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A STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE REGARDING ENHANCED RECOVERY (ERAS) PROTOCOL AMONG STAFF NURSES IN SELECTED HOSPITALS AT ALUVA

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ABSTRACT

Background of the study: Enhanced Recovery After Surgery (ERAS) is an evidence-based multidisciplinary approach that aims to reduce postoperative complications, shorten hospital stay, improve patient recovery and enhance the quality of care. Nurses play a vital role in the successful implementation of ERAS protocols. Therefore, adequate knowledge and a positive attitude among staff nurses are essential to ensure effective perioperative patient care. **Objectives:** To assess the level of knowledge regarding ERAS protocol among staff nurses, assess the level of attitude toward ERAS protocol, determine the relationship between knowledge and attitude and find the association of knowledge and attitude with selected demographic variables. **Methods:** A quantitative descriptive research design was adopted for the study among 30 staff nurses working in selected hospitals at Aluva. Samples were selected using a convenience sampling technique. Data were collected using a demographic proforma, a structured knowledge questionnaire and a Likert attitude scale. An information booklet on the ERAS protocol was provided to the staff nurses. Descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (Pearson correlation and Chi-square test) were used for data analysis. The findings revealed that 76.7% of the staff nurses had excellent knowledge, 20% had good knowledge and 3.3% had fair knowledge regarding ERAS protocol. Regarding attitude, 56.7% of the staff nurses showed clear agreement, 33.3% showed very strong agreement and 10% showed moderate agreement toward ERAS protocol. **Major findings of the study:** The calculated Pearson correlation coefficient ($r = 0.377$, $p = 0.040$) showed a statistically significant positive relationship between knowledge and attitude regarding ERAS protocol. The calculated Chi-square values showed a significant association between knowledge scores and the demographic variables of age ($\chi^2 = 11.25$), educational qualification ($\chi^2 = 8.73$), total years of clinical experience ($\chi^2 = 8.53$), current area of posting ($\chi^2 = 5.76$), and source of information ($\chi^2 = 7.35$). A significant association was also found between attitude scores and the demographic variables of educational qualification ($\chi^2 = 12.66$) and current area of posting ($\chi^2 = 6.00$) at the 5% level of significance. **Conclusion:** The study concluded that staff nurses possessed good to excellent knowledge and a positive attitude regarding ERAS protocol. A significant positive relationship existed between knowledge and attitude and selected demographic variables influenced both knowledge and attitude. The findings emphasize the need for continuous education and training programmes to strengthen nurses' competency and promote effective implementation of ERAS protocols in clinical practice.

KEYWORDS

Knowledge, Attitude and ERAS.

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INTRODUCTION

"The best surgical outcomes are not achieved in the operating room alone, but through coordinated care before, during and after surgery"
- Henrik Kehlet

Background of the study

Health is a fundamental human right and a vital indicator of national development. The World Health Organization defines health as a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity. In modern healthcare systems, surgical interventions play a significant role in saving lives, correcting deformities, relieving pain and improving quality of life. However, despite advancements in surgical techniques and anesthesia, postoperative complications, delayed recovery, prolonged hospitalization, and increased healthcare expenditures remain major concerns worldwide. Therefore, improving postoperative recovery has become a global priority (WHO, 2024)[1].

Surgery induces a physiological stress response characterized by hormonal, metabolic, and inflammatory changes in the body. This stress response may lead to complications such as infections, thromboembolism, delayed wound healing, and impaired organ function. Minimizing surgical stress and maintaining normal physiological function are crucial for improving recovery outcomes. In response to this need, the concept of Enhanced Recovery After Surgery (ERAS) was developed to optimize perioperative care and ensure faster and safer recovery (Ljungqvist, Scott and Fearon, 2017)[2].

Enhanced Recovery After Surgery (ERAS) is an evidence-based, patient-centered, multidisciplinary approach aimed at reducing surgical stress, maintaining postoperative physiological function and promoting early recovery. The ERAS protocol was pioneered by Professor Henrik Kehlet in the late 1990s and has since been widely adopted across various surgical specialties.

The key components are preoperative education and counseling, optimization of nutrition, avoidance of prolonged fasting, carbohydrate loading, standardized anesthesia, multimodal pain management, early mobilization, and early initiation of oral feeding. Implementation of ERAS protocols including preoperative assessment and risk stratification, patient education and counseling, prehabilitation, nutritional optimization and carbohydrate loading, minimal preoperative fasting, standardized anesthetic techniques, multimodal analgesia, prevention of postoperative nausea and vomiting, maintenance of normothermia, goal-directed fluid therapy, thromboprophylaxis, early removal of drains and urinary catheters, glycemic control, early mobilization, and early initiation of oral feeding has been shown to reduce postoperative complications, shorten hospital stay, lower healthcare costs, and improve patient satisfaction (The ERAS Society Guidelines, 2023)[3].

The success of ERAS protocols largely depends on the effective collaboration of the multidisciplinary healthcare team, particularly nurses. Nurses are directly involved in preoperative preparation, intraoperative coordination, postoperative monitoring, pain management, patient education, early ambulation and nutritional support. The nurses are key agents in implementing evidence-based practices and ensuring patient safety. Their continuous presence at the bedside positions them uniquely to monitor compliance with ERAS components and address patient concerns promptly (ICN, 2023)[4].

Knowledge is an essential component of professional competence. It enables nurses to understand the scientific rationale behind clinical practices and apply them effectively in patient care. Knowledge refers to the understanding and awareness gained through education and experience. Adequate knowledge regarding ERAS protocols empowers nurses to educate patients, prevent complications and adhere to standardized perioperative care pathways. Conversely, inadequate knowledge may result in inconsistent practices and reduced protocol adherence (Polit and Beck, 2021)[5].

ERAS Protocol help reduce hospital bed occupancy in known India’s overburdened public hospitals. By early mobilization and oral feeding, ERAS lowers the risk of hospital acquired infection and deep vein thrombosis. Standardized ERAS pathways improve teamwork between

surgeons, anesthetists and nurses, helping them to build a protocol driven culture (NMCH Patna 2024).

Need and significance of the study

Major surgery is a critical component of global health systems and is essential for treating life-threatening conditions such as trauma, cancer, obstetric complications, and congenital disorders. More than 300 million surgical procedures are performed worldwide each year; however, approximately 5 billion people still lack access to safe and affordable surgical care. It is estimated that an additional 143 million surgeries are needed annually to meet the global disease burden, and surgical conditions account for nearly 13% of the world's disability-adjusted life years (DALYs). These figures highlight the major gap in surgical access and emphasize the importance of research to improve surgical capacity, safety, and equity worldwide (World Health Organization, 2025)[6].

In ERAS, care is partnership-based, meaning responsibility is shared between the nurse and the patient. Unlike traditional care where the patient remains passive, ERAS encourages the patient to become an active participant in recovery. The nurse explains the recovery pathway before surgery, sets daily goals such as walking, breathing exercises, oral intake and provides motivation and reassurance. When patients understand the plan, they experience less fear, cooperate better, and begin mobilizing earlier (Lovegrove J, 2022)[7].

Trust between the nurse and patient helps reduce the surgical stress response. Pre-operative anxiety can increase cortisol levels, heighten pain perception, and delay healing. When nurses communicate clearly and empathetically, the patient's anxiety decreases, the need for analgesics reduces and recovery improves (Xue B 2022)[8].

During recovery in ERAS, patients are encouraged to perform activities they usually avoid, such as early ambulation, early oral feeding and breathing exercises. Many patients initially resist these measures because they believe rest promotes healing. A strong therapeutic relationship helps the nurse provide encouragement, reassurance of correction of misconceptions and emotional support. Close and continuous interaction between nurses and patients in ERAS helps in the early detection of complications such as ileus, nausea, pain intolerance and immobility.

Early reporting allows prompt intervention, which reduces postoperative complications (The ERAS Society guidelines 2019)[9].

Attitude and knowledge play an equally important role in the successful implementation of clinical guidelines. A positive attitude among nurses towards ERAS protocols can enhance motivation, teamwork, and willingness to adopt new evidence-based practices. On the other hand, resistance to change, lack of confidence, or negative perceptions may hinder effective implementation. Studies suggest that both knowledge and attitude significantly influence clinical performance and quality of patient care (Smith and Brown, 2022)[10].

Although these studies provide valuable insights into nurses' knowledge and attitudes regarding ERAS protocols in different specialties and regions, there is a lack of similar studies conducted among staff nurses. Differences in healthcare settings, institutional policies, availability of training programs, and patient care practices necessitate local evidence to understand the existing level of knowledge and attitude of nurses toward ERAS protocols. Hence, this study is undertaken to assess the knowledge and attitude of staff nurses regarding the Enhanced Recovery After Surgery (ERAS) protocol in order to identify knowledge gaps and to provide a basis for planning educational and administrative interventions for effective implementation of ERAS protocols.

Major surgery is often associated with complications such as pain, cardiopulmonary problems, infections, thromboembolic events, cognitive changes, nausea, ileus, fatigue, and delayed recovery. Beyond technical surgical or anesthetic errors, the main cause of postoperative morbidity is the body's stress response to surgery, which increases the workload on organs. Existing diseases and organ dysfunction further raise complication rates and prolong hospital stay. To address this, clinical guidelines and risk assessment tools have been developed to evaluate cardiac, pulmonary, and thromboembolic risks and to guide preventive measures. A coordinated, multimodal care approach may significantly reduce

surgical complications, enhance recovery and decrease overall healthcare costs (Henrick Kehlet, British Journal of Anesthesia, 1997)[11].

In India, AIIMS hospital in Delhi, the Department of Pain Medicine and Critical Care unit practiced ERAS protocol to improve the surgical outcomes by optimizing the perioperative care by reducing the pain by using multimodal analgesia. They used epidural analgesia with nonopioid medications for operative patients. This combined approach alleviates the postoperative pain more effectively and minimizes the side effects associated with opioid use such as nausea, constipation, and sedation. This leads to faster patient mobilization and also reduced hospitalization (Amit Kumar Malviya and Puneet Khanna 2024)[12].

ERAS protocols are designed to minimize the body's stress response to surgery, which includes hormonal and inflammatory changes. By using strategies such as minimal fasting, carbohydrate loading before surgery and optimized anesthesia, ERAS helps maintain metabolic stability. Hence, the researcher is interested to assess the knowledge and attitude regarding ERAS protocol among staff nurses.

Statement of the problem

"A study to Assess the Knowledge and Attitude regarding Enhanced Recovery After Surgery (ERAS) protocol among Staff Nurses in selected Hospitals Aluva"

Objectives

Assess the level of knowledge regarding Enhanced Recovery After Surgery (ERAS) protocol among staff nurses.

Assess the level of attitude regarding Enhanced Recovery After Surgery (ERAS) protocol among staff nurses.

Determine the relationship between knowledge and attitude regarding Enhanced Recovery After Surgery (ERAS) protocol among staff nurses.

Find out the association between the level of knowledge regarding Enhanced Recovery After Surgery (ERAS) protocol with the selected demographic variables.

Find out the association between the level of attitude regarding Enhanced Recovery After Surgery (ERAS) protocol with the selected demographic variables.

Operational definitions

Assess

It refers to the evaluation of knowledge and attitude among staff nurse by using structured questionnaire and Likert scale.

Knowledge

It refers to how well staff nurses understand and are aware of the Enhanced Recovery After Surgery (ERAS) protocol.

Attitude

In this study, attitude refers to the thoughts, feelings, and beliefs of staff nurses towards the ERAS protocol.

Enhanced Recovery After Surgery (ERAS) Protocol

ERAS pathways are structured, multidisciplinary, evidence-based approaches to perioperative care aimed at reducing complications and improving recovery.

Staff Nurses

In this study, staff nurse is a qualified registered nurse working in selected Hospitals in Aluva who are directly involved in caring for surgical patients.

Hospital

A hospital is an institution for the care, cure, and treatment of the sick and injured, and for the study of diseases and training of healthcare professionals.

Assumption

Staff nurses have varying levels of knowledge and a positive attitude towards ERAS protocol.

Adequate knowledge of ERAS protocols among staff nurses will lead to better patient care.

Hypothesis

H1: There is a significant relationship between knowledge and attitude regarding ERAS protocol among staff nurses.

H2: There will be a significant association between the level of knowledge regarding ERAS protocol with the selected demographic variables.

H3: There will be a significant association between the level of attitude regarding ERAS protocol with the select

REVIEW OF LITERATURE

"A literature review is a body of text that aims to review the critical points of knowledge on a particular topic of research" -Creswell, 2013

Literature related to knowledge of staff nurses regarding enhanced recovery after surgery protocols

A descriptive cross-sectional study was conducted in selected cardiac surgery units of tertiary care hospitals in Turkey to assess nurse's knowledge regarding Enhanced Recovery After Surgery (ERAS) protocols. A quantitative approach was used and data were collected using a structured questionnaire covering preoperative, intraoperative, and postoperative aspects of ERAS. The study included 50 cardiac surgery nurses selected through convenience sampling. The findings showed that 100% of nurses had a moderate level of knowledge, with a significant association between knowledge level and higher educational status. The study highlighted the need for ongoing education and training to improve ERAS implementation (Doruker 2023).

A descriptive cross-sectional study was conducted in cardiac surgery units across 50 hospitals in America to assess nurse's knowledge regarding Enhanced Recovery After Surgery (ERAS)

protocols. A quantitative approach was used, and data were collected using a structured questionnaire covering preoperative, intraoperative, and postoperative ERAS components. The study included 1,500 cardiac surgery nurses selected through convenience sampling. The findings revealed that 100% of nurses had insufficient knowledge regarding ERAS protocols, indicating a significant need for educational interventions and training programs (Nihal Celikturk *et al*, 2023).

Literature related to attitude of staff nurses regarding enhanced recovery after surgery.

A descriptive cross-sectional study was conducted at the University Medical Center, Ho Chi Minh City, to assess knowledge and attitude regarding Enhanced Recovery After Surgery (ERAS) among nurses and anesthesia technicians. A quantitative approach was used, and data were collected using a structured questionnaire. The study included 193 participants selected through convenience sampling. The findings showed that about 70-80% of participants had good knowledge and a positive attitude towards ERAS. However, only 40-50% consistently implemented ERAS guidelines, indicating a gap between knowledge and practice (Ho Tat Bang *et al*, 2024).

Literature related to relationship between knowledge and attitude of staff nurses regarding enhanced recovery after surgery

A descriptive study was conducted in the Turkish Republic of Northern Cyprus hospital to assess staff nurse's knowledge and attitude towards Enhanced Recovery After Surgery (ERAS) protocols. A structured questionnaire was used for data collection. The sample was selected through convenience sampling, but the exact sample size was not reported. The findings showed that about 55–65% of nurses had moderate knowledge, while 70-80% had a positive attitude towards ERAS, highlighting the need for ongoing education and training (Yildiz K *et al*, 2024).

A descriptive correlational study was conducted in a cardiac surgery clinic in Turkey to assess nurse's knowledge and attitude towards ERAS protocols using a structured questionnaire. The sample was selected through non-probability sampling, and the exact sample size was not specified. The findings revealed that 65-75% of nurses had adequate knowledge and 70–85% had a positive attitude. A positive relationship was found between knowledge and attitude, emphasizing the importance of continuous education (Doruker CN *et al*, 2023).

Literature related to association between the level of knowledge on enhanced recovery after surgery and selected demographic variables

A descriptive cross-sectional study was conducted in 22 tertiary hospitals across 14 provinces in China to assess knowledge, attitude and practice regarding Enhanced Recovery After Surgery (ERAS) among pediatric surgical nurses. Data were collected using a structured questionnaire. The study included 855 nurses selected through convenience sampling. The findings showed that nurses had an overall knowledge score of about 82%, but gaps existed in preoperative and postoperative care, with some areas having less than 50% correct responses. Education

level and clinical experience were significantly associated with knowledge, attitude, and practice (Ke- Xian Lui *et al*, 2023).

Literature related to association between the level of attitude on enhanced recovery after surgery protocol and selected demographic variables

A descriptive cross-sectional study was conducted in clinical hospital settings in Turkey explored nurse's knowledge of Enhanced Recovery After Surgery (ERAS) and their attitudes toward using the ERAS protocol in daily clinical practice. The study included staff nurses from clinical settings and used a structured questionnaire with convenience sampling. The findings revealed a moderate and significant positive relationship between nurses' knowledge and their attitudes, meaning that nurses who had higher knowledge of ERAS were more likely to have a positive attitude toward applying the protocol in practice (Nihal Celikturk *et al*, 2024).

A descriptive cross-sectional study was conducted in a university hospital in Izmir Turkey examined the knowledge and attitudes of cardiac surgery nurses toward the Enhanced Recovery After Surgery (ERAS) protocol. The study was carried out using a structured questionnaire and a convenience sampling method. Fifty cardiac surgery nurses participated in the study. The findings showed that nurses had a moderate level of knowledge and generally positive attitudes toward ERAS. A significant positive relationship was found between nurse's knowledge and their attitudes. The study emphasized the need for regular education and training programs to improve nurse's knowledge and ensure effective implementation of the Enhanced recovery after surgery protocol in clinical practice (Tugba Nur Oden *et al*, 2023).

A quantitative descriptive study conducted in the surgical clinics of a state hospital in Northern Cyprus. The study explored that the knowledge of nurses about perioperative Enhanced Recovery After Surgery (ERAS) protocols. Nurses working in these units participated in the study, and data were collected using a structured questionnaire with convenience sampling. The results highlighted that most nurses had only a moderate level of knowledge about Enhanced recovery after surgery. Many had not received formal training on Enhanced recovery after surgery even though they believed the protocols were helpful for patient recovery. The authors emphasized that providing proper education and encouraging evidence-based practice are essential to improve nurses understanding and effective use of Enhanced recovery after surgery protocols in clinical settings (Kareem Yildiz *et al*, 2024).

SUMMARY

The literature review reveals considerable variation in nurse's knowledge and attitudes toward the Enhanced Recovery After Surgery (ERAS) protocol. Many nurses have inadequate to moderate knowledge, particularly where training is limited, while better knowledge and positive attitudes are seen with prior education. Most studies reported a positive relationship between knowledge and attitude, influenced by factors such as education and work experience. Based on these findings, the present study aims to assess the knowledge and attitude of staff nurses regarding ERAS in selected hospitals at Aluva and their association with demographic variables. The study findings will help identify learning needs and guide the development of an information booklet to enhance effective ERAS implementation in clinical practice.

METHODOLOGY

Research methodology is the framework that guides how research is conducted. It is the science dealing with the systematic methods used by the researcher to study a research problem along with the logic behind them. It includes identifying the problem, collecting data, analyzing it, and drawing conclusions.

This chapter deals with the research approach, research design, setting of the study, population, variables, sample size, sampling technique, inclusion criteria, exclusion criteria, data collection instrument, content validity, reliability, description of the tool, data collection method, and plan for data analysis.

Research approach

In this study, the researcher adopted quantitative research approach.

Research design

Research design is a framework of research methods and techniques chosen by the researcher to conduct the study. Research design selected for the present study is descriptive.

Variables

"A variable is a characteristic or attribute of an individual or organization that can be measured or observed"- Creswell

Dependent variable

Knowledge and attitude regarding ERAS protocol.

Influencing variables

Age, gender, marital status, educational qualification, total year of clinical experience, current area of posting, previous experience in surgical units, source of information about ERAS protocol, positional status of nurse, hospital category.

Setting of the study

Setting of the study is defined as the specific location and conditions under which data collection takes place, including hospitals, communities, or institutions, along with relevant contextual features- Polit and Beck

The study was conducted in Carmel Hospital, Ashokapuram and Sanjoe Hospital, Perumbavoor. Carmel Hospital in Ashokapuram is owned and managed by the Congregation of the mother of Carmel (CMC), specifically under the Vimala Province, Ernakulam. This hospital offers various departments such as Orthopedics, Gynecology, General Medicine, Pediatrics and ENT, along with facilities like a blood bank and ambulance services while Sanjoe Hospital in Perumbavoor is owned and managed by the Franciscan Clarity Congregation (FCC).This hospital offers various departments such as General Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Orthopedics, Cardiology, Neurology, Nephrology, Urology, Gastroenterology, Pulmonology, ENT, Dermatology, Psychiatry, Dentistry, and Emergency/ICU services.

Population

"Population is a set of all cases or units about which generalizations are made" - Kerlinger

The population of the study includes all staff nurses working in selected hospitals at Aluva.

Sample and sampling technique

"Sampling technique is the process of selecting a subset of a population to represent the whole"-Polit and Hungler

A non-probability convenience sampling technique will be adopted to select the samples for the study.

Inclusion criteria

Aged between 20 years – 60 years and above.
Belongs to both genders.
Able to understand english.
Able to follow instructions.

Exclusion criteria

Aged above 70 years.
Unwilling participants.
Nurses who are on leave during data collection.
Nurses who have already undergone specialized ERAS training.

Tool / instruments

Description of tool

The tools consist of three sections.

SECTION A: Tool for assessing demographic data.

SECTION B: Structured questionnaire to assess knowledge regarding ERAS protocol

SECTION C: Likert scale to assess attitude regarding ERAS protocol

SECTION A: Tool for assessing demographic data

It consists of demographic information such as age, gender, marital status, educational qualification, total years of experience, current area of posting, previous experience in surgical units, source of information about ERAS protocol, positional status of nurse and hospital category.

Section B: Knowledge questionnaire

Contains multiple-choice questions related to ERAS protocol

Section C: Attitude scale

Consists of Likert scale statements to assess attitude toward ERAS protocol.

CONTENT VALIDITY

"Validity is the degree to which an instrument measures what it is intended to measure" -Denise F. Polit

To ensure the research study and to get the content validity, the objectives and prepared data tool was

submitted to 6 experts and obtained suggestions from departments such as Medical surgical nursing, Obstetrics and gynecological nursing, Pediatric nursing, Mental health nursing and Community health nursing. Modifications are made in demographic variables.

Reliability of the tool

"Reliability is the extent to which a test yields consistent results" - L.J. Cronbach

Reliability of the knowledge was established using split half method. The tool was administered to 10 staffs, who are not included in the main study. The score was divided odd and even. Karl Pearson correlation coefficient was tabulated which was 0.61. Spearman Brown prophecy was used. Final reliability was 0.76, which indicating that the tool was reliable.

Pilot study

"A pilot study is a preliminary study used to test research procedures, assess the feasibility of the study and refine research instruments before conducting the main study" - Creswell

To test the feasibility, relevance and practicability of the research study, pilot study was performed in Carmel Hospital, Aluva. A written permission was taken from the director. For pilot study, 10 samples were selected with the age of 20 and 40 in the same manner of original study and the tool was feasible and convenient and proceeded in the main study.

Method of data collection

The study was conducted over a period of two weeks. Prior to the commencement of data collection, written permission was obtained from the concerned authorities. The researcher then proceeded with the study accordingly. The researcher introduced herself to the participants and clearly explained the purpose and objectives of the study. Confidentiality of the information provided was assured. Informed consent was obtained from each participant individually before initiating the data collection process. A structured questionnaire was used to assess the knowledge of the participants and a Likert scale was used to assess their attitude. The questionnaire was administered to the participants, and adequate time was provided for them to respond. Only those individuals who were willing to participate and provided consent were included in the study. The researcher ensured that the data collection process was conducted in a systematic and ethical manner

Plan for data analysis

Both descriptive and inferential statistics will be used.

Demographic variables will be analyzed using frequency and percentage

Knowledge and attitude levels will be analyzed using mean and standard deviation

Association with demographic variables will be analyzed using chi-square test

ANALYSIS AND INTERPRETATION

Data analysis and interpretation of data is the most important part of any research process. It involves the process of organizing and synthesizing the data systematically and summarizing and comparing the data.

The objective of this chapter is to summarize the collected data, interpret the findings and compare the research variables to identify their association, which can be subjected to statistical data testing. The data obtained were analyzed using both descriptive and inferential statistical methods. Suresh K Sharma, 2018

The study findings is tabulated as follows

The above table showed that with regard to age among staff nurse 27(90%) of them were between 20 and 40 years, 3(10%) of them were between 41 and 60 years, none of them are above 60 years.

The above table showed that with regard to gender among staff nurse, 26(86.7%) of them were females and 4(13.3%) of them were males.

The above table showed that with regard to marital status among staff nurse. 10(33.3%) of them were single, 20(66.7%) of them were married and none of them were widowed and divorced.

The above table showed that with regard to educational qualification among staff nurse. 12(40%) of them were diploma, 17(56.7%) of them were graduate,1 (3.3%) of them were postgraduate and none of them were others.

The above table showed that with regard to clinical experience among staff nurse. 12(40%) of them were

between 1 to 5 years, 6(20%) of them were between 6 to 10 years, 9(30%) of them were between 11 to 15 years and 3(10%) of them were above 15 years of experience.

The above table showed that with regard to current area of posting among staff nurse. 5(16.7%) of them were ICU, 18(60%) of them were ward,7(23.3%) of them were operation theatre and none of them were others.

The above table showed that with regard to previous experience in surgical units among staff nurse. 11(36.6%) of them were below 1 year, 13(43.5%) of them were between 1 to 3 years, 2(6.6%) of them were between 4-6 years and 4(13.3%) of them were above 6 years of experience.

The above table showed that with regard to source of information about ERAS protocol among staff nurse. 13(43.4%) of them were in service education, 1(3.3%) of them were workshop/conference 6(20%) of them were self -learning and 10(33.3%) of them were other

Sources.

The above table showed that with regard to postional status among staff nurse. 27(90%) of them were staff nurse, 3(10%) of them were head nurse and none of them were supervisors and others.

The above table showed that with regard to hospital category among staff nurse. 23(76.7%) of them were public hospital, 7(23.3%) of them were multi-specialty hospital and none of them were primary health centre and rehabilitation centre.

DESCRIPTION OF KNOWLEDGE

The knowledge on ERAS protocol was assessed with a self-administered questionnaire and was graded as follows: 80% - 100% as excellent knowledge, 60% - 79% as good knowledge, 40% - 59% as fair knowledge and below 40% as poor knowledge.

The data analyzed using descriptive statistics and in terms of frequency and percentage distribution of subjects according to the grading of the knowledge of ERAS protocol.

From the above table, it is clear that 23(76.7%) of them were excellent knowledge, 6(20%) of them were good knowledge, 1(3.3%) of them were fair knowledge and none of them were poor knowledge level.

The attitude on ERAS Protocol was assessed by using Likert scale score by self-administered questionnaire, where scores of 60%–80% indicated very strong agreement, 40%–59% indicated clear agreement, 20%–39% indicated low agreement and below 20% indicated weak agreement.

The data was analyzed using descriptive statics in terms of frequency percentage distribution of subject according to the grading of the attitude on ERAS protocol among staff nurse.

From the above table, it is clear that 10(33.3%) of them were very strong agreement, 17(56.7%) of them were clear agreement, 3(10%) of them were moderate agreement and none of them were low agreement and weak agreement of attitude level.

The analysis showed a statistically significant positive correlation between knowledge and attitude, $p = 0.040$. This indicates that higher knowledge levels are moderately associated with more positive attitudes among participants.

The above table showed that: the calculated chi-square values exceeded the tabulated chi-square value of 3.84 at the 5% level of significance, indicating a significant association between the knowledge scores and the selected demographic variables such as age ($\chi^2 = 11.25$), educational qualification ($\chi^2 = 8.73$), total years of experience ($\chi^2 = 8.53$), current area of posting ($\chi^2 = 5.76$) and source of information ($\chi^2 = 7.35$).

Conversely, the calculated chi-square values were lower than the tabulated chi-square value of 3.84 at the 5% level of significance, indicating no significant association between the knowledge scores and the selected demographic variables such as gender ($\chi^2 = 0.123$), marital status ($\chi^2 = 0.178$), previous experience ($\chi^2 = 2.11$), positional status ($\chi^2 = 0.417$) and hospital category ($\chi^2 = 0.080$).

The above table showed that the calculated chi-square value exceeded the tabulated chi-square value of 3.84 at the 5% level of significance, indicating a significant association between the attitude scores and the demographic variables of educational qualification and current area of posting. Conversely, the calculated chi-square values were lower than the

tabulated value of 3.84 for age, gender, marital status, total years of experience, previous experience, source of information, positional status, and hospital category, indicating no significant association between the attitude scores and these selected demographic variables

SUMMARY

The present study was conducted to assess the knowledge and attitude regarding Enhanced Recovery After Surgery (ERAS) protocol among staff nurses working in selected hospitals at Aluva. The study also aimed to determine the relationship between knowledge and attitude and to find their association with selected demographic variables. ERAS protocol plays a vital role in improving postoperative recovery, reducing complications, and enhancing the quality of patient care. Therefore, adequate knowledge and a positive attitude among staff nurses are essential for the successful implementation of ERAS protocols.

The objectives of the study were to assess the level of knowledge regarding ERAS protocol among staff nurses, assess the level of attitude toward ERAS protocol, determine the relationship between knowledge and attitude and find the association of knowledge and attitude with selected demographic variables such as age, gender, marital status, educational qualification, total years of clinical experience, current area of posting, previous experience in surgical units, source of information, positional status, and hospital category. A quantitative descriptive research design was adopted for the study. The study was conducted among 30 staff nurses working in selected hospitals at Aluva. Samples were selected using a convenience sampling technique. The tools used for data collection included a demographic proforma, a structured knowledge questionnaire, and a Likert scale to assess attitude. Data were collected after obtaining permission from the concerned authorities and informed consent from the participants. Confidentiality and anonymity of the participants were maintained throughout the study.

The findings revealed that 76.7% of the staff nurses had excellent knowledge regarding ERAS protocol, 20% had good knowledge and 3.3% had fair knowledge. None of the participants had poor knowledge. Regarding attitude, 56.7% of the staff nurses showed clear agreement toward ERAS protocol, 33.3% showed very strong agreement, and 10% showed moderate agreement. None of the participants demonstrated a low or weak level of agreement.

The study also revealed a statistically significant positive relationship between knowledge and attitude regarding ERAS protocol ($r = 0.377$, $p = 0.040$), indicating that higher knowledge was associated with a more positive attitude.

A significant association was found between knowledge scores and the demographic variables of age, educational qualification, total years of clinical experience, current area of posting, and source of information ($p < 0.05$). However, no significant association was observed with gender, marital status, previous experience, positional status, or hospital category ($p > 0.05$).

A significant association was also observed between attitude scores and the demographic variables of educational qualification and current area of posting ($p < 0.05$). No significant association was found with age, gender, marital status, total years of clinical experience, previous experience, source of information, positional status, or hospital category ($p > 0.05$).

The study concludes that staff nurses possess good to excellent knowledge and a positive attitude toward ERAS protocol. It also demonstrates a significant positive relationship between knowledge and attitude, indicating that improving nurses' knowledge may promote a more positive attitude toward ERAS implementation. Continuous education and training programmes are recommended to further enhance nurses' knowledge and facilitate the effective implementation of ERAS protocols in clinical practice.

DISCUSSION, SUMMARY AND CONCLUSION

INTRODUCTION

The present study was intended to assess the knowledge and attitude regarding Enhanced

Recovery After Surgery (ERAS) protocol among staff nurses working in selected hospitals at Aluva.

Objectives

Assess the level of knowledge regarding Enhanced Recovery After Surgery (ERAS) protocol among staff nurses.

Assess the level of attitude regarding Enhanced Recovery After Surgery (ERAS) protocol among staff nurses.

Determine the relationship between knowledge and attitude regarding Enhanced Recovery After Surgery (ERAS) protocol among staff nurses.

Find out the association between the level of knowledge regarding Enhanced Recovery After Surgery (ERAS) protocol with the selected demographic variables.

Find out the association between the level of attitude regarding Enhanced Recovery After Surgery (ERAS) protocol with the selected demographic variables.

DISCUSSION

The present study was conducted to assess the knowledge and attitude regarding Enhanced Recovery After Surgery (ERAS) protocol among staff nurses working in selected hospitals at Aluva. The study also aimed to determine the relationship between knowledge and attitude and their association with selected demographic variables.

Knowledge regarding eras protocol

The findings of the study revealed that the majority of staff nurses (76.7%) had excellent knowledge regarding ERAS protocol, 20% had good knowledge, and only 3.3% had fair knowledge. None of the participants had poor knowledge.

These findings indicate that most staff nurses are well aware of ERAS principles. This may be due to increasing awareness of evidence-based practices and institutional emphasis on improving postoperative recovery outcomes. Adequate knowledge among nurses is essential for effective implementation of ERAS protocols, as they play a key role in perioperative patient care.

Attitude towards eras protocol

The study findings showed that the majority of staff nurses (56.7%) had agreement, 33.3% had strong agreement, and 10% had moderate agreement toward ERAS protocol. None of the participants demonstrated a negative attitude.

This suggests that nurses generally have a positive attitude toward ERAS protocol. A positive attitude is crucial for successful implementation, as it influences adherence to guidelines and improves patient outcomes.

Relationship between knowledge and attitude

The present study revealed a statistically significant relationship between knowledge and attitude regarding ERAS protocol among staff nurses ($p < 0.05$).

This indicates that higher knowledge levels are associated with more positive attitudes. Nurses who are better informed about ERAS protocols are more likely to accept and implement them effectively in clinical practice.

Association with demographic variables

The study also showed a statistically significant association between knowledge and selected demographic variables, as well as between attitude and demographic variables ($p < 0.05$).

This suggests that demographic factors such as age, educational qualification, years of experience, and exposure to ERAS-related information may influence knowledge and attitude levels among staff nurses.

SUMMARY

The study was conducted to assess the knowledge and attitude regarding ERAS protocol among staff nurses in selected hospitals at Aluva and to determine their association with selected demographic variables.

A quantitative descriptive research design was adopted. The sample consisted of 30 staff nurses selected through purposive sampling technique. Data were collected using a demographic proforma, structured knowledge questionnaire, and Likert scale for attitude assessment. Ethical principles such as informed consent, confidentiality and anonymity were maintained.

The major findings of the study were

Majority (76.7%) of staff nurses had excellent knowledge, 20% had good knowledge and 3.3% had fair knowledge.

Most nurses had a positive attitude toward ERAS protocol, with 56.7% agreement and 33.3% strong agreement.

A statistically significant relationship was found between knowledge and attitude ($p < 0.05$).

Significant association was observed between knowledge and selected demographic variables.

Significant association was also found between attitude and selected demographic variables.

Table No.1: Knowledge questionnaire

S.No	Score	Interpretation
1	80% - 100%	Excellent knowledge
2	60% - 79%	Good knowledge
3	40% - 59%	Fair knowledge
4	Below 40%	Poor knowledge

Table No.2: Attitude scale

S.No	Score	Interpretation
1	80%-100%	Very strong agreement
2	60%-79%	Clear agreement
3	40%-59%	Low agreement
4	Below 40%	Weak agreement

Table No.3: Distribution of demographic variables with regard to age of staff nurse in selected hospitals Aluva

S.No	Demographic variable Age	Number	Percentage
1	20-40 years	27	90
2	41-60 years	3	10
3	Above 60 years	-	-

Table No.4: Distribution of demographic variables with regard to gender of staff nurse in selected hospitalsAluva

S.No	Demographic variables Gender	Number	Percentage
1	Male	4	13.3
2	Female	26	86.7

Table No.5: Distribution of demographic variables with regard to marital status of staff nurse in selected hospitals Aluva

S.No	Demographic variables Marital status	Number	Percentage
1	Single	10	33.3
2	Married	20	66.7
3	Widowed	-	-
4	Divorced	-	-

Table No.6: Distribution of demographic variables in regard to educational qualification of staff nurse in selected hospitals Aluva

S.No	Demographic variables Educational qualification	Number	Percentage
1	Diploma	12	40
2	Graduate	17	56.7
3	Postgraduate	1	3.3
4	Others	-	-

Table No.7: Distribution of demographic variables with regard to total years of experience of staff nurse in selected hospital Aluva

S.No	Demographic variable Total years of experience	Frequency	Percentage
1	1-5 Years	12	40%
2	6-10 Years	6	20%
3	11-15Years	9	30%
4	>15 Years	3	10%

Table No.8: Distribution of demographic variables with regard to current area of posting of staff nurse in selected hospitals Aluva

S.No	Demographic variables Current area of posting	Number	Percentage
1	ICU	5	16.7
2	Ward	18	60
3	Operation Theatre	7	23.3
4	Others	-	-

Table No.9: Distribution of demographic variables with regard to previous experience in surgical units of staff nurse in selected hospitals Aluva

S.No	Demographic variables Previous experience in surgical units	Number	Percentage
1	<1 Year	11	36.6
2	1-3 Years	13	43.5
3	4-6 Years	2	6.6
4	>6 Years	4	13.3

Table No.10: Distribution of demographic variables with regard to sources of information about ERAS protocol in staff nurse in selected hospitals Aluva

S.No	Demographic variables Source of information about ERAS protocol	Number	Percentage
1	In service education	13	43.4
2	Workshop/Conferences	1	3.3
3	Self-learning	6	20
4	Others	10	33.3

Table No.11: Distribution of demographic variables with regard to positional status of nurse in selected hospitals Aluva

S.No	Demographic variables Positional status of nurse	Number	Percentage
1	Staff nurse	27	90
2	Head nurse	3	10
3	Supervisor	-	-
4	Others	-	-

Table No.12: Distribution of demographic variables with regard to hospital category of staff nurse in selected hospitals Aluva

S.No	Demographic variables Hospital category	Number	Percentage
1	Public hospital	23	76.7
2	Multi-specialty hospital	7	23.3
3	Primary health center	-	-
4	Rehabilitation center	-	-

Table No.13: Frequency and percentage of level of knowledge score regarding ERAS protocol among staff nurses

S.No	Knowledge score	Frequency	Percentage
1	Poor	-	-
2	Fair	1	3.3
3	Good	6	20
4	Excellent	23	76.7

Table No.14: Distribution of level of attitude regarding ERAS protocol among staff nurses Aluva n=30

S.No	Attitude score	Frequency	Percentage
1	Very strong agreement	10	33.3
2	Clear agreement	17	56.7
3	Moderate agreement	3	10
4	Low agreement	-	-
5	Weak agreement	-	-

Table No.15: Relationship between level of knowledge and attitude regarding ERAS protocol among staff nurses n=30

S.No	Variables	Mean	Sd	Median	Chi-square	df	p-value
1	Knowledge	17.567	2.569	18	4.26	1	0.040
2	Attitude	61.867	3.674	61			

p=<0.05 - statistically significant

Table No.16: Association between knowledge scale score with selected demographic variables

S.No	Demographic variables	Knowledge score		Calculated value of chi-square	Tabulated value of chi-square at 5% LOS
		Below mean	Above mean		
Age					3.84
1	Below 40 years	4	14	11.25 S	
2	Above 40 years	11	1		
Gender					
3	Male	3	1	0.123	
4	Female	18	8	NS	
Marital status					
5	Single	7	3	0.178	
6	Married	14	6	NS	
Educational qualification					
7	Degree/Diploma	21	4	8.73	
8	Postgraduate	1	4	S	
Total years of experience					
9	Less than 10 years	12	3	8.53	
10	More than 10 years	3	12	S	
Current area of posting					
11	ICU	21	4	5.76	
12	Ward	1	4	S	
Previous experience					
13	Less than 3 years	4	2	2.11	
14	More than 3 years	2	18	NS	
Source of information					
15	Formal education	9	6	7.35	
16	Self-learning	1	14	S	
Positional status					
17	Staff nurse	2	1	0.417	
18	Head nurse	8	19	NS	
Hospital category					
19	Public hospital	3	3	0.080	
20	Multispeciality hospital	8	16	NS	

Table No.17: Association between attitude scale score with selected demographic variables

S.No	Demographic variables	Attitude score		Calculated value of chi-square	Tabulated value of chi-square at 5% LOS
		Below mean	Above mean		
Age					3.84
1	Below 40 years	3	0	0.282	
2	Above 40 years	18	9	NS	
Gender					
3	Male	17	9	0.001	
4	Female	2	2	NS	
Marital status					
5	Single	7	3	0.017	
6	Married	12	8	NS	
Educational qualification					
7	Degree/Diploma	17	3	12.66	
8	Postgraduate	3	9	S	
Total years of experience					
9	Less than 10 years	6	12	0.0059	
10	More than 10 years	5	7	NS	
Current area of posting					
11	1.ICU	15	10	6	
12	2.Ward	0	5	S	
Previous experience					
13	Less than 3 years	5	1	0.089	
14	More than 3 years	16	8	NS	
Source of information					
15	Formal education	6	9	0.006	
16	Self-learning	11	13	NS	
Positional status					
17	Staff nurse	10	17	0.255	
18	Head nurse	1	2	NS	
Hospital category					
19	Public hospital	15	9	0.081	
20	Multispeciality hospital	4	2	NS	

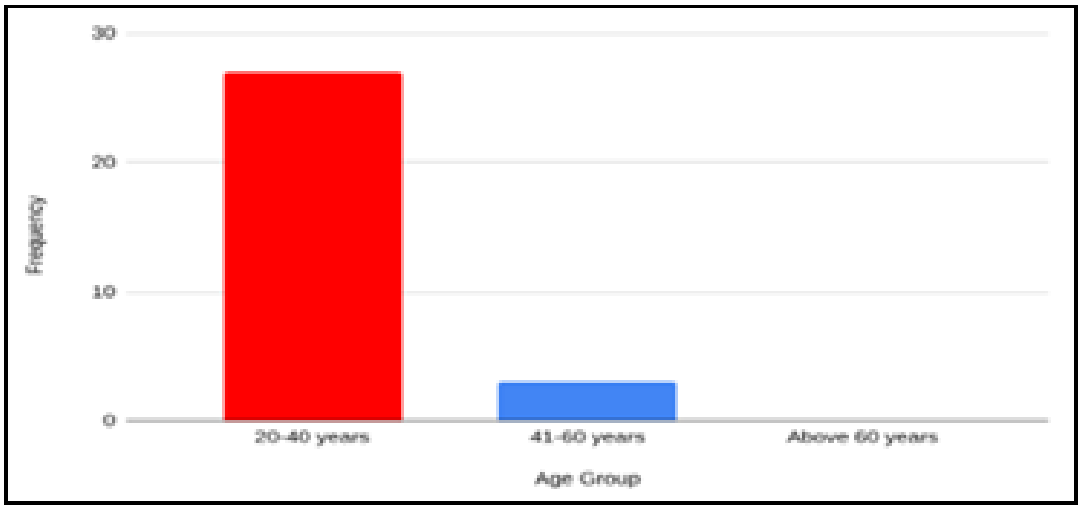


Figure No.1: Distribution of demographic variables with regard to age of staff nurse in selected hospital

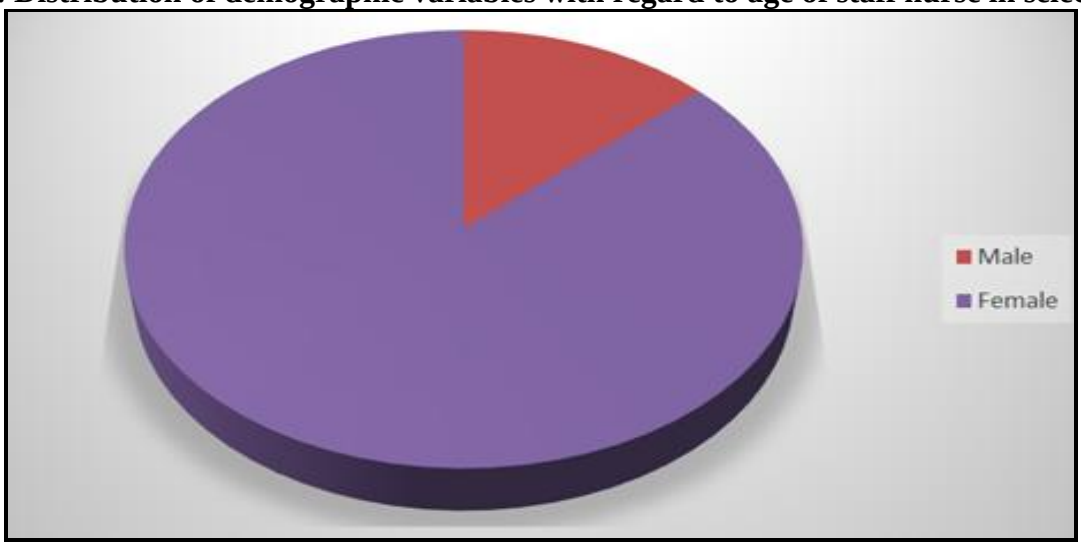


Figure No.2: Distribution of demographic variables with regard to gender of staff nurse in selected hospitals Aluva

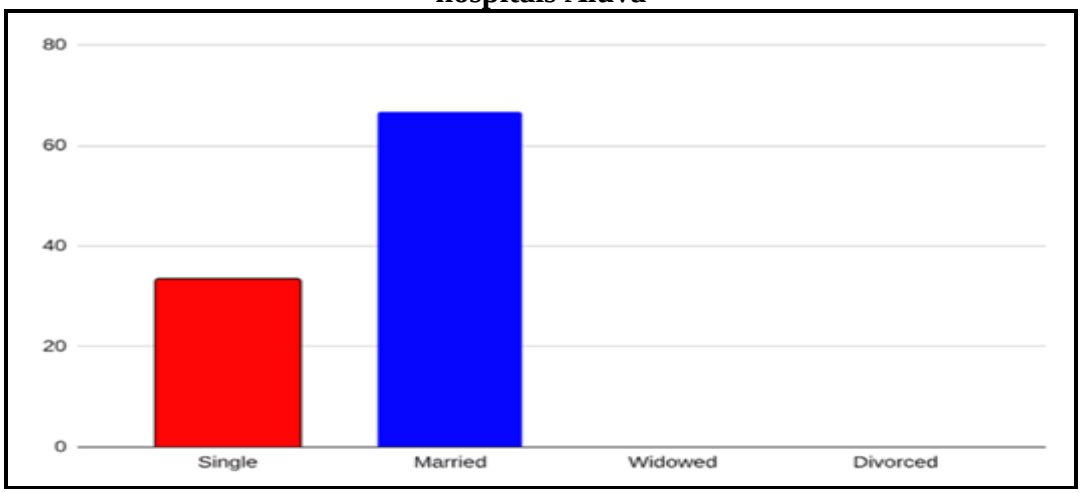


Figure No.3: Distribution of demographic variables with regard to marital status of staff nurse in selected hospitals Aluva

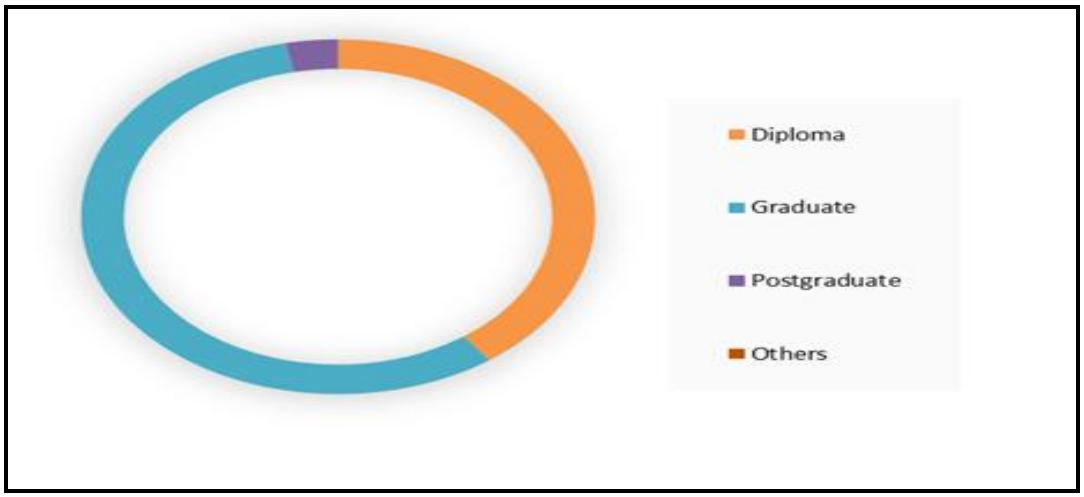


Figure No.4: Distribution of demographic variables in regard to educational qualification of staff nurse in selected hospitals Aluva

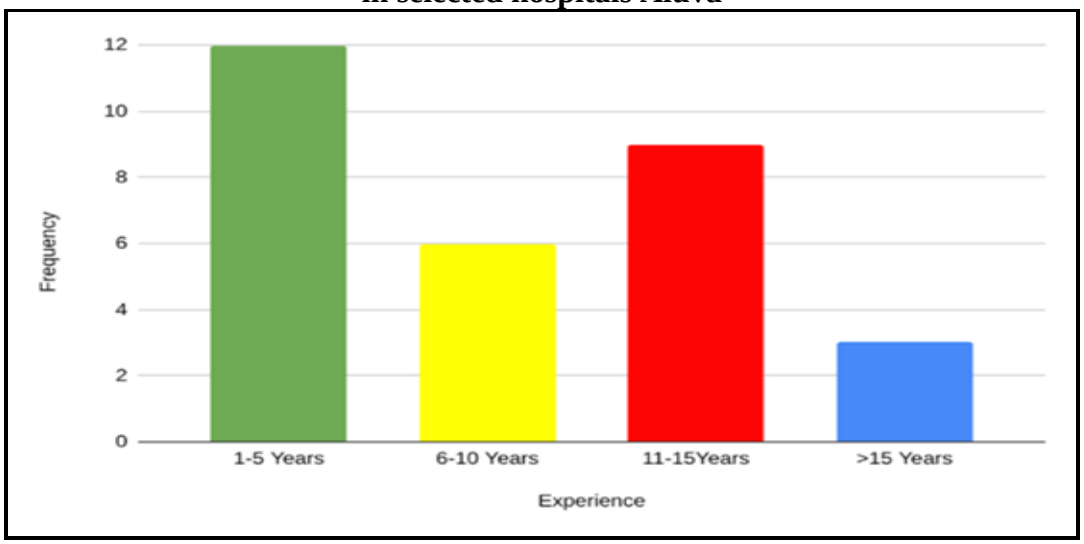


Figure No.5: Distribution of demographic variables with regard to total years of experience of staff nurse in selected hospital Aluva

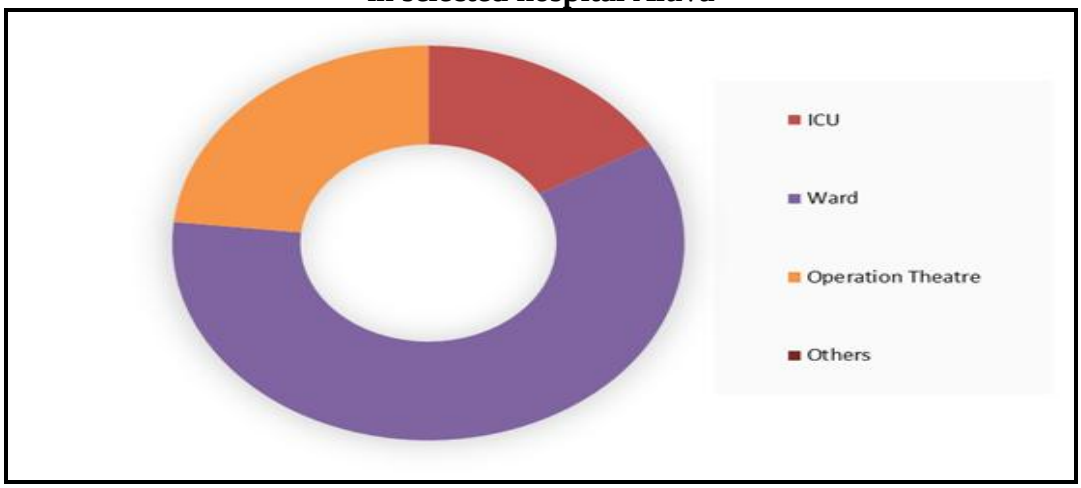


Figure No.6: Distribution of demographic variables with regard to current area of posting of staff nurse in selected hospitals Aluva

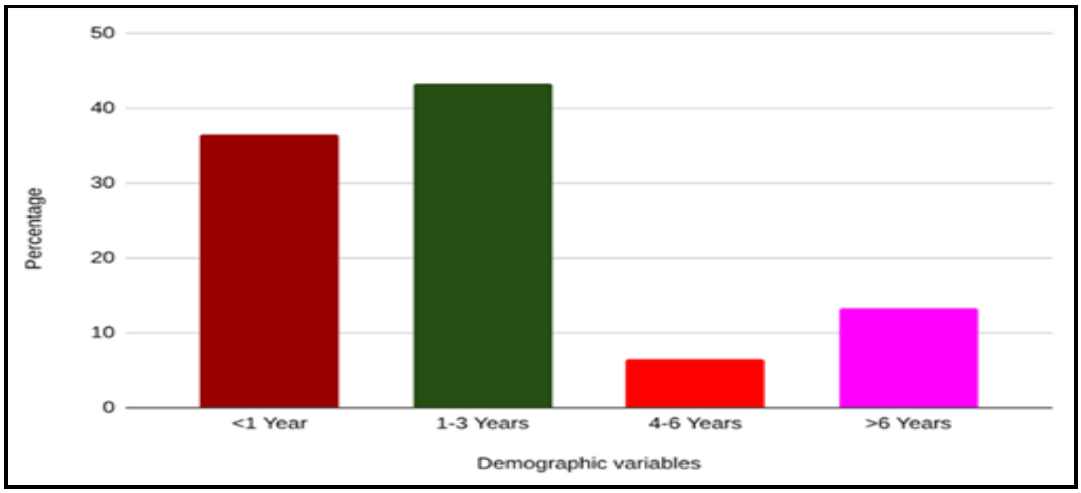


Figure No.7: Distribution of demographic variables with regard to previous experience in surgical units of staff nurse in selected hospitals Aluva

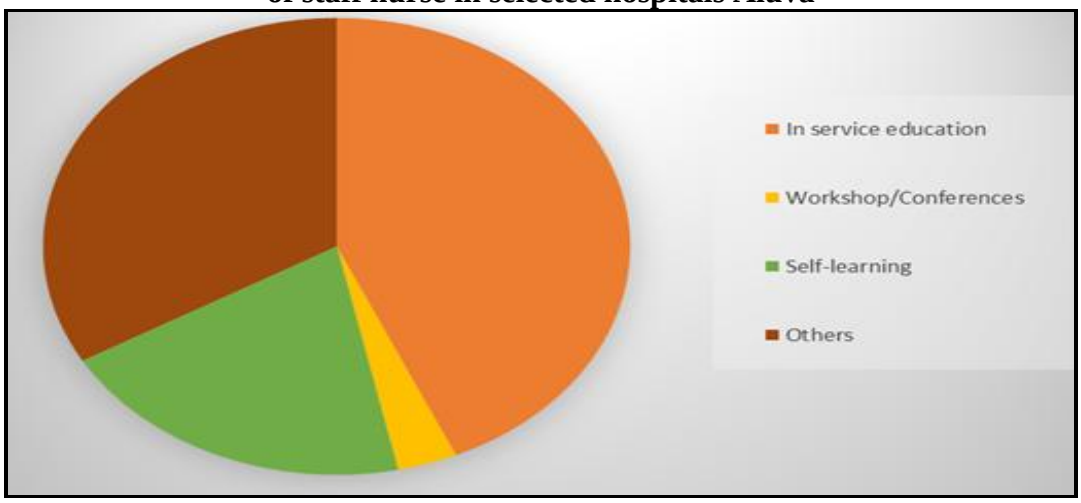


Figure No.8: Distribution of demographic variables with regard to sources of information about ERAS protocol in staff nurse in selected hospitals Aluva

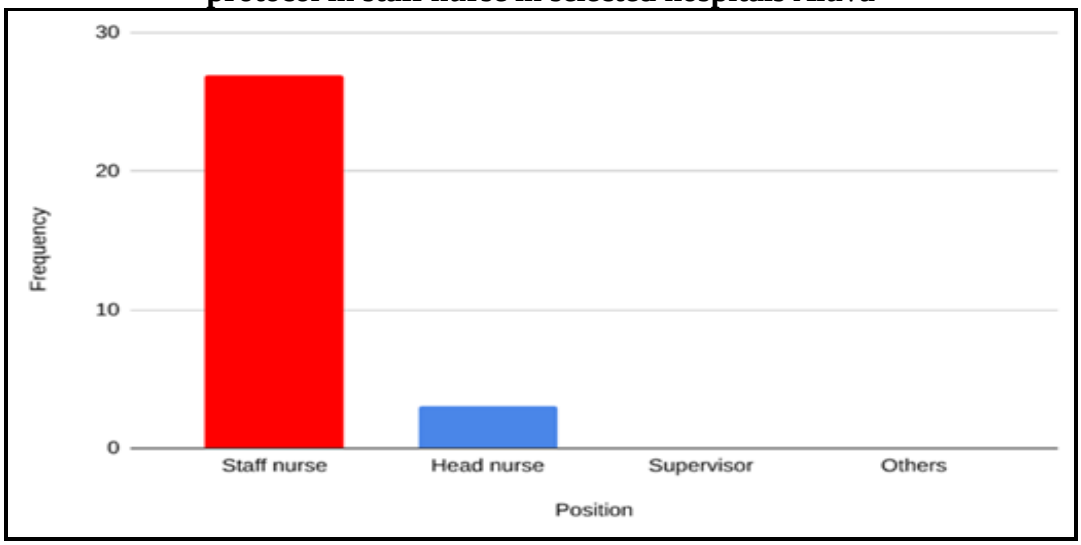


Figure No.9: Distribution of demographic variables with regard to positional status of nurse in selected hospitals Aluva

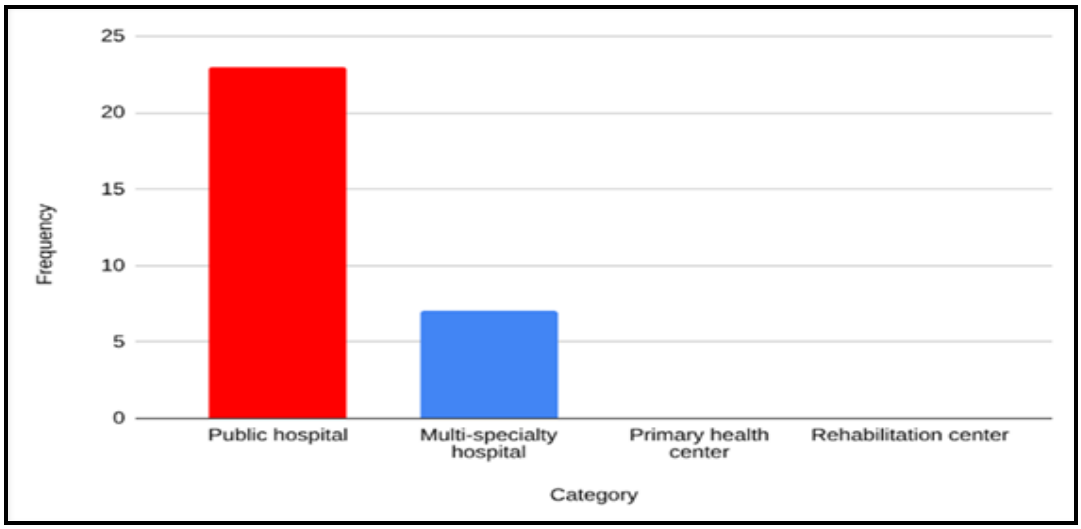


Figure No.10: Distribution of demographic variables with regard to hospital category of staff nurse in selected hospitals Aluva

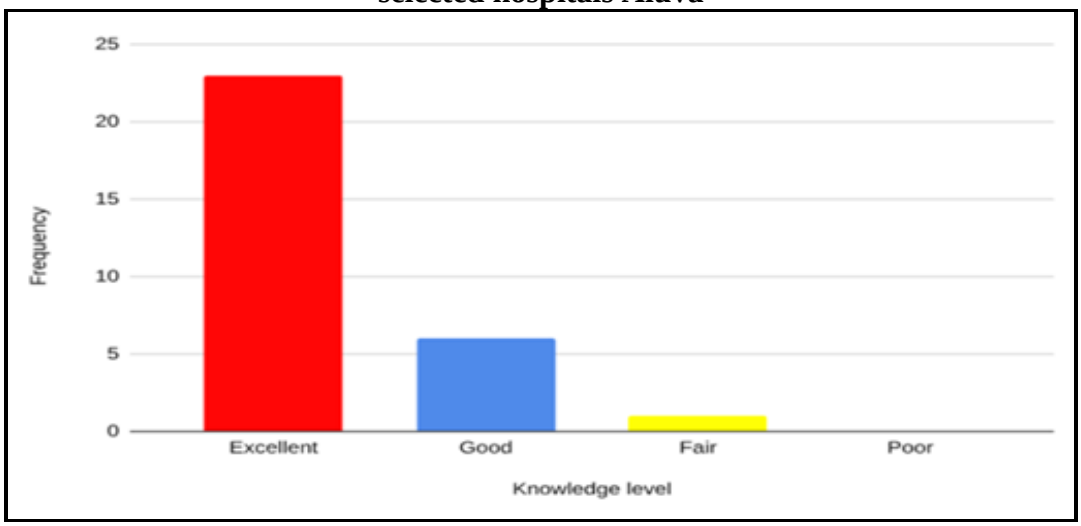


Figure No.11: Frequency and percentage of level of knowledge score regarding ERAS protocol among staff nurses

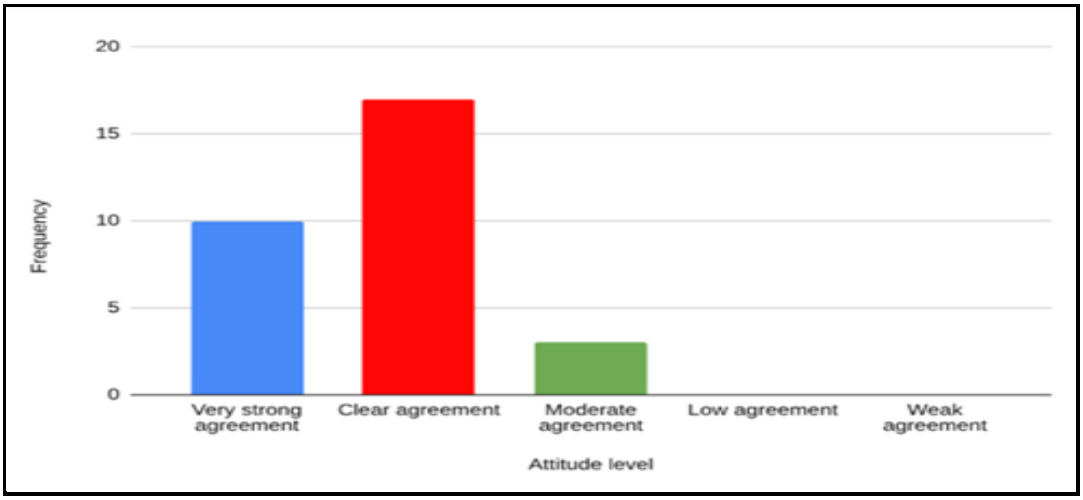
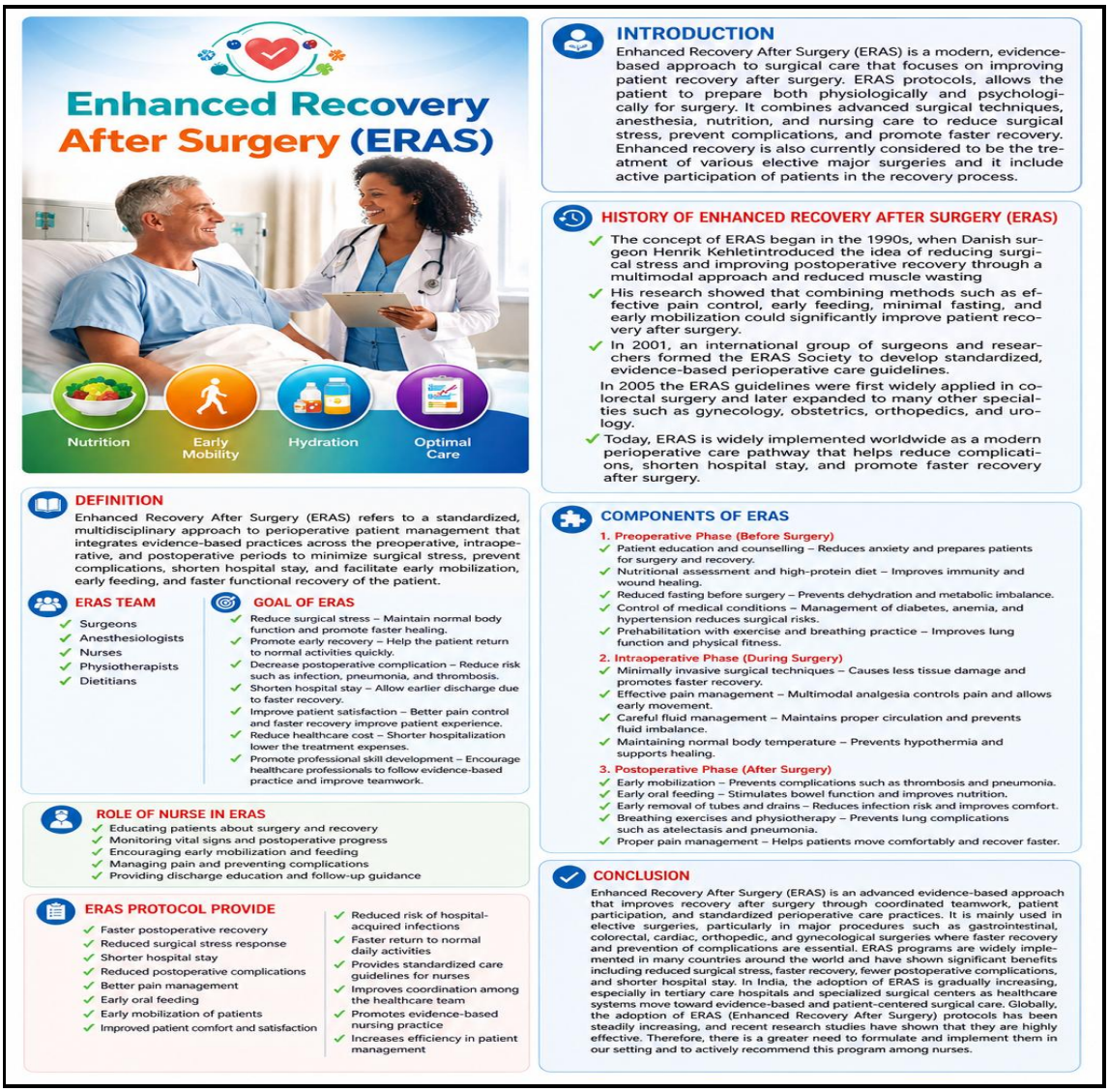


Figure No.12: Distribution of level of attitude regarding ERAS protocol among staff nurses Aluva



Chat No.1: Enhanced Recovery After Surgery (ERAS)

CONCLUSION

The study concludes that staff nurses possess good to excellent knowledge and a positive attitude toward Enhanced Recovery After Surgery (ERAS) protocol. There is a significant relationship between knowledge and attitude, indicating that improved knowledge leads to a more positive attitude toward ERAS. Demographic variables also play an important role in influencing both knowledge and attitude levels. The findings emphasize the need for continuous education and training programs to enhance knowledge and promote effective implementation of ERAS protocols in clinical practice.

NURSING IMPLICATIONS

Nursing Practice

Nurses should actively implement Enhanced Recovery After Surgery (ERAS) protocols to improve postoperative recovery and patient outcomes.

Emphasis should be placed on evidence-based perioperative care practices in routine clinical settings.

Nursing Education

ERAS protocols should be incorporated into the nursing curriculum and training programs.

Regular workshops, seminars, and in-service education programs should be conducted to enhance the knowledge and skills of staff nurses.

Nursing Administration

Hospital administrators should organize continuing education and training programs on ERAS protocols.
Policies and guidelines should be developed to support the standardized implementation of ERAS protocols in clinical practice.

Nursing Research

Further research should be conducted to evaluate the effectiveness of ERAS training programs.
Future studies can be expanded to include assessment of nursing practice and patient outcomes related to ERAS implementation.

LIMITATIONS

The sample size may be limited due to time constraints.
Only knowledge and attitude are assessed; actual practice of ERAS protocol is not evaluated.
The study is limited to a specific time period.

RECOMMENDATIONS

Similar studies can be conducted with a larger sample size to improve the generalizability of findings.
Comparative studies can be carried out across different hospitals or regions.
Experimental studies can be undertaken to evaluate the effectiveness of educational interventions on ERAS protocols.
Studies assessing knowledge, attitude, and practice (KAP) are recommended.
Development of structured teaching programs or informational booklets on ERAS protocols is suggested.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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