UNIVERSITY OF GHANA

SCHOOL OF NURSING AND MIDWIFERY

COLLEGE OF HEALTH SCIENCE

EXPERIENCES OF HEALTH PROFESSIONALS IN THE IMPLEMENTATION OF ENHANCED RECOVERY AFTER SURGERY PROTOCOLS AT THE UNIVERSITY OF GHANA MEDICAL CENTRE

BY

AMBROSE WADIE BAIDOO (11008180)

THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON, IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL NURSING DEGREE

NOVEMBER, 2024

DECLARATION

I declare that this thesis is original research I have conducted, and it has never been submitted to any institution for any award. The sources of information cited in this study are duly acknowledged

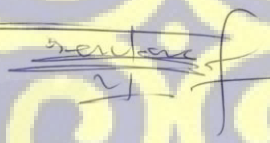
Ambrose Wadie Baidoo  28/11/24

(Candidate) Sign Date

We, the undersigned, have supervised this research and ensured the satisfaction of all requirements.

Dr. Gladys Dzansi  28/11/2024

(Principal Supervisor) Sign Date

Dr. David Tenkorang-Twum  8/11/24

(Co-Supervisor) Sign Date

ABSTRACT

The implementation of enhanced recovery after surgery (ERAS) protocols in a hospital aims to decrease postoperative problems, shorten hospital stays, and improve patient outcomes. They have become a cornerstone of contemporary perioperative care. The successful implementation of these guidelines, which integrate evidence-based procedures throughout the surgical continuum, largely depends on the experiences and adherence of healthcare personnel. Although ERAS is highly beneficial in several healthcare settings across the globe, little is known about how it can be used in low- and middle-income countries (LMICs).

This study investigated healthcare professionals' experiences at the University of Ghana Medical Centre (UGMC) with implementing Enhanced Recovery After Surgery (ERAS) protocols. By understanding these experiences, the study aims to identify and address gaps in the implementation of ERAS, ultimately enhancing patient care in a low-resource setting.

The study adopted a descriptive exploratory design to examine the health professionals' experiences of ERAS protocols at the University of Ghana Medical Centre in Accra, Ghana. Twenty health professionals were purposively recruited and interviewed using in-depth individual interviews. The reflexive thematic analysis method was used to analyse the data.

The study explored health professionals' experiences with implementing Enhanced Recovery After Surgery (ERAS) protocols at the University of Ghana Medical Centre. Results revealed significant insights into participants' awareness, beliefs, barriers, and

strategies for improving ERAS implementation. However, challenges like communication, patient resistance, and institutional issues hinder their implementation. Despite these, health professionals identified strategies to enhance implementation, including professional development, protocol development, improved resourcing, and teamwork. The findings emphasize the significance of addressing challenges to enhance ERAS adherence and surgical outcomes, suggesting that tailored interventions can significantly enhance ERAS implementation in resource-limited settings.

The study emphasizes the importance of enhancing healthcare professionals' implementation of Enhanced Recovery After Surgery (ERAS) protocols. It recommends strengthening education, fostering collaboration, addressing barriers, promoting flexibility, leveraging patient feedback, developing clear guidelines, addressing workload and burnout, and fostering a positive organizational culture. It also suggests investing in resources, promoting empathy, and addressing workload and burnout.

DEDICATION

This thesis is dedicated to my family, whose unwavering love, encouragement, and sacrifices have been the foundation of my academic journey. To my parents, thank you for your endless support, belief in my abilities, and for always inspiring me to strive for excellence. Your sacrifices and dedication to my education have shaped who I am today.

I also dedicate this work to all the healthcare professionals who work tirelessly to improve patient outcomes, particularly those who have contributed their time and expertise to this study.

Your commitment to enhancing care and improving recovery outcomes in the face of challenges is truly inspiring.

To my friends, mentors, and colleagues—thank you for your constant support, motivation, and insightful feedback. This journey would not have been the same without you.

Finally, I dedicate this thesis to all the patients who inspire the work of healthcare professionals every day. May this research contribute in some small way to improving surgical care and patient recovery for generations to come.

ACKNOWLEDGMENT

First and foremost, I would like to express my deepest gratitude to my supervisors, Dr. Gladys Dzansi and Dr. David Tenkorang-twum, for their unwavering guidance, mentorship, and support throughout this research journey. Their invaluable advice, constructive feedback, and encouragement at every stage of the thesis have been pivotal in shaping this work into its final form.

I would also like to extend my heartfelt thanks to Dr. Dora Awuah and all the healthcare professionals at the University of Ghana Medical Centre (UGMC) who participated in this study. Their willingness to share their experiences, insights, and challenges regarding ERAS protocols has been fundamental to the success of this research. Without their time, cooperation, and openness, this study would not have been possible.

Special appreciations to the administrative and clinical staff at UGMC for their logistical support and assistance in facilitating the data collection process. Their efforts ensured the smooth running of this study and helped me navigate any challenges that arose during the research process.

I am grateful to the University of Ghana for providing the resources and academic

environment that allowed me to pursue this study. The support from the university's staff, the library services, and other academic resources played a significant role in the completion of this thesis.

I would like to acknowledge the contributions of my colleagues, friends, and family, whose constant encouragement and understanding kept me motivated during this research journey. To my friends who provided insightful discussions and feedback during various stages of the thesis— your support and perspective have been greatly appreciated.

Finally, I dedicate this work to my family for their love, patience, and belief in me throughout this process. Their sacrifices and continuous support have been a source of strength during the course of my academic journey. Thank you all for making this thesis possible.

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 LIST OF ABBREVIATIONS

DOI: Diffusion of Innovation Theory

ERAS: Enhanced Recovery After Surgery

HBM: Health Belief Model

LMICs: Low-Middle-Income Countries

PBC: Perceived Behavioral Control

QI: Quality Improvement

SCT: Social Cognitive Theory

SOTA: Surgical, Obstetric, Trauma, and Anesthesia

SSA: Sub-Saharan Africa

TPB: Theory of Planned Behavior

UGMC: University of Ghana Medical Centre

CHAPTER ONE

1.0 Introduction

This chapter introduced the Background of the Study, Statement of the Problem, Purpose of the Study, Research Questions, Objective of the Study, Significance of the Study, Definition of Terms, Organization of the Study, and chapter summary discussed in this chapter.

1.1 Background to The Study

Surgery is an indispensable aspect of modern healthcare, ranging from life-saving procedures to interventions for chronic conditions. Globally, more than 300 million surgical procedures are carried out annually (Agochukwu-Mmonu & Chung, 2019), with the majority performed in middle- and high-income countries (Cohen & Gooberman-Hill, 2019b). Yet, nearly five billion people worldwide lack access to safe, timely, and affordable surgical and anesthetic care (Lam et al., 2021). This gap results in avoidable deaths, uncorrected deformities, and disabilities that reduce quality of life and limit economic productivity.

Despite its benefits, surgery carries significant risks. Complications affect between 3–25% of surgical patients, often leading to longer hospital stays, disability, and mortality (Panayi et al., 2019). Globally, postoperative deaths account for about 7.7% of all mortality, with LMICs bearing the greatest burden. In Africa, one in five surgical patients develops a complication, and overall mortality is approximately 2% (Wei et al., 2020a). Policymakers increasingly recognize this as not only a clinical challenge but also a development issue, linking safe surgical care to the Sustainable

Development Goals (SDGs) on health, equity, and economic growth(Ugwu et al., 2025). These realities underscore the urgent need for structured perioperative strategies that enhance patient outcomes.

Enhanced Recovery After Surgery (ERAS) is one such approach. Developed in the late 1990s by Henrik Kehlet in Northern Europe, ERAS was first applied to colorectal surgery and has since expanded across multiple specialties, including urology, gynecology, orthopedics, and otolaryngology (Byrnes & Ruth, 2019; Ayik et al., 2021). ERAS is a multidisciplinary, evidence-based model designed to reduce the physiological stress of surgery and improve recovery (Smith et al., 2020). It incorporates a series of interventions across the surgical pathway, such as preoperative counseling and nutritional optimization, intraoperative multimodal analgesia and fluid management, and postoperative strategies like early mobilization, opioid-sparing pain relief, and early oral intake (Uknowledge & Janes, 2017; Gustafsson et al., 2019). Together, these interventions aim to reduce surgical stress, maintain homeostasis, and promote faster recovery.

Evidence from high-income countries shows ERAS reduces complications by up to 50%, shortens hospital stays by two to three days, and cuts costs significantly (Noba et al., 2020; Gustafsson et al., 2019). In the United States, colorectal ERAS reduced readmissions by nearly half and saved about $1,500 per patient. Patients also report greater satisfaction, citing shorter hospital stays, less opioid dependence, and faster return to daily life (Ljungqvist et al., 2017; Patel et al., 2020).

ERAS has been adopted more slowly in LMICs, despite the fact that it is already

commonplace in many wealthy nations. Implementation is hampered by issues such as a lack of resources, deficiencies in the infrastructure, and inconsistent training among medical personnel (Riad et al., 2023). However, there is encouraging data. Despite having limited access to cutting-edge equipment, ERAS was successfully modified for colorectal surgery in Kenya (Boatman et al., 2022). ERAS decreased hospital stays by 20% and problems by 15% in India (Mukhopadhyay et al., 2021). Similarly, research from South Africa shows that following implementation, hospital stays are 30% shorter and complications are 30% lower (Oodit et al., 2021). These results show that ERAS can produce results similar to those in high-income environments when customized for local conditions.

Policymakers in LMICs increasingly view ERAS as a cost-effective strategy to strengthen surgical systems and optimize scarce resources (Rosenberg et al., 2022). However, healthcare providers—surgeons, anesthetists, and nurses—often highlight systemic challenges such as staff shortages, variable training, and cultural barriers that hinder consistent implementation (Gramlich et al., 2017; Al-Worafi et al., 2023). From the patient perspective, cultural expectations, misconceptions about fasting, or fear of early mobilization can also affect adherence to ERAS principles (Aziz et al., 2020). Thus, while the benefits are clear, successful implementation depends on aligning clinical evidence with system readiness, cultural sensitivity, and patient engagement.

Notwithstanding these advantages, little is known about the experiences of medical professionals in LMICs, such as Ghana, using ERAS. Healthcare professionals are essential to the adoption of protocols, yet their viewpoints frequently show a complicated interplay between advantages and disadvantages. While ERAS promotes

teamwork, professional growth, and better patient outcomes, systemic limitations like staffing shortages, uneven training, and cultural concerns pose a threat to its long-term viability (Gramlich et al., 2017; Al-Worafi et al., 2023).

Understanding these experiences is vital for tailoring ERAS strategies to resource -constrained contexts, thereby ensuring that patients benefit from safer, more effective, and more efficient surgical care. However, the financial effects of ERAS protocol implementation in a tertiary care hospital a study conducted in Indian hospitals shows that ERAS procedures resulted in a 15% drop in postoperative complications and a 20% reduction in hospital stay length, which contributed to significant cost savings for both patients and the healthcare system (Mukhopadhyay et al, 2021).

To sum up, ERAS has become a revolutionary perioperative care approach that has been shown to improve patient outcomes, healthcare efficiency, and cost effectiveness. Its application in LMICs, such as Ghana, is understudied and fraught with particular difficulties. Therefore, it is crucial to look at the experiences of medical practitioners in these settings. In addition to guiding successful ERAS adaptation, these insights will support the larger objective of lowering surgical complications, mortality, and disparities in access to safe surgical treatment globally.

1.2 Statement of The Problem

Global estimates show that major surgeries claim the lives of 8 million individuals per year on average, with up to twice that many suffering from problems after the procedure (Nguyan et al,2020). New management systems and medication therapy could save up to 500 lives every hour and prevent 1000 problems, considering

that 50% of these outcomes may be prevented(de Oliveira et al., 2020). Millions of people have their lives impacted by surgical care. Research shows that, depending on the intricacy of the procedure and the hospital environment, 3–25% of hospitalized patients experience problems that result in disability or a longer hospital stay (Buttigieg et al,2018).

In actuality, diseases that can be treated surgically account for 28–32% of the world's illness burden (Cieza et al, 2020). Even while 4.2 million people worldwide pass away within 30 days of surgery every year, and postoperative deaths make up 7.7% of all deaths worldwide, half of these deaths take place in LMICs(Fatiregun & Lasebikan, 2021). The treatment required to manage surgical disorders, including surgical, obstetric, trauma, and anesthesia (SOTA), is rather complicated and necessitates collaboration amongst all system pillars, including the foundations of infrastructure and enhanced recovery after surgery patterns (L. M. Gramlich et al., 2017).

The ERAS protocols are well acknowledged, but their uptake and application in low- and middle-income countries (LMICs) like Ghana are still uneven. In high-income settings, ERAS methods have been demonstrated to enhance overall patient outcomes, decrease hospital stays, and reduce postoperative complications(Slim et al., 2023). Nevertheless, several obstacles, including scarce resources, inadequate training, cultural disparities, and differing degrees of institutional support, prevent ERAS benefits from being fully realized in LMICs (Robertson et al., 2020).

The unique challenges healthcare professionals face in such settings, including resource limitations, varying levels of training, cultural differences, and institutional support, may affect their experiences with ERAS protocols. These challenges could lead

to variations in the application of the protocols, potentially impacting patient outcomes and the overall effectiveness of the ERAS program (Gustafsson et al, 2019). A meta-analysis in 2025 across gastrointestinal surgeries showed ERAS pathways shortened hospital stays by 3.16 days, reduced postoperative complications by 30%, and cut readmissions by 25% compared to standard care(Grandi et al., 2023). A 2023 study from Northern Italy reported that the adoption of ERAS in colorectal surgeries reduced postoperative complications (17.3% vs. 22.1%) and shortened hospital stays (5 days vs. 8.1 days (Mangone et al., 2024). These findings demonstrate that surgical complications can be considerably reduced by both cutting-edge procedures like ERAS and realistic, affordable therapies like infection surveillance, early risk assessment, prehabilitation, and wearable monitoring.

University of Ghana Medical Centre, a tertiary health facility, carries out an estimated 1,586 surgical procedures annually. About 2.1% of the annual surgeries are infected surgeries (UGMC Health Info, 2023).

A state of stress brought on by surgical procedures causes homeostatic imbalance in the body, of which UGMC clients are not exempt. On the other hand, an excessive or prolonged reaction, as occurs after surgery, has unfavorable effects such as immunosuppression, tachycardia, hyperglycemia, and protein catabolism (L. M. Gramlich et al., 2017). The inconsistent implementation of ERAS protocols exacerbates these risks and contributes to suboptimal outcomes(Lobo et al., 2024). The study, therefore, sought to explore the experiences of healthcare professionals at UGMC in the implementation of ERAS protocols. There is a need to explore how these professionals perceive the protocols, what challenges they encounter, and what factors influence their

attitude toward implementation. Understanding these aspects is crucial for identifying potential barriers to effective implementation and developing strategies to enhance the success of ERAS protocols at UGMC, which have implications for patient outcomes and the overall quality of surgical care in Ghana.

1.3 Purpose of The Study

The purpose of this study was to explore the experiences of health professionals in the implementation of Enhanced Recovery After Surgery Protocols at the UGMC

1.4 Specific Objectives

1. To describe the Cognitive perception of health professionals about the implementation of ERAS protocols
2. To explore the barriers to influencing the implementation of the ERAS protocol by a health professional
3. To explore the strategies for improving the implementation of the ERAS protocol at UGMC.

1.5 Research Questions

1. What are the cognitive perceptions of health professionals about the implementation of the ERAS protocols in improving patient outcomes?
2. What barriers are perceived by health professionals to implementing ERAS protocols?
3. What are the strategies for improving the implementation of the ERAS protocol at UGMC?

1.6. Significance of The Study

This study is noteworthy because it tackles the little-known subject of ERAS implementation in low- and middle-income countries (LMICs), where healthcare systems are frequently hampered by a lack of funding, inadequate training, and cultural hurdles. This research could enhance surgical treatment in Ghana and other comparable LMICs by highlighting the issues and offering solutions. Improved patient outcomes, fewer postoperative complications, and more effective healthcare systems could result from the findings.

This study provides empirical data on the challenges and perceptions of healthcare professionals regarding ERAS in a Ghanaian setting, highlighting the need for tailored strategies to enhance the effectiveness of ERAS protocols in low-income countries, despite the existing literature focusing on high-income countries.

This study aims to identify barriers to the successful implementation of ERAS protocols at UGMC, such as resource limitations, training gaps, and cultural resistance. By addressing these issues, the study aims to improve patient outcomes, reduce mortality rates, minimize complications, and enhance the quality of life for surgical patients in Ghana.

One of the research's main findings is its ability to guide national and institutional policy development. The results will offer empirically supported perspectives on how ERAS protocols might be modified to meet the unique requirements and limitations of healthcare systems in low- and middle-income countries. This can help policymakers create interventions that address the educational and infrastructure gaps impeding the

effective implementation of ERAS. Additionally, by encouraging the adoption of ERAS protocols and supporting the development of training programs to equip medical personnel with the requisite skills and knowledge, this study may influence institutional policies at UGMC and other comparable postsecondary healthcare facilities.

Healthcare professionals in LMICs often face significant challenges due to inadequate training and limited exposure to advanced medical protocols. This study highlights the experiences of these professionals in implementing ERAS, offering insights into their professional development needs. By identifying the gaps in knowledge and training, the research can contribute to the design of targeted educational programs that will enhance the competencies of healthcare workers. Improved training in ERAS protocols will increase the confidence and expertise of healthcare professionals and improve the quality of care delivered to patients.

Post-operative care is crucial for patient outcomes after surgery, as it shortens recovery times, minimizes problems, and improves overall health. Consistent adherence to standards leads to better patient safety, fewer mistakes, and higher-quality care. This research can help develop educational programs and targeted training for healthcare professionals, strengthening the workforce. Regular adherence to protocols increases patient trust and satisfaction in the healthcare system. Empirical data can guide decision-making and inform policy and practice modifications.

1.7 Operational Definition

ERAS protocol: Enhanced Recovery After Surgery includes specific guidelines for postoperative care, including medication administration, wound care, patient monitoring,

and communication among multidisciplinary teams, documented in official hospital or clinic documents.

Health professionals: In this setting, healthcare experts from multiple specialties—surgeons, nurses, and anesthesiologists- form multidisciplinary teams and work together to provide patients with perioperative care.

SOTA: surgical, obstetric, trauma, and anesthesia

LMICs: Low-middle-income countries (Countries not developed or developing countries).

TPB: Theory of Planned Behavior

SSA: Sub-Saharan Africa is the portion of Africa's continent that is located south of the Sahara.

UGMC: University of Ghana Medical Centre

1.8 Organization of Thesis

The first chapter of this work consists of an introduction, background of the study, problem statement, purpose of the study, objectives, research questions, significance of the study, and operational definitions. Chapter Two offers a review of relevant literature, done in line with the theoretical framework guiding the study. Chapter Three explains the various research processes that constitute the methodology. These include; the research design, setting, target population, inclusion and exclusion criteria, sampling size and technique, data collection tool and procedure, data management, analysis, and methodological rogue first chapter of this work, consists of; the introduction, background of the study, problem statement, purpose of the study,

objectives, research questions, significance of the study and the operational definitions. In

In Chapter Four, the findings of the study are presented. In Chapter Five, the findings of the study are presented. These were all done in relation to the guiding theoretical framework. The sixth and final chapter contains the summary of the entire work, implications, limitations, and conclusions. It further offered some recommendations for improvement.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

There are two sections in this chapter. The theoretical and empirical literature that supports the study's underlying theories is surveyed in the first section. An assessment of earlier studies on the major variables in this investigation is included in

the second section.

2.1 Theoretical and Conceptual Framework

Several models were taken into consideration when creating the theoretical framework for this study in order to comprehend and examine the experiences of medical professionals with reference to Enhanced Recovery After Surgery (ERAS) protocols. These frameworks include the
Diffusion of Innovation Theory (DOI), the Social Cognitive Theory (SCT), and the Health Belief Model (HBM). Although each model offers insightful information about behaviors connected to health, the Theory of Planned Behavior (TPB) was finally chosen because it closely matched the goals of the study and could be used to comprehend intention-driven behavior in healthcare settings.

The Health Belief Model (HBM) is a useful tool for understanding personal health choices, but it lacks broader institutional, interpersonal, and cultural factors influencing ERAS protocols. Social Cognitive Theory (SCT) emphasizes the interaction between personal, behavioral, and environmental factors, but its broader scope dilutes its focus on intention. The diffusion of Innovation Theory (DOI) examines how innovations are adopted within a community or organization, but primarily focuses on adoption processes. However, the Theory of Planned Behavior (TPB) is a framework that helps understand health professionals' intentions and behaviors in adopting ERAS protocols. It focuses on attitudes, subjective norms, and perceived behavioral control, which are essential factors in healthcare settings. TPB is applicable to multidisciplinary teams and has been successfully applied in studies analyzing professional behaviors, such as

adherence to clinical guidelines, evidence-based practices, and surgical protocol compliance. The model's theoretical rigor and relevance to healthcare behaviors make it the most suitable choice for this research.

The Theory of Planned Behavior (TPB), which takes into account the impact of attitudes, subjective norms, and perceived behavioral control, and offers a thorough framework for comprehending and forecasting human conduct, was used for this study. External factors can directly force or prevent behaviors, depending on the individual's control and perceived control, regardless of the intention. The first theoretical construct is the behavioral intention, or the motivating elements influencing conduct (Bosnjak et al., 2020).

One is more likely to carry out a specific conduct if they have a stronger intention to do so. The degree to which a person views a certain conduct favorably or unfavorably is the second construct, known as attitude toward the behavior. Behavioral beliefs and outcome assessments make up attitude. The third construct is the subjective norm, which is societal pressure to engage in or refrain from engaging in a particular activity. Subjective norms are the result of normative beliefs combined with compliance drive. People's perceptions of how easy or difficult it is to carry out the activity of interest are known as perceived behavioral control, and they are also fundamental to the TPB. In Figure 1, this link is represented by a dashed line.

2.1.2Theory of Planned Behavior

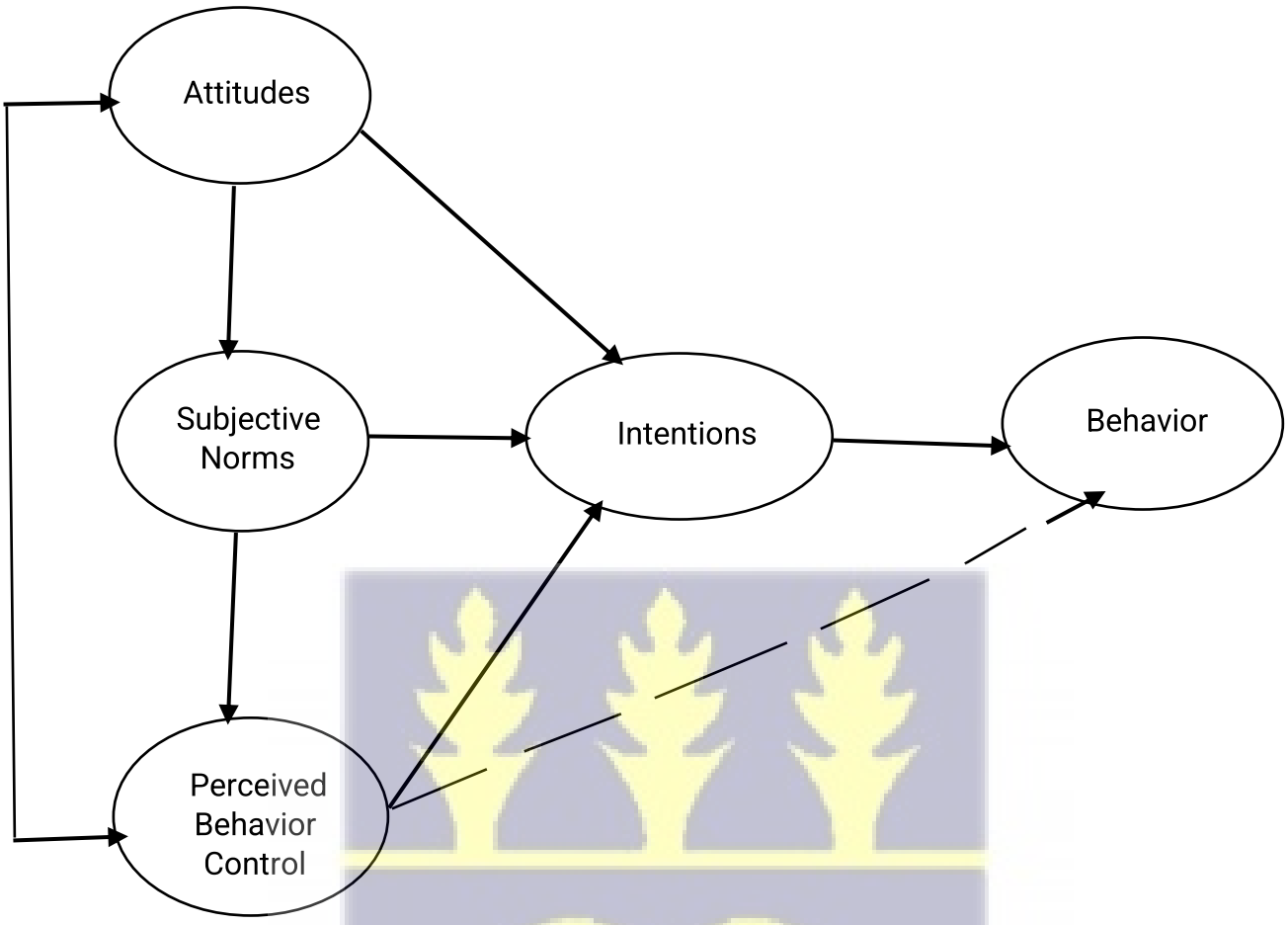

Figure 1: Theory of Planned Behavior Model, Adapted from Ajzen 2005

Ajzen (1991) created the widely accepted Theory of Planned Behavior (TPB), a psychological framework for understanding and forecasting human behavior. According to TPB, the primary factor influencing a person's decision to carry out a specific conduct is their intention to do so. Three primary constructs determine this intention: the behavior's attitudes, subjective norms, and perceived behavioral control. The construct of attitude refers to an individual's evaluation of a specific behavior, influenced by their beliefs about the outcomes and the personal value they attach to these outcomes. In

the context of ERAS protocols, attitudes may include health professionals' views on benefits and concerns. Subjective norms refer to the perceived social pressure to perform or not perform a behavior, influenced by others like colleagues, supervisors, or institutional policies.

They consist of normative beliefs about approval or disapproval from important groups and motivation to comply. Perceived Behavioral Control (PBC) is an individual's perception of their ability to perform a behavior, considering internal and external factors. It consists of Control Beliefs and Perceived Power. Health professionals' perceived control over ERAS protocols may depend on resources, institutional support, and confidence. Perceived Behavioral Control (PBC) is an individual's perception of their ability to perform a behavior, considering internal and external factors. It consists of Control Beliefs and Perceived Power. Health professionals' perceived control over ERAS protocols may depend on resources, institutional support, and confidence.

2.1.3 Application of The Framework to The ERAS Implementation Experience Study

In this study, TPB is the most appropriate theoretical framework as it aligns with the study's aim to understand the experiences and perceptions of healthcare professionals in implementing ERAS protocols at the University of Ghana Medical Centre (UGMC). The behavior expected in this study is to explore the experiences of health professionals in the implementation of Enhanced Recovery After Surgery

Protocols at the UGMC experience in the implementation of ERAS protocols are complex, involving not only knowledge and skills but also attitudes, perceived pressures from colleagues, and perceived barriers in the healthcare environment. TPB helps to

dissect these factors systematically, providing insight into how they influence the behavior of healthcare professionals (Ateş & Kölemen, 2024).

The theoretical framework explores the interconnected relationships between the characteristics of health workers, including their sociodemographic and economic backgrounds, and the broader dynamics within the multidisciplinary team, providing insights into how these factors influence the overall experiences and perceptions of implementing Enhanced Recovery After Surgery (ERAS) protocols and compliance to avoid most post-operative complications (Pache et al., 2019). The theory will also examine attitudes toward ERAS implementation, focusing on perceived benefits in patient outcomes and overall perioperative care, as well as positive evaluation of ERAS principles and protocols. Attitudes Toward the Behavior: This TPB construct describes how healthcare professionals feel about putting ERAS protocols into practice. The study found that positive attitudes can be attributed to the benefits that the professionals perceive the protocols to offer, like better patient outcomes and more efficient care delivery. On the other hand, negative attitudes may surface if the professionals believe the protocols to be too time-consuming, resource-intensive, or difficult to follow.

Subjective norms in multidisciplinary collaboration include perceived social pressure, expectations, and approval for ERAS implementation. Social influences on knowledge acquisition include peer interactions, organizational culture, and leadership support. Subjective norms influence ERAS education uptake, influencing intentions to engage in initiatives (Cohen & Gooberman-Hill, 2019b). Professionals may be more likely to implement ERAS protocols if they perceive that their peers and superiors endorse and follow them, or if there is pressure from professional guidelines to adhere to these

protocols. subjective norms may include the influence of senior colleagues, management, or even professional bodies on healthcare professionals' decisions to implement ERAS. If healthcare workers perceive that their peers or superiors are adhering to the protocols, they may be more likely to adopt them. On the contrary, if nonadherence is the norm or if there is resistance among influential colleagues, adherence may be negatively impacted. Similarly, a study by Andersson et al. (2019) on ERAS adoption found that peer influence and institutional norms played critical roles in driving or hindering adherence to the protocols.

Perceived behavioral control influences ERAS training effectiveness, influencing confidence in controlling ERAS-related behaviors and the effectiveness of education and training programs. Perceived behavior control can be associated with the resources available at UGMC, the level of training, and the infrastructural support needed for successful implementation. High perceived behavioral control suggests that healthcare professionals feel confident in their ability to implement ERAS protocols effectively, while perceived behavioral control indicates barriers such as lack of resources, insufficient training, or institutional constraints that limit their capacity to follow the protocols consistently.

It will aid in highlighting the importance of confidence in overcoming barriers and the influence of social pressure on adherence. It will also highlight the importance of sustainable
ERAS practices and suggest targeted interventions to enhance adoption. The Theory of Planned Behavior is applied to the thesis on ERAS adherence by professionals, offering a structured understanding of cognitive determinants influencing healthcare

professionals' intentions and behaviors.

Table 2.1: Illustration of Framework Application in this Study

Construct of theory	Research objective	Constructs explored
Behavior	Implementation of ERAS protocol	Experiences with ERAS implementation
Intention	Not stated	Willingness
Attitude	Cognitive perception of ERAS implementation	Knowledge, attitude, beliefs
Subjective norms	Barriers to ERAS protocol implementation	perception of collaborative teamwork and institutional cultural factors
Perceived behavioural control	Strategies for improving ERAS implementation	Capacity-building efforts, Institutional resourcing, Development and implementation of standardized protocols

2.2. Review of Related Literature

This section evaluates empirical studies on the experiences of health professionals in the implementation of ERAS protocols.

2.2.1 Enhanced Recovery After Surgery

Enhanced Recovery After Surgery (ERAS) procedures have revolutionized surgical care by minimizing stress, maximizing perioperative care, and accelerating patient recovery. However, adherence from multidisciplinary healthcare teams is crucial for these benefits. This literature review investigates ERAS protocols, team dynamics, and factors impacting adherence, emphasizing the importance of high-quality patient care (Mithany et al,2023).

Kehlet, (1997) introduced enhanced recovery after surgery (ERAS), sometimes referred to as "fast-track surgery,". The goals of the multimodal ERAS perioperative care pathway are to optimize perioperative management, reduce perioperative problems, and enhance postoperative recovery (Gustafsson et al., 2019). Currently, ERAS is being successfully used for urological, orthopedic, general, and other surgeries. Several expert consensus statements and guidelines have been created for each specialty, indicating the maturity of the ERAS application. (Elias, et al,2019).

ERAS is a keystone of value-based care in the rapidly changing field of quality improvement (QI) in healthcare and a useful instrument that strikes a balance between patient and family experiences, safety, and outcomes (Lam et al., 2021).

Preoperative education, restricting preoperative fasting, nutritional support, minimally invasive techniques, prudent intraoperative opioid use, minimizing indwelling tubes/catheters, early postoperative mobilization, and the use of multimodal analgesia are the main components of ERAS, which was developed in the late 1990s by Danish surgeon Dr. Henrik Kehlet (Uknowledge & Janes, 2017).

2.2.2 Preoperative Teaching and Counseling

Preoperative counseling is a term for an educational program before surgery that tries to enhance the patient's understanding, well-being, and results. The most recent developments in patient education for surgery call for early preoperative education to be scheduled, along with more frequent message exposure through various interventions and/or reinforcing, with an emphasis on postoperative care and management (Baldini et al., 2018). Pre-admission counseling and education are recommended by all ERAS standards, regardless of the type of operation. These initiatives might lessen worry, promote healing, boost recuperation, and shorten hospital stays (Jankowski, 2017). Different strategies are permissible, such as individual counseling, printed materials, and electronic media, either separately or in combination. Regardless of the method, it should include comprehensive details regarding the surgery, anesthesia, and the anticipated recuperation period. A surgeon, anesthesiologist, and most crucially, a nurse or other allied health professional, should be involved in multidisciplinary teaching initiatives. This will help to build confidence between the patient and the team and facilitate the interchange of further information. Patients should receive presurgical education, meet with surgical team members, discuss early discharge planning, nutrition, pain management, early ambulation, early feeding post-op, and optimize co-morbidities (Baldini et al., 2018). For the patient to completely comprehend and act upon the information, it must be clear and exact. Patients can take an active role in determining their mobility and nutrition. The patient must understand their responsibility for their healing. The patient's knowledge of what to expect while in the hospital and basic understanding of the treatment's guiding principles are the primary goals (Dipokromo &

Sherman, 2022).

2.2.3 Restricting Preoperative Fasting

Fasting before surgery lowers the chance of emesis; nonetheless, extended fasting increases the risk of hypoglycemia, dehydration, ketoacidosis, slower healing, and worse patient satisfaction. The rationale for prolonged fasting before general anesthesia was that it would lower the risk of gastric aspiration and regurgitation during surgery by decreasing stomach volume and acidity. It has been demonstrated that the customary fasting requirements of surgery harm perioperative outcomes because they deplete liver glycogen and are linked to worsened insulin resistance and glucose metabolism (Yurashevich et al., 2019). ERAS methods prevent dehydration by shortening the preoperative starving period and using complex carbohydrate liquids in non-diabetic patients, in contrast to standard "nothing by mouth" procedures. This approach has been demonstrated to shorten hospital stays and increase patient satisfaction in colorectal surgery by lowering preoperative anxiety and thirst as well as postoperative insulin resistance (Sun et al., 2022). Clear fluids should be consumed up to two hours before surgery, as it doesn't increase gastric content, pH, or risk. Food should be given 6 hours before induction, with multidisciplinary support. The ERAS concept was applied in 2016 at the trauma center. Patients were required to eat clear liquids up to two hours before surgery, except those who had delayed gastric emptying because of diseases such as obesity or emergency surgery. The hospital's nutritional department recommended a carbohydrate-enriched beverage with 12.5% maltodextrin, allowing patients to consume up to 800 milliliters the night before surgery and 400 milliliters the day, two hours before. The study aimed to determine compliance with

preoperative carbohydrate loading and non-compliance with glucose loading. Patients' awareness was assessed using the Steward score, with a score of 5 or higher allowing oral clear liquids and solid food. Patients who resumed these within two hours were considered adherent (Andersson, 2019).

2.2.4 Nutritional Support

Nutrition is increasingly recognized as crucial for maximizing perioperative results, with preoperative conditions significantly impacting postoperative outcomes. Enhanced Recovery After Surgery (ERAS) methods focus on nutritional optimization, with disease-specific dietary formulas being developed to cater to specific patient groups. Nutritional optimization is crucial for improving postoperative outcomes, including mortality, in critically ill patients, leading to the development of "Enhanced Recovery After Surgery" methods. Producers create disease-specific dietary formulas for specific patient groups, like Acute Respiratory Distress Syndrome (ARDS), to prevent dehydration and improve perioperative outcomes, unlike traditional fasting requirements that deplete liver glycogen and worsen insulin resistance (Friedman & Thiele, 2020).

The study suggests that reducing preoperative anxiety and postoperative insulin resistance in colorectal surgery patients can shorten hospital stays and increase satisfaction. It recommends foods up to 6 hours before anesthesia induction and clear fluids up to 2 hours before surgery. A 2011 Cochrane review found no significant difference in anastomotic leakage or wound infections between elective colorectal surgery patients with and without mechanical colon preparation. Research suggests oral antibiotics and mechanical bowel preparation can lower infection and leakage rates

during laparoscopic surgery (Pillinger et al., 2018). However, a randomized controlled trial found no significant difference in procedures with or without mechanical bowel preparation. Research suggests oral antibiotics and mechanical bowel preparation can lower infection and leakage rates during laparoscopic surgery. However, a randomized controlled trial found no significant difference in procedures with or without mechanical bowel preparation (Sun et al., 2022).

2.2.5 Minimally Invasive Techniques

Shorter hospital stays, less discomfort following surgery, and reduced operative trauma are all made possible by minimally invasive techniques. Because of the clear advantages in lowering access trauma, minimizing fluid shifts, reducing pain and the need for opiate analgesia, and lowering complications like ileus, blood loss, pulmonary complications, and wound infections, minimally invasive techniques have found their way into many ERAS protocols. In many disciplines, minimally invasive surgery is a crucial cornerstone of enhanced recovery after surgery (ERAS). It also makes many other ERAS components possible, including mobilization, analgesia, and hydration management (Rubinkiewicz et al., 2019).

2.2.6 Prudent Intraoperative Opioid Use

Enhanced Recovery After Surgery (ERAS) guidelines focus on the prudent administration of opioids during the intraoperative stage, highlighting the benefits, drawbacks, and strategies for effective pain management. The opioid crisis, originating from acute pain drugs, presents an opportunity to prevent chronic opioid use during surgery. ERAS procedures, which support opioid-free and multimodal analgesia, have been linked to shorter hospital stays and less postoperative ileus (Echeverria-Villalobos

et al., 2020). However, contradictory reports on multimodal medications and opioid-free analgesia's potential harm are needed. The ERAS paradigm is reevaluating opioid dependence for intraoperative pain treatment, focusing on reducing side effects and maximizing surgical outcomes, such as early patient mobilization and discharge, in line with ERAS goals. The search for methods to reduce opioid exposure while preserving efficient pain management becomes critical as the medical community transitions to a patient-centered and value-based care model (McEvoy et al., 2022).

2.2.7 Minimizing Indwelling Tubes/Catheters

Protocols for Enhanced Recovery After Surgery (ERAS) promote evidence-based techniques to improve patient outcomes. One aspect of ERAS involves reducing the use of indwelling tubes and catheters. These tubes and drains are used to aid in drainage, but they can impair patients' quality of life, reduce mobility, and exacerbate postoperative pain (Shen & Che, 2019). Routine use of vaginal, abdominal, and nasogastric drains increases morbidity, delays discharge, and restricts movement.

Vaginal packing can be uncomfortable, nasogastric tubes reduce leaks, and urinary catheter removal within 24 hours reduces hospital stay length. This review explores the benefits, drawbacks, and implementation techniques of reducing the use of indwelling devices in perioperative care, aiming to promote a patient-centered, efficient surgical recovery process within the ERAS framework (Li et al., 2021).

2.2.8 Early Postoperative Mobilization

Early mobilization is crucial for improved recovery after surgery (ERAS) pathways, reducing complications, enhancing walking ability, and reducing hospital stays. To

overcome resistance, resources and knowledge can be improved through education and clinical decision-making. Recent developments include the combination of ERAS with exercise rehabilitation and real-time feedback of mobilization amount using wearable technologies. ERAS guidelines need to highlight the advantages of organized postoperative mobilization. ERAS emphasizes early postoperative mobilization, focusing on appropriate analgesia and urinary catheter removal. The goal is to achieve significant mobility within 24 hours, including walking, transferring, and sitting up straight. Nurses or physical therapists assist in progressing toward independent mobilization (Tazreean et al., 2022).

2.2.9 The Use of Multimodal Analgesia Is the Main Component of Eras

Following surgery, mobilize immediately, aiming for significant mobility within 24 hours. ERAS routes include walking frequency, distance traveled, and time spent out of bed. Nonopioids like Nonsteroidal Anti-Inflammatory Drugs (NSAIDs), acetaminophen, gabapentin, glucocorticoids, ketamine, and tramadol are often used. Neuraxial techniques (epidural, spinal) and peripheral nerve blocks (transverse abdominal plane [TAP], paravertebral, brachial plexus, sciatic, and femoral nerve blocks) are among the regional anesthetic methods frequently employed in ERAS pathways (Upadhya R et al., 2018).

To effectively control pain, multiple analgesic modality combinations are needed, including systemic administration of drugs, regional methods like TAP block and nerve blocks, mental analgesia (MA), opioid or nonopioid medications combined with regional anesthesia, continuous intra-articular infusion, intravenous lidocaine (IL), and ketamine.

These methods can improve pain relief, reduce opioid consumption, and reduce pain scores in patients undergoing surgery. However, due to its controversial nature, the appropriate dose is crucial, as only 12.5% of patients required rescue analgesics. Gabapentinoids are commonly used as an adjunct for postoperative pain management (PPM) in orthopedics and major gynecological surgery. High doses are effective in reducing PP after spine surgery. Opioids remain the main analgesia for moderate to severe pain, but long-term usage increases the risk of stronger pain, increased opioid need, and prolonged recovery periods (Gelman et al., 2018). A fundamental component of ERAS protocols, multimodal analgesia signifies a paradigm shift in the treatment of postoperative pain. With the growing adoption of patient-centered and evidence-based care models in the healthcare industry, multimodal analgesia plays an increasingly important role in ERAS (Kaye et al., 2019).

2.3 Health Professionals and The Deployment of Eras

Coordinating and cooperating with diverse healthcare teams is essential to the successful implementation of ERAS. In examining the contributions, difficulties, and dynamic interactions that form the basis of contemporary surgical care, this paper explores the critical role that multidisciplinary teams play as the center of ERAS implementation. A coherent approach across the perioperative continuum and successful implementation of ERAS are ensured by multidisciplinary teams, which are made up of professionals from diverse specialties and promote complete decision-making and individualized patient care. Effective communication and coordination are crucial in ERAS, with multidisciplinary teams facilitating seamless information exchange to minimize care gaps and optimize patient outcomes (Keller, 2022).

Multidisciplinary teams collaborate in preoperative planning and intraoperative coordination to assess patient needs and develop individualized ERAS pathways, ensuring adherence to protocols and minimizing opioids. Postoperative collaboration is crucial for pain management, early mobilization, and resolving complications, with multidisciplinary teams monitoring patient progress and adapting the ERAS pathway as needed. The ERAS principles are emphasized through comprehensive education and training programs, regular interdisciplinary meetings, and standardized protocols and checklists, fostering a culture of continuous improvement and consistent care delivery (Salenger et al., 2020).

2.4. Behaviors Influencing Adherence to Eras Protocols

Healthcare practitioners' adherence to ERAS guidelines varies, and this can have a big impact on patient care and recovery. The study's findings showed a correlation between a reduction in significant complications and a shorter length of stay in the hospital following surgery and high compliance with each particular ERAS component. According to a study, 60% of the ERAS components had compliance rates of 70% or above, and the total program compliance rate was 70% (IQR, 65–80%) (Feng et al., 2022). On the other hand, there was a lot of variation in ERAS component compliance. A few of the elements include patient education, preoperative counseling, and antibiotics. These are the main variables affecting how closely

ERAS protocols are followed.

Education and Training: Healthcare personnel's adherence to protocols is greatly influenced by their comprehension of and familiarity with the ERAS principles. Adherence levels can be increased with appropriate education and training programs

that highlight evidence-based procedures, the intended benefits, and the reasoning behind ERAS components (Bastable, 2021).

Clinical Guidelines and Protocols: Specifically tailored instructions and optimal techniques for perioperative care are furnished to healthcare practitioners by unambiguous and uniform ERAS protocols. When healthcare facilities have ERAS policies that are well-established, easily accessible, and routinely updated in light of new information, adherence is frequently higher (Abouleish & Stead, 2018).

Multidisciplinary Cooperation: To comply with ERAS guidelines, a variety of medical specialists, such as nurses, anesthesiologists, surgeons, dietitians, and physical therapists, must work together. When interdisciplinary teams collaborate well, delegate tasks to one another, and communicate clearly to consistently apply ERAS protocols, the level of adherence rises (Boudreaux, 2020).

Leadership support and culture: Hospital administrators and department heads must provide strong leadership support to foster a culture of ERAS protocol adherence. Healthcare professionals are more likely to follow the protocols when leaders give priority to ERAS implementation, provide resources, and promote staff participation (Herbert et al., 2017).

Mechanisms for Audit and Feedback: Frequent audit and feedback procedures offer insightful information about adherence rates and potential improvement areas. Over time, healthcare facilities that carry out audits, give staff feedback, and carry out remedial actions when necessary tend to have higher adherence rates to ERAS guidelines (Wei et al., 2020b).

Continuous Quality Improvement: Healthcare facilities that are dedicated to ongoing quality improvement tend to have better ERAS protocol adherence rates. Healthcare practitioners can improve adherence to ERAS guidelines and improve their practices over time by conducting quality improvement activities, identifying areas for improvement, and routinely monitoring outcomes (Wei et al., 2020b).

2.5 Impact of Perceived Behavioral Control on The Success of Eras

The Theory of Planned Behavior, or TPB, holds that action results from the intention to act. An individual's behavior can be determined by their intention, according to the Theory of Planned Behavior, which states that intention directly determines an action. Perceived behavior control, or an individual's response to something as behavioral control, is a term that describes how easy or difficult it is to carry out an activity (Ajzen, 2002). Perceived behavioral control is likely to influence intentions even when it is not very realistic. When all else is equal, a high perceived control level should reinforce an individual's intention to carry out the behavior and boost their degree of effort and persistence. In this way, through influencing intention, perceived behavioral control can have an indirect effect on behavior. Furthermore, when perceived behavioral control is accurate, it can be utilized as an additional direct predictor of behavior since it offers helpful details about the real control an individual can exert in the circumstance. It is one of the key elements determining the intention (Yanuar & Arifin, 2022). An important component in behavior control is the presence of supportive variables. Conversely, a person finds it harder to grasp and execute a behavior the less motivating variables there are in his or her life. A person will have a higher intention to carry out a behavior if he or she is optimistic, gets support from those around them, and faces

fewer hurdles in doing so than if they are is positive, supportive, and faces numerous obstacles (Bangun & Handra, 2021). A person's intention to adhere to ERAS protocols is significantly influenced by their perception of behavioral control, regardless of their level of knowledge. However, adherence to ERAS protocol is also impacted by ignorance or lack of understanding.

2.6 Impact of Subjective Norms on Health Professionals' Experiences

Health workers' adherence to Enhanced Recovery After Surgery (ERAS) procedures can be significantly impacted by subjective norms, which are defined as perceptions of social pressure, approval, and expectations from colleagues, superiors, and the larger healthcare community. When it comes to ERAS implementation, health professionals could experience pressure to live up to the expectations of their superiors and colleagues. Professionals are more likely to follow the protocols to meet expectations if there is a culture of support and expectation for ERAS adherence within the healthcare team (Gillis et al., 2021). Individual adherence to ERAS guidelines might be influenced by the conduct and attitudes of colleagues in interdisciplinary teams. When members of the team exhibit a strong dedication to ERAS and actively facilitate its execution, it establishes a social norm that motivates others to follow the procedures as well.

The development of subjective norms surrounding ERAS adherence is largely influenced by leadership in healthcare institutions. Health professionals are encouraged to prioritize ERAS implementation when leaders exhibit strong support for the system and convey unambiguous expectations for adherence (Janke et al., 2021) Healthcare

practitioners have the option to ask for input from their colleagues and assess how well they adhere to ERAS guidelines in comparison to others. Rewarding praise and acknowledgment for compliance can strengthen the subjective norms that underpin the execution of ERAS, while perceived departures from the norm may lead people to modify their behavior.

2.7 Barriers to The Implementation of ERAS

Despite their proven benefits and increasing global adoption, implementing ERAS protocols remains challenging, particularly in resource-limited settings. Barriers to successful implementation arise from systemic, institutional, and individual factors that impede adherence to the protocols and hinder their effectiveness.

2.7.1 Resources and Workload

Limited resources can hinder the implementation of ERAS, as nurses are responsible for patient education and postoperative care progression. In busy clinical areas, staff may become frustrated by the lack of time to follow guidelines and address compliance concerns. The COVID-19 pandemic has exacerbated the nursing shortage, and implementing ERAS is an essential step to increase efficiency in healthcare settings. This structured perioperative pathway will lead to a more rewarding, less stressful working environment, requiring investment and resources. The ERAS coordinator, typically a specialist nurse, is introduced to address barriers to successful implementation and sustainability, focusing on staff education, data management, and care pathway development. Effective leadership and seniority are crucial in a department. Data can be a powerful tool for real-time improvement, highlighting compliance and improved clinical outcomes. Sharing this data with team members,

particularly nurses, can support requests for additional resources and demonstrate progress (Balfour et al., 2022).

2.7.2 Communication

Poor communication between healthcare professionals can lead to conflicting patient care approaches, causing uncertainty and inconsistencies in daily clinical practice. Challenge traditional practices and beliefs through open discussion and education to ensure nurses understand ERAS elements. Encourage nurses to advocate for their patients while adhering to best practices. Regular reports and structured meetings with management and multidisciplinary teams can document the ERAS process, highlight successes, and improve care plans. The ERAS program is crucial for patient care, as it ensures continuity and avoids conflicting information. It helps patients understand expectations before, during, and after surgery, providing an agreed pathway for recovery. Preoperative coaching ensures realistic expectations and participation, using appropriate language and tools like apps, websites, and patient diaries (Balfour et al., 2022).

2.7.3 Lack of Policy Support

Many hospitals lack incentive policies and measures to encourage the implementation of ERAS, leading to a lack of internal motivation among medical staff. Some believe tertiary hospitals' ERAS programs are not implemented in basic hospitals, and there is no formal training course. Informal training lacks a unified ERAS implementation process, leading to significant differences in implementation across hospitals, making it challenging to compare and analyze the effects of multicenter

hospitals (Wang et al., 2022).

2.7.4 High Cost

Poor economic conditions often lead patients to avoid pain and avoid using analgesic pumps, while nutritionists argue that high costs of commercial preparations and medical insurance reimbursement can result in a lack of essential nutrients (Wang et al., 2022).

2.7.5 Buy-in and Engagement

Lack of uniform engagement with ERAS elements can cause inconsistencies and uncertainty within nursing teams. Nurses may disagree with early feeding, catheter removal, or mobilization, fearing reprisals. Despite evidence-based pathways, ongoing staff engagement, education, and support are crucial for a successful ERAS pathway (Balfour et al., 2022).

2.8. Health Professionals' Attitudes and Intentions Towards Long-Term Integration of Eras Procedures

The success and durability of Enhanced Recovery After Surgery (ERAS) programs can be greatly impacted by the attitudes and intentions of healthcare providers on the long-term integration of ERAS treatments. This is how their aims and attitudes affect long-term integration.

2.8.1 Communication and Collaboration

Communication and a mutual desire to work together are essential for the successful incorporation of ERAS techniques. Comprehensive ERAS education for staff and patients, together with efficient and transparent knowledge and information

distribution, were thought to be a key factor in the cases where this worked well. The high turnover rate of health personnel was mentioned as a challenge to this procedure, and it was proposed that giving new hires a

"thorough introduction about ERAS principles helped to improve things (Cohen & GoobermanHill, 2019a). Additionally, effective teamwork is essential since it creates an atmosphere where concerns about staff and practice, as well as discipline or intervention-specific issues, could be addressed. Effective team communication was also considered as a way to reduce staff confusion regarding ERAS particular areas that needed to be improved include dialogue between staff and patients, which can be particularly difficult given the condensed and information-rich nature of ERAS, and between nurses and surgeons (Mathews & Mathews, 2018).

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Building strong relationships within and between participating ERAS centers is crucial for the successful implementation of the program, according to champion staff, who understood that these connections promoted communication regarding current practices on the ground and helped to create better understandings of them among all parties involved. It was believed that a bottom-up strategy, as opposed to a top-down one, was more successful in introducing ERAS programs. Employees were more likely to respond favorably to the implementation of ERAS practices when they could participate in their creation (Cohen & Gooberman-Hill, 2019a).

2.8.2 Resistance to Change

The adoption of ERAS has been significantly hampered by staff resistance to change, both individually and collectively. It has been mentioned, for example, that the personnel will need to adjust their culture in order to introduce and carry out the program, which they anticipate will be significant and abrupt. Negative attitudes and a reluctance to follow ERAS rules can result from worries about how unfamiliar new working procedures are, while a general fear of change can also cause disinclination. The age and experience of the staff also influence the extent and intensity of the resistance that is being discussed here. When implementing ERAS programs, it was found that designating a "champion" had been very beneficial in fostering positive attitudes and productive cooperation. Employees assuming this, or a comparable, position were hired from a variety of Multidisciplinary specialties, and they included an ERAS coordinator and a designated ward-based ERAS nurse. However, from the champions' point of view, resistance was understood more narrowly and precisely, with some attributing it to disagreements about particular initiatives rather than more general mechanisms. Furthermore, they believed that individual-level resistance from certain staff members might still exist even in situations where multidisciplinary were, for the most part, readily accepting of ERAS standards (Cohen & Gooberman-Hill, 2019a).

2.8.3 Role and Significance of Protocol-Based Care

The multidisciplinary team staff is aware of how evidence-based policies and procedures can improve patient flow and standardize procedures. On putting ERAS interventions into practice, there are differing views. As long as they are based on the

best available data and follow established order sets, surgeons think these are simple to execute. Standardized criteria are something that anesthesiologists are amenable to implementing. ERAS routes are not strictly prescriptive, there will always be variation in how they are eventually operationalized and incorporated into the clinical systems already in place at a site. A study discovered that employees could become confused if ERAS procedures need to be changed or deviated from.

The reality that certain patients do not and cannot comply with ERAS requirements and do not "fit" standard care trajectories because they are too old and frail, or because they have very high levels of comorbidity, or because they are just too sick, seemed to have the biggest impact on nursing staff's day-to-day work. Nursing personnel faced both logistical and ethical challenges as a result of these issues. Some expressed feelings deeply conflicted about the conflicts they encountered while attempting to meet the ERAS standardized care targets. Multidisciplinary teams are unduly cautious in their work since there is a lack of clear instructions regarding when and how to default or vary from ERAS guidelines. They also suggested that more exact and well-defined inclusion criteria would be beneficial in determining which patients to push through. Recovery (Cohen & Gooberman-Hill, 2019a).

2.8.4 Knowledge and Expectations

Employees acknowledged that a thorough understanding of ERAS is necessary for successful implementation, even though this requirement goes beyond the practical guidelines and procedural specifics offered by the ERAS protocols themselves. Instead, staff members needed to understand the intervention's broader goals and objectives

and have faith in the intervention's worth and its benefits (Cohen & Gooberman-Hill, 2019a).

Studies show that staff members generally felt favorably about and positively about the implementation of ERAS. Despite staff members' initial skepticism, their feelings changed after they observed how well ERAS functioned in actual use (Ciulla & Ciulla, 2020).

Staff members' concerns about ERAS practices varied based on their multidisciplinary team specialization. Nurses were skeptical due to uncertainty, indecisiveness, and fear of ward rounds. They also worried about the potential negative effects on patients advancing their recovery. Nurses' implicit knowledge was crucial in implementing ERAS. Health professionals prioritize setting and managing expectations to build shared understandings around ERAS and understand their tasks. They benefit from clear patient expectations and recognize the complex difficulties in collective understanding across multidisciplinary teams, where different perspectives and understandings may conflict (Cohen & Gooberman-Hill, 2019a).

Staff expectations in multidisciplinary teams vary, leading to uncertainty and ambivalence around ERAS implementation. Nurses anticipate resistance, surgeons worry about nursing culture, anesthetists fear patient understanding, and surgeons are uncertain about changes' impact on patient experiences. Staff acknowledge preoperative education's importance, but face challenges (Ramesh et al., 2017).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The methods utilized to address the research questions are covered in this chapter. The study design, study population, inclusion and exclusion criteria, sampling techniques, tools, and methods for data collecting, data analysis, and ethical concerns and considerations are the subsections that will be covered.

3.1 Research Paradigm

The study is grounded in the interpretive paradigm, which emphasizes understanding human experiences, perceptions, and social phenomena from the perspective of the individuals involved. This paradigm aligns with the qualitative nature

of the research, focusing on exploring the lived experiences of health professionals with the implementation of Enhanced Recovery After Surgery (ERAS) protocols. The interpretive paradigm, based on social construction and context, provides a nuanced understanding of health professionals' subjective experiences and strategies for implementing ERAS in resource-constrained settings through interviews and thematic analysis (Walumbe, 2022)

3.2 Research Design

Using an explorative descriptive method, this study seeks to provide a thorough knowledge of health professionals' experiences, viewpoints, and behaviors related to the implementation of ERAS. An in-depth interview on enhanced recovery after surgery protocols was explored in the natural setting to gain understanding and meaning, which is central in this approach. This method allows the research to delve into the perceptions, attitudes, and practices of healthcare professionals, uncovering underlying factors influencing their adherence to ERAS protocols. On the other hand, helps to capture and present these experiences in rich, detailed narratives, thereby providing a comprehensive picture of the participants' realities (Alase, 2017).

3.3 Research Setting

The participants were perioperative health professionals from Ghana's capital city of

Accra, who works at the University of Ghana Medical Centre. Situated on the University of Ghana campus in Accra, Ghana, the University of Ghana Medical Centre is a quaternary medical and research facility. The University of Ghana Medical Centre (UGMC) is a state-of-the-art hospital offering excellent quaternary-level healthcare

services in Ghana, West Africa, and beyond. The Center was built between April 2013 and January 2021, when it was finished and ready for use. It can accommodate 1000 beds in total. The multidisciplinary team includes specialists in surgery, anesthesiology, nursing, physiotherapy, nutrition, and pharmacy, among others. The center employs over 800 staff members, including senior consultants, junior medical officers, nurses, allied health professionals, and administrative personnel. UGMC offers a variety of medical and surgical services, including general surgery, orthopedics, neurosurgery, urology, and gynecology. It also provides advanced care in oncology, cardiology, and nephrology. The hospital supports obstetric and pediatric care, provides advanced diagnostic tools, and offers post-surgical rehabilitation services. It also promotes research and innovative practices with its simulation center.

3.4 Targeted Population

The study population consists of health professionals who have worked for 2 years of experience at the University of Ghana Medical Centre. This specifically includes Surgeons,

Nurses and Anesthesia

3.4.1 Inclusion Criteria

1. Perioperative Nurses who are working are eligible to participate.
2. General nurses working in the Surgical units and the Main Theatre Department with at least two years of experience.
3. Surgeons, anesthetists, and medical officers working on patients for pre-operative and post-operative

3.4.2 Exclusion Requirements

1. Temporary staff or professionals on probationary employment.
2. Staff unavailable during the study period due to leave or other commitments.

The above health professionals may not have enough experience with enhanced protocols

3.5 Sampling Size and Sampling Technique

A purposive sample of 15 to 20 health professionals was chosen to achieve saturation and provide detailed insights into the research objectives. This range was deemed sufficient to capture variability in experiences while ensuring manageable data for qualitative analysis. The breakdown of participants by specialty. Following is the breakdown: Main theatre (7); Medical and surgical ward (2); Neuro ward (2); Cardio ward (1); Orthopedics ward (2); Pediatric surgery (1); Endoscopy (1); ENT nurses (1); and Women and Children (3). The various specialties were chosen based on their expertise and their crucial role when patients are booked for surgery and are directly involved in surgical procedures. To ensure that every specialty was adequately represented in the sampling and to discover whether there were variations in the adherence to enhanced recovery after surgery protocols. Purposive sampling was used to select participants who met the specific criteria. This aided the study in focusing on the group characteristics, providing detailed data.

3.6 Data Collection Tool

A semi-structured interview guide was used in this study to gather primary data. The adoption of in-depth interviews as a qualitative research technique was motivated by the requirement to elicit detailed responses from the respondents. Piloting was done

using five respondents from Legon Hospital to test the interview guide before using it officially for the study. The interview guide quizzes respondents in four sections, are questions reflecting the objectives and theory guiding the study. Additionally, it gave the researcher a better chance to explain the study's objectives and ask respondents about their personal experiences with the subject.

3.7 Piloting of Instrument

A pilot study aided the researcher in identifying the interview guide's constraints, shortfalls, defects, and any weaknesses, allowing for repair and amendment before study implementation and the development of the research question (Vercacmmen et al., 2023). The pilot study involved a small sample of 5 health professionals at Legon Hospital who have experience with ERAS protocols. The participants were selected using purposive sampling to reflect the diversity of the professional group. The pilot testing involved semi-structured interviews, focus group discussions, and observational checklists. Feedback was solicited to gather perspectives on the clarity of questions and the appropriateness of the interview structure. Data collected was reviewed to assess the quality and relevance of responses, and necessary revisions were made to the interview and focus group guides. The expected outcomes of the pilot study include ensuring robust data collection instruments, improving the flow and structure of interviews and discussions, and addressing logistical challenges.

3.8 Data Collection

Ethics approval was secured from the University of Ghana Medical Centre institutional review board (IRB), ensuring that the study adhered to ethical standards for

research involving human participants. Administrative approval was obtained from UGMC management, granting permission to access the facility and engage with staff. A pre-test of the data collection was done using 4 similar participants. The instrument was adequate and needed no amendment.

Unit heads and ward managers formally introduced the researcher to the wards and departments at the start of data collection. These gatekeepers made sure the researcher was appropriately oriented in each clinical environment, supported the development of an initial relationship with the personnel, and communicated the goal of the study. Participants' trust was increased, and participation was guaranteed throughout the data collection procedure, thanks to this introduction.

After making initial contact with the health professionals at the various specialties' units, main theatre, surgical ward, medical ward, neuro ward, orthopedics ward, cardio ward, post-anesthesia care unit, pediatric surgery, women and children, and ENT, the researcher scheduled an appointment with them. The researcher later got in touch with the participants by visiting the various wards to confirm the appointment time before the person met for the interview. This gave the participant ample time to think about joining. All interviews took place in a consulting room at the various units. This ensured the subject was at ease, isolated from peers, providing privacy, before starting the interview. Before audio-taping the interview, the researcher gathered demographic data, including age, sex, level, rank, religion, occupation, and department. This was done to safeguard the obscurity and privacy of participants. The interview was recorded and then transcribed verbatim. The researcher took field notes on all

observations made throughout the interview, ensured all data was documented, and facilitated contextual analysis. The interview lasted between 25 and 40 minutes for each participant.

3.9 Data Management

A well-structured data management plan was essential for ensuring the accuracy, confidentiality, and reliability of the data collected in this study on the experiences of healthcare professionals concerning Enhanced Recovery After Surgery (ERAS) protocols at the University of Ghana Medical Centre (UGMC). The study ensured the security and confidentiality of data by storing electronic data on encrypted computers and backing it up on secure cloud storage. Data processing will involve transcription, coding, and cleaning to organize the data for analysis. Thematic analysis will be used to identify key themes and subthemes related to the Theory of Planned Behavior. The following sections outline other strategies.

3.10 Data Analysis

Reflexive Thematic Analysis (RTA), as described by Braun and Clarke (2019), was used to analyze the qualitative data in this study. This method was chosen for its adaptability and ability to provide a thorough and nuanced knowledge of participants' experiences and perspectives. The RTA technique enabled the systematic identification, categorization, and analysis of patterns in data while maintaining reflexivity throughout the process.

3.10.1 Familiarization with the Data

The first step involved immersing in the data to gain a deep understanding. Audio

-recorded interviews were transcribed verbatim, and the transcripts were read and re-read to ensure familiarity. Notes and initial observations were documented during this phase to capture nuances in participants' expressions, pauses, and emphases. For instance, while reading the transcripts, repeated phrases such as "teamwork is essential" and "patients recover faster," which hinted at emerging patterns related to collaboration and patient outcomes were noted.

3.10.2 Generating Initial Codes

The next phase involves systematically coding data using an inductive approach, focusing on descriptive, interpretive, and contextual codes. This included highlighting specific actions related to ERAS implementation, capturing broader meanings, and considering cultural, institutional, and social contexts in Ghana. The study utilized NVivo software

for data-driven, inductive coding to identify participants' experiences, perspectives, and challenges, resulting in robust codes reflecting their experiences and perspectives. Both semantic (explicit) and latent (implicit) meanings were considered. For example, codes were generated from participant statements as illustrated in Table 3.1

Table 3.1 Participant's Significant Statement and Codes

Participants	Significant statement	codes

Participant 1 (P1	*"I've seen patients walk sooner and leave the hospital much earlier compared to traditional methods."*	1. "Positive perception of early mobilization" 2. "Quicker recovery observed"
Participant 17 (P17):	*"Language can be a barrier when working with a staff who cannot understand your language or are slow to understand various signals."*	1. "Communication challenges among staff" 2. "Impact of language on teamwork"
Participant 5 (P5):	*"We need mor training to understand the steps better and the resources to carry them out efficiently."*	1. "Need for professional development" 2. "Resource constraints limiting ERAS adherence"

Codes were refined throughout the process to ensure relevance and clarity. To make sure the coding process remained data-driven, the researcher maintained reflexivity by recording personal presumptions and biases in a journal. To ensure accuracy, all interpretations were meticulously compared to the original data. The reviewed significance was also reviewed by supervisors and approved as appropriate.

3.9.3 Searching for Themes

The study's next phase involved identifying themes by combining preliminary codes into comprehensive patterns, aiming to find cohesive, overarching themes that encapsulate participants' experiences. The researcher systematically reviewed the initial codes, looking for relationships, commonalities, and recurring ideas. For instance, codes such as *"early recovery," "improved patient outcomes,"* and *"reduced hospital stay"* were grouped as they related to the benefit of Enhanced Recovery After Surgery (ERAS). This cluster of codes contributed to the broader theme of *"Promotes Recovery."*. Related codes were examined collectively to determine whether they fit within a single theme or needed separate categorization. For example, Codes like *"team communication challenges"* and *"confusion over guidelines"* were grouped under the sub-theme *"Communication Barriers."* However, *"insufficient staff"* and *"lack of equipment"* were grouped under *"Institutional Barriers."* Codes emphasizing health professionals' commitment to patient outcomes, such as *"collaborating to achieve goals"* and *"shared responsibility for recovery,"* contributed to the sub-theme *"Strengthening Teamwork"*. Thematic maps were made to show the connections between themes and sub-themes. These helped to identify any overlap or gaps in the themes. Themes were refined to ensure they were distinct and directly addressed the research questions. Redundant or loosely connected codes were reassigned or discarded. The iterative and systematic approach to searching for themes ensured that the analysis captured the depth and diversity of experiences while remaining aligned with the study objectives.

3.9.4 Reviewing Themes

Themes were reviewed in the fourth phase, refining and validating themes to ensure

they accurately reflect data. Themes were reviewed against the entire dataset to ensure they accurately reflected the data. This iterative process included revisiting transcripts to verify the coherence and relevance of each theme and checking for overlap or redundancy among themes. For instance, the theme *"Barriers to ERAS Implementation,"* sub-themes like *"Patient-Related Barriers"* and *"Communication Barriers"* were reviewed to confirm they captured specific challenges distinct from other themes. Themes were cross-checked with the original transcripts to ensure they represented the participants' perspectives without losing context.

were reviewed under the sub-theme to ensure alignment with the theme's focus on patient-related challenges. The preliminary theme *"Implementation Challenges"* was too broad and was refined into more specific sub-themes, such as *"Communication Barriers"* and *"Institutional Barriers."*

Overlapping content between *"Teamwork Dynamics"* and *"Communication Barriers"* was clarified by ensuring the latter focused on communication breakdowns, while the former highlighted collaborative efforts. The reviewing process ensured the final themes were robust, distinctive, and reflective of the data while maintaining alignment with the study's objectives. Themes such as Awareness of ERAS, Beliefs About ERAS, Barriers to ERAS Implementation," and strategies for improving ERAS implementation provided nuanced insights into participants' perspectives, creating a foundation for a rigorous and credible analysis.

3.9.5 Defining and Naming Themes

The fifth stage includes defining and naming where themes were defined in

terms of their central organizing concepts and relevance to the study objectives. This involves articulating a detailed narrative for each theme to ensure clarity about what the theme represents and its significance in the dataset. Each theme was revisited to ensure it reflected the data accurately and distinctively. Definitions were supported by examples, including participant quotes, to substantiate the theme's focus. The table below presents themes, definitions, and respective significance statements from participants.

Table 3.2 Naming, Defining, and Significant statement from participants

Naming Themes	Defining	Significant Statement
Awareness of Eras	Awareness, as explored in this study, refers to the knowledge, understanding, and familiarity of healthcare professionals with the principles, practices, and objectives of Enhanced Recovery After Surgery (ERAS) protocols.	*"For me, I think, pre operatively, receiving patients, we have protocols, like ensuring you have the right patient, the patient has consented to the surgery, the sites being marked, just to make sure the correct site is going to be approved. And then, ensuring patients have maintained NPO to prevent anesthesia complications". (P8, surgical ward, senior nursing officer)*
Beliefs About ERAS	This theme captures healthcare professionals' perceptions and attitudes toward the ERAS protocols, including their perceived benefits, limitations, and influence on patient recovery and teamwork.	*"I believe ERAS helps patients recover faster. I've seen patients walk sooner and leave the hospital much earlier compared to traditional methods."* (P1, Nurse).

Barriers to ERAS Implementation	This theme highlights challenges faced by healthcare professionals in implementing ERAS protocols, including logistical issues, institutional constraints, and patient-related challenges.	*"If there are no clear, written protocols and no proper communication among teams, how will it work?"* (P2, Nursing Officer, OBS Theatre).
Strategies for improving ERAS implementation	This theme encompasses actionable strategies proposed by participants to enhance the adoption and adherence to ERAS protocols, focusing on resource allocation, training, and guideline standardization.	*"Continuous professional development is key. If staff are regularly trained, they will understand the protocols better."* (P3, Surgeon).

By defining and naming themes systematically, the analysis achieved clarity and depth, ensuring that each theme was distinct, meaningful, and rooted in the data. This step provided a framework for presenting the findings in a coherent and structured manner, ultimately contributing to the rigor and credibility of the study.

3.9.6 Producing the Report

The final phase of reflexive thematic analysis involves producing a detailed report that synthesizes the analytical findings into a coherent narrative. This process aligns the identified themes with research objectives and questions, ensuring a compelling and academically rigorous account. The report was structured to align with the research objectives and questions, using verbatim quotes from participants to illustrate each theme. Each theme is described in depth, combining participant perspectives with the researcher's interpretation. The report follows a logical progression, maintaining a

balance between presenting raw data and interpreting the findings. Reflexivity and rigor were ensured, with strategies such as peer debriefing and iterative revisions of the report. The themes are discussed in existing literature to demonstrate their contribution to the field. The report concludes by emphasizing the study's contributions to understanding ERAS implementation, offering practical recommendations, and identifying areas for future research.

3.10 Rigor in Methodology

When conducting qualitative research, rigor is utilized to assess if the participant's information accurately reflects their experiences and can be relied upon. (Hamilton, 2020) In qualitative research, rigor is crucial to guarantee that the results are reliable, authentic, and accurately represent the participants' experiences. Several techniques were used to ensure rigor throughout the research process in this study, which examines the experiences of medical professionals at the University of Ghana Medical Centre (UGMC) on the implementation of Enhanced Recovery After Surgery (ERAS) protocols. The primary techniques for assessing the reliability of a study are credibility, transferability, dependability, and confirmability (Korstjens & Moser, 2018). Triangulation was a key tactic used in all of these fields, where data were compared across multiple sources and techniques to enhance the reliability of the results.

3.10.1 Credibility

Credibility is the extent to which study findings accurately reflect reality, participants' perspectives, and the significance of the research participants' experiences. Another emphasis on credibility was the establishment of a correspondence between

the realities provided by the researcher and the respondent's constructed world (Collingridge & Gantt, 2019). Credibility in this study was crucial for its validity. Strategies include prolonged engagement, using multiple data collection methods, cross -checking data consistency, member checking, and maintaining a reflective journal. Engaging with participants and comparing transcripts ensured accurate interpretations. Using a reflective journal helped identify personal biases and assumptions, ensuring the study accurately represents the experiences of healthcare professionals with ERAS protocols. Triangulation was especially important; to guarantee consistency in interpretation, data from field notes, interviews, and reflective journaling were compared. Involving participants in member verification or transcript reviews confirmed that the results accurately represented their experiences.

3.10.2 Transferability

This study aims to assess the transferability of its findings to other contexts, particularly in low- and middle-income countries (LMICs) or similar healthcare settings. It provides detailed descriptions of the research context, participants, and findings, and uses a purposive sampling strategy to include relevant participants with diverse experiences. Additionally, the sample should be sufficient in size and appropriately diverse. Additionally, triangulation facilitated transferability by comparing results from other health professional cadres, such as nurses, surgeons, and anesthetists, enabling a range of viewpoints to enhance the overall image.

For an audit trail, transcribed data and field notes were also maintained (Phillippi & Lauderdale, 2018).

3.10.3 Dependability

Dependability is the stability of the methods and procedures used by a researcher during research. For dependability to be achieved, participants were asked the same questions during data collection, a detailed account of the process of data collection was provided, and the same interview guide, the same recorder, and the same method of analysis were used. Dependability in the research also involves the stability and consistency of findings over time. Strategies to ensure dependability included maintaining an audit trail, engaging with experienced qualitative researchers, and code-recoding. The audit trail documents decisions made during data collection, analysis, and interpretation. Peer review and debriefing ensured interpretations were grounded in the data, and code recording helped identify variations in coding decisions. By enabling the comparison of data from various participant groups and interview sessions, triangulation helped to ensure that the results were consistent and not reliant on a single source or instance.

3.10.3 Confirmability

Confirmability in research involves incorporating reflexivity, triangulation of multiple data sources, and external audits. Reflexivity involves maintaining a reflective journal to document personal biases, while triangulation reduces researcher bias. External audits involve an independent reviewer ensuring data collection methods, coding, and analysis were not skewed by personal bias. This was accomplished using a non-biased research methodology and outcome. The interviews were verbatim content transcribed verbatim after being audio recorded. After the interview, audio recordings were also played back to the participants to make sure their expectations were satisfied.

All study-related documents were also saved for an audit trail. Direct quotes from the participants helped bolster the investigation's emerging themes. Reflexivity will be employed to eliminate researcher bias, considering a researcher's position and duty in a study. Data were transcribed immediately after collection to ensure an accurate representation of recent graduates' experiences.

Another method of ensuring the study's reliability was bracketing. Before the data could be analyzed, bracketing was used to eliminate all prior assumptions about the phenomenon being studied. Bracketing is the process of identifying and putting aside any preconceived notions and judgments one could have about a phenomenon being studied and recording them in a field note (McNarry et al., 2019).

The interviews were performed using a semi-structured interview guide that had been authorized by the supervisors, and depending on the participant's responses, probes were utilized to get more information. Constructivism and interpretivism are complementary approaches in qualitative research that aim to comprehend and interpret the personal meanings that people attach to their experiences. Rather than looking for broad generalizations or universal truths, researchers strive to understand the various interpretations and views held by participants.

3.10.4 Ethical Consideration

The study had undergone an ethical review process, including ethics approval from the University of Ghana's Institutional Review Board and administrative approval from UGMC management. The IRB ensures the research adheres to ethical guidelines and minimizes potential risks to participants, while administrative approval ensures the

research aligns with hospital policies and procedures. Informed consent is an ethical principle that ensures participants understand the study's purpose, procedures, risks, and benefits before agreeing to participate. Participants received a clear Participant Information Sheet (PIS) outlining the study's purpose, procedures, and expected duration. Participation was voluntary, and participants had the right to withdraw at any stage. A written informed consent form confirms their understanding and agreement. Participants' privacy and confidentiality were protected by using pseudonyms in transcripts, reports, and publications. Data collected will be stored securely, with electronic data encrypted and physical copies kept in a locked cabinet. Only the principal researcher and authorized research assistants will have access to raw data, which will be securely disposed of after completion. Risk minimization includes addressing potential emotional discomfort and providing psychological support to participants who experience distress. The study aims to minimize potential risks and ensure a safe and ethical environment for participants. The research aims to maximize benefits and minimize harm, improving ERAS protocol implementation at UGMC. Transparency is crucial, and results will be shared with management and participants for institutional learning.

CHAPTER FOUR

RESULTS

4.0 Introduction

The data generated from the participants who fulfilled the study's inclusion criteria are presented in this chapter. Once data was analyzed using thematic analysis, sub-themes were organized under the principal themes using the theory of planned behavior. The three main themes that emerged were the experiences related to awareness and beliefs of ERAS, barriers to practicing ERAS protocols, and strategies for improving the implementation of ERAS. Complete biographies of the participants were recorded, in addition to verbatim quotes taken in secret.

4.1 Background of Participant

There were twenty (20) participants in the study, nine (8) of whom were nurses, six (6) were Doctors, and six (6) were anesthetists. The participants' ages ranged from 26 to 45 years old, of which (15%, n=3) were 20-30 years, (65%, n=13) were 31 to 40, and (20%, n=4) were 41 to 45.

The sample was (45%, n=9) females and (55%, n=11) males. The most occurring health professionals interviewed were nurses (40%, n=8), followed by surgeons (30%,n=6) and anesthetists (30%,n=5). A large fragment of the participants (65%,n=13) were married, and a minority (35%,n=7) were single. The majority of the participants (85%, n=17) were Christians, and a minority (15%, n=3) were Muslims. This is shown in Table 4.1.1 below.

Table 4.1: Social Demographic Data

Pseudonym	Age	Gender	Religion	Marital Status	Profession
P1	28	female	Christian	single	Nurse
P2	33	female	Christian	married	Nurse
P3	42	male	Christian	married	anesthetics
P4	44	male	Christian	married	surgeon
P5	40	male	Muslim	married	surgeon
P6	43	male	Christian	married	surgeon
P7	41	male	Christian	single	surgeon
P8	34	female	Christian	single	Nurse
P9	38	male	Christian	married	Nurse
P10	37	male	Muslim	single	anesthetics
P11	29	male	Muslim	single	Nurse
P12	35	male	Christian	married	anesthetics
P13	40	female	Christian	married	surgeon
P14	28	female	Christian	married	Nurse
P15	38	female	Christian	married	anesthetics
P16	33	female	Christian	married	Nurse
P17	31	male	Christian	married	Nurse
P18	39	male	Christian	married	surgeon
P19	35	female	Christian	single	anesthetics
P20	33	Female	Christian	single	anesthetics

4.2 Organization of Themes

From the experiences narrated by the participants, three themes identified from the analysis were identified from the constructs of the TPB.

Experiences of health professionals concerning enhancing recovery after surgery

implementation: Synthesis of themes and sub-themes

Table 4.2: Organization of Themes

Research Question	Themes	Sub-themes
What are the cognitive perceptions of health professionals about the implementation of the ERAS protocols in improving patient outcomes?	1a) Awareness of ERAS	a) Pre-op preparations b) Intra-operative guidelines c) Post-operative guidelines
	1b) Beliefs about ERAS	a) Promote recovery b) Strengthens teamwork c) Delays in service delivery d) Increase workload
What barriers are perceived by health professionals to implementing ERAS protocols?	Barriers to affecting ERAS Protocols implementation	a) Communication Barriers b) Patient-related barriers, c) Institutional Barriers
What are the strategies for improving the implementation of the ERAS protocol at UGMC?	Strategies for improving the implementation of ERAS	a) Continuous professional b) development, Protocol/guideline development, and implementation c) Resourcing institutions d) Improving care coordination

4.3 Awareness of ERAS

This theme sheds important light on how well medical practitioners comprehend Enhanced Recovery After Surgery (ERAS) procedures, particularly emphasizing the three main phases of surgical care: pre-operative planning, intraoperative guidelines, and post -operative guidelines.

The University of Ghana Medical Centre (UGMC) staff's recognition, interpretation, and

application of ERAS protocols at various stages of the surgical care continuum are clarified by these sub-themes.

Pre-operative preparation emerged as a sub-theme. Awareness of pre-operative preparations under ERAS protocols varied among participants, with many highlighting practices such as patient counseling, dietary adjustments, and hydration. However, gaps in understanding certain evidence-based practices, such as the use of carbohydrate-loading drinks, were noted.

Participant 8 stated that:

"For me, I think, pre-operatively, receiving patients, we have protocols, like ensuring you have the right patient, the patient has consented to the surgery, the sites being marked, just to make sure the correct site is going to be approved. And then, ensuring patients have maintained NPO to prevent anesthesia complications". (P8, surgical ward, senior nursing officer)

The participant generally recognized the importance of pre-operative education and preparation in reducing patient anxiety and optimizing outcomes. However, knowledge gaps around advanced interventions, such as carbohydrate loading and specific fasting protocols, were evident. This highlights the need for enhanced training and standardized guidelines to ensure consistency in pre-operative practices.

The **Intra-operative guidelines** subtheme refers to the set of evidence-based practices and protocols implemented during surgical procedures. These guidelines aim to optimize patient outcomes, minimize surgical stress, and facilitate faster recovery. They are centered around improving surgical practices through collaboration and adherence

to standardized practices.

Participants demonstrated varying levels of awareness regarding intra-operative guidelines, such as maintaining normothermia, optimizing fluid management, and minimizing the use of invasive techniques. For instance, Participant 1 stated that:

"And then, intra-operatively, we have the WHO safety checklist, which we go through, that has briefing, signing, time-out, sign-out, and then debriefing, which we go through to ensure patients have received their surgery, which all promotes" (P1 theatre, Senior nursing officer)

The participant's quote provides insight into the level of awareness of intra-operative guidelines as an operating theatre staff, reflecting her direct involvement in surgical care. At the same time, the narrative reveals a lack of clear instructions or training on specific intra-operative measures, such as fluid optimization and maintaining temperature. This inconsistency suggests that while intra-operative guidelines awareness exists, a more structured approach to disseminating ERAS guidelines is necessary to standardize care.

Post-operative guidelines, another sub-theme of awareness, focus on evidence-based strategies to accelerate patient recovery, minimize complications, and reduce the length of hospital stays. These guidelines aim to optimize post-surgical care through multidisciplinary collaboration and patient-centered approaches. Participants displayed the greatest variation in awareness and adherence to post-operative guidelines. While many were familiar with early mobilization and pain management, others expressed uncertainty about nutritional strategies and discharge criteria. This is exemplified in the

narrative of Participant 8, who stated that:

"We are trying to, because right from admitting the patients to the ward, so the patient goes through surgery and post-surgery, there are so many protocols in place to make sure that patients spend less time post-surgery" (P8, surgical ward, senior nursing officer)

The above quote depicts awareness of post-operative guidelines, reflecting a strong focus on mobilization and pain control, which are critical components of ERAS protocols. However, gaps in understanding nutritional interventions and discharge planning suggest that additional emphasis on these areas could enhance patient recovery and satisfaction. These gaps can further be explained by the individual's beliefs about ERAS protocols.

4.3.1 Beliefs about ERAS Protocols

The theme of **Beliefs about Enhanced ERAS protocols** captures the perceptions and opinions of healthcare professionals regarding the benefits and challenges of implementing ERAS practices. The analysis of participants' responses revealed a spectrum of beliefs about Enhanced Recovery After Surgery (ERAS), underscoring its potential benefits and perceived challenges. The findings are organised into the sub-themes of promoting recovery, strengthening teamwork, delays in service delivery, and increased workload.

Promoting recovery is a sub-theme that describes how adherence to ER protocols significantly improved postoperative outcomes, including shorter hospital stays, reduced complications, and faster ambulation. This is further illustrated by

Participant 15 in the quote below:

"Patients seem more comfortable and confident when they recover faster; it's satisfying to see them leave the hospital sooner. The benefit is we see patients recover and maybe, for example, a patient with pain and pain management protocols usage". (P15, Nursing officer, surgical ward).

The statement above reflects a shared understanding among participants that ERAS directly addresses the goals of modern surgical care, which are to optimise recovery and minimise morbidity. The participants linked faster recovery to improved physical and psychological wellbeing experienced in the hospital. This shared belief underscores the potential of ERAS to transform surgical care. However, some participants noted variability in recovery outcomes depending on adherence to specific protocol steps, highlighting the need for consistent implementation.

Strengthening teamwork emerges as a sub-theme that highlights the important role of collaboration in the implementation of ERAS protocols. Teamwork benefits patients and creates an avenue for professional collaboration, which can contribute to job satisfaction and improved care delivery.

Participant 20 shared light on this in the quote below:

"I think it's all about the team. If everybody is ready to cooperate, it makes the work easier. I think making the team understand the importance of the protocol. So, when they get to understand, they know the importance of it. (P20 Nursing officer, Recovery unit)

Participants highlighted this as a positive outcome, viewing the teamwork fostered by ERAS implementation as a crucial element in improving patient care. However, some participants indicated that the strength of teamwork could vary based on the availability of resources and the level of training among team members. Participants noted that the coordinated steps required for ERAS demand consistent communication, shared responsibilities, and mutual accountability, fostering a stronger sense of teamwork across different specialties.

Despite the positive beliefs about ERAS, participants indicated that some negative beliefs can also constrain the implementation process.

Delays in service delivery describe the disruptions or inefficiencies in the execution of Enhanced Recovery After Surgery (ERAS) protocols can result in prolonged waiting times for patients and interruptions in the workflow of healthcare professionals. The structured nature of the protocols, while beneficial, was seen as resource-intensive and time-consuming, especially in under-resourced settings.

For instance, Participant 15 said: *"And maybe when they are changed, the only time the protocols are affected or may change is when we have emergencies like maybe a PPH or an APH, then maybe we have to skip some protocols and then fix in others to suit the safety of the patient and then the baby". (P14 Senior nursing officer, theater)*

These delays were particularly evident during the initial implementation phases, where professionals struggled to balance protocol adherence with the demands of a busy clinical environment. Additionally, the increased workload associated with documentation and frequent patient monitoring was seen as challenging, particularly in

departments with staffing constraints.

Increased workload emerged prominently in participants' discussions about the challenges associated with Enhanced Recovery After Surgery (ERAS). While ERAS protocols offer numerous benefits, their structured and comprehensive nature introduces additional tasks for healthcare providers, which can lead to an increase in workload.

Participant 3 stated that:

"There are too many steps to follow, and if we miss one, it can delay the next phase of care.

It's hard when we don't have enough staff."(Participant 3, anesthetics).

This participant perceives the structured nature of the protocols as resource-intensive and time-consuming, especially in under-resourced settings. These beliefs can serve as barriers to the execution of the ERAS protocols.

4.4 Barriers to Practising ERAS Protocols

The analysis of barriers to practising ERAS protocols highlights critical areas requiring intervention to optimise implementation. Three sub-themes further describe these challenges: communication barriers, patient-related barriers, and institutional barriers. By overcoming these barriers, UGMC can maximise the potential of ERAS protocols to improve patient outcomes and surgical care quality.

Communication barrier impedes ERAS protocol implementation. Communication Barriers were often described as arising from insufficient coordination between

departments or inadequate dissemination of protocol-related information. The lack of regular interdisciplinary meetings or briefings was highlighted as contributing to misunderstandings, delays, and inconsistent adherence to protocol steps. Participants identified these gaps in intra-team and patient-provider communication as significant obstacles.

For example, Participant 17 stated:

"language can be a barrier when working with a staff who cannot understand your language or are slow to understand various signals. It slows down the process and affects the patient's recovery due to non-cooperation with protocols" (P17 Senior nursing officer, theatre)

This quote provides insight into how communication barriers can undermine the multidisciplinary collaboration necessary for ERAS. In settings like the main theatre, where precision and teamwork are paramount, any communication breakdown can cascade into larger systemic inefficiencies. These inefficiencies can exacerbate stress among staff, delay care delivery, and compromise the principles of ERAS, which aim to enhance recovery through standardized, evidence-based practices. These findings suggest the need for structured communication systems, such as regular staff meetings and clear documentation of roles and responsibilities, to enhance the effective implementation of ERAS.

Patient-related challenges describe the difficulties arising from patients' attitudes, behaviors, health conditions, and sociocultural circumstances that hinder the effective implementation of Enhanced Recovery After Surgery (ERAS) protocols. These include

resistance to new practices, poor understanding of ERAS principles, and comorbidities that complicate adherence to protocols. This is further illustrated in the narrative of Participant 5 stated:

"*Some patients don't understand why we encourage early mobility—they think it's too soon and prefer to stay in bed… Managing patients with multiple health issues makes it hard to follow all the steps of ERAS." (P5, Orthopedic Nurse).*

This quote sheds light on the patient-centered challenges in implementing ERAS, emphasizing the need for effective communication and individualized care strategies. When patients resist or struggle to adhere to ERAS steps, it can create delays in recovery, increase healthcare costs, and place additional burdens on healthcare providers. Addressing these barriers requires proactive education, flexible care plans, and strong communication to align patient behaviors with ERAS goals, ultimately improving outcomes for diverse patient populations

Participant, 2 stated

"So, with the communication barrier, if there are no clear, written protocols, if there is no proper communication among teams, how will it work? Oh, this is not good. Mm-hmm. The team needs to have one protocol that will work across all teams. So communication, I think, if there is a misunderstanding between, amongst the team, how is work done going to be effective? Okay". (P2 Nursing officer, theatre.)

This quote reflects the systemic nature of communication barriers in the context of ERAS implementation. Without effective communication strategies, even the best-designed protocols cannot be implemented successfully. This has implications for

patient outcomes, staff satisfaction, and the overall efficiency of surgical services.

Institutional Barriers are systemic challenges within healthcare facilities that impede the adoption and effective implementation of Enhanced Recovery After Surgery (ERAS) protocols. These barriers encompass resource constraints, policy limitations, workflow inefficiencies, and structural gaps that collectively hinder adherence to ERAS guidelines, including resource limitations, staff shortages, and the lack of standardized ERAS training, emerged as significant barriers to effective implementation.

Participant 2 stated that:

"If we need the suction machine and then we don't have one, how are we going to work? If the diatom machine or the pad is not working, how are we going to work? Mm-hmm. If we don't have consumables, we can't work. That's all." (P2 Nursing officer, Theatre)

Institutional barriers were primarily attributed to resource constraints and systemic inefficiencies. Participants highlighted that the unavailability of essential resources, such as specific medications or advanced monitoring equipment, limits the full application of ERAS protocols. Additionally, inconsistent training across departments leads to variability in staff knowledge and confidence in applying the protocols. This reinforces the importance of organizational support in providing adequate resources, standardizing training, and fostering a culture of continuous professional development.

4.5 Strategies for improving implementation of ERAS

The participants' suggested road map for UGMC's ERAS implementation optimization.

The hospital may overcome present obstacles and optimize the potential of ERAS protocols to improve surgical outcomes and patient care by addressing resource limitations, improving training programs, encouraging teamwork, and giving institutional support top priority.

Continuous Professional Development (CPD) emerged as a key strategy to address gaps in knowledge, skills, and adherence to Enhanced Recovery After Surgery (ERAS) protocols among healthcare professionals. CPD is vital for equipping staff with the latest evidence-based practices, improving their confidence in implementing ERAS guidelines and fostering a culture of continuous improvement in surgical care, which includes continuous education and training that emerged as a critical strategy for improving ERAS implementation.

Participant 7 stated:

"Regular workshops and refresher courses would help us keep up-to-date with the protocols and apply them better. Having clear, step-by-step guidelines that are easily accessible would make it easier for everyone to follow." (P7, Orthopedics Medical officer)

Participants emphasized the importance of professional development in ensuring consistent application of ERAS protocols. Many identified a need for ongoing training to address knowledge gaps, reinforce protocol steps, and enhance confidence in applying them. Structured training programs, including workshops, simulations, and multidisciplinary discussions, were recommended as ways to build staff capacity and align practices with the latest evidence-based guidelines.

Protocol/Guideline Development and Implementation are critical for ensuring standardized, evidence-based surgical care that improves patient outcomes and reduces complications. Participants in the study emphasized the role of well-developed and communicated guidelines in facilitating adherence to ERAS principles. However, challenges in the design, dissemination, and implementation of these protocols were also highlighted as illustrated by the quote below:

"Having clear, step-by-step guidelines that are easily accessible would make it easier for everyone to follow. We need guidelines that fit our context, not just imported ones." (P7, Pediatric Surgery Nurse

The need for context-specific and user-friendly guidelines was a recurring theme. Participants noted that many existing protocols are either too generic or poorly adapted to the resource-constrained environment of UGMC. Clear and accessible protocols tailored to the local context, combined with visual aids and checklists, were suggested as practical tools to enhance compliance and reduce variability in practice.

Resourcing Institutions is a crucial sub-theme that emerged in the study, which emphasized that the success of ERAS implementation is heavily dependent on the availability of appropriate resources, including equipment, human capital, infrastructure, and funding.

Participant 5 stated that:

"Resource constraints are probably the biggest hurdle. Sometimes, we don't have the necessary infrastructure or staff capacity to fully adhere to all ERAS components. Additionally, there's resistance from some colleagues who are more accustomed to

traditional methods. But we can work on this through peer training and continuous education" (P5, Neuro surgeon) Participants underscored the critical role of resource allocation in supporting ERAS implementation. Resource constraints, including shortages of equipment, essential medications, and staff, were frequently cited as barriers. Addressing these limitations through strategic investments in infrastructure, procurement, and human resources was seen as essential for ensuring the protocols' sustainability and effectiveness

The sub-theme **Improving Care and Coordination** highlights the critical role of effective collaboration among multidisciplinary teams and streamlined communication in enhancing the implementation and success of Enhanced Recovery After Surgery (ERAS) protocols. Participants emphasized that cohesive teamwork, well-defined roles, and improved interdepartmental communication are essential for overcoming challenges and achieving optimal patient outcomes.

Participant 3 stated that:

"first of all the institution has to decide that this is what we want to use or follow, ERAS and once you make that decision the rest is not difficult it's a matter of adding it to as if it's an inservice training where the whole team gets to and buy in and know their roles that they have to play and once that is done you have regular audits to assess how it is going" (P3, Anesthesiologist)

The participant emphasizes the significance of ERAS protocols in healthcare, emphasizing the need for multidisciplinary collaboration, standardized communication, strong leadership, technology integration, and patient-centered coordination. These

factors improve care quality, reduce delays, and enhance patient satisfaction. They also facilitate real-time information sharing and timely interventions, thereby optimizing the implementation of ERAS protocols.

4.6. Summary of Results

The study analyzed the experiences and perceptions of health professionals at the University of

Ghana Medical Centre (UGMC) regarding Enhanced Recovery After Surgery (ERAS) protocols. It revealed varying levels of awareness of ERAS protocols, with some professionals having a comprehensive understanding of pre-operative, intra-operative, and post-operative guidelines. Health professionals expressed beliefs about ERAS implementation, including promoting recovery but also causing delays in service delivery. Barriers such as poor communication, patient-related challenges, and institutional barriers hindered ERAS implementation. However, utilizing strategies like continuous professional development, protocol/guideline development and implementation, resourcing institutions, and improving care coordination can improve ERAS implementation. The findings provide a nuanced understanding of the challenges and opportunities associated with ERAS implementation in low-resource settings.

CHAPTER FIVE

DISCUSSION

5.0 Introduction

The previous chapter looks at the analysis of the findings of the study. The study aimed to explore the experiences of health professionals regarding the implementation of enhanced recovery after surgery protocols. The main themes were awareness of ERAS, Barriers to practicing ERAS protocols, and strategies for improving the implementation of ERAS. This chapter discusses the findings of the literature review. The socio-demographic data are not discussed because they are not the main focus of the study.

5.1 Awareness of ERAS

Since awareness establishes the basis for adherence and appropriate execution, it is crucial to determine the effective implementation of Enhanced Recovery After Surgery (ERAS) protocols. At the University of Ghana Medical Centre (UGMC), this study explored healthcare personnel's knowledge of ERAS, emphasizing pre-operative

planning, intraoperative protocols, and post-operative care. The results showed a range of awareness, with differences depending on jobs, experience, and ERAS training exposure.

The significance of pre-operative interventions in ERAS, such as patient counseling, dietary optimization, and shorter fasting durations, was moderately understood by the participants. Few people grasped the scientific underpinnings of particular interventions, such as carbohydrates. These findings are consistent with studies highlighting the limited adoption of evidence-based pre-operative practices in LMICs (Gustafsson et al., 2019). The results suggest that while the importance of preparation is acknowledged, detailed awareness of best practices is lacking. This gap could stem from inadequate training or the absence of structured institutional protocols emphasizing pre-operative interventions. These findings align with recent literature. A systematic review and meta-analysis in Perioperative Optimisation in LMICs (2023) showed that while ERAS protocols are feasible, many LMIC studies lack robust prehabilitation or preoperative optimization components. (Oodit et al., 2022). This review found that ERAS in LMICs reduces length of hospital stay (LOS) compared to routine care (standardized mean difference −2.18 days) but noted inconsistency in implementation of preoperative optimization across studies. Additionally, the Guidelines for Perioperative Care in Elective Abdominal and Pelvic Surgery in LMICs (2022) strongly recommend preoperative education, screening for comorbidities, and nutritional assessments as essential to reducing postoperative morbidity (Oodit et al., 2022). Thus, findings of a gap in detailed awareness are widely mirrored, suggesting that institutions may acknowledge preoperative practices but fall short in embedding

them in protocol or training.

Different professions have varying levels of awareness of intraoperative ERAS requirements. Nursing staff showed little knowledge of protocols such as regional anesthetics, normothermia management, and reduced fluid overload, whereas anesthetists and surgeons were more familiar with these methods. However, nurses showed much awareness of safety protocols such as the WHO safety protocol (sign-in, time out, sign-out, and debriefing). The findings highlight the disparity in awareness levels within the multidisciplinary team, underscoring the need for comprehensive education across all cadres. Studies in LMICs suggest that intra-operative protocols are often underutilized due to fragmented training and resource limitations (Gheorghe, 2018). Bridging this awareness gap is essential, as adherence to intra-operative protocols significantly improves patient outcomes. Regarding intraoperative ERAS requirements, your observation that nurses had lower awareness of methods like regional anesthesia, normothermia, and fluid management, while anesthetists and surgeons were more familiar, also has support in recent studies. The global systematic review Enhanced recovery programme after colorectal surgery in high-income and low-middle income countries (2023) found that LMICs tend to implement basic or less costly ERAS elements more readily, while higher-cost or more resource-intensive intraoperative practices lag (Slim et al., 2023).

Another study, Enhanced Recovery after Surgery in Pakistan: a qualitative descriptive analysis (2024), reported that surgeons were more likely to know about intraoperative ERAS elements than nursing staff, and many nurses noted insufficient training and a lack of clear protocols.(Ahmad, 2023) These data support your finding:

awareness is uneven across professional cadres, reinforcing the need for multidisciplinary training and structured intraoperative protocol dissemination. The participants demonstrated a higher awareness of post-operative procedures, including early mobilization, pain management, and nutritional progression. However, it was determined that practical issues, such as insufficient staffing and patient non-compliance, would hinder the successful implementation of these procedures. This finding aligns with the global literature, which emphasizes the importance of postoperative care in ERAS protocols.

A meta-analysis of gastrointestinal surgery ERAS pathways (2025) found that postoperative hospital stay was shortened by about 3.16 days, postoperative complications reduced by ~30%, and readmissions by ~25% under ERAS versus standard care (Dong et al., 2025). However, adherence to post-operative mobilization components was cited as a limiting factor. Similarly, Early Mobilization in Enhanced Recovery After Surgery Pathways: Current Evidence and Recent Advancements emphasizes that early mobilization improves functional recovery and reduces LOS, but that modifiable barriers such as lack of staff education, absence of clear protocols, and resource constraints limit compliance in many settings (Tazreean et al., 2021)

Another relevant, more specific study is Impact of ERAS-based nursing intervention on long-term recovery for gynecological malignancies (2025), which compared ERAS vs conventional care. Over 3 and 6 months, patients in the ERAS group showed better quality of life, improved activities of daily living (ADL) scores, and better nutritional recovery, despite similar baseline characteristics (Brooks et al., 2022)

This suggests that awareness of post-operative practices may translate into longer-term benefit if well implemented. Despite awareness of its benefits, the inability to implement post-operative guidelines consistently due to systemic barriers reflects broader challenges LMICs face (Ahmad, 2023). Such limitations highlight the need for enhanced institutional support to translate awareness into actionable practice. The study reveals a lack of understanding of ERAS as a cohesive framework, with many viewing it as a standalone intervention rather than an integrated, patient-centered approach. This gap in awareness limits healthcare teams' ability to utilize ERAS benefits fully.

5.1.2 Beliefs about ERAS

The majority of participants were confident that ERAS may help surgery patients recover more quickly and easily. They saw observable advantages like fewer problems, shorter hospital stays, and earlier mobilization. Beliefs in professional empowerment and growth are widespread among healthcare personnel, with ERAS seen as an opportunity to harmonize with international best practices. Positive professional beliefs can lead to greater acceptance and dedication to ERAS guidelines (Gustafsson et al., 2019). The findings underscore the role of positive beliefs as facilitators of ERAS adoption. However, this belief may remain theoretical if not supported by adequate institutional frameworks, as seen in other LMIC contexts where ERAS is underutilized despite its proven efficacy (Ahmad, 2023)

The belief that ERAS promotes faster recovery emerged strongly across participants, underscoring its role in improving patient outcomes. Health professionals highlighted the noticeable reduction in recovery time, fewer complications, and shorter

hospital stays for patients who underwent surgeries adhering to ERAS protocols. This aligns with the broader literature, which emphasizes ERAS as a transformative approach that enhances postoperative recovery by minimizing the physiological stress of surgery (Gustafsson et al., 2019). These observations resonate with global evidence supporting ERAS in improving recovery trajectories through structured preoperative, intraoperative, and postoperative interventions.

Numerous participants pointed out that ERAS protocols naturally encourage cooperation between interdisciplinary teams. Coordinated efforts across specializations are required by the protocols, which promote accountability and communication. These findings resonate with studies highlighting the role of teamwork in ERAS implementation. The shared responsibility and collaborative nature of ERAS enhance professional relationships and align team efforts toward improved patient care (Sicotte et al., 2002). However, in the UGMC setting, the effectiveness of teamwork is hindered by fragmented communication systems and unequal levels of ERAS training, which are common barriers in LMIC healthcare systems.

Contrary to the perceived benefits, some participants believed that implementing ERAS protocols can lead to delays in service delivery. The meticulous planning and documentation required to adhere to ERAS steps were reported to slow down the process, especially in fast paced healthcare settings. Delays were particularly noted during the preoperative stage, where extensive patient education, optimization, and preparation are required. This is consistent with studies highlighting that ERAS protocols may initially increase the time required for patient preparation and intraoperative management (McDonald et al., 2020). However, these delays are often

offset by reduced postoperative complications and shorter overall hospital stays.

Another significant belief was that ERAS increases the workload of healthcare professionals. Participants reported that the comprehensive nature of ERAS, including its structured documentation, patient monitoring, and multidisciplinary coordination, demands additional time and effort.

This perception aligns with findings from other studies, which indicate that ERAS places additional burdens on healthcare providers, especially in resource-limited settings where staffing is already constrained. Nurses, in particular, expressed concerns about balancing ERAS responsibilities with other clinical duties, which could lead to burnout and reduced efficiency (L.

(Gramlich et al., 2020).

5.2 Barriers to Practicing ERAS

The successful implementation of Enhanced Recovery After Surgery (ERAS) protocols depends on addressing the multifaceted barriers that healthcare professionals encounter. This study identified critical challenges, categorized under communication barriers, patient-related barriers, and institutional barriers, which significantly impact adherence to ERAS protocols at the University of Ghana Medical Centre (UGMC).

Healthcare professionals cited ineffective communication as a major hindrance to the seamless implementation of ERAS. Inconsistent information-sharing among multidisciplinary teams, unclear delegation of responsibilities, and gaps in feedback mechanisms were frequently reported. This finding aligns with previous research

suggesting that communication breakdowns are a major barrier to collaborative healthcare practices (Buttigieg et al., 2018). ERAS requires synchronized effort among surgeons, anesthetists, nurses, and other team members, making communication crucial. At UGMC, the lack of structured communication channels amplifies the risk of protocol non-compliance, echoing challenges observed in low- and middle-income countries (LMICs), where multidisciplinary collaboration is often underdeveloped. To address this, regular multidisciplinary meetings and the adoption of standardized communication tools, such as checklists and handover templates, can enhance team coordination (Lam et al., 2021). Patient-related factors, such as non-compliance, cultural preferences, and pre-existing conditions, were identified as significant obstacles to implementing ERAS protocols. These findings are consistent with studies that highlight the role of patient attitudes and behaviors in influencing ERAS outcomes. In LMICs like Ghana, cultural perceptions of rest during recovery, financial constraints, and limited health literacy exacerbate patient-related challenges. For example, early mobilization and dietary adjustments, critical components of ERAS, may conflict with traditional beliefs about postoperative care (L. Gramlich et al., 2020).

Language barriers and patient discomfort were significant obstacles to the successful deployment of ERAS protocols. The linguistically diverse population of UGMC's healthcare professionals can struggle to explain the importance of ERAS protocols to patients in their preferred language, which is crucial for postoperative care and preoperative education. This can lead to reduced effectiveness of ERAS, as patient engagement and adherence are essential for recovery. Overcoming these barriers requires improved patient education, accessibility, and understanding, to ensure

patients are fully engaged in their recovery process (Wei et al., 2020a). Institutional barriers, including inadequate resources, staffing shortages, and insufficient training, were the most frequently cited challenges to ERAS implementation. The findings reflect the broader systemic challenges faced by healthcare institutions in LMICs. Resource limitations, such as insufficient monitoring devices, specialized medications, and operating room capacity, make it difficult to implement ERAS comprehensively (Van Haren & Atay, 2019). Additionally, staffing shortages, high patient loads, and the absence of ERAS-specific training undermine healthcare workers' ability to adhere to protocols. Several barriers to ERAS protocol implementation in perioperative care include colleague resistance, knowledge gaps, and resource limitations. Colleagues may resist adopting ERAS due to skepticism or comfort with traditional methods, which can be overcome through strong leadership, persistent lobbying, and change management techniques. Knowledge gaps among healthcare providers may be due to inadequate training or communication of guidelines. Addressing these issues requires systemic investments in infrastructure, staffing, supply chain management, and policies prioritizing perioperative care (Lam et al., 2021).

The cumulative impact of these barriers' manifests in inconsistent adherence to ERAS protocols, reduced efficacy, and suboptimal patient outcomes. Communication lapses disrupt team coordination, patient-related challenges compromise protocol steps, and institutional limitations undermine the ability to deliver care aligned with ERAS principles.

Research has shown that institutional barriers are particularly acute in LMIC settings, where healthcare infrastructure is underfunded, and organizational support for

innovation is limited (Gustafsson et al., 2019). At UGMC, these issues result in inconsistencies in protocol application, ultimately affecting patient outcomes. To overcome these challenges, institutional investment in ERAS-specific training, resource allocation, and supportive leadership is crucial. The development of simplified, resource-sensitive ERAS protocols tailored to the local context may also enhance feasibility.

5.3. Strategies for improving implementation of ERAS.

The findings of this study underscore the need for targeted strategies to address the challenges associated with implementing ERAS protocols at the University of Ghana Medical Centre (UGMC). Participants identified key strategies such as continuous professional development, the development and implementation of clear protocols, resource optimization, and strengthening teamwork. These strategies collectively aim to enhance adherence to ERAS protocols and improve patient outcomes.

Participants highlighted the importance of ongoing training for healthcare professionals to ensure familiarity with ERAS principles and protocols. Continuous professional development is critical in fostering healthcare workers' competence and confidence in adhering to ERAS protocols. This finding aligns with Gustafsson et al. (2019), who emphasized that regular education and training are essential for maintaining a skilled workforce capable of implementing ERAS effectively. In LMICs, where formal ERAS training programs are often limited, workshops and refresher courses can serve as practical solutions to bridge the knowledge gap and promote best practices.

Participants in this study frequently cited the need for more comprehensive and

ongoing training to fill knowledge gaps and build confidence in applying ERAS protocols. Training healthcare providers is essential to the success of ERAS, as studies have shown that lack of education is a significant barrier to its adoption (Gustafsson et al., 2019). At UGMC, there is a need for structured training programs that cover the theoretical foundations of ERAS, as well as practical aspects of its implementation. This training should target not only surgeons but also nurses, anesthetists, and other team members involved in perioperative care. At UGMC, investing in regular training workshops and seminars can enhance staff capacity and ensure that ERAS protocols are effectively applied.

The absence of standardized and context-specific ERAS guidelines was identified as a barrier, necessitating the creation and dissemination of clear protocols.

Standardized ERAS protocols ensure consistency in care delivery and adherence to evidence-based practices. Participants call for context-specific guidelines is particularly relevant in LMICs, where resource constraints and varying levels of expertise may hinder the application of generic ERAS protocols (Ha et al., 2023). Localized protocols that account for available resources and cultural factors are critical for ensuring feasibility and effectiveness.

A recurring theme was the need for improved infrastructure, medical supplies, and adequate staffing to support ERAS implementation. Resource availability is a cornerstone of successful ERAS implementation. Studies in similar contexts have shown that the lack of essential resources, such as patient monitoring devices, analgesics, and nutritional supplements, undermines protocol adherence (Wang et al., 2023). Addressing these gaps requires institutional investment and external support,

such as partnerships with governmental and non-governmental organizations, to equip facilities with the tools needed for optimal ERAS delivery.

The study highlights the importance of ERAS protocols in improving care coordination by fostering multidisciplinary collaboration, streamlining patient management, and enhancing the predictability of surgical outcomes. The structured steps within ERAS protocols encourage shared planning and implementation, fostering inter-professional communication and reducing care fragmentation (Ha et al., 2023).

This is particularly important in perioperative care, where effective communication ensures optimal patient preparation, adherence to intraoperative protocols, and closely monitored postoperative recovery. ERAS can catalyze improving care continuity in low- and middle-income countries (LMICs), where healthcare systems are often fragmented (Golder & Papalois, 2021).

This observation aligns with previous studies emphasizing the role of ERAS in breaking down traditional silos in surgical care (Wang et al., 2023) . Multidisciplinary collaboration is particularly important in perioperative care, where effective communication ensures that patients are prepared optimally, intraoperative protocols are adhered to, and postoperative recovery is closely monitored.

CHAPTER SIX

SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSION, AND RECOMMENDATIONS

6.0 Introduction

This chapter discusses the summary of the study, the implications of the findings, and the limitations of the study. It also presents the conclusion and recommendations.

6.1 Summary of the study

The thesis explores the experiences of healthcare professionals concerning Enhanced Recovery After Surgery (ERAS) protocols. It aims to understand the attitudes, intentions, perceived barriers, and strategies used to overcome challenges in applying these protocols. The findings of this research were based on key themes such as awareness of ERAS, barriers to practicing ERAS, and strategies for improving these barriers. When these barriers are combined, they can lead to inconsistent adherence to ERAS protocols, decreased efficacy, and less-than-ideal patient outcomes; communication breakdowns interfere with team coordination; patient-related issues jeopardize protocol steps; and institutional constraints make it more difficult to provide

care that is in line with ERAS principles. A purposive sampling approach was used to recruit 20 healthcare professionals, including surgeons, nurses, and anesthetists, who were directly involved in surgical care and had experience with ERAS protocols. Data were collected through semi-structured interviews, which were transcribed and analyzed using reflexive thematic analysis. This method ensured a thorough and iterative engagement with the data, allowing for the emergence of rich, grounded themes

Participants demonstrated a basic understanding of ERAS protocols, with variations in their familiarity with pre-operative, intra-operative, and post-operative guidelines. The study revealed gaps in consistent application, attributed to limited formal training and the absence of standardized guidelines tailored to the local context.

Healthcare professionals strongly believed in the benefits of ERAS, including enhanced patient recovery, strengthened teamwork, and alignment with evidence-based practices. However, they acknowledged that adherence to ERAS could be tedious and challenging, especially in resource-limited settings.

Key barriers identified included communication breakdowns, patient-related challenges (e.g., non-compliance or cultural resistance), and institutional constraints such as inadequate resources, staffing shortages, and inconsistent leadership support.

Participants suggested actionable strategies, including continuous professional development, the formulation and dissemination of clear protocols, improving institutional resourcing, and fostering multidisciplinary collaboration. Leadership engagement and addressing staffing constraints were also emphasized as critical enablers for successful ERAS adoption.

6.2 Reflexivity and Insight Gained by Researcher

Reflexivity involves the researcher's ongoing process of examining how their background, perspectives, and interactions with participants influence the research process. It acknowledges the dynamic relationship between the researcher and the research, emphasizing transparency and self-awareness to enhance the credibility and rigor of the study.

The researcher reflects on their assumptions about ERAS protocols, avoiding overinterpreting technical responses and allowing participants to express their experiences freely.

They maintain researcher-participant boundaries, recognize each participant's unique experiences, and use open-ended questions during interviews. Engaging with colleagues during the thematic analysis phase ensures diverse interpretations of data and avoids disproportionate influence from the researcher's positionality.

The study provides valuable insights into the complex nature of ERAS implementation in resource-constrained environments, emphasizing the need for a holistic approach involving infrastructure, interdisciplinary teamwork, and patient-centered care, beyond awareness and training.The study underscored the importance of multidisciplinary collaboration in achieving optimal surgical outcomes, emphasizing the need for contextualized research in Ghana to address barriers like communication issues and resource shortages and promote personal and professional growth.

This research deepened my capacity for empathetic listening and critical analysis. By immersing myself in participants' experiences, I developed a nuanced

understanding of how frontline healthcare workers navigate challenges in their pursuit of evidence-based practices. As a researcher, I learned the importance of reflexivity as a tool for ensuring rigor and authenticity in qualitative research. The iterative process of reflection and analysis sharpened my ability to capture and interpret complex phenomena accurately.

The journey of this research has underscored the importance of reflexivity in qualitative studies. By continuously reflecting on my role and approach, I was able to maintain the integrity of the research process and prioritize participants' voices. The insights gained not only enrich the academic discourse on ERAS implementation but also contribute to my personal growth as a researcher committed to advancing healthcare in resource-limited settings. This reflexive practice will continue to inform my future research endeavors, ensuring that they remain rigorous, ethical, and grounded in participants' lived experiences.

6.3 Implication

The study highlights the necessity of a comprehensive strategy to maximize the use of ERAS. The healthcare system in Ghana and other LMICs may significantly enhance the delivery of surgical treatment by addressing institutional, structural, and human barriers while utilizing enablers including teamwork, training, and customized protocols. To fully realize the potential of ERAS protocols in improving patient outcomes worldwide, practitioners, legislators, and researchers must act immediately in response to these findings.

6.3.1 Healthcare practice

The study highlights the importance of integrating ERAS protocols into standard operating procedures, focusing on continuous professional development programs, and establishing routine audits and feedback mechanisms to ensure adherence to evidence-based practices, despite healthcare professionals' recognition of their benefits.

The study highlights the need for targeted interventions to improve ERAS implementation, including enhancing interdisciplinary communication, providing patient education, and improving institutional support. It also emphasizes the importance of strengthening teamwork in surgical care, promoting clear roles, mutual respect, and consistent communication. These interventions can be implemented through team-building initiatives, joint training sessions, and cross-disciplinary feedback platforms.

Patient-centered care is crucial for managing comorbidities and managing early mobilization. Health practitioners should engage patients, tailor protocols, and address concerns.

Institutional support and policy development are necessary for ERAS protocols, including dedicated implementation committees, adequate funding, and incorporating compliance as a key performance indicator in quality improvement initiatives.

The study emphasizes the need for ERAS protocols to be integrated into routine surgical care to prevent delays and reduce workload. This can be achieved through standardized guidelines and digital tools like electronic health records. The findings emphasize the importance of aligning clinical practice with evidence-based guidelines.

6.3.2 Policy Development

Policymakers must address resource and staffing shortages by investing in healthcare infrastructure, surgical equipment, and training programs. Allocating resources to support ERAS implementation will not only improve patient outcomes but also optimize hospital efficiency by reducing lengths of stay and preventing complications.

Institutional leaders should develop policies that prioritize ERAS integration within surgical units. This includes providing financial and administrative support, fostering a culture of innovation, and holding staff accountable for protocol adherence.

6.3.3 Education and Training

The study emphasizes the need for ongoing training programs to build health professionals' capacity in ERAS principles. Structured CPD activities, including workshops, seminars, and simulation training, can enhance awareness and confidence in applying ERAS protocols. Incorporating ERAS protocols into medical and nursing curricula will prepare future healthcare professionals to adopt evidence-based practices early in their careers.

6.3.4 Future Research

This study adds to the limited research on ERAS in LMICs, providing a foundation for further investigation into its applicability and sustainability in resource-constrained environments.

Future studies could explore patient perspectives, long-term outcomes, and cost-effectiveness of ERAS in LMICs. Further research is needed to delve deeper into the

systemic and cultural barriers identified in this study. Qualitative and quantitative studies could inform strategies for overcoming these challenges at the national and regional levels.

Researchers should focus on creating frameworks that outline step-by-step processes for ERAS integration in LMICs. These frameworks can guide hospitals in implementing protocols effectively and achieving desired outcomes.

6.4 Limitations

The study on ERAS protocols in healthcare professionals in Ghana's University of Ghana Medical Centre has several limitations. The small sample size, involving 20-30 professionals, may not be universally applicable to other institutions or low- and middle-income countries. The study's focus on the institution may also limit its transferability to other settings. Self-reported data may be biased, and the study did not explore patient perspectives, which could affect the authenticity of some findings. The study was conducted over a limited time frame, which restricted longitudinal outcomes. Resource constraints in LMICs were not quantitatively assessed, and comparative analysis was limited. The study focused on ERAS protocols but could have explored other institutional protocols and cultural influences. The lack of quantitative metrics also limited the ability to measure the prevalence or impact of identified barriers and strategies. Despite these limitations, the study offers valuable insights into healthcare professionals' experiences with ERAS protocols in resource-limited settings.

6.5 Conclusion

The study explores the experiences, beliefs, and challenges of healthcare

professionals in implementing Enhanced Recovery After Surgery (ERAS) protocols at the University of Ghana Medical Centre (UGMC). It reveals the complexities of adopting evidence-based perioperative care in resource-limited settings, highlighting both opportunities and obstacles. The study found varied awareness of ERAS, positive beliefs about its effectiveness, barriers to implementation, and strategies for improving adoption. Barriers to ERAS practice included communication challenges, patient-related factors, and institutional constraints like resource shortages and staffing limitations. Strategies to improve ERAS implementation include continuous professional development, standardized guidelines, teamwork strengthening, and addressing resource constraints. The findings have significant implications for surgical care in low- and middleincome countries, emphasizing the need for robust training programs, resource allocation, and supportive institutional frameworks. Further research is needed to explore the long-term impact of ERAS adoption on patient outcomes and healthcare efficiency.

6.6 Recommendations

The following suggestions are put forth to improve the University of Ghana Medical Centre's (UGMC) and other comparable healthcare facilities' adoption and efficacy of Enhanced Recovery After Surgery (ERAS) protocols in light of the research's conclusions and discussions. These suggestions center on removing obstacles that have been found, utilizing expert knowledge, and improving patient outcomes by utilizing ERAS procedures.

6.6.1 Strengthen Training and Continuous Professional Development

Targeted Educational Programs: Develop and implement regular training sessions to enhance healthcare professionals' knowledge of ERAS protocols. The training should focus on pre-operative, intra-operative, and post-operative components to ensure comprehensive understanding.

Mentorship and Coaching: Introduce mentorship programs were experienced professionals guide less experienced staff on ERAS implementation.

Evidence-Based Practice Training: Emphasize the importance of evidence-based care in the training to solidify the belief in the efficacy of ERAS.

6.6.2 Develop and Disseminate Standardized ERAS Protocols

1. Institutional Guidelines: Create user-friendly, context-specific ERAS guidelines tailored to UGMC's needs, ensuring uniformity in practice across departments.
2. Multilingual Resources: Provide materials in languages understood by all healthcare workers to enhance accessibility.
3. Regular Updates: Periodically review and update protocols to incorporate the latest evidence and align with global standards.

6.6.3 Address Institutional Barriers

1. Resource Allocation: Increase institutional investments in necessary equipment, medications, and supplies essential for ERAS adherence.
2. Staffing and Workload: Recruit additional staff to address workload pressures, ensuring sufficient personnel to follow protocols effectively.

3. Enhanced Communication Systems: Implement efficient communication channels between multidisciplinary teams to streamline information sharing and coordination.

6.6.4 Foster Teamwork and Interdisciplinary Collaboration

1. Interdisciplinary Workshops: Organize collaborative workshops and team-building exercises to strengthen relationships between surgeons, nurses, anesthetists, and allied healthcare workers.

2. Regular Feedback Mechanisms: Establish feedback forums where teams can discuss challenges, share successes, and propose improvements to ERAS practices.

6.6.5 Promote Patient and Family Engagement

1. Educational Campaigns: Create patient-centered educational materials to inform patients and their families about ERAS protocols and their role in recovery.

2. Preoperative Counseling: Provide pre-surgery counseling sessions to prepare patients mentally and physically for ERAS adherence.

6.6.6 Enhance Institutional Support for ERAS Implementation

1. Leadership Commitment: Engage hospital management in championing ERAS initiatives, demonstrating institutional commitment to the protocols.

2. Monitoring and Evaluation Systems: Introduce systems to monitor adherence to

ERAS protocols and evaluate outcomes regularly.

3. Recognition Programs: Establish rewards or recognition programs to

motivate staff for exemplary adherence to ERAS practices.

6.6.7 Advocate for National and Regional Support

1. Policy Integration: Collaborate with the Ministry of Health and other stakeholders to integrate ERAS into national perioperative care policies.

2. Funding and Grants: Secure funding to support training, resource procurement, and research on ERAS in Ghana and other low- and middle-income countries (LMICs).

6.6.8 Further Research on ERAS in LMICs

1. Context-Specific Studies: Conduct additional studies to explore ERAS implementation in other healthcare settings within Ghana and across LMICs.

2. Patient-Centered Research: Investigate patient perspectives on ERAS to develop more inclusive and holistic care protocols.

3. Longitudinal Impact Analysis: Explore the long-term effects of ERAS adherence on patient recovery, hospital costs, and healthcare efficiency.

6.7 Conclusion

By implementing these recommendations, UGMC and other healthcare facilities in similar contexts can address the barriers to ERAS adherence, enhance healthcare professionals' capabilities, and ultimately improve surgical outcomes. A coordinated, multidisciplinary approach that prioritizes education, institutional support, and resource allocation will ensure the success and sustainability of ERAS protocols, contributing to a higher standard of surgical care in low- and middle-income countries.

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APPENDIX I. Introductory letter

UNIVERSITY OF GHANA

SCHOOL OF NURSING AND MIDWIFERY
COLLEGE OF HEALTH SCIENCES

Ref: 11008180

30th May, 2024.

University of Ghana Medical Centre,
P.O. Box LG25,
Accra.

Dear Sir/Madam,

LETTER OF INTRODUCTION – AMBROSE WADIE BAIDOO

I write to introduce to you **Ambrose Wadie Baidoo**, MPhil Nursing student in the Department of Adult Health Nursing, School of Nursing and Midwifery, University of Ghana, Legon.

The Scientific Review Committee of the School has approved the thesis topic: **"Experiences of Health Professionals with regards to Enhanced Recovery after Surgery at University of Ghana Medical Centre".**

As part of the school's requirement, **Ambrose Wadie Baidoo** is required to obtain ethical clearance before embarking on the data collection.

I hope the committee will consider its approval and grant him ethical clearance to enable him to undertake his study.

Thank you.

Yours faithfully,

Charles Klutse
Administrator

P. O. Box LG 43, Legon, Accra, Ghana | Tel: +233 (0) 303 970 801
Email: nursing@ug.edu.gh | Website: www.nursing.ug.edu.gh

APPENDIX II. Ethical clearance letter.

UNIVERSITY OF GHANA
MEDICAL CENTRE
World Class Patient Care,Training and Research
Medical and Scientific Research Centre

26th November, 2024

Ambrose Wadie Baidoo
University of Ghana,
P. O, Box OH 39,
0242356487
ambrosewadiebaidoo@gmail.com

Protocol Title: Experiences of health professionals with regards to enhance recovery after surgery at University of Ghana Medical Centre.

Protocol #:	
Funding Source:	Self-funded
Review Date:	September 29th, 2024
Effective Date:	26th November, 2024
Expiration Date:	December 31st, 2025
Review Type:	Expedited
Review Action:	Approved

Dear Ambrose,

Decision on your Protocol Approval

On November 26th 2024, after a review of your submitted protocol for ethical clearance, the University of Ghana Medical Centre Institutional Review Board (UGMC-IRB) granted **Approval** for the above-referenced submission. Please note that the approval for this protocol will lapse on November 1st, 2025, and requires you to submit progress and final report to the UGMC-IRB.

This approval includes the following:

1. **Proposal**
2. **Work Plan**
3. **Budget**
4. **Data collection tool**

The UGMC-IRB requires you to conduct the study in accordance with the protocol and its appendices as submitted for approval and to comply with all its requirements, subject to ethical and safety considerations, including complying with ICH Good Clinical Practice.

Please contact the UGMC-IRB Administrator via ***Tel: +233-(302)-550843-5 Ext.16207*** or ***Email:*** msrc@ugmc.ug.edu.gh if you have any questions.

Sincerely,

Dr. Maurice Ankrah,
Chair, UGMC-IRB.

Address: P. O. Box LG 25, Legon, Accra, West Africa
Ghana Post GPS: GA-337-6980
Google Map: University of Ghana Medical Centre
Phone: 233-(302)-550843, 233-(302)-550844, 233-(302)-550845
Email: info@ugmc.ug.edu.gh

Facebook: University of Ghana Medical Centre
LinkedIn: University of Ghana Medical Centre
Twitter: University of Ghana Medical Centre
Instagram: University of Ghana Medical Centre
Website: www.ugmedicalcentre.org

APPENDIX III. Interview guide

INTRODUCTION

My name is Ambrose Wadie Baidoo, an MPhil nursing student at the University of Ghana, Legon. You are selected to participate in an interview on Experiences of Health Professionals in

Implementation of enhanced recovery after Surgery Protocols at the University of Ghana Medical Centre. Your answers will be treated with the utmost confidentiality; there is no right or wrong answer. This interview with you is divided into two main sections A and B. Section A is on some demographic data, and section B will cover some specifics on experiences of health professionals in implementation of enhanced recovery after surgery protocols

SECTION A – PERSONAL DATA

This section will contain personal information about participants obtained once they have agreed to participate in the study. The information will improve comprehension of the many qualities of participants and assess the unique characteristics of the data collected. Please tell me about yourself.

Code: ……..

1. Age: ……
2. Gender: Male { } Female { }
3. Marital status: Single { } Married { } Divorced { } Widow { } Cohabitating { } 4. Religion

5. Profession **SECTION**

B.

1. Attitudes

I. What is your perception about enhance recovery after surgical protocols?

II. What are the benefits you associate with enhance recovery after surgical protocols?

III. Are there any negative aspects of enhance recovery after surgical protocols?

IV. Do you practice ERAS? What do you think will happen if you practice ERAS? V. How important are these outcomes ERAS to you as a health professional?

VI. Can you describe any personal experiences that have shaped your perception on ERAS?

VII. On a scale of 1 to 10, how beneficial do you think ERAS is?

VIII. What makes you think are the benefits and disadvantage of ERAS?

2. Subjective Norms

I. How do colleague perceive enhance recovery after surgical (ERAS) protocol?

II. Do you feel any pressure from colleagues to engage not engage in ERAS?

III. Have they ever expressed clients/patients opinions about ERAS?

IV. How do their opinions impact your decision to engage in ERAS?

3. Normative Beliefs

I. Are there any social or cultural expectations that influence your decision to practice in ERAS?

II. How do these expectations affect your willingness to practice ERAS?

III. How confident are you in your ability to practice ERAS?

IV. What skills or resources do you think are necessary to practicing ERAS?

4. Control Beliefs

I. What factors make it easier for you to practice ERAS?

II. Can you identify any barriers that might prevent you from practicing ERAS?

III. What could help you overcome these barriers?

APPENDIX IV. Support letter

UNIVERSITY OF GHANA
DEPARTMENT OF ADULT HEALTH
SCHOOL OF NURSING

Ref. No. 11008180

30th May, 2024.

University of Ghana Medical Centre,
P.O. Box LG25,
Legon.

Dear Sir/Madam,

SUPPORT LETTER – AMBROSE WADIE BAIDOO

I write in support of the application for ethical clearance for **Ambrose Wadie Baidoo**, MPhil Nursing student in the Department of Adult Health Nursing, School of Nursing and Midwifery, University of Ghana, Legon.

Ambrose Wadie Baidoo is undertaking research topic: **"Experiences of Health Professionals with regards to Enhanced Recovery after Surgery at University of Ghana Medical Centre,"** as part of the requirement for the MPhil programme.

He is humbly seeking ethical approval for his research, and I highly recommend his proposal for your consideration and approval.

Thank you.

Yours faithfully,

Dr. Gladys Dzansi
Supervisor

COLLEGE OF HEALTH SCIENCES
• P. O. Box LG 43, Legon, Accra, Ghana. • Telephone: +233 (0) 302 513 250 / 0289 531 213
• Email: adulthealth.son@chs.ug.edu.gh • Website: www.nursing.chs.ug.edu.gh

APPENDIX V. Consent forms

Title: Experiences of Health professionals with regards to Enhanced Recovery After Surgery Protocols at UGMC

Principal Investigator: Ambrose Wadie Baidoo

Address: University of Ghana, P.O Box LG 43. Legon

General Information about Research

The proposed study seeks to explore the experienced of health workers with regards to enhanced recovery after surgery protocols. Interview quides will be administered by the researcher and trained research assistants to you. It is estimated to last between 10-15 minutes with your permission. You have the right to withdraw from the study even after consenting without any consequences. You are also free to decline to answer questions you consider very sensitive or seek clarification about anything regarding this study.

Possible Risks and Discomforts

As a respondent to this study, you will be treated with respect regardless of your age, or any other affiliation.

Possible Benefits

Your participation in this study has no direct benefit you. However, the results from this study will help health systems and policy makers to develop strategies to implement and trained health professional to adhere to Enhanced Recovery After Surgery Protocols to improve patient recovery **Confidentiality**

During the data collection process, your' anonymity will be protected, and any additional personal information that could allow for identification will be excluded. To protect privacy and confidentiality, the process will take place in appropriate settings, participation is voluntary, and you have the right to withdraw from participation anytime you feel uncomfortable continuing with the process.

Compensation

No monetary benefit will be given in this study.

Voluntary Participation and Right to Leave the Research

Participation is voluntary, and you have the right to withdraw from participation anytime you feel uncomfortable continuing with the process.

Contacts for Additional Information

Principal supervisor

Name: Gladys Dzansi

Tel: 0243059316

E. mail: **gdzansi@ug.edu.gh**

Rights as a Participant

This research has been reviewed and approved by the University of Ghana Medical Centre for Medical Research Institutional Review Board (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-
5pm through the landline 0302916438 or email addresses: msrc@ugmc.ug.edu.gh

APPENDIX VI. Volunteer agreement

The above document describing the benefits, risks and procedures for the research title **"Experiences of health professionals with regards to Enhanced Recovery After Surgery protocols has** been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

_____ _____

Date Name and signature

If volunteers cannot read the form themselves, a witness must sign here:

Date: _____ Name and signature of witness: _____

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

Date: _____

Name Signature of Person Who Obtained Consent: _____

APPENDIX VII. Participant Information Sheet and Consent Form

The interviews will be performed using a semi-structured interview guide that has been authorized by the supervisors, and depending on the participants' responses, probes will

be utilized to get more information. Informed permission will also be requested from the participants in order to guarantee their safety against exploitation and intimidation. Before enrolling in the study, participants were informed of its goals and asked for their agreement

The study participants will have one week to give their consent. This gives individuals the most time possible to think about taking part in the study. Prior to the data being collected, participants will be required to sign a consent form. Additionally, participants will be informed that they have the freedom to leave the study at any time and without explanation. Interviews were conducted at participants' chosen locations, ensuring privacy and avoiding harm to patients. Participants' names and identities were hidden, and only the researcher and thesis supervisors will have access to the data. Conversation about the findings will be avoided with other participants, the hospital administration, or nurses

11008180:THESIS_AMBROSE_FINAL_WORK_(3).docx

ORIGINALITY REPORT

9%	7%	5%	4%
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