18]

Baghai R, Khoshond Shabastari M (2018) conducted a quasi-experimental study with protest and posttest. Study sample consist of 64 nursing staff working in Razi psychiatric centre in Urmia 2018 who selected by random sampling. In this study drug prescription error questionnaire was used. The study was to determine the effect of ISBAR communication model training on the frequency of medication error among nurses working in Razi psychiatry center. The result showed that before and after the training, the lowest average score was in the second phase and highest score was in 4 the phase. Comparing the performance of nurse in special care departments before and after shift reporting training using ISBAR tool showed statistically significant difference and increased after intervention. It recommended that ISBAR communication model be taught to all nurses working in medical centres to prevent any medication errors from occurring.[19]

Martin Muller, Jonas Jurgens, KarstenWinberg, Wolf.E.Hautz (2018) conducted a systematic review to summarize the impact of the implementation of ISBAR on patient safety. A variety of health professionals including nurses and physicians at a wide range of setting within primary and secondary care and nursing homes. The eight studies with a before-after design and three

controlled clinical trials performed in different clinical settings met the inclusion criteria. The objective of the studies was to improve team communication patient handover and communication, in telephone calls from nurses to physicians. In total, 26 different patient outcomes were measured, of which eight were reported to be significantly improved. Only one study reported a descriptive reduction in patient outcomes.[20]

Lia Chew, Selvi Ramakrishnan, Sazelin Binti, Abu-Bakr (2019) conducted a cross-sectional oncology study in oncology unit at King Fahad Tertiary Hospital, Dammam, Saudi Arabia. Total sample size was 70. Questionnaire was the instrument tool in study. Study is to determine nurses perception and compliance on ISBAR tool for handoff communication in tertiary hospital Dammam. The study resulted that the overall perception mean score was 7.73 plus or minus 0.588. This showed nurses had a good perception and compliance regarding ISBAR tool and none of them had poor perception and compliance regarding the same. There was statistically significant relationship (p=0.000) between perception and compliance on ISBAR tool.[21]

Agnette Kaltoft,Yth Inga Jacobson (2021) conducted a qualitative study with the aim to investigate interaction in handovers between anesthesia and the recovery room and to examine the effect of using ISBAR instrument as a structured dialogue tool during handover at Danish hospital. Result showed that from baseline to follow up nurses were more prepared to recieve the patient, read the patient records more frequently. The content of the oral handover was more structured using ISBAR and handovers became more concentrated and undisturbed. [22]

Jaslina Gnanarani (2022) conducted an experimental study to assess the effectiveness of ISBAR handoff protocol on safe handover competence among nurse interns. The study was done on BSC Nursing interns of Apollo college of Nursing Chennai by primary data collection using a structured questionnaire. The study shows that majority of interns had adequate competence in the post intervention (46.9%) after providing education regarding ISBAR protocol. There is a statistically significant correlation between the previous academic performance and their

handover competence. About two third of nurse interns (65.317%) had high level of acceptability towards ISBAR protocol.[23]

Solari E, Sonani L, Ramlet A.S, Schneider A.G (2022) conducted an observational study on quality of ISBAR tool during nurse physician call in the ICU. The study was conducted at university hospital in French speaking area of Switzerland. All consecutive telephone calls from nurse to nurse physician during a calendar month was recorded. The quality of ISBAR utilization was assessed using a pre designed analysis grid. They analyzed 290 calls made by 99 nurses and identified that during nurse initiated calls the quality of ISBAR utilization to communicate about patient clinical status changes was poor and found that ISBAR quality was influenced by nurses age and ICU expertise and also found that teaching at the pre-graduate level was associated with higher quality score while learning simulation and traditional lectures were not.[24]

Clinical handover is one of the most critical steps in patient's journey and is a core skill that needs to be taught to health professionals, students and junior clinicians. Performed well, clinical handover should ensure that lapses in continuity of patient care, errors and harm are reduced in the hospital. Handover however is often poorly performed with critical detail being omitted and irrelevant details included. The uses of a structured, standardized frame work for handover such as ISBAR improve patient outcomes. The well standardized ISBAR to be ideal tool to employ effective clinical handover.[25]

From these studies it is found that the nurses agreed that ISBAR was useful guide to clinical handovers and they had a good perception and compliance regarding ISBAR tool and none of them had poor perception and compliance regarding the same. The nurses identified the quality of ISBAR utilization to communicate about patient clinical status. The content of the oral handover was more structured using ISBAR and handovers became more concentrated and undisturbed.[26]

b) Literature review related to effective communication among staff nurses at clinical settings.

Kato H, Clouser J M, Talari P (2022) conducted a qualitative study to identify what matters to bedside nurses and their perceptions of effective NPC communications and actions. Conducted three focus groups with a total of 19 medical unit nurses across two hospitals in one academic medical center in the United States. Result shows that the presence of direct communication between physicians and nurses was identified as the first theme and perceived by nurses as very important. Additional themes related to physician communication and attributes emerged including collegiality and respect (e.g., engaging nurses as partners in patient care), attentiveness and responsiveness (e.g., listening carefully and addressing concerns), and directness and support (e.g., backing nurses up in difficult situations). Effective NPC is further facilitated by organizational structure, relationship development separate from patient care, and consistent/timely use of technology. Conclusions Hospital bedside nurses provided valuable insight into improved physician communication and what attributes contribute to more effective NPC. Most importantly, they emphasized the significance of physicians in supporting them with difficult patients.[27]

Anat Drach-Zahvy, Nadim Hadid (2015) conducted a Prospective study to examine the relation between the strategies the nurse's employee during handover and the number and types of treatment errors in patient care in following shift. Data were collected in 2012-2013 from 200 randomly selected handovers in five internal wards. Handover strategies previously adapted by from high reliability organization were assessed via observations, treatment error-dosage discrepancy, order postponed, no documentation-captured from the patients files and demographical data were collected via questionnaires .The result of the study, on average, in nearly one-fifth of the patients file medication dosage given was inaccurate, in nearly one-third a care order was fulfilled late and in nearly half documentation was partially missing, rate of use of handover strategies previously adapted from high reliability organization varied substantially. Result of negative binomial regression analysis revealed that face-to-face verbal update from practitioners other than the outgoing, topic initiated by incoming and outgoing team, including

letters stance on care plans and writing a summary prior to handover, were significantly and negatively linked to number of treatment errors ($P<0.05$).[28]

Behrouz Pakcheshm (2017) conducted a quasi-experimental study to evaluate the impact of using a standard checklist on a clinical handoffs in the coronary care unit. Study was performed based on pre and posttest design at Afshar hospital in Yazd. There was a Total of 564 handoffs with the participation of 24 Nurses in 2 coronary care units in 2017.Before intervention, the frequency of providing information during clinical handoffs was reported as follows: patient identify (86.9%) current position (75.1%) clinical history (52.8%) system status review (59.9%)and recommendations (92.9%).The results showed that the indexes significantly increased ($p<0.001$) after the interventions in all these 5 domains. Patient identify (100%) current situation (94%) clinical history (80.1%) system status review (92.2%) and recommendations (100%).[29]

Orly Toren,Michal Lipschuetz,Arielle Lehmann,Gil Rege, Dana Arad (2017) conducted a national intervention project to present implementation process and participants satisfaction of a national project that used a standardized tool for team communication by improving patient safety in general hospitals using structured handoffs. National intervention project included process implementation team from 17 Israeli general hospitals evaluating the ISBAR implementation process for transferring patients from intensive care units to medical/surgical wards. Nurses reported higher satisfaction (0.036). participants who perceived less missing information during handoffs were more satisfied with this process of information flow between wards (84.9%) than those who perceived more missing information (15.6%) participants who responded that there was no need to improve information flow were more satisfied with the project information flow (95.6%). compared to group which responded that it was necessary to improve information flow (58.2%).[30]

Adriana Hada,Fiona Coyer (2019) conducted an integrative review to identify which nursing handover interventions were associated with improved patient outcomes, specifically patients

fall, pressure injuries in hospital setting. A systematic search of seven electronic database was conducted and retrieved articles were assessed by two independent reviewers. The findings indicate that improvements in handover communication had a clinically important positive effect on patient outcomes. Across the studies reduction in fall varied from 9.3 to 80%, pressure injuries from 45 to 50% and medication errors from 11.1 to greater than 50%.This review highlights that the implementation of bedside nursing handover and the adoption of standardized handover tools to improve nursing handover communication reduce patient adverse events.[31]

Xialoing Wong, Yi Jung Tung, Sin Yee Peck, Mein Li God (2019) conducted a project to improve clinical nursing handover between registered nurses. Which was implemented in 3 phases from January 2017 to November 2017 at 3 adult surgical wards of a tertiary hospital utilizing Joanna Briggs Institute Practical Application of Clinical Evidence System (JBI PACES). Pre and post implementation audits were conducted. Post implementation audit of nurses performing handover showed that handovers using standardized documentation improved from 0% to 21.0%. This was statistically significant. Medication errors incidents related to handover was reduced by 72% over a six month period.[32]

Catherine Amber Welsh, Mindy E Flanagan, Patricia Ebright (2021) conducted a qualitative, descriptive pilot study to analyse the barriers and facilitators to effective nursing end of shift. Data presented in this paper were collected as a pilot study. Short semi structured interviews were conducted asking nurses about their handoff process, The data revealed possibilities for characterizing the barriers and facilitators to effective nursing end of shift reports for two types of handoff methods. The taped report and written report. Analyses revealed 6 barrier and 4 facilitators to effective nursing end of shift reports.[33]

Lee V Jones, Leanne C Jack (2021) conducted a Quasi experimental study to translate the best practice nursing shift handover recommendations in an acute care setting using the Ottawa model for research use and to explore its effect on patient outcomes. Study conducted in four internal medicine wards in a major tertiary hospital. A total of 88 nurses and 110 patients participated in

152 handover observations. The findings showed clinically important increases in percentage and odds of nurses compliance with shift handover recommendations after the interventions were compared to the corresponding period of previous year. A reduction was observed for all adverse patient outcomes.[34]

Donella Piper, Lea J, Woods C, Parker V (2022) conducted a cross-sectional study online survey using the agency for Health care Research and Quality Hospital Survey on patient safety culture was implemented across six rural local health districts in NSW, Australia and resulted in 1587 respondents. The study aimed to explore the effect of handover on overall perceptions of patient safety dimensions on handover in a rural Australian setting. The study resulted that, all models were significant overall ($p<.001$) with explanatory powers ranging from 29 to 48% within rural health patient safety perceptions. (R square is equal to 29). A strong team work culture and management support culture was found to enhance effective handover of patient information.[35]

Ebtsam Aly, Abou Hashish, Asidi AA, Alnajjar Y.K (2022) conducted a descriptive study to analyse the nurses effective handover communication and patient safety, quality of care. Majority of nurses reported good quality handover. The regression analysis showed that staffing, cognitive capacity, focus of attention relationships and safety climates factors contributed positively to Variance of handover quality. In contract intrusions, distractions, anxiety, time and acute and chronic fatigue factors negatively affected the production of handover quality. Nurses added type of shifts and languages as barriers to handover the while emphasizing training and use of standardized tools for handover as facilitators.[36]

Having good communication skill is essential to collaborate on team and also important to patient centred care. Poor communication or lack of communication in health care can lead to patient's misunderstanding and failing to follow treatment protocols. It can also lead to workflow breakdown on the team, resulting in medical error. Healthcare competency offers a primary means for establishing trusting, collaborative relationship with patients and families. From these review of literature it is found that a structured handover system in clinical arena has the

potential to improve the quality and safety of clinical care and improvement in handover communication had a clinically important positive effect on patient outcomes.[37]

SUMMARY

The review of literature helps to understand about the effectiveness of proper communication among nurses, with the focus on ISBAR communication tool. ROL helps to know about the role of effective communication in healthcare settings. It pointed out the vital role of effective communication among healthcare professionals for the patient safety and good quality patient care. ROL related to ISBAR communication tool reviewed how ISBAR can enhance the transfer of patient information and promote better communication. Finally the ROL helped to provide a strong foundation for the research study. It helps to gain knowledge about the research topic, framing the research questions, objectives. Helps to aids in generating hypotheses. Also helps in the selection of samples based on inclusion and exclusion criteria.

CHAPTER III
RESEARCH METHODOLOGY

"Research means that you don't know, but are willing to find out."

-Charles Kettering

INTRODUCTION

A comprehensive theoretical evaluation of the approaches used in a field of study constitutes the research methodology. It includes an overview of the body of procedures and guiding ideas related to the field of study. It typically includes the idea of a quantitative technique. In it, the researcher examines numerous approaches that are typically taken by researchers when analyzing research problems, as well as the reasoning behind them. The study is being undertaken to determine the impact of evidence-based communication practices on clinical outcomes among nursing staff at a particular institution. The chapter discusses the methods used for the investigation. Research methodology refers to the particular steps or methods used to collect, organize, and evaluate data on a subject.

Research methodology involves the particular steps or methods used to collect, organize, and evaluate data on a subject.

For the researcher to know not only the research methods/techniques but also the methodology. Researchers not only need to know how to develop certain indices or tests, how to calculate the mean, the mode, the median or the standard deviation or chi-square, how to apply particular research techniques, but they also need to know which of these methods or techniques, are relevant and which are not, and what would they mean and indicate and why. Researchers also need to understand the assumptions underlying various techniques and they need to know the criteria by which they can decide that certain techniques and procedures will be applicable to certain problems and others will not.

All this means that it is necessary for the researcher to design his methodology for his problem as the same may differ from problem to problem.[38]

RESEARCH APPROACH

Research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. This plan involves several decisions, and they need not be taken in the order in which they make sense to me and the order of their presentation here. The overall decision involves which approach should be used to study a topic. Informing this decision should be the philosophical assumptions the researcher brings to the study; procedures of inquiry (called research designs);and specific research methods of data collection, analysis, and interpretation.

The investigation is aimed at evaluating the effectiveness of evidence based communication practice on clinical outcomes, among nursing personnel at selecting institution.[39]

RESEARCH DESIGN

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevant to research purpose with economy in procedure.

One Group pre- test post- post test design is adopted for this study.

It can be adopted by as following;

E→O1→X→O2

E: Experimental group **O1:** pre – test assessment

X: Intervention regarding evidence based communication practice is given

O2: Post-test assessment

VARIABLES

Variables are qualities, properties or characteristics of person, things or situation that change or vary. Chin and Kramer stated that variables are concept at different level of abstraction that are concisely defined to promote their measurement or manipulation within the study.

Dependent Variable: It is presumed effect/ outcome or response due to effect of the independent variable, which researcher wants to predict or explain. In this study, the dependent variable is clinical outcome.

Independent Variable: It is presumed cause/stimulus or activity that is manipulated or varied by the researcher to create the effect on the dependent variable. In this study, the independent Variable is evidence based communication practice. [14]

SCHEMATIC REPRESENTATION OF THE STUDY

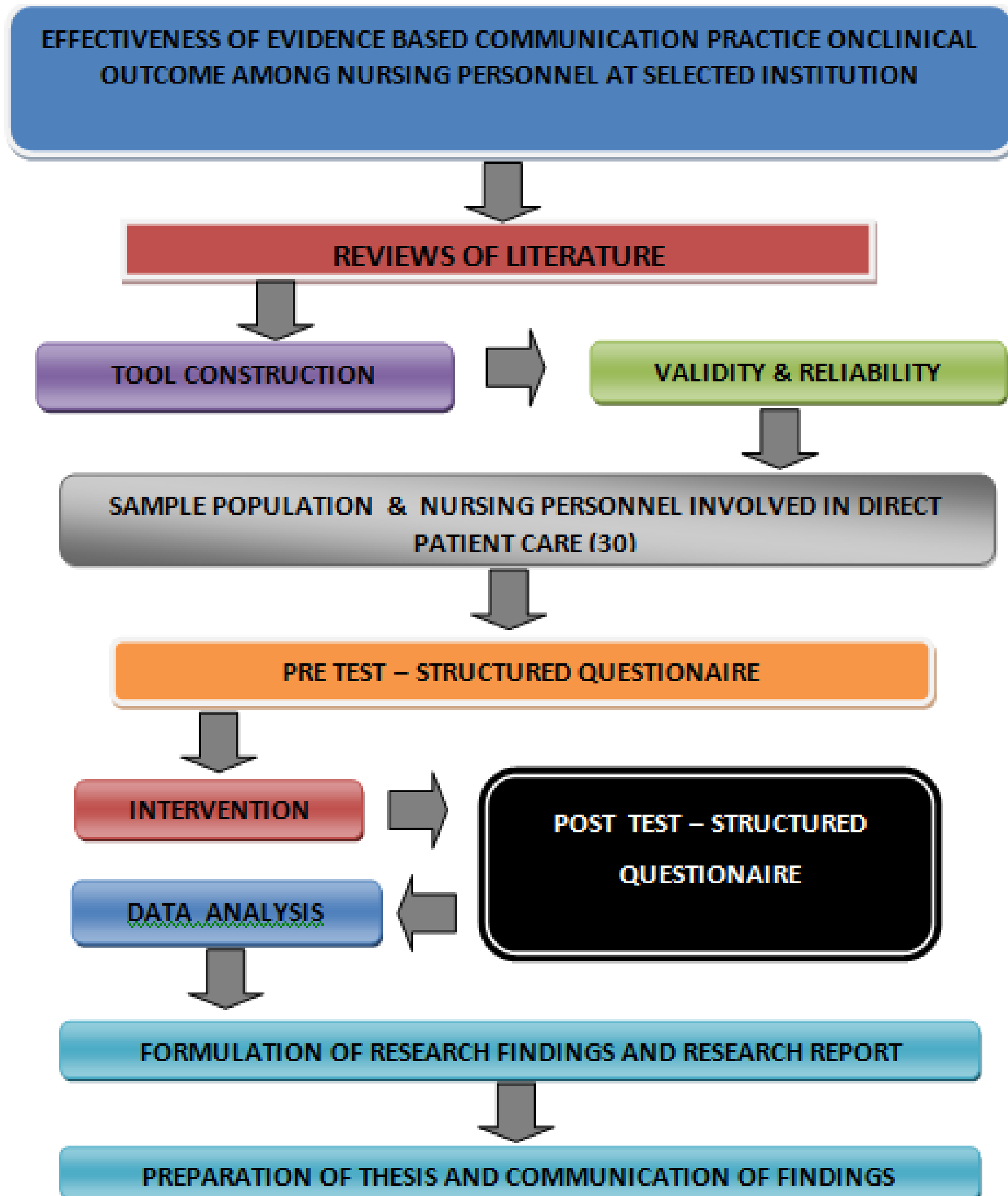

FIG. 3.1 SCHEMATIC REPRESENTATION OF STUDY

SETTING

Setting is a location for conducting research; can be natural, partially controlled or highly controlled. The main study and pilot study was conducted at selected institution. Reason for selecting there setting:

- The subjects were readily available and adequate for the study.
- The subjects are cooperative, easy to approach and convey the need.
- The selected setting is near and feasible.

POPULATION

Population is the aggregation of all the units in which a researcher is interested.

Target Population: A target population consists of the total number of nursing personnel which meet the inclusion criteria. In this study the target population consists of nursing personnel involved in direct patient care.

Accessible Population: It is the aggregate of nursing personnel that conform to designated criteria and are also accessible as subjects for a study. In this study the accessible Population includes nursing personnel who are available during the period of data collection.

SAMPLE

It refers to a smaller, manageable version of a larger group. In this study sample comprises of 30 nursing personnel involved in direct patient care at selected institution.

SAMPLE SIZE

Sample size refers to number of subjects, events, behaviors or situations that are examined in a study. In this study, the sample size is 30.

SAMPLING TECHNIQUE

Sampling is defined as the process of selecting a group of people, events, behavior or other elements which are needed to conduct a study. In this study sampling technique used is Convenient.

Convenient sampling is a non-probability technique, subject are selected due to their convenient accessibility and proximity to the researcher at selected institution. It is a fast, inexpensive and easy sampling technique.

SAMPLING CRITERIA

Inclusive Criteria:

(1) Nursing personnel working in selected setting.

(2) Nursing personnel who can understand English.

(3) Nursing personnel who are involved with direct patient care.

Exclusive Criteria:

(1) Nursing personnel who are not willing to participate in this study.

(2) Nursing personnel who are not involved in patient handover or shift changes.

(3) Nursing personnel unavailable during the period of data Collection.

SELECTION OF TOOL

Data collection tools are the instruments that are the return devices that a researcher uses to collect data. For example, Questionnaire and Observation schedule. In this study, the researcher uses structured questionnaire to collect information regarding demographic data, effectiveness of evidence based communication practice on clinical outcomes and their experience with evidence based communication.

DESCRIPTION OF TOOL

- **Section A:-**Structured questionnaire for demographic and clinical information among nursing personnel
- **Section B:-** Structured questionnaire on awareness regarding evidence based communication practice among nursing personnel
- **Section C:-**Observation checklist for assessing the clinical measures.
- **Section D:-**Structered Rating scale (Likert scale) regarding use of evidence based communication practice.

SCORE TABLE

TOTAL SCORE	11
ADEQUATE AWARENESS	≥ 8 (75%)
INADEQUATE AWRENESS	< 8

VALIDITY

It refers to the extent to which a measure represents. Content validity is concerned with the scope or range of items used to measures the variable. For examining the content and face validity of the questionnaire, it was given to 14 experts in the field. The validators have suggested some modifications in the content. The modifications and suggestions of experts were included in the final preparation of the questionnaire by the investigators.

RELIABILITY

It is the degree of consistency and accuracy with which and instrument measures the attribute for which it is designed to measure. It is the degree of consistency and accuracy with which an instrument measures the attribute for which it is designed to measure.

In this study inter- rater method is used was used to assess the reliability for observation checklist and reliability score: 0.86. It is a measure of how consistent an individual is at measuring a constant phenomenon and instrument reliability pertains to the tool used to obtain the measurement. Split-half method was adapted to check the reliability of structured questionnaire and the score was 0.9. These scores were beyond 0.7 level of acceptance and hence tools were found to be reliable in the study.

PILOT STUDY

Pilot study is defined as the small scale version of trial run of the major study. Pilot study is conducted at selected institution after obtained return permission from the head of the Hospital committee; the tool is administered to $1/10^{th}$ of original sample size to check the feasibility and reliability of the study. The purpose of the study is explained to the nursing

personnel and assumed confidentiality of their identity and responses is maintained. Pilot study score reveals adequate awareness of nurses on evidence based communication practice.

DATA COLLECTION PROCESS

Before data collection a formal return permission is obtained from the head of the Hospital committee for conducting research study. The purpose of the study is explained to the nursing personnel to ensure their cooperation and prompt response. Effect of the dependent Variable is seen before the treatment (pre- test).Later the manipulation is implemented and after manipulation observation of dependent Variable is made to examine the effect of the manipulation on the dependent Variable.

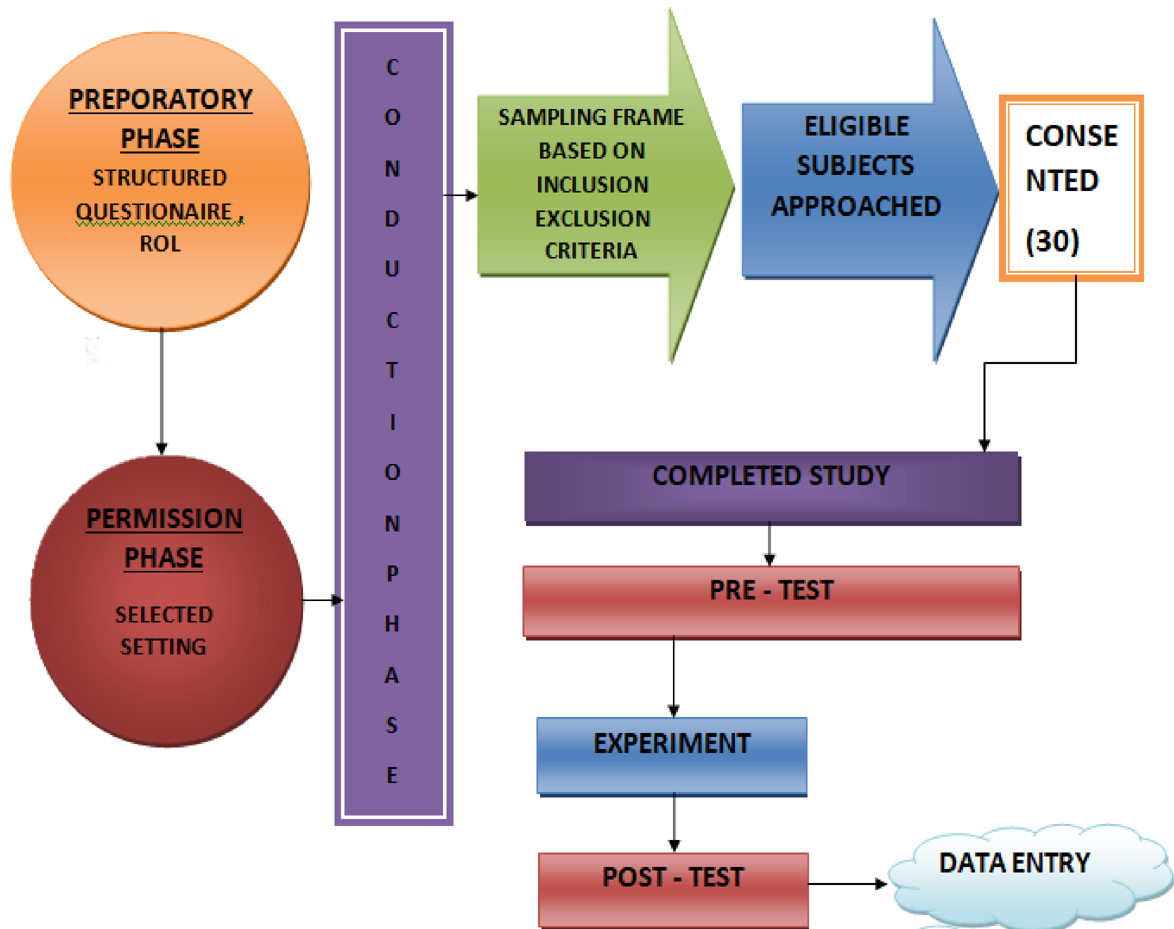

FIG .3.2 SCHEMATIC DIAGRAM OF DATA COLLECTION PROCESS

a) Preparatory Phase:

The research was discussed with a number of experts including research guide, ethical clearance committee and statistician. Valuable inputs given by them were incorporated and changes were made accordingly. The investigator took ROL related to the study and prepared structured questionnaire. Procedure validation required was done.

b) Permission Phase:

Permission was taken from the college research committee for conduction of research. Then the ethical clearance was taken from the institutional review board. At last NOC was obtained from the selected institution for conducting the research.

c) Conduction Phase:

- The investigator checked the available nursing personnel based on the inclusion and exclusion criteria.
- After introduction, the investigator explained about the study and provided the subjects with the information. All the doubts were clarified and their confidentiality and anonymity in the study was assured. The investigator obtained written consent after establishing the subject's willingness to participate.
- Pre-assessment of all the available subjects was done and a sampling frame was prepared of the subjects. The investigator collected data for all the available samples.
- Intervention was given to selected samples according to the teaching materials prepared regarding evidence based communication practice.
- Post-test was done on the 7th day.
- The findings of the data were recorded. The investigator assured not to interfere with routine functioning of the ward and thanked the participants and hospital management for their cooperation.

Data collection process is concluded by thanking each nursing personnel for his /her participation and cooperation. The data collected is then complied for data analysis.

PLAN FOR DATA ANALYSIS

Analysis is defined as the process of organizing and synthesizing data in such a way that research questions can be answered and hypothesis tested. The data analysis for this study will involve both descriptive and inferential statistical methods.

Descriptive analysis will be used to summarize demographic information and baseline characteristics of participants. For the outcome measures, descriptive statistics will present mean, median, standard deviation, and frequency distributions. Inferential analysis will be conducted to assess the impact of evidence-based communication practices on clinical outcomes. Statistical tests, such as t-tests or ANOVA, will compare outcome variables before and after the intervention. Correlation analysis will explore relationships between variables.

Statistical significance will be set at a predetermined alpha level (usually 0.05), and confidence intervals will help interpret the precision of the results. Software like SPSS will be used for analysis.

CONCLUSION

The research methodology employed in this study provided a systematic and rigorous framework for investigating the research questions. The chosen approach, data collection methods, and analysis techniques were carefully selected to ensure the reliability and validity of the findings. By adhering to established research practices and addressing potential limitations, this methodology has contributed to the robustness of the study's outcomes and has laid a foundation for future research in this area.

CHAPTER IV

ANALYSIS AND INTERPRETATION

"*The goal is to turn data into information, and information into insight."*

- Carly Fiorina

Analysis is defined as 'the process of organizing and synthesizing the data so as to answer reach questions and test hypothesis.' The data analysis and interpretation helped the researchers to transform the collected data into credible evidence about the development of the intervention and its performance. The data collection is followed by the analysis and interpretation of data, where collected data are analysed and interpreted in accordance with study objectives. It also helps in editing, coding, classifying, and presenting the data.[14]

The purpose of analysing data is to obtain usable and useful information. The analysis helped the investigator to

1. make the raw data meaningful.
2. test null hypothesis.
3. test the statistical significance of data or related data.
4. draw inferences and make generalization.
5. estimate parameters.

STATEMENT: A study to assess the effectiveness of evidence-based communication practice on Clinical outcomes among nursing personnel in selected institution.

OBJECTIVES: -

1. To evaluate effectiveness of evidence-based communication practice on Clinical outcomes.
2. To measure awareness, practice and experience of nursing personnel towards evidence-based communication practice.
3. To associate selected demographic variables with evidence-based communication practice awareness.

HYPOTHESIS: -

H_1: There is a significant relationship between demographic variables and evidence-based awareness.

H_0: There is no significant relationship between demographic variable and evidence-based awareness.

ANALYSIS AND INTERPRETATION:

This chapter deals with statistical analysis. The data collected from the nursing personnel in selected setting regarding effective communication skill is tabulated, analysed and interpreted. The data obtained is mainly classified into 4 sections.

SECTION A:

It deals with the distribution of demographic characteristics and clinical information among the nursing personnel who are working in selected setting.

SECTION B:

It consists of distribution of scores obtained by assessing the awareness regarding evidence-based communication practice among nursing personnel in selected setting.

SECTION C:

It consists of an observational checklist for assessing the pretest and post-test Evidence -Based Communication Practice on Clinical Outcomes among Nursing Personnel to be filled by investigator.

SECTION D:

It consists of Structured Rating Scale regarding experience with ISBAR and the data is to be collected post intervention

SECTION A: This section deals with the demographic and clinical data of the subjects under study. It is analysed in frequency and percentage method.

Sr No	DEMOGRAPHIC	VARIABLES	PERCENTAGE
1	Education	a. GNM	45.45%
		b. BSC	54.55%
2	Year of experience in health care	a. 1-3	72.73%
		b. 7-10	18.18%
		c. >10	9.09%
3	Clinical speciality	a. ICU	27.27%
		b. medical ward	54.55%
		c. Private ward	18.18%
4	Average number patient handover per shift	a.7-10	18.18%
		b. >10	81.82%

TABLE 4.1: DISTRIBUTION OF DEMOGRAPHIC DATA

Table 4.1 and fig 4.1 depicts the distribution of the subjects in relation to their education, years of experience, clinical speciality, average number of patient handover per shift. Majority of the respondents 54.55% has done BSC education and 45.45% GNM. Pertaining to years of experience in health care, 72.73% have 1-3 years and 9.09% have more than 10 years. In accordance to clinical speciality 54.55% are working in medical surgical ward, 27.27% are in ICU and less proportion 18.18% are in private room. Around 81.82% has more than 10 patient handover per shift and 18.18% has 7-10 handovers.

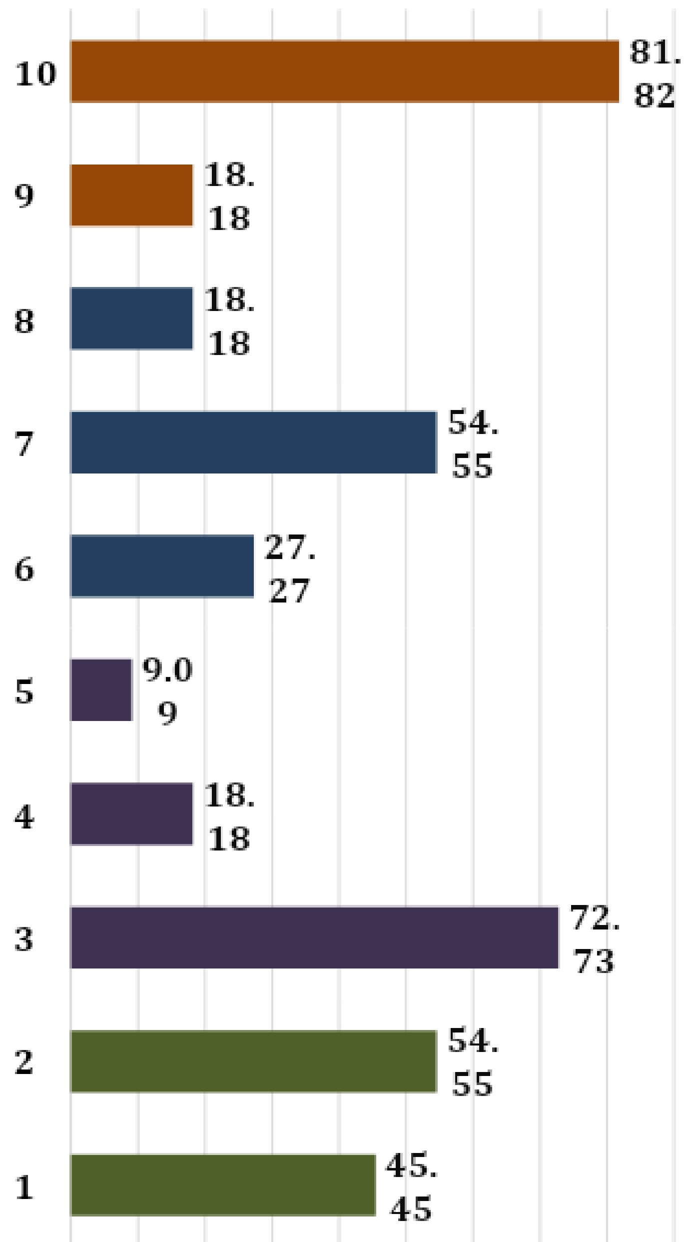

FIGURE 4.1: DISTRIBUTION OF DEMOGRAPHIC DATA

TABLE4.2: DEMOGRAPHIC DATA REGARDING EVIDENCEBASED COMMUNICATION

Sr No	DEMOGRAPHIC	VARIABLE	PERCENTAGE
1	Handover formal communication	a. Yes	72.73%
		b. No	27.27%
2	formal training	a. Yes	45.45%
		b. No	54.55%
3	Comfortable with present handover	a. Yes	90.91%
		b. No	9.09%
4	ISBAR familiarity	a. Yes	72.73%
		b. No	27.27%
5	Place of handover	a. Nursing station	54.55%
		b. patient's room	45.45%
6	Incomplete handover	a. Yes	54.55%
		b. No	45.55%

Table 4.2 and fig 4.2 reveals use of formal communication during handover, reception of formal training, comfort with present handover, place of conducting handover and completeness of handover.72.73% use formal communication during handover,45.45% has received formal training in performing handover, 90.91% are comfortable with present handover method used in their institute, 72.73% are familiar with ISBAR format of communication, pertaining to place of conducting handover 54.55% confirms that they do it at nursing station and remaining 45.45% at patient's bed side. More than half of the staff 54.55% remains confused due to incomplete handover.

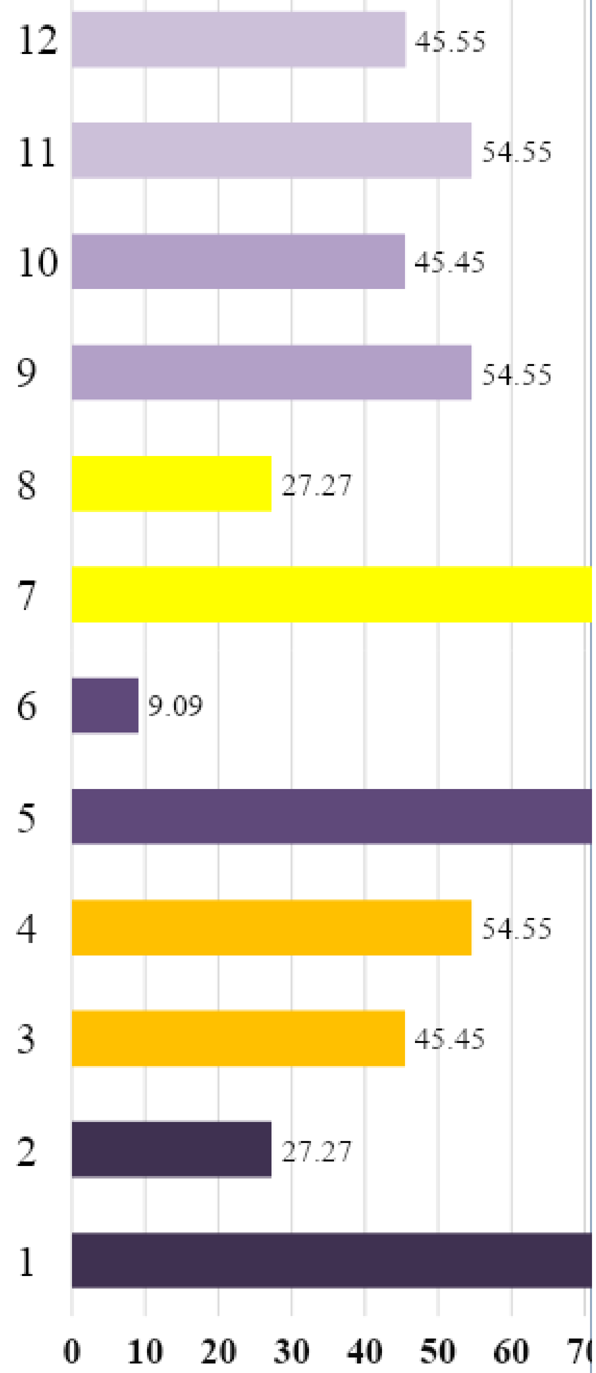

FIGURE 4.2 DATA REGARDING EVIDENCE : BASED COMMUNICATION

SECTION B: This section deals with structured questionnaire on awareness regarding evidence-based communication practice among nursing personnel.

TABLE 4.3: DISTRIBUTION OF SAMPLES ACCORDING TO LEVEL OF AWARENESS.

Sr. No	LEVEL OF AWARENESS	SCORE	PERCENTAGE
1	Adequate awareness	≥ 8	63.63%
2	Inadequate awareness	<8	36.36%

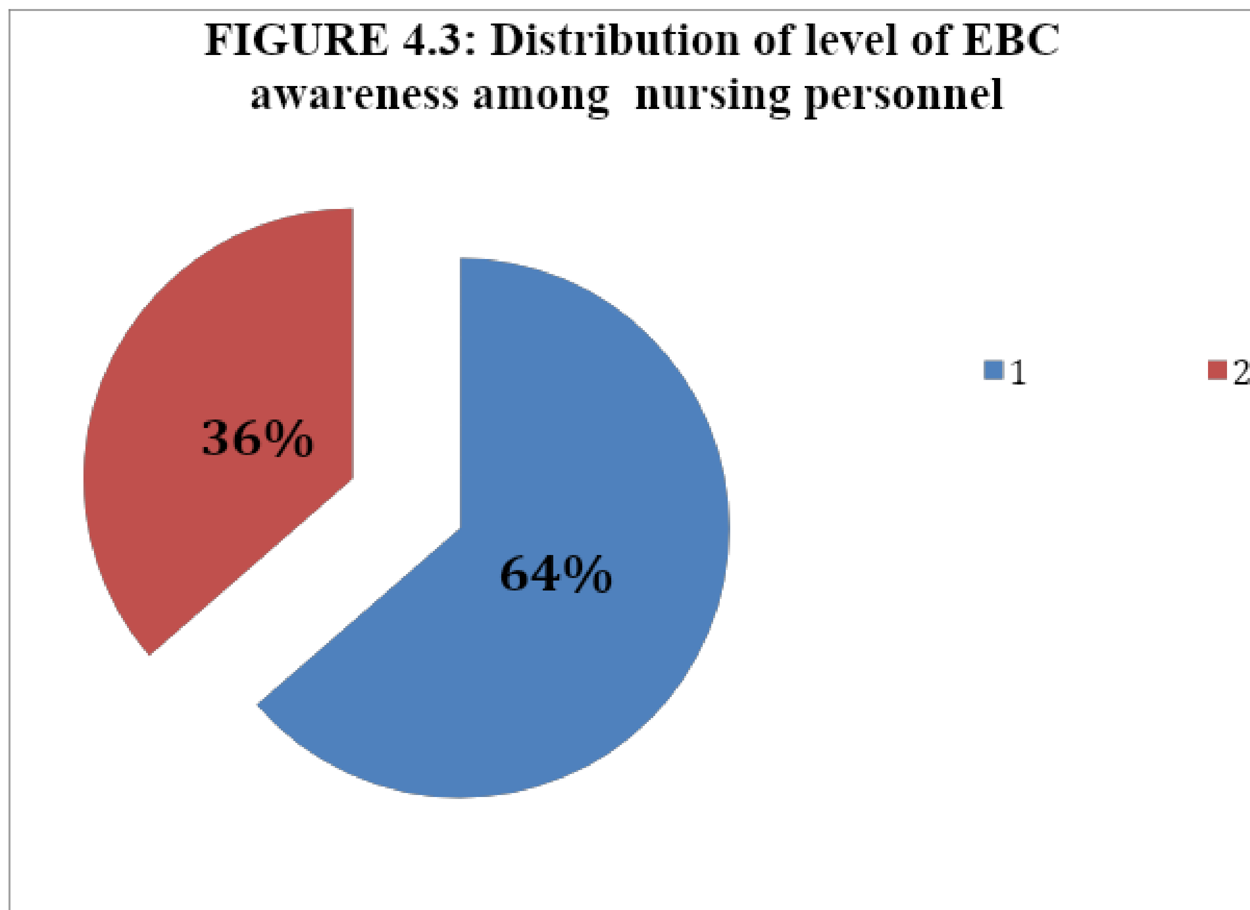

Table 4.3 and fig 4.3 reveals that out of all the respondents 63.63% have adequate awareness about evidence-based communication practice and remaining 36.36% have inadequate awareness.

SECTION C: This section deals with the pre-test and post-test observation checklist for clinical measures.

TABLE4.4: DISTRIBUTION OF PRETEST OBSERVATION OF CLINICAL OUTCOMES.

Sr. No	CLINICAL MEASURES	VARIABLE	PERCENTAGE
1	Adverse events	a. Yes	20.59%
		b. No	79.41%
2	Errors recorded	a. Yes	20.59%
		b. No	79.41%
3	Medication error	a. Yes	17.65%
		b. No	82.35%
4	Bed side handover	a. Yes	0%
		b. No	100%
5	Clinical documentation	a. Yes	67.65%
		b. No	32.35%
6	Discrepancies in handover	a. Yes	23.53%
		b. No	76.47%
7	Readmission	a. Yes	5.88%
		b. No	94.12%
8	Adverse patient outcome	a. Yes	5.88%
		b. No	94.12%
9	Nurse-to-patient ratio	a. Yes	0%
		b. No	100%
10	Adequate time spent	a. Yes	32.35%
		b. No	67.65%

Table4.4 and figure 4.4 reveals the distribution of pretest observation of clinical measures, in that 20.59 % of adverse events are take place like delay to essential tests and treatment took place. 79.41% of errors are not recorded.17.65 % of medication error is happening. 100% of hand overs did not happen at the patient's bedside.67.65% of clinical documentation is done accurately. 23.53% have discrepancies in hand over. 5.88% patients were readmitted. 5.88% adverse patient outcome like medication side effects were observed. nurse-to-patient ratio is not maintained in any of the floor or wards. The adequate time spent for hand over is 32.35%.

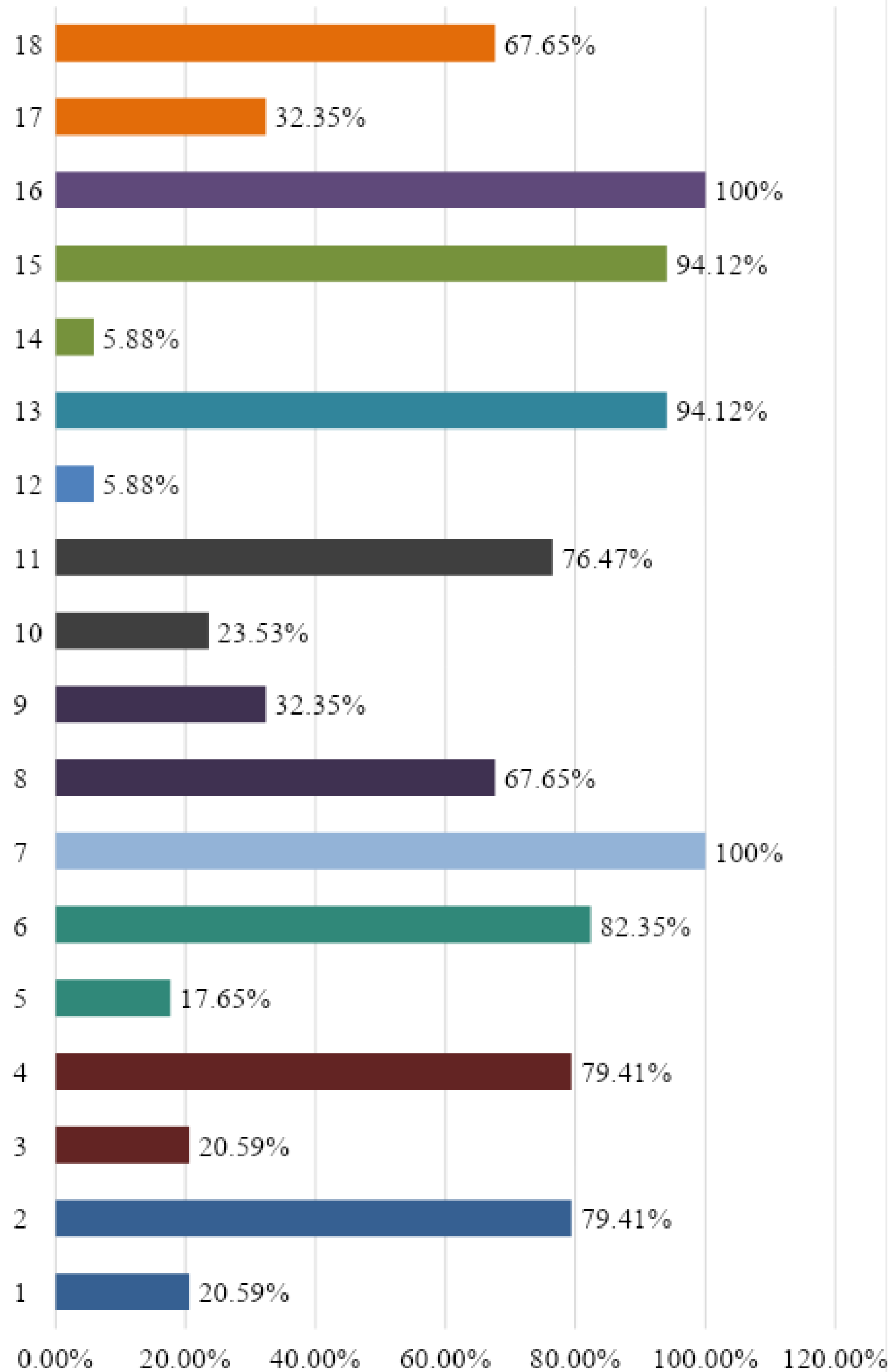

FIG 4.4:DISTRIBUTION OF PRETEST OBSERVATION OF CLINICAL OUTCOMES.

TABLE4.5: DISTRIBUTION OF POST-TEST OBSERVATION OF CLINICAL OUTCOMES.

Sr.No	CLINICAL MEASURES	VARIABLE	PERCENTAGE
1	Adverse events	a. Yes	44.44%
		b. No	55.56%
2	Errors recorded	a. Yes	14.81%
		b. No	85.19%
3	Medication error	a. Yes	33.33%
		b. No	66.67%
4	Bed side handover	a. No	16.67%
		b. No	83.33%
5	Clinical documentation	a. Yes	57.41%
		b. No	42.59%
6	Discrepanies in handover	a. Yes	40.74%
		b. No	59.26%
7	Readmission	a. Yes	12.96%
		b. No	87.04%
8	Adverse patient outcome	a. Yes	3.70%
		b. No	96.30%
9	Nurse-to-patient ratio	a. Yes	3.70%
		b. No	96.30%
10	Adequate time spent	a. Yes	33.33%
		b. No	66.67%

Table4.5 and figure 4.5 reveals the distribution of post-test observation of clinical measures, in that 44.44 % of adverse events are take place like delay to essential tests and treatment took place. 85.19 % of errors are not recorded. 33.33 % of medication error is happening.83.33% of hand overs did not happen at the patient’s bedside. 57.41% of clinical documentation is done accurately. 40.74% have discrepancies in hand over. 12.96% patients were readmitted. 3.70% adverse patient outcome like medication side effects were observed.96.30% nurse-to-patient ratio is not maintained in any of the floor or wards. The adequate time spent for hand over is 33.33%.

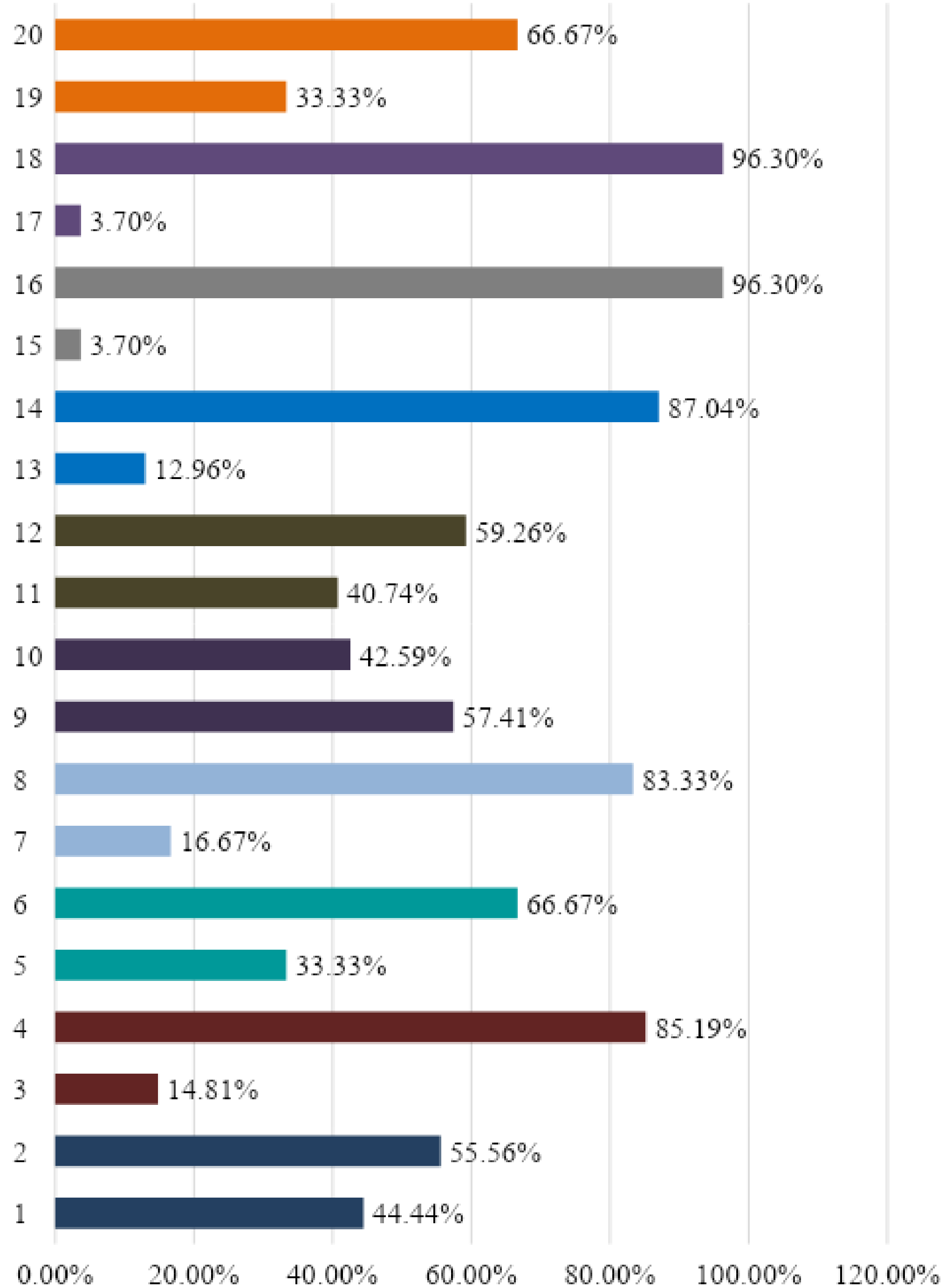

FIG 4.5:DISTRIBUTION OF POST-TEST OBSERVATION OF CLINICAL OUTCOMES

TABLE 4.6: COMPARISON OF PRETEST AND POST-TEST SCORES FOR OBSERVATION OF CLINICAL OUTCOMES.

Sr. No	CLINICAL MEASURES	PRETEST PERCENTAGE	POST-TEST PERCENTAGE
1	Adverse events	20.59%	44.44%
2	Errors recorded	20.59%	14.81%
3	Medication error	17.65%	33.33%
4	Bedside handover	0%	16.67%
5	Clinical documentation	67.65%	57.41%
6	Discrepancies in handover	23.53%	40.74%
7	Readmission	5.88%	12.96%
8	Adverse patient outcome	6%	3.70%
9	Nurse-to-patient ratio	0%	3.70%
10	Adequate time spent	32.35%	33.33%

Table 4.6 and Fig 4.6 reveals the comparison of pretest and post-test scores for observation of clinical outcomes. Time interval between pretest and post-test was not ideal in this study comprises for better effectiveness reassessment of clinical measure at regular interval to be done. 44.44% adverse events are in after post-test, errors recorded is 14.81. 33.33% medication error present after pretest. Bedside increased from 0% to 16.67%. 57.41% of clinical documentation. Discrepancies increase from 23.53% to 40.74%.12.96% of readmission in seen. 3.7% of adverse patient outcome seen. Nurse to patient ratio increase from 0% to 3.70%. 33.33% adequate time is spent for hand over.

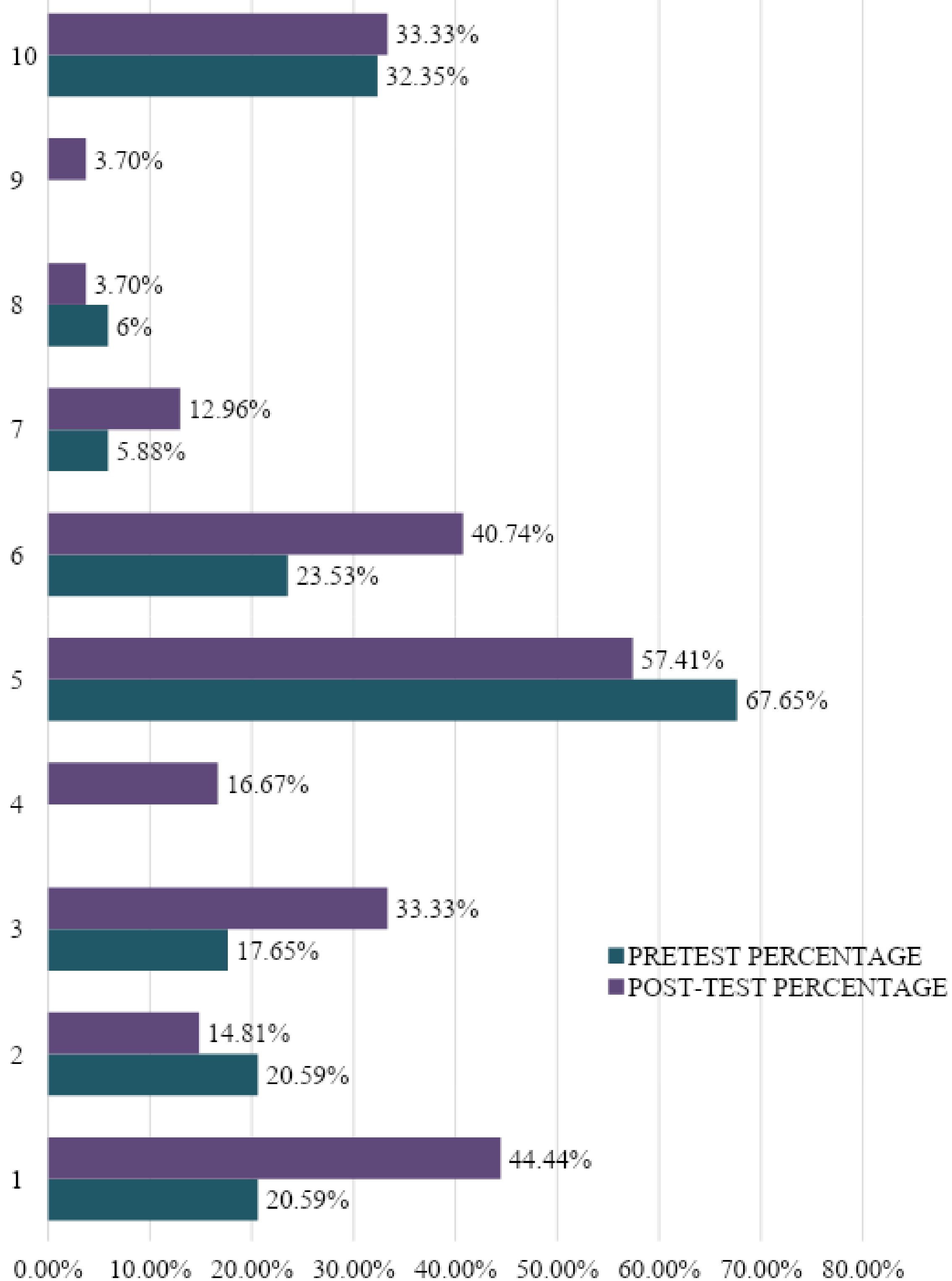

FIG 4.6: COMPARISON OF PRETEST AND POST-TEST SCORES FOR OBSERVATION OF CLINICAL OUTCOMES

SECTION D: This section deals with structured rating scale. Data to be collected post intervention.

TABLE 4.7: STRUCTURED RATING SCALE (LIKERT SCALE)

Sr. No	RATING SCALE	VARIABLES	PERCENTAGE
1	Enhance communication	a.Agree	100%
		b.Neutral	0%
		c.Disagree	0%
2	Trained	a.Agree	81.82%
		b.Neutral	18.18%
		c.Disagree	0%
3	Improves patient safety	a.Agree	100%
		b.Neutral	0%
		c.Disagree	0%
4	Time	a.Agree	27.70%
		b.Neutral	54.55%
		c.Disagree	18.18%
5	Recepted	a.Agree	45.45%
		b.Neutral	27.27%
		c.Disagree	27.27%
6	Structured approach	a.Agree	81.82%
		b.Neutral	9.09%
		c.Disagree	9.09%
7	Reduce gap	a.Agree	81.82%
		b.Neutral	9.09%
		c.Disagree	9.09%
8	Interdisciplinary collaboration	a.Agree	72.73%
		b.Neutral	18.18%
		c.Disagree	9.09%
9	Improves patient outcomes.	a.Agree	81.82%
		b.Neutral	18.18%
		c.Disagree	0%
10	Receive training	a.Agree	72.73%
		b.Neutral	27.27%
		c.Disagree	0%
11	Recommentation	a.Agree	81.82%
		b.Neutral	9.09%
		c.Disagree	9.09%
12	Inclusion in education	a.Agree	72.73%
		b.Neutral	18.18%
		c.Disagree	9.09%

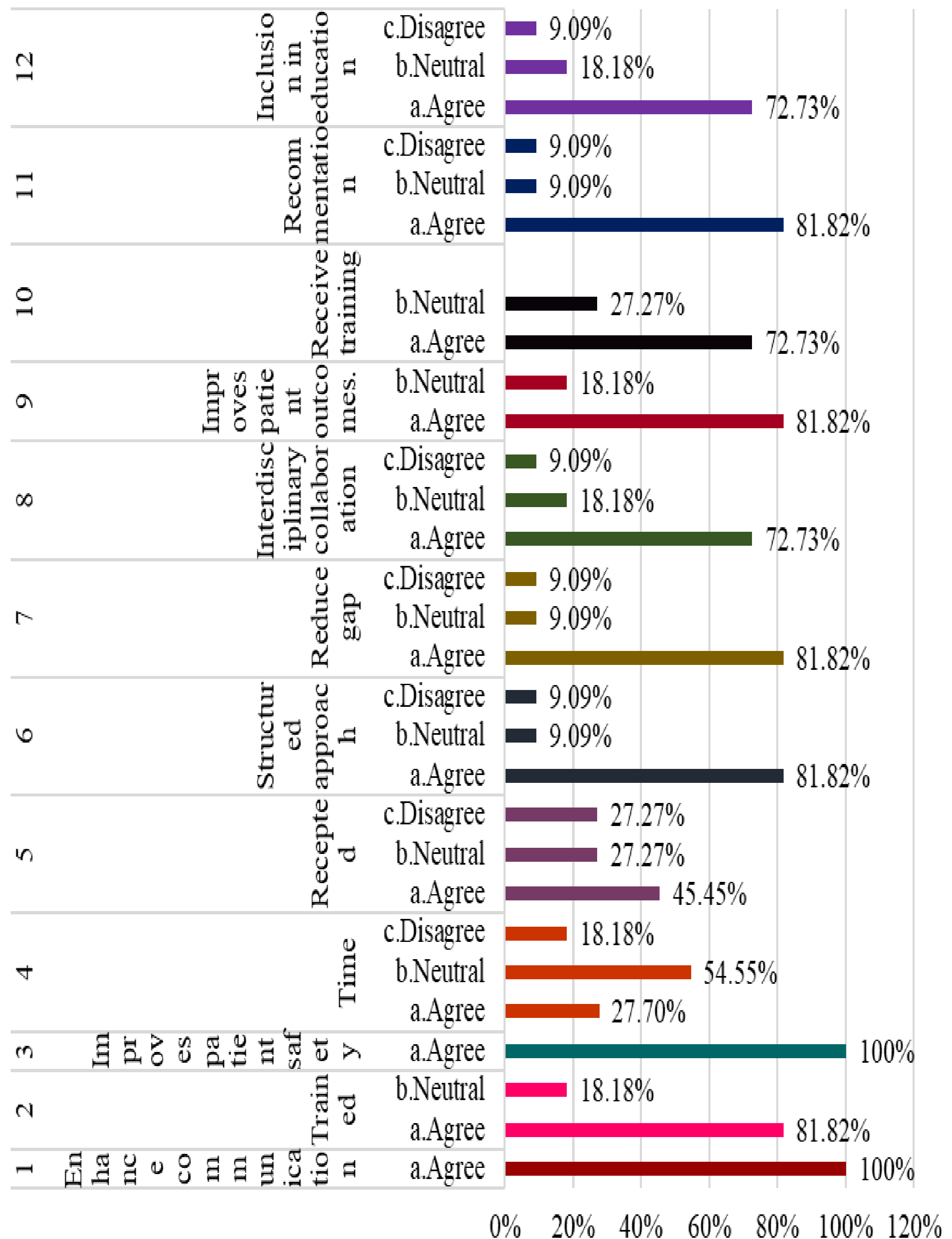

FIG 4.7:STRUCTURED RATING SCALE

Table 4.7 and fig 4.7 depict the structured rating scale (Likert scale) based on experience related to evidence-based communication practices in health care settings. The nursing personal experience that ISBAR format enhances communication up to 100%. 81.81% feel adequately trained. 100% of sample answered format improves patient safety. 54.55% is neutral for time.45.45% of colleagues are well receiving format.81.82% feels it promote structured approach. 81.82% feel reduction in information gap. 72.73% of interdisciplinary collaboration improved.81.82% of patient outcomes is improved. 72.73% receive training on ISBAR format.81.82% are recommended ISBAR to other health care professionals. 72.73% agree to include the ISBAR format in nursing education.

TABLE 4.8 EXPERIENCE RELATED TO EVIDENCE-BASED COMMUNICATION CHECK LIST.

Sr. No	EXPERIENCE	SCORE	PERCENTAGE
1	Positive Experience	24-36	100%
2	Negative Experience	<24	0%

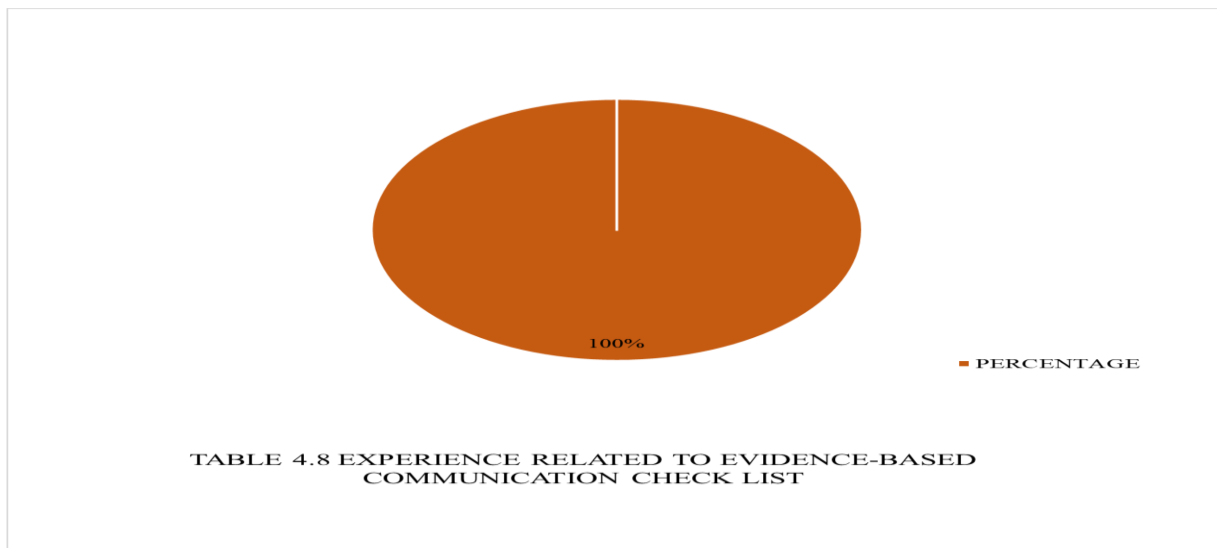

Table 4.8 and Fig 4.8 reveals the experience related to evidence-based communication among nursing personals, which is 100% positive experience.

TABLE 4.9: ASSOCIATION BETWEEN DEMOGRAPHIC VARIABLES AND EVIDENCE-BASED COMMUNICATION AWARENESS.

Sr. No	PARTICULARS	FISHER'S EXACT TEST VALUE	SIGNIFICANCE (YES/NO)
1	Education	1	No
2	Year of experience in health care	1	No
3	Clinical speciality	1	No
4	Average number of patient hand over per shift	0.49	No
5	Hand over formal communication	0.087	No
6	Formal training	0.06	No
7	Comfortable with present hand over	0.36	No
8	ISBAR familiarity	0.49	No
9	Place of handover	0.54	No
10	Incomplete handover	0.307	No

Table 4.9 reveals association between demographic variables and evidence-based communication awareness. Fisher's exact test was used to find out association between demographic variable and level of awareness regarding evidence-based communication. And at the level of significance P=0.05. It was found that all the values of fisher exact test were greater than 0.05 enhance the significance was not present for any of the demographic variables with evidence-base communication.

SUMMARY: -

"In summary, it takes a lot of effort to make something simple."

– Steve Jobs

The objective to measure awareness, practice and experience of nursing personnel towards evidence-based communication practice of the study was met through the assessments found that majority of nurses are novice with 1-3 years of experience and 81% handle more than 10 handovers during a single shift. More than half of the handovers does not take place at patient's bedside and remain incomplete. Majority of the nursing personnel 64% have adequate knowledge regarding evidenced based communication and ISBAR. The first objective to evaluate effectiveness of evidence-based communication practices of the study was met through the pre-test and post-test assessment of observation for clinical outcomes revealed that there is improvement in areas of errors recorded during handover, adverse patient outcomes, nurse: patient ratio and time spent during handover. The nursing personnel rated their experience with evidence- based communication and ISBAR on Likert scale. It was evident that 100% participants had positive experience with use of ISBAR and particularly that it enhances communication and improves patient outcomes. Fisher's exact test was performed to meet the last objective for the association between the demographic variables and awareness; the calculated values were more than 0.05 which led to acceptance of null hypothesis.

The study was limited with number of times the observations could be made. A time series approach with multiple observations at regular intervals will serve as better data source for checking significance.

CHAPTER V
RESULTS

A good discussion increases the dimensions of everyone who takes part

-Randolf Bourne

This chapter provides a concise summary of the study's key findings. Additionally, it contains recommendations for further research as well as ideas, restrictions, first-hand accounts, and consequences. The purpose of this study was to evaluate the impact of evidence-based communication practices on clinical outcomes among nursing personnel.

PROBLEM STATEMENT:

"A study to assess the effectiveness of evidence based communication practice on clinical outcomes among nursing personnel at the selected institution."

OBJECTIVES: -

1. To evaluate effectiveness of evidence-based communication practice on Clinical outcomes.
2. To measure awareness, practice and experience of nursing personnel towards evidence-based communication practice.
3. To associate selected demographic variables with evidence-based communication practice awareness.

HYPOTHESIS: -

H_1: There is a significant relationship between demographic variables and evidence-based awareness.

H_0: There is no significant relationship between demographic variable and evidence-based awareness.

METHODS AND TECHNIQUES:

With the help of the review of literature the investigator was able to learn about evidence based communication practice, ISBAR handover protocol for the formulation of conceptual framework, tools, selection of design and plan for analysis.

A quantitative pre experimental approach and one group pre test-post-test design was selected by the investigator for the assessment of effectiveness of evidence based practice on clinical outcome among nursing personnel. Convenient method was used to select the samples in a selected institution as per inclusion and exclusion criteria.

TOOL:

The researchers had prepared structured questionnaire which include:

SECTION A: Structured Questionnaire For Demographic And Clinical Information. Section A consists of structured questionnaire with 12 items to collect demographic details and clinical information of nursing personnel.

SECTION B: Structured Questionnaire On Awareness. Section B Consist Of Structured Questionnaire With 12 Items To Collect The Details On Awareness Regarding Evidence Based Communication Practice Among Nursing Personnel.

SECTION C: Observation Checklist For Clinical Measures. Section C Consist Of Observation Checklist Prepared By The Researchers With 10 Items To Assess The Effectiveness Of Evidence Based Communication Practice On Clinical Outcomes Among Nursing Personnel To Be Collected Pre And Post Intervention.

SECTION D: Likert Scale. Section D Consist Structured Rating Scale (Likert Scale) With 12 Statements To Collect Data After The Intervention Based On The Experiences Related To Evidence Based Communication Practice In Healthcare Settings. The Respondent Rate The Statements Based On Their Agreement.

FINDINGS OF THE STUDY:

FINDINGS OF SECTION A: This section deals with the demographic and clinical data of the subjects under study. It is analysed in frequency and percentage method:

FREQUENCY AND DISTRIBUTION OF DEMOGRAPHIC DATA:

- Majority of the respondents 54.55%(6) has done BSC education and 45.45%(5) has done GNM education.
- Years of experience in healthcare is 72.73%(8) have 1-3 years of experience,18.18%(2) have 7-10 years of experience 9.09%(1) have years of experience above 10 years.
- Accordance to clinical speciality 54.55%(6) are working in medical surgical ward, 27.27%(3)are in ICU and 18.18%(2) are working in private room.
- Around 81.82%(9) has more than 10 patient handover per shift and 18.18%(2) has 7-10 number of patient handover per shift.

FREQUENCY AND DISTRIBUTION OF DEMOGRAPHIC DATA REGARDING EVIDENCEBASED COMMUNICATION:

- 72.73%(8) use formal communication during handover and 27.27%(3) doesn't use formal communication while giving handover.
- 45.45%(5) has received formal training in performing handover and 54.55%(6) not received any type of training for giving handover.
- 90.91%(10) of staff are comfortable with present handover method used in their institute and 9.01%(1) are not comfortable.
- 72.73%(8) are familiar with ISBAR format as a means of communication to be used during handover and 27.27%(3) are not familiar.

- ❖ 54.55%(6) confirms that they do handovers at nursing station and remaining 45.45%(5) do handovers at patient’s bed side.
- ❖ 54.55%(6) encountered situations where unclear or incomplete handover information resulted in confusion or delay in patient care and the remaining 45.45%(5) did not experienced that.

FINDINGS OF SECTION B: This section deals with structured questionnaire on awareness regarding evidence based communication practice among nursing personnel. It is analysed in frequency and percentage:

- ❖ Total score for this Structured questionnaire is 11. If the score obtaining is ≥8 then it is considered as the respondents have adequate level of awareness regarding evidence based communication practice. If the score is ≤8 the respondents have inadequate level of awareness.
- ❖ Out of all respondents 63.63% (7) have adequate awareness (score ≥8) about evidence based communication practice and remaining 36.36% (4) have inadequate awareness (≤8) about evidence based communication practice.

FINDINGS OF SECTION C: This section deals with the pre-test and post-test observation checklist for clinical measures. For assessing these the investigator observed the shift handovers done by staff with the help of observation checklist. The following findings were recorded:

PRE TEST OBSERVATION FINDINGS OF CLINICAL OUTCOME:

- 20.59% (7) of adverse events related to miss communication during patient handover like delay to essential tests and treatment take place.
- 79.41% (27) of errors that happened were not recorded.
- 17.65%(6)of medication error is happened due to improper communication
- 100% (34) of hand overs did not happen at the patient's bedside.
- 67.65% (23) of clinical documentation is done accurately.
- 23.53% (8) have discrepancies in patient information from the previous shifts.
- 5.88% (2) patients were readmitted due to improper discharge and handovers.
- 5.88% (2) adverse patient outcome like medication side effects were observed.
- Nurse-to-patient ratio is not maintained in any of the floor or wards.
- 32.35%(11)spent adequate time for handover and maximum staff do not have adequate

POST TEST OBSERVATION FINDINGS OF CLINICAL OUTCOME:

- 44.44 % (24) of adverse events related to miss communication during patient handover like delay to essential tests and treatment take place.
- 85.19% (46) of errors are not recorded.
- 33.33% (18) of medication error is happening.
- 83.33% (45) of hand overs did not happen at the patient's bedside.
- 57.41% (31) of clinical documentation is done accurately.
- 40.74% (22) have discrepancies in hand over.
- 12.96% (7) patients were readmitted.

- 3.70% (2) adverse patient outcome like medication side effects were observed.
- 96.30% (52) nurse-to-patient ratio is not maintained in any of the floor or wards.
- 33.33% (18) spent adequate time for handover.

The time interval between the pretest and post-test was not ideal in this study because, for better effectiveness, reassessment of clinical measures was to be done at regular intervals. From the observation findings it is evident that bedside handovers were increased from 0% to 16.67%. Adverse patient outcomes decreased 5.88% to 3.70%. Nurse-patient ratio increased from 0% to 3.70% and adequate time spent by nurses for handover increased from 32.35% to 33.33%.

FINDINGS OF SECTION D: This section deals with structured rating scale (Likert scale). Questions were based on the experiences related to evidence based communication practice in healthcare settings. Data was collected post intervention.

- 100% nursing personnel experienced that ISBAR format enhances communication
- 81.81% (9)feel adequately trained to use the EBC format and 18.18%(2)feels neutrally trained to use the EBC format.
- 100% (11) of sample answered that ISBAR format improved patient safety.
- 54.55%(6)rated neutral for Using the EBC/ISBAR format requires too much time, 27.27%(3) agreed for using the EBC/ISBAR format requires too much time and 18.18%(2) that EBC/ISBAR format requires too much time.
- 45.45%(5) agreed that EBC/ISBAR format is well-received by my colleagues, 27.27%(3) rated neutral to that EBC/ISBAR format is well-received by my colleagues and 27.27% disagreed that EBC/ISBAR format is well-received by my colleagues,

- 81.82% (9) agreed that EBC/ISBAR format promotes a structured approach to patient handovers,9.09% (1) rated neutral and 9.09% disagreed.
- 81.82% (9) agreed that EBC/ISBAR format helps in reducing information gaps, 9.09% (1) rated neutral and 9.09% (1) believes ISBAR format doesn't reduce information gap.
- 72.73%(8)agreed that EBC/ISBAR format improves interdisciplinary collaboration,18.18%(2) rated neutral and 9.09(1) believes ISBAR format doesn't improve interdisciplinary collaboration
- 81.82%(9) agreed that patient outcomes improved since using the EBC/ISBAR format,18.18%(2) rated neutral for the same
- 72.73% (8) agreed that the health care professionals should receive training on EBC/ISBAR format,27.27%(3) rated neutral for the same.
- 81.82%(9) agreed that they would recommend the EBC/ISBAR format to other healthcare professionals,9.09%(1) rated neutral and 9.09%(1) disagreed for recommendation
- 72.73% (8) agreed that EBC/ISBAR format should be included in nursing education, 18.18% (2) rated neutral and 9.09% (1) believes ISBAR format shouldn't be included in nursing education.

CONCLUSION:

The first objective 'To evaluate effectiveness of evidence based communication practices' and the second objective 'To measure awareness, practice and attitude of nursing personnel towards evidence based communication practice' was met through the pretest and post test assessment. The third objective 'To associate selected demographic variables with evidence based communication awareness' is achieved through Fisher's exact test at the level of significance

P=0.05. Calculated fisher's exact test values were greater than 0.05. Therefore the null hypothesis (H_0) 'There is no significant relationship between demographic variables and evidence based communication awareness' is accepted and the H1 is rejected. Hence there is no significant relationship between demographic variables and evidence based communication awareness.

CHAPTER VI

DISCUSSION, SUMMARY AND CONCLUSION

"After all, the ultimate goal of all research is not objectivity, but truth"

- *Helene Deutsch*

DISCUSSION

Evidence-based communication practices facilitate effective knowledge transfer between shifts and enhance collaboration within interdisciplinary teams. The effectiveness of the communication amongst the clinicals involved is one of the most crucial elements in deciding the outcome of a critically ill patient. It may enhance the standard of treatment and security for patients in clinical settings, as well as teamwork and communication amongst healthcare personnel.

The problem statement of the study is "a study to assess the effects of evidence-based communication techniques on clinical outcome among nursing staff at the selected institution." As a result, the focus of the current study is primarily on evidence-based communication practices among nursing personnel engaged in direct patient care. The results and the discussion of the current investigation are covered in this chapter. The study's findings have been reviewed in relation to the goals specified and have received support from the results of other investigations.

In a study conducted by Jack Pum [2013] questionnaire survey was used to identify factors associated with and specific impact paths between the quality, communication skills and nurses perception on clinical handover on nursing staff from local hospitals in Hongkong. Similarly in a prospective study conducted by Anat Drach – Zahby, Nadim Hadid [2015] examines the relation between strategies the nurses employee during handover and the number and types of treatment errors in patient care in following shifts is conducted by using demographical data and questionnaires. Jaslina Gnanarani [2022] conducted an experimental study to assess the effectiveness of ISBAR handoff protocol on safe handover competence

among nurse interns using a structured questionnaire for data collection. These studies helped the investigator to develop a structured questionnaire including three sections for the present study.

In a quasi – experimental study conducted by Baghai R, Khoshond Shabastari M [2018] among 64 nursing staff working in Razi psychiatric Centre in Urmia to determine the effect of ISBAR communication. Similarly, a study was done by Lee V Jones, Leanne C Jack [2021] among 88 nurses in 152 handover observation in quasi – experimental study to translate the best practice nursing shift handover recommendation in an acute care setting using the Ottawa model for research use and to explore its effect on patient outcome. A focus group study conducted by Ancy J, Spooner R. N [2018] among 17 senior nurses intensive care unit of medical surgical ICU in Australia. This study gave insight to the investigator to conduct the present study among nursing personnel in selected settings who met the inclusion criteria.

In a quasi – experimental study conducted by Behrouz Pakcheshm [2017] to evaluate the impact of using a standard checklist on a clinical handoffs in coronary care unit. The study was performed based on pre and post – test design at Afshar Hospital in Yazd. There were a total of 564 handoffs with the participation of 24 nurses into coronary care units in 2017. Similarly Xialoing Wong, Yi Jung Tung, Sin Yee Peck, Mein Li God [2019] conducted a project to improve clinical nursing handover between registered nurses by conducting a pre and post implementation audits. These studies helped the investigator to develop the method of one group pre- test post – test for the present study.

Sayedesh Ahmas, Fahim Yegane [2016] conducted a clinical audit study in three phrases in Imam Hossein Hospital. The study aimed to audit the current clinical handover according to the ISBAR tool and survey effect of training the ISBAR tool in EMS and EMA staff on improvement of the clinical handover of the patient to ED. The result showed that the clinical handover process doesn't follow standard ISBAR [0.0%]. However after training, 65.3% were performed in accordance with ISBAR. Similarly a cross – sectional study conducted by Lia Chew, Selvi Ramakrishnan, Sazelin Binti, Abu – Bakr [2019] among nurses to determine the perception and compliance on ISBAR tool for hand off communication in tertiary hospital Dammam. The study resulted that the overall perception mean score was 7.73 plus

or minus 0.588. This showed nurses had a good perception and compliance regarding the same.

Jaslina Gnanarani [2022] conducted an experimental study to assess the effectiveness of the ISBAR handoff protocol on safe handover competence among nurses interns of Apollo College of nursing Chennai. The study shows that the majority of interns had adequate competence in the post Intervention [46.9%] after providing education regarding ISBAR protocol. In this study the post – test observation of clinical measures shows 85.19% of errors are not recorded, 57.41% of clinical documentation is done accurately and the adequate time spent for handover is 33.33%. 40.74% have discrepancies in handover. 12.96% patients were readmitted. 3.70% adverse patient outcome like medication side effects was observed. 96.30% nurse to patient ratio is not maintained in any of the floors or wards. 44.44% adverse events take place like delay to essential tests and treatment took place. 33.33% of medication error is happening. 83.33% of the handover did not happen at the patients bed side.

The above quoted literature and present study releases that " Clear communication is the key that opens the door to patient safety,' just like ISBAR" still stands strong and gives the insight that evidence based communication practice should be practiced in the standardized manner for better clinical outcome.

IMPLICATIONS OF THE STUDY

The implications of the study are discussed under the following categories

- Nursing practice
- Nursing education
- Nursing research
- Nursing administration

NURSING PRACTICE

Nursing personnel are in the best position to identify the needs of evidence based communication practice and the need for skill enhancement. Nurses should implement evidence based communication practice in day to day clinical practice. The findings will imply the need for clinical nurses to acknowledge evidence based communication practice. Nurses can utilize this standardized protocol for patient safety and better clinical outcome.

NURSING EDUCATION

Continuing education regarding evidence based communication practice is the way to update in knowledge of the nurses. Integration of theory and practice is a vital need and it is important in the nursing profession. Therefore the nurse educator can use the result of Study as an informative tool to educate the students and the staff nurses. Nursing education must emphasize the importance of evidence based communication practice in the caring profession. It will help to uplift the professional values.

Nursing education should promote inter-professional collaboration and communication. ISBAR can be used as a common language between healthcare professionals from different disciplines.

NURSING RESEARCH

Nursing research is an essential aspect of nursing as it uplifts the profession and develops new nursing norms and body of knowledge through utilization of evidence based communication practice. Longitudinal studies might examine the long-term impact of consistent ISBAR use on healthcare organizations, such as its effect on reducing adverse events, readmissions, or malpractice claims. Nurse researchers can be motivated to follow evidence based communication practice for patient safety and better patient outcome. Findings of the study show that the area needs further exploration.

NURSING ADMINISTRATION

With technological advances and the overgrowing challenges of health care emphasis the nurse administrator must have a responsibility to provide nurses with substantive continuing education opportunities. This will enable nurses to update their knowledge to acquire special skills and demonstrate high quality care.

The nurse administrator should take an active part in the making of health care policy, developing protocols, methods of patient communication. The nurse administrator could arrange a health workshop, conference and discussion in collaboration with other allied health science to make more aware about evidence based communication practice.

RECOMMENDATIONS

With present study‘s results and experience as the foundation, investigator postulates the following recommendation for further studies.

- ❖ A similar study can be conducted on a large sample size.
- ❖ The study can be replicated in different settings with similar facilities.
- ❖ A longitudinal time series study needs to be done to explore the outcomes consistently and in detail.
- ❖ Similar study with different health care workers can be done.
- ❖ Similar study can be utilized as a grounded research to develop protocol of the hospital

LIMITATIONS OF THE STUDY

- ❖ The study was confined to a specific setting.
- ❖ The study findings cannot be generalized as the sample size was small.

PERSONAL EXPERIENCE

"***Nothing ever becomes real till it is experienced.***"

- ***John Keats***

The research process was reinforcing experience for the investigator to earn comprehensive knowledge and understanding of not only the research process but also about the study Variables. Guidance and support from the guide, experts in the field, teachers and hospital authority boosted the confidence to overcome the hurdles faced during research activities. Even though education is provided regarding ISBAR handoffs, continues reinforcement to nursing personnel is required. Investigator was startled with the fact that the nursing personnel doesn't have adequate knowledge on ISBAR handover which is considered as the standardized tool for handoffs.

Entire experience was a great learning lesson, with proper precaution and time management investigator could complete the research in stipulated time period.

CONCLUSION

"***Effective teamwork begins and ends with communication.***"

-Mike Krzyzewski

ISBAR tool was an effective patient safety tool improving quality care. It enhances safe patient care and improving quality is indispensable an effective communication flow. Teamwork and communication between healthcare personnel is essential for achieving optimal patient outcomes but it may leads to adverse outcomes when not followed in appropriate format. Findings of the study show the need for improving knowledge regarding evidence based communication practice. Above all with the present study the investigator was able to understand if not whole but definitely the parts research process which will surely serve fruitful in future. .

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ANNEXURE – A

PERMISSION LETTER

To,

Date:-

Subject:- Permission to Conduct Research Study

Dear Madam / Sir,

_________________________ our Under graduate Student (3rd year B.Sc. Nursing) would like to conduct Research study (Topic: A study to assess the effectiveness of evidence based communication practice on clinical outcomes among nursing personnel at selected institute).

Kindly allow them to conduct the above said study as this is approved by Ethical Review committee of

_____________________________. This research study is required as part of partial fulfilment of completion of B.Sc. nursing under Kerala University of Health Sciences, Thrissur.

We promise to maintain confidentiality with all data collected and it will be used only

for educational purpose.

Thanking you,

Yours truly,

Principal College of Nursing.

ANNEXURE B

LETTER SEEKING EXPERT OPINION IN VALIDATING TOOL & CONTENT

From,

____

____

To,

____

____

Respected Madam/ Sir,

We, _________________________, Third Year B.Sc. Nursing student of _____________________have undertaken a research project in partial fulfilment of Bachelor of Science in Nursing programme on below given topic.

The research topic and objectives are as follows

“A study to assess the effectiveness by of evidence based communication practice on clinical outcomes among nursing personnel at selected institute ".

Objectives

1.To assess the effectiveness of evidence based communication practice on clinical outcomes.

2. To measure awareness, practice, and attitude of nursing personnel towards evidence based communication practice.

3. To associate selected demographic variables with evidence based communication practice and clinical outcomes.

We request you to validate the tool/ lesson plan for planned teaching of our study and give your valuable suggestions.

Yours Faithfully,

Enclosures:

 Research Title and Objective Tool of the research Tool Performa

ANNEXURE C

CERTIFICATE OF VALIDATION

This is to certify that____________________, 3rd year B.Sc. nursing students of ________________conducting study on: "To assess the effectiveness of evidence based communication practice on clinical outcomes among nursing personnel at selected institute" has developed tools to collect data, which have been validated by us.

Date:

Place:

Name of the expert:

Signature:

Designation and seal

APPENDIX D – LIST OF EXPERTS FOR CONTENT VALIDITY

SL No	NAME	DESIGNATION
1	Dr. Sajid Omer	General Manager KMC Anjarakandy
2	Dr. Vidhyadhar NK Ram Rao	Principal KMC Anjarakandy
3	Dr.Bithun Balan	Assoc. Prof Pathology CON, KMC
4	Dr. Vineetha KV	Asst. Prof Pathology CON,KMC
5	Lt Col. Leelamma KJ(Rtd)	Nursing Superintendent KMC Anjarakandy
6	Dr. Satya Shenbega Priya	Principal CON, KMC Anjarakandy
7	Mrs. Usha V	Vice Principal Professor HOD,Dept. of Child Health Nursing CON KMC
8	Mrs. Little Flower P	Professor HOD, Dept. Of Community Health Nursing CON, KMC
9	Mrs. Soumya	Asst. Professor Dept. Of Community Health Nursing CON, KMC
10	Ms. Chaithanya	Statistician Dept. Of medical records KMC
11	Mrs. Jagruti Mhatre	MSN, Nurse Educator Bombay
12	Mrs Pratibha kashid	Manager Tata Hospital
13	Mrs. Sharvari Jagtap	MSN,Nurse Educator Global Hospital

ANNEXURE E

CONSENT FORM

I __________________________ hereby give my consent to be the participant in the study titled "A study to assess the effectiveness of evidence based communication practice on clinical outcomes."

1. I confirm that I have read and understood the information dated___________________ for the above study and had the opportunity to ask questions.

2. I understand that my participation in the study is voluntary and that I am free to withdraw at any time, without giving any reason, without my job or legal rights being affected.

3. I understand that the investigator or the ethical committee and the regulatory authorities will not need my permission to look at my patient handover in respect of current study.

4. I agree not to restrict the use of any data or results that arise from this study provided such a use is only for scientific purposes.

5. I understand that my identity will not be disclosed in any information released to the third parties or publications.

6. I agree voluntarily agree to take part in this study

Name of the subject:

Signature/thumb impression of the subject:

Name of the witness:

Signature/thumb impression of the witness:

Name of the investigator:

Date:

ANNEXURE F

CONSENT RESPONDANCE SHEET

PROBLEM STATEMENT: "A STUDY TO ASSESS THE EFFECTIVENESS OF EVIDENCE BASED COMMUNICATION PRACTICE ON CLINICAL OUTCOMES AMONG NURSING PERSONNEL AT SELECTED INSTITUTE

1. Introduction:

The investigators would like to invite you to read and understand the information provided carefully and decide whether to participate in the research. In case of any doubt, please feel free to discuss with investigators and then take the decision. You may also discuss it with your colleagues or doctor. After reading through the information sheet, if you wish to participate in the study you may do so by signing the consent form, which would be given to you.

2. What is the purpose of the study?

There are certain problems occurred during patient handovers due to miscommunication among nursing personnel. In this study the investigators are helping the nursing staffs to know the effectiveness of evidence based communication practice on clinical outcomes during patient handover.

3. Why I am being requested to participate in this study?

Because you are directly involved in patient handover.

4. Is my participation compulsory?

No. The decision of participate or refrain from the study rests on you. Your decision

will not hamper your duty.

5. What will the study involve?

The study involves a pre-test which will be conducted based on communication tool , a session on evidence based communication practice will be conducted, finally a post-test will be conducted among the sample group to asses you implementation of provided knowledge .

6. Will the results be informed to me?

No.

7. What are the possible benefits of my participation?

The research may/may not be directly beneficial to you. But the information generated by the study could prove the effectiveness of evidence based communication practice during patient handover.

8. Are there any side effects?

There are no apparent side effects of the intervention.

10. What are the risk/inconvenience involved?

There are no apparent risks to you while undergoing the study.

11. Who is funding for the study?

The investigator will bear the cost of the research.

12. Can I withdraw from the study?

You are free to withdraw from the study at any time without giving any explanation for the same. Though it is not mandatory, it is advisable that you inform the investigator about your withdrawal. Your decision will not hamper your regular duty.

13. What about the confidentiality of the data?

All information obtained in the study will be kept confidential and used for scientific purposes only. The information generated by the researcher may be published or presented in scientific meetings. However, your identification information will not be revealed. The information generated may be provided to the ethical committee.

14. Is the study approved by institutional ethical committee?

Yes. The study has been reviewed and approved by the hospital institutional ethics committee and the permission to conduct the study has been granted to the investigator.

ANNEXURE G

TOOL

SECTION A: Structured Questionnaire for Demographic and Clinical Information among nursing personnel.

INSTRUCTIONS: Select only one response per question.

1. Education

a) GNM b)BSc

2. Years of Experience in Healthcare

a) 1-3 Years b)7-10 c) Above 10

3. Clinical Specialty

a) ICU c) Private Ward c) Medical Surgical Ward

4.Average Number of Patient Handovers/Shift:

a) 1-3 c)7-10

b) 4-6 d) Above 10

5.Any formal communication based method is used in your setting during handover?

a) Yes b) No

6.Have you received formal training on communication practices for handover?

b) Yes b) No

7.Are you comfortable with present handover communication method being used in your setting?

c) Yes b) No

8.Are you familiar with the ISBAR format for handover communication?

d) Yes b) No

9.Where do you typically conduct patient handovers?

e) Nursing Stations b) Patient's Room

8.Have you encountered situations where unclear or incomplete handover information in confusion or delays in patient care?

a. Yes b) No

SECTION A: Structured Questionnaire for Demographic and Clinical Information among nursing personnel.

INSTRUCTIONS: Select only one response per question.

1. Education

a)GNM b)BSc

2. Years of Experience in Healthcare

a) 1-3 Years b)7-10 c)Above 10

3. Clinical Specialty

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c) Yes b) No

8.Are you familiar with the ISBAR format for handover communication?

d) Yes b) No

9.Where do you typically conduct patient handovers?

e) Nursing Stations b) Patient's Room

8.Have you encountered situations where unclear or incomplete handover information in confusion or

delays in patient care?

a. Yes b) No

SECTION B: Structured Questionnaire on awareness regarding Evidenced based communication Practice among nursing personnel.

INSTRUCTIONS: Read the questions carefully and select only one answer for each.

1. What does "evidence-based communication practice" refer to?

a) Communication methods based on personal experiences.

b) Communication practices backed by scientific research and best evidence.

c) Communication techniques are popular among healthcare professionals.

2. Why is evidence-based communication important in healthcare?

a) It helps save time during patient interactions.

b) It ensures effective and safe patient care.

c) It is a requirement for administrative purposes.

4. What is the main goal of evidence-based communication practices?

a) To increase the number of patient interactions.

b) To improve patient outcomes through effective communication.

c) To reduce the need for written documentation.

5. How can evidence-based communication practices impact patient safety?

a) No impact on patient safety.

b) Prevents misunderstandings and errors.

c) Only affects administrative procedures.

6. What is the primary purpose of the ISBAR communication format?

a) To increase the complexity of patient handovers.

b) To provide a structured framework for effective communication during handovers.

c) To create confusion among healthcare professionals.

7. What does the acronym "ISBAR" stand for in healthcare communication?

a) Immediate, Speak, Background, Actions, Reassurance

b) Introduction, Situation, Background, Assessment, Recommendation

c) Information, Status, Briefing, Assessment, Recap

8. What is the purpose of using the ISBAR format during patient handovers?

a) It's not used for patient handovers.

b) To make the conversation longer.

c) To ensure vital information is communicated clearly and concisely.

9. How does ISBAR contribute to patient care?

a) It has no impact on patient care.

b) It promotes effective transfer of information, enhancing patient safety.

c) It only applies to administrative tasks.

10. What is the "handover" process in healthcare?

a) A process of exchanging medical equipment.

b) Transferring patient care responsibilities from one healthcare professional to another.

c) A method of updating patient records.

11. When is a handover typically performed?

a) At the beginning of a shift.

b) At the end of a shift.

c) Both at the beginning and end of a shift.

12. How does effective handover benefit patient care?

a) It doesn't have any impact on patient care.

b) It ensures continuity of care, reduces errors, and enhances patient safety.

SECTION C: Observation Checklist for Clinical Measures

Data to be collected Pre and Post Intervention.

Observational Checklist for Assessing the Effectiveness of Evidence-Based Communication Practice

on Clinical Outcomes among Nursing Personnel to be filled by the investigator Instructions:

1.Observe patient handovers communication practices during shifts.

2. Record any incidents or errors related to communication.

3. Monitor patient outcomes, including infection rates and complications.

4. Track length of hospital stay and readmission rates.

5.Record time taken for handovers.

SL No.	PARTICULARS	YES	NO
1.	Adverse events related to miscommunication during patient handovers		
2.	Errors reported in incident reports or health records		
3.	Medication Errors are reported (Incorrect dosages/ Missed medications/ Wrong medications administered)		
4.	Handover takes place at patient's bedside.		
5.	Clinical Documentation is done Accurately		
6.	Discrepancies in patient information before and after handover		
7.	Readmission of patient is noted		
8.	Adverse Patient Outcomes (HAI/ Complications)		
9.	Nurse-to-patient ratio is maintained		
10.	Adequate Time Spent on Handover		

SECTION D: Structured Rating Scale (Likert Scale)

Data to be collected Post Intervention.

Answer the following questions based on your experiences related to evidence-based communication practices in healthcare settings

Please rate the following statements based on your agreement:

EBC: Evidenced based communication

SL No	PARTICULARS	AGREE	NEUTRAL	DISAGREE
1.	The EBC/ISBAR format enhances effective communication during handovers.			
2.	I feel adequately trained to use the EBC/ISBAR format.			
3.	The EBC/ISBAR format improves patient safety.			
4.	Using the EBC/ISBAR format requires too much time.			
5.	The EBC/ISBAR format is well-received by my colleagues.			
6.	The EBC/ISBAR format promotes a structured approach to patient handovers			
7.	The EBC/ISBAR format helps in reducing information gaps.			
8.	The EBC/ISBAR format improves interdisciplinary collaboration.			
9.	I have seen improvements in patient outcomes since using the EBC/ISBAR format.			
10.	Healthcare professionals should receive training on the EBC/ISBAR format.			
11.	I would recommend the EBC/ISBAR format to other healthcare professionals.			
12.	The EBC/ISBAR format should be included in nursing education.			

ANNEXURE H

ETHICAL CLEARANCE CERTIFICATE

KANNUR MEDICAL COLLEGE

ANJARAKANDY INTEGRATED CAMPUS

POST ANJARAKANDY, KANNUR 670 612, KERALA, PHONE: 0497-2856400

041/PO/KMC/EC

05 September 2023

ETHICAL CLEARANCE CERTIFICATE

Project No	09/2023
Project Title	**EVIDENCE BASED COMMUNICATION PRACTICE ON CLINICAL OUTCOME**
Principal Researcher	Ms.Subuhana N Ms.Sreethu KP Ms.Rakhi G Ms.Anet PP Ms.Ansalna L Ms.Mahfoosa Nasir
Co-Researcher	
Guide	Mrs.Nilofar Loladiya Asst Prof, Dept of OBG Nursing College of Nursing, Kannur Medical College
Co-Guide	

This is to certify that the above mentioned research proposal was considered by the Institutional Ethics Committee met on 25 August 2023 and was found to be in accordance with the requirements of the Committee hence Approved on 05 September 2023.

CHAIRMAN
IEC

It is the Principal Researchers responsibility to ensure that all researchers associated with this project are aware of the conditions of approval and which documents have been approved.

The Principal Researchers is required to notify the secretary of the Ethics Committee via amendment or progress report of

1. **Any significant change to the project and the reasons for that change, including and indication of ethical implication (if any).**
2. **Serious adverse effects on participants and the action taken to address those effects (if any).**
3. **The inability of the Principal Researcher to continue in the role or any other change in research personnel involved in the project.**
4. **Any expiry of coverage provided with respect to funded researches.**
5. **A delay of more than six months in the commencement of the project.**
6. **Premature termination or Closure of the project.**
7. **Final Completion of the project.**
8. **Any other unforeseen events or unexpected developments that merit notification.**

ANNEXURE I

LETTER GRANTING PERMISSION TO CONDUCT RESEARCH STUDY

KANNUR MEDICAL COLLEGE

ANJARAKANDY INTEGRATED CAMPUS

POST ANJARAKANDY, KANNUR 670612, KERALA, PHONE: 0497-2856400

KMC/GMO/E/23-12

The Principal
College of Nursing
Kannur Medical College
Anjarakandy

Dear Madam,

Reference: Letter number: CON/08/2023-1 dated
Subject: Request for permission to conduct research study -issue of NOC reg,.

Dear Madam,

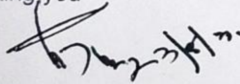
This office has no objection in granting permission to third year BSC students to conduct the following studies

1. A study to assess the knowledge on prevention of complications among patients undergoing hemodialysis at Kannur Medical College , Anjarakandy
2. A study to assess the knowledge on prevention of Nosocomial infections among healthcare workers at Kannur Medical College ,Anjarakandy
3. A study to assess the effectiveness of evidence based communication practice on clinical outcome among nursing personnel at Kannur Medical College , Anjarakandy

The principal investigator is required to adhere to the following conditions throughout the study process:

1. Appropriate approvals shall be obtained from the ethics committee and the copy of the approval letter to be submitted to this office prior to commencement of the study.
2. Patient rights and confidentiality shall be ensured at all points of time during the conduct of the study.
3. The entire process of the study shall be under the direct supervision of the principal investigator and the assigned nursing superintendent of Kannur Medical College.
4. This office is to be informed the date of commencement, progress and completion of the study through the nursing superintendent.

Thanking you



General Manager
Kannur Medical College Anjarakandy

Copy to:

Lt Col Leelamma KJ (Rtd)
Nursing Superintendent