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PATIENTS' POSTOPERATIVE RECOVERY EXPERIENCES AFTER ABDOMINAL SURGERY: A STUDY IN THE HO MUNICIPALITY

BY

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(10333115)

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DECLARATION

I, John Kwasi Akortiakuma, do hereby declare that with the exception of the references made from other researches and authors which have been duly acknowledged, this thesis is the result of my original research work undertaken towards the award of the Master of Philosophy Degree in Nursing from the School of Nursing and Midwifery, University of Ghana, Legon. The research has been undertaken under the guidance and supervision of Dr. Gladys Dzansi and Dr. Lydia Aziato, both of the School of Nursing and Midwifery, University of Ghana, Legon. This work has neither in whole or part been presented to any institution for the award of any degree.

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(STUDENT)

This thesis has been presented for examination with our approval as supervisors.

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ABSTRACT

Postoperative recovery is an integral part of the surgical experience. In Ghana, there is inadequate evidence about postoperative recovery experiences after abdominal surgery. This study explored these experiences using the conceptual framework of operationalisation of postoperative recovery developed by Allvin and others in 2009. An exploratory descriptive qualitative approach was used. Eligible participants aged 18 to 63 years were recruited from Volta Regional Hospital, Ho. There was face-to-face interview with 15 participants. Interviews were audio-recorded, transcribed and analysed using framework data analysis method. Findings suggested participants recovering from abdominal surgery experienced physical symptoms including pain, nausea and vomiting, fatigue, appetite changes, and altered sleep pattern. Physical functions impaired included gastrointestinal, cardiovascular, bladder and urethral functions. Additionally, there was impaired mobilisation, muscle weakness, alteration in sexual activity and impaired skin integrity. Symptoms and presence of functional deficits affected their psychological and social well-being. Participants also experienced anxiety, depression, and difficulty in concentration, reduced social activity, and dependence. Participants received support from their spouses, family, friends, and religious affiliations. Self-motivation, cautiousness, and self-medications facilitated postoperative recovery experiences. Nurses and doctors donated blood to and provided financial support to some participants. Health education on medications and diagnosis was however inadequate. The postoperative recovery period was associated with unpleasant experiences therefore; support and professionalism are essential considerations. Health professionals also require adequate training and resources that will facilitate safe and comfortable recovery after abdominal surgery. Furthermore, government needs to revise the National Health Insurance Scheme policy to fully cover the entire cost of financing abdominal surgeries.

DEDICATION

I dedicate this project work to my dear wife, Mrs. Pearl Tetteh-Akortiakumah and my lovely daughters, Perfect (Akorfa), Michelle (Eyram), and Henrietta (Sena) Akortiakumah. Your unflinching support and steadfast love with regular daily persuasions to finish hard and fast to join you back home have been very motivational and further strengthened me.

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LIST OF ABBREVIATIONS

AIDS:	Acquired Immune Deficiency Syndrome
ASA:	American Society of Anaesthesiologists
CDC:	Centre for Disease Control
CINAHL:	Cumulative Index to Nursing and Allied Health Literature
CSP:	Colposacropexy
EBSCO:	Elton Bryson Stephens Company
HIV:	Human Immunonodeficiency Virus
HSP:	Hysterocolposacropexy
IASP:	International Association for the Study of Pain
IBD:	Inflammatory Bowel Diseases
NG:	Nasogastric
NHIS:	National Health Insurance Scheme
NRS:	Numeric Rating Scale
PONV:	Post Operative Nausea and Vomiting
PUBMED:	Public/Publisher MEDLINE
QoL:	Quality of Life
RP:	Relative Position
USA:	United States of America
WHO:	World Health Organization
OPD:	Out Patient Department

CHAPTER ONE

INTRODUCTION

This chapter presents the background to the study and the problem to be explored. It also consists of the purpose of the study, research objectives, research questions, significance of the study and the operational definition of key terms.

1.1 Background of the Study

Many patients all over the world undergo one type of surgical intervention or the other on daily basis. Although patients have varied types of surgeries and anaesthesia, postoperative recovery remain an integral part of their surgical experiences. Post-operative recovery occurs as a consequence of a surgical intervention for the treatment of an illness. Postoperative recovery is defined as an energy-requiring process of returning to normality and wholeness (Allvin, Ehnfors, Rawal, & Idvall, 2008; Allvin, Ehnfors, Rawal, Svensson, & Idvall, 2009). Postoperative recovery is a process starting at the end of the surgical procedure when anaesthesia is discontinued and it proceeds for a variable period until the patient resumes wellness at a level higher than or equivalent to the preoperative period through the reestablishment of all recovery domains (Allvin et al., 2009; Arakelian, Gunningberg, Larsson, Norlén, & Mahteme, 2011; Romanzini, Carvalho, & Galvão, 2015). Thus, it has been described by Allvin, Berg, Idvall, and Nilsson (2007) as a dynamic process with the aim of enabling patients to undertake their everyday life activities as they used to do before the surgical intervention. Other authors have noted that postoperative recovery entails a process of regaining preoperative levels of independence and normalcy and also occasionally, progression towards a new or improved life or becoming worse compared to their pre-surgery status (Forsberg, Vikman, Wälivaara, & Engström, 2015). Thus, during this process, the surgical patients require quality and well focused nursing care to promote the quality of their postoperative recovery process as well as enhance clinical outcomes.

The postoperative period is the third of the three perioperative phases of the surgical experience (Yeater, 2012). Patients attain postoperative recovery when they recuperate from the five dimensions of the postoperative recovery process which are physical symptoms, physical functions, psychological, social, and activity or habitual functions (Allvin et al., 2009). The experiences of these dimensions of recovery propel patients into their preoperative states of independence or dependence in performing activities of daily living and regaining an optimum state of psychological health. Thus, positive experiences may enhance rapid recovery and reduce the length of hospitalisation. In as much as the health team may have plans of care, the patient may also have individualized goals as they transition through the postoperative period. For instance, patients recovering from abdominal surgery always hope to have reduced physical symptoms, attain psychological well-being, and regain their preoperative functions and self-care. The experiences of patients on recovering from abdominal surgery under general anaesthesia are however distressing as they encounter physical symptoms, experience changes in their physical functions, psychological, and social lives, and they regain habitual activities diversely when recovering from abdominal surgery (Allvin et al., 2011; Bowyer & Royse, 2016). This indicates that the postoperative phase involves a myriad of experiences which affect the process of recovery.

Most studies investigating the postoperative concept have significantly been focused on patients' experiences and challenges with single symptoms related to the recovery process (Chand et al., 2016; de Miguel-Ibáñez, Nahban-al Saied, Alonso-Vallejo, & Escribano Sotos, 2015). Globally, extensive studies have been conducted into single symptoms experienced by patients such as postoperative pain; (Aziato & Adejumo, 2015a; Francis & Fitzpatrick, 2013; Gagliese, Gauthier, Macpherson, Jovellanos, & Chan, 2008; Richards & Hubbert, 2007), and postoperative nausea and vomiting (Conway, 2009; Kim, Ko, Kim, Lee, & Choi, 2007). However, studies reporting the broader spectrum of postoperative recovery symptoms appear

to be limited. For instance, one study was identified in Pakistan which reported that out of 411 patients who had surgeries, 11.6% of them experienced nausea and vomiting and 7.0% experienced respiratory tract symptoms whiles 18.2% of them had postoperative pyrexia and 11.4 % experienced varying degrees of septic wounds, 0.9% had wound haematoma and 0.2% experienced wound dehiscence (Jawaid, Masood, & Iqbal, 2006).

The reasons for these experiences of patients can partly be attributed to the inadequate preoperative preparation and anaesthetic assessment (de Oliveira et al., 2015), poor surgical technique and substandard postoperative care including follow up care during reviews (Darwin, 2016). In addition, patients have complaints of inadequate information regarding the possible risks of surgery and expectations of their postoperative period, and may not have the insight that they ought to report early any postoperative adverse experiences (Jawaid et al., 2006). These experiences have been observed to translate into poor patient satisfaction as reported in a study conducted in Kenyan hospitals that some patients described nurses as impolite and demonstrated rudeness as well as expressed their hesitation to attend to them after surgery (Ojwang, Ogutu, & Matu, 2010).

Moreover, poor postoperative experiences have been reported to be a contributing factor to the delay in returning to normal self –care activities and physiological function after surgery. Postoperative pain, drowsiness, nausea and vomiting, fatigue, exhaustion and inability to ambulate are some of the common symptoms patients expressed their apprehension about (Aziato & Adejumo, 2015a).

Abdominal surgeries can occur as a consequence of patients suffering small bowel perforation which can be caused by numerous inadvertent situations such as penetrating abdominal trauma, high velocity gunshot wounds, bacterial peritonitis from typhoid infection and appendicitis (Schiessel, 2015). It could also be caused by ingestion of foreign materials such as toothpicks which can perforate the bowels (Steinbach, Stockmann, Jara, Bednarsch,

& Lock, 2014). In tropical countries such as Ghana, typhoid fever is a common cause of bowel perforation (Singh, Charokar, & Balmiki, 2013; Vagholkar, Mirani, Jain, Iyengar, & Chavan, 2015). Most of these patients are usually rushed into the emergency room or the wards of the hospitals where emergency laparotomy is organised without comprehensive preoperative preparation of the patients (Aziato & Adejumo, 2014a; Choo et al., 2013; Forsberg et al., 2015). Such patients are managed by emergency laparotomy and also put on appropriate antibiotics (Ameh, Abantanga, & Birabwa-Male, 2012; Schiessel, 2015). The postoperative recovery experiences of these abdominal surgical patients include the development of an abdominal compartment syndrome coupled with high intra-abdominal pressure, respiratory distress and septicaemia among others (Hadley, 2014; Ordoñez & Puyana, 2006; Søreide et al.; Søreide et al., 2015; Watson & Benbow, 2009). These complications occur as a result of the biological reactions of the patient's body to the disease processes leading to alterations in the normal physiological functions (Calvache et al., 2015).

Many patients experience changes in their physical functions as physiological changes accompany surgery (Ahn & Ahn, 2016). Postoperatively, patients regain functions and re-establish activities over an extended period of time until they can perform all activities without depending on anyone for support (Hardy & Rakestraw, 2012; Hohenberger & Delahanty, 2015). Usually, patients also make conscious efforts to indulge in activities of daily living after surgery. The resumption of the body functions usually precedes resumption of activities of daily living. Thus, nurses should encourage hospitalised patients as well as those discharged to resume activities gradually according to their strength and capacity (de Miguel-Ibáñez et al., 2015) to perform them without worsening their condition and the recovery process. Self-care activities such as toileting, feeding, personal hygiene, outdoor games are introduced gradually. Patients usually are supported to resume mobilisation by pursuing early ambulation out of bed (Eriksson, Haglund, Leo Swenne, & Arakelian, 2014)

and then gradually walking without support around the bed and in the cubicle and then to the washrooms without support but under strict supervision and observation by the nursing staff.

Psychological encounters have been unpleasant experiences of many abdominal surgical patients. Patients mostly demonstrate their anxiety, nervousness, insecurity, and fear of the unknown outcome of the surgery with regards to how they would recover from the surgery (Ascari et al., 2013). Postoperative pain (Jeantieu et al., 2014), possible surgical site infection (Sanger et al., 2014; Tanner, Padley, Davey, Murphy, & Brown, 2012) and haemorrhage associated with the surgery (Tinnfält & Nilsson, 2011) have been the major psychological concerns of surgical patients. In a study to describe people's experiences of undergoing gastric bypass surgery in Sweden, patients experienced both feelings of vulnerability and safety in the unknown hospital environment a short while after the surgery (Forsberg, Engström, & Söderberg, 2014a). These surgical patients demanded the presence of the nurses around them so as to ease their apprehension and allay their anxiety. Patients profoundly express their psychological instability when they encounter any complications postoperatively which can result in increased costs due to prolonged hospitalisation (Stey et al., 2015). This worsens most especially when patients have not subscribed to the National Health Insurance Scheme (NHIS) or any other private health insurance scheme.

Social wellbeing after surgery and hospitalisation is of great concern to many surgical patients. The social wellbeing of the patients is affected by their separation from their family and significant others (Bakker, Cakir, Doodeman, & Houdijk, 2015; Bowyer & Royse, 2016). Many patients emphasise their displeasure with separation from their families and loved ones during hospitalisation. Various social groups however make significant attempts to bridge the separation gaps during the period of recovery of the patient after surgery. It is a common sight in Ghanaian hospitals to see many social groups (Whitehouse & Lanman, 2014) such as family members, religious groups and workmates in their numbers to visit their relatives and

loved ones after surgery so as to demonstrate their social and emotional support (Otis-Green & Juarez, 2012; Stephens & Petrie, 2015; Watson-Jones & Legare, 2016). Some surgical patients who leave their children at home express their frustration about the loss of social attachment with their children and even wonder if they will ever see their children (Forsberg et al., 2015). Some patients have no interest in participating in any activity (Do, Lemogne, Journois, Safran, & Consoli, 2012) whiles on admission. Other patients do enjoy some diversional musical activities (Hole, Hirsch, Ball, & Meads, 2015) from the television or radio sets or from among themselves but a number of them do not interact with the other patients at all and remain desolate on admission.

Social support systems are used by many surgical patients to promote their recovery. Patients depend on support extensively from family members, friends and colleagues when they are discharged (Berg, Kjellgren, Unosson, & Årestedt, 2012). Patients receive support from the nurses and other hospital staff mainly during the period of hospitalisation. Surgical patients who receive adequate preoperative preparation (Fraczyk & Godfrey, 2010) through quality social interaction with the health care team experience high quality social wellbeing during recovery. If this quality social interaction proceeds into the postoperative phases of recovery (Flanagan, 2009; Holland & Bowles, 2012; Holland, Knafl, & Bowles, 2013; Mcmurray, Johnson, Wallis, Patterson, & Griffiths, 2007) it may augment the postoperative social function of the patient and reduce boredom and rejection even when at home.

1.2 Problem Statement

Globally, some studies have observed increasing rates of abdominal conditions which require surgical interventions and in most high income countries some of these interventions were carried out on an out-patient basis. However, there is an increasing trend of readmission of surgical patients with 11.3% of the 1442 patients who underwent surgery between 2009 and 2011 readmitted to a hospital in the USA within 30 days of discharge (Kassin et al.,

2012). In Ghana, statistics available at the Volta Regional Hospital, Ho, indicate that a total of 8179 general surgical operations were done from 2012-2016 out of which 72.6 % were abdominal surgeries (5938) including elective and emergency surgeries. About 6.3% of these patients (375) were readmitted to the hospital and 5.0% (299) developed complications including surgical site infections, surgical wound dehiscence, anaemia, and severe insomnia. In 2013, a total of 1306 general surgeries were done at the Volta Regional Hospital, Ho, and abdominal surgeries constituted 55.8% (929) and 5.7% (38) of patients had various complications whiles 7.3 % (68) of them were readmitted. An increasing trend was also noted at the end of 2016 during which a total of 2546 general surgeries were performed and 78% (1987) were abdominal surgeries. Out of these abdominal surgeries, as many as 7.8% (98) of the patients developed various complications and 5.1% (102) were readmitted. Patients lacked adequate information on self- care at home and show their displeasure with care at the hospital despite the efforts of the health care staff.

Abdominal surgical patients experience a dramatic deterioration in physical and psychosocial functions and they suffer unpleasant symptoms related to the surgery and anaesthesia which influence their recovery (Lee, Dumitra, Fiore, Mayo, & Feldman, 2015). However, the experiences of adults with abdominal surgery under general anaesthesia are poorly described and not well explored (Schiessel, 2015) and most studies in this area have focused on single symptoms after surgery without a holistic view of postoperative recovery.

The researcher's personal experiences as a nurse anaesthetist show that many of the abdominal surgical patients experience social separation from family and friends and psychological apprehension about the drainage tubes and bags which usually hang around their abdomen and impair their movement and comfort. Postoperative pain, surgical site infections, significant weight loss with disturbed body image are experienced by abdominal surgical patients. Furthermore, literature searched so far revealed there is a lack of adequate

data on abdominal surgeries and patients' experiences in Sub-Saharan Africa, most especially Ghana despite the increasing number of abdominal surgical interventions. For these reasons, the researcher sought to conduct a qualitative study among adult patients to explore their postoperative recovery experiences with abdominal surgery. In order to capture and understand the broader spectrum of experiences, there is a need to adopt a framework that conceptualises these experiences as a whole rather than a single unit. Thus, the Framework for Operationalisation of Postoperative Recovery developed by Allvin et al., (2009) served as the conceptual framework for the study.

1.3 Purpose of the Study

This study aimed at exploring the postoperative recovery experiences of patients after abdominal surgery in the Ho Municipality of the Volta Region of Ghana.

1.4 Research Objectives

- To explore patients' experiences with physical symptoms following abdominal surgery.
- To illuminate patients' experiences with physical functioning following abdominal surgery.
- To explore the psychological well-being of patients after abdominal surgery.
- To explore the social well-being of patients after abdominal surgery.
- To uncover self-care activity issues that patients experience after abdominal surgery.

1.5 Research Questions

- What are the experiences of patients with physical symptoms after abdominal surgery?
- What are the experiences of patients with physical functioning following abdominal surgery?
- What are the psychological experiences that patients have after abdominal surgeries?

- What are the social experiences that patients have after abdominal surgery?
- What are the activity issues that patients experience after abdominal surgery.

1.6 Significance of the Study

The findings of this research will inform practice and improve the quality of postoperative care given to patients by all clinical staff especially nurses, anaesthetists, and doctors. It will help develop and organise training programmes that will increase the knowledge, practice, and skills of nurses, anaesthetists, and surgeons on the postoperative management of patients. The findings will influence health policy development and management of surgical patients. It will also guide the development of nursing curriculum and refresher training courses related to postoperative management of abdominal surgical patients. Furthermore, it is anticipated that this study will fill the gap in research in postoperative care of patients in the Ghanaian setting and offer further direction for the conduct of other studies.

1.7 Operational Definitions

Postoperative: A period just after abdominal surgery is completed on a patient and anaesthesia ends.

Recovery: A process of returning to preoperative levels of independence and normality and also progressing towards a new or different life compared to their status prior to surgery.

Experiences: Incidences, circumstances, or events that involve or affect a person after abdominal surgery.

Patient: A person who has undergone open abdominal surgical intervention.

Anaesthesia: A technique of using drugs to induce sleep in a patient so as to render the entire body of the patient unresponsive to pain and any injury during the surgical intervention.

CHAPTER TWO

LITERATURE REVIEW

This chapter presents the review of relevant literature on patients' postoperative recovery experiences after abdominal surgery. The conceptual framework of operationalisation of postoperative recovery was the framework of reference used for the study. The main constructs in the framework were physical symptoms, physical functions, psychological, social functions and activities or habitual functions. Wiley, Pub Med, EBSCOhost, Google Scholar, Science Direct, Sage, and Medline electronic databases were searched for English language papers published with literature on the constructs. The keywords and phrases or the search terms used separately and in combination were: 'recovery', 'postoperative', 'post surgical', 'post discharge', 'abdominal surgery', 'patients' experiences,' 'physical', 'psychological', 'social', 'support', 'self-care', 'coping' and 'qualitative'.

2.1 Conceptual Frameworks Considered for the Study

At the time this study was conceptualised, two other models were considered for use before finally the conceptual framework of operationalisation of postoperative recovery was chosen. The Quality of Life Model (QoL) developed by Betty Ferrell in 1999 was first considered for this study. This model was originally designed to develop a theoretical foundation for the determination of the domains that define the quality of life of cancer patients so as to uncover their lived experiences of pain, fatigue and their resultant effect on the health of these patients (King & Hinds, 2011). Other models were synthesised from this QoL model including the QoL applied to Family Caregivers of cancer patients which was developed by Betty Ferrell in 2001. According to King & Hinds (2011), the dimensions of the QoL model included physical, social, psychological and spiritual well-being. The physical well-being domain describes the physical functioning of the caregiver of the cancer patient

and the associated health challenges including fatigue, sleep disruption, function, nausea, appetite, constipation, and pain. The psychological well-being entails experiences of the caregiver such as anxiety, depression, helplessness, difficulty coping, fear, uselessness, loss of concentration, control, and distress which constitutes emotional functioning. The social well-being refers to the interaction between the cancer patient and the caregiver which considers isolation, role adjustment, financial burden, roles, affection or sexual function, leisure activities, burden, and employment. The spiritual well-being of the caregiver of the cancer patient refers to hope, meaning, uncertainty, religiosity, transcendence and positive change and these constitute the spiritual impact placed on a caregiver rendering care to a cancer patient. This model centred on the cancer patient and their caregivers and not those who had surgery due to cancer. Their experiences may differ from patients recovering from surgery. Moreover, this study was about patients recovering from abdominal surgery and not their caregivers or cancer caregivers hence the QoL Model was not used.

The biopsychosocial model developed by Engel was also considered for this study. This model has the biological, psychological and social domains. Genetic predisposition, effects of medications, neurochemistry, Hypothalamic Pituitary Axis and fight-flight response constitutes the biological domain. The meanings of the psychological and social domains depict that of the QoL model. Moreover, the physical symptoms and functions of surgical patients were not conspicuous in this model and it demanded more of laboratory examinations to ascertain some of the components. Exploring the physical symptoms and functions of the patient after abdominal surgery was essential in this study but these dimensions were not clearly defined in the biopsychosocial model hence it was not used for the study. The conceptual framework for operationalisation of postoperative recovery developed by Allvin et al. (2009) was also considered and chosen for this study since it satisfied the objectives of the study.

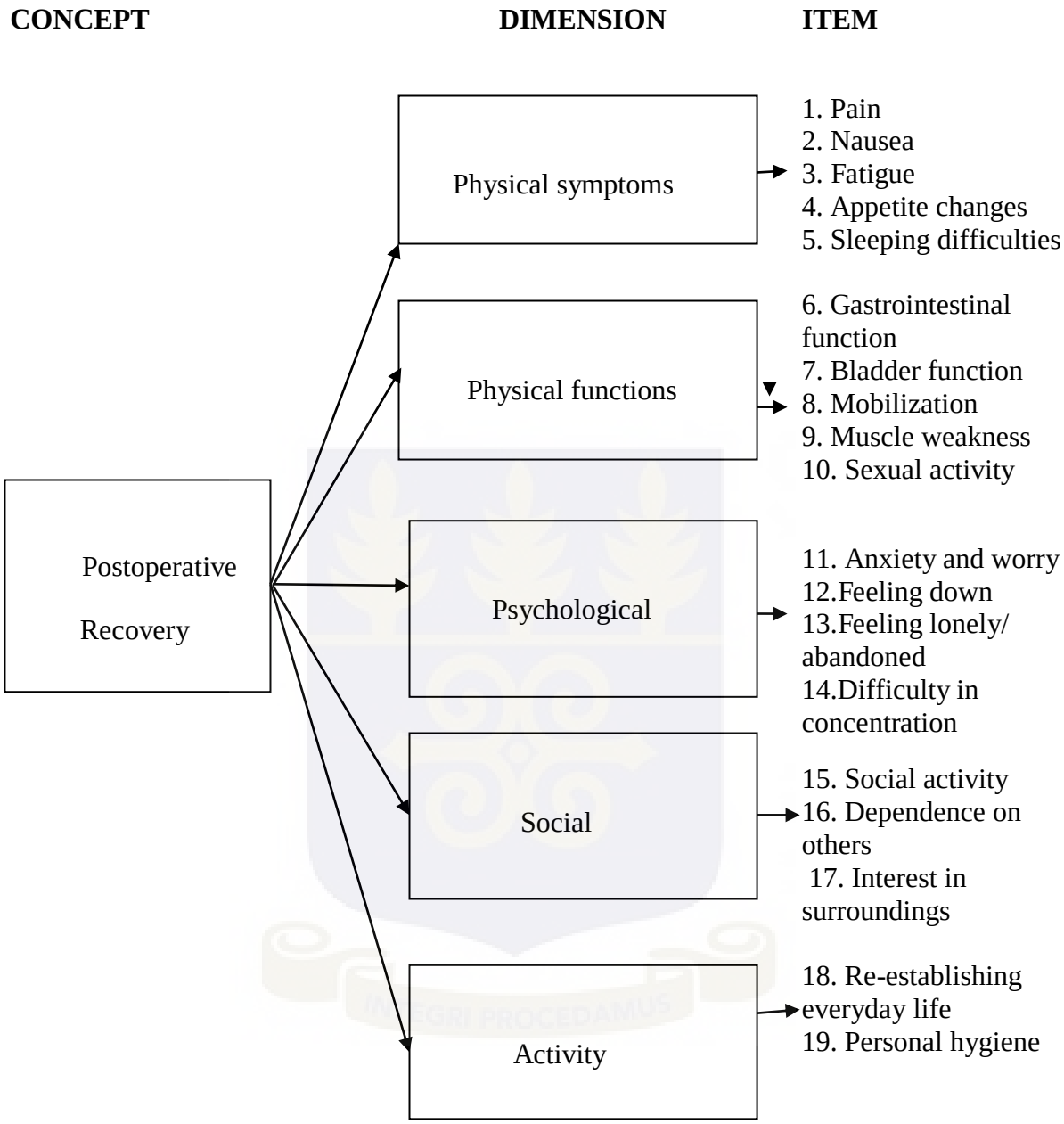
2.2 Conceptual Framework Used for the Study

The Conceptual Framework of Operationalisation of Postoperative Recovery was developed by Allvin et al. (2009) based on professional practice and research into the phenomenon. The development of the model proceeded through concept analysis, qualitative, quantitative and longitudinal studies. Concept analysis was utilised to clarify and examine the structure and function of the postoperative recovery (Walker & Avant, 2005). In the second phase, qualitative methods were utilised to explore and describe patient and staff experiences regarding postoperative recovery. In the third phase, a multidimensional questionnaire was developed to assess the content validity and intra-patient reliability. In the longitudinal phase, the Postoperative Recovery Profile questionnaire was further developed regarding its construct validity. Consequently, a conceptual framework was developed to enhance understanding of postoperative recovery experiences.

The framework is made up of five (5) dimensions and nineteen (19) items used for developing the questionnaire which were brought forth through the concept analysis of postoperative recovery (Allvin et al., 2007) and also in a study on the description of postoperative recovery by patients and the health care staff who managed them during their hospitalisation for various surgeries (Allvin et al., 2008). The items identified also included those synthesised from current literature on the perspectives and experiences of both patients and their clinicians on postoperative recovery which all form part of the process of putting into action the concept of postoperative recovery (Allvin et al., 2009; Allvin et al., 2011).

Details of the conceptual framework of operationalisation of postoperative recovery are presented below as figure 2.1

Figure 2.1: Conceptual Framework of Operationalisation of Postoperative Recovery developed by Allvin et al. (2009).



The literature review indicated that this framework was not used for any previous studies. Despite this, the concept of postoperative recovery has been used in the practice of anaesthesia, medicine, and nursing. The features of this concept were not scientifically well established (Berg et al., 2012) and lacked vivid description until Allvin et al. (2009) developed this theoretical framework. To understand the phenomenon of postoperative recovery, a concept analysis was done to establish a functional, clinically sensitive definition

of the concept. The concept analysis posited that postoperative recovery is an energy-requiring process which persists until the patient assumes the preoperative state of normality and wholeness by achieving physical, psychological, social, and habitual functions (Allvin et al., 2007). This definition is consistent with that of the World Health Organisation (WHO) which defined health as "the state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity" (WHO, 2013). To understand postoperative recovery from the perspectives of surgical patients, the physical dimension was segregated into two components as "physical symptoms" and "physical function" while the habitual dimension was given a different notation as activity which clearly denotes the patients' experiences with activities of daily living (Allvin et al., 2008). Postoperative recovery entails a process of gradual measurable physiological and dynamic changes in the health status of the patient which occur as a consequence of the surgical intervention which was performed as well as the anaesthetic effects. This process is climaxed by the patient returning to an improved state of health presumed to be the healthy state of the patient before becoming ill and undergoing surgery or even progressing to a better state of health comparatively even though deterioration can also occur (Hollenbeck et al., 2008; McKay et al., 2010). The improvement in the patient's state of well-being signifies recovery but the patient experiencing this change must perceive the positive healthy progress in his/her life (McKay et al., 2010; Zalon, 2004).

The postoperative recovery process, irrespective of the type of anaesthesia used occurs through three phases for both inpatients and out patients or day surgical cases. The phases comprise of the early, intermediate and the late postoperative recovery phases (Allvin et al., 2008; Allvin et al., 2011; Berg et al., 2012; Bowyer & Royse, 2016; Grover & Haire, 2004). The early phase of recovery commences just after anaesthesia has been discontinued and lasts until the patient regains the motor functions and the normal protective reflexes,

including control over the airway. It mostly occurs in the theatre and the post anaesthesia care unit (PACU) or recovery ward. The early phase of recovery progresses into the intermediate phase when the patient is transferred into the surgical wards until the time he/she is ready to be discharged home. The late phase comprises the period when the patient is discharged from the hospital and continues until full return to preoperative levels of health and well-being or even better. This varies among different patients depending upon the type of illness and surgery, individual responses to the process of recovery, and the environmental factors (Allvin et al., 2011; Berg et al., 2012; Bowyer & Royse, 2016; Grover & Haire, 2004).

There are psychological and physical factors patients experience individually which influence their postoperative recovery (Allvin et al., 2008). The perception of the patient that he /she is healthy and well, especially during the late phase of the recovery process when the patient is at home is important in influencing the successful return to pre-surgical levels of normality. This perception of well-being creates an internal standard within the patient which is brought about by a number of factors. These factors include the type of surgery, preoperative expectations of recovery, the severity of the physical symptoms experienced by the patient during the phases of the recovery and the external environmental factors including the experiences the patient had with the clinical staff, society and the family (Berg et al., 2012). In view of this, it is relevant to reach a state of equilibrium between the patients' postoperative experiences and the internal standards in order to achieve recovery without deviations. It is therefore imperative to put in pragmatic efforts to comprehensively manage patients and minimise the adverse physiological reactions of the body to the surgical intervention (Ann DiMaria-Ghalili, 2016; Berg et al., 2012; Delnoij & Hafner, 2013).

Social functions are discriminatory and basically determined by the roles the patient plays in the society as well as the social status achieved by the patient and the social class

he/she is identified with in the society (Nukunya, 2003; Twumasi, 2005). Patients of high social repute usually play prestigious roles in society associated with the kinds of employment or educational levels they attained and they may have different orientations towards hospitalisation for surgical interventions. Depending on the level of socialisation and the roles played by the patient in society, the job functions of the patient may be vacant and many roles may still be expected of the patient even as he/she is indisposed and hospitalised for either emergency or elective surgery (Dzorgbo & Tonah, 2014). Many patients receive visitors whiles on hospital admission depending on their influence in the society and the roles or social class they belong to within the society (Twumasi, 2005). During visiting periods patients interact with their relatives and loved ones as well as friends and coworkers (Aziato & Adejumo, 2014c). The visiting hours usually take only about two hours both in the morning and evening in Ghanaian hospitals hence patients are deprived of their relatives for about 20 hours in each day they spend on admission. Meanwhile, some patients are not visited by any one and they look on and witness how all others interact and socialise with their visitors. This could be a demoralising and challenging phenomenon to patients of diverse social classes sharing the same hospital cubicle or ward environment.

Patients recuperate faster and their recovery can be enhanced when the social environment at home is conducive and supportive after discharge. It is very important to prepare most surgical patients and their relatives adequately on the support systems, nutrition, gradual resumption of self-care, financial support to purchase medications and support for review (Swenne, Cederholm, Gustafsson, & Arakelian, 2015). The patient also needs to be in touch with the employers and valid excuse duty certificates should be issued until fully declared fit to resume preoperative functions. This will promote the social stability of the patient and enhance recovery postoperatively.

Patients resume their habitual functions which they perform prior to their illness and subsequent surgery when they successfully perceive recovery on their own as they may also be declared by their attending physician or surgeon during review after surgery (Allvin et al., 2008; Forsberg, Söderberg, & Engström, 2014b). These habitual functions are activities which they usually perform for their everyday living and they can do so satisfactorily only when they recover from the surgery and its physiological changes. The process of postoperative recovery sometimes deviates from the norm when the patient responds to the surgical intervention and the effects of anaesthesia in an unusual manner which can result in possible complications (Lee et al., 2015; Martínez, de Nadal Clanchet, Schiraldi, Villegas, & Santullano, 2015). The clinical team collaborates with the patient and family to utilise the available resources, especially what the patient routinely uses to augment the self-care of the patient after discharge (Berg et al., 2012). The performance of roles or self-care activities could be recognised as a burden to the patient and family or immediate relatives since they perceive such functions as the prerogative of the nurses (Berg et al., 2012). This presupposes that the patient and the family members, especially those who live together with the patient should be educated adequately on the way to perform self-care activities. Activities such as personal hygiene, grooming, feeding, exercise, recreational activities and normal job functions should be resumed gradually, bearing in mind the need to conserve energy for complete recovery.

The reliability of the items on the conceptual framework for measuring postoperative recovery was confirmed by the reliability test done as shown by the percentage agreement of the items which ranged from 72% to 100%. This indicated that a minimum of 18 out of the 25 patients who were the participants were fully stable in their test –retest assessments (Allvin et al., 2009). The highest levels of systematic disagreement in relative position (RP)

during the assessment were recorded in the test-retest assessments of sleeping difficulties, muscle weakness, and dependence on others.

During the process of development of the conceptual framework, patients undergoing elective lower abdominal and orthopaedic surgery formed part of the participants between September 2006 and July 2007. The exclusion criteria included surgical patients who were unable to speak, read and write the Swedish language, cognitive dysfunction that impaired the cooperation of the patient with the instructions, or patients with severe co-morbid medical conditions that obstructed the postoperative objective assessment of the patient (Allvin et al., 2009). To critique the framework, people who could not speak the Swedish language may have had contrary views on the concept of postoperative recovery but they were not given the opportunity to make their views known. Moreover, it is possible that patients who had emergency surgeries, and those who had other types of surgeries apart from lower abdominal and orthopaedic may have had contrary experiences hence the differences in their assessment. Despite these limitations, this conceptual framework is, however, valid and reliable for measuring postoperative recovery of patients who underwent abdominal surgery. The constructs used for the study included physical symptoms, physical functions, psychological functions, social roles and functions, and performance of activities or habitual functions.

2.3 Overview of Abdominal Surgeries

Surgical care has a role in treating a broad spectrum of diseases in the alleviation of human suffering (Rose, Chang, Weiser, Kassebaum, & Bickler, 2014). It is required for all ages; from neonates with congenital anomalies to elderly people with cataracts. Surgery can be preventative, as in reducing HIV transmission through circumcision, or curative, as in many cancers. It is often a component of acute emergency care, such as bowel perforations and trauma, as well as the treatment for chronic diseases such as osteoarthritis and

inflammatory bowel disorders. Additionally, surgical care is important in the diagnosis and supportive care of numerous conditions (Bowyer & Royse, 2016).

Abdominal surgery is a very common operative procedure which includes a wide range of surgeries for both emergency and elective surgical interventions (DeFrances, Lucas, Buie, & Golosinskiy, 2008). The overall abdominal surgical rates have been noted to be increasing with age from 13.4% in patients less than 21 years old to 43.8% in those above the age of 60 years (DeFrances et al., 2008). In addition, compared to males, the prevalence of intra-abdominal surgery in female was significantly higher (Nunoo-Mensah, Rosen, Chan, Wasserberg, & Beart, 2009). Similar to other countries, Vietnam has a high rate of abdominal surgery. It was reported that abdominal surgery is the most common procedure. For example, a survey of Dong Thap General Hospital in 2003 to 2007 found that 36.9% of surgical patients (n=30,453) had abdominal surgery (Ta & Nguyen, 2010). In addition, 30% of surgical patients (n=1463) in the Hospital of Medicine and Pharmacy University in Ho Chi Minh City underwent abdominal surgery (Dao, 2010). Abdominal surgery involves not only the intra-abdominal organs such as liver, pancreas or gastrointestinal tract but also the extra-abdominal structures like prostate, urinary tract or an aortic aneurysm (Maingot, Zinner, & Ashley, 2007). The indications for abdominal surgery include infection, obstruction, tumours, and inflammatory bowel disease. Most abdominal surgery patients have to undergo general anaesthesia and entail unconsciousness for a certain time in an operating theatre (Braden, Reichow, & Halm, 2009).

2.4 Patients' Experiences with Postoperative Physical Symptoms

Postoperative physical symptoms are common experiences of surgical patients including those who had abdominal surgery (Bowyer & Royse, 2016; Rosén, Clabo, & Mårtensson, 2009). These symptoms sometimes linger into the late phase of postoperative

recovery beyond the expectation of the patient as well as the clinical staff (Rosén, Bergh, Lundman, & Mårtensson, 2010). Physical symptoms primarily are physiological reactions of the body of the patient to the surgery which impacts on the well-being and ability of the patient to engage in activities of daily living (Allvin et al., 2008; Rosén et al., 2009). The physical symptoms during postoperative recovery include pain, nausea, fatigue, appetite changes, and sleeping difficulties (Allvin et al., 2008; Allvin et al., 2009; Bowyer & Royse, 2016). The resolution of postoperative symptoms and functions is a prerequisite for complete postoperative recovery (Bowyer & Royse, 2016).

2.4.1 Postoperative Pain

Pain has always been defined in the subjective context of the patient and it has been defined by the International Association for the Study of Pain (IASP) as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (Brand & Court, 2010, p. 214). McCaffery (1983) further defined pain as whatever the experiencing person (patient) says it is, existing whenever they say it does (McCaffery, 1983; McCaffery & Sofaer, 1983) cited in (Al Samaraee, Rhind, Saleh, & Bhattacharya, 2010; Aziato & Adejumo, 2015a).

The phenomenon of postoperative pain has been widely reported and it has been a major and the most common adverse effect of surgical interventions experienced by many patients including abdominal surgical patients (Robleda, Roche-Campo, Sánchez, Gich, & Baños, 2015; Romanzini et al., 2015; Segerdahl, Warrén-Stomberg, Rawal, Brattwall, & Jakobsson, 2008). About 50% of surgical patients experience postoperative pain on admission in the hospital during the second phase of their postoperative recovery (McGoldrick, 2004). A qualitative study by Sommer et al. (2008) in a university hospital in the Netherlands, among 1490 surgical inpatients to investigate the prevalence of postoperative pain revealed that 41% experienced moderate to severe pain on the day of

surgery and the first day after surgery. The study further revealed a high prevalence of moderate to severe postoperative pain experienced by 30% of the patients who underwent abdominal surgery whiles as many as 55% of them experienced the same measure of pain on the first postoperative day (Sommer et al., 2008).

Although the pathophysiology of postoperative pain has been extensively studied which gave rise to the production of a wide variety of appropriate pain relieving drugs and analgesic techniques, the quality of postoperative pain management continues to be a challenge to postoperative recovery (Al Samaraee et al., 2010; Coluzzi, Savoia, Paoletti, Costantini, & Mattia, 2009; Vickers et al., 2009). In a quantitative study among 588 respondents who were mainly anaesthesiologists and practising pain management specialists sampled from 163 Italian hospitals comprising of 24.4% public hospitals, less than half of the hospitals surveyed (41.7%) had an organised Acute Pain Service (Coluzzi et al., 2009).

Varying reasons were cited for the poor management of pain among postoperative patients. Coluzzi et al. (2009) stated in their study that the respondents who were anaesthesiologists cited inadequate training of surgeons and nurses (44.3%), poor organisation of pain services in the hospitals (29.9%), and non-availability of equipment (21.5%) as the major reasons for their inability to manage postoperative pain effectively. This was further affirmed in the study of Al Samaraee et al. (2010) that insufficient education and training of doctors and nursing staff, poor communication among the clinical staff/team at different levels, insufficient assessment by nurses and doctors and poor preoperative education of patients on how to report pain contributed to the persistence in poor postoperative pain management of adult abdominal surgical patients (Al Samaraee et al., 2010). Other reasons for the poor management of postoperative pain were found to include the fear of administering large doses of potent opiates by doctors, nurses and pharmacists for causing harm to the patient through the potential side effects of the opiates such as respiratory

depression (Abad Torrent et al., 2016; Alawadi et al., 2016; Aziato & Adejumo, 2014a). About 51.2% of the respondents in a study among pain management experts suggested that dedicated anaesthesiologists be assigned for the management of postoperative pain on a daily basis in order to have a well organised and quality acute pain service (Coluzzi et al., 2009).

Studies have shown that most patients after abdominal surgery experienced pain when they were at rest (Ahn & Ahn, 2016; Al Samaraee et al., 2010), and others during nursing care procedures such as change of dressing on their wounds, deep breathing exercises, and when ambulating and coughing (Francis & Fitzpatrick, 2013). Other patients experienced postoperative pain when they were rising up from the bed, engaging in self-care activities, and repositioning themselves in bed (Amini et al., 2015; Anderin, Gustafsson, Thorell, & Nygren, 2015). In a descriptive phenomenological study in the United Kingdom (UK) among twenty Caucasian participants, aged 50–82 years (10 males, 10 females), patients described their postoperative pain as restrictive following abdominal surgery and end-end anastomosis. They further described their postoperative recovery experience as very painful, awful, and horrendous, excruciating like labour pains, persistent overnight and frightening with the presence of the abdominal incisional wounds, and when emptying their bowels after surgery (Worster & Holmes, 2009).

Postoperative pain leads to unpleasant experiences of the patient. It brings untold suffering (Hong & Lee, 2014) associated with reduced emotional well-being and leads to self-care deficits which consequently results in experiences of insecurity, apprehension and loneliness (Berg et al., 2012; Robleda et al., 2015) especially during the late phase of recovery (Bowyer & Royse, 2016). Some other adverse effects of postoperative pain include difficulty in sleeping, reduction in mobility, and respiratory system problems such as atelectasis (ASA, 2012; Lee & Lee, 2006; Rudolph & Marcantonio, 2011), chronic pain (Shipton, 2014a) and unnecessary suffering. The adverse effects of poorly managed

postoperative pain have the tendency to prolong the length of hospitalisation which definitely has increased cost implications for the patient and the health care facility (Currie & Hughes, 2008). Therefore, adequate and prompt management of postoperative pain for abdominal surgical patients has been a very relevant nursing intervention that benefits the patients at large but the health care staff and the institution as well (Hutchison, 2007).

2.4.2 Postoperative Nausea and Vomiting

Postoperative nausea and vomiting (PONV) are common and distressing symptoms (Gan et al., 2014; Robleda et al., 2015; Smith & Laufer, 2014) experienced by patients after abdominal surgery. The global incidence of postoperative nausea and vomiting is 50% and 30 % respectively but the rate can accelerate to as high as 80% among high risk patients for PONV (Calvache et al., 2015). Many patients value freedom from nausea (Hughes et al., 2015) as a very important component of their postoperative recovery experiences from abdominal surgery. Postoperative nausea is most often accompanied by vomiting.

The predisposing factors of PONV include the adverse effects of some anaesthetics (Coluzzi, Rocco, Mandatori, & Mattia, 2012; Milnes, Gonzalez, & Amos, 2015), opioids (Smith & Laufer, 2014), toxins, severe postoperative pain, intra-abdominal inflammation (Harbord & Pomfret, 2013; Iqbal & Spencer, 2012; Öbrink, Jildenstål, Oddby, & Jakobsson, 2015; Pleuvry, 2015) and gastroparesis (Nagarwala, Dev, & Markin, 2016).

The complications of postoperative nausea and vomiting include dehydration due to fluid volume depletion, electrolyte imbalance, aspiration, oesophageal rupture, haematemesis, wound dehiscence (Gibbison & Spencer, 2009; Harbord & Pomfret, 2013) and nutritional deficiencies due to chronic vomiting (Rettenmaier et al., 2014), and constipation (Coluzzi et al., 2012). The effects of PONV also include discomfort, worsening morbidity, increasing the cost of health care and prolonged hospitalization due to delayed recovery and poor patient satisfaction (Gan et al., 2014; Gibbison & Spencer, 2009).

The guideline for the management of postoperative nausea and vomiting (Calvache et al., 2015) stipulated that an antiemetic of a different pharmacological class other than the one used intraoperatively as a prophylaxis should be used in treating patients experiencing postoperative nausea and vomiting. Meanwhile, other drugs such as 2–4 mg IV dexamethasone, IV droperidol 0.625 mg, or IV promethazine 6.25–12.05 mg, are alternatively used for treating PONV (Calvache et al., 2015). These drugs are good for the prevention or the treatment of PONV but they may end up inducing drowsiness or sedation or other symptoms which can also be unpleasant to the patient and impair recovery.

In a prospective observational quantitative study with 126 abdominal surgical patients made up of 52% women and 48% men in Spain, more women than men reported nausea and vomiting (Robleda et al., 2015). In all, 20% to 28% of the patients reported of nausea and 5% to 8% of vomiting 6-8 hours and 24 hours after surgery respectively. In the study, patients who received antiemetic drugs at the post anaesthesia unit reported reduced discomfort compared to those who did not receive any 24 hours postoperative (Robleda et al., 2015). The choice of a prospective observational quantitative design was good in finding out the incidence of PONV among abdominal surgical patients but an in-depth description of the discomfort experienced by individual patients was not explored. The study was also restricted to only one health facility with more females than males. The patients who gave their consent to participate in the study and those who opted out may also have different experiences which were not known.

2.4.3 Postoperative Fatigue

Fatigue is the deterioration in the performance of activities by the patient as a result of a decline in muscle function (Allen, Lamb, & Westerblad, 2008). Fatigue is experienced by postoperative abdominal patients as a consequence of the stress from the surgery leading to the reduction in physiological function which can persist 6-8 weeks after the patient is

discharged from the hospital (Mayo et al., 2011). Increased need for sleep, weakness in the muscles, and reduction in the capacity to concentrate are the characteristics of postoperative fatigue. The level of preoperative fatigue and health status, strength, the intensity of the metabolic response, the complexity of the surgery and postoperative physiological response to recovery or deterioration determines the level of postoperative fatigue (Kahokehr, Sammour, Srinivasa, & Hill, 2011; Mayo et al., 2011; Yu et al., 2015).

Many abdominal surgical patients undergo chemotherapy and radiotherapy for possible colorectal cancer treatment but the synergistic effect of these therapies and the surgery prolongs the postoperative experience of fatigue by the patient (Mayo et al., 2011; Worster & Holmes, 2009). A prospective quantitative study in New Zealand among 51 patients (18 males and 33 females) of various ethnic backgrounds, who underwent major abdominal surgery, reported that all patients experienced some degree of postoperative fatigue but their impacts resolved about one to two months (Paddison et al., 2009) which is consistent with the study of Mayo et al.,2011. The study further revealed that patients who preoperatively expressed low expectations of postoperative fatigue rather experienced more intense and sustained duration and resolution of fatigue postoperatively and vice versa (Paddison et al., 2009). This study, however, did not investigate the communication strategy that was used by the nurses and the other surgical care team members in educating the patients about postoperative fatigue. It appears that some patients have unrealistic expectations about their recovery and underestimated how long it could take them to recover from fatigue following surgery. Nursing care must be strategised to address the comprehensive expectations of surgical patients preoperatively and engage in appropriate communication throughout the postoperative period so as to clear the doubts of the patients. The systematic impact of the information given to the patients on their recovery must be measured so as to determine the best methods of approaching surgical patients' expectations.

2.4.4 Changes in Appetite

Postoperatively, patients lose appetite for food and drinks. The physiological response to abdominal surgery compels patients to avoid food and drinks for a number of days after the surgery (Worster & Holmes, 2009). The levels of serum and saliva acylated ghrelin (the hormone responsible for stimulating appetite) have been found to decrease among patients with inflammatory disease conditions such as appendicitis who undergo an appendectomy, the commonest abdominal surgery (Cetinkaya et al., 2009). Patients could not eat immediately because they were prevented from eating due to resection and anastomosis of portions of their bowels which warrants healing before the resumption of normal feeding (Castelino et al., 2016). Some patients who were discharged home could not eat properly because they lost appetite postoperatively (Eriksson et al., 2014) and this precipitated their experience of physical and psychological discomfort (Worster & Holmes, 2009).

In a phenomenological study among 20 Caucasian abdominal surgical patients (10 males and 10 females), those who were offered food and drinks could not tolerate them because they had lost appetite but when they realised they were losing weight significantly after the surgery, they forced themselves to eat and take oral fluids. Patients described their inability to eat for five days after surgery as discomforting and added that not being able to take oral fluids was their worse experience postoperatively (Worster & Holmes, 2009). They lamented about how their lips became dry and cracked and could not get jelly and ice cream as requested and described the feelings they had in their mouths as awful and terrible. In the same study, other patients described their experiences of staying out of food and water as a deliberate starvation from the nurses and doctors (Worster & Holmes, 2009). They further stated that they were virtually dead and begged for a cup of tea but could not get. This study shows that patients were not well educated on the reasons for staying off food and water postoperatively and those who were well informed were also not able to cope with it since it

was not pleasant to do so in the midst of hormonal changes. This study has a well balanced gender representation of respondents. Nurses and other clinicians must endeavour to offer alternatives to patients who are on nil by mouth due to surgery such as wetting their lips and tongues with ice cubes and applying some jelly to prevent the drying of their lips.

2.4.5 Sleeping Difficulties after Abdominal Surgery

Sleep is essential in promoting recovery postoperatively (McKinley, Fien, Elliott, & Elliott, 2013). Thus, any alteration in the quality of sleep of a person will negatively impact on the quality of life, performance of daily activities and functions, and it may lead to increased risk of complications, mortalities, and prolonged hospitalisation (Ancoli-Israel, 2009; Magee, Caputi, & Iverson, 2011) and compromise recovery from surgery. In a cross sectional study among 193 African American patients, a little below half (46%) reported difficulty and altered sleep pattern which was attributed to pain among 56 % of them (Baker & Whitfield, 2015). A study among 52 adults made up of 28 females and 24 males in Switzerland recorded a positive correlation between engaging in exercise about 4 hours before bed time at night and higher sleep efficiency, reduced frequency of awakening and shorter duration of awakenings after sleep onset, and increased duration of deep sleep (Brand et al., 2014). This finding is consistent with the findings of a similar cross- sectional study among 1000 American adults (Buman, Phillips, Youngstedt, Kline, & Hirshkowitz, 2014). This suggests that postoperative patients may have improved sleep patterns under normal circumstances when there is no pain and when they are encouraged to engage in passive and active tolerable exercises especially at night before they retire to bed.

2.5 Patients' Experiences with Postoperative Physical Functions

Regaining physical functions precedes the voluntary resumption of activities of daily living. Physical functions among hospitalised patients include bowel function, emptying the

bladder, and the resumption of the intake of oral food and fluids (Allvin et al., 2008). The focus of physical functions shifted to the recuperating period with improved muscle strength that permits the patient to indulge in outdoor activities and exercises. Physical functions in this study, according to the conceptual framework are grouped under gastrointestinal function, bladder function, mobilization, muscle weakness and sexual activity.

2.5.1 Postoperative Gastrointestinal Function

Gastrointestinal function depends upon the quality of the nerve impulses, adequacy of blood supply, and the stability of the immune system. Gastrointestinal dysfunction is common among abdominal surgical patients and its effects include the delay of recovery, increased morbidity and mortality (Coakes & Schuster-Bruce, 2007; Fitton & Thomas, 2009). These effects emanate from poor or malabsorption of enteral feed (van der Heide, 2016), diarrhoea, sepsis, and stress ulceration (Coakes & Schuster-Bruce, 2007). Functional bowel disorders (Lacy et al., 2016) affect the return to normal function of the digestive system and this negatively impacts on recovery. The fear of postoperative ileus and delay in bowel function precipitate the delay in resuming normal diets among abdominal surgical patients which in turn delays recovery (Lacy et al., 2016; Rettenmaier et al., 2014).

Chewing gum after abdominal surgery has been found to promote the recovery of postoperative gastrointestinal function (Li et al., 2013). It was reported in a meta-analysis of 17 studies that chewing gum after an abdominal surgery improved the time of bowel function. The first flatus was passed as early as 0.31 day (95% CI, $P < 0.0001$) and the the first bowel movement was passed 0.51 day (95% CI, $P < 0.0001$) (Li et al., 2013). This study found improvement in the prevention and management of postoperative intestinal ileus (Bragg, El-Sharkawy, Psaltis, Maxwell-Armstrong, & Lobo, 2015). This finding can be used

in Ghana among abdominal surgical patients with nurses championing the intervention of chewing gum after abdominal surgery.

2.5.2 Bladder Function after Abdominal Surgery

Bladder function is very crucial in the recovery of abdominal surgical patients as it promotes the health of the genitourinary system and provides clues to the physiological function of the organs of the renal system. Patients described transurethral and suprapubic catheterisation as discomforting (McPhail, Abu-Hilal, & Johnson, 2006) and major sources of health facility acquired infections or nosocomial among abdominal surgical patients (Nygren et al., 2012).

In a qualitative descriptive study among 17 patients aged 55-70 years who underwent prostatectomy in Canada, patients described their experiences with the indwelling urethral catheter as the worst form of their prostatectomy recovery experience and repeatedly expressed their anger with the catheter (Burt, Caelli, Moore, & Anderson, 2005). They described their discomforting experiences with the catheter (Worster & Holmes, 2009) with regards to the pain, leaking, irritation, burning, bladder spasms, embarrassment and childlike feelings (Burt et al., 2005).

2.5.3 Mobilisation

Early postoperative mobilisation as a form of exercise (Bhatt et al., 2015) has proven to improve recovery through significant physiologic improvements. Postoperative exercise improves the peak oxygen uptake of the lungs, reduces the loss of total muscle mass, and improves muscular strength. Early postoperative mobilisation reduces pulmonary complications and eventually reduces postoperative hospitalization (Edvardsen et al., 2015; Guimarães et al., 2014). Mobilisation imposes some postoperative discomfort on surgical patients. In a prospective observational study by Robleda et al., 2015 in Spain, almost half

(44%) of the 126 respondents reported restriction of their movement within 6-8 hours after surgery and 79% of the patients experienced same at 24 hours after abdominal surgery. Patients reported their restriction of movement after surgery as one of their greatest forms of postoperative discomfort (Robleda et al., 2015). Meanwhile, the cultural relevance of this study must be considered since the study was conducted in Spain and Ghanaians may regain mobility after surgery at a different time and pace. The study needed to be extended later than 24 hours after surgery so as to determine holistically the effects of mobilisation on abdominal surgical patients.

Postoperative pain (Brookman, Benzon, Manohar, & Wu, 2014; Hanna, Ouanes, & Tomas, 2014; Hong & Lee, 2014) has been associated with delayed mobilisation after surgery which can also be impaired by the use of opioid analgesics (Smith & Laufer, 2014) due to their side effects hence epidural infusions (Shipton, 2007) of analgesics and local anaesthetics have been encouraged to promote early mobilisation (Robleda et al., 2015). Patients should be encouraged to resume ambulation as early as they can tolerate.

2.5.4 Muscle Weakness after Abdominal Surgery

There are varying causes of postoperative fatigue among abdominal surgical patients. Many patients who suffer small bowel perforations also undergo bowel resection and anastomosis. Those patients who experience the breakdown of the end-to-end anastomosis may end up with worsening peritonitis (Piper, Derinkuyu, Koral, Perez, & Murphy, 2011) and experience muscle weakness as they may grow very lean (Castelino et al., 2016; Forsberg et al., 2014a) and dehydrated due to the physiological loss of fluids and atrophy of muscles due to disuse (Castelino et al., 2016).

There are relevant interventions to reduce or avert the incidence of postoperative fatigue but with minimal success. Intravenous fluids are administered to replace and maintain

the fluid and electrolyte as well as the energy levels of the patients (Raghunathan, Singh, & Lobo, 2015) but most patients experience real unbearable hunger postoperatively (Forsberg et al., 2014a). Planned re-laparotomy is basically the obvious choice of treatment for such patients with poor healing and recovery (Alfonsi et al., 2014) when there is the breakdown of anastomosis of the perforated bowels. This becomes necessary when the patient experiences severe purulent peritonitis (Ordoñez & Puyana, 2006) as the faecal matter leaks through the broken down anastomosis of the small bowel (Schiessel, 2015). Recovery from surgery entails that the patient should regain all the physiological functions such as emptying of the bladder and the bowels (Gustafsson et al., 2012; Lassen et al., 2012; Nelson et al., 2016), ingestion of food and fluids including water and muscle strength (Raghunathan et al., 2015). These functions basically cannot be controlled by the patient postoperatively since these functions follow the passive course of events related to the strength of the patient (Allvin et al., 2008; Sleney et al., 2014; Stephens & Petrie, 2015). The regaining of muscle strength is experienced gradually and it surges mostly after the patient is discharged from the hospital (Holland et al., 2013; Tsai, Joynt, Orav, Gawande, & Jha, 2013) and it is expressed in the return of patient's ability to perform all activities including exercise and outdoor games and events (Spiegel, Abdullah, Price, Gosselin, & Bickler, 2013).

2.5.5 Sexual Activity

There were fears that various abdominal surgical interventions could interfere with the sexual functions of patients postoperatively (Angenete, Asplund, Andersson, & Haglind, 2014). Sexual dysfunction was recorded in about 60% of patients depending on specific symptoms of interest to the patients and their partners (Irani & Lowry, 2011).Various disease conditions for which abdominal surgeries were performed such as cervical and ovarian cancers (Chan et al., 2015), endometriosis (Donato et al., 2014), inflammatory bowel diseases

(IBD) most commonly Crohn's disease and ulcerative colitis (Sanders, Gawron, & Friedman, 2016) were associated with fears of postoperative sexual function (Irani & Lowry, 2011).

In an exploratory descriptive qualitative study among 10 women within the ages of 42 -54 years (mean age 47.2 years) in Denmark who underwent abdominal hysterectomy, they expressed their anxiety about the impact of the surgery on returning to sexual activities (Wagner, Carlslund, Sørensen, & Ottesen, 2005). Meanwhile, within a month following the abdominal hysterectomy, the respondents resumed normal sexual lives without any reported problems contrary to previous fears of encountering challenges (Wagner et al., 2005). The study was however skewed to only middle aged women in Denmark while young adults and the elderly women from other cultures were not considered for their postoperative experiences with sex. Sexual activity can be expressed differently across cultures hence studies among different cultural jurisdictions may produce different experiences.

In a similar study in Italy to compare the sexual effects of colposacropexy (CSP) and hysterocolposacropexy (HSP) among 37 sexually active women who had the surgical interventions for urogenital prolapse (15 HSP, mean age 53 years; 22 CSP, mean age 56 years), it was established that there were no statistically significant differences between the experiences of sexual activity among the patients who had their uterus removed and those who had theirs spared (Zucchi et al., 2008). Meanwhile, it was established that 5 patients (13.5%) experienced a significant reduction in their regular sexual activity which was attributed to the effects of the surgery (Zucchi et al., 2008). This finding supports that of Wagner et al. (2005) that the majority of patients experience no significant deviations in sexual activity attributable to abdominal surgery.

A study comparing different types of hysterectomy in Germany postulated that abdominal hysterectomy without adnexectomy for premenopausal women have a significant

influence on sexual function and quality of life of the women (Radosa et al., 2014; Thakar, 2015). The findings from the study of Radosa et al. (2014) were inconsistent with those of Wagner et al. (2005) and Zucchi et al. (2008) but agree with the 13.5% of the respondents from Zucchi et al. who stated that their regular sexual activity had reduced after surgery. It is however imperative to take into cognisance the regularity and desire for the sexual activity since the emotions and feelings of causing pain or suffering to ones' partner can reduce the frequency or the regularity of the sexual activity after abdominal surgery. Patients and their partners should be educated on the effects of the surgery on their sexual lives postoperatively and all their fears and anxieties should be managed before and after the surgical procedure.

2.6 Patients' Experiences with Postoperative Psychological Well-Being

Psychological experiences of postoperative recovery include anxiety and worry, feeling down, feeling lonely or abandoned, and difficulty in concentration. Patients experience these dimensions of recovery at different levels. Patients' experience psychological and physical uncertainties related to surgery and recovery through their expression of anxiety (Komolafe, Csernus, & Fülöp, 2015).

Studies have shown that postoperative recovery can be enhanced using appropriate communication skills and anxiety reducing strategies (Lim et al., 2011). These strategies reduce the perception of postoperative pain, improve the compliance of patients and reduce the incidence of complications. The use of appropriate communication skills and anxiety reducing strategies among surgical patients minimise the patients' demand and use of medications and reduce the length of hospitalisation (Lim et al., 2011). In effect, there would be reduction in the economic burden of health care (Stey et al., 2015) on patients and their family as well as the state (Komolafe et al., 2015). It has been noted that quality preoperative preparation of patients significantly reduces their postoperative anxiety which improves their recovery from surgery (Guo, East, & Arthur, 2012; Huang, Wun, & Stern, 2011).

Preoperative anxiety when not carefully resolved can lead to postoperative anxiety (Vaughn, Wichowski, & Bosworth, 2007). All efforts must be put in place to identify and attend to the issues contributing to the anxiety and worry of surgical patients.

Several factors contribute to the experience of anxiety among surgical patients. Patients who consistently seek diverse information about their surgery experience increasing levels of anxiety (Matthias & Samarasekera, 2012). Female patients and those who have not had any previous experience with surgery (Mitchell, 2012) experience higher levels of anxiety as well as those who experience intense preoperative anxiety and desired to be in the company of their friends or loved ones and family members (Yilmaz, Sezer, Gürler, & Bekar, 2012). The findings from a Hungarian study by Komolafe et al. (2015) were inconsistent with that of Mitchell (2012) that previous experience with surgery correlates positively with anxiety levels. Reasons such as subjectivity of the experience of anxiety and the measuring instruments were cited for such variations in different findings. Environmental factors such as the friendliness and other positive attitudes and behaviours of nurses were identified by patients as highly contributing to the reduction in their anxiety levels (Komolafe et al., 2015; Lim et al., 2011).

Patients expressed their worry and fear about the presence of long plastered incisional longitudinal or transverse wounds on their abdomen (Hughes et al., 2015; Karl et al., 2014) when they recover from general anaesthesia. Although there has been a tremendous improvement in surgical care with regards to improvement in the knowledge of the anaesthetists, surgeons and nurses who manage such patients, there were reports of either intraoperative or postoperative deaths related to surgery (Badoe, 2009 in (Badoe, Archampong, & da Rocha Afodu, 2000). This partly justifies the apprehension of surgical patients and their recovery (Berg et al., 2012). It is therefore necessary to give adequate and quality perioperative information to all surgical patients to minimize their fear and anxiety

and improve upon their cooperation and postoperative recovery (Aziato & Adejumo, 2014c; Guo et al., 2012).

Depression is experienced especially during the later part of the postoperative recovery phase. During this phase, some patients say they feel down (Carr, Thomas, & Wilson-Barnet, 2005) especially when their recovery has not been smooth or the outcome of the surgery did not meet their preoperative expectations (Baliatsas, van Kamp, Hooiveld, Lebret, & Yzermans, 2015). Depression and anxiety (Gould & Edelstein, 2010) worsen the perception of pain by the patient and delay recovery (Carr et al., 2005; Davis, Stockstill, Stanley, & Wu, 2014; Gupta, Gandhi, & Viscusi, 2011).

Patients experience loneliness and feel abandoned by the health team due to the unfriendly attitudes nurses and other health care staff demonstrate towards them after surgery (Hughes et al., 2015). Patients desire that the nurses stay with them to curb their loneliness and feeling of neglect after surgery (Norr, Allan, Macatee, Keough, & Schmidt, 2014). Nurses and the surgical team members must adopt a regime of postoperative practice and dedicate certain staff to surgical patients who would promptly attend to all their needs (Sugiura & Sugiura, 2015). This would provide surgical patients with the necessary company, appropriate care and health education to promote their recovery (Finset, 2013).

Patients have reported lower levels of concentration and cognitive function (Pişkin et al., 2015) lasting for the first few days after surgery. Loss of memory of events surrounding the surgery and the environment after surgery under general anaesthesia have also been reported (Mandal, Schifilliti, Mafrica, & Fodale, 2009). There have been experiences of postoperative cognitive dysfunction which lasted for significantly longer periods after surgery and affected the recovery of the patient (Lee et al., 2015). Decreased concentrations and dysfunctional cognitive abilities (Cao, Wang, Gu, Du, & Song, 2014; Tsai, Sands, & Leung, 2010) have contributed to injuries among patients. Such patients easily forget the

postoperative instructions given to them by clinicians as a result of the effects of prolonged general anaesthesia (Tung, Herrera, Fornal, & Jacobs, 2008) leading to recovery challenges.

Non-pharmacological nursing procedures have been used to improve postoperative recovery. Psychologically**,** music therapy effectively relieves postoperative pain and improves sleep patterns leading to the physical and psychological well-being of surgical patients (Sin & Chow, 2015). Healing touch intervention has been described by patients as relieving their anxiety, worry, agitation, pain, and nausea as well as enabling them to sleep comfortably (Anderson et al., 2015). Patients who worry about their states of health (Verkuil, Brosschot, & Thayer, 2007) or recovery from surgery may have challenges with sleep (Weise, Ong, Tesler, Kim, & Roth, 2013) which can delay their recovery. Healing touch, music therapy and other diversional therapies can be used to enhance the recovery of patients.

2.7 Patients' Experiences with Postoperative Social Well-Being

Social well-being after surgery includes engaging in social activities, dependence on others and having an interest in ones' surroundings. Patients belong to families and other social groups (Aziato & Adejumo, 2014c; Otis-Green & Juarez, 2012) hence hospitalisation for surgery deprives them of their independent social functions (Watson-Jones & Legare, 2016). This suggests that patients depend on other people during their periods of convalescence. In a qualitative study that explored the experiences of patients who sustained inadvertent injuries in Bristol, Surrey, and Swansea, patients underscored the relevance of health care staff assessing and considering their social environment and circumstances during their recovery process before they are discharged (Sleney et al., 2014). The study emphasised that patients' social support groups must be analysed and sensitised on the necessary support they can provide. Patients' linkage with social support groups including family members, friends, and societies is necessary for ensuring the home and work environment (Chapin, Chandran, Sergeant, & Koenig, 2014) of the patient are safe and supportive of recovery.

Poor social support (Do et al., 2012) of patients has been a contributing factor to poor recovery and complications such as delirium and feeling of loneliness and dejection (Krenk, Rasmussen, & Kehlet, 2012; Sasajima et al., 2012). The social identity of the patient is relevant for positive psychosocial functioning (Meca et al., 2015) hence patients must continue their social relations which can promote their recovery. Patients must be encouraged to receive visitors and engage in discussions that reconnect them to their significant others despite being hospitalized for surgery. Social activities such as outdoor events and participation in social gatherings must be encouraged during discharge even though patients can partake in the fruitful family and social activities even in the hospital (Bourassa, 2009).

2.8 Patients' Experiences with Postoperative Self –Care Activities

Research conducted into patients' recovery experiences after gastric bypass surgery shows a total deviation in motivation in daily life activities one month after surgery (Forsberg et al., 2014a). Patients expressed their ecstasy with their recovery as they could perform all activities and feel better than previously. A few participants however, demonstrated their experience of weakness postoperatively such that they could not engage in physical activities of daily living (Forsberg et al., 2014a; Forsberg et al., 2015). The rate of return to normal activity levels of the patient was influenced by the degree to which the patient experienced postoperative physical or physiological symptoms. Some patients however never regained full preoperative functions after undergoing surgery since they experienced diverse difficulties with resuming their preoperative activities (Allvin et al., 2009; Groven, Råheim, & Engelsrud, 2015). This leaves doubt and psychological instability among surgical patients.

2.9 Summary of Literature Reviewed

The literature reviewed was on the postoperative recovery experiences of patients after abdominal surgery. It entailed the physical symptoms, physical functions, psychological and social functions, and habitual functions or activities. The literature illustrated the myriad

of experiences of abdominal surgical patients during their recovery from surgery. These experiences were identified in many studies which were focused mainly on single symptoms. Moreover, patients experience these symptoms together with the psychological and social issues and a holistic resolution of all these experiences would contribute to a total recovery. Many of the studies reviewed were quantitative and they were conducted in well resourced hospitals among high income people in the high income countries with a few in Africa. The gravity of these experiences may differ among different cultures and people with different economic and social standards. The few studies conducted in the Ghanaian setting focused on the family caregivers and there is a paucity of research about the comprehensive experiences of postoperative recovery experiences of patients after abdominal surgery in the Ghanaian context. This study sought to use the qualitative approach to identify the postoperative recovery experiences of abdominal surgical patients and identify possible ways of improving postoperative recovery.

CHAPTER THREE

METHODOLOGY

This chapter presents a description of the methods that were used to conduct the research. These include the research design, the research setting, target population, sample size and sampling technique. It further includes the tool and the procedure for data collection, method of data analysis, data management, methods to ensure trustworthiness (methodological rigour) as well as ethical considerations.

3.1 Research Design

Research design has been defined by Creswell (2014, p.12) as "types of designs of inquiry within qualitative, quantitative, and mixed method approaches that provide specific direction for procedures in a research design". This research aimed at describing the postoperative recovery experiences of patients with abdominal surgery at the Volta Region of Ghana. A qualitative research design was employed for the study. Qualitative research uses an interpretive and naturalistic approach to study the experiences of people in their natural environment, and these include the unique experiences people have in the world and the specific meaning they attribute to such experiences in the world in which they live (Borbasi & Jackson, 2012; Gergen, Josselson, & Freeman, 2015; Sarah B Merriam, 2009). Qualitative research aims at generating an in-depth understanding of a particular phenomenon from the perspective of the person experiencing it (Spiers, 2000). It is often used to describe a phenomenon by looking at the behaviour of the person, understanding and interpreting the feelings, the thought, insight, and actions of the person instead of focusing on numbers or statistics which is a feature of quantitative method of study. Qualitative research design enables the researcher to describe the processes leading to a particular behaviour or experiences relative to the context which produces that unique outcome rather than only highlighting the outcome (Creswell, 2014).

The researcher used an exploratory descriptive qualitative study design to explore and describe the postoperative recovery experiences of adults after abdominal surgery (Jonsson, Stenberg, & Frisman, 2011; Mayan, 2009). Human beings are unique and complex and possess the ability to modify their own experiences hence these unique experiences of people can be explored by the use of qualitative research design. A qualitative study is, however, the most appropriate method of understanding individuals and their subjective postoperative experiences following abdominal surgery (Fossey, Harvey, McDermott, & Davidson, 2002). The participants had daily experiences throughout their periods of recovery both at the hospital and at home after discharge. The qualitative descriptive exploratory design enabled the researcher to explore and describe the postoperative recovery experiences of these participants both at the hospital and at home.

3.2 Research Setting

The study was conducted in the Ho Municipality of the Volta Region of Ghana. Ho Municipality is one of the twenty-five (25) administrative Municipalities and Districts of the Volta Region. The Ho Municipality is situated between latitude 6 degrees 20 1N and 60 degrees 55 1N and longitudes 0 degrees 12 1E and 0 degrees 53 1E and covers an area of 11.65 square kilometres (Habitat-UN, 2013). The municipality shares boundaries with the Adaklu-Anyigbe District to the South, Hohoe District to the North, South-Dayi District to the West and the Agotime- Ziope District as well as the Republic of Togo to the East (www.ghanadistricts.com). The population of Ho Municipality projected from the 2010 population and housing census is 177, 281 comprising of 83, 819 (47.3 %) males and 93, 462 (52.7%) females. This population corresponds with the national figure with females outnumbering the males (Ghana Statistical Service, 2014).

Ho is situated in a valley surrounded by ridges. Ho is at the merge of the guinea-savannah and the semi-deciduous forest belt with two main rainy seasons. The major rainy

season is March to June, with August to November as the minor rainy season. The heaviest rainfall is usually recorded in June with a mean value of 192 millimetres with the lowest rainfall occurring in December with a mean value of 20.1 millimetres. The average annual rainfall, however, is between 20.1 millimetres and 192 millimetres (www.ghanadistricts.com).

The dry season falls between December and February and becomes unfavourable to animals especially livestock since they starve. This makes the livestock farmers such as the herdsmen burn the bush during the dry season in anticipation of the growth of fresh leaves which their cattle and other livestock feed on. Crop farmers also take advantage of the burnt bushes to prepare the ground for farming. Meanwhile, hunters use the time to chase their game. These practices, especially during the dry season, contribute to the degradation of the forest reserves in the municipality (Kwabla et al., 2015).

The average annual temperature of the Ho Municipality ranges between 16.5° C and 37.80° C but the monthly mean temperature ranges between 22° C and 32° C. Ho is warm with high temperatures recorded all over the year which interchange with rain and invariably supports crop farming activities. The dry season is between December and February and records extremely high temperatures that do not support food crop cultivation except for irrigation and river valley farming which are minimally done within the municipality.

Ho Municipality is mainly dominated by the “Ewes” who speak the “Ewe” language but there are other tribes such as “Akans”, “Fantes”, “Dagombas”, “Gas” and the “Hausas”. The predominant religion in Ho is Christianity but Islam and traditional religion are also practised. The primary occupations of the people of Ho Municipality are farming and trading and also crafts and artisanship. The main regional head offices of the various departments and agencies are located within the Ho Township. This makes the town very busy, especially

during week days. There is a big market centre with traders coming from all over the region and other regions and Togo. The market days are every five days from the previous one.

There are numerous public and private schools in Ho with four main tertiary institutions made up of the University of Health and Allied Sciences (UHAS), Ho Nursing Training College, Evangelical Presbyterian University College and the Ho Technical University, formally Ho Polytechnic. About 162 Pre-Schools, 185 Primary, 114 Junior High Schools, 22 Senior High Schools are located within the Ho Municipality.

The health services within the municipality are organized around a total of 45 health institutions with 33 of them owned by Ghana Health Service, 8 private and 4 Christian Health Association of Ghana-owned facilities. The Volta Regional Hospital, and the Ho Municipal Hospital, and three other private hospitals perform abdominal surgical operations. The Nurse-Population ratio is 1:2,399 while the Doctor- Population ratio is 1: 37,913.

The Volta Regional Hospital was the recruitment centre of the participants for the study. The hospital is situated in the Eastern part of Ho along the main Ho-Denu/ Aflao highway. It shares boundaries with the Nursing Training College, Ho at the West and one of the campuses of the University of Health and Allied Sciences to the East. The hospital, a Ghana Health Service facility, is the largest hospital in the Volta Region and serves as a referral centre for all other health facilities within the region where the highest numbers and the most complex abdominal surgeries are performed in the region. The hospital serves diverse patients with varying degrees of abdominal surgical health conditions. The architectural work of the hospital began in 1998 but it was completed and commissioned on 1st December, 2000. It is situated on an area of land approximately 3,325 square metres. The hospital is a 240-bed capacity facility with 42 units/ departments and 452 staff strength but currently being upgraded to a teaching hospital status. The clinical units of the hospital include the 24 hour Accidents and Emergency Unit, Out Patients Departments, In-Patients

Care, Surgical including Orthopaedics, Urology and Theatre, Obstetrics and Gynaecology, Internal Medicine, Child Health, Dental Services, Herbal Medicine, Ear Nose and Throat Unit, Dietetic Services, Mental Health, Pharmacy, Physiotherapy, Public Health, Dialysis, and Diagnostic Services including Magnetic Resonance Imagery. Elective and emergency abdominal surgeries are done on daily basis at the Volta Regional Hospital.

3.3 Target Population

A population in research refers to those elements that make up the focus of the study (LoBiondo-Wood & Haber, 2010). For this study, the target population included Ghanaians who have undergone abdominal surgeries, and have been discharged within one month and three months and reside within Ho Municipality.

3.4 Inclusion Criteria

The establishment of exclusion and inclusion criteria increases the precision of a study and strengthens the evidence produced (LoBiondo-Wood and Haber, 2010). This study's participants included: (a) males and females who had abdominal surgery and live within the Ho Municipality, (b) people who were 18 years or older, (c) those who were admitted postoperatively for at least 2 days, (d) men and women who had surgery between one month and three months, (e) those who granted a recorded interview for a period between 45 and 90 minutes.

3.5 Exclusion Criteria

This research excluded: (a) males and females who were still on admission, (b) people who had day surgery, (c) males and females who had abdominal surgery but were terminally ill, (d) people who were below the age of 18 years, (e) people who had difficulty in speaking or hearing, (f) men and women who had had psychiatric problems.

3.6 Sample Size and Sampling Technique

A sample refers to a subset of a target population, normally defined by the sampling process (Creswell, 2014; Gerrish & Lacey, 2010). The sample size for the study depended on the data saturation or redundancy which was the stage where successive participants were providing similar responses without generating any new information, themes or sub-themes (Grove, Burns, & Gray, 2012). The most appropriate way to determine a sample size for a qualitative study is to conduct interviews with the participants until saturation or redundancy is reached (Bernard, 2011; Schensul & LeCompte, 2010). A total of 15 men and women who had abdominal surgery and resided within the Ho Municipality participated in this study.

Sampling refers to the selection of individual members of a larger population who possess the qualities of the target population (Khan, 2012). The participants for the study were recruited by the use of purposive sampling technique. Purposive sampling technique enabled the researcher to intentionally select individuals who had undergone abdominal surgery and experienced recovery which was the phenomenon under study (Marshall & Rossman, 2014). This purposive sampling technique allowed members of the target population who reflected the characteristics the researcher expected to be part of the study however, the technique did not permit the participants to have equal chances to be selected (Khan, 2012).

The researcher sought ethical clearance from the Noguchi Memorial Institute for Medical Research (NMIMR). The ethical clearance certificate in addition to an introductory letter from the School of Nursing, University of Ghana, Legon, which had the purpose of the study were presented to the management of the Volta Regional Hospital through the Volta Regional and the Ho Municipal Directors of Health Services for a formal permission which was granted for the recruitment and interviewing of the participants in the hospital. The heads of the departments of Surgery, the Male and Female Surgical Wards, the OPD, and the Biostatistics Department of the hospital were notified through the management of the hospital

who allowed access to the wards and the participants for the study. One nurse each from both the Male and Female Surgical Wards, in addition to the Nurse Managers of the wards were engaged in recruiting the participants. The nurses were briefed by the researcher on the purpose of the study as well as the inclusion and exclusion criteria. The telephone contacts of the researcher were made available to the nurses who alerted him when potential participants were identified. The researcher then proceeded to contact these potential participants through telephone conversations. When the eligible participants agreed to participate in the study, the researcher booked an appointment and met them at a mutually convenient venue and time to complete the consent form for the conduct of the interview.

3.7 Data Collection Tool

The instrument for data collection was a semi-structured interview guide which was used to conduct in-depth face-to-face interviews. This semi-structured interview guide enhanced the collection of quality data from eligible participants as it offered flexibility in the conduct of the interview (Grove et al., 2012). Khan (2012) posited that the method of interview is appropriate for the collection of data through face-to-face interaction with participants and it enables the recording of the responses of participants in order to cross check and ascertain clarity. The semi-structured interview guide was appropriate for this study since it promoted the free expression of the experiences of the participants. It also created the opportunity for the researcher to use probes during the interview so as to further elicit divergent views and other experiences which were not clearly narrated by the participant (Kusi, 2012). The conceptual framework of operationalisation of postoperative recovery developed by (Allvin et al., 2009) was used together with the objectives of the study to guide the development of the semi-structured interview guide. The framework was used with written permission from Dr Renée Allvin, the lead author and developer (Appendix F).

The semi-structured interview guide consisted of two main sections, section A and section B. Section A of the interview guide focused on the demographic characteristics of the participants. Section B consisted of specific postoperative recovery experiences of participants with regards to their physical symptoms, physical functions, psychological, social, experiences, and activity as well as the various coping strategies adopted to overcome the challenges of the recovery process. The interview guide (Appendix D) mainly had open-ended questions with probes.

3.8 Data Collection Procedure

Following receipt of the permission granted by the management of the Volta Regional Hospital, an appointment was booked by the researcher with the participants at the surgical wards when they were discharged from the hospital. At a later date, the researcher contacted the potential participants through a telephone conversation to confirm the appointment for the interview after the first week to the fourth week after discharge. This ensured that the participants were not in pain or discomfort or experiencing any physical symptoms postoperatively and would have experienced postoperative recovery which they can speak about. The interviews were conducted in either English or "Ewe" language based on the preference of the participant. The anonymity of the participants was maintained as the researcher used a coding frame to identify participants. The participants were asked to complete an informed consent form which was clearly read and explained to them.

The researcher established rapport with the participants after they agreed to participate and signed the consent form so as to secure their cooperation. This enabled them to freely share their lived experiences of postoperative recovery. An in-depth face-to-face interview of each participant was done by the researcher in an office allocated to him in the hospital and also at the homes of some participants. The interview commenced with broad questions asking the participants of their state of health and whether they were experiencing

pain or any other physical symptoms. This was followed by obtaining participant's socio-demographic data and then the main interview commenced. Participants were encouraged to speak freely about what they felt and it started with asking them "Tell me about your experiences with recovering from the operation you had. Mayan (2009) has noted that people usually open up discussions with grand tour questions which enable participants to choose a convenient means to begin the conversation. During the interview, any response which was not clear was clarified as much as possible by asking follow-up questions (Leedy & Ormrod, 2001; Mayan, 2009). Furthermore, probing questions were asked to encourage the participants to express and share their experiences with recovering from abdominal surgery at the hospital and at home. The researcher ensured the comfort of the participants. In any circumstance where the participant demonstrated any distress or tiredness or some emotional discomfort, the interview process was halted and a brief period of break provided.

The interviews were audio-taped with signed written permission from participants and transcribed verbatim (Mayan, 2009). The researcher also took brief field notes during the process of the interview to keep adequate track of events and ideas for further exploration. The verbal and non-verbal cues, behaviour, and interactions during the interview were also documented. These behaviours and expressions usually occurred as a reaction from the interaction between the researcher and the environment or the participants under observations (Musante & DeWalt, 2010). The entire interview lasted for about 45- 90 minutes.

3.9 Piloting of the Study

The interview guide used for the study was piloted among three patients who had recovered from abdominal surgeries at the Hohoe Municipal Hospital, Hohoe, in the Volta Region of Ghana. Abdominal surgeries are performed under conditions at Hohoe Municipal Hospital similar to the Volta Regional Hospital, Ho. Both Ho and Hohoe Municipalities share similar geographical, cultural and socio-economic characteristics. This ensured that the

questions on the interview guide were clear and were capable of generating the required data for the study. However, the data from these pilot interviews were not added to the main data for the study. The lapses or questions which were found to be ambiguous or redundant were corrected before the main interview.

3.10 Data Management

Data management is a process of appropriate storage for easy access or retrieval of the data for prompt analysis (Miles & Huberman, 1994).The interview was audiotaped and notes were taken of the observations including the verbal and non-verbal communications from the participants during the interview which complimented the audio-recording. Alphabets were assigned in a chronological order with identification codes A to Z to the participants for easy identification in accordance with the order with which the interviews were conducted. Each recorded interview was identified by assigning figures such as 1, 2, 3, also in a chronological order. The interviews were transcribed verbatim as soon as possible after the interview by the researcher. During the process of transcription, pseudonyms were used in place of the alphabets assigned to the participants. FPR and MPR meaning "Female Postoperative Recovery" and "Male Postoperative Recovery" respectively prefixed the chronological order in which he interviews were conducted and transcribed. For instance, a female was the first participant hence her pseudonym was FPR1 and a male was the 3rd participant hence his pseudonym was MPR3. Each transcribed recording or data was saved as a different file and placed in a folder with a unique name for easy identification. Electronic or soft copies of the transcribed data were stored in a folder on a computer hard drive which was protected with a password so as to ensure the safety and security of the data. Hard copies of the transcribed interviews were also kept under lock and key in the office of the researcher. Meanwhile, the data on the demographic characteristics of the participants were separated from the hard copies of the main interview.

3.11 Method of Data Analysis

Data analysis in a qualitative study refers to the continuous iterative process which begins concurrently with the collection of data and it is done throughout the period of the study (Mayan, 2009; Miles & Huberman, 1994). In this study, data analysis was done concurrently with data collection. Framework analysis was used to analyse the data for this study. The procedure and stages of the framework method of qualitative data analysis involves data transcription, familiarisation with the interview (data), coding, developing a working analytical framework, applying the analytical framework, charting data into the framework matrix, and interpreting the data (Gale, Heath, Cameron, Rashid, & Redwood, 2013). The tape recording of the interview was played several times by the researcher to ensure familiarisation with the data. The data was transcribed and cross checked for any errors. The transcribed interviews done in the local "Ewe" language was shown to an expert and a scholar of the "Ewe" language and Linguistics who cross checked for accuracy. The data were exported to the Nvivo software for the data to be organised. The transcripts were read thoroughly by the researcher for familiarisation and note was taken of repeated words or phrases, and similar ideas that emerged from the data. Coding of the data was done based on the original codes of the conceptual framework. The emerging codes from the framework were noted and thoroughly discussed with the supervisors of the researcher who perused the data for their approval of the analytical framework. This ensured that the responses of the participants were duly represented as the true reflection of their views and experiences. The framework was applied to subsequent transcripts. The data was charted into a framework matrix which helped to determine saturation or redundancy of the data at the 15th participant.

Attention was paid to the divergent views and minor responses raised by the participants during the interview which enabled the researcher to draw conclusions and verify the data. Follow up and probing questions were asked by the researcher during the interview

in order to confirm the responses given by the participants. Conclusions were drawn from the themes and categories that were identified by the researcher which reflected the postoperative recovery experiences of the participants after they had abdominal surgery. In order to ensure that the responses of the participants were duly represented as the true reflection of their views and experiences, additional discussions were held with the supervisors.

3.12 Methodological Rigour

Rigour is an essential component of a qualitative study (Speziale, Streubert, & Carpenter, 2011) which determines and ensures that the information or data collected from the participants actually represent their true experiences which make it to be trusted (Lincoln & Guba, 1985). For this study, the framework of Lincoln and Guba (1985) was utilised to ensure rigour and this involved credibility, dependability, confirmability and transferability.

Credibility is used to assess the extent to which the findings of the study from the data accurately reflect the reality on the ground and represents the views and experiences of the participants (Lincoln & Guba, 1985). The credibility of the study was ensured by the researcher through recruiting male and female participants who met the inclusion criteria for the study and had varied experiences with their postoperative recovery. Conclusions were drawn from the data after the verification of the responses of the participants by the researcher at the end of each interview. This measure ensured a clear understanding of the responses by the participants in order for the researcher to document their actual experiences. Moreover, interviews were transcribed verbatim and coded each day that they were conducted before any subsequent interviews were conducted so as to enable the researcher to relate appropriately with the responses and the content. Member checking was done during the interview as the researcher regularly validated the data with the participants in order to ensure that the information collected clearly represents the views and experiences of the participants. All potential and actual inherent biases, beliefs and feelings emanating from the

researcher were documented in a reflexive diary so as to ensure that they did not influence the pattern of questioning or the interpretation of the data. Furthermore, the interviews conducted in the "Ewe" language other than English were transcribed by the researcher who understands the Ewe language very well.

Dependability refers to the consistency of the procedure and processes that have been used by the researcher. Dependability also describes whether the research can be replicated by another researcher (Guba & Lincoln, 1981). The setting for the study has been vividly described and all steps taken in arriving at all findings have been clearly stated and documented for easy reference and use by other researchers (Shenton, 2004). During data collection, dependability was ensured by asking all participants similar questions (Hungler & Polit, 1999; Lincoln & Guba, 1985). Dependability was further ensured by the researcher using the same interview guide, tape-recorder, and the same method for analysing all the interviews or data from all participants. Moreover, the researcher discussed all documents from the field including the field notes and all the verbal and non-verbal communications with the supervisors.

Confirmability, with regards to qualitative research, refers to the objectivity of the researcher. Confirmability is a process of ensuring that the findings of the study reflect the exact experiences and ideas explicitly expressed by the participants and not the biases or preferences of the researcher (Patton, 1999). The researcher ensured confirmability by transcribing the data collected from the participants immediately in order to prevent misinterpretation. The interviews were conducted in "Ewe" and English languages and those in "Ewe" were transcribed into the English language and those conducted in English were transcribed verbatim. Experts in the local "Ewe" language were engaged and the transcripts were discussed with them to ascertain the true reflection of the views and experiences or perspectives of the participants. An audit trail was developed by the researcher which include

the field notes, audiotapes, interview transcripts, and documents on emerging themes, and categories, notes from the member checks done, personal notes from the field, the interpretations drawn as well as the final report. The transcribed interviews were further discussed with participants to ensure that their experiences had been correctly represented.

Transferability describes the applicability of the findings of the study in another setting (Guba & Lincoln, 1981; Merriam, 1998). To ensure transferability, the researcher has provided a detail description of the methodology and the procedures used to guide the study. This ensured clear and easy comprehension of the processes and sequences adopted in carrying out the study. The findings of the study strictly reflect the postoperative recovery experiences of the participants following abdominal surgery.

3.13 Ethical Considerations

Ethical principles of research were adhered to and enforced to protect the participants from any form of harm or undue exploitation. The researcher obtained ethical clearance from the Institutional Review Board (IRB) of the Noguchi Memorial Institute for Medical Research, University of Ghana. In addition, the researcher sought formal permission from the management and authorities of the Volta Regional Hospital, Ho before the participants were recruited. This was done with an introductory letter from the School of Nursing, University of Ghana, Legon together with a copy of the ethical approval document. The information sheet was given to the potential participants and the purpose and objectives of the study were clearly explained to them in a dialect they could understand so as to enable them to make an informed decision regarding their participation in the study.

Potential benefits such as enhancing practice and risks such as sitting for several minutes, associated with the study were clearly explained to the recruited participants. Consent forms were also issued and signed by the recruited participants who agreed to partake in the research. The consent form was translated into “Ewe” for the participants who

could not read and write the English language. This was done in the presence of a witness who was asked to sign or thumb print the consent form in addition to the participant so as to ensure the informed consent of the participant for the study. The participants were informed of their right to object to answering any question posed to them which they deem sensitive or uncomfortable. They were notified that they could pause or withdraw from the study during the interview period or any time they felt they could not continue with the study even after they have consented to participate in the study. They were also informed that withdrawal from the study at any stage would not in any way affect the quality of care they would receive or any future health care they will be accessing in the Volta Regional Hospital, Ho.

The issues of anonymity and confidentiality were strictly followed and adhered to. The consent forms or any information or documents that can identify the participant were separated from the transcripts of the interviews that were conducted and kept under lock and key to prevent easy access to all unauthorised people. Passwords were placed on the computer that was used for the study and all field notes and other pertinent information were securely kept under a lock and the researcher solely handled the key. The research findings have been presented by the use of identification codes to protect the identity of the participants. Any undue psychological trauma or stressful situations were handled professionally and participants were made aware of the availability of a clinical psychologist at no cost. The participants were however informed that the findings of the study would be used for scientific publications to add to knowledge in caring for patients who undergo surgery and also to teach students. The next chapter presents the findings of the study.

CHAPTER FOUR

FINDINGS

In this chapter, the findings of the study that explored the postoperative recovery experiences of patients who had undergone abdominal surgery under general anaesthesia in the Ho Municipality are reported. The specific objectives were to explore patients' experiences with physical symptoms following abdominal surgery, to illuminate patients' experiences with physical functioning following abdominal surgery, to explore the psychological well-being of patients after abdominal surgery, to explore the social well-being of patients after abdominal surgery, and **t**o uncover self-care activity issues that patients experience after abdominal surgery. The demographic characteristics of the participants are presented first, followed by the themes and the sub-themes that emerged from the framework analysis of the interview transcripts. Field notes and the use of a journal facilitated the extraction of the meaning and context of the participant's narratives.

4.1 Participants' Demographic Characteristics

A total of 15 participants who had undergone abdominal surgery under general anaesthesia and live in the Ho Municipality were recruited and interviewed for the study. Their ages ranged from 21 years to 63 years. The majority (n = 8, 53.3%) of the participants aged from 21-29 years, three (3) of them were between 30-39 years, two (2) of them aged between 40-49 years while the remaining two were 63 years. Females constituted 60% (9) while males represented 40% (6) of the participants. Their marital status included nine (10) married ones, four (4) single ones, and one 63year old woman was a widow. Ten (10) of the participants had at least a child. The occupations of the participants were varied: traders (4); military officer or soldier (1); farmers only (2), farmer and corn mill operator (1); teacher only (1); teacher and building contractor (1); mason (1); students (2); student and "kente" cloth weaver (1),secretary (1). The participants were of different educational backgrounds

and the details included: Primary (1); Middle School Leaving Certificate (2); Junior High School (4); Senior High School (2); Higher National Diploma from Polytechnic (2); University Bachelors' Degree (2) including one soldier who attended Military Academy after his Bachelors degree. Two (2) of the participants were students with one female participant in the second year of a Senior High School and the other in the final year (Level 400) of a Bachelor's degree programme in the University. Almost all (14) of the participants were Christians and only one was a Muslim. They spoke the English language, and Ghanaian languages including "Ewe", "Twi", "Ga", "Fante" and "Hausa".

The majority (12) of the participants had emergency abdominal surgeries whiles three (3) had elective surgeries. Many of the participants had multiple abdominal surgical procedures. The specific types of the surgeries included: Total Abdominal Hysterectomy for uterine myoma (1); Gynaecological Laparotomy with Salpingectomy for ectopic gestation (2); Laparotomy with small bowel resection and anastomosis for traumatic abdominal injury (1); Laparotomy with small bowel resection and anastomosis for typhoid perforation (3); Laparotomy with appendicectomy for ruptured gangrenous appendix and peritonitis (3); Laparotomy for epigastric hernia and heniorrhaphy for huge inguinal hernia (2); myomectomy, adhesiolysis with small bowel resection and anastomosis (1); Laparotomy with resection and anastomosis for gangrenous small bowels following intussusceptions and obstructed inguinal hernia (1); Laparotomy with small bowel resection and anastomosis for gangrenous bowel following intussusceptions and colon tumour (1). The types of incision they had included: transverse incision (4); midline incision (8) and midline incision with inguinal incision (3). The number of days the participants were hospitalised ranged from three (3) days to sixty (60) days. Three of the participants were readmitted for different reasons including wound dehiscence, severe insomnia and anaemia and they spent different

days on admission again before they were discharged. The details of the participants' demographic characteristics have been presented (See Appendix G).

4.2 Organisation of Themes

A total of seven major themes were synthesised from the data. The themes were physical symptoms, physical functions, psychological well-being, and social well-being, altered performance of self-care activities, coping strategies in postoperative recovery, and health system factors. Five of the major themes were in line with the conceptual framework of operationalisation of postoperative recovery (Table 4.1). These were physical symptoms, physical functions, psychological well-being, social well-being, and altered performance of self-care activities. These themes reflected the participants' postoperative recovery as suggested by Allvin et al. (2009).

A total of 31 sub-themes emerged from the 7 major themes. 12 new sub-themes emerged from the study while the remaining 19 sub-themes were congruent with the conceptual framework of operationalisation of postoperative recovery. There are 5 new sub-themes presented under two major themes in table 4.1. These new sub-themes are 'impaired cardiovascular function' and 'impaired skin integrity' which are under the major theme 'physical functions'. The other new sub-themes which were presented under the major theme 'social well-being' are: 'social isolation', 'economic burden' and 'social support networks'. All the two newly emerged themes, 'coping strategies in postoperative recovery' and 'health system factors' presented a total of 7 new sub-themes. The major themes and the sub-themes are presented on Table 4.1 and Table 4.2 on the next page. Most of the sub-themes have various categories which are further presented in Appendix H. Verbatim quotations from the participants were used to present the themes and the sub-themes. Pseudo names were used to represent the actual names of the participants in order to ensure anonymity.

Table 4.1: Postoperative Recovery Experiences after Abdominal Surgery: Themes and Sub-Themes based on Conceptual Framework.

Major Themes	Sub-Themes
Physical symptoms	• Postoperative pain • Postoperative nausea and vomiting • Fatigue • Appetite changes • Altered sleep pattern
Physical functions	• Impaired gastrointestinal function • Impaired bladder and urethral function • Impaired mobilization • Muscle weakness (loss of strength) • Alteration in sexual activity • Alteration in cardiovascular function • Impaired skin integrity
Psychological well-being	• Anxiety and worry • Feeling down and depressed • Feeling lonely /abandoned • Difficulty in concentration
Social well-being	• Reduced social activity • Dependence on others • Interest in surroundings • Social isolation • Economic burden • Social support networks
Altered performance of self-care activities	• Re-establishing everyday life activities • Altered personal hygiene practices

Two new themes emerged that were not derived from the conceptual framework (Table 4.2). These were coping strategies of patients in postoperative recovery, and health system challenges that confront patients recovering from abdominal surgery.

Table 4.2: Other Sub-Themes on Postoperative Recovery Experiences

Major Themes	Sub-Themes
Coping strategies in postoperative recovery	• Self-motivation • Cautiousness • Religiosity, superstitious beliefs and acceptance • Self-medication to enhance recovery
Health system Factors	• Inadequate health education • Insufficient medication • Attitudes of health personnel

4.3 Physical Symptoms Experienced During Recovery from Abdominal Surgery

This theme emerged to answer the research question: What are the experiences of patients with physical symptoms after abdominal surgery? The physical symptoms were the various reactions of the patients' body to the surgery, anaesthesia, or the effects of the medications. All the 15 participants experienced physical symptoms which impeded their recovery. The absence or resolution of these symptoms partly determined their progress of recovery. This theme was consistent with the conceptual framework on postoperative recovery that was used. The physical symptoms were further categorised as postoperative pain, postoperative nausea and vomiting, fatigue, appetite changes, and altered sleep pattern. All these five sub-themes were consistent with the conceptual framework used for the study.

4.3.1 Postoperative Pain

All the 15 participants experienced postoperative pain. They had varying subjective individualised experiences with their postoperative pain. The pain affected the performance

of other functions including mobility, feeding, and sleeping. Their pain experiences were categorised into: the location of postoperative pain, severity of postoperative pain, aggravating factors of postoperative pain, and relieving factors of postoperative pain.

4.3.1.1 Location of postoperative pain

Participants narrated that the pain was at the incisional site and it caused them so much discomfort. Some reported feeling generalised abdominal pain while others noted the pain was deep. They commented:

> *"The pain was all over deep inside my tummy, the sides of the tummy, from the two sites of the drainage tubes up to my navel, were painful. It came to a time the pain was most severe deep inside my naval than any part of my body…."* (FPR13)

> *"Everywhere in my abdomen was painful. I was feeling the pain deep inside my abdomen and I became helpless and couldn't do anything for myself. I couldn't even touch the abdomen let alone allow anyone to touch it because of the pain but when I asked the doctor he said the rotten intestines were all removed".* (FPR11)

Participants were unanimous about the location of pain experienced although for some of them the pain was felt in other areas of the body apart from the incisional site. Other participants added that:

> *"My abdomen and the wound were very painful. The pain was like my heart was going to come out of my chest because when the wound was paining me then it would move to the heart and hmmm it was not easy at all".* (MPR5)

> *"The pain was at the umbilical region from the initial stages then it moved to the right and left sides of the abdomen, my back and it sometimes hold my waist so much that it was difficult for me to walk. I noticed that the pain was also running to my chest and it was as if I was choking and I couldn't breathe well".* (FPR15).

Participants noted that pain was localised to the incision site, experienced in multiple locations of their body including the abdomen, waist, back, thighs, umbilical region, sides of the abdomen, and the chest. The narrative on the location also included the severity of the

pain. A participant noted the pain felt as if the "heart was coming out" while another said she could not breathe.

4.3.1.2 Severity of the Postoperative Pain

Participants rated their pain on a scale of 0 (no pain) to 10 (severe pain). A score range of 6 to 9 (average 7) was observed. Participants reported that the pain was severe, sometimes intermittent and excruciating. The subjective nature of pain created instances that did not make comparison useful but some female participants compared their postoperative experiences to labour pain. The participants said:

> *"I would rate my pain 9 on the scale you are describing to me since I have never had any severe pain like that before. The wound was very painful, my brother. The pain was excruciating and it would hold me and be intense and persistent for a long time like labour pain before I get some relief"*. (FPR8)

> *"After the operation, I had so much pain that made me wept on the first and second days but I think it was just a happy pain because despite I was feeling pain, the surgery gave me the chance to live again. I was happy I had the operation so even though I was having pain it was a happy pain".* (FPR4)

Despite the postoperative pain was severe, unbearable, and described like labour pain, some female participants expressed happiness with their pain experiences since they had successful surgeries and are still surviving. Other participants noting intensity of pain they experienced added:

> *"The pain after the operation was better compared to the gravity of pain I experienced before I was operated. Even though the operation was painful it was a comfort pain. The pain was worse and most severe before the surgery compared to after the surgery… I was feeling severe, very disturbing pain, causing me so much distress, I wept and couldn't bear the pain after the surgery but it was like a comfort pain and it was better than the pain before the surgery. I will rate the pain before the surgery 10 and after surgery 8".* (FPR11)

Some participants stated they experienced so much postoperative pain but they considered it better compared to their preoperative pain. Two participants compared and described the severity of their pain as "happy pain" and the other captioned it as "comfort

pain". In reporting the severity of pain, participants also noted that irrespective of the location of the pain or the severity, there were instances that the pain could get better or worse.

4.3.1. 3 Aggravating Factors of Postoperative Pain

Several factors were responsible for exacerbating the postoperative pain of the participants. These included wound dressing, the weather, functional activities such as the washing of clothes, and lifting water to the bathroom. Some of the participants reported they were experiencing severe pain which made them feel that the abdominal muscles were over stretching to the extent that the surgical incision was going to open-up:

> *"When I am washing clothes I feel more pain and whenever I lift water to bath in the bathroom, eeeiiiih! eeiiihh! eeeiih! The wound becomes more painful and the pain in the abdomen worsens making the flesh on the abdomen to over stretch as if it was about to tear for the wound to open up again…"* (FPR1)

> *"Whenever I wanted to change my position on the bed it was hell for me because I would have to battle with severe pain before changing my position… If I am lying sideways and I want to lie in different positions then I would feel more pain and when I want to sit down, there was a very serious pain. Standing upright to start walking worsens the pain so much…"* (FPR11)

The type of surgical incision (transverse incision), laughing and coughing worsened the pain experienced by participants. A participant who had a gynaecological laparotomy (Right Salpingectomy) linked the transverse incision to her worsening pain experience:

> *"The way the doctor cut across my abdomen caused me more pain, hmm! I could not lie down flat and if I cough then I feel severe pain. This wound across my abdomen was more painful especially when I laughed as compared to the* longitudinal incision I *had with the two previous surgeries that".* (FPR2)

The process of wound dressing, the presence of adhesive plasters as well as the removal of the stitches from the wound caused some participants intensifying pain experiences:

> *"It was the dressing of the wound that aggravated the pain and the way they were pressing the sides of the wound and the tight plaster was making me feel more pain that sometimes I sense the pain deep inside my heart". (*MPR10)

> *"When they were using the gauze to clean the wound with the spirit it was very severe and when the nurse was removing the stitches from the wound it was too painful, sharp and sustained pain about ten minutes. The dressing was always painful and even if I had my way I would have asked the nurses not to remove the stitches for me because it was too painful".* (FPR14)

The time of the day and the weather aggravated the pain experience of some of the participants. Some experienced more pain during warm weather, however, others reported that cold weather worsened their pain. Nevertheless, there were situations in which they had their pain relieved.

4.3.1.4 Relieving Factors of Postoperative Pain

The participants mentioned that pain medications, dressing techniques of some nurses and listening to music were measures that relieved the pain. The medications used included tablets, suppositories and injections. Some of the comments were:

> *"…when they gave me some injections and tablets to swallow and when I inserted some into my anus the pain reduces…I took some medications in the house whenever the pain was there and it reduced".* (FPR8)

> *"….it was diclofenac I was inserting inside my anus at home and the pain reduces but in the hospital I was given injections on my thighs and buttocks and the pain reduces but the injections made me felt dizzy and sleepy".* (FPR12)

Four participants reported that the professionalism and passion nurses used to dress their wounds and how they gently removed stitches from their wounds relieved them of pain:

> *"The nurses did the dressing and removed the stitches well…They saw that their old lady was feeling so much pain. The nurses cleaned the wound gently and they were saying grandma sorry ooh, sorry, sorry ooh'. So I was not feeling the pain like how it was painful from the beginning when they started dressing it".* (FPR4)

> *"When the nurse was dressing the wound and removing the stitches she saw how I was feeling the pain so she did it gently with some passion and she was saying 'ooh I am sorry, mum I am sorry, I would finish soon', so I didn't feel much pain like how I was feeling the pain from the beginning". (FPR15)*

Listening to music was identified by participants as a measure they used to relieve their pain.

> *"I listen to gospel music from my phone or the home theatre in the house and I forget about the pain especially when the weather was hot".* (MPR10)

Although there were reports from some participants that their medication did not adequately relieve their pain and had to be replaced, generally pain medication worked in relieving the pain. The empathy of the nurses and music were all instrumental in containing the postoperative experience of pain. Apart from pain, there were other physical symptoms such as nausea and vomiting that was included in participants' narratives.

4.3.2 Postoperative Nausea and Vomiting after Abdominal Surgery

Postoperative nausea and vomiting were some of the physical symptoms experienced by many participants when they were recovering from the abdominal surgery. Only two participants experienced nausea without vomiting. This sub-theme has three categories which are: onset and duration of postoperative nausea and vomiting; factors inducing postoperative nausea and vomiting; and the relieving factors of the postoperative nausea and vomiting.

4.3.2.1 Onset and Duration of Postoperative Nausea and Vomiting

The onset of vomiting differed among participants. It occurred immediately after the surgery, first day post operation, and the first day of resuming feeding after surgery. Some participants vomited at home after they were discharged from the hospital. The duration of vomiting also varied. Some participants were awakened from sleep by the strong urge to vomit. Some of them reported:

> *"On the 1st day of eating and the 3rd day of eating I started vomiting and I vomited so much… I vomited for 2 days… On the first day when I started eating, I vomited like 6 times and the 3rd also I vomited 4 times….."* (PR15)

> *"One bad thing that I didn't like was I was vomiting; I was vomiting very, very much right from the time I regained my consciousness after the anaesthesia. I vomited for 5 days. I was vomiting everything, morning, afternoon, and evening. Sometimes I would be sleeping but the vomiting wakes me up… Yeah, sometimes I felt like vomiting and then the vomiting will start but sometimes too there was no nausea but I would vomit".* (FPR11)

Participants experienced nausea for a longer number of days than vomiting which ceased after a while but the nausea persisted for additional two or three days. Some participants experienced nausea for about five days but vomited for three days after the surgery. There were factors that induced the vomiting in most cases but some participants could not tell what caused them to vomit.

4.3.2.2 Factors Inducing Postoperative Nausea and Vomiting

Participants stated that their nausea and vomiting were induced or aggravated by the removal of the nasogastric tubes (NG tubes), anaesthesia, fast injection of intravenous medicines, intraoperative and postoperative opioids, the smell of food and the presence of food in their stomach after surgery. Participants had their NG tubes removed two or three days after the surgery and they vomited in large quantities.

> *"I was not eating but I was still vomiting certain greenish things and that was after the NG tube was taken off two days after surgery …. I was afraid I was going to die because I was losing hope and became very weak while the vomiting continued and it had prolonged and the volume was so much at a time… anything and anytime that I ate I would vomit after removing the NG tube".* (FPR11)

> *"When they inserted that tube through my nose and throat* (NG tube)*, I have been removing it myself but whenever I removed it then I would start vomiting some plenty greenish things but when the nurses inserted it back for me the vomiting stopped immediately".* (MPR3)

The smell of food and medicines were the aggravating factors for nausea and vomiting among seven (7) of the participants. Fresh fish used for meals was a common factor inducing nausea and vomiting among many of the participants. A participant added:

> *"After the surgery, I was having a strong urge to vomit so I don't like eating, most especially when fresh fish was used for the soup because the smell alone made me vomit so much…. Whenever I took even small food or even the smell of the food was just enough for me to throw up... Sometimes when other patients in my ward were eating their food and just by smelling the aroma of the food then the trouble of vomiting would start".* (FPR14)

Medicines or injections, mainly intravenous antibiotics were identified as factors inducing nausea and vomiting. The smell from these injections as well as the fast speed of administration induced nausea and vomiting among the participants.

> *"There was this medicine that whenever they are coming to give it to me it smells and makes me feel like to vomit and sometimes I vomited… It was injected into my vein… It was a small injection in some small bottle that the nurses were calling 'Genta'* (gentamycin). *When they were injecting me very fast I sensed the smell of the medicine in my throat which made me vomit especially when they continued to push the injection very fast".* (FPR2)

Recovering from surgery included periods participants stayed away from food for a number of days. Participants stated that they were persuaded to resume normal feeding at the period they were experiencing severe nausea and vomiting hence they thought they were going to die. The weakness associated with the vomiting and discomfort of nausea made the postoperative experience unfavourable. However, there were measures that minimised the effect of nausea and vomiting.

4.3.2.3 Relieving Factors of Nausea and Vomiting

Participants reported the use of medications (antiemetic), chewing of ginger *(Zingiber officinale)*, bitter sticks such as neem tree *(Azadirachta indica)*, the chewing of the bark of a mahogany tree (*Khaya senegalensis*), gums and bitter tasting candies as relief measures.

These items were usually supplied to the patients by their relatives or friends during visiting times. Chewing of sticks was odd to some participants. Some of their accounts were:

> *"Sometimes the nurse gives me injections and some small white tablets to stop vomiting... I chew ginger (*Zingiber officinale*) and also put chewing stick inside my mouth before the nurses come around with those injections which usually make me vomit. When the urge to vomit persisted then I would chew ginger and the neem tree* (Azadirachta indica)*... I take some 'tom tom' or 'ahomka' ginger candies and 'mentos' gum mostly when visitors were around".* (FPR2)

> *"There was this tree that was bitter, the neem tree and also the back of the mahogany tree* (Khaya senegalensis) *that I used to chew first and before they inject me then I would put ginger into my mouth to prevent the nausea and vomiting. When I chew the ginger then I add the neem tree then the feeling to vomit will go and I wouldn't vomit at all".* (MPR9)

The eating of sour tasting fruits such as lemon and lime, chewing bitter sticks as well as covering the nose before the injections to avoid the nauseating smell was adopted by some participants to control their nausea and vomiting.

4.3.3 Appetite Changes after Abdominal Surgery

Many of the participants experienced changes in their appetite which made most of them unable to eat after the operation hence they were coerced by the nurses to eat. However, three (3) of them reported that even though they were unable to eat immediately after the surgery they had increased appetite when they begun to eat. Most of them resumed feeding with light food like with Lipton beverages or porridge but others quickly started with very heavy local food such as 'fufu' (pounded yam or cassava mixed with or without plantain) and 'kenkey' (solid food prepared from slightly fermented corn dough) without any challenges.

> "*As for the food I was not having any appetite for the food. The food was brought alright but I was not having any appetite to eat. The nurses would always force me to eat but I could not eat the food… It took me four days when I had lost appetite for food even when I was asked to start eating I could not eat much of the food".* (MPR3)

> *"…there was no appetite for the food. 'Koko'* (local porridge made from corn dough) *was the only food I was able to eat initially at the hospital and even that the nurses have to force me and stand on me to eat. It took me three days from the day I was told to start eating because I was not able to tolerate any food since the appetite was not there. Later on, it was light soup and 'kafa'* (soft smooth local food prepared from non-fermented corn dough) *that I have been eating for two weeks before I started a solid diet like 'akple'* (solid local food prepared from corn flour) *and beans recently".* (FPR4)

A participant resorted to eating only light soup and very soft local food. However, some participants said they had increased appetite and ate so much food more than what they were able to eat before their surgery.

> *"I was feeling so hungry that early morning so I realised that tea wouldn't help me. I ordered for some heavy food. I told my wife she should not bring tea because I was feeling hungry and she brought 'kenkey' and I ate two balls that morning. I started eating more than the time I was not operated". (*MPR6).

Loss of appetite was common among the participants and their narratives suggested that while appetite was good in some instances for some participants, other participants had poor appetite. Participants recalled that they were asked to continue fasting until their bowel sounds were active when they began to pass flatus or started moving their bowels. They were given water or liquid diets to start as their bowel sounds returned. This slow pace of resuming feeding caused a number of participants to lose appetite for food when they were asked to eat.

4.3.4 Fatigue after Abdominal Surgery

Postoperative fatigue was one of the physical symptoms almost all the participants experienced during their recovery. Postoperative recovery was negatively affected by the presence of fatigue. Fatigue was described in the form of feeling tired and bodily pains which affected the performance of their daily activities in diverse ways. Fatigue was experienced both in the hospital and at home after discharge. It was realised from the data that fatigue among the participants had a long duration. Some participants feared they were going to die because of the excessive feeling of tiredness and they thought because they had lost energy significantly, they were going to die due to their progressive dwindling strength.

> *"I became very tired and weak for four days and I couldn't do anything much for myself because there was no strength. I saw myself as losing everything out because I realised that I was too weak to survive and there was only little strength in me which was too little to help me survive. Now I cannot do any work because of the tiredness and weakness".* (FPR15)

> *"I started feeling this tiredness and I was always feeling weak in bed. If I do something small then I become more tired so I was afraid if I was going to survive. I wasn't doing any work at all because of the tiredness".* (FPR12)

A number of the participants reported that they experienced fatigue or tiredness just after rising up from bed early in the morning without engaging in any strenuous activity.

> *"When I wake up whether I have done any work or not I would be feeling tired even early morning. Without doing any strenuous work I was feeling tired like someone had beaten me up several times and I was feeling tired and weak all over my body including the joints".* (FPR4)

Participants related excessive sleep to experiencing more fatigue or tiredness and took steps to limit their duration of sleep so as to reduce their experience of fatigue. They experienced fatigue in varying durations, ranging from a few days to months after surgery. Additionally, participants experienced altered sleep pattern during their postoperative recovery periods.

4.3.5 Altered Sleep Pattern after Abdominal Surgery

Many of the participants had their usual sleep patterns either disrupted or they had difficulty falling asleep after recovering from anaesthesia. Some participants were either re-admitted into the hospital due to lack of sleep or they had to stay longer on admission. Some participants could not sleep both in the hospital and at home after discharge due to pain:

> *"I could not sleep after I woke up from sleep the first time at the theatre… Both in the hospital and in the house I could not sleep. I don't sleep at all… I came to complain to the doctor and I was admitted again for some time then I started to sleep like 11 pm and sometimes 12 am but I wake up like 3 am then the whole day there would be no sleeping again".* (FPR2)

> *"As for the sleeping, it was not happening because I was in pain and whenever I tried to sleep a little then the pain wakes me up suddenly".* (FPR14)

Postoperative pain and the fear of dislodging the intravenous cannula and getting it reinserted and undergoing pain negatively affected the sleep pattern of some participants:

> *"My cannula was dislodging frequently so I kept wake to monitor it and prevent it from blocking so that I wouldn't go through that painful process of cannula insertion again and that prevented me from sleeping well".* (FPR13)

Some participants associated their inability to sleep effectively at night to bad dreams or nightmares. They narrated that they were awakened from sleep by bad dreams they were having in which people were chasing them to kill:

> *"I couldn't sleep three days after the operation. I had bad dreams in the night and it wakes me up frequently. I had some terrible bad dreams in which some soldiers were chasing me with cutlass and knives to kill me and suddenly the woman who was sleeping in the bed next to mine woke me up that I was shouting. I have even told my husband so we have been putting those bad dreams and nightmares into the hands of God for his intervention".* (FPR8)

> *"Sometimes I would be sleeping and dreaming and frequently I suddenly wake up from sleep because of bad dreams…people would be chasing me and sometimes I dream of dogs chasing me to kill and suddenly I would wake up or the nurse would wake me up that I was disturbing other people. When I wake like that I wouldn't be able to sleep for the rest of the night… Even during the day time, it happens and I could not even sleep at all again".* (FPR12)

A few of the participants linked their change of environment to their altered sleep pattern during hospitalization. Periods of medications in the hospital also interrupted the sleep pattern of participants. They spoke about having intermittent sleep periods at night in the hospital which improved when they were discharged:

> *"The hospital was another environment so the place was new with all the anxiety about the operation and what was going to be the outcome. The hospital was not like my house so I was struggling to fall asleep and whenever I entered into sleep it wouldn't be long then I would wake up again because it was a new environment with new masters. The nurses must work so they have to wake me up and give me treatment…Yes, in the comfort of my home now I sleep very well".* (MPR6)

In summary, the majority of the participants experienced physical symptoms which impaired their recovery from the surgery. Postoperative pain, nausea and vomiting, fatigue, changes in appetite, and sleep pattern disturbances were the physical symptoms the participants experienced. These symptoms which resulted from physiological disturbances affected the physical functioning of the participants and this would be discussed next.

4.4 Physical Functions after Abdominal Surgery

Physical functions emerged as the second theme from the data which answered the second research question - What are the experiences of patients with physical functioning following abdominal surgeries? Physical functions were the physiological processes and immune reactions of the body of the patients to the recovery process from their surgical intervention. These physiological reactions resulted in the alteration of some physiological processes among the patients which resulted in the impairment or alteration of some physical functions. The data from the study discovered seven physical functions. They were functions which were altered and they constituted the sub-themes under the theme, physical functions. These sub-themes included: impaired gastrointestinal function, impaired bladder and urethral function, impaired mobilisation, muscle weakness, alteration in sexual activity, alteration in cardiovascular function, and impaired skin integrity.

4.4.1 Impaired Gastrointestinal Functions after Abdominal Surgery

Gastrointestinal functions were reported to be impaired among participants of the study. Physiological activities which were found to be altered or impaired in the gastrointestinal system of the participants were put into three categories under the sub-theme gastrointestinal functions and they included: alteration in bowel movement; feeding difficulties; and difficulties with nasogastric tubes.

4.4.1.1 Alteration in Bowel Movement after Abdominal Surgery

Many participants had difficulties with moving their bowels since there were disruptions in the functions of their bowels after the surgery. The alteration in bowel movement was mainly manifested in the form of constipation or delay in moving the bowels after the surgery. Participants stated that they struggled to empty their bowels and they experienced pain in their anus when passing stools both on admission and at home. They narrated their encounters:

> *"I couldn't empty my bowels freely. The stool became hard and it kept long before some small faeces came out. I have to stay in the toilet for a long time and struggle so much all the time and always strained myself with pain before the stools could come out"*. (MPR3)

> *"I cannot 'pupu'* (empty bowels) *but I was feeling pain in my abdomen with the urge to 'pupu'* (empty bowels) *when I go nothing will come out…it continued for 8 days. Then, later, small pupu* (stool) *will come but it wasn't even nice but it was black with some strange colour, bluish- green or something. One small hard stool came then later the rest was full of phlegms and dirty looking. The constipation was my worst experience… I have to visit the washroom always without passing stool meanwhile walking was with pain and difficulty for me…"* (FPR11)

Some participants opined that they passed very hard "stone-like" stools upon straining with intense pain. Their stools were reportedly stained with blood. They used remedies such as eating fruits and vegetables to enhance their bowel activities:

> *"At the beginning, I wasn't able to pass stools. Once in 3 days before I would be able to move my bowels. Whenever I went to the toilet the stools were very hard like stone. When I strained there would be some blood coming with some small hard stool. There was so much pain whenever I passed stool". When I started eating some fruits and green vegetables like 'kontommire', 'ademe', banana, and walking little by little I started passing stools well..."* (MPR9)

Two participants, FPR4 and FPR15, resorted to manual removal of the constipated stools by inserting their fingers inside their rectums to remove the stools at home. They said

the "stone-like" constipated stools were removed and normal stools followed spontaneously a day or two from the day they manually removed the constipated stools:

> *"One day I was feeling very uncomfortable and my abdomen was distended and I was feeling distressed because of the constipation. I inserted my finger into my anus and deep inside the anus before I removed very hard stools like stone and some even were looking like caked stone. Since the day I inserted my finger into my anus to remove the hard stools the road was opened for the stool so I have started emptying my bowels freely from the next day".* (FPR4)

However, a participant passed watery stools after the surgery. She resorted strictly to liquid diets after the surgery but began passing watery stools. She noted her bowel actions normalised when she started eating solid but very soft 'eworkple' (soft but solid local food prepared with corn flour).

4.4.1.2 Feeding Difficulties

Feeding difficulties were the various challenges that prevented the participants from being able to tolerate food after the surgery. Participants had specific difficulties with feeding which many attributed to abdominal pain and their disturbing vomiting episodes.

> *"I was warned not to eat for three days. After the three days, anytime I ate there would be a severe abdominal pain... the food was rather causing more abdominal distress so I stopped eating to allow my intestines to heal well…"* (FPR15)

> *"The only problem I had with eating was because of the pain from the wound and the abdominal pain and the abdomen became distended. It was difficult for me to breathe because the abdomen was distended. I was refusing the food to avoid difficulty in breathing with the abdominal distension…"* (MPR5)

Similarly, another participant stated:

> *"I always felt I could eat more food than that what I was eating but for the way, my abdomen was distending after every food that I ate I had decided to reduce how much food I was eating… I was feeling very uncomfortable with my abdomen distending anytime I had eaten some small quantity of food. I wasn't able to breathe well after eating and I would become restless and very uncomfortable mostly when my abdomen became distended.* (MPR7)

In addition to the pain which restricted some participants from eating for the fear of not having a normal bowel function, they also commented on distension of the abdomen. This

was a source of worry to them since they had difficulty breathing when the abdomen was distended. They consequently reduced the quantity of food consumed to minimise the effects.

4.4.1.3 Difficulties with Nasogastric Tubes

Nasogastric tubes were inserted for majority of the participants who underwent the abdominal surgery. Almost all the participants reported of their discomfort with the nasogastric tubes inserted for them. Some participants reported that they were disturbed by the presence of the nasogastric tube and were unable to breathe well. They added that the tube caused them pain and made their throat dry hence they forcefully removed the nasogastric tubes. The NG tube made it difficult for some participants to swallow their saliva and prevented them from eating as indicated by the participants:

> *"I was restricted from eating because some tube was in my nostril* (nasogastric tube, NG tube). *The tube was disturbing me so I removed it two but they inserted it again into my nostril… I was not able to breathe well and I was having pains and dryness in my throat so I removed the tube myself. Even when I wanted to swallow saliva it was very difficult. I was told to eat but for four days after the tubes were removed I could not eat anything".* (MPR3)

> *"My throat was dried so breathing was difficult when that tube was inserted through my mouth and throat and it took some time before I was able to breathe well when the tube was removed. I asked them for some water but they said I cannot drink water unless the tube was removed before I can drink. Even with the tube inside, saliva was coming out of my mouth and they used some machine to suction it out. The tube was distressing so much".* (FPR12)

A participant added that the nasogastric tube was choking her in the throat and she was asked to lie on her side to facilitate the drainage of the gastric contents through the NG tube and that caused her more pain and distress. She however, began to vomit so badly immediately the NG tube was removed for her:

> *"I was feeling all choking, the NG tube was choking me in my throat, I can't really swallow anything at the same time the pain was not making me comfortable whiles I was lying down. Later the nurse said I was supposed to position myself on the side so that what they were trying to drain from my stomach will come out and I did that but with so much pain until the tube was taken off. Immediately the NG tube was removed, that was when I started vomiting so badly".* (FPR11)

Participants further stated that they intentionally removed the NG tube because they were feeling like they were chained hence they removed the tube to free themselves. They had the notion that people who had the NG tube inserted did not survive after the surgery hence they removed the tube to prevent themselves from dying. They were however educated on the passage of the NG tube prior to its passage but they did not remember the explanations given them when they recovered from anaesthesia hence they willingly removed the tube and later began to vomit.

4.4.2 Impaired Bladder and Urethral Function after Abdominal Surgery

Many of the participants (n=13, 86.7%), reported their displeasure with challenges and frustrations encountered with urethral catheters. This sub-theme would be discussed under two categories which include urethral catheter disturbances and alteration in urinary outflow, and urethral discharge.

4.4.2.1 Urethral Catheter Disturbances and Alteration in Urinary Outflow

All the participants had urethral catheters passed for them perioperatively. Almost all the participants experienced painful micturition especially after the catheter was removed. Some participants further mentioned that they were unable to pass urine when the catheter was initially removed hence it was re-passed to relieve them of pain:

> *"After the operation, I wasn't passing urine frequently. It took a long time before I passed a little urine when they first removed the catheter for me. I told them and they passed another catheter for me. When they removed the catheter I was feeling pains where they put the catheter and I came back and reported to them and they gave me medicine and after that, it stopped".* (FPR2)

> *"I felt severe pain when they were inserting the tube into my penis and as if that was all hmmm! When they finished the operation eeeiiihh! That rubber in my penis wasn't easy for me. I couldn't feel free and it was like something was holding my penis so I was afraid if it was not going to destroy my penis before they would remove it for me".* (MPR5)

A participant shared his frustrations:

> *"Whenever I wanted to pass urine I used to open the port at the lower end then I would strain myself to force the urine out. The nurses got angry with me and they warned me never to remove it again… Initially, I didn't know that they inserted anything into my penis so when I saw it I did not know what it was. I had never seen it in anyone's penis so I was pulling it out in some attempt to free myself until it injured my penis and left some wound inside my penis".* (MPR3)

In addition to the pain and discomfort, few participants were ignorant about the presence of the urethral catheters and they did not know the functions of the catheter hence they tampered with it to enable them to pass urine by their own efforts. They said they forcefully pulled it out in order to be free and urinate voluntarily. Some complained of discharges from the catheter.

4.4.2.2 Urethral Discharge

A number of participants who had the urethral catheter inserted reported their experiences of urethral discharges and burning sensations in addition to their painful encounters with the catheter when it was removed. These symptoms expressed by the participants suggested urinary tract infections suffered by the participants:

> *"That rubber was painful when the nurse was inserting it and it was just not good for a man because I was feeling bad about it until it was removed for me. I felt pains and burning sensations like pepper has entered inside my penis especially whenever I passed urine. Some whitish discharge was also coming with the pain when I passed urine three days after the catheter was removed".* (MPR7)

> *"I have still been suffering whenever I want to urinate… I experience pain inside my penis before the urine would come out. Even the urine takes a long time before it comes out... Yes, the discharge that comes from my penis is like white but even now when I finish passing urine then plenty blood comes out of my penis and now some whitish discharge also comes out from my penis. Since the rubber was removed from my penis I have been noticing that painful whitish urethral discharge...No, it was not there before the operation".* (MPR3)

In addition to urethral discharges, a participant narrated his encounter with the persistent passage of bloody urine due to an injury he suffered when he forcefully removed

the catheter. While squeezing his face to demonstrate the painful discomforting situation he had with passing bloody urine, he said:

> *"I feel pain even till now whenever I pass urine and it was burning like they inserted some pepper in my urethra and some discharges were coming out. It felt like ginger was pushed inside my vagina so I became terrified if my urethra was torn… I placed restrictions on the frequency of my urination so as to avoid pain. I have decided to urinate only twice or thrice in the day so I hold the urine on until it would be time for me before I pass urine despite the discomfort".* (FPR14)

A participant expressed her frustration about how the urethral catheter was leaking and she soiled herself and her bed linen with urine.

> *"The urine was leaking along the side of the catheter and it was pouring on me and wetting me in the bed. I informed the nurse and she told me the doctors would re-pass a new one only when they come around. Later in the day, the urine was still leaking and I called one nurse to either re-pass or remove the catheter for me but she rather insulted me... I was able to urinate but I had pain on urination after the catheter was removed for me".* (FPR8)

Participants further described their experiences with the catheter as feeling a burning sensation which they likened to the feeling of hot pepper or ginger being pushed through their urethra. They said they were controlling the discomfort they experienced with the catheter by avoiding or withholding urine and scheduling to pass urine only at specific periods.

4.4.3 Impaired Mobilisation

Impaired mobilisation was one of the sub-themes under the theme physical functions. This sub-theme was congruent with the conceptual framework that was used for the study. All the participants had challenges with getting out of bed and performing their activities of daily living after the surgery. All participants resumed mobilization gradually until significant improvement was achieved and they walked without assistance:

> *"The first day after the operation I couldn't walk, on the second day I was able to walk a little bit to the wash room… I started walking a little by little… I was bending before walking because of the pain and it was not comfortable at all. The wound was healing before I was able to raise myself a bit when walking. Now I am walking the normal way I used to walk without bending down".* (MPR10)

All participants had challenges with mobilization after the surgery. Mobility was very difficult for days after the surgery and participants mentioned they were bending down on their abdomen before they were able to walk due to postoperative pain:

> *"Yes, in the ward if I walk from my bed to the washroom, I feel more pain, meanwhile the nurses advised that I should be walking about and not lying down always. So I kept on doing that but when I walk to the washroom and I am back to the bed, I feel more pains then I have to lie down for a while".* (FPR13)

In addition, a participant narrated how she had to bend down and coil herself before she was able to move a few steps forward and emphasised the pain associated with mobility:

> *"It took me 3 days and I couldn't walk after the surgery. I have to bend down and coil myself before I was able to walk a little because of the pain. When I walked upright then it was like someone was using a saw to cut through my abdomen. It was so painful that the thought of walking put tears in my eyes… It was very painful* (said it very loudly to emphasise the severity of the pain) *so when I walked for a small distance then I sit for a while, but the nurses would ask if I was sitting already".* (FPR11)

Participants further described their experiences with the catheter as feeling a burning sensation which they likened to the feeling of hot pepper or ginger being pushed through their urethra. They said they controlled the discomfort they experienced with the catheter by avoiding or withholding urine and passing urine at specific periods only.

4.4.4 Muscle Weakness (Loss of Strength)

Muscle weakness was a sub-theme identified from the data collected for the study. Participants revealed they were feeling weak from the day of the surgery and it progressed throughout their recovery period:

> *"I was feeling weak in bed and could not even get up or move because I had no strength. After the operation, I couldn't do anything initially and it only improved a little when I went home because of the weakness in my body. I could not hold anything or even get up from bed because I was feeling very weak so my friends were carrying me in a wheelchair and the nurses would push me before I could go and urinate and go to toilet".* (MPR3)

Participants had their muscle strength returned gradually during their recovery period:

> "*I was feeling very weak and ill after the operation but I started regaining my strength gradually. I couldn't get up from the bed but little by little I was able to sit up in bed and later I got some strength to move around the bed and visit the washroom without help. It took about 7 days when I started having more strength to even walk to the hospital gate to see my friends and relatives off".* (FPR4)

The muscle weakness was experienced at varying intensities. Some participants remained weak and bed ridden and unable to rise up from bed after surgery for as long as two weeks while others took about three to four days to regain their strength:

> *"I became extremely weak about 15 days and I couldn't do anything much on my own and I remained in bed because there was no strength to even talk or walk… I saw myself as losing everything out because I realised that I was too weak to survive and there was only a little strength in me…"* (FPR11)

> *"… I was very weak and felt my muscles were worn out and I wasn't able to even walk from the beginning because of the weakness. I couldn't get up from bed to go to the toilet and even how to eat was a problem because the strength was not even there to get up from the bed and eat… Like 3 days and on the 4th day I was told to try getting up from the bed and I started getting my strength back."* (MPR9)

Some participants said they lost significant body weight and their muscles were wasting away after the surgery as they remained bed ridden and inactive for a long period.

4.4.5 Alteration in Sexual Activity

Many of the participants expressed their apprehension about the impact of the surgery on the performance of their sexual roles expected of them by their partners. The majority of them commented on how their poor muscle strength and lack of energy prevented them from engaging in sexual functions when they were discharged home. They desired full recovery and took caution to regain their strength before engaging in sexual intercourse:

> *"…almost three months now I have not attempted anything like sex with my wife. I feel I have not regained my strength fully yet to sustain me in sexual activity as the nurses said I should not do any hard work and I believe sexual activity was strenuous so I decided I wasn't going to have sex until I recover fully".* (MPR5)

> *"I could not have sex with my wife after the operation to avoid any complication. Sexual activity demands that I have to use plenty of energy and the strength was not there so I could not have sex with her about three months now".* (MPR7)

Although most of the male participants in the study stated that they were not having enough *energy* to engage in sexual activity with their partners, many of them revealed that they were still having very strong sexual *urges* towards their partners:

> *"… sometimes I would have serious urge to have sex with my wife and I would be confused when I see her looking attractive again but there was no energy to even withstand any sexual activity… I have been feeling for it but I discipline myself and my wife also understands me so we have been coping until my strength returns".* (MPR6)

> *"…but you know my penis is still alive so sometimes I have been feeling seriously for sex but because of the operation, I have no strength in my body so I couldn't have sex over two months now but I feel for it…I want to be strong first before engaging in any hard work like sex...I don't force myself but just play gospel music and pray then I sleep".* (MPR9)

Some participants reportedly engaged in other forms of sexual encounters including romancing and kissing so as to keep up their unions but without any intercourse which demanded energy:

> *"…my wife was younger than me so she was more sexually active and strong…I could understand what she was going through so we kiss each other, play with our bodies and touch ourselves and those things but no actual sexual intercourse because my energy was not enough for vigorous sex".* (MPR6)

A 24-year-old female participant however, was upset about the extensive incisional scars on her abdomen. She lamented that the scars were not making her look sexually attractive since she was conscious about how she looked. She feared the incisional scars could affect her marriage in future.

4.4.6 Alteration in Cardiovascular Function

The cardiovascular function of some of the participants was altered after the surgery. Participants experienced anaemia due to excessive blood loss intraoperatively as well as

through poor nutrition and loss of appetite. Some of them reported to have experienced palpitation, dizziness, weakness and were transfused with some units of blood in the hospital:

> *"I was given about four units of blood in the hospital because I was bleeding so much…I was feeling dizzy and my heart was beating very fast. The next day the doctor said I was pale again so they gave me two more units of blood. Even in the house I was feeling dizzy with palpitation so I have been eating more vegetables and fruits to regain blood faster".* (FPR15)

> *"My face was turning very fast on the 5th day after the operation and I wasn't able to walk or even get out of bed. I became restless in the bed. The nurse checked under my eyes and said I was pale; my blood level had gone very low because of the operation so they checked my blood again and gave me two units of blood. I was weak and dizzy until I became better after some days".* (MPR5)

Another participant who spent one week on admission before discharge but was readmitted due to anaemia during her recovery period added that:

> "*I was told they gave me three pints of blood in the theatre and I was transfused four more pints of blood in the ward because I lost plenty blood. But still I have been feeling dizzy and weak so a nurse from our church visited me… she said may be my blood was down and advised me to be taking 'kontomire', 'kantossi', and 'ayooyo'. I was not getting well, feeling very dizzy, sweating profusely and they rushed me back to the hospital and I was admitted again and they gave me three more pints of blood again before I was discharged later".* (FPR2)

The presence of anaemia due to excessive blood loss during surgery and poor postoperative nutrition impeded the recovery process of two participants. They were rushed back to the hospital and readmitted for severe dizziness, palpitation, profuse sweating and diagnosed of anaemia as reported by the participants.

4.4.7 Impaired Skin Integrity after Abdominal Surgery

Surgical incisions altered the normal functions of the skin of participants. The incisions altered the integrity of the protective function of the skin. This sub-theme presented three categories which emerged from the data. They included: description of the wound, wound dehiscence, and surgical wound infection.

4.4.7.1 Description of the Wound

Participants described their surgical wounds in different ways. Some described it as horrible, strange, fearsome, and very big, terrifying and fresh looking. The sight of the wound was not pleasant and some participants were near *fainting* when they first saw their surgical wounds.

> *"The wound was looking fearsome and scary and it was still fresh. I was afraid so one day when I attempted looking at it I became very dizzy and I was almost fainting so the nurse shouted on me that I should lie down and I put my head on the bed immediately".* (FPR15)

> *"The wound was looking horrible and made me afraid that I was going to die. When I saw the wound, in fact, I was terrified… First, when they were dressing the wound for me and I saw it I thought I was going to die if they remove the stitches because the wound was so big. It was not nice at all".* (MPR3)

The sight of the wound and the long plaster covering the wound was a source of worry to many participants which caused some to cry for the fear of permanent disability.

> *"…they put that long plaster covering the entire abdomen from my waist to almost my chest and it was just scary and terrible, it was a very big and long wound… the wound was from here* (using hands to show a little above symphysis pubis) *through the abdomen up to the top close to my chest. When I saw it I was crying because I thought I wouldn't ever walk again".* (FPR14)

> *"The first time they removed the plaster and I saw the wound, I was terrified so I shouted eeeiiih! …I was just scared if the wound was going to heal at all because it was long and too big covering the whole abdomen I was asking myself if I was going to be fine again and walk with my abdomen closed well again without becoming a cripple".* (MPR7)

The fear of seeing the wound made participants to cover their faces or close their eyes during wound dressing procedures due to the large and frightening sizes of their wound.

4.4.7.2 Wound Dehiscence after Abdominal Surgery

Wound dehiscence was reported among 5 participants. The wound dehiscence was noticed on the 5th, 7th and 9th day after surgery for different participants. The

gaped wound was sutured for one participant on the same day it was noticed. It however took between additional 5 days to one week when the rest of them had secondary suturing of their gaped wounds.

> *"The wound had opened up after the stitches were removed by the nurse when I was still on admission on the 5th day. It became very big and I was scared… There was no water coming from it and it did not smell but very painful…the doctor assured me that they were going to suture it again but it took one week before it was re-sutured…the nurses were only dressing the wound..."* (FPR8)

> *"I was dressing the wound at the hospital on the 7th day when the nurse called the doctor that my abdomen had opened up again because the wound stitches have given up. The doctor gave me some medicines to take and they kept dressing the wound and covering it with big plaster until about five days later when they stitched it again… I was worried and afraid that I was going to die. It has delayed my recovery so much".* (MPR9)

Participant FPR11, however, reported that her surgical wound gaped twice on the 7th and 15th postoperative days. She described her ordeal:

> "*Yes, the wound gaped twice, 7 days after the surgery and then 8 days after it was sutured the second time it had opened up bigger again... I was seeing deep inside my abdomen when I took pictures of the wound I couldn't watch. Very big and fresh even after one week. The first stitch was done. The second stitch, I didn't allow…I was tired, every time piercing and piercing to inject me and suture the wound… Eventually, even though I suffered it healed… I was scared, it was scary and heart breaking… The kind of wound I saw, if I see it again, I am sure I will collapse. I was thinking when I eat it will come out".* (FPR11)

All the participants who had wound dehiscence had their wound dressings done at the Volta Regional Hospital except one who had her dressing done at the nearby clinic in the village.

4.4.7.3 Surgical Wound Infection after Abdominal Surgery

Surgical wound infection was experienced by seven of the participants. They commented on discharges from their surgical wounds which became reddened and more painful during wound dressing after the 5th postoperative day:

> *"The wound was discharging some smelling fluid and the nurse said it was infected. The discharge was heavy and wetting all the bed sheets for 2 days so the bed sheets were changed frequently but subsequently, it had reduced but it was rather soaking the gauge that the nurse used to cover the wound".* (FPR15)

> *"...it got to a time the wound opened up and it was discharging very severely. So they decided not to remove the stitches, so it was still in for about one week they have not removed it and still it was discharging... It was thick brown discharges and the sides of the wound became discoloured and more painful... The nurse said the wound was infected..."* (FPR14)

The majority of the participants who experienced wound infection reported that they subsequently suffered wound dehiscence.

> *"The wound became very painful and it was discharging some light yellowish bloody fluid when the nurse was dressing it on the 7th day after the surgery. So the next day when they pressed the sides of the wound it started discharging some thick brown fluid and the following day the wound had gaped".* FPR11)

> *"I was feeling some severe pain in my abdomen and inside the wound one morning at home...In fact, I never knew the wound gaped and draining discharges until I went back to the hospital for dressing..."* (MPR6)

Most of the participants who had wound infection were outpatients and some were those doing the wound dressing on their own at home.

In summary, there were impairments in the physical functions of the participants which brought discomfort to them and affected their psychological well-being. The influences on the psychological well-being of the participants are presented next.

4.5 Psychological Well-Being after Abdominal Surgery

Psychological well-being was the third theme that emerged from the data collected from the study and it answered the third research question- What are the psychological experiences that patients have after abdominal surgeries? This major theme has five sub-themes. They consisted of anxiety and worry; feeling down; feeling lonely; and difficulty in concentration.

4.5.1 Anxiety and Worry

Participants expressed their anxiety and worry about the various experiences they encountered postoperatively. Some of them were anxious about the wound discharges when their surgical wounds became infected and gaped. The anticipated results from histopathological laboratory examination remained a source of anxiety to participants who were worried about whether they had cancer or not since their results were overly delayed:

> *"I was very worried about that huge thing* (a tumour) *that was removed from my intestine and I do not know what caused it. The doctor said it may be cancer. The thing was sent to Korle-Bu Teaching Hospital for laboratory test but the result too has still not come yet… My wound had delayed in healing… I don't know what would happen if they confirm it to be cancer, I may die, hmmm".* (FPR15)

> *"… I was so anxious honestly. This was the fourth surgery I had undergone. Already I was afraid of the surgery and praying hard that nothing bad should happen. The way the wound became infected and had delayed in healing got me apprehensive there would be another complication..."* (FPR13)

Additionally, a number of participants were anxious about the delay in wound healing and recovery:

> *"…the recovery was not fast enough for me. I don't know the time it takes to recover after surgery or the wounds to get healed completely but to my look of things mine had delayed so much and I couldn't resume work early and even when I started work I had no strength to do so many things".* (MPR10)

> *"I was very worried when the wound was infected and discharging because I was afraid it would affect my womb and fallopian tubes so I asked the doctor if I will be able to give birth. Hmmm, I don't know why they just didn't want to give me any solid answer…and has made me very worried and anxious because that was the reason my parents didn't want me to do the surgery…"* (FPR14)

The prospects of securing a future job in the security services became a source of worry and anxiety to some participants who feared the scars on their abdomen may disqualify them:

> *"Oooh hmm, I have been very worried that the operation was going to prevent me from getting my dream job of joining the Ghana Armed Forces. It has always been my wish to be a soldier and this year I was preparing for the enlistment but for the big scar on my abdomen from the surgery and the way my strength has gone down I am afraid I may be disqualified".* (MPR10)

Some female participants expressed their anxiety and worry concerning the possibility of childbirth after the surgery since that was the fear they entertained before the surgery but they had still not received any information on the outcome of their surgeries.

4.5.2 Feeling Down/ Depression

A number of participants narrated how they went through periods of depression and became psychologically down after the surgery at the early part of their recovery process whilst others were feeling down at the later phase of recovery. Their feeling of depression emanated from circumstances including the excruciating pain experienced, feeling of loss of a job and livelihood due to the effects of the surgery:

> *"…I woke up the next day after the operation, I tried to raise my body, I couldn't and I saw that it was because of the wound… I got afraid if the wound would heal, would I recover to walk and work again as a building technologist, my military ambition was dashed. My spirit went down, I was crying, feeling very bad for myself and I couldn't even eat but the pain was never sparing me".* (MPR10)

The fear of the impossibility of conceiving a child in future as a result of the gynaecological abdominal surgery was a source of depression for some participants.

> *"I don't feel happy at all. Hmmm… it was the second ectopic pregnancy, I lost all my tubes now and I would never give birth again…my husband has gotten a new lady and no one cares about me any longer…"* (Participant shedding tears and crying whiles she was consoled by the researcher and handed over to the counsellor who came in to counsel her) (FPR2)

Two participants who were staying with relatives reported that they were marginalised and insulted because they had become burdens on their relatives. Two female students who were deprived of their academic work as a result of the surgery expressed their sadness. They expressed their sadness about how they were stigmatized by their colleagues that they were having an abortion which let them to have surgery:

> *"Whenever I do any small work I would experience the pains in my abdomen so I am not doing any work again hence my relatives have been feeding me… Since I returned from the hospital my relatives just speak to me any how they want and scream at me as if I am a hopeless person because I am no longer*

having money to feed myself…I only hide in the room and cry but there is no help". (MPR3)

"I am schooling and nobody gives a special calendar to a student…and I kept thinking 'why me', 'why now' because we were writing examination at the time... I am in the final year but now I have to wait and graduate next year instead of graduating this year with my colleagues… I am a lady, the moment people heard abdominal operation then they had concluded that it was abortion and the stigma is all over around me… I was crying very much in the ward, I cried a lot. Almost all the time I was crying. I was depressed, I felt traumatized". (FPR11)

4.5.3 Feeling Lonely/ Abandoned

A number of participants stated that they were *feeling dejected, very lonely* and could not go out to visit their friends and relatives because of the postoperative pain experienced:

"*When I was home, everybody goes to work or school. I will be feeling very lonely in the house, feeling dejected, there was no one to even talk to and I could not go out because of the pain and the wound was discharging and I was feeling hopeless and bored because of the delayed recovery from the surgery".* (MPR10)

"I was lonely, very lonely and left out because my colleagues too were writing their exams at that time and no one was there for me until my mum came and for the wound, my friends would not play with me". (FPR11)

Additionally, some participants described their hospitalisation and discharge periods as lonely and times they were feeling sad because their friends and loved ones were not spending enough time with them even though they lacked adequate strength for self-care.

"I was not feeling happy, I was sad and lonely. I even regretted marrying… because of the operation, my husband does not even spend a little time with me and my friends do not have time for me again because I may ask them to help me at home since they know I don't have enough strength now". (FPR2)

Some participants reported that they were abandoned by their parents in the hospital since they reported for surgery and wondered what the reasons for their parents' attitude were:

"*My parents didn't care about me because they had abandoned me since I came for the surgery. They never visited me except my friends and my boyfriend who helped me…maybe my step father didn't allow my mother to visit me but my father, I don't know what exactly was the reason he has abandoned me".* (FPR14)

However, a few participants mentioned that they were always in good company and never been abandoned or felt lonely.

4.5.4 Difficulty in Concentration

Difficulty in concentration after the surgery was reported by some participants mostly during the early recovery phase but it persistent into the late phase of recovery among a few participants. Participants commented on their inability to recall and oblige to certain instructions given them after the surgery:

> *"The next day after the operation I was in pain and I had noticed that I was not able to concentrate on whatever they were telling me in the hospital. I was told not to remove the tube inserted into my nose (nasogastric tube) but I forgot it and I removed it anytime it was inserted. I had even forcefully removed the rubber in my penis and it had injured the hole inside my penis (urethra)".* (MPR3)

> *"After the operation I was a little confused from the third day…it was like I would not know what I was about or even what I should do and I was finding it difficult to concentrate on one thing because small time I will forget what I had planned to do for sometime before later I will remember again".* (MPR9)

Some participants described their loss of cognitive abilities to recall events. It appeared they were experiencing retrograde amnesia and they expressed its effect on their official duties:

> *"I cannot concentrate on doing things after the operation. I easily forget things and I don't remember to do some things that they told me to do in the hospital. When I returned home I realised I was unable to recall the people who credited my goods and owed me money before I went for the surgery".* (FPR2)

In summary, the psychological well-being of participants was affected during their recovery from surgery. They expressed their anxiety and worry about events surrounding their recovery. Some participants felt abandoned by their relatives after the surgery but their social interaction with their friends and loved ones brought hope to them. Details of the findings on the social well-being of participants are presented next.

4.6 Social Well-Being

Social well-being is the fourth theme that emerged from the study and it answered the fourth research question- What are the social experiences that patients have after abdominal surgery? This theme has five sub-themes and these are reduced social activity; dependence on others; interest in surroundings; social isolation; and social support networks.

4.6.1 Reduced Social Activity

Participants expressed how their engagement in various social activities have been affected and significantly reduced after their abdominal surgery. They cited reasons such as reduced physical strength and diminished energy to perform social functions:

> *"Nowadays, when I go for those social gatherings like funerals and church project works and I join them, I could not do the work because I would become very tired and weak…I have been going but when I am sitting down that is when they will be saying those things like 'wouldn't you work', 'don't you have any work to do to help us'. So I don't want to go again".* (FPR2)

Some young male participants described how they could not join their colleagues in playing games to entertain themselves as they used to do before the surgery:

> *"I cannot play ball since the operation was done for me. I don't even play any games with my friends again. Now when my friends are doing those strenuous exercises I only watch from a distance but I don't even go close to them again because I am afraid they would use their hands to hit my abdomen".* (MPR3)

> "*Whenever we close from school we would go and play some football before we go home so as for at now I am not able to do that... Because I don't have enough strength and I fear people injuring my abdomen I have not been able to play any game with my team again. Anytime I go there to watch they normally ask wouldn't you play, why you not playing…"* (MPR10)

A participant who attempted to participate in some social activities commented on her experience of tiredness, pain and how she lost energy and interest in such activities.

4.6.2 Dependence on Others

The majority of the participants expressed their discomfort with their dependence on other people for the performance of various activities of daily living. They, however, stated

that they needed to depend on other people to help them perform such activities since they lacked the necessary energy and strength to do so after the surgery. They said:

> *"My clothes became dirty… I needed a bucket of water to be sent to the bathroom for me but I feared to call my uncle's daughter because I felt I was depending on her too much. I just tried to do it by myself but I fell down with the water because the strength was not there. She usually frowns her face when helping me".* (FPR14)

> *"I feel bad worrying someone to carry a bucket of water to the bath house for me all the time and doing some simple things for me. Sometimes the person would be in the middle of something and I have to wait for him to finish what he was doing before attending to me and that usually gets me late to school".* (MPR10)

A few participants tried to be independent by preventing their relatives from identifying their needs such as dirty clothes since they tried to hide them from their sights:

> *"I felt I was worrying my mother and the other people I was depending on so much. My mother has abandoned her work to attend to me…Sometimes I hide my dirty clothes away from them because I don't want to worry anybody to wash them for me... I tried to wash them but with much difficulty".* (FPR12)

A number of participants stated that they were uncomfortable depending on others because that takes away their sense of autonomy and felt they had overburdened others.

4.6.3 Interest in Surroundings

Four participants stated they lost interest in the various activities during their periods of hospitalization due to pain and discomfort but they resumed their interests in programmes such as watching football games when they were discharged home:

> *"I lost interest in everything when I was in the hospital because of the pain and I was only praying to be fine and get discharged faster... When I was discharged home I was watching my favourite English Premier League matches".* (MPR10)

Three participants narrated how they resumed showing interest in their usual television programmes as soon as they had some strength and their pain subsided in the hospital:

> *"When I feel bored I used to watch TV* (television) *at the nurses' station… Hhahahaha* (laughing)*, 'Kumkum Bagyaa'* (Telenovela translated into the Twi language related to relationships) *and football games were the programs I usually watch on the TV because I want to follow the series and not miss them".* (FPR1)

> *"I watch television… I didn't understand the languages they were speaking but I was watching the pictures and sometimes I asked the other patients around and we discussed what those politicians and others were saying…it was after one week when the pain went down and I started watching TV in the ward".* (FPR15)

> *"In the hospital, I have been listening to the news on the radio and I usually watch TV (television) when I feel lonely. We have been discussing the current issues happening in the country, how prices of everything have been rising fast and we discuss how the politicians have been deceiving us…"* (FPR2)

A number of participants said they discussed political campaign messages and promises of politicians during the electioneering periods when they were hospitalised after surgery. Those discussions were used by the participants as diversionary measures from their boredom.

4.6.4 Social Isolation

Almost all the participants reported that they were isolated from participating in various social activities after the surgery. A number of the participants mentioned that they were not comfortable with their weight loss hence they isolated themselves from social gatherings to avoid stigmatisation:

> *"When I tried attending a funeral of a family member, people questioned whether I have recovered and having strength before coming and some people discussed me and gossiped about how I have grown lean… they were trying to stigmatise me as an HIV AIDS patient… Social gatherings are on hold until things have become better and I put on weight and have enough strength".* (FPR15)

> *"Some time ago when I went for a funeral and I joined the people who were cooking, they were sacking me and they said 'leave here', 'what are you doing here', go and get some place and seat' and they kept shouting on me until I left. They would be saying a lot of things including gossiping that I had grown lean and probably I was having HIV AIDS and others which caused the ectopic pregnancy. Now I have decided to excuse them until I fully recover".* (FPR2)

> *"I am not having the strength to walk to funerals or weddings or even parties. Moreover, people may ask why I am not doing what they are doing and this can even bring confusion and quarrel between us… Because the strength to function is not yet returned, I have decided to isolate myself from those social gatherings and concentrate on my healing process".* (FPR1)

Four participants lamented about how other people isolated them from social programmes because they lacked the necessary energy to perform various functions that were expected of them at those places. Some participants reported that their friends had isolated them from attending social events because they feared they were unfit to partake in such programmes. A minority of participants considered themselves to be vulnerable to abdominal injuries which could affect them hence they took great caution to avoid social events:

> *"Maybe in the cause of those social programmes someone can just hit me with something. I am scared of walking in crowded places nowadays because the person may not do it intentionally but once I have a hit in the abdomen the harm has already been caused and I cannot do anything about it so I am very careful now about going out for those social gatherings".* (FPR12)

4.6.5 Economic Burden

The data suggested that the surgery and the recovery process had economically burdened the participants and their relations. The cost of treatment, cost of living, and loss of business opportunities were the three categories that emerged under this sub-theme.

4.6.5.1 Cost of Treatment

The cost of treatment which included the cost of surgery, medications, laboratory investigations and hospitalisation was considered by eleven (11) of the participants as high:

> *"There was no money to buy medicines prescribed for me after the operation. The drugs were expensive and every day the doctor requests expensive laboratory tests averagely GH₵ 60.00. When I was discharged, I remained in the hospital for two weeks before my uncle was able to make part payment of GH₵1,600.00 and it was left with GH₵700.00… I needed to go for review at the hospital but I don't have money to pay them".* (MPR3)

> *"I am bankrupt because I have used all my money on this operation thing, review, treatment, medications and everything is expensive…last month I was feeling dizzy and I inadvertently dropped my phone in a bucket of water…* (FPR11)

Three participants narrated how their children and spouses resorted to borrowing money from people in their localities at high interest rates to pay part of their hospital bills:

> *"When I was on admission my children went to the owner of the corn mill I was operating to borrow GH₵1,000.00 to pay part of my hospital bills but he refused to lend to us but another man borrowed GH₵ 800.00 to my wife at the interest of 60% per annum because there was no option and that was used to buy prescribed medicines for me and pay part of the hospital bills".* (MPR5)

Participants stated they were financially challenged hence they applied for personal loans from their banks when they were on admission and they used it to offset their bills:

> *"I was not financially prepared for the surgery because it was an emergency. The fourth day after the surgery, I called my bank manager and discussed with him and he granted me some loan… I sent my mother who did the documentation for me at the bank which I signed at the hospital and they gave me GH₵2,000.00…I used it to pay for the medicines and the hospital bills".* (FPR12)

The cost of daily wound dressings at the hospital coupled with the cost of transportation was reported by participants to have placed a great financial burden on them.

4.6.5.2 Cost of Living

The cost of food and other daily expenditure after surgery was stated by participants as an economic burden to them because their usual life styles changed after the surgery. Participants said they went hungry in the hospital due to lack of money to purchase food:

> *"The hospital used to serve me food but when I was discharged immediately they stopped feeding me. It became very difficult for me to get food to eat because my relatives left me to look for money to pay my bills… I sleep without eating and wake up with abdominal pains because there was no money to buy food".* (MPR3)

The lack of energy and money after the surgery reportedly made a 63-year-old man hungry at home. He became weak and was given food later in the night by his wife:

> *"One evening when my children couldn't bring me any foodstuffs or money, I became very hungry but I had no money to buy food… my wife used a touch light to the farm to uproot cassava and sold some before we were able to get money to prepare food around 10:00 pm when I became weak because of hunger".* (MPR7)

Participants bemoaned how changes in their lifestyle financially burdened them:

> *"The types of food I eat have changed…I don't normally buy a lot of fruits, but for the surgery, I have to buy fruits and they are expensive. After cooking a particular food, I just lose appetite, and I have to cook another one…I have bought low slippers because of the abdominal pains and dumped my precious high heel footwears… now I am struggling to survive".* (FPR11).

4.6.5.3 Loss of Business Opportunities

Four participants lamented on how their loss of energy and strength as a result of the recovery process of the surgery has caused them to lose significant business opportunities:

> *"I am seriously having financial challenges. Previously I have been weaving 'kente' clothes and doing some manual jobs to get some money for a living but because of the operation all my customers are avoiding me because I don't have the energy and strength to weave enough to meet deadlines".* (MPR3)

Some female participants who have made huge investments described how they lost large sums of money due to their hospitalization and delayed recovery from the surgery.

> *"I prepare dish washing liquid soap on a large scale and supply many shops in Ho but because of the long stay in hospital I have stopped and the customers have gone and I have lost money so much. The surgery has short changed my business ventures and the flow of money from the business has stopped now".* (FPR8)

> *"I have spent all the money I have on the operation… I was having about seven hectares of groundnut farm and 12 hectares of maize farm but because of the operation I couldn't maintain the farm well and I couldn't even harvest the produce since there was no money to hire labourers and I was not there to even monitor them properly. All my investments have gone waste".* (FPR15)

One merchant narrated how her shop collapsed when she was hospitalised for surgery:

> *"I lost a huge sum of money about GH₵ 6,000.00 because of the operation. I placed my niece in the shop when I went for the operation and before I returned the shop was empty meanwhile no honest account was rendered to me. Now, I lost many of the customers to the other competitors"… I don't have the capital to restock the shop because most of the money was used to pay my hospital bills".* (FPR8)

Participants who worked in the building industry recounted how they lost a number of building contracts. This was because their customers considered them not strong and healthy enough to complete work within schedule. Jobs meant for participants were given out to other 'healthy' contractors to do even though they won those contract works prior to the surgery.

4.6.6 Social Support Networks

Participants received various forms of social support from significant others which they considered very essential and immensely helpful for their recovery. Social support was received from spouses, family members, friends, religious affiliations of participants, health personnel, and colleagues from the workplaces of participants. All the married participants received support. Five categories emerged under this sub-theme and include spousal support, family support, and support from friends, support from religious affiliations, support from health personnel and workplace support.

4.6.6.1 Spousal Support

The spouses of the participants provided financial, emotional and religious support to them. Ten of the participants were married at the time data was collected for the study. Both male and female participants received financial support from their spouses:

> *"My husband was very supportive throughout the period of my sickness. The very day I was admitted for surgery he sent me money which was used for buying most of the medicines and other things initially and he came again to pay my bills when I was discharged but he has still been sending money for my review".* (FPR13)

> *"My husband paid for the hospital bills and bought most of the drugs for me. He bathes and feed the children, sends them to school and back. He cooks any food of my preference and washes our clothes and plates. He sweeps the house and does the scrubbing of the washrooms since I had the surgery". (FPR12)*

Some male participants recounted the financial and emotional support they received from their wives during their recovery process:

> *"My wife was always with me in the hospital. When I was having severe abdominal pains and the wound was discharging she came around to encourage and comfort me. She gets my soft 'eworkple' ready in time and took over the upkeep of the house with proceeds from the sales of vegetables from her farm…she sends the bucket of water to the bathroom for me and usually accompany me to the hospital for review with her own money".* (MPR5)

The religious support of spouses was highly appreciated by a number of participants and it was considered very crucial in aiding their recovery:

> *"My husband declared fasting and prayer for himself throughout the period of my hospitalisation to seek spiritual intervention for my healing. He consulted our pastor and they visited and prayed for me. When I was having nightmares, my husband brought anointing water and when I started using it I stopped having those bad dreams. He always intercedes in prayer for me".* (FPR8)

> *"He prays for me to regain my strength and energy to work again".* (FPR12)

4.6.6.2 Family Support

The Ghanaian family units function in providing the appropriate and desired help required by each member which is socio-culturally recognised as part of their responsibilities. All of the participants mentioned that they received appreciable financial, emotional, and spiritual support from their mothers, fathers, brothers, aunts, children and the head of their family. Some participants whose relatives were health workers further received various forms of health education on their disease conditions, medications, and wound care from them:

> *"The surgery put pressure on me financially… my brother really helped me…he also sent me money in the hospital for the surgery. If it had not been his support I would have been embarrassed because I exhausted all my money in the hospital. The money from my brother helped me so much".* (FPR13)

> *"My children, brothers and sisters all sent me money… Our last born too stays in Ho here and she always visits me and helps me in the house and when I need something, I call on her and she helps me out. I only depend on them to survive since I have no money of my own after the operation".* (FPR4)

A participant who needed blood transfusion said his biological brother freely donated his blood for her and brought six of his friends who also donated blood to save her life:

> *"…My brother quickly went to donate his blood to save my life. He brought six of his friends but they took blood from four of them for to me…"* (FPR2)

A participant expressed how her family members came out to support her in diverse ways during her hospitalization and her stay at home after her discharge:

> *"I sent all my four children to my sister and they were living with her to ensure their safety before I came for the surgery…my mother, mother-law, and nieces were there and they help me with washing my clothes, cleaning the house, cooking for me and fetching water. My brother and my husband have been sending fish, foodstuffs and money to support us. They were always there for me and they helped me throughout the operation time and still doing them".* (FPR1)

Some elderly men described how the heads of their respective families organised their members and convinced them to contribute money to help. They sold their family properties to help pay hospital bills of the participants:

> *"The whole family was supportive. Our family head organised them and levied everybody to contribute money to pay my hospital bills and they added their money to the little my wife and children brought. My daughter who is in Accra had also been sending money to buy medicines for me".* (MPR7)

> *"I was withheld in the hospital for almost a month because I could not pay my hospital bills. The head of my family met with my people and they sold some oil palm trees* (Elaeis guineensis) *and three Odum* (Milicia excelsa) *trees in my father's forest which was used to defray part of the bills.* (MPR5)

4.6.6.3 Support from Friends

Friends were a great source of emotional and financial support and they provided other forms of support to help the participants during their surgery and recovery periods. All the participants said their friends visited and offered some assistance to them. Participants relied on friends who took away their boredom as they kept them good company:

> *"My friends who heard of my surgery always come every morning and evening to visit me… we chat, crack jokes, and they say things that make me laugh and sometimes forget about the pain I was going through… They encouraged me to get well faster and join them play for our football team".* (MPR10)

A participant who appreciated how her friend took custody of her only daughter when she was hospitalised for the surgery added:

> *"My friend, the seamstress, took custody of my daughter when I went for the operation. She comes with her to visit me in the hospital and brings me fruits like banana and avocado pear. She always comforts me and keeps me company when I was feeling sad and lonely in the hospital and the house…"* (FPR2)

Some participants expressed joy about how their friends provided them with financial support, brought them food, and fruits during their visits to them at the hospital and home:

> *"Initially they didn't know I was operated. Later on, they always come in their numbers, some give me money, and others bring oranges, banana, and add money to plenty fruits. My friends prayed with me when they visited".* (MPR9)

> *"My friends buy 'koko'* (porridge) *for me every morning when they visit me at the hospital and at home… They gave me some money to buy food. They took me to the place we usually weave the 'kente' so that I would stay with them and not feel lonely in the house. They buy food and we eat there…"* (MPR3)

Participants relied on their friends for emotional and spiritual support and they always prayed and communicated with them when they were feeling lonely and sad.

> *"I was feeling lonely and sad in the hospital when my parents abandoned me… my friends pay me visits all the time and as soon as they leave the hospital they begin to call me on phone again. They give me money, food and one person also brought me a dozen of new panties and night gown".* (FPR14)

> *"My friend is a pastor…he came with two other pastors to pray for me and seek divine healing and stop the work of the devil in my life. He was very instrumental in my healing and he visits me every day to check on me".* (FPR13)

4.6.6.4 Support from Religious Affiliations

Many participants mentioned that they received spiritual, emotional and financial support from their respective religious affiliations**.** Church members were organised and delegated by their church leadership to visit their members who had surgery. Financial support came from contributions in church purposely to assist the participants on admission:

> *"My head pastor himself visited me with his wife and some church members. They presented an envelope with a huge sum of money about GH₵ 320.00 which I was told was contributed in church purposely to support me. I was very much impressed. They prayed for me too…"* (MPR9)

Some groups within the church to which the participants belong also made special cash donations and offered prayers to assist four participants:

> *"I belong to the C.Y.B.* (Church Youth Builders) *group. They came in their numbers to pray for me and sung some songs for me twice. On their second visit, our leader gave me an envelope containing GH₵ 300.00 which he said was a contribution from the entire C.Y.B group for me".* (FPR12)

> *"My pastor called and informed me that they have declared three days fasting to seek divine healing from God on my behalf…the prayer warriors have been meeting and praying for me and they also come to me during visiting hours in the hospital to pray with me. They were very helpful".* (FPR1)

The members of the Islamic religion provided emotional and spiritual support to their member during hospitalization and at home:

> *"My Muslim brothers and sisters were very supportive. They were seeing me every day, some were telling me they have been praying for me and others were chatting with me on social media, calling me always to wish me well".* (FPR11)

4.6.6.5 Workplace Support

All the participants received some form of support from their workplaces through their superior officers, colleagues or heads of departments. The participants appreciated how those valuable gifts and donations were timely and supported their recovery.

> *"My manager visited me with three of my co-workers and he told me not to worry about work. I should just relax and take the time to recover well. He gave me some GH₵ 100.00 to buy medicine. The third day he sent two other staff that brought two cartons of 'Voltic' mineral water and non-alcoholic drinks to me... I started working only two weeks ago but I have been paid all my salaries".* (FPR12)

Participants narrated how their leaders at their work places rescheduled their duties to suit them without having any negative repercussions on their remunerations.

> *"My headmaster has given me one month to rest…my classes were given to another teacher but I was paid my full salary… When I resumed recently, I discussed with my HOD* (Head of Department) *that I can mark like a few exam scripts but not all so he has given me only a few to mark but I am paid the required allowances to help me. They have been of great help to me…"* (FPR13)

> *"When I started going to work, my colleagues know I am not strong again so they were not allowing me to do the lifting of blocks, climbing the building and carrying mortar and other heavy duties because of my low strength… they give me my share of the money accurately without discriminating".* (MPR9)

Some participants were impressed by the emotional support they received from the visits of their co-workers and bosses from their work places which reduced their boredom.

> *"The Headmaster sent some of the teachers who visited me at the hospital and appreciated my condition; they sympathised with me and encouraged me. The headmaster later called that I should be at home, if I get well before I resume school". Now he doesn't allow me to do every work".* (MPR10)

> *"Some of my staff came to visit me… we are over 125 teachers in the school and some came in three badges and when I was discharged others also came to visit me…they brought biscuits, cartons of drinking water, soft drinks, and some also gave me money. They took away my boredom".* (FPR13)

In summary, the social well-being of the participants was affected when they were hospitalised but family members, friends and colleagues from their places of work provided immense support that aided the recovery of the participants. The performance of the self-care activities of the participants contributed to recovery. These are presented in the next section.

4.7 Altered Performance of Self- Care Activities

This theme emerged from the data and it answered the fifth research question- What are the self-care activity issues that patients experience after abdominal surgery? The ability to perform self-care activities was altered among all the participants. The performance of activities of daily living resumed gradually and participants increased their activity levels as they progressed with recovery. Participants were unable to perform their personal hygiene immediately after the surgery but it resumed progressively. Two sub-themes emerged from the data and these were altered personal hygiene practices and re-establishing everyday life activities.

4.7.1 Altered Personal Hygiene Activities

The difficulty with the performance of personal hygiene was reported by participants. They were unable to get up from the bed and take their baths, clean their teeth, and wash their personal clothes due to lack of energy and strength coupled with pain in the first few days after the surgery. They were given bed bath by the nurses for a few days until they resumed self-care:

> *"…The nurses were bathing me in the hospital until I could do those things on my own later before they stopped. I could not bath on my own because of the pain and I was feeling very weak and tired and I couldn't get up from bed".* (MPR3)

> *"The nurses bathed me early in the morning in the bed for three days when I was in pain, weak, helpless and couldn't do anything. They held me to get up and brushed my teeth for me until I regained a little strength to do them".* (FPR15)

A number of participants expressed their discomfort with the bed bath given to them by the nurses because they felt their privacies were invaded and they were uncomfortable with another person bathing them in bed and helping them groom themselves:

> *"On the first day, the nurse bathed me but she realised that I was not comfortable with her bathing me. I was not able to do the bathing well because of the pain and the discomfort from the wound so I pleaded with the nurse to allow my wife to come into the ward to bath me and that was better for me".* (MPR6)

> *"The nurse came to bath me or clean me with towels in bed and she helped me cleaned my teeth but I was not happy about that because I didn't want anyone to see my private part as she was doing and touching everything just like that so I told her to allow me bath myself after the second day"…* (MPR10)

All the fifteen participants narrated that they were restricted from bathing 'normally' all over their bodies. When bathing, they had to prevent water from coming into contact with the surgical wound hence they always felt they were not clean after taking their bath:

> *"I only cleaned myself. I don't bath normally…I used sponge and soap to clean my body whiles sitting down and I was not using water on my body like how proper bath was done so I always ensured water doesn't touch the plaster or the wound until the wound got healed before I bathed properly".* (FPR4)

> *"I was not comfortable with that kind of bathing. I know that bathing means using water and soap to clean the body but this one I was only cleaning my body in the room without using water properly. I was feeling like I was not bathing and sometimes I would feel like my body was not clean and feeling dirty".* (MPR7)

Due to pain and discomfort, three participants said they were deliberately skipping their baths for a day or two and some could not wash their dirty clothes but hid them:

> *"At the hospital, it was difficult for me to bath so sometimes I couldn't even take my bath for two days because of the pain and discomfort from the wound when bathing. Whenever I tried to stand before bathing then I feel so much pain in my abdomen and the flesh in the abdomen would be pulling me and increasing the pain so I was not bathing all the time as the pain continued…"* (MPR5)

> *"I could not bend and wash my clothes because the wound was painful and pulling me and I was feeling dizzy… I was hiding my dirty dresses in my bag until I used all before I begged my cousin to wash them for me…*" (FPR14)

4.7.2 Re-Establishing Everyday Life Activities

Resuming everyday life activities was a challenge to all the participants who said they started performing those activities gradually because of their poor strength and insufficient energy coupled with excessive fatigue. They were unable to perform household chores when they were discharged home. They, however, resumed their usual duties at their workplaces gradually but with some inaccuracies due to insufficient energy. This sub-theme has two categories which are re-establishing household activities and occupational activities.

4.7.2.1 Re-Establishing Household Activities

The re-engagement of participants in their household activities was reported to be a great challenge to almost all of them hence they sought assistance from the beginning until they regained enough strength and energy to resume those activities on their own gradually:

> *"Those house chores that I used to do like bathing my children, taking care of them, cooking, washing and cleaning the house and those things, now I don't do any of them because the energy is not there to stand or walk for long to do such things. One of my cousins was around and she took over and was doing everything in the house until recently when I started gradually".* (FPR13)

> *"I was not able to do anything as a woman of the house like cooking, pounding 'fufu', washing clothes, cleaning and others but my daughter was helping… Now I can walk, grind pepper, prepare soup but I am unable to prepare 'akple' because it demands more strength and it may put more pressure on the wound".* (FPR8)

Many of the participants reported how stressful and energy demanding it was for them to resume performing household chores on their own when everyone was expecting them to do so.

> *"I was feeling very tired after a short distance walk and when I manage to sit down to wash or prepare soup or grind the pepper then the rest of the day or the night I would be very restless because of bodily pains and exhaustion".* (PRR8)

> *"I have been trying nowadays to resume activities on my own but when I cook and sweep and do some cleaning and any of those activities in the house in recent time then I would be feeling very tired, suffocating and breathless".* (FPR15)

4.7.2.2 Re-Establishing Occupational Activities

Re-establishing the usual duties at the workplaces brought challenges to the participants in diverse ways. They were uncomfortable they could not perform their duties efficiently:

> *"I get to my office by 6.20am. At work, I embark on my normal activities, visit places at the barracks and the whole military garrison and I conduct parade as usual and deliver messages to the soldiers. But it worries me I cannot lift objects and perform the various military drills and regular training as a soldier due to the pain and instructions they gave me in the hospital".* (MPR6)

A final year university student bemoaned how the surgery affected her academic activities:

> *"I can't study effectively because I need a lot of energy to study. I need to sit up and learn for hours and there is no energy. The moment I take the medications, the next minute I feel drowsy and sleepy. I cannot carry my laptop and those heavy books around. It is really affecting my academic work seriously* (she deeply emphasised it)*".* (FPR11)

Many participants stated they could not work for the required number of productive hours and they lamented how they were restricted from working when they resumed:

> *"I used to farm and I have been weaving 'kente' cloth but now I can only weave for a few hours and do only very small work for a day because of my poor strength. It would take me a long time before I can weave one full 'kente' cloth but those days before the operation I could weave one in a few days".* (MPR3)

> *"I am a teacher but now they have given almost all my classes to other teachers because my headmaster said I wasn't strong enough to prepare students for the impending Senior High School exams… My HOD* (Head of Department) *came for the few examination scripts he gave me to mark and gave them to other teachers because if I mark a few I have to sit for a while and rest and it delays".* (FPR13)

In summary, participants experienced challenges with the performance of their personal hygiene when recovering hence they were bed bathed until they gradually regained their self-care. Work place activities were disrupted due to fatigue and poor strength. They, however, adopted various measures to cope with the challenges they encountered during their recovery process. The coping strategies adopted by the participants are presented in the next section.

4.8 Coping Strategies Used by Participants Recovering from Abdominal Surgery

Coping strategies refer to the self-adopted measures used by the patients to ease their challenges with the recovery process. Coping strategies were not part of the constructs in the conceptual framework used for the study but it was a key finding from the study. The participants described the various measures they adapted to cope with the physical symptoms and the side effects of their medications, altered physical functioning, challenges with psychological and social well-being and their frustrations with resuming self-care activities after the surgery. The sub-themes identified from the data were self-motivation to recover and survive, cautiousness, perception of cause of illness and acceptance, religiosity, and self-medication to enhance recovery.

4.8.1 Self-Motivation to Recover and Survive

Self-motivation was employed by almost all the participants when they were recovering from surgery. Participants narrated how they relied on their inner strength to energise themselves to move on and help themselves to regain their physical strength. They said they could not bear the challenges of pain and weakness for too long hence they tried to take up the challenge to resist the pain and gradually rose up from the bed and eventually walked although in pain. The participants described how their inner strength and strong desire to recover and survive to fend for their children strongly motivated them to put in extra effort to do things to survive:

> *"I must live. I cannot die in this suffering. No, I must rise up and do everything within my capability to defeat this pain and be on my feet again".* (FPR12)

> *"I kept having this strong feeling within me to help myself and move on and not allow myself to die here. I decided to start getting up gradually and I walked to the toilet and bath with little assistance and I was happy when I started walking so it made me to practice more until I was better".* (FPR1)

Some participants listened to the words and actions of the nurses who persistently complained participants were disturbing them. Moreover, some other nurses were encouraging them to get up and resume their self-care. These words and actions from the nurses gave them some inner challenges which motivated them to resume their self-care:

> *"I called the nurse to help me get up and visit the toilet but she shouted on me and said I was not the only patient in the ward and new patients were being brought from the theatre that needed attention so I should get up and help myself. I should not disturb her with toilet and bath issues again. I felt bad but I decided to start doing things on my own without the help of people".* (FPR5)

> *"I begged the nurse to bathe me because I was feeling so much pain but she said she could not bath me because they were only two on duty and for the whole day I didn't bath until evening time when I bathed on my own and cared for myself and since that day despite the discomfort I do them".* (FPR11)

A number of participants added that they took inspiration from their friends and relatives who visited them in the wards and encouraged them to look at their young children and endeavour to help themselves and do all things possible to aid their recovery and survival:

> *"My mother and my cousins brought my two children, a girl of age 6 years and the boy almost three years, who were all over me and calling mama, mama but I couldn't get up and play with them so my mother asked me to help myself otherwise if I die there would be no one to take care of my children. This kept ringing a bell in my ears all the day and night so I began to get out of bed and always making efforts to survive and recover fast to meet my children".* (FPR13)

4.8.2 Cautiousness

Participants narrated how they became very cautious about everything that could have any impact on their recovery. They stated their strict compliance with instructions given them to prevent complications such as preventing water from wetting the wound to prevent

infection. Additionally, participants always endeavoured to avoid strenuous activities and all activities which could have any negative implication on their recovery from the surgery:

> *"I strictly obeyed all the instructions given me by the nurses and doctors in the hospital. I never lifted any heavy materials and not even a bucket of water and I avoided training and strenuous exercises…I dressed the wound always and I never bathed onto it…I eat soft food just as I was told by the nurse…"* (MPR6)

> *"The nurses and doctors gave me some instructions so I obey them without any complaints…I don't bath onto the wound despite I was not comfortable, I don't lift buckets of water or any loads and I took my medications judiciously".* (FPR8)

Participants added that they sought information about types of food to eat to heal their joined intestines and recover safely. They adopted the use of the internet and asking other health workers including their relatives and people who previously had surgery for pertinent information. This reportedly augmented their recovery successfully without complications:

> *"I asked the doctors, nurses, and relatives who had surgery before about the things I should do and the food that would help my quick recovery. I also read books and on line about the intestines and ruptured appendicitis, peritonitis, and strategies for early healing and how to gain energy and recover fast…"* (FPR11)

> *"I just saw a dietician attending to a burnt patient in the ward so I asked him, which food I should take to heal my intestines fast… He said I should be taking one egg daily and enough natural fruits on an empty stomach to heal the intestines fast. When I went home I read about the small intestine on line and I realised that about 90% of digestion takes place in the small intestine".* (FPR13)

Participants described their cautiousness about avoiding further psychological stressors as they always tried to co-exist peacefully with one another. They tried to cope by living together as brothers and sisters in the ward. They supported each other, shared toiletries and food and were interested in the welfare of one another while in the ward:

> *"Oooh normal relations, I don't have any problem with anybody in the ward. We live together in harmony just like friends. We do share things in the ward for instance if you don't have something like sugar, toilet roll, soap and others you can ask one another and we were living like a family unit in the ward".* (FPR13)

> *"We were like a family in the ward and careful not to have problems with one another. If you receive food from the house or the hospital food and others are hungry we give to each other… There were elderly patients who settle disputes among us in the ward if any arises and we all tried living in peace".* (MPR9)

4.8.3 Religiosity, Superstitious Beliefs and Acceptance

Participants immensely demonstrated their increasing faith and hope in God. It was clear that majority of the participants tremendously immersed themselves into the word of God. They had beliefs in Jesus Christ as their lord, saviour and healer. Their hope was that God would surely bring them divine healing and they sounded very religious. They became more involved in religious activities such as singing praises and worship songs, praying more, read their Bibles and Quran more often to seek divine healing from God or Allah:

> *"I listen to praises and worship songs on my phone and pray and I have hope and true faith in God to heal me. My friends in the church and pastor have all been coming to help me in prayers to seek divine healing form God who is the only one who can give and take our lives".* (FPR2)

> *"I read my Quran regularly now and do all the five prayers. My uncle and Iman who visited me also pray for me for Allah to have mercy and heal me".* (FPR11)

Four participants believed that their illnesses were caused by supernatural ways and they identified some family members and workplace colleagues whom they suspected have either bewitched them or used "juju" (charm, amulet, magical or fetish supernatural powers mainly of West African origin) to attack them spiritually:

> *"I didn't understand how my intestines got rotten and my abdomen became distended all of a sudden. I believed my uncle who had always wanted to kill me because of some land issues was the one who juju me to die but the God Almighty redeemed me. I went to the spiritualist at… to consult and find out what was happening and it came out there that I should watch my uncle".* (MPR5)

> *"My aunty said I was not going to have children in my life… I went to some prayer camp and the prophet said my aunt used her witchcraft to put something in my womb which caused the ectopic and all the problems I went through. I have some herbs I bath and anointing oil now for protection". (FPR12)*

All the participants accepted their conditions and always prayed for speedy divine healing.

> *"Only God knows what caused the intestines to get rotten... I have accepted everything and I leave it all to God who gives me divine healing".* (FPR15)

4.8.4 Self Medication to Enhance Recovery

It was clear that majority of the participants were not satisfied with the amount of medications given to them in the hospital and some complained they were not given any medicines to take at home to enhance their recovery. These 12 participants resorted to self-medication by the use of over- the- counter orthodox antibiotics and analgesics as well as herbal medicines and alcoholic concoctions to enhance their recovery.

4.8.4.1 Self- Medication with Orthodox Medicines

Participants stated they purchased orthodox medicines from the chemical shops to relieve their pain and promote their recovery. It was apparent most of the participants could not differentiate antibiotics from analgesics and they used the medicines between two weeks and two months without prescription:

> *"The drugs I was given at the hospital got finished and my friends said amoxicillin can help the wound to heal faster in my abdomen so I bought some in the drug store… I took two capsules every day, morning and evening for two weeks at home after discharge and the pain I was experiencing stopped".* (FPR1)

> *"I was taking amoxicillin capsules and other capsules that were having some 500 and 400 written on them for two months…I bought them from the drug store in town… the pain reduced so much and the water coming from the wound also gradually stopped when I took the medicines".* (MPR7)

> *"I mixed the medicines to help me manage the pain properly. I took B-co* (Vitamin B-Complex), *brufen, diclofenac, red and yellow capsule* (amoxicillin) *together with small white pills that have V written on them* (Penicillin V). *A friend in the drug store selected them for me to help my wound to heal quickly". (MPR5)*

4.8.4.2 Self- Medication with Herbal Medicines and Alcoholic Concoctions

Some participants resorted to the use of herbal medicines and alcoholic concoctions to relieve themselves of the postoperative pain. They were mostly supplied with the bark of trees and the dried roots of different plants. These roots and bark of trees were either boiled or mixed with locally distilled alcohol 'akpeteshie' which they drunk anytime they experienced pain or abdominal discomfort.

> *"I have some friends who previously had surgery and they brought some local herbs together with the bark of a mahogany tree* (Khaya senegalensis) *and spices which my wife boiled for me…I took one calabash every morning, afternoon and evening for about two months for the wound to heal fast".* (FPR12)

> "*I prepared concoction or bitters by mixing the dried bark of the mahogany tree and the dried roots of some particular trees with 'akpeteshie' which helped reduce the pain and the abdominal discomfort. When the alcohol got finished on top of the bitters, I refilled it so I can get rid of the pain and get some strength".* (MPR7)

It was identified from the interviews that participants convinced new patients who secretly used alcoholic concoctions in the ward unknown to the nurses and doctors. A participant vividly narrated:

> *"The patients who had their operations before me advised us in the ward to use some special concoction because it was helping them. They said when I continue to complain to the nurses and doctors about my pain they would ignore me and label me as 'chief complainant'. One day, during visiting time, a man secretly brought the bitters made of the dried roots of some plants mixed with 'akpeteshie' to his relative (patient) in the ward. The patient took the bitters and gave some to another patient in the ward. They all praised how the alcoholic concoction was working so they encouraged all of us to use some for the pain. They showed us where to get some in town which we did. I realised the bitters was very effective in stopping the pains hence we also taught the new patients who came to the ward after the operation before we left…"* (MPR5)

A participant revealed that his friends introduced him and he adopted the smoking of Indian hemp or marijuana ('wee') to relieve his painful surgical experiences at home.

> *"My friends visited me and saw how I was feeling pain in the room and they told me there was some drug to help me. They brought the 'wee' or the marijuana and smoked and gave me some to try and it was very strong in relieving the pain immediately…Since that time I have been smoking marijuana anytime I feel pain and abdominal discomfort and the pain resolves soon after smoking".* (MPR3)

In summary, many of the participants resorted to the use of orthodox and alternative medicines which they believed helped them to cope with their postoperative pain and discomfort. A participant smokes 'wee' which he considered a strong analgesic to cope with his pain. He was referred to receive rehabilitation from a counsellor at the Volta Regional Hospital, Ho since he was becoming dependent on it for pain relief.

4.9 Health System Factors

This theme incorporated the activities of the health care workers, mainly nurses, doctors, and cleaners who interacted directly with the participants and provided services that had impacted on their recovery. The participants echoed how the health system processes and procedures influenced their recovery during their period of hospitalization. They recounted some health system issues that existed during their stay in the hospital and these issues formed the sub-themes under this major theme. Three sub-themes which emerged from this theme were: inadequate health education, insufficient medication, and attitudes of health personnel.

4.9.1 Inadequate Health Education

Health education on the conditions of participants, possible complications and the processes of management were expected to be given to the participants. Participants expected adequate information on their self-care to enhance their recovery but this was not adequately

delivered. Education on medications, reasons for procedures such as insertion of NG tubes, urethral catheters, was reported not adequately done. They reported that they had not been given enough education on the results of the various diagnostic investigations done for them.

> *"The doctors and nurses did not teach me anything about my condition and the operation…I started asking them what was happening to me and I kept vomiting and growing lean and my condition was worsening… the outcome of the operation and if I was going to die… doctors and nurses either ignored me or shut me down to stop worrying them with too many questions".* (FPR11)

> *"Lack of education on my condition was my biggest challenge… I didn't have any dietary education despite they cut the rotten intestines off, they wouldn't answer any further questions to allay my fears. I didn't get any diet specialist to talk to me about the food that can heal my intestines fast".* (FPR14)

> *"We fear to ask questions and to talk to the doctors so they have to be friendly and be asking us what is wrong with us and give education on what medicines they gave us and also on our problem that brought us to the hospital".* (FPR2)

Participants who had higher education, as well as students, bemoaned their frustrations about how they made efforts to get some education on their disease conditions and their recovery process but they were ignored or shut down by the doctors and nurses.

4.9.2 Insufficient Medication

Many of the participants complained they were given insufficient medications during hospitalisation and upon discharge. They attributed challenges with their recovery such as delayed wound healing, gaping of the wound, wound sepsis and fatigue to inadequate medications given them.

> *"I was not given any medicine in the hospital which made me continuously tired and weak. They only gave me drips…If I had taken enough medicines right after the operation, my wound wouldn't have gotten infected and gaped…"* (MPR7)

> *"It was only some few medicines that I was given at the hospital which got finished in some few days. I was not given any medications to take home until the wound gaped before they gave me two other tablets".* (FPR8)

The delay in payment of medical bills or financial challenges was largely attributed to the insufficient medication given to the participants:

> *"I was given only a few medicines after the operation despite I was still in pain and the wound did not heal. When I was discharged too I wasn't given any medicine to use at home all because I was unable to pay my bills in time and the doctors said they wouldn't add more to it".* (MPR3)

A participant who shared a similar experience reported:

> *"The nurse told me to pay my bills early and take drugs otherwise I would have problems with the wound but I couldn't pay early so I wasn't given enough medicines until the wound was discharging and opened up".* (MPR5)

Two participants however mentioned that they were satisfied with the quantities of medications given them although they would have appreciated more medicines if that would have enhanced their recovery from the surgery and facilitated their regaining of strength and energy.

4.9.3 Attitudes of Health Personnel

Participants reported attitudes of health personnel which had various influences on their recovery process. Positive attitudes of health personnel and negative attitudes of health personnel were both reported and were the two categories which emerged under this theme**.**

4.9.3.1. Positive Attitudes of Health Personnel

Nurses and doctors were reported to have provided emotional, spiritual as well as nutritional and material support to participants. Nurses and doctors used their own money to buy medicines and food for some three needy patients who were also in pain in the ward:

> *"When my medicine got finished and I was in pain but I had no money, the nurses on duty contributed money and bought the medicines prescribed for me and administered them to me and they also have been borrowing medicines from other people to give to me before they replaced them later on their own".* (MPR3)

> *"I was in severe pain and my relatives didn't come at that time to buy medicine for me. The doctor and the nurses contributed money and they bought the medicines for me but they didn't accept the refund…" (FPR10)*

Nurses provided food for three participants who were hungry but whose relatives were not readily available and they were financially constrained to afford the cost of food:

> *"…when I was hungry, especially in the night, the nurses have been preparing their own tea for me to take. In the morning too, another nurse prepares food from home and brings to me when they come to work… because they knew I had no money and I may starve again".* (MPR5)

Doctors and nurses were reported to have donated units of blood to save the lives of participants who were bleeding profusely perioperatively and there were no other donors:

> *"I was told I was bleeding severely during and after the surgery and there was no blood. The doctor donated blood for me and he went and talked to some three nurses who also freely donated their blood which helped me survived..."* (FPR11)

Emotional and spiritual support was provided by some nurses to participants who mentioned that they were feeling lonely because they were abandoned by their relatives. Participants reported that the professionalism and caring attitudes of nurses brought relief for their pain and discomfort when they were recovering. Regular morning devotions with prayer were used to augment the spiritual needs of the participants during their recovery in the ward.

4.9.3.2 Negative Attitudes of Health Personnel

Some of the participants were not pleased with the attitudes of the health care professionals towards them. They largely considered those attitudes as negative, unprofessional and rudeness:

> *"Some of the nurses were unprofessional and not friendly at all. The nurses would be shouting at me and some were not treating me well".* (FPR13)

A number of participants vehemently lamented how cleaners rudely shouted at them, insulted them and demonstrated their anger at them because they soiled the floor during their early recovery periods when they were experiencing physical symptoms such as vomiting:

> "I *vomited onto myself and the floor... I was not able to walk to the washroom. When the cleaner came she was angry, insulted me and said the next time I soil the floor I should clean my mess ...I felt sad and I cried."* (FPR11)

> *"I was taking medicine and some water poured on the floor and when the cleaners came they shouted on me and got very angry with me..."* (FPR2)

Other participants described how the nurses were rude to them, insulted and used *unwholesome words* on them although they were in severe pain during the recovery period:

> *"The doctor asked the nurses to send me to the side ward so I asked the nurses if I was going to be there alone… all of a sudden the nurses started insulting me, asking me who was I and whether I was better than other patients before I should be sent to the side ward… so many unwholesome words were used on me while I was in severe pain. They pushed me hesitantly and inflicting more pain on me while relocating me to the side ward. I wept but there was no help".* (FPR13)

> *"Despite I was feeling pain, the nurse never spoke to me in a polite manner at all. She was shouting at me that I am not the first to be operated on so if I like she will remove her dresses for me to see she had also been operated on so I should stop disturbing… She was rude to everybody".* (FPR12)

Some participants added how the nurses neglected them at the time they needed their help most because they lacked the required strength. They added that the nurses were insulting and sacking their friends and relatives who came around to assist them with their self-care.

4.10 Summary of Findings

In summary, this chapter presented and analysed the findings of the study among 15 participants interviewed. It also sets the foundation for discussions in the next chapter in relation to reviewed literature. A total of seven (7) themes were noted from the analysis: five were consistent with the conceptual framework employed in the study and two were additional themes. Findings from this study have shown that patients recovering from

abdominal surgeries were faced with a myriad of challenges including physical, psychological and social issues. The physical symptoms noted included pain, nausea, fatigue, changes in appetite and altered sleep patterns. In addition, impaired gastrointestinal functioning, altered sexual functioning among others characterised the physical issues that participants faced in the postoperative recovery phase. Psychologically, participants were anxious, worried, lonely and experienced difficulty in concentrating on usual tasks. Economic burden and increasing dependence on others characterised the social aspect of their recovery. Poor interpersonal relationships between participants and the health care workers were of great concern to the participants. However, some health care staff impressed the participants with their good professional attitudes. Despite these challenges, the patients manifested various coping strategies to deal with the challenges they were faced with and this represents an extension of the model used for the study. In addition, participants also described mixed experiences with the health services and professionals at the health facility which may offer direction for improving services. The next chapter discusses the findings in relation to literature.

CHAPTER FIVE

DISCUSSION OF FINDINGS

This chapter discusses the findings of the study in relation to literature. The purpose of the study was to explore patients' postoperative recovery experiences after abdominal surgery. This chapter discusses the physical symptoms, physical functions, psychological well-being, and social well-being, the altered performance of self-care activities, coping strategies, and the health system factors experienced by the participants during their recovery.

5.1 Physical Symptoms

The findings from the study show that all the 15 participants experienced physical symptoms which included pain, nausea and vomiting, fatigue, appetite changes, and altered sleep pattern. Different studies reported the presence of physical symptoms among patients recovering from abdominal surgery (Lee et al., 2015). Postoperative pain was reported widely in several studies (Bendixen, Jørgensen, Kronborg, Andersen, & Licht, 2016; Heikkilä, Peltonen, & Salanterä, 2016). It was a demonstration that postoperative pain remains a significant disturbance and life threatening symptom to many postoperative patients (Garcia et al., 2017) and the management of postoperative pain was reported to be largely inadequate (Polanco-García, García-Lopez, Fàbregas, Meissner, & Puig, 2017). The findings from this study revealed that postoperative pain was experienced after abdominal surgery which was distressing and discomforting to the participants (Young & Buvanendran, 2014). Pain was experienced by all the participants but each individual expressed the pain in a subjective manner unique to that person and this was consistent with a previous study (Aziato & Adejumo, 2014a). Additionally, the experience of pain was found in this study to negatively impact on the performance of various activities of daily living and this was in line with other studies which discovered difficulty with walking, eating (ASA, 2012; Chou et al., 2016; Gerbershagen et al., 2014; Rudolph & Marcantonio, 2011) and sleeping (Chouchou, Khoury,

Chauny, Denis, & Lavigne, 2014). These findings suggest that nurses and other clinicians should consider the effect of pain on the performance of self-care activities of the patients and assist the patient in such ways to promote recovery (de Miguel-Ibáñez et al., 2015).

Furthermore, findings from this study showed that participants experienced severe postoperative pain at different locations such as the incisional site, deep inside the abdomen, and generalised abdominal pain. Some participants stated that their pain was located at multiple sites such as their waist, back, thighs, umbilical region, sides of the abdomen, and chest and radiating from one location of their body to the other. This finding agrees with another study on postoperative pain which found that the location of postoperative pain was predominantly in the abdominal region of general surgical patients (Oliveira et al., 2013) as well as the incisional site (Rau, Lin, & Cheng, 2016). The findings were also consistent with another study (Amini et al., 2015) that reported the location of surgical pain as radiating from one location such as the surgical site to the chest and back. This implies that the patients need careful pain assessment and appropriate multiple measures of preemptive pain management used to take care of the pain effectively at all times (Park, Haddad, & Fogelson, 2015).

Findings from this study again showed that the severity of pain was described by participants as very painful, severe, excruciating, persistent, and intermittent. This finding corroborates many studies which reported postoperative pain as severe (Gerbershagen et al., 2014; Oliveira et al., 2013; Palmer, Royal, & Miller, 2014), intense, excruciating and persistent similar to labour pain (Gupta et al., 2011; Worster & Holmes, 2009). The study revealed that the participants rated their pain 6-9 and averaged 7.2 on the Numeric Rating Scale (0-10). This finding, however, differs slightly from a study which found the average worst pain to be 5.6 in Spanish hospitals among postoperative patients (Polanco-García et al., 2017) and also rated 3 on the same scale in a similar study in French hospitals (Dualé et al., 2015). The difference in these ratings could be due to the cultural differences (Garcia et al.,

2017; Otis-Green & Juarez, 2012) in their perception and expression and also due to differences in their pain thresholds (Jarrell et al., 2014; Johnson, Ko, Hall, Saunders, & Lantz, 2011; Cameron MacLachlan, Shipton, & Wells, 2016) and may further be due to the large sample size in the study which was quantitative in design (Porembka, Hall, Hirbe, & Strasberg, 2010; Probst et al., 2016). It may further be due to the addition of orthopaedic patients to the survey done in Spain. Although majority of the participants were abdominal surgical patients, orthopaedic surgical patients perceive high pain intensity than abdominal surgical patients but the higher number of the abdominal surgical patients may compensate for the difference (Park et al., 2015; Polanco-García et al., 2017). This, however, suggests that patients should be assessed and their pain managed on an individual basis since they perceive and describe their pain differently (Wachholtz, Foster, & Cheatle, 2015).

Participants described their postoperative pain as “happy pain” and “comfort pain”. They considered their preoperative pain experienced to be worse compared to the postoperative pain and further explained that though they experienced severe postoperative pain that made them cry, they finally had some relief because the fundamental cause of the pain was removed through the surgery. This finding was contrary to other studies which found the severity of postoperative pain to be higher than preoperative pain irrespective of the type and gravity of the surgical procedure among young adults (Gerbershagen et al., 2014; Campbell MacLachlan, Shipton, & Wells, 2015). The difference in the findings may be attributed to other confounding variables such as psychological factors, biological, and social factors (Campbell MacLachlan et al., 2015; Shipton, 2014b) which may influence the perception and experience of pain among the participants who are from different geographical environments (Kikuchi et al., 2008; Pham et al., 2010) and may be satisfied with postoperative pain management (Brown, Constance, Bédard, & Purden, 2013). This suggests that perioperative preparation should be given the necessary attention to enable

nurses and other clinicians to identify patients who experience relief from pain and those who have worsening pain experience at any phase of their recovery for the appropriate satisfying remedy to be offered (Xu et al., 2015).

Postoperative pain was found in the study to be aggravated by the process of nursing procedures such as wound dressing and removal of stitches, weather, turning and repositioning in bed, the performance of activities such as lifting a bucket of water, and washing of clothes, type of incision, and laughing. These findings were congruent with those other studies where nursing duties such as change of wound dressing, ambulation and coughing of patients gave rise to pain (Francis & Fitzpatrick, 2013; Rau et al., 2016), rising up from bed, engaging in self-care activities, repositioning themselves in bed (Amini et al., 2015; Anderin et al., 2015) and when they were in resting positions just before they rose up to engage in activities (Ahn & Ahn, 2016; Al Samaraee et al., 2010). The findings from the study showed further that the cold weather and warm weather aggravated the pain experience among different participants. This finding agrees partly with another study which found that increasing temperature and pressure increases postoperative pain among trauma orthopaedic surgical patients (Shulman, Marcano, Davidovitch, Karia, & Egol, 2016). Contrary to this finding, the prevalence of pain was reported to be high among the adult population of Iceland and its neighbouring countries which are all very low temperature regions (Gunnarsdottir, Ward, & Serlin, 2010). The experience of pain by people with respect to cold and warm temperate weather was suggested to be related to the genetic as well as cultural differences that exist among the different people (Gunnarsdottir et al., 2010). These findings call for further research to ascertain the influence of the weather on the intensity of pain. It would be imperative for pain assessment tools to be validated among different people to establish any cultural or geographical variations before its use (Ullan et al., 2016). Professionalism must be

upheld in all nursing procedures to further provide comfort and psychological relief for all patients experiencing pain (Brady, Keller, & Delaney, 2015).

Postoperative nausea and vomiting were physical symptoms experienced widely among the participants in the study and this was consistent with findings of other studies (Gan et al., 2014; Robleda et al., 2015; Smith & Laufer, 2014). Nausea preceded vomiting in most situations (Calvache et al., 2015). The study found factors inducing nausea and vomiting among the participants to include the removal of the nasogastric tubes (NG tubes), previous history of postoperative nausea and vomiting, anaesthesia, fast injection of intravenous medicines, the smell of drugs and food and also when they began to eat after the surgery and opioids analgesics. The findings corroborate other studies which also identified previous history of postoperative nausea and vomiting, nasogastric tube insertion and removal, and anaesthesia (Coluzzi et al., 2012; Son & Yoon, 2017) as well as postoperative opioids for analgesia (Coluzzi et al., 2012; Donald de Boer, Detriche, & Forget, 2017; Smith & Laufer, 2014; Son & Yoon, 2017; Veiga-Gil, Pueyo, & López-Olaondo, 2017) to induce postoperative nausea and vomiting. Fast injection of antibiotics and opioids were reported by participants to induce their nausea and vomiting. This was in line with other studies which explained physiologically the occurrence of nausea and vomiting. It was explained that the sudden presence of large concentrations of vomiting inducing chemicals in the blood which are stronger trigger factors induce vomiting. This happens by those strong trigger factors stimulating the chemosensitive trigger zone located in the vomiting centre, area postrema, situated on the caudal floor of the fourth ventricle of the brain (Horn, Wallisch, Homanics, & Williams, 2014; Pleuvry, 2015; Yi et al., 2017). The smell of drugs, food, and feeding after surgery were other factors identified by the participants to have induced their nausea and vomiting. This was consistent with other studies which gave pathophysiological explanations to these experiences (Horn et al., 2014; Son & Yoon, 2017; Veiga-Gil et al., 2017). These

findings mean that nurses ought to exercise patience and administer injections slowly according to recommendations from the manufacturer and literature about the medicines (Gunnarsdottir et al., 2017). Nurses should also advocate for the most appropriate food that the patient tolerates and the patients should be managed in the ward in a manner that their preferred meals may not become a challenge and induce nausea and vomiting among others patients (Moreno, Veiga, Pereira, Martinho, & Abelha, 2013).

From the study, participants adopted the chewing of ginger *(Zingiber officinale)*, bitter sticks such as neem tree *(Azadirachta indica)* and the chewing of the bark of a mahogany tree (*Khaya senegalensis*) as relieving measures of nausea and vomiting. This finding was congruent with other studies which found the oral administration of 500mg of ginger an hour perioperatively as useful in preventing or minimising the rate of occurrence of PONV to a large extent (Kalava et al., 2013; P. Mandal et al., 2014; Tchatchouang, Beng, & Kuete, 2017). *Azadirachta indica* (neem) which belongs to the family of *Khaya senegalensis* (mahogany) was found in other studies to be culturally useful in treating several disease conditions (Gupta, S. Prasad, Tyagi, Kunnumakkara, & Aggarwal, 2017). The bark, leaves, flowers and other parts of the neem tree have been used for treating various ailments (Hao, Kumar, Yadav, & Chandra, 2014; Patel, Venkata, Bhattacharyya, Sethi, & Bishayee, 2016) and the twigs of neem were chewed by a large population of Africans, Asians, Indians, and Indonesians for cleaning teeth thereby exploiting the active ingredients for action (Patel et al., 2016). Neem was found to possess the phytochemical nimbin, which possess antihistamine, and anti-inflammatory, antipyretic, fungicidal and antibacterial properties (Gupta, Prasad, Tyagi, Kunnumakkara, & Aggarwal, 2017; Hao et al., 2014; Sujarwo, Keim, Caneva, Toniolo, & Nicoletti, 2016). Neem was used to manage gastrointestinal problems such as vomiting and to stimulate appetite by using parts of the neem or chewing the twigs as done by the participants in the study (Gupta et al., 2017; Sujarwo et al., 2016). The use of *Khaya*

senegalensis (mahogany) by participants corresponded with the findings of a study conducted in the Ashanti Region of Ghana where parts of the plant were used for the management of the symptoms of malaria including nausea and vomiting (Komlaga et al., 2015). These findings broaden the scope of the use of alternative medicines or herbal medicines to manage various conditions such as nausea and vomiting. Patients ought to be careful about the covert adverse effects of herbal medicines and ensure their safety before using them (Aziato & Odai, 2017).

Fatigue was a physical symptom experienced by the participants postoperatively. Participants complained of fatigue without engagement in any activity and they were very weak. This finding corroborates other findings which reported that the complexity of the surgery and the physiological response of the body to surgery determine the extent of fatigue and not necessarily any engagement in activity (Kahokehr et al., 2011; Mayo et al., 2011; Nøstdahl, Bernklev, Raeder, Sandvik, & Fredheim, 2016; Yu et al., 2015). The findings of this study showed that participants who slept for long periods experienced more fatigue. This finding disagrees with that of another study among women with abdominal hysterectomy who experienced better sleep with reduced incidence of fatigue 6 weeks after surgery. However, those who had vaginal hysterectomy experienced poor sleep and the corresponding increased fatigue (Kim & Lee, 2009). The difference in the types of surgeries and the ages of the women and their levels of education may account for these disparities since they can influence how participants do their self-evaluation and report fatigue and sleep (Kim & Lee, 2009). Another study further disagrees with the findings of this study and showed that sleep deprivation rather induces fatigue which can negatively impact on the availability of energy to perform activities (Sugden, Athanasiou, & Darzi, 2012). The duration of fatigue varied as some participants were found to experience it up to 3-4 days and others' persisted up to months postoperatively. This finding was consistent with other studies which found fatigue existing in the early postoperative period but extending 2-3 months after surgery (Mayo et al.,

2011; Paddison et al., 2009; Yu et al., 2015). Clinicians including nurses and midwives ought to appreciate the presence of fatigue without activity among patients so as to support and provide the necessary care to augment the self-care activities of the patients (Yu et al., 2015).

Changes in appetite were uncovered among participants which affected their recovery. Loss of appetite, as well as increased appetite was reported in this study. Participants were restricted from food and drinks immediately after the surgery for 2 - 4 days or more which was consistent with findings of other studies which explained that it was to allow the return of bowel functions (Alfonsi et al., 2014; Azhar et al., 2016; Cerantola et al., 2013; Xu et al., 2016) so as to prevent intestinal ileus (Bragg et al., 2015; Donald de Boer et al., 2017; Flores-Funes, Campillo-Soto, Pellicer-Franco, & Aguayo-Albasini, 2016; Li et al., 2013; Worster & Holmes, 2009; Xu et al., 2016) and allow for the healing of portions of bowels which underwent resection and anastomosis (Balayla, Bujold, Lapensée, Mayrand, & Sansregret, 2015; Herling, Møller, Palle, & Thomsen, 2016). Loss or decreased appetite was found among participants in the study and this was reported in other studies where participants had inflammatory bowel disease conditions such as appendicitis and underwent appendectomy (Balayla et al., 2015; Cetinkaya et al., 2009; Herling et al., 2016).

A few participants reported increased appetite after the surgery. This finding agrees with other findings in studies that identified increased gut hormone (ghrelin) stimulation which facilitated gastric emptying after gastrectomy and other gastric surgeries which further stimulates hunger (Beck, Sweeney, McCarter, & Group, 2014; Elliott et al., 2015; Koizumi et al., 2014). The changes in appetite from loss of appetite among some participants to increased appetite in others may be attributed to differences in the surgeries with different physiological responses (Elliott et al., 2015). The study found circumstances in which participants were discharged home but they persistently experienced loss of appetite and inability to eat. This finding is congruent with findings of other studies (Eriksson et al., 2014) which added that

the persistent loss of appetite exacerbated their psychological and physical discomfort (Worster & Holmes, 2009). This finding suggests that postoperative clients should be given thorough planned education before discharge and this should include measures they can adopt to enhance their appetite (Holland et al., 2013; S. Hughes, Leary, Zweizig, & Cain, 2013).

Alteration in sleep pattern was reported among many participants in the study. Participants attributed their poor sleep patterns to their pain experiences. This finding corroborates other studies which found postoperative pain (Baker & Whitfield, 2015) and the use of opioids for treatment to enhance the quality of sleep (Chouchou et al., 2014; Dolan, Huh, Tiwari, Sproat, & Camilleri-Brennan, 2016). This finding, therefore, means that the patients must be educated very well on the use of their analgesics according to prescription and they must demonstrate adequate understanding of the desired and side effects of the medications given them for early identification and redress (Dolan et al., 2016; Miller, Roth, Roehrs, & Yaremchuk, 2015). Alternatives to opioids as analgesics should be considered among patients who experience alterations in their sleep patterns (Andersson et al., 2017).

Alterations in the sleep pattern of participants were found in the study which resulted in readmission thereby delaying recovery. This finding was in line with other findings which showed that alteration in the sleep quality resulted in the poor quality of life leading to complications and prolonged hospitalization and readmission (Ancoli-Israel, 2009; Magee et al., 2011). This finding implies that comprehensive assessment of patients should be done including their quality of sleep and the resultant quality of life before discharge (Arakelian et al., 2011). Patients with sleep disorders should be identified and managed appropriately to prevent complications and readmissions (Alfonsi et al., 2014). The review should be scheduled to monitor and ascertain the recovery of the patients to promote and ensure comprehensive recovery to avert readmissions (Kassin et al., 2012; Lucas, Sweeney, & Pawlik, 2014). The use of other non-pharmacological measures such as engagement of the

patient in appropriate exercises before bedtime, psychological therapy with a counsellor or clinical psychologist (McKinley et al., 2013; Scarpa et al., 2017), avoiding late communications or the use of mobile phones deep into the night (Exelmans & Van den Bulck, 2016), reducing the time used to view television (Leng et al., 2013) and other measures should be adopted to improve the quality of sleep among postoperative patients (Yue Leng et al., 2014). Nurses and health care staff must be circumspect in their duties especially at night and must organise their activities including medications in bulk and reduce noise levels in the wards to avoid the disturbance of the sleep pattern of patients (McKinley et al., 2013). The physiological or physical functions have repercussions on the physical symptoms hence the following discussions centred on physical functions.

5.2 Physical Functions

Physical functions were the physiological functions that were experienced by the participants in the study after abdominal surgery. The study identified alterations in physical functions which included gastrointestinal functions, impaired urethral and bladder function, impaired mobilization, muscle weakness, alteration in sexual activity, alteration in cardiovascular function and impaired skin integrity. Impaired gastrointestinal functions included alteration in bowel movement, feeding difficulties, the excessive passage of flatus, and difficulties with NG tubes. Participants with alteration in bowel movement experienced constipation with pain in their anus when passing stools due to hard and impacted stools. This finding was consistent with other findings where patients had constipation after surgery (Allen-Dicker, Goldman, & Shah, 2015; Costilla & Foxx-Orenstein, 2014). Participants mentioned their inactivity or lack of effective exercises after the surgery as well as inadequate intake of food and fluids to be the cause of their constipation. This was in line with other studies which cited reduced activity and poor appetite and nutritional intake as contributing factors of constipation (Allen-Dicker et al., 2015; Serra et al., 2017). Some participants in the

study adopted the use of fresh leafy vegetables, fruits, high roughage diets and increased their fluid intake to manage their constipation and this finding was congruent with other studies (Boilesen, Tahan, Dias, Melli, & Morais, 2017; Serra et al., 2017). The preventive measures of constipation should be instituted as early as possible and nurses should support and encourage early ambulation and passive exercises among postoperative patients to prevent constipation (Adogwa et al., 2017; Khandhar et al., 2017; Nadler et al., 2014).

Discomfort and restlessness were experienced by some elderly female participants who adopted manual removal of impacted constipated stool from the anus using their bare fingers without gloves at home. This finding was related to other findings where the medical or surgical practitioners digitally removed impacted stool of constipated patients (Emmanuel et al., 2017; Gardiner & Hilton, 2014; Pepe, Murphy, O'Connell, & Zabbo, 2017). The nurses and doctors should encourage the patients to use other measures and schedule review to assess the bowel function of the patients and if constipation persists, a special tool designed for removal of impacted faecal matter from the rectum should be considered (Burton, 2017). If the manual removal was the only option, then it must be done under aseptic conditions with the use of the appropriate protective gloves and apparels in the right environment. The medical hand washing techniques should be used to prevent contamination and infection of the patient and others (Allegranzi et al., 2013; Sax & Boyce, 2017).

Bladder and urethral function negatively affected almost all the participants who vehemently expressed their discomfort with the catheter. Urethral discharges, burning sensation, painful micturition, leaking and trauma to the urethra were some of the challenges faced by the participants. These findings corroborate other findings related to challenges with a urethral catheter (Burt et al., 2005; Davis et al., 2015; Stav et al., 2015). Nurses, doctors, and all clinical staff must endeavour to adopt strict aseptic techniques and use appropriate lubricants and procedures in the insertion of urethral catheters to avert associated infections

and complications (Jordan & Nicolle, 2014). The patients must be given adequate information to prevent them from forceful pulling off of the catheter which results in trauma to their genitourinary tracts (Hollingsworth et al., 2013).

Impaired mobilisation was experienced widely among the participants in the study. Participants resumed mobilization gradually and their immobility which was mostly due to pain and postoperative fatigue affected their performance of activities of daily living. The pain associated with the incisional wound on the abdomen prevented most participants in the study from walking upright but rather bending down and resuming walking gradually as done by some elderly people. This finding was congruent with the findings in available literature since most patients regained their energy and strength steadily but with pain (Brookman et al., 2014; Hanna et al., 2014; Hong & Lee, 2014); patients were uncomfortable with their inability to move about freely without pain and restrictions (Robleda et al., 2015). Patients should be provided with adequate but appropriate analgesia (Smith & Laufer, 2014) and they should be encouraged to resume mobilisation early but gradually (Holland et al., 2013; Tsai et al., 2013) to improve their recovery. This would improve muscle strength, prevent loss of muscle mass and muscle weakness, improve pulmonary functions thereby reducing the length of hospitalisation after surgery (Edvardsen et al., 2015; Guimarães et al., 2014).

Another physical function which was altered among the participants was sexual function. They associated their poor muscle strength and reduced energy and strength to their inability to engage their spouses in sexual intercourse. This finding was congruent with other studies which found sexual intercourse as an energy requiring activity which demands fitness and strength to perform (Angenete et al., 2014; Karpel & Cordier, 2013; Sanders et al., 2016). The study further agrees with other studies that the participants lacked interest in sexual activities (Li, Huang, Zhang, & Li, 2016) which may be attributed to hormonal disturbances (Woo et al., 2014) and psychological factors. These findings however disagreed with findings

of other studies which examined the sexual functions of patients after sex related surgical interventions such as abdominal hysterectomy and prostatectomy in which participants reported no significant changes in their sexual functions six months after surgery (Chan et al., 2015; Kim, Yang, Lee, Paick, & Oh, 2014; Radosa et al., 2014; Wagner et al., 2005). These disparities could be linked to lack of homogeneity in the samples and durations used for the various studies and the differences in the types of surgeries (Schauer, Keller, Müller, & Madersbacher, 2015; Voznesensky, Annam, & Kreder, 2016; Zuo et al., 2013). The differences in culture among the various settings of the studies could be associated with the different findings with sexual functions after surgery. Sexual activity and its expression differed among different cultures due to ethical considerations (Atallah et al., 2016). These findings however show that major consideration and attention must be given to patients concerning sexual activity and appropriate education given to partners together as much as possible to reduce all misconceptions and misinterpretations (Lacy et al., 2016). Patients ought to be educated on other ways of keeping close relationships with their partners and keeping their sexual lives active and satisfactory without necessarily engaging in sexual intercourse which is highly energy requiring (Espinosa, 2016; Irani & Lowry, 2011).

Alteration in cardiovascular function was reported among the participants in the study. Acute incidences of anaemia were reported which emanated from excessive perioperative bleeding, poor nutrition and loss of appetite. Participants complained of dizziness, palpitation, weakness, profuse sweating and near collapse which resulted in readmission. Blood transfusion and dietary education were found to be done in the hospital as corrective measures of the anaemia. This finding corroborates the findings of other studies where abdominal surgical patients developed anaemia due to perioperative haemorrhage, nutritional inadequacy of essential nutrients and other co-morbidities (Jun et al., 2016; Shander, Lobel, & Javidroozi, 2016) and they were managed by blood transfusion (Paul &

Nesbitt, 2016; Tohme, Varley, Landsittel, Chidi, & Tsung, 2016; Willett & Carson, 2014). This finding shows that thorough preoperative assessment and preparation should be done before surgery and blood and blood products readily made available to manage all haemorrhage related complications (Quinn, Meland, McGinn, & Anderson, 2017; Stewart, 2014). Patients should be given a comprehensive assessment and evaluation to ensure their safety and readiness for independent self-care at home before discharge in order to prevent morbidities and mortalities at home arising especially from anaemia (Camaschella, 2017; Kansagra & Stefan, 2016). Nurses and other clinicians should collaborate with the nutritionists and dieticians in the perioperative management of surgical patients including their immediate family care givers through in-depth dietary and nutritional assessment and education (Collazo & Graf, 2017; Forbes et al., 2017; Leahy & Luning, 2015; Ross, 2014). Adequate knowledge on nutrition and selection of dietary products relevant to the healing of intestines and comprehensive improvement in the health status of the surgical patient would translate into improvement in postoperative recovery ("Appendix E - Nutritional Therapy A2 - DiSaia, Philip," 2018; Dossett, Cohen, & Cohen, 2017).

Impaired skin integrity which occurred as a result of the surgical incisional wounds generated varying degrees of discomfort and challenges among the participants. Findings from the study showed that participants described their surgical wounds as horrible, strange, fearsome, and very big. The sight of the wound was unpleasant and precipitated near fainting situations. This finding was congruent with other studies in which patients described the incisional wounds as awful, horrendous, and very painful and frightening (Ju et al., 2014; Worster & Holmes, 2009).

Patients experienced surgical wound infections and gaped wounds or wound dehiscence and this finding was similar to other studies which reported these experiences as major preventable complications of surgery (Bharatam et al., 2015; Staszewicz, Eisenring,

Bettschart, Harbarth, & Troillet, 2014; Wang-Chan, Gingert, Angst, & Hetzer, 2017; Zinn & Swofford, 2014). Surgical aseptic techniques among nurses, surgeons, and other clinicians must be intensified in the various surgical settings and patient education and personal hygiene practices must be intensified to help curb surgical site infections (Anderson et al., 2014; Gould & Coffin, 2018; Martin et al., 2013). Wound dehiscence must be prevented by clinicians teaching patients how to practically hold and protect their abdomen when they cough in the presence of postoperative pain so as to prevent gaping of the surgical wound (Gómez Díaz et al., 2014; Slater, Bleichrodt, & van Goor, 2012). Current and tested surgical skills should be encouraged among skillful surgeons so as to ensure the rate of wound dehiscence is reduced or prevented as much as possible (Gili-Ortiz, González-Guerrero, Béjar-Prado, Ramírez-Ramírez, & López-Méndez, 2015; Pérez-Guerra, Vázquez-Hernández, Ramírez-Moreno, & López-García, 2017). Most of these surgical patients experience challenges with their psychological well-being hence the next discussion focused on the psychological well-being of patients.

5.3 Psychological Well-Being

The study uncovered poor psychological well-being of the participants. Participants expressed their challenges with psychological well-being in the form of anxiety and worry, feeling down (sad), feeling lonely, and difficulty in concentration. Anxiety and worry about wound discharges and dehiscence, pain and delay in wound healing, prolonged hospitalisation, and worry about the incisional scars were some of the psychological challenges reported. Other issues which were reported by participants as challenges to their psychological well-being were loss of hope about securing future professions in the security services and inability to exercise and keep fit or engage in activities of daily living. This finding was consistent with findings of other studies (Rakel et al., 2012; Yilmaz et al., 2012) which found the presence of postoperative anxiety and worry and their predictors to delay

recovery. The unknown outcomes of the surgical process, recovery, change in environment and the unknown outcome of the histopathological findings of biopsies taken during the surgery remained sources of anxiety and worry among the participants as found in other studies (Komolafe et al., 2015). Environmental factors such as poor attitudes of nurses and other clinical staff including insults and showing of gross disrespect to patients were identified in the study as some factors which gave rise to anxiety, worry, depression and made participants sad. This finding was congruent with findings in the available literature (Komolafe et al., 2015; Lim et al., 2011; Wiseman, Foster, & Curtis, 2016).

Most of the particpants underwent emergency abdominal surgeries with inadequate preoperative preparations. The outcomes of the surgeries were unfavourable to participants. They were worried about the possibility of ever bearing children again, poor wound healing, wound dehiscence, ugly incisional scars which scared them and made them uncertain about their future relationships and professions. This finding corroborates findings of other studies which identified these sources of anxiety and worry as leading patients into feeling sad, lonely and depressed (Carr et al., 2005). These psychological experiences reportedly occurred among the participants mainly during the late phase of their recovery when they perceived failure in their lives or poorly meeting their preoperative expectations of the surgery and its outcome. This finding supported existing literature about postoperative depression and anxiety (Baliatsas et al., 2015; Wiseman, Curtis, Lam, & Foster, 2015). In-depth preoperative counseling and education should be done. This should involve the patients and their next of kin or a significant family member preferred by the patient to ensure preoperative expectations and possible postoperative outcomes are duly discussed and managed (Castillo, Cooke, Macfarlane, & Aitken, 2016; Gauduchon, Sabbagh, & Regimbeau, 2015; Tay, Rees, Chen, Kareth, & Silove, 2015). Nurses and other clinicians should not only be in haste to secure signed consent forms (Mulsow, Feeley, & Tierney, 2012) for surgery and anaesthesia

from patients and their family but appropriate preoperative education and postoperative rehabilitation and management should be planned and prioritised (Eagleson, Hayes, Mathews, Perman, & Hirsch, 2016; Lim et al., 2011; Mahoney et al., 2016).

Further to the above, it was noted that participants experienced difficulty in concentrating on usual tasks and unable to recollect certain information. A contributory factor to this experience was identified to be the intense pain they experienced postoperatively. The experience of postoperative pain has been noted to be associated with difficulty in sleeping (ASA, 2012; Lee & Lee, 2006; Rudolph & Marcantonio, 2011) and this is likely to affect the energy levels of the patient leading to difficulty in concentrating. This strengthens the need to manage postoperative pain satisfactorily as it derails the patient's energy level which affects their psychological well-being. A thorough cognitive and neurological assessment should be done on such patients for appropriate psychotherapy (Berger et al., 2015).

5.4 Social Well-being

In the current study, it was identified that the engagement of participants in various social activities was adversely affected as they experienced diminished energy levels in the postoperative period. Although some particpants attempted to engage in some social activities, they had to stop as they experienced discomfort. Previous studies have noted that patients are social beings and belong to families and communities (Aziato & Adejumo, 2014c; Otis-Green & Juarez, 2012). Thus, the social identity of the patient is relevant for positive psychosocial functioning (Meca et al., 2015) and patients must continue their social relations which can promote their recovery. Bourassa, (2009) has indicated the need for patients to participate in social activities to enhance recovery. However, in relation to this study, it was observed that participants could not partake in various social activities due to discomfort. Thus, there is a need to identify strategies that can assist patients to deal with their discomfort in the postoperative phase so as to enhance their participation in social

activities. This is particularly essential as prolonged discomfort whilst engaging in these activities may affect the patient's interest as noted by some participants in this study (Stephens & Petrie, 2015). This assertion may offer direction for further research.

Another contributory factor that was identified in this study regarding diminished participation in social activities was significant weight loss. This made participants isolate themselves from some social gatherings as they felt unfit to partake in these activities. This finding may be related to the experience of poor appetite and feeding, nausea and vomiting in the postoperative phase. In a similar vein, Worster and Holmes (2009) noted in their phenomenological study that the participants experienced significant weight loss due to poor appetite and when the patients realised it, they forced themselves to eat. Nurses and other health care professionals should always encourage patients to feed and engage in appropriate physical exercises to promote healthy physique (Grode & Søgaard, 2014).

Although patients' linkage with social support groups including family members and friends and other significant others and societies is very necessary for recovery (Chapin et al., 2014), participants in the current study were worried that they depended on their family members for support. This was because they felt they had lost their senses of autonomy. This finding suggests the need to engage in pre-operative teaching so as to make patients understand and be aware of the need for social support at the postoperative phase. This may make patients still retain their sense of autonomy (Meca et al., 2015).

Further to the above, it was identified in the current study that participants experienced economic burden due to the cost of treatment, increased cost of living and loss of business opportunity due to loss of energy and delay in recovery. In a previous study, Stey et al., (2015) argued for the need to reduce the economic burden of healthcare through reducing the incidence of complications, minimising the patients' demand and use of medications and reducing the length of hospitalisation. This may imply the need to manage postoperative

symptoms such as pain satisfactorily as well as undertake activities that can expedite recovery of patients who have undergone abdominal surgeries (Brady et al., 2015). In addition, the National Health Insurance Scheme policy may need to be revised to cover the entire cost of patients undergoing abdominal surgeries without charging the patients any hidden fees (Blanchet, Fink, & Osei-Akoto, 2012).

In the current study, the existence of social support was noted. Social support was received from spouses, family members, friends, religious affiliations of participants, health personnel, and colleagues from the workplaces of participants. These supports took the form of financial assistance, emotional support, assistance with domestic chores, prayers among others. Previous studies (Redinbaugh, Baum, Tarbell, & Arnold, 2003; Stephens & Petrie, 2015) have noted the importance of social support systems and as such asserted that it is very important to prepare most surgical patients and their relatives adequately on issues including the support systems, nutrition, gradual resumption of self-care, financial support to honour purchases of medications and support for review (Swenne et al., 2015). However, Redinbaugh et al., (2003) have cautioned that it is the quality of the social support and not the quantity that helps to attenuate the burden associated with hospitalisation.

5.5 Performance of Self-care Activities

In this study, it was observed that the ability to perform self-care activities was altered among all the participants. The performance of activities of daily living was resumed gradually and increased as they progressed with their levels of recovery. Difficulties were noted to be associated with the performance of personal hygiene and this could be attributed to the diminished energy levels. Further to this, it was observed that the experience of pain contributed to the identified difficulty in participating in self-care activities. Similarly, previous studies identified that the patient's experience of weakness postoperatively was to

such an extent that they could not engage in physical activities of daily living compared to the time before surgery (Forsberg et al., 2014a; Forsberg et al., 2015). This strengthens the need to encourage the practice of preoperative teaching to enable patients to understand graduated activities as they recover as well as manage pain adequately in the postoperative period (Kretschmer et al., 2017). In addition, participants in the current study faced challenges in re-establishing their participation in household chores and their official duties. A contributory factor was low energy levels and extreme fatigue. The experience of these challenges was such that some participants were excluded from work by their employers as reported in another study (Lauszus, Kallfa, & Madsen, 2016). This finding may offer support to the assertion that patients need to be prepared adequately in the preoperative phase and taken through graduated activities prior to discharge to enhance their adaptation and quality of life.

5.6 Coping Strategies

This section describes an additional theme that was noted from the study. It was observed that considering the issues participants faced in the postoperative period, they also developed some coping strategies. The strategies noted were self-motivation to recover and survive, cautiousness, and religiosity, perception of cause of illness and acceptance, and self-medication to enhance recovery. Lazarus and Folkman (1984) in their landmark work on coping, appraisal and stress explained that once people are confronted with stressors such as recovering from surgery, they would try to find ways to cope through the process of appraisal. Lazarus and Folkman (1984) included influencing factors (personal factors and situational factors), appraisal, coping, and outcome to their seminal work. The first set of influencing factors (personal factors) has an effect on how the individual perceives a person-environment relationship and personality characteristics. The second set of influencing factors, situation factors, includes novelty, predictability, duration of events, the uncertainty of events, and imminence. Thus at the postoperative phase, the participants were faced with

various issues that served as stressors to which they responded by using various coping mechanisms (Tu, Shao, Wu, Chen, & Chuang, 2014) including self-motivation, self-medication, religiosity and being cautious. However, outcomes related to these coping strategies could be associated with the different rates at which the participants recovered from the surgery. It was noted from the study that some of the participants recovered speedily while others took longer periods to recover due to various challenges. Coping in this study also took the form of social, financial and other forms of support the participants stated they received during their recovery from relatives, friends, co-workers and health workers. Moreover, a participant who was using marijuana for relief postoperatively became dependent on it until he was referred to the Volta regional hospital for assistance.

5.7 Health System Factors

This section also describes an additional theme that was noted in the study. It incorporates the activities of the health care workers, mainly nurses, doctors, and cleaners who interacted with the participants and provided services that impacted on the recovery of the participants. The participants echoed how the health system processes and procedures influenced their recovery during their period of hospitalisation. In this regard, participants re-echoed the lack of adequate health education. Educational conversation or health education has been described as a major coping resource for patients undergoing surgery and has been linked to alleviating anxiety significantly (Aust et al., 2016). Conversely, the lack of it may be associated with increased anxiety levels in the postoperative phase. Thus, there is a need to apportion adequate time to provide health education especially preoperatively and re-echo this information postoperatively to all surgical patients. This will enhance their compliance and satisfaction (Kretschmer et al., 2017). Documents with adequate details of the various restrictions and the life style modification instructions with their appropriate rationales should be given to the patients for easy reference (Best et al., 2017).

This study observed that participants were worried about the provision of inadequate medications during hospitalisation and discharge. This finding supports existing studies which reported the unmet expectation of patients on the medications given to them due to poor collaboration between patients and the clinicians in decision making (Ekman, Wolf, Vaughan Dickson, Bosworth, & Granger, 2017; Qin, Yu, Chen, Mehta, & Kuo, 2015).This finding strengthens the need to provide education on the various medications that have been given and reasons why some medications have been withheld. If rationales for medications are provided, patients will be more likely to understand the need for them and comply accordingly (Dezutter et al., 2016).

Further to the above, participants in the current study mentioned the mixed attitudes exhibited by health professionals. The issue of negative attitudes towards patients has been reported in previous studies and as such, there has been a clarion call by various leaders for health professionals to change the negative and sometimes contemptuous attitudes towards patients (Ledda et al., 2017). Health care workers should receive regular refresher training on communication skills to boost their interpersonal relationships. Nurse-patient relationships, as well as communication among all health care providers and their patients must be done in professional ways so as to avoid the unintended negative implications (Macdonald, 2016).

In summary, these postoperative recovery experiences of the postoperative patients after undergoing abdominal surgery were revealing and they need pragmatic approaches to ensure improvement in health care delivery. Patient and family satisfaction with the health care would translate into improved quality of the lives of all people. The evaluation done on the conceptual framework used for the study has been discussed next.

5.8 Evaluation of the Conceptual Framework Used for the Study

The conceptual framework for operationalisation of postoperative recovery developed by Allvin et al. (2009) was used for the study and it was very useful. All the five dimensions or constructs of the framework which were physical symptoms, physical functions, psychological, social, and activity were used by the researcher to formulate the research objectives. The interview guide used for the study was developed based on the constructs of the conceptual framework. The construct on physical symptoms helped the researcher to uncover the various postoperative symptoms the participants experienced when recovering from the surgery and these symptoms were all consistent with the framework. One major theme emanated from the domain of physical symptoms which had postoperative pain, postoperative nausea and vomiting, fatigue, appetite changes and altered sleep pattern as the sub-themes. Despite the consistency, nausea was presented in the conceptual framework without vomiting but the data discovered vomiting which was mostly experienced by the participants together with nausea. Pain and nausea were prefixed with the word 'postoperative' and sleep difficulties was also modified to read 'altered sleep pattern' to emphasise postoperative experiences and reflect the findings of this study respectively.

The construct physical functions had one major theme and this helped the researcher to elicit the physiological responses to the surgery. Impaired cardiovascular function and impaired skin integrity were uncovered as additional physical functions that affected the recovery of the participants. The remaining five functions were consistent with the framework and they each had a sub-theme as well as the newly added ones. Alterations made to the framework under the domain of physical functions included prefixing the word 'impaired' to gastrointestinal, bladder and urethral functions, and mobilization while 'alteration' was added to sexual activity to reflect the physical functioning of the participants during their recovery. Impaired bladder and urethral function was a sub-theme under the

major theme physical functions. Bladder function was consistent with the framework but it was modified as bladder and urethral function. The urethral function was added since the data suggested a number of the participants experienced challenges with urethral catheters and also reported symptoms of urinary tract infections which included the functions of both the bladder and the urethra.

The researcher generated one major theme from the psychological domain of the framework. This construct entailed anxiety and worry, feeling down and depressed, feeling lonely/abandoned, and difficulty in concentration as the four sub-themes which were all consistent with the framework used for the study. The psychological domain was however modified as psychological well-being since the word 'psychological' was not qualified in the framework to present the exact dimension being measured.

The social domain constituted a major theme. The sub-themes generated from the social domain were reduced social activity, dependence on others, and interest in surroundings which were all in line with the framework. Additional three sub-themes generated from this study which were not originally part of the framework included social isolation, economic burden, and social support networks. The sub-theme 'social activities' was modified by prefixing it with 'reduced' to portray the experiences of the participants.

The activity domain was consistent with the framework but it was modified as altered performance of self-care activities which reflected the type of activity affected. The activity domain was used by the researcher as a major theme and two sub-themes were generated from it. These were altered personal hygiene practices and re-establishing everyday life activities.

In all, seven themes were generated from the study and five of them were consistent with the framework used for the study. These themes included: physical symptoms, physical

functions, psychological well-being, and social well-being, altered performance of self-care activities. The existing domains of the framework produced 24 sub-themes and 19 of them were consistent with the framework while 5 were additions from the study elicited under the various major themes above. The new themes generated from the study were coping strategies in postoperative recovery, and health system factors influencing postoperative recovery. Coping strategies in postoperative recovery had four sub-themes which were: self-motivation; cautiousness; religiosity, superstitious beliefs, and acceptance, as well as self-medication to enhance recovery. The theme health system factors had three sub-themes which were: inadequate health education, insufficient medication, and negative attitudes of health personnel. A total of 31 sub-themes were generated from the study and 19 of them were congruent with the conceptual framework for operationalisation of postoperative recovery while 11 new sub-themes were discovered.

5.9 Suggestions to the Conceptual Framework

The researcher suggests that the conceptual framework of operationalisation of postoperative recovery may incorporate coping strategies in postoperative recovery and health system factors as additional domains with their respective sub-themes as new items under them. Alteration in cardiovascular functions and impaired skin integrity could be added to the domain of the physical functions of the conceptual framework. The psychological and social domains may be modified to read psychological well-being and social well-being. Furthermore, physical symptoms and physical functions could be merged into one domain to read physical functioning since the physical symptoms emanated from the altered physical functions and they were both describing physical effects of the surgery on the participants. The next chapter presents the summary, implications, limitations, conclusions, and recommendations made from the findings of the study.

CHAPTER SIX

SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter focuses on the summary of the entire research work, the study's implications for nursing education, management, practice, and research as well as policy formulation. It further presents the limitation, conclusions, and recommendations. The purpose of the study was to explore the postoperative recovery experiences of patients after abdominal surgery.

6.1 Summary of the Study

Patients who undergo abdominal surgery encounter several experiences during their recovery period which has an impact on their postoperative quality of life. The return to preoperative normalcy and improvement in their postoperative quality of life was paramount to all the participants. Qualitative descriptive design was employed for the study. An interview guide was developed by the use of the objectives of the study and the conceptual framework of operationalisation of postoperative recovery developed by Allvin et al. (2009). Purposive sampling approach was used to recruit participants who were aged 18 years and above, who had had abdominal surgery between one month and three months and had been discharged. Data saturation was achieved at the fifteenth (15) participant. The principles of Framework method of data analysis were employed for this study.

From the data, seven main themes emerged which were physical symptoms, physical functions, psychological well-being, social well-being, altered performance of self-care activities, coping strategies in postoperative recovery, and health system factors influencing recovery from abdominal surgery. Two additional themes which emerged from the study but were not part of the framework used for the study were coping strategies for postoperative recovery, and health system factors influencing recovery from abdominal surgery. The other

five main themes were all consistent with the framework. Key findings from the study showed that postoperative recovery related physical symptoms and adverse side effects of medications were experienced by participants. Severe pain was experienced by participants at various locations such as their incisional wounds, abdomen, and waist. The pain was found to be aggravated by some nursing procedures such as wound dressing as well as functional activities of the participants. The relieving factors for the pain included interventions such as utilising analgesics and assuming comfortable positions. Additionally, other physical symptoms such as extreme fatigue, nausea, and vomiting as well as appetite changes were reported by participants. These symptoms were noted to affect the physical and psychological well-being of the participants.

Physical functions were negatively affected during the recovery process and this included factors such as altered bowel movement and feeding difficulties. Participants experienced discomfort with leaking catheters, pain and burning sensations as well as urethral discharges following the passage of the urethral catheters. Participants found it difficult to move out of bed and they resumed their mobility gradually since they experienced impaired mobilisation due to muscle weakness and loss of physical strength. Impairment in cardiovascular function was reported which resulted in readmission of some participants who were transfused with multiple units of blood due to massive haemorrhage. Sexual activities were impaired among participants due to the effects of physical symptoms including muscle weakness, fatigue, and postoperative pain. Participants described their surgical wounds as horrible, fearsome, terrifying and too big. Wound dehiscence and surgical wound infection were experienced and reported by participants

The psychological well-being of participants was compromised due to the altered physical functions and the experiences of physical symptoms among them. Participants had anxiety and they were worried about their delayed recovery, wound dehiscence, and

infections with discharges from their surgical wounds. Postoperative pain, the fear of losing a dream job in the security services, fear of not conceiving in future and delay in academic progression due to surgery were sources of worry and anxiety. Some participants experienced loss of concentration and amnesia which appeared to affect their work output.

The social well-being of the participants was compromised during their recovery period. Their engagement in social activities reduced tremendously due to reduced physical strength, pain, and fatigue, even though they attempted to engage in various social events. Participants expressed their concerns about having to depend on others to meet their activities of daily living and lamented about the loss of their sense of autonomy. There was loss of interest in the activities of some of the participants even though a number of them kept track of their interests in their favourite television programmes and political discussions. These interests served as diversionary measures for managing their boredom and pain. The loss of physical strength and energy coupled with fatigue resulted in the isolation of participants from social gatherings. They were considered by their peers as unfit to participate in such social activities. Some participants feared being hurt in their abdomen hence they isolated themselves from such programmes. They further isolated themselves from social places due to stigmatisation by their peers for their altered body image as a result of their significant overt weight loss.

The cost of treatment, cost of living, and loss of business opportunities economically over burdened the participants. The cost of hospitalisation affected participants' finances to the extent of having to obtain loans. They, however, received appreciable social support from their spouses, family, friends, religious affiliations, health personnel, and colleagues from their workplaces. Even though participants received tremendous support from various social networks, their overall social well-being was poor during their recovery hence they used some measures to cope.

Participants adopted some coping strategies to manage their distressing physical, psychological and social experiences during their recovery. Self-motivation was a strategy used by the participants. This motivation depicted the inner strength and desire of participants to survive and cater for their children and other dependants. Also, they cautiously lived in harmony with one another and avoided conflict situations which could be additional stressors. Some participants were superstitious and believed they had been bewitched. In addition, they all accepted their situations and became highly religious and deeply immersed themselves in various faith practices such as regular prayer sessions, and reading of the Bible or the Quran. They had hope and tremendous faith in God for their healing which improved their psychological and spiritual well-being.

The use of antibiotics and over the counter analgesics for self-medication as well as herbal preparations and alcoholic concoctions were other coping strategies adopted by participants to manage their pain and discomfort. Amoxicillin, and ampicillin capsules, diclofenac, ibuprofen, vitamin B-complex, penicillin V tablets were among the common self-medications used. They also used the dried bark of the mahogany tree and the roots of other plants which they added to alcohol to prepare concoctions which they took as remedies for their postoperative abdominal pain and discomfort. It was further noted that some male participants who adopted the use of these alcoholic concoctions learnt it from other patients whom they met in the ward. They said they usually sneaked the alcoholic concoctions into the ward unknown to the nurses. Smoking of marijuana (wee) was also adopted by a participant as a coping measure to manage his pain and abdominal discomfort.

Lastly, both positive and negative health system factors were noted to have influenced the recovery of the participants. Positive health system factors included the professionalism and passion some nurses used in rendering nursing care. This had reportedly reduced the pain associated with wound dressing and removal of stitches of some participants. Nurses used

their own money to purchase medicines and food for helpless patients who were hungry and in pain in the ward as their relatives abandoned them after discharge. Doctors and nurses donated their own blood for participants which saved the lives of participants who were bleeding profusely. Some negative health system factors included inadequate health education, insufficient medications given to participants, and negative attitudes in the form of disrespect, rudeness, neglect and insults of participants negatively affected their psychological well-being.

6.2 Implications of the Research

The findings from this study highlighted some implications for nursing education, management, practice, and research as well as health policy formulation.

6.2.1 Implications for Nursing Education

The findings from the study showed that participants experienced severe postoperative pain and other physical symptoms and alterations in physical functions but were not given adequate and prompt attention. The professionalism adopted by some nurses to care for some participants resulted in the relief of their pain and discomfort. Professionalism in nursing practice must be re-emphasised during all nursing seminars, workshops and educational platforms to promote quality of care. The physical symptoms and functions related to postoperative recovery were not clearly understood by the nurses hence the participants were not impressed with the approach and management styles the nurses adopted in caring for them. It is imperative for the developers of nursing curricula for various levels of nursing education to give prominence to postoperative recovery and make it a credit awarding subject in the surgical nursing syllabus. Nurse educators should be encouraged to teach postoperative recovery symptoms and physiological changes associated with recovery. This would help increase the knowledge base of the nurses who would manage these patients. Continuous professional development programmes for nurses should regularly feature

postoperative recovery and nursing care of surgical patients. Pain assessment and management should be given a more serious attention hence practicing nurses should be given regular in-service training on it during such trainings.

6.2.2 Implications for Nursing Management

The findings from the study showed that some of the participants experienced nausea and vomiting, pain, fatigue and other symptoms which demanded extra time and attention to adequately and effectively take care of the number of the patients to achieve quality of care. Patients however stated that they were not given much attention by the nurses when they encountered such challenges during their recovery. Nursing management should make efforts to assess and revise the staffing and scheduling norms in the surgical wards to ensure adequate number of staff attend effectively and efficiently to the needs of the patients. The symptoms experienced by the patients suggest that more resources including cleaning and infection prevention and control equipment and supplies should be procured to meet the demands of the nurses for effective and efficient management of the wards. Nurses and doctors donated their own blood to save the lives of patients who were bleeding severely. Appropriate recognition for such kind and selfless gestures by staff should be rewarded to motivate them and others. Meanwhile, preoperative preparation should be effectively done to ensure that appropriate assessments are done and all risks anticipated and prepared for to forestall any of such eventualities.

6.2.3 Implications for Nursing Practice.

Postoperative pain assessment was lacking since the reports of the participants showed nurses mostly administered analgesics to them on demand. This means that pain was not assessed and managed appropriately as one of the key vital signs. The various pain assessment tools and multimodal pain management strategies should be used in the management of surgical patients. The psychological and social return to activity, coping

strategies and health system factors associated with postoperative recovery especially in abdominal surgery should be given much attention in the management of postoperative patients. Nurses should factor the psychological and social well-being of the surgical patient into their care and provide comprehensive quality nursing care that would improve the recovery of the patient. The high incidence of surgical wound infection and wound dehiscence require improvement in the aseptic techniques used in the hospital in order to reduce their occurrence.

6.2.4 Implications for Nursing Research

This study illuminated the need for further research. The present study explored the postoperative recovery experiences of patients after abdominal surgery in the Ho Municipality. There is the need for future studies to explore the perspectives of clinicians such as nurses, doctors, anaesthetists, biomedical laboratory scientists, and pharmacists on patients' postoperative recovery experiences in Ghana. This would illuminate the phenomenon of postoperative recovery among abdominal patients better through the documentation of the in-depth experiences of clinicians in managing surgical patients. This will broaden the understanding of postoperative recovery. Moreover, a quantitative study is required to further understand the degree to which patients experience the postoperative recovery physical symptoms and physiological changes. A study into the quality of life after postoperative recovery would be required in future. Further studies on factors influencing the high incidence of surgical wound infections and gaping of wounds should be conducted.

6.2.5 Implications for Policy Formulation

Findings from the study suggested that participants were faced with financial burdens during their recovery. Some participants were detained in the hospital for as long as a month after discharge due to their inability to pay hospital bills although some of them claimed they subscribed to the National Health Insurance Scheme (NHIS). The health policy on funding of

health care services needs to be revised for its effectiveness and appropriateness. A social intervention policy may be developed to assist patients who cannot afford surgeries and their NHIS cannot entirely cover such procedures. This would improve the psychological, social, and physical well-being of the patients. The social welfare policy ought to be revised and made more effective to cater for needy patients so that they would not remain a burden on the nurses, doctors and other concerned health care professionals.

6.3 Insight Gained from the Study

During the data collection process, the researcher observed that the participants passionately narrated their experiences with the physical symptoms especially pain, nausea and vomiting and fatigue as well as their impaired mobility which affected their independent resumption of self-care activities. Depending on others for support and performance of activities of daily living was a big challenge to them. Unrelieved pain was a major challenge to the surgical patients and it influenced them to resort to the use of personal measures to resolve their pain and discomfort. Pragmatic efforts should be made to improve the use of evidence based approaches for the comprehensive management and prevention of these physiological changes in patients. It was further noticed that as many as eight of the participants recruited during the period they were on admission had passed on during their recovery period. This was not known to the surgical management team of the hospital since they had no track of the patients they operated when they were discharged. It would be prudent if a database of the surgical patients can be created and follow up telephone conversations done regularly to check on the recovery of these patients.

6.4 Limitations of the Study

The study adopted the qualitative descriptive design and the verbatim quotations of the respondents were presented. Meanwhile, the interviews conducted in the local “Ewe”

language and translated into English could not be back-translated from English to the "Ewe" language to ascertain whether the words used were exactly the same as the participants intended. Despite this, the transcriptions were reviewed by an expert in the "Ewe" language and all the necessary corrections to the transcripts were made to reflect the true meaning of the experiences of participants as presented. Additionally, the study was done in only the Ho Municipality with the participants recruited only from the Volta Regional Hospital in the middle belt of Ghana where Christianity is dominant. Thus, findings may be unique to the setting where the study was conducted.

6.5 Conclusion

The study uncovered the postoperative recovery experiences of participants who underwent abdominal surgery in the Ho Municipality. Findings from the study showed that people recover along different trajectories. Although some participants recovered rapidly after surgery to engage in their habitual functions, others had delayed recovery. Postoperative pain, nausea, and vomiting as well as muscle weakness and loss of strength were major challenges that impacted negatively on the recovery of participants. Improvement in the management of the various challenges of participants required the attention of all clinicians and health care managers. The conceptual framework of operationalisation of postoperative recovery developed by Allvin et al. (2009) was used as the organising framework for the study and it was very useful. This framework together with the objectives of the study guided the development of the interview guide used for the study.

6.6 Recommendations

Relative to the findings of this study, the following recommendations were made to the Ministry of Health, Ghana Health Service, Nursing and Midwifery Council of Ghana, and the management board of the Volta Regional Hospital.

6.6.1 The Ministry of Health (MoH)

The Ministry of Health should:

- Institute a human resource policy framework that would be used to employ and deploy clinical psychologists to all hospitals in Ghana to support the clinicians in managing the psychological well-being of all patients including surgical patients.
- Employ and post nutritionists and dieticians to all hospitals to be part of the clinical team that would facilitate the recovery of surgical patients especially those who need special diets to speed up their recovery.
- Collaborate with the Ministry of Gender, Children and Social Protection to formulate and implement policies that would provide social support services to needy patients who cannot afford the cost of surgery and are not fully covered by the NHIS.
- Collaborate with the National Health Insurance Authority to include histopathological laboratory investigations on the list of accredited services of the NHIS to reduce the economic burden and psychological disturbances some patients encounter.

6.6.2 The Ghana Health Service

The Ghana Health Service should:

- Organise continuous professional development programmes for all nurses, doctors, anaesthetists, pharmacists, laboratory scientists, clinical psychologists and health service administrators to update them on their responsibilities and emerging trends in managing and enhancing the postoperative recovery of surgical patients.
- Organise a nationwide training to implement the infection prevention and control policy to prevent surgical site infections, wound dehiscence and urinary tract infections associated with urethral catherisation and all health facility- based acquired infections.
- Design and adopt a multi-disciplinary protocol to enhance postoperative recovery with emphasis on prevention, control, and management of the physical symptoms.

6.6.3 Nursing and Midwifery Council of Ghana (NMC)

The NMC should:

- Collaborate with the Ghana College of Nurses and Midwives to design a specialists' programme for nurses and midwives to train as specialists in pain management and post-anaesthesia recovery to promote the quality of postoperative recovery in Ghana.
- Renew their commitment to the management of pain by integrating pain management into the curricula of all levels of nursing education in Ghana and ensure they are taught.
- Ensure that practicing professional nurses and midwives take in-service training courses in pain management each year to renew their licenses to practise.

6.6.4 The Management of the Volta Regional Hospital, Ho

The management board of Volta Regional Hospital, Ho should:

- Improve upon their security measures to ensure that all patients and their visitors are screened or monitored to ensure they do not enter the ward with alcoholic substances meant for the patients on admission which can negatively affect their recovery.
- Retrain the nurses, doctors, anaesthetists and other clinicians in effective communication in health care and customer care practices to improve upon the interpersonal relationships between clinicians and the patients and their family.
- Ensure effective discharge planning is done to include the education of patients on the medicines given them as well as their self-care after discharge and ensure their doubts are cleared on medications and other issues of concern.

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APPENDICES

APPENDIX A: INTRODUCTORY LETTER

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Our Ref: SON/F.11 January 24, 2017

Your Ref:.....

The Regional Director of Health Service
Regional Health Directorate
Volta Region
Ho.

Dear Sir/Madam,

INTRODUCTORY LETTER

I write to introduce to you John Akortiakumah, an M'Phil Year II student of this School, University of Ghana, Legon. He is conducting a research project on **"Patients' Postoperative Recovery Experiences after Abdominal Surgery: A Study at the Ho Municipality".** Your Facility has been chosen as his data collection outlet.

I should be most grateful if you could kindly assist him with the information needed to enable him collect data for his thesis research..

Thank you.

Yours faithfully,

fw Dr. Lydia Aziato
SENIOR LECTURER

Cc: The Municipal Director
Municipal Health Directorate
Volta Region
Ho.

Cc: The Municipal Director
Municipal Health Directorate
Volta Region
Ho.

The Medical Director
Volta Regional Hospital
Ho.

The Nurse Manager
Volta Regional Hospital
Ho.

APPENDIX B: ETHICAL CLEARANCE CERTIFICATE

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH
Established 1979
A Constituent of the College of Health Sciences
University of Ghana
INSTITUTIONAL REVIEW BOARD

Phone: +233-302-916438 (Direct)
+233-289-522574
Fax: +233-302-502182/513202
E-mail: nirb@noguchi.ug.edu.gh
Telex No: 2556 UGL GH

Post Office Box LG 581
Legon, Accra
Ghana

My Ref. No: DF.22
Your Ref. No:

4th January, 2017

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824 **IRB 00001276**

NMIMR-IRB CPN 025/16-17 **IORG 0000908**

On 4th January, 2017, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a full board meeting reviewed and approved your protocol titled:

TITLE OF PROTOCOL : **Patients' Postoperative Recovery Experience after abdominal Surgery: A Study at the Ho Municipality**

PRINCIPAL INVESTIGATOR : **John Kwasi Akortiakumah, MPhil Cand.**

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 3rd January, 2018. You are to submit annual reports for continuing review.

Signature of Chair: .....
Mrs. Chris Dadzie
(NMIMR – IRB, Chair)

APPENDIX C: CONSENT FORM

NMIMR-IRB CONSENT FORM TEMPLATE

Title: Patients' Postoperative Recovery Experiences after Abdominal Surgery: A Study at the Ho Municipality.

Principal Investigator: John Kwasi Akortiakumah

Address: Department of Adult Health, School of Nursing, College of Health Sciences, University of Ghana, P.O Box LG 43, Legon, Accra, Ghana.

General Information about Research

The objective of this study is to explore your experiences both at home and at the hospital when you were recovering from the abdominal surgery you underwent at the Volta Regional Hospital, Ho (Trafalgar). The interview the researcher will have with you will be in relation to your experiences with how you recovered from the abdominal surgical operation you had undergone at the hospital, your experiences both on admission and at home after your discharge. The researcher will like you to provide information on your physical and psychosocial experiences, how you managed to perform the various activities of daily living on your own after the operation, and the coping strategies you adopted during your recovery from the surgical operation. The researcher will have a conversation with you which is expected to last between 45 minutes and one and half hours (90 minutes). The researcher will use English, or a local language depending on your preference with regards to the one you can understand and communicate in most fluently. You will be asked to sign or thumbprint a consent form prior to the interview which will demonstrate your acceptance for the interview. The conversation you will have with the researcher will be tape recorded. Kindly share your experiences freely since there will be no wrong or right answers.

NMIMR INSTITUTIONAL REVIEW BOARD
VALID UNTIL
0 3 JAN 2018
APPROVED DOCUMENT

Possible Risks and Discomforts

Your participation in this study is not expected to be harmful to you. However, you may experience some emotional discomfort, exhaustion or psychosocial distress when narrating your experiences. You have the freedom to alert me when you encounter any of the above. You could request for some rest in between our conversations and you will be assisted to receive the professional services of a counsellor at no cost to you if you experience any emotional distress. The name of the counsellor is Mr. Samuel Agbeko Ahiah who is readily available at the Volta Regional Hospital and his contact number is 0202416199. You have the freedom to discontinue the conversation if you feel so for any reason during the process.

Possible Benefits

Your participation in this study will not bring any direct benefit to you. However, the information you will provide will enable the researcher to understand the experiences of patients who undergo surgical operation especially abdominal surgeries. This knowledge will provide the health care providers and other stakeholders in health the opportunity to improve upon the care provided to such patients and also formulate appropriate policies to guide surgical care of patients. The research findings will also form a basis for curriculum review since the knowledge and experiences can be incorporated into any new or reviewed surgical nursing curriculum in the future.

Confidentiality

The conversation we shall have will be tape recorded and later played and written in words. Your name will however not be added to the recordings. Some alphabets and numbers will be assigned to the conversation in order to prevent identification of your information with you. The only people who will know about our conversation will be the supervisors of the research work. The recorded information will be protected with a password on a computer hard drive whiles the hard copy of the documents will be kept under lock and key at

a separate place in the custody of the researcher for five years after which it will be destroyed. Your background information will not be tape- recorded but the hard copies of that data will be separated from the recorded information and placed under lock and key in the custody of the researcher so as to prevent it from being associated with the information you will provide on your personal surgical experiences.

Compensation

You will not receive any monetary compensation for your participation in this research. However, you will be offered a bottle of Malta Guinness and some biscuit for your refreshment. Moreover, if the researcher will have to meet you at any place other than your home or work place for the interview, you will be given an amount of GHC 10.00 if you stay within the Ho Township and GHC 20.00 if you stay outside the Ho Township to defray the cost of your transportation from your house to the venue of the interview.

Voluntary Participation and Right to Leave the Research

Your participation in this research is purely on voluntary basis. You have the freedom to discontinue from participating in the study or stop the interview conversation at any time for any reason if you feel so even after signing or thumb printing the consent form and agreed to participate in it. Your withdrawal from the study will not in any way have any adverse effect or repercussions on any health care service you require or desire to receive from any health care facility or health care worker now or in the future. There is absolutely no punishment for withdrawing from the study.

Contacts for Additional Information

If you have any questions or concerns related to this research for clarification now or later, kindly contact;

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NMIMR INSTITUTIONAL REVIEW BOARD
VALID UNTIL
03 JAN 2018
APPROVED DOCUMENT

The Researcher

John Kwasi Akortiakuma

Department of Adult Health, School of Nursing, College of Health Sciences, University of Ghana, P.O Box LG 43, Legon, Accra, Ghana.

Phone Numbers: 024 3312002/ 0203646220

Email: johnakort@yahoo.co.uk

Supervisors

Madam Gladys Dzansi

Department of Adult Health, School of Nursing, College of Health Sciences, University of Ghana, P.O Box LG 43, Legon, Accra, Ghana.

Phone Number: +233243059316

Email: gladysdzansi@gmail.com

Dr. Lydia Aziato

Department of Adult Health, School of Nursing, College of Health Sciences, University of Ghana, P.O Box LG 43, Legon, Accra, Ghana.

Phone Numbers: +233244719686/ +233208552719

Email: aziatol@yahoo.com

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (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: nirb@noguchi.ug.edu.gh

VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title "Patients' Postoperative Recovery Experiences after Abdominal Surgery: A Study at the Ho Municipality" 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 or mark of volunteer _____

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

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

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 _____

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APPENDIX D: INTERVIEW GUIDE

INTERVIEW GUIDE

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. **Sex:** Male: [ ] Female: [ ]
2. Age in years: .....
3. Marital status: .....
4. Number of children: .....
5. Occupation .....
6. Level of education: .....
7. Nationality: .....
8. Religion: .....
9. Place of residence: .....
10. Languages spoken: .....
11. Type of surgery (Emergency/ Planned).....
12. Name of procedure/surgery: .....
13. Date on which surgery was performed: .....
14. Location of surgical wound: .....
15. Number of days on admission: .....

1

SECTION B: POSTOPERATIVE RECOVERY EXPERIENCES

Main question: Please share with me your story about the things you went through (experiences) when getting well (recovering) after the surgical operation.

Sub- questions (probe where necessary).

1. Kindly share with me what happened to you after the operation.

Probes

- Recovery
- Wound (response to the wound- appearance, surprise, anger, fear, joy; dressing- discomfort, drainage tubes, stoma/ wound care, infection, discomfort,)
- Pain (time, intensity, site, position, aggravating factors, relieving factors, related to any procedure, effects)
- Nausea/Vomiting (frequency, aggravating factors, relieving factors, effects)
- Fatigue/ Feeling tired, Muscle weakness
- Loss of appetite
- Difficulty in sleeping
- Elimination (urine and stool)

2. Please tell me how the operation affected your activities of daily living

Probes

- Mobilization (ability to walk around)
- Ability to maintain personal hygiene, grooming
- Feeding
- House chores

3. How do you feel about depending on other people to get help after the operation?

Probe as necessary

2

4. Please share with me your story concerning your feelings and emotions after you had the operation.

Probes

- Anxiety and worry
- Loneliness and feeling abandoned
- Concentration (ability to be attentive)
- Depression (Feeling down)
- Restrictions (food, sex, grooming)

5. How has the operation affected your economic activities?

Probes (based on economic activities)

- Business opportunities, money, revenue
- Excuse duties/ permission
- Promotion at work
- Customer relationship/attrition
- Performance at work (e.g. heavy lifting)

6. Kindly share with me how your social life has been affected by the operation.

Probes

- Relationship with family members, children
- Relationship with work place staff, friends, religious groups
- Relationship with other patients
- Relationship with nurses, doctors, and other staff of the hospital (cordial, attention to needs, care, education on type of surgery, possible effects, home care, review)

- Visitors (hospital, home)
- Recreational activities (Games, Music)
- Social gatherings (marriage ceremonies, funerals, meetings)
- Social activities in the ward and home environment
- News, Television and radio

7. Tell me how you have been managing life after the surgical operation (coping strategies)

Probes

- Family support (nuclear, extended), friends, workplace.
- Religion (faith, prayer, hope)
- Support from groups, NGOs
- Drug use
- Information/ education
- Financial support, effects on life after surgery

8. What was your greatest challenge with regards to recovering from the surgery?

9. What do you think can be done to help those who go through abdominal surgery?

Probe as necessary

10. Please, tell me anything else you will like to share with me about your experiences when recovering from the surgical operation.

Probe as necessary

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APPENDIX E: APPROVAL LETTER FOR DATA COLLECTION FROM VOLTA REGIONAL HOSPITAL, HO

GHANA HEALTH SERVICE
Your Health · Our Concern

VOLTA REGIONAL HOSPITAL- HO

MEMO

FROM; **HUMAN RESOURCE MANAGER**

TO; **HEADS/WARD IN-CHARGES**

DATE; **27/1/2017**

SUBJECT; **Academic Research- Mr. John Akortiakumah**

I have been directed to inform you that, the above mentioned University of Ghana-Legon Student is researching into the topic,

"(Patients' Postoperative Recovery Experience after Abdominal Surgery; A study at the Ho Municipality)"

The research is for academic purposes only.
Please give him your necessary support

APPENDIX F: APPROVED PERMISSION FOR THE USE OF CONCEPTUAL FRAMEWORK

SV: PERMISSION TO USE QUESTIONNAIRE AND CONCEPTUAL FRAMEWORK

People

- rene.allvin@regionorebrolan.se
-
- 28/04/16 at 2:11 PM

To

- johnakort@yahoo.co.uk

Message body

Dear Mr Akortiakumah,

I am glad to hear that you are interested in postoperative recovery and of the PRP. I am also happy to give you permission to use the framework and the questionnaire.

In the attachments you will find:
- Five of my articles (PRP)
- The questionnaire. One with 17 items to use for in-patients, and one with 19 items to use after admission from hospital
- A user manual

One problem might be that, expect from the articles, the attachments are in Swedish. Hopefully you can have them translated.

Best regards

/Renée

Renée Allvin, RNA, MSNc, PhD
Department of Anesthesiology & Intensive Care/Skills Center
Örebro University Hospital
SE- 701 85 Örebro
Sweden

Phn: + 46 19 6020144

E-mail: rene.allvin@regionorebrolan.se

http://www.regionorebrolan.se/

Från: John Akort [mailto:johnakort@yahoo.co.uk]
Skickat: den 22 April 2016 21:53
Till: Allvin René, KTC USÖ
Ämne: PERMISSION TO USE QUESTIONNAIRE AND CONCEPTUAL FRAMEWORK

Hello Dr. Renée Allvin,

Good evening from Ghana. My name is John Akortiakumah, a Registered Nurse Anaesthetist and a student from the University of Ghana, Legon, Accra, who is pursuing my Master of Philosophy degree in Nursing. I have been reading some of your articles on postoperative recovery and I find them great and very informative. I am also interested in doing a study on the **"PATIENTS' POSTOPERATIVE RECOVERY EXPERIENCES AFTER ABDOMINAL SURGERY: A STUDY IN THE HO MUNICIPALITY**. The study will be conducted in a municipality of the regional capital of Volta Region of Ghana but recruitment of samples will be done in the Regional Hospital which is a referral hospital. I have seen your articles which you used to develop a conceptual framework and a questionnaire for the measurement of patient-reported postoperative recovery under the topic:

"**Development of a questionnaire to measure patient-reported postoperative recovery: content validity and intra-patient reliability".**

Sir, I am seeking your permission to use your conceptual framework to do my study and also humbly asking for you to send me your questionnaire which was developed for the measurement of postoperative recovery. Thanks for your assistance. I will be very grateful to have them so as to help me develop my thesis. Please, may you add any of your articles on postoperative recovery, if possible. Thanks very much.

Yours faithfully,

Signed

[John Akortiakumah]

School of Nursing

College of Health Sciences

University of Ghana, Legon, Accra.

APPENDIX G: PARTICIPANTS DEMOGRAPHIC CHARACTERISTICS

PSEUDONYM	AGE YEARS	SEX	MARITAL STATUS	RELIGION	EDUCATION BACKGROUND	OCCUPATION	NO. OF CHILDREN	NO. OF DAYS ON ADMISSION	NAME OF SURGERY	EMERGENCY/ ELECTIVE SURGERY	LOCATION OF WOUND/ INCISION
FPR1	26	F	Married	Christian	Senior High School	Trader	4	7	Abdominal Hysterectomy	Emergency	Transverse
FPR2	32	F	Married	Christian	Senior High School	Trader	1	11	Gynaecological Laparotomy (Salpingectomy)	Emergency	Transverse
MPR3	21	M	Single	Christian	Junior High School	Kente Weaver/ Student	Nil	24	Exploratory Laparotomy (Small Bowel Resection and Anastomosis)	Emergency	Midline
FPR4	63	F	Widow	Christian	Middle School Leaving Certificate	Petty Trader	1	5	Laparotomy (Small Bowel Resection and Anastomosis)	Emergency	Midline
MPR5	39	M	Married	Christian	Junior High School	Corn Mill Operator/ Farmer	4	60	Laparotomy (Small Bowel Resection and Anastomosis)	Emergency	Midline
MPR6	48	M	Married	Christian	University Degree + Military Academy	Soldier (Army Officer)	5	4	Laparotomy with Appendicectomy	Emergency	Midline
MPR7	63	M	Married	Christian	Primary/ Basic School Leaver	Farmer	4	3	Laparotomy, Epigastric Hernia, and Huge Inguinal Hernia Repairs	Elective	Midline + Inguinal
FPR8	53	F	Married	Christian	Middle School Leaving Certificate	Trader	4	6	Laparotomy with Epigastric Hernia Repair	Emergency	Midline
MPR9	27	M	Married	Christian	Junior High School	Mason	1	12	Laparotomy with Inguinal Hernia Repair	Emergency	Midline + Inguinal
MPR10	23	M	Single	Christian	HND –Technical University	Teacher + Building Contractor	Nil	4	Laparotomy with Appendicectomy	Emergency	Midline
FPR11	24	M	Single	Islam	University Health Science Student	Student	Nil	15	Laparotomy with Appendicectomy	Emergency	Midline + Right Iliac
FPR12	28	F	Married	Christian	HND-Technical University	Secretary	Nil	8	Gynaecological Laparotomy (Salpingectomy)	Emergency	Transverse
FPR13	39	F	Married	Christian	University Degree	Teacher	2	10	Laparotomy Bowel Resection and Anastomosis	Elective	Transverse
FPR14	21	F	Single	Christian	Senior High School	Trader	Nil	9	Exploratory Laparotomy	Elective	Midline
FPR15	40	F	Married	Christian	Junior High School	Farmer	3	22	Laparotomy, Resection and Anastomosis	Emergency	Midline

APPENDIX H: SUMMARY OF THEMES, SUB-THEMES AND CATEGORIES

MAJOR THEMES	SUB-THEMES	CATEGORIES
Physical symptoms	• Postoperative pain	Location of postoperative pain Severity of postoperative pain Aggravating factors of postoperative pain Relieving factors of postoperative pain.
	• Postoperative nausea and vomiting (PONV)	Onset and duration of PONV Factors inducing PONV Relieving factors of PONV
	• Appetite changes	
	• Fatigue	
	• Altered sleep pattern	
Physical functions	• Impaired gastrointestinal function	Alteration in bowel movement Feeding difficulties Difficulties with nasogastric tubes.
	• Impaired bladder and urethral function	Urethral catheter disturbances and alteration in urinary outflow Urethral discharge
	• Impaired mobilization	
	• Muscle weakness (loss of strength)	
	• Alteration in sexual activity	
	• Alteration in cardiovascular function	
	• Impaired skin integrity	Description of the wound Wound dehiscence Surgical wound infection
Psychological well-being	• Anxiety and worry	
	• Feeling down and depressed	
	• Feeling lonely /abandoned	
	• Difficulty in concentration	

Social well-being	• Reduced social activity • Dependence on others • Interest in surroundings • Social isolation	
	• Economic burden	Cost of treatment Cost of living Loss of business opportunities
	• Social support networks	Spousal support Family support Support from friends Support from religious affiliations Workplace support.
Altered performance of self-care activities	• Altered personal hygiene practices	
	• Re-establishing everyday life activities	Re-establishing household activities Re-establishing occupational activities
Coping strategies in postoperative recovery	• Self-motivation • Cautiousness • Religiosity, superstitious beliefs and acceptance	
	• Self-medication to enhance recovery	Self- Medication with Orthodox Medicines Self- Medication with Herbal Medicines and Alcoholic Concoctions
Health system factors	• Inadequate health education • Insufficient medication	
	• Attitudes of health personnel	Positive attitudes of health personnel Negative attitudes of health personnel