SCHOOL OF NURSING AND MIDWIFERY
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA, LEGON

EXPLORING THE PSYCHOSOCIAL EFFECTS OF BURNS AND COPING STRATEGIES AMONG BURN INJURY SURVIVORS AT KORLE BU TEACHING HOSPITAL

BY

ENID AFI FRENCH-CUDJODE

(10804726)

THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTERS OF SCIENCE DEGREE IN NURSING

DECEMBER, 2020

DECLARATION

I, Enid Afi French-Cudjoe hereby declare that except for references to other people's works which have been duly acknowledged, this dissertation is the result of my own original work towards the award of a Master of Science Degree in Nursing in the School of Nursing and Midwifery, University of Ghana, Legon. This research has been undertaken with the guidance and supervision of Dr. Gideon Puplampu and Dr. Samuel Adjorlolo, School of Nursing and Midwifery, University of Ghana, Legon. The undersigned supervisors certify that they have read the dissertation and have recommended it to the School of Nursing and Midwifery for acceptance.

ENID AFI FRENCH-CUDJOE	.....	13/07/21
(STUDENT)	SIGNATURE	DATE
DR. GIDEON PUPLAMPU	.....	13/07/21
(SUPERVISOR)	SIGNATURE	DATE
DR. SAMUEL ADJORLOLO	.....	13/07/21
(CO-SUPERVISOR)	SIGNATURE	DATE

DEDICATION

This work is dedicated to my family and friends, without whom I would not have come this far.

ACKNOWLEDGEMENT

I am most grateful to God for His grace and favour throughout my MSc programme.

My profound gratitude goes to all the participants who voluntarily participated in this study. Without them, the study would not have been a success.

I am also grateful to the staff of the National Reconstructive Plastic Surgery and Burns Centre, Korle Bu Teaching Hospital for their support.

I appreciate the immense efforts and guidance of my supervisors; Dr Gideon Puplampu and Dr Samuel Adjorlolo. My encounter with them has been a learning process. I am grateful for their guidance, immense input and sense of clarity which enriched the study.

Many thanks to the entire faculty members of the School of Nursing and Midwifery and my colleagues (MSc/MPhil, the year 2019/2020).

I acknowledge the diverse perspectives shared by the various authors and publishers on the subject matter.

ABSTRACT

The aftermath of severe burn injury has a lifelong effect on functionality and wellbeing. The disfigurement and disability suffered by burn survivors are devastating, distressing, affecting their psychological, social and physical wellbeing. The study explored the psychosocial effects of burns and coping strategies among burn injury survivors at Korle Bu Teaching Hospital (KBTH) in the Accra Metropolis using the Transactional Model of Stress and Coping as the guiding theoretical framework. The study design was the qualitative exploratory descriptive research design. Using the purposive sampling technique, 12 burn survivors from the National Reconstructive Plastic Surgery & Burns Centre, KBTH were engaged in a face-to-face and phone-interviewing for data collection. The interviews were audiotaped, transcribed verbatim and analyzed using thematic content analysis. The results showed that burn injuries negatively impact the lives of burn survivors, as they experience psychological problems such as anxiety and depression; and social effects such as stigmatization, social withdrawal and isolation. The study discovered that, developing strong self-efficacy, endurance, covering their burn injuries or scars, ignoring looks and comments and limited outing are the coping strategies adopted by burns survivors. The roles played by health professionals, family and friends in the form of social support of different kinds (tangible, informational, emotional and companionship) were identified to be crucial in the treatment and recovery process of burn survivors. In conclusion, this study found that burn survivors experience psychological and social problems for which reason they adopt several coping strategies. It is recommended that collaborative efforts from family, friends, health professionals, government and other relevant stakeholders need to be pooled to support burn survivors to make their post-burn life as close as possible to their pre-burn life. This requires, health professionals rendering counselling and emotional support; government formulating policies that include burn survivors.

Keywords:

Burns, burn survivors, psychological problems, social problems, coping strategies.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

A&E	Accident and Emergency
ASD	Acute Stress Disorder
BID	Body Image Dissatisfaction
CSSD	Central Sterile Services Department
C/S	Caesarean Section
EFC	Emotion Focused Coping
FP	Female Participant
GHS	Ghana Health Service
ICU/HDU	Intensive Care Unit/High Dependency Unit
KATH	Komfo Anokye Teaching Hospital
KBTH	Korle Bu Teaching Hospital
LPG	Liquefied Petroleum Gas
MOE	Ministry of Education
MOH	Ministry of Health
MP	Male Participant
NGO	Non-governmental Oganization
NHIS	National Health Insurance Scheme
NMCG	Nurses and Midwifery Council of Ghana
NRPS/BC	National Reconstructive Plastic Surgery and Burns Centre
PFC	Problem Focused Coping
PTSD	Post-Traumatic Stress Disorder
WHO	World Health Organization

CHAPTER ONE

The chapter entails the background information, the problem of the study, the purpose of the study, objectives of the study, questions of the study, significance of the study and operational definition of terms.

1.1 Background to the Study

Burn is an injury that results in the internal or external damage of the human skin and destruction of body tissues caused by heat (Reddy, 2017). The World Health Organization (WHO) described burn to include organic tissue damage (example: damage of the respiratory organ as a result of smoke inhalation) and identifies burn causes to include heat, radiation, contact with a chemical substance, friction, electricity and radioactivity (WHO, 2014).

According to WHO (2014), approximately 265,000 fire-related burn deaths are recorded worldwide each year. This infers that there are more burn deaths and burn cases when other forms of burns are taken into consideration. Hence, it is not surprising when Meaney et al. (2019) reported that in 2014 alone, close to 11 million severe burns required medical attention. Qader and Muhamad (2010) posit that apart from those who died as a result of burns, many burn survivors in millions are left disfigured and disabled and prone to stigmatization and rejection. Therefore, based on the prevalence of burns and their associated negative effects, WHO identifies burn injuries as a serious global health problem (Wanjeri et al., 2018).

Burn injury is devastating, causes distressing trauma, and lifelong effects as a result of disfigurement and disabilities (Kurian et al., 2019). Thombs et al. (2008) identified depression, anxiety and the psychological effect of living with disfigurement among others as rehabilitation challenges suffered by burn survivors. Related to depression among burn survivors, Andrews et al. (2010) reported a range of 2.2% to 54% depression rate within one month of burn injury. Again,

depending on the environment and individual characteristics, burn survivors shy away from social life (Lawrence et al., 2012) and the decreased quality of life due to burns delay burn rehabilitation (Finnerty et al., 2016).

Burn survivors go through psychological difficulties as a result of scarring (Lawrence et al., 2012). From the viewpoint of Connell et al. (2014), burn injuries cause body image disturbances as burn survivors tend to show dissatisfaction with their external appearance and exhibit emotions like discomfort, anxiety and impaired cognitive functioning thereby exempting themselves from social activities. Davydow et al. (2009) identified acute stress disorder (ASD), depression, pain, posttraumatic stress disorder (PTSD), sleepless night, anxiety and delirium as aftermath symptoms of severe burn or burn injuries. Arbitrating from the aforementioned challenges suffered by burn survivors and personal experience, the researcher concurs that the effects of burns on survivors can be lifelong and devastating. Given the challenges suffered by burn survivors, Sadeghi-Bazargani et al. (2017) revealed that the challenges encountered by burn survivors can be broadly explained by two perspectives, namely; view from the inside- how the burn survivor perceives him/herself; and the view from outside- how others or society relate or treat the burn survivor.

Bardach et al. (2017) disclosed that burn injuries reduce the quality of life as it affects functionality and well-being. Judging from the physical and psychological effects of burns, post-burn life would not be the same as pre-burn life. However, this is dependent on the environment where the burn survivor finds him/herself and the individual characteristics of the burn survivor as mentioned by Lawrence et al. (2012). This assertion is in line with Bardach et al. (2017) assertion that burn survivors who experienced some psychological effects such as depression and anxiety in the past find it more difficult returning to the pre-burn quality of life. Bardach et al. (2017),

Lawrence et al. (2012), among other scholars affirmed that burn injury has psychological and social effects on survivors.

Relating burn to death, Lau (2006), Torabian and Saba (2009) asserted that burns are associated with death, morbidity and disabilities worldwide. However, the prevalence and effects of burns vary across countries (Wanjeri et al., 2018). In high-income countries, there is a low rate of deaths caused by burns. In the United States of America as an example, burns account for 3% of all injury deaths (Liao & Rossignol, 2000). The situation is different in low- and middle-income countries as the association of burns to mortality, morbidity and disability are high (Lau, 2006; Toarabian & Saba, 2009). Mock et al. (2008) revealed that whereas 1 burn death out of 100,000 people is recorded in high-income countries, Africa characterized by low-middle income countries records 6 burn deaths out of every 100,000 people. The difference between high-income countries and low-middle income countries result from poverty and poor housing amidst other risk factors that are dependent on country-specific environment and cultures (Asuquo et al., 2009). Wanjeri et al. (2018) alluded that 95% of burn deaths are recorded in low-middle income countries even though preventable. Peck and Toppi (2020) also assert that burn is a leading cause of disability-adjusted life years in low-middle income countries.

In Nigeria, 4.8% of trauma deaths are associated with burn injuries, which infers that these people died out of the aftermath effect of burn injuries (Gwaram & Ameh, 2017). Similarly, Wanjeri et al. (2019) reported that 20% of traumatized patients seen at Kenyatta National Hospital, Nairobi, Kenya are caused by burn injuries. Tropez-Arceneaux et al. (2017) found that in the USA, only 30% of adult burn survivors showed moderate to severe psychosocial effect of burns while the remaining 70% show little to no symptoms of psychosocial effects of burns. These findings suggest that the percentage of burn survivors who suffer post-burn effects specifically

psychological and social effects of burns are less in high-income countries compared to low-middle income countries.

In Ghana, the incidence, mortality and morbidity of burns exist. The National Reconstructive Plastic Surgery and Burns Centre (NRPS & BC) at Korle Bu Teaching Hospital (KBTH) recorded 302 severe burn cases out of which 21.9% died in 2013. The number of burn cases received at the NRPS & BC decreased in 2014 to 283 and further decreased to 248 in 2015. However, the burn mortality rate at the NRPS & BC increased from 21.9% in 2013 to 24% in 2014 and a suspected further increase in 2015 (Yarney et al., 2019). This trend does not only affirm various authors' assertion of a high incidence of burn mortality and morbidity in low-middle income countries, but also brings to bear the fact that many are dead as a result of burns, many are disfigured and disabled because of burns, and the negative effects of burns extend from burn victims (alive or dead) to the country at large (Greenhalgh, 2019; Yarney et al., 2019). Therefore, the study sets out to explore the psychosocial (psychological and social) effects of burns and coping strategies among burn injury survivors.

1.2 Problem Statement

The WHO estimates that 11 million persons suffered burn injuries of all types annually worldwide, 180,000 of these cases are fatal and required medical attention (WHO, 2018). Burn injuries affect the quality of life as well as lead to early mortality hence a serious global health problem (Wanjeri et al., 2018). To reduce the mortality of burns patient and facilitate the coping experiences of the survivor, modern and innovative approaches are being applied in medical facilities as well as equipment that enhance burn care.

This has resulted in low burn mortality rates especially in high-income countries and an increased number of people living with burn injuries (Andrews et al., 2010; Qader & Muhamad, 2010; Yarney et al., 2019). Despite the effort being made, burn survivors are left with lifelong disabilities, disfigurement and possibly death at a later time. Unfortunately, while the incidence of burns is declining in high-income countries, the opposite is observed in low-middle income countries like Ghana (Al-shamsi & Othman, 2017; Yarney et al., 2019). With the gradual improvement in burn care in low-middle income countries, it suggests that more burn survivors would have to deal with the associated effects of burn injuries.

Knowing that burn survivors suffer psychological, physical and social problems as aftermath which reduces their quality of life, it is important and necessary to understand how burn survivors cope with their situation.

Therefore, in light of the aftermath effects of burn injuries suffered by burn survivors being dependent on a person's characteristics and existing social environment, it is crucial to understand the psychological and social effects of burn injury on survivors in low-middle income countries especially Ghana to help address the impact on patients and families.

1.3 Purpose of the Study

The study sought to explore the psychosocial effects of burns and coping strategies among burn injury survivors, using burn survivors at the National Reconstructive Plastic Surgery & Burns Centre, Korle Bu Teaching Hospital in the Accra Metropolis.

1.4 Specific Objectives

The specific objectives outlined for the study were to;

1. Explore the psychological experiences from burn injury among burn survivors.
2. Explore the social experiences from burn injury among burn survivors.

3. Identify and describe the coping strategies burns survivors adopt.

1.5 Research Questions

The study is guided by the following research questions:

1. What are the psychological experiences from burn injury among burn survivors?
2. What are the social experiences from burn injury among burn survivors?
3. What coping strategies are adopted by burn survivors to overcome the psychosocial effects of burn injury?

1.6 Significance of the Study

The study uniquely fills an important gap in the literature by exploring psychological and social experiences from a burn injury and the coping strategies adopted by burn survivors. Therefore, the study would help ascertain vital information that would be used to improve psychological adjustment and social support for burn survivors. The information gathered through this study would help improve health care and the provision of holistic treatment to burn survivors.

Secondly, the majority of burn survivors are disfigured and become vulnerable to psychological effects and are discriminated against (WHO, 2014). Also, burn injury has been identified as a public health problem (Wanjeri et al., 2019; WHO, 2018) and this calls for collective and collaborative efforts from the government and stakeholders in addressing the problem. Therefore, information gathered through this study would inform policies as well as advocacy campaigns by various stakeholders, aimed at minimizing the negative effects of burns, from psychosocial to financial and economic impact.

Finally, as a health professional, the researcher is enthused to carry out this study as it would enable her to have first-hand information on the psychosocial effects of burns and coping strategies among burn survivors. This would help her to empirically understand from the

perspective of burn survivors how to render judicious burn care and manage its associated effects. This would enhance the researcher's professional skills as a health worker. Also, conducting this study gives the researcher the platform to practice her research skills and knowledge.

1.7 Operational Definition of Terms

Burn: An injury to the skin or other organic tissue primarily caused by heat or due to radiation, radioactivity, electricity, friction or contact with chemicals. Respiratory damage resulting from smoke inhalation is also considered to be burn.

Psychosocial: Relating to the interrelation of social/environmental and/or biological factors and an individual's thought and behaviour.

Coping: The action or process of adapting to a challenge, threat or event.

Psychological: affecting or arising in the mind; related to the mental and emotional state of a person.

Social: Relating to society or its organizations

CHAPTER TWO

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

This chapter presents the theoretical framework that underpins the study and a review of related literature. The theoretical framework guiding this study is the Transactional Model of Stress and Coping. The chapter also delves into empirical studies related to the research problem and is structured according to the study objectives. Finally, the chapter concludes with a summary of reviewed literature.

2.1 Theoretical Framework (The Transactional Model of Stress and Coping)

This study adopts the transactional model of stress and coping by Lazarus and Folkman (1984) to explain the psychosocial effects and coping strategies of burn injury survivors. Not only has the transactional model of stress and coping gained recognition and acceptance among scholars and practitioners (Dewe & Cooper, 2007; Mitchell, 2004) but it conceptualized psychological stress as an individual and environmental interaction, and views coping with psychological stress as a dynamic process since stressful situations are not static and individuals respond differently to stressful events.

The transactional model of stress and coping initially propounded by Lazarus (1966) and further developed by Lazarus and Folkman (1984) presents that, there is a bidirectional relationship between an individual and the environment where a multifaceted transaction between the individual and the environment are means through which stress is produced and can be managed. Lazarus and Folkman (1984) argued that individuals constantly appraise stimuli within their existing environment, which generates emotions that need to be managed. Appraised stimuli perceived to endanger one's well-being acts as a stressor which initiates coping strategies that help manage the stressor or emotions developed. The outcome of the coping strategy changes the

individual-environment relationship which can be appraised as favourable, unfavourable, or unresolved (Lazarus and Folkman, 1984). When the outcome of the coping strategy is favourable, emotions are positive but when unfavourable or unresolved, it produces negative emotions like stress which forces the individual to look for alternative coping solutions. Therefore, Lazarus and Folkman (1984) defined stress as appraised stimuli that are harmful or threatening and exceed the individual coping abilities. Lazarus and Folkman (1984) believed that two primary features namely the cognitive appraisal and coping determine the individual-environment relationship. These features are explained.

2.1.1 Cognitive Appraisal

According to Lazarus and Folkman (1984), the cognitive appraisal evaluates, determines, and explains what is stressful, and its extent as a result of a particular transaction between an individual and his/her environment. According to Mitchell (2004), the cognitive appraisal can take three forms namely primary appraisal, secondary appraisal, and reappraisal.

The primary appraisal judges a specific transaction between an individual and the environment, based on how the transaction affects the individual's well-being. The transactional effect is said to be irrelevant if it does not affect the individual's well-being and benign-positive if the individual's well-being is positively influenced by the transaction. However, if the transactional effect is termed stressful, it means the individual's well-being is harmed (damage already happened), threatened (anticipated harm or losses) or challenged (potential growth or gain). Biggs et al. (2017) iterated that the stressful transactional effect produces negative emotions that require coping solutions hence, stressful transactions are the primary concerns of the transactional model of stress and coping.

Secondary cognitive appraisal judges what can be done to manage a stressful transaction by evaluating coping strategies depending on coping resources such as self-efficacy, situational variables such as living with burn scars and coping styles which emphasizes whether similar transactions have been experienced (Biggs et al., 2017). Questions asked during secondary appraisal include "what choices are available?", "can the available options be applied?" and "would the options address the stress problem". During the secondary appraisal, the individual evaluates physical resources such as strength and health, social support, psychological resources like self-efficacy and self-esteem, and material resources like money (Mitchell, 2004). Availability of sufficient resources during the secondary appraisal to manage stressors reduces stress while inadequate or unavailable resources increases stress levels (Biggs et al., 2017). That is, without a stressful transaction, there would be no secondary cognitive appraisal. Dewe and Cooper (2007) discussed that secondary appraisal is about deciding on how to manage stressor and its resultant distress, however, the secondary appraisal is not of less importance compared to primary appraisal and neither are both primary and secondary appraisal independent as stress is influenced by a dynamic process which includes exchanges between primary appraisal and secondary appraisal at the same time.

Cognitive reappraisal helps to evaluate the coping strategies adopted and their resultant effect on the individual's stress situation. Thus, the reappraisal makes use of new information derived from the individual and environment relationship within a specific transaction. Mitchell (2004) argued that reappraisal makes use of previous cognitive appraisal (primary and secondary appraisal), hence the psychological adjustment of the individual speaks to the effectiveness of coping measures that determine reappraisal. Lazarus and Folkman (1984) argued that cognitive

reappraisal helps determine whether a coping measure has changed a transaction effect from stressful to irrelevant or benign-positive.

2.1.2 Coping

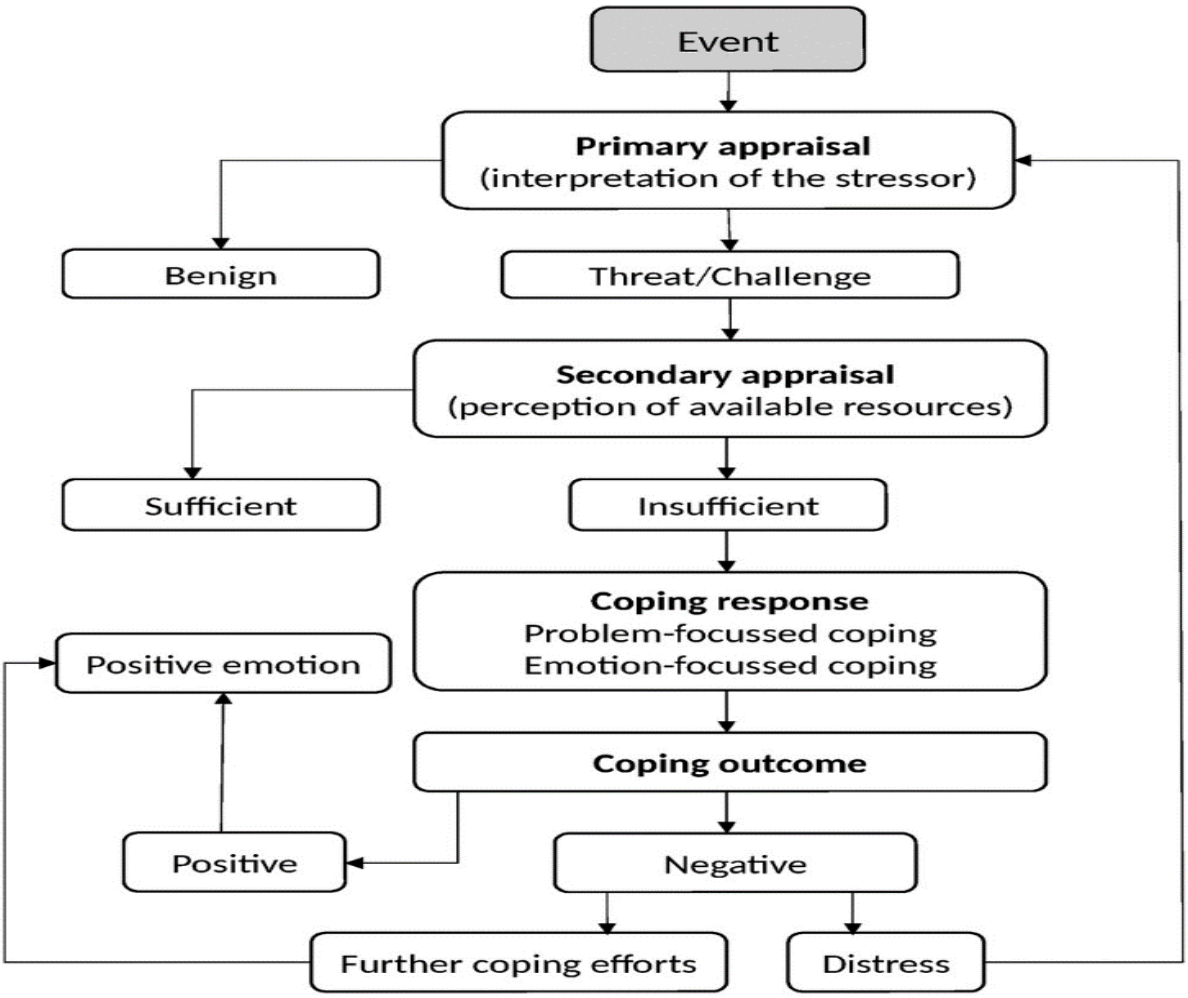
Lazarus and Folkman (1984) defined coping as "a constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person." They considered coping to be a varied process depending on the situation and not linked to personality traits hence, coping emerges when cognitive appraisal of an individual and environment transaction needs managing (stressful transactional effect). In that regard, Cheng et al. (2015) maintain that coping strategies help determine the level of psychosocial stress and also helps in addressing stressors. There are two forms of coping strategies, namely emotion-focused coping and problem-focused coping according to Lazarus and Folkman (1984).

Emotion-focused coping (EFC) focuses on regulating emotions that arise because of stressful transactions between an individual and the environment. This type of coping focuses on internal situations that spark emotional responses rather than external situations. Mitchell (2004) alludes that EFC is generated when nothing can be done to change the cognitive appraisal of threatening or challenging transactional effect resulting from an individual's relationship with the environment. Hence, EFC strategies such as wishful thinking, avoidance, taking alcohol or using drugs are developed to change the individual's emotional response (Mitchell, 2004). On the other hand, problem-focused coping (PFC) are strategies produced to directly manage stressors or stressful transactional effects. Thus, when cognitive appraisals considered threatening or challenging can be changed or resolved, the PFC measures are produced (Mitchell, 2004).

Examples of PFC include developing new behaviours and learning new skills whereas seeking social support can be an EFC and PFC measure (Vitaliano et al., 1987).

Lazarus and Folkman (1984) argued that both EFC and PFC strategies are used by individuals in stressful transactions. However, Boyd et al. (2009) argued that EFC increases anxiety and dissatisfaction hence, PFC measures are effective compared to EFC as PFC measures decrease anxiety and dissatisfaction. Similarly, Graven et al. (2014) discovered that PFC improves health-related quality of life while EFC worsens health-related quality of life and associated with high mortality risk among cardiac patients. Hence scholars such as Boyd et al. (2009), Graven et al. (2014) and many other scholars believe that EFC strategies are maladaptive and ineffective resulting in negative outcomes while PFC strategies result in positive outcomes. Contrarily, Dewe and Cooper (2007) stand against the generalization of PFC effectiveness over EFC and argued that EFC measures are considered maladaptive because of how EFC reactions are labelled example "avoidance" which is negative. However, to simplify the argument on the effectiveness of coping strategies, the transactional model of stress and coping by Lazarus and Folkman (1984) articulates that coping strategies are inherently neither effective nor ineffective but rather depends on the extent to which the coping strategy matches the cognitive appraisal and situational conditions hence, the effectiveness of a coping strategy is tied to how well it fits and the context within which the coping strategy is being used. For example, EFC measures can be used in the short term when there are no sufficient resources for PFC measures. The transactional model of stress and coping by Lazarus and Folkman (1984) is presented in figure 2.1 below.

Figure 2.1: Lazarus and Folkman (1984) Transactional Model of Stress and Coping



Source: Turner-Cobb and Hawken (2019)

Figure 2.1 can be used to explain the psychological stress and coping strategies adopted by burn survivors. Burn survivors are naturally put into a dilemma where they begin to appraise how they feel post-burn and how others see and behave towards them. This creates the individual and environment relationship discussed by Lazarus and Folkman (1984). Substantively, serious burn injuries that leave scars and deforms burn survivors would be considered a stressful transaction effect as it harms, threatens, and challenges the well-being of the burn victim. The interpretation and identification of the stressful transaction occur during the primary appraisal. Burn survivors

who have identified the transactional effect to be stressful begin to search and think about what can be done to manage their stressful situation, through secondary appraisal. If the available resources to manage the stressful situation are insufficient, burn survivors begin to access coping strategies either EFC or/and PFC in managing their emotions. Through reappraisal, burn survivors know whether their coping strategy has been effective or not. In cases where the result is negative, alternative coping strategies are developed or burn survivors go through further psychological stress and consequential adverse effects like depression, anxiety, and post-traumatic stress disorders (PTSD).

2.1.3 Relevance and Justification of the Model to the Study

The transactional model of stress and coping by Lazarus and Folkman (1984) explained stress as a transaction effect from the interactions of individuals and their environment hence stress is described as an individual-environment interaction. Through the individual-environment interaction, the transactional model of stress and coping helps to understand the process of stress formation as well as causes of stress. The transactional effect between an individual and the environment is stressful when the wellbeing of the person is affected. The researcher identified that burn survivors' transactional effect is stressful as their wellbeing is harmed (excruciating pain due to burn injuries, scars from burn injuries and disfigurement), threatened (inability to perform some tasks, attend social events and in some cases loss of friendships) and challenged (dealing with post-burn challenges such as stigmatization). The researcher believes that this is why Thakur et al. (2019) posit that death due to burns is only part of a problem as burn survivors live a harmed, threatened and challenged life and possibly die at a later time due to burn injuries. Again, the model helps in understanding the challenges faced by burn survivors, using the view from inside and view from outside perspective as classified by Sadeghi-Bazargani et al. (2017). The view from

inside is the cognition process of the burn survivor and the view from outside is the environmental effect on the burn survivor.

Beyond stress, the transactional model of stress and coping by Lazarus and Folkman (1984) explained how coping strategies are formed to deal with stressors. Theories that conceptualize coping as an ego process are criticized that coping is not a mastery act but a response to stressful demands while theories that conceptualize coping as a trait are criticized that stressful situations are not static and individuals respond differently to similar stressful situations (Lazarus and Folkman, 1984; Mitchell, 2004). Therefore, the transactional model of stress and coping conceptualize coping as a dynamic process that must fit a stressful situation and applied with an appropriate context. By this, coping strategies are formed and used based on stressful situations and the individual's characteristics.

Biggs et al. (2017) assert that, over the past five decades, stress and coping researches have been shaped by Lazarus and Folkman's transactional model of stress and coping. This infers that the transactional model of stress and coping by Lazarus and Folkman (1984) has gained extensive recognition and usage by various scholars. The model describes stress as an individual-environment interaction and coping as a dynamic process that must fit a stressful situation and context. The stress aspect of the transactional model enabled the researcher to understand the emotions of burn survivors due to their burn injuries, and the associated psychosocial outcomes. On the other side of the transactional model is coping, which enabled the researcher to know how, why and the type of coping strategies adopted by burn survivors. Therefore, the study adopted and used the transactional model of stress and coping by Lazarus and Folkman (1984) as the theoretical framework for explaining the psychosocial effects of burns and coping strategies among burn injury survivors.

2.2 Review of Related Studies

Literature was reviewed using various sources such as published journals, articles, books, and the internet. A portion of the databases utilized as a part of the sources for writing include; Science Direct, Google Scholar, Medline Plus, PubMed, Sage, CINAHL, EBSCO host, JSTOR, Wiley Online Library, HINNARI, Taylor and Francis Online Library. Keywords utilized for the search included; "burn injury", "burns", "psychosocial effects of burns", "psychological implications", "social implications" and "coping strategies", among others. Studies that were reviewed are presented according to the objectives of the study.

2.2.1 Psychosocial Implications of Burn Injury

Many burn survivors face both psychological and social problems as a result of the burn injury sustained. Burn injuries affect the physical functioning of burn survivors and may go a long way to affect lifestyle and relationships (Moi & Gjeangedal, 2008). Tehranineshat et al. (2020) explained that burn injuries are traumatic and can have negative permanent physical, emotional, and psychological effects on burn survivors. The negative psychological, emotional, and physical challenges suffered by burn survivors reduce their quality of life and well-being (Palmu et al., 2016; Tehranineshat et al., 2020). Guccione (2014) believes that resilience and self-efficacy among others are factors that influence the quality of life and wellbeing of burn survivors. The section discusses the psychological and social problems faced by burn survivors due to their burn injuries.

2.2.1.1 Psychological Experiences of Burn Injury

There is a high probability of burn survivors developing psychological disorders among other adverse consequences when there is no specialized care (Palmu et al., 2016). According to Dalal et al. (2010), a high level of acute pain due to burn injuries is related to psychological effects such as suicidal ideation, depression, acute stress disorder and PTSD even 2 years or more after

the burn injury. The most common psychological problems are depression, anxiety, and post-traumatic stress disorder (Lawrence et al., 2006; Palmu et al., 2016; Ullrich et al., 2009).

2.2.1.1.1 Depression

According to Lawrence et al. (2006), depression is the number one psychological problem burn survivors suffer. From the perspective of Moi et al. (2008), depression is suffered by many burn survivors because of the scarring as a result of burn injuries. It is almost inevitable to survive serious burn injuries without scars even after surgery, hence burn survivors must learn how to deal with their new post-burn body image since that is the main cause of psychological disorders, topmost depression (Moi et al., 2008). Jain et al. (2015) affirm that depression is associated with dissatisfaction with body image and a functional inability among burn survivors even five years or more after the burn injury.

In a qualitative study conducted by Moi et al. (2008) to understand the experiences of burn survivors in Norway, 14 burn survivors were selected from the National Burn Centre of Norway. They discovered that the burn survivors were depressed mainly because of their physical appearance and not the pain from their burn injuries. As a result, some of the sampled participants reported that they were unable to look in the dressing mirror especially after the burn injuries dressings were removed. Others also reported that, even after several months, they get a surprise shock when they look at their body image in the mirror. Moi et al. (2008) also found that not only did the burn victims suffer depression but often feel socially withdrawn and stigmatized.

2.2.1.1.2 Anxiety

Another psychological problem suffered by burn survivors is anxiety. Anxiety among burn survivors can take two forms, state and trait anxiety (Hulbert-Williams et al., 2008). Hulbert-Williams et al. (2008) explained that state anxiety occurs when the burn survivor experiences slow wound healing and recovery while trait anxiety occurs when the burn survivor faces psychosocial issues such as worrying about the burn injuries and/or reaction of people.

Hulbert-Williams et al. (2008) suggested that sufferers of major burns experience higher levels of distress when compared with those who have minor burns. In contrast, Tebble et al. (2004) claimed that injuries no matter what size, may have a psychological impact on a patient. This viewpoint is shared by Bisson et al. (1997); Padadopolous et al. (1999); Shepherd et al. (1990) and Smith (2000).

Tebble et al. (2004) carried out a prospective, longitudinal study to examine the psychological impact of patient factors on self-consciousness and anxiety in those reporting to the Accident and Emergency (A&E) with minor facial injuries. A cohort, longitudinal survey of self-reported questionnaires, using a convenient sample in an A&E unit in a UK hospital was adapted to carry out the study. A total of 63 participants (majority male) aged between 18 and 55 years were incorporated into the study. Enrolment was limited to those with a visible wound and larger than 1.5 cm in length. These restrictions were put in place as staff felt a wound larger than 1.5 cm was more noticeable to observers. The Derriford Appearance Scale (DAS) (Carr et al. 2000) was utilized as it measures the consequences of issues of appearance. The scale was chosen as it applies to various deformities and aesthetic problems including minor facial injuries. Only two of the scales subheadings were included as the other three were only relative to the body. The State-Trait Anxiety Inventory (STAI) was also included as a definitive measure of anxiety. Scar size, living arrangements (social support) and cause of injury had a significant impact on self-consciousness.

These factors were then studied in relation to state anxiety scores. Those who lived alone had scars larger than 4 cm and who had been in accidents were found to have had higher State Anxiety scores. Anxiety and social self-consciousness (SSC, a subheading of the Derriford Appearance Scale), did not decrease at 6 months post-injury. As there were mixed results in relation to living arrangements, this may be an indication that support should be available based on an individual's needs. It was found that scar size did not impact anxiety until 6 months, perhaps due to outlooks of healing. This study is an excellent demonstration of the anxiety experienced by burn survivors.

Hulbert-Williams et al. (2008) also carried out a study to explore anxiety in burn victims. This was an experimental study consisting of 60 participants (30 burn survivors and 30 with no burn injuries) from the UK. This study compared burn survivors with those who have not had any burn injuries using experimental stimuli (3 packs containing, burn images, non-injured images and neutral images i.e. houses or gardens.) The STAI was adapted to measure the results. The results depicted higher levels of anxiety in those with burn injuries; however, the authors stated that there was evidence that regular exposure to a somewhat anxiety-provoking stimulus can reduce the provoking factor over time (Fava et al. 2001).

2.2.1.1.3 Post-Traumatic Stress Disorder (PTSD)

PTSD is suffered by burn survivors because of burn trauma. According to Kurian et al. (2019), burn injuries are devastating, causing distressing trauma which has a psychological, social, economic, and physical impact on burn survivors. Therefore, Kurian et al. (2019) assert that coping with the new post-burn body image is a traumatic task for burn survivors. The American Psychiatric Association (1994) identified i) re-experiencing - the process of remembering or recollecting burn injury incident, ii) hyperarousal - the inability to sleep or continuous experience of anxiety, and iii) avoidance of trauma-related stimuli as the causes of PTSD among burn

survivors. Cheng et al. (2015) examined coping behaviours in severely burned patients with PTSD and found that avoidance and resignation were the main coping mechanisms adopted by burn survivors with PTSD hence, Cheng et al. (2015) believed that coping strategies do not only disclose the extent of PTSD but also act as a means of diagnosis.

2.2.1.2 Social Experiences of Burn Injury Survivors

Burn scars disfigure burn survivors and this leads to crude and subtle social behaviours against them (Kurian et al., 2019). Crude social behaviours include double looks, bullying, whispering, teasing and blatant starring while subtle social behaviours are avoidance or distancing, lack of eye contact and ignoring. Bull and Rumsey (1988) revealed that burn survivors suffer from low body esteem, privacy violation and social isolation when such dehumanizing social behaviours are experienced.

Karabeg et al. (2009) carried out a retrospective study intending to portray social rehabilitation and social adaptation of those who suffered burn injuries alongside the psychiatric consequences. This was a longitudinal study assessing hospitalized patients over a period of 5 years. There was a gender mix varying from ages 15 to 88, and a total of 58 patients with various forms of burn injuries were included in the study. Socialization was measured by the number of patients who returned to the workforce and experienced social stigma. Out of the 26 capable patients, only 16 returned to their previous posts, 3 patients changed their career and 7 retired. 13 patients who had facial, neck or hand scarring, reported public stigma in the form of staring. This study was a small sample and its measurements of social stigmatization could be questioned.

Lawrence et al. (2006) provide a more reliable study that discussed social stigmatization experienced by burn survivors. This study was carried out using the same sample participants as previously discussed under depression Lawrence et al (2006a). However in this study the

instruments used vary, the Perceived Stigmatization Questionnaire (PSQ) and the Social Comfort Questionnaire (SCQ) were applied. Stigmatizing behaviour as reported by those with appearance distinctions included; staring, teasing, rude behaviour, avoidance, confused behaviour and external pressure to change one's appearance. The PSQ consisted of 38 items where participants were asked to rate how frequently they experienced this kind of behaviour. The SCQ should be used in conjunction with the PSQ. The SCQ measures subjective sense of social isolation and violation of privacy effect. With this, the ISEL-12, BES, IAS, and the SMFQ were dispensed. When these questionnaires were returned, the PSQ was analyzed for askew information or results. Consequently, 6 items were removed from the PSQ. The results depict significant correlations with both PSQ and SCQ with depression. "The PSQ absence of friendly behaviour subscale had the highest correlation with social support variables" (Lawrence et al., 2006b).

It is clear from the studies reviewed that body image plays a large role in social integration. Appearance is a complex social function which when interfered with, may cause stereotyping (Macgregor, 1990). Price (1990) developed a model of body image which provided a clear and comprehensive model in relation to psychological experiences. This model should be recognized by health care staff to help better prepare burn patients' return to the community.

2.2.1.3 Social Support for Burn Injury Survivors

Anzarut et al. (2005) assert that many studies in the literature point to the fact that, social support for burn survivors plays a significant role in both the physical and psychological recovery of burn victims. LaGreca (1992) and Uchino (2009) categorized social support into tangible/instrumental, companionship, informational and emotional support. Tangible social support is in the form of tangible resources such as money, tools and equipment that would be helpful to the burn victim. Informational support entails sharing ideas and crucial information

about a particular situation (for example burn injuries) and how to successfully manage such conditions. Companionship has to do with being there for the burn survivor in person, especially in times of need when others reject or ignore the burn victim while emotional support requires words of encouragement and positive statements that would boost the self-esteem and self-efficacy of the burn victim and elicit a sense of belonging and love.

Providers of social support to burn survivors range from health workers to friends, family, and others in society (Badger & Royse, 2010). Backstrom (2013) asserted that burn survivors identify family support as a crucial factor during the recovery process. MacNeil and Mead (2005) believed that social support especially from peers creates an enabling environment that helps people to redefine themselves and discover how to rebuild, following a traumatic injury. Uchino (2009) also argued that there is evidence that links social support to positive health outcomes.

In a comparative study carried out by Waqas et al. (2016) to examine the social support and ego resilience among burn injury patients in Lahore, Pakistan, 80 burn patients were conveniently sampled from a Plastic Surgery and Burn Centre in a Teaching Hospital which was compared to 80 patients with minor ailments from another teaching hospital, revealed that the burn patients reported lower social support scores from family, friends, and significant others, compared to their counterparts. The study findings showed that there was significant variation in ego resiliency between burn patients and non-burn patients. However, a positive correlation existed between perceived social support received, and ego resilience levels. Waqas et al. (2016) concluded that the low social support received, affected the recovery process of burn patients hence social support for burn patients should be improved.

According to Backstrom (2013), the association between social support and health outcome is dependent on two models; the buffering model and the direct effect model. Backstrom (2013)

explained that when social support is targeted at improving the well-being of a person suffering from a traumatic event, it is known as the buffering model. The buffering model emphasizes that the social support provided is geared towards preventing a person from suffering any negative influences from a traumatic event such as burns. However, when social support is provided regardless of the existence of a traumatic event or stressful incident, it is known as the direct effect model. Liang et al. (2012) argued that social support is an important factor that aids the recovery process of burn survivors as it responds more to psychosocial needs than the psychological needs of burn survivors.

2.2.2 Coping Strategies Adopted by Burn Injury Survivors

Bras et al. (2007) in their study dubbed "Coping with severe burns in the early stage after burn injury," investigated the relationship between coping strategies, anxiety, and depression levels. The survey tool comprised of coping with burn questionnaire, Beck Anxiety Inventory and Beck Depression Inventory which respectively measured coping strategies, anxiety, and depression. They sampled 70 hospitalized patients with severe burns from the University Hospital of Traumatology in Zagreb, Croatia. The study discovered that out of the six subscales (emotional support, optimism-problem solving, avoidance, revaluation/adjustments, self-control and instrumental action) in the coping with burn questionnaire, emotional support and optimism-problem solving had the highest score indicating that these coping strategies were frequently used. However, the study showed that burn patients who adopted avoidance as a coping strategy had high levels of depression and anxiety. In view of this, Bras et al. (2007) concluded that coping strategies should be introduced early during burn treatment to help improve adaptation among burn survivors.

Tandon et al. (2013) defined coping as a conscious attempt to regulate cognition, emotion, behaviour, physiology and the environment in response to stressful stimuli. Similarly, Horwitz et al. (2011) referred to coping as an active process that utilizes behavioural or cognitive efforts to manage the internal or external sources of psychological stress. When faced with a stressful situation, the individual adapts a variety of coping strategies. The adapted patterns of coping strategies vary across individuals or groups of individuals.

Factors that influence coping strategies include; personality characteristics, the individual's experiences and available supports and resources. Coping strategies employed by burn survivors include, (a) problem-focused; where the individual actively attempts to change stress-inducing circumstances; (b) emotion-focused: the individual makes effort to change their own negative emotions caused by the stressor and (c) avoidance coping; which results when individuals use strategies to simply avoid the stressor. The frequent use of both emotion-focused coping and avoidance coping are associated with ineffective coping patterns (Horwitz et al., 2011).

Fauerbach et al. (2002) underwent a qualitative research study comparing two emotion-focused coping methods when dealing with body image alterations following burn injuries. The two methods compared were mental disengagement and venting emotions experienced. The study used a prospective longitudinal design, incorporating 78 participants of a broad age range and mixed gender. All the participants were required to meet at least one of the American Burn Association (1984) criteria for severe burn injury. It was found that those who used both venting and disengagement were younger. Also, this group had larger burns than those who used one method or neither method. It proved that those who required both coping strategies had greater levels of body image dissatisfaction (BID) 2 months following discharge. In the absence of any coping strategies, there was a lack of cognitive, behavioural and social skills required to adapt to

the body image alterations. However, some variables were not included such as how one's personality and social support helped them to cope with BID. This study portrayed the advantages of coping strategies, however, further research should be undertaken concerning how these strategies can be applied to those suffering from depression, anxiety, PTSD or social issues.

Kurian et al. (2019) conducted a single cohort study to investigate body image perception, coping skills, social support and self-monitoring behaviours among adult burn survivors. They used the purposive sampling technique to select 18 burn survivors who could read and write and were admitted for a minimum of one week in the burns intensive care unit at the Kasturba Medical College in Manipal, India. The survey tool consisted of many indices notably the self-monitoring scale (SMS), social support appraisal scale (SSA), satisfaction with appearance scale (SWAP) and coping with burns (CQB). The survey was administered when the burn survivors were admitted to the intensive care unit and after a month when the burn survivors were discharged. The study revealed that there was a positive relationship between body image satisfaction and coping strategies. Thus, burn victims who had better body image satisfaction obtained higher coping strategies score and vice versa. Kurain et al. (2019) also discovered that self-monitoring behaviours and satisfaction with body image decreased with time. Also, the study showed that there was a negative social support appraisal with friends offering the least support followed by family.

Similar to the findings of Waqas et al. (2016), Kurian et al. (2019) identified that gender and educational level significantly influenced body image, coping strategies, social support and self-monitoring behaviours and recommended that further investigations are carried out to bring about interventions that would improve the quality of life of burn survivors.

Wiechman et al. (2020) in their study, used the biopsychosocial model to understand long term adjustments in depression, psychological distress and PTSD among 231 burn survivors by

determining the significance of pre-burn adjustments, coping strategies and injury-related variables. Various indexes and scales including the SF-36, Davidson Trauma Scale, Beck Depression Inventory-II, Brief Symptom Inventory and Ways of Coping Checklist-Revised were used to source primary data from the sampled 231 burn victims. Using multiple regression analysis, Wiechman et al. (2020) found that, good pre-burn physical health predicted high use of avoidance coping strategies; good pre-burn emotional health predicted low use of avoidance coping strategies and good pre-burn physical and emotional health does not predict the use of approach coping strategies. The study also revealed that high use of avoidance coping strategies predicted high symptoms of depression, psychological distress, and PTSD during the first year of burn injury and higher PTSD symptoms in the second year of burn injury. They concluded that good/better pre-burn adjustments do not always predict good/better post-burn adjustments. The findings of Wiechman et al. (2020) affirmed the assertions of Dalal et al. (2010) that the psychological effects of a burn injury can manifest beyond the early years of burn injury. Again, Wiechman et al. (2020) affirmed that coping is a dynamic process that occurs over time and its effectiveness is tied to how it fits the context in which it is being used as argued by Lazarus and Folkman (1984).

Many studies have researched the psychological issues present following a burn injury however there are few studies on the treatment of psychological issues in burn patients. Bernstein (1976) produced a text discussing psychotherapy care required by those with burn injuries however it is descriptive rather than empirical and evaluative. Assessment and treatment of these issues are not adequately dealt with as a major portion of the treatment regime (Wisely & Tarrier 2007). Freund and Marvin (1990) include both group and individual psychotherapies, behaviour modifications and stress inoculation as part of their treatment regime.

2.3 Chapter Summary

The chapter reviewed both theoretical and empirical literature that are related or useful in explaining the psychosocial effects and coping strategies among burn injury survivors. The transactional model of stress and coping was discussed to elaborate on the different channels through which stress and post-burn situations manifest and affect burn injury survivors. The review showed that burn survivors go through a traumatic experience that has psychosocial effects such as depression, anxiety, PTSD, low body esteem, privacy violation and social isolation, among others.

Again, the review showed that not many burn-related studies have been conducted in Ghana and Africa in general. The researcher found only one study conducted in Ghana that relates to the psychosocial effects of burns and coping strategies among burn survivors. However, the focus of this study and approach is different from that study in terms of objectives, research setting and research approach. Therefore, this study is unique and timely especially in this modern era where burn care and treatment have improved to reduce mortality among burn victims. The study, guided by the transactional model of stress and coping, fills an important gap in the literature as the findings would shed light on psychosocial effects of burn injury and coping strategies that can be adopted to enhance the recovery and rehabilitation process within the context of Ghana and Africa.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter explains how data was collected to answer the stated research questions and ensure the study objectives are fully met. The chapter comprised the research design, research setting, study population, sampling technique and sample size, as well as inclusion and exclusion criteria. Others include pretesting of the instrument, data collection tool, data analysis as well as ethical consideration.

3.1 Research Design

Research design is the skeletal framework (blueprint) for conducting research. There are a variety of research designs and each has its pros and cons. Given this, Akorsu (2010) explained that research designs are carefully selected to avoid methodological ambivalence and inconsistencies that bias research. Creswell (2009) posits that research designs are beyond plans and procedures for carrying out research. The author explained that research design includes decision making on the method of data collection and analysis that meets the research objectives.

Harrison et al. (2020) explained that qualitative exploratory descriptive research design enables a researcher to explore how people understand and describe the human phenomenon. This design is used when much is not known about the topic to be studied and the researcher wishes to know more about the phenomenon (Creswell et al., 2020). It is also used when the researcher wishes to explore the lived experiences of people (Creswell et al., 2020). According to Hasson-Ohayon et al. (2014), qualitative research seeks to explore and describe individual experiences such as the accounts and meanings that people ascribe to social or psychological phenomena. A qualitative exploratory descriptive design was used by the researcher to explore the psychosocial effects and coping strategies among burn injury survivors at Korle Bu Teaching

Hospital in the Accra Metropolis. This design enabled survivors of burns to give in-depth and detailed descriptions of the psychosocial effects of the injury and coping strategies they adopted**.**

3.2 Research Setting

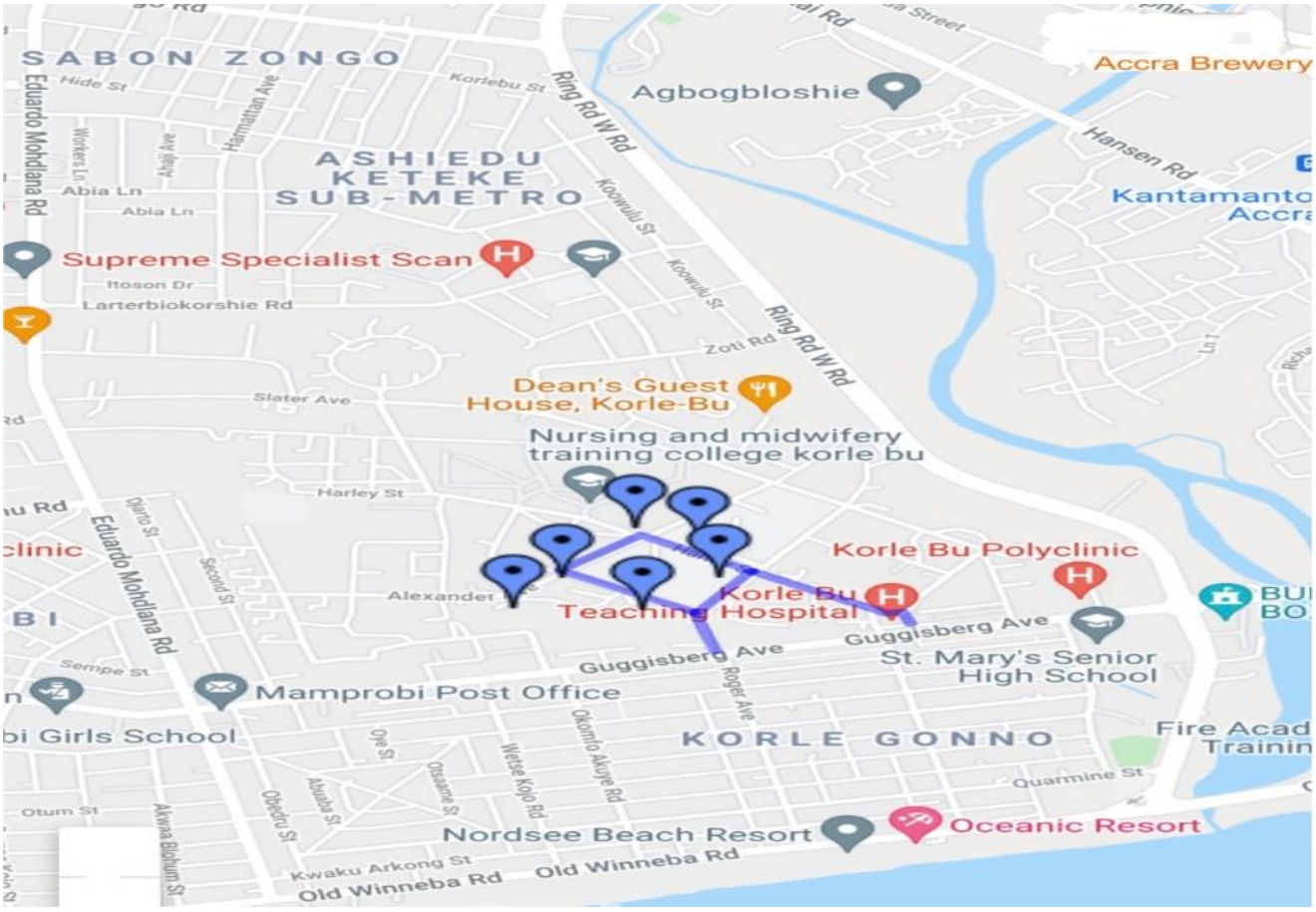
The study was conducted at the Korle Bu Teaching Hospital (KBTH), located in the Ablekuma South sub-locality in the Accra metropolis. "Korle Bu" which in the Ga language means "the Valley of the Korle lagoon," was established on October 9, 1923, as a General Hospital in the colonial days to address the health needs of indigenes under the administration of the then Governor of the Gold Coast, Sir Frederick Gordon Guggisberg. This general facility of 200 beds has developed and expanded in both size and specialities into a capacity of over 2000 beds with several specialities and Centres of Excellence. It is currently, the third-largest Hospital in Africa, the largest referral facility in the West African Sub-Region and the leading national referral centre in Ghana. The facility became a teaching hospital in 1962 as demand for orthodox healthcare expanded and the need to train more health care professionals for the health sector became imperative. There are currently 17 clinical and Diagnostic Units and Departments. The hospital also has three "Centres of Excellence", which are the National Reconstructive Plastic Surgery and Burns Centre (RPS/BC), the National Cardiothoracic Centre and the Radiotherapy and Nuclear Medicine Unit. KBTH has an average daily attendance of 1,500 patients and about 250 patient admissions on daily basis.

KBTH hospital was chosen because the National Reconstructive Plastic Surgery and Burns Centre (NRPS/BC) is situated within the hospital, and it receives most burn cases, both emergencies and referrals from various parts of the country and even from outside Ghana. The NRPS/BC is one of the largest burn treatment facility in Ghana that treats indigenous and international burns patients upon referral. The centre was inaugurated in May 1997 by a retired

Scottish plastic surgeon, Jack Mustarde. The facility, which was built to accommodate 69 beds, provides services in reconstructive plastic surgery, deformities, ulcers, burns, cancers, various injuries and cosmetic problems for Ghanaians and other nationals in the sub-region. It has two theatres and other units, such as the Reconstructive Plastic Surgery Unit, Burns Unit, Ulcer Unit, Theatre Recovery Ward, ICU/HDU, Executive Ward, Public Health Unit, Physiotherapy Unit, Pharmacy, CSSD, and the Out-Patient Department. Approximately 3000 patients are seen at the unit's outpatient clinics annually, and over 1000 patients undergo operative treatment each year.

A map showing the location of the study setting is presented in figure 3.2 below.

Figure 3.2: Map showing Location of Study Setting



3.3 Target Population

Silverman (2013) described the study population as individuals of interest who are related to the topic under study. The study population consist of all survivors of burn injury who were treated and discharged from the National Reconstructive Plastic Surgery and Burns Centre (NRPS/BC), KBTH.

3.4 Inclusion criteria

This included burn survivors who were 18years and above, had received and completed their burns care at least three months before the study, and could speak English, Twi or Ga.

3.5 Exclusion criteria

This included burn survivors who were minors or elderly and those discharged but are still in pain.

3.6 Sampling Technique and Sample Size

The impracticability of gathering data from the entire study population calls for sampling (Silverman, 2013). This means that the researcher has to select few participants from the study population for data collection. The researcher employed a purposive sampling technique for data collection. According to Lambert and Lambert (2012), purposive sampling is the deliberate choice of participants due to the qualities of information they possess. In other words, purposive sampling is the selection of informant founded on unique common characteristics, to ensure that interpretations are established through a rich and comprehensive pool of data (Hasson-Ohayon et al., 2014).

The sample size is the total number of consented participants involved in a study that can increase knowledge of the phenomenon under study (Burmeister & Aitken,

2012). Qualitative studies do not seek to generalize but to gain a deeper understanding of a phenomenon under study hence a small number of participants can unearth in-depth understanding. In qualitative studies, the sample size is guided by data redundancy or saturation (Mason, 2010); which is the point at which no new responses emerge from the participants (Creswell & Creswell, 2017). The researcher continued to collect in-depth information from participants until no new information emerged after the 12th participant. Hence researcher interviewed 12 participants.

3.7 Ethical Consideration

Adhering to ethical issues protect both the researcher and participants from any harm and also ensures the quality of the research (Fraenkel & Wallen, 2003). The researcher obtained ethical approval from the Scientific and Technical Committee/Institutional Review Board at the Korle Bu Teaching Hospital. The purpose, benefits and possible risks were explained to participants both verbally and in the consent sheet. This was done a week before data collection to allow participants to understand the information that has been given to them and consider participation or otherwise. The researcher ensured that i) sampled participants gave verbal consent before the commencement of each interview after the purpose of the study was meticulously explained in the participant's language of comfort; ii) the identity of sampled participants was not disclosed. Pseudonyms were used; each participant was given a unique name such as; P1, P2, P3…; and iii) gathered data was used for only this study. Participants responses were not altered and recorded audios were not shared and verified to contain all the information needed.

Privacy was also ensured during the interview by interviewing one person at a time, and at a date, time and venue chosen by the participants. An arrangement was made with a professional counsellor to help participants who may become emotional during the study. Confidentiality was ensured by not disclosing any information obtained from participants. The researcher also

maintained proper interpersonal and communication skills with the participants in order not to offend or harm them. Finally, the researcher fully acknowledged all sources to avoid plagiarism and ensured that she reviewed enough literature to enable her to write in her own words.

3.8 Data Collection Tool

The study used a semi-structured interview guide to gather primary data for analysis. This was prepared by the researcher using the constructs of the Transactional Model of Stress and Coping, and the study objectives for carrying out the interviews. The interview guide had two sections. The first section asked about some demographic information which includes age, sex, education and employment status. The second section delved into the socio-psychological effects of burn injuries and coping strategies. Probing questions were added to seek answers to specific questions (***See appendix V for a sample of interview guide***).

3.9 Pretesting of the Interview Guide

Pretesting of the interview guide is the process of interviewing small participants who share similar characteristics as participants in the study setting to ensure the appropriateness of the interview guide (Hennink et al., 2020). The interview guide was pretested on two burn survivors at the 37 Military Hospital.

The researcher sought permission from the hospital through a formal letter from the School of Nursing and Midwifery, University of Ghana. The consent of two participants who met the inclusion criteria was sought, and they were interviewed at a convenient place in the Burns Unit, 37 Military Hospital. After each interview, data gathered was transcribed to ensure that the research questions were clear enough to elicit appropriate responses and are understandable to participants. Questions that were not clear, were restructured. The data gathered from the pretesting was not included in the final study.

3.10 Data Collection Procedure

A semi-structured interview approach was selected because it allows the researcher to probe further and collect in-depth information. According to Woods (2011), even though face-to-face interviews are time-intensive, it provides the researcher visual cues that aid discussions and the chance to evaluate the validity and reliability of the responses provided by the respondent.

Adhering to COVID-19 health and safety protocols, the researcher conducted face-to-face interviews as well as phone interviews with sampled participants using the designed interview guide.

Before data collection, the researcher submitted a proposal for ethical approval from the Scientific and Technical Committee/Institutional Review Board, Korle Bu Teaching Hospital. With an introductory letter from the School of Nursing and Midwifery, the University of Ghana, a copy of the information sheet and the ethical approval letter (***See appendix I, II and III***), the researcher gained access to the NRPS/BC. Aided by the Unit in-charge, the researcher had access to the record books that had the list and details of burn injury patients, treated at the facility and therefore obtained the telephone numbers of the burn injury patients who have been treated and discharged but visit the hospital for review/follow-ups. Through the telephone calls with participants, data collection schedules were drawn.

On the day of the interview, the researcher phoned the participants in the morning to remind them of the interview so they come prepared. The researcher also ensured to get to the NRPS/BC, KBTH early enough to secure a suitable sitting place for the interviews, with chairs set at 2 meters apart with snacks and water readily available.

At the start of each interview, the researcher introduced herself, elaborated on the research topic and the purpose of data collection. She also thanked the participants for their time and allowed them to ask questions. Verbal consent was sought and participants signed a consent form

(See appendix IV for a sample of the consent form) before the commencement of each interview. Permission was also sought to record the interviews after assuring the participants of utmost confidentiality. Each participant was given a pseudonym.

Averagely, each interview lasted for 45 minutes. Most of the participants were forthcoming with their responses and had a lot to say while others also did not have much to say thereby providing short answers. During the interviews, the researcher observed closely the mannerisms and demeanor of participants and ensured that each participant was relaxed.

3.10.1 Adhering to COVID-19 Protocols

Adhering to COVID-19 protocols was a must especially during the face-to-face interviews. In the bid to avoid too much personal contact, the researcher communicated with selected participants through phone calls prior to the interviews. On the day of the interview, the researcher made available a bottle of sanitiser for use by both the interviewer (the researcher) and the interviewee (participants). More importantly, the researcher ensured that both parties wore a face mask, and a distance of two (2) meters was created between the researcher and the participants. No touching (handshake or hugging) of any sort was encouraged or practised as a form of greeting. After the interviews had come to an end, each participant was given a simple gift of a sanitiser, and fully thanked by the researcher.

3.11 Data Management

The objective of managing qualitative data is to package data in a way as to allow for easy accessibility and analysis (Padgett, 2016). Before data collection, the researcher recorded the time, date and venue of the interview in a field diary. The interviews were recorded with the consents of the participants and transcribed verbatim. Those gathered in the local dialects were translated and transcribed into English by the researcher and a translator to avoid data distortion.

Field notes taken during the interviews were incorporated during the transcription of the data.

Soft copies of the transcribed data were kept on a computer protected by a password known to the researcher alone. Numbers were assigned to each participant (P1 through to P12) in order of recruitment into the study. To these transcripts, pseudonyms were then assigned to each participant. After the transcription, hard copies of each interview, field notes, audiotapes, diaries and any documented information were kept in a locked cabinet for safekeeping. Demographic data and other documents that had identifiable information about participants such as the consent forms were separated from transcripts and stored separately. This information is accessible only to the researcher and her supervisors and will be stored for five (5) years after which it will be destroyed. The transcribed data will be stored on CD- Rom and duplicated to prevent data loss.

3.12 Data Analysis

Data analysis occurred concurrently with data collection. After the data collected was transcribed verbatim, it was analyzed using thematic content analysis. The thematic content analysis focuses on "what was said" and "how it was said," by creating themes and categorizing responses under these themes. The researcher affirms Byrne (2001) assertion that a large volume of data is ascertained from qualitative research, hence the need for categorizing under themes to describe the phenomenon being studied. Given this, the thematic content analysis approach of qualitative data was adopted and used, to obtain the pattern, frequency, relationship, and structures embedded in the communicated information to produce a well-organized and rich description of data collected (Braun & Clarke, 2006; Daly, 2007; Kellehear et al., 1997; Neuendorf, 2017; Vaismoradi et al., 2013).

The researcher read through the transcripts (transcribed interviews) at least thrice, to get the general viewpoint of the participant's thoughts and views regarding the questions asked. The

further reading of the transcripts helped the researcher search for similar ideas, thoughts and words that can be labelled as codes. Similar codes were grouped to form sub-themes, and these sub-themes were then grouped into themes that reflect the study objectives. Each transcript was analyzed using these themes, by copying and pasting responses of each participant under the various themes. In presenting the analysis, the researcher compared and contrasted the response under each theme. Some of the responses from participants were used as quotes to buttress the concluding point established.

3.13 Methodological Rigour

Trustworthiness in qualitative research ensures that findings accurately represent exactly what participants have said and that findings can be trusted (Lincoln & Guba, 1985b). The Rigour of research can be accurate when the researcher applies the appropriate research tools to meet the stated objectives of the investigation (Creswell & Creswell, 2017). Thus, to ensure the trustworthiness of the research, the criteria of credibility, transferability, dependability and conformability must be achieved (Lincoln & Guba, 1985b).

Credibility is achieved when the findings from the data reflect reality and are believable (Shenton, 2004). Credibility is the confidence about the truth of the research findings establishing whether or not the research findings represent reliable information gathered from the participants' original view or is an appropriate interpretation (Anney, 2014; Graneheim & Lundman, 2004; Lincoln & Guba, 1985). For this purpose, the researcher ensured that all participants recruited for the study met the inclusion criteria, with the exclusion criteria strictly applied. Additionally, credibility was ensured by developing and asking the right questions that elicited the right responses from the participants. Also, probing skills were utilised and rephrasing of questions used to bring clarity in the questions asked and to ensure quality data was collected. Participants were

assured of confidentiality being maintained throughout the whole process to encourage them to freely provide information.

Credibility is also enhanced through triangulation, a method of rigour advocated by many authors (Corbin & Strauss, 2008; Lincoln & Guba, 1985a). Triangulation arises when data are included from multiple sources (i.e., participants, field notes, audit trail) that help to validate the study (Corbin & Strauss, 2008). Investigator triangulation involves the use of several researchers from different perspectives partaking in the data analysis process (Denzin & Lincoln, 2005). In the study, triangulation was achieved by accumulating data through different methods (i.e., individual interviews and field notes) and by including different participants at each stage thus enhancing credibility and validity.

Another technique to ensure credibility refers to prolonged engagement, which involves the researcher spending sufficient time in data collection activities to have an in-depth understanding of the views of the participants under study (Polit-O'Hara & Beck, 2006). This technique is used to build trust and rapport with the participants and establish the credibility of the findings. To achieve this, the researcher met the demands of prolonged engagement by:

i) Engaging with the participants at the time of recruitment to develop rapport with them;

ii) conducting interviews in convenient locations and spending sufficient time with the participants at the commencement of the interviews to assist in building trust; and

iii) frequently listening to the interview tapes and re-reading the transcripts.

Again, a member check was conducted to verify the responses of participants by discussing themes arrived at with the participants. In addition, each interview was transcribed and coded before the subsequent ones. The researcher also requested an independent coder to code the transcripts from participants, to allow for comparisons to be made to establish credibility.

Transferability is the extent to which the findings of the study can be applied in other settings (Lincoln & Guba, 1985a). The reader notes the specific details of the research situation and methods and compares them to a similar situation that they are more familiar with. If the specifics are comparable, the original research would be deemed more credible. The researcher provided a detailed description of the research setting, methodology and background of participants who were used in the study for other researchers to apply when transferring the conclusions of this study to other similar cases. Also, direct quotations from the participants were used to allow the reader to have a better understanding of the context. All transcribed data and field notes were kept for the audit trail.

Reflexivity refers to the researcher's appreciation of their own beliefs, characteristics and how this may impact the research process (Hansen, 2006). Reflexivity was maintained throughout the study by disclosing relevant beliefs and assumptions in advance, and detailed records via a journal that showed evidence of all the planning and research interactions. This required the researcher to acknowledge personal values, interests and the significance of these in understanding factors that influence resilience. This enables the reader to interpret data more transparently and consider possible alternatives.

According to Lincoln and Guba (1985), dependability is the consistency of the research findings with time. To achieve this, the researcher provided a detailed description of the research setting, methodology and background of participants used in the study. Also, all participants were interviewed with the same interview guide; which was developed based on the conceptual framework and was pretested to ensure effective data collection, and interpretation of findings (Colorafi & Evans, 2016; Hurst et al., 2015). Each transcript was subjected to the same method of

arriving at sub-themes and themes. A peer was allowed to examine the data and data was recoded to ensure accuracy. All documents were kept for the audit trail.

Confirmability entails establishing the fact that interpretations of findings were derived from the data and not from the researchers own point of view or imagination (Tobin & Begley, 2004:392). This was addressed in the study by situating the sample. This means that the demographics of the sample was described along with the life experience about which they are being interviewed, to allow the reader to comprehend to whom the findings of the research may be relevant. All audio recordings were transcribed by the researcher shortly after the interview to ensure that difficulties in each interview were easily identified and the researcher accurately portrayed the meanings participants were attempting to express. Each interview was also replayed and checked against the corresponding transcript for accuracy of the findings. The researcher also kept a reflexive journal which bracketed all her perceptions, experiences and opinions about the topic under study.

CHAPTER FOUR

FINDINGS OF THE STUDY

This chapter presents the findings of the study. The findings were presented under four (4) major themes; psychological experiences, emotional experiences, social experiences, and coping strategies, based on the thematic analysis of the data gathered and the constructs of the transactional model of stress and coping by Lazarus and Folkman (1984). The chapter, first of all, focuses on the background information of the participants, followed by a description of the themes and sub-themes that emerged and are reflected in direct quotations from study participants.

4.1 Background Information of Study Participants

A total of twelve burn injury survivors participated in the study. The participants comprised six (50%) males and six (50%) females. Each participant was given a pseudonym based on their gender and the order in which they were interviewed. For instance, the first participant to be interviewed was a female hence the pseudonym **FP1** (female participant 1), the second participant was a male so **MP2** (Male participant 2). Nine (75%) of the participants sustained their burn injury through domestic gas explosion while the remaining three (25%) participants sustained electrical burns. The least age of the study participants was 29 years while the oldest participant was 64 years old. Therefore, interviewed participants ages ranged from 29 to 64 years. Seven (58.3%) of the participants were married, three (25%) were single and two (16.7%) were widows. Two (16.7%) of the participants did not have a child/children while the remaining ten (83.3%) participants had at least one child and at most nine children.

Table 4.1 shows the background information of all the participants as presented below.

Table 4.1: Background Information of Participants

Pseudonym	Age	Sex	Marital status	Number of children	Type of work	Work status	Religion	Tribe	Educational background
FP1	35	Female	Married	2	Baker	Working	Christian	Fante	Tertiary
MP2	50	Male	Married	9	Tax Administrator	Working	Christian	Fante	Tertiary
MP3	37	Male	Married	2	Police	Working	Christian	Krobo	Tertiary
FP4	31	Female	Married	2	Trader	Not working	Christian	Krobo	Tertiary
FP5	32	Female	Married	1	Teacher	Not Working	Christian	Fante	Tertiary
MP6	35	Male	Single	1	Carpenter	Not working	Christian	Ga	SHS
MP7	29	Male	Single	0	Electrical Engineer	Not working	Christian	Akan	Technical
MP8	61	Male	Married	4	Businessman	Working	Christian	Ewe	Tertiary
FP9	43	Female	Married	3	Businesswoman	Working	Christian	Akan	Tertiary
FP10	57	Female	Widow	3	Trader	Not working	Christian	Ewe	JHS
MP11	29	Male	Single	0	Batten Plant Operator	Not working	Christian	Fante	SHS
FP12	64	Female	Widow	1	Retired	Retiree	Christian	Ga	Tertiary

Source: Field Data, 2020

From table 4.1, in terms of the type of work, two (16.7%) of the participants were traders, one (8.33%) baker, one (8.33%) tax administrator, one (8.33%) police officer, one (8.33%) teacher, one (8.33%) carpenter, one (8.33%) electrical engineer, one (8.33%) batten plant operator, one (8.33%) businessman, one (8.3%) businesswoman and one (8.33%) of the participant was a retiree.

Concerning employment, one (8.33%) participant is retired, five (41.67%) are working, six (50%) of the participants were not working, however, it is possible for them to return to work after full recovery. One of the participants who was not working is a teacher and was not working because of the closedown of schools due to the outbreak of COVID-19.

As shown in table 4.1, all the participants are Christians of a varied denomination. Four (33.3%) of them belong to the Fante tribe, and two participants each belong to the Ewe, Ga, Krobo and Akan tribes respectively (66.7%). In terms of education, the participants had varied educational backgrounds. Eight (66.7%) had tertiary education, two (16.7%) had Senior High School (SHS) education, one (8.3%) had Junior High School (JHS) education, and one (8.3%) had technical training. The educational background of the participants enhanced the data collection, as the participants easily understood the questions and responded accordingly.

4.2 Organization of Themes

Four major themes emerged from the narrations of the burn injury survivors on their experiences. Each of these themes had separate sub-themes. These themes and sub-themes emerged contextually from the data gathered, aligned with the theoretical model, and with the study objectives. Sixteen sub-themes were identified in all. A description of all the themes and sub-themes is presented in the ensuing sections, buttressed by direct quotes from the participants. An outline of all the themes and sub-themes is presented in table 4.2.

Table 4.2: Themes and Sub-themes from Transcribed Data

THEMES	SUB-THEMES
Psychological experiences	a) Psychological pain b) Anxiety c) Depression d) Post-traumatic stress disorder (PTSD)
Emotional experiences	a) Sadness b) Fear c) Worry
Social experiences	a) Stigmatization b) Social withdrawal c) Social isolation d) Social support e) Care providers' attitude
Coping strategies	a) Self-efficacy b) Endurance c) Emotional support d) Social support

4.3 Psychological Experiences of Burn Survivors

In exploring the psychological experiences from burn injuries, participants were asked to share their experience following burn injury and treatment. From the participants' narrations, the researcher first identified that the burn injuries sustained by the participants were mainly due to gas explosion at home causing fire-related burns followed by electrical burns. Nine out of the twelve participants sustained burn injuries through gas explosion while the remaining three sustained electrical burns. As the participants shared their experiences, the foremost effect of burn

injury was excruciating pain especially during the early days of treatment. According to the participants, little to no pain is felt the very minute the incident happens, as it takes place in a flash. However, at the hospital where they have gained consciousness, that is when they begin to feel severe pain. Although the pain decreases with time, all the participants claim burn injury is a very painful and traumatic experience.

It was also found that burn survivors suffered severe pain during change of wound dressings (burn patients are usually given a thorough savlon bath, after which the wounds are dressed), and post skin grafting when undergoing treatment, despite being given various forms of analgesia. This was found when participants were asked to describe the most difficult time for them, following burn injury and treatment. Some metaphorized the pain experience and others associated the intensity of the pain to the wound dresser.

4.3.1 Psychological Pain

Although the pain was physiologic in the early stages of burn injury, it can also be described as psychological pain because according to most of the participants, at some point during treatment, the mere thought or mention of wound dressings was traumatic for them. They experienced episodes of anxiety, mood swings and for some, depression. Some responses from participants that suggested this were;

...I'm unable to sleep the night before my dressings will be changed. ***(FP1; 35yrs)***

Other participants corroborated the experience as follows:

...Honestly, wound dressing is very painful, I become anxious when my dressing time is getting close. ***(FP4; 31yrs)***

...Could not sleep especially the day before dressing...I didn't want to hear the word "dressing." ***(FP5; 32yrs)***

...When I'm told that I'm due for dressing, I don't want to hear it because I'll be thinking...eeiii God so today too I'll go through that pain. ***(FP9; 43yrs)***

4.3.2 Anxiety

The researcher found that anxiety and depression were also suffered by some of the participants as a result of the burn injury. The anxiety mainly led to sleepless nights, nightmares and panic attacks. Some responses from the participants that suggest anxiety are:

...I panic when I heard others saying my situation was serious. ***(FP1; 35yrs)***

...Could not sleep and could not do anything as both hands were burnt. ***(MP8; 61yrs)***

... Having flashes at night and could not sleep especially the day before dressing. ***(FP5; 35yrs)***

...Mostly at night, when I feel pains in my hand and there is no nurse available to assist me, I get anxious and cry most of the time. ***(MP6; 35yrs)***

Other participants corroborated the experience as follows:

...I was having many thoughts, mostly bad where I was thinking I would die. ***(MP3; 37yrs)***

...I was anxious as I was never hospitalised, and I had heightened anxiety anytime the doctor asked me about when I was admitted and when the burn happened as I thought I was going to die from prior knowledge on burn survivors... Even had a nightmare and shouted to the hearing of everybody in the ward. ***(MP8; 61yrs)***

... Could not sleep and had a terrible dream where I was dead and saw my aunty and children crying. This made me anxious at night. ***(FP9; 43yrs).***

4.3.3 Depression

Regarding depression, the participants identified that whenever they get the chance to see themselves in a mirror, looked at their old pictures or saw their friends, it got them depressed. Hence depression suffered by the participants was mainly due to scarring, deformity or functional inability as a result of the burn injury. Some responses from participants that indicated this finding are:

... My deformity kept me worried at all times. I keep thinking about how I would get my skin back. ***(FP10; 57yrs)***

... I had depression when I was discharged. Whenever I looked in the mirror and at my old pictures, till date I cry. ***(FP5; 32yrs)***

...I was depressed anytime I look in the mirror or looked at my old pictures or saw my friends I felt shy. ***(FP4; 31yrs)***

... I was disappointed with my facial look and did not like the way people were looking at me and this made me cry. Also, my children were scared of me and did not want to come close to me for almost two weeks when I was discharged and went home. It was difficult and I was always crying and even wanted to commit suicide. ***(FP9; 43yrs)***

According to one participant, although he was not depressed, his condition got his mother and wife depressed. His 14-year-old daughter was traumatised because of his condition.

… My mother and wife were depressed; my daughter was psychologically affected and was almost taken to the psychiatric hospital because of my condition. ***(MP2; 50yrs)***

It is obvious that families of persons who experienced burn injuries also got depressed by association and this in turn also impacted the injured person.

4.3.4 Post-Traumatic Stress Disorder (PTSD)

From the interviews, it was revealed that some of the participants had a vivid flashback, during which it felt as if they were experiencing the burn incidence again. It was also revealed that some of them avoided thinking or talking about their burn experience in the early stages after their discharge. Also, some lost interest in activities they previously enjoyed doing. The study also discovered that some of the participants avoided situations or places that reminded them of the incident. A few of them relocated to a new residence. Direct quotes from participants include;

…Till date, I've not brought myself to use a gas cylinder …the kitchen where the incident occurred, I don't use there often ***(MP2; 50yrs)***

…There are times when I dream about the burn incident and it feels so real but I wake up and realise it was a dream. ***(FP4; 31yrs)***

Some corroborated the experience as follows:

…I didn't use a gas cylinder for five months when I got home. ***(FP5; 32yrs)***

…When I'm going to buy food and I see a gas cylinder there, I return without buying the food. ***(MP3; 37yrs)***

…Some of the things I use to do, now I don't do them anymore ***(MP6; 35yrs)***

…After I was discharged, we moved to a new area. ***(FP9; 43yrs)***

….Sometimes when I dream, I'm in so much pain and I wake up crying. ***(MP3; 37yrs)***

...I'll be sleeping, and I'll be seeing fire and I'll be shouting and crying. ***(FP5; 32yrs)***

...I kept remembering the ward where I was and what I went through. It took some time before the memories stopped. ***(MP8; 61yrs)***

4.4 Emotional Experiences

It was found that participants also suffered emotional stress. The emotional stress was in the form of sadness, fear and worry. They expressed that there were instances that they became worried due to their condition. Others also disclosed that the screams or yelling from other burn victims in the ward put fear in them and for some participants, it made them feel sad. According to one participant, due to the emotional stress from the burn injury, her body was in shock and this led to the delay of her menstrual flow.

4.4.1 Sadness

Participants traumatized by their burn injury expressed their affliction verbally and non-verbally.

... When others wound are being dressed and they are crying or when you see the look on their faces, it makes you feel sad. ***(MP8; 61yrs)***

...Whenever I looked in the mirror and at my old pictures, till date I cry. ***(FP5; 32yrs)***

...It was difficult and I was always crying. ***(FP9; 43yrs)***

4.4.2 Fear

Every one of the participants was horrified by the experience and some vowed to be more cautious to sources of burn injury.

...I was afraid that should something happen to me, who will take care of my kids.

(MP3; 37yrs)

...I was scared that if something happens to me, who will cater for my kids. ***(FP9; 43yrs)***

...From what I have been through, everything I have seen and heard, has helped me to be open-minded and more cautious. ***(FP1; 35yrs)***

4.4.3 Worry

According to all the participants, they were worried at one point in time due to their condition. Responses from participants that suggested this are;

...I was mostly worried about going to work and how to survive as I had difficulty holding things. ***(MP3; Age 37yrs)***

... My deformity kept me worried at all times. ***(FP10; 57yrs)***

...While thinking about my predicament, I was also thinking about how my kids were fairing at home. ***(MP2; 50yrs)***

...Watching other burn survivors admitted in the hospital and by my assessment, I felt they were in a terrible state and it affected my sleep. ***(MP8; 61yrs)***

4.5 Social Experiences of Burn Survivors

Apart from psychological experiences, the researcher enquired from the study participants, their social experiences. Stigmatization, social withdrawal, social isolation, discomfort and social support were found to be the social experiences of the participants. This was done intentionally by some people while others did that unintentionally since there was something new or different (skin colour, extent of burn) about the burn survivor.

4.5.1 Stigmatisation

The study discovered that, burn survivors suffer social stigma as a result of acts perpetrated by either strangers or some family and friends intentionally and unintentionally. The narrations by participants on their social experiences revealed that both strangers and people they were familiar with, acted in ways that made them feel bad. People would normally stare, take a double look and/or give discomforting comments**.** Some responses from participants that suggested this are:

... The way people look at you, makes you know the colour of your skin is different and this has limited my movement and outings. ***(FP1; 35yrs)***

... People see you as if you not from this earth and this affects you. ***(MP3; 37yrs)***

...People's facial expressions when they see you…they look at you in a particular way because of the burns. ***(FP4; 31yrs)***

Some participants shared their experiences as follows:

... Anytime I meet people for the first time, they looked at me in ways that make me feel bad. Some stare and even turn to give you double look. Some also passed comments such as she is burnt in the local language. ***(FP5; 32yrs)***

...The way people were looking at me, I didn't like it. ***(FP9; 43yrs)***

... Fixated gazing which makes me feel uncomfortable and some go like "wow". ***(FP10; 57yrs)***

4.5.2 Social Withdrawal

Some participants shared that, they had to limit their movements or going out after the burn injury because of people's reactions when they went out. Strangers would normally stare, take a double look and give discomforting comments whenever they meet the burn victim. Even though

non-strangers might have been careful in how they look and treated burn victims, asking some questions were considered inappropriate by the burn survivors.

... Because of my burns, I have limited my movement and outing. ***(FP1; 35yrs)***

...When I want to go to town, I don't use the usual routes I used to use so that I don't meet a lot of people especially those who use to know me in the area. ***(FP4; 31yrs)***

... A lot of things that I use to do, now I don't do them anymore. ***(MP6; 35yrs)***

4.5.3 Social Isolation

From the interviews, it was discovered that most of the participants preferred to keep to only their spouses and children or one/two trusted family members after they were discharged. One of the participants disclosed that he preferred living all by himself and that when the need arises or when he needs some sort of assistance or help, he called only his mother.

...I mostly stayed at home with the children and didn't go anywhere. ***(FP9; 43yrs)***

...Most of the time, I don't go out. Even when I have to run an errand, I get other people to do that for me. If it's urgent that I do it myself, I use a route that I'll meet few people. ***(FP4; 31yrs)***

...Now I don't go anywhere, I prefer to stay at home. ***(MP7; 29yrs)***

4.5.4 Social Support

The findings also revealed that participants received sympathy and support from family and friends who learnt of their burn injury. Again, acceptance by their spouses and children despite the changes to their skin colour and other complications such as keloids, contractures, etc. had a positive impact on the recovery process especially the participants coming to terms/accepting the changes caused by the burn injury.

... My family…husband and relatives supported me in diverse ways. Anytime I try to recount the burn instance, they find a nice way to discuss it so that I do not feel bad. Actually, with my family, it was as if I did not experience any burn at all hence was never depressed. ***(FP1; 35yrs)***

Other participants corroborated the experience as follows:

... Family…wife and children would always travel long distance and ensure that by 6:00 am they were there to see me, ensure that I eat and was comfortable. There were times my son slept within the hospital premises. My siblings also came around which gave me some assurance and care. ***(MP8; 61yrs)***

... My family was supportive throughout everything. Whenever am depressed, they comfort me and talk to me to realise that my situation is better than others. They told me they knew me, and they like me as I am and it makes me happy. My small girl always tells me that all the sores would die so I should stop crying and that whether it goes on not I am beautiful. My friends were also calling to give words of encouragement. ***(FP9; 43yrs)***

Also, some of the participants disclosed that their children did not want to get close to them at the initial stages when they were discharged. The change in skin colour and the fact that they were covered in bandages created some sort of fear in the children, which prevented them from getting close. One participant said that his duties and responsibilities towards his family, especially his children was interrupted as a result of the burn incidence. It also affected his duties at church since he was a leader for quite some groups in the church.

...My children were left like sheep without a shepherd because I, the shepherd was not there and my wife, the assistant shepherd, was also not in her right frame of mind because

of my situation. While thinking about my predicament, I was also thinking about how my kids were fairing at home. ***(MP2; 50yrs)***

...I had to shirk my duties and responsibilities in the church, not because I wanted to but because of my predicament. ***(MP2; 50yrs)***

...After my discharge, the children did not want to come near me. They were scared and this made me sad but later they started getting close. ***(FP9; 43yrs)***

Some participants also shared their experiences as follows:

...My children when I got home were so glad, they were so happy but I could see tears in the eyes of some of the younger ones because they haven't seen me for some time and also because of my bandages. ***(MP8; 61yrs)***

...When my children saw me, it was a shock to them. They avoided getting close to me in the initial stages but gradually, they adjusted. ***(MP2; 50yrs)***

4.5.5 Care Providers' Attitude

All the participants disclosed that they appreciated the support and care received from the health professionals especially the Nurses, but they also reported that on one or two occasions, a couple of them spoke harshly or acted impatiently towards them, which they felt might be because of work overload. According to some participants:

...The health professionals were nice and helpful. However, there were about two instances where some utterances were not okay from some nurses which I believe was caused by the behaviour of some other patients, but because I was concerned about my survival, I looked over it. ***(MP3; 37yrs)***

...The health professionals were helpful but of course, you won't get it 100% but if you understand that they are doing their work, you will know that they helped. ***(FP5; 32yrs)***

... Some of the Nurses were impatient, however, some were also nice and took good care of me. ***(FP9; 43yrs)***

4.6 Coping Strategies of Burn Survivors

Participants were asked about how they coped following the burn injury and all the participants indicated that they had to endure and hope to get better. Therefore, the study found that the coping strategies adopted by the participants were largely the development of strong self-efficacy and endurance.

4.6.1 Self-efficacy

According to most of the participants, they relied on their inner strength, maintained a positive attitude, were hopeful and prayed to God. Some quotes from participants indicating these findings include:

... I psyched myself to endure before others also encouraged me as the treatment and coping with a burn injury is not easy. This gave me the psychological strength to overcome the pain. ***(MP3; 37yrs)***

...I felt God loved me as the accident did not kill me and I was expectant of a miracle. I also compared myself to others who have been there longer and wanted to be out of there, so I endured. I continuously prayed to God for strength. ***(MP8; 61yrs)***

... I did not lose hope and did not let the death of others disturb me. Was positive and it helped me heal fast. ***(MP11; 29yrs)***

... I maintained a positive attitude throughout and was praying. ***(FP12; 57yrs)***

Some participants also drew motivation from other burn victims who were in a relatively compromising situation compared to theirs or had completed treatment and were being discharged. The following are some quotes from the participants:

... In the ward, I realized there were others in there whose condition were worse but were coping, so I drew inspiration from that. ***(FP5; 32yrs)***

... I saw someone discharged on the second day and that assured me that it would be over for me. ***(MP8; 61yrs)***

...I joined a burn survival club on social media and comparing my situation with others, I drew inspiration from there as I got to realize other burn survivors were in more critical conditions. ***(FP1; 35yrs)***

However, in dealing with stigmatisation as a result of burn injury, some participants shared that, they had to limit movement or going out, ignore what was said or how they were looked at by others and in some cases try to cover the burn injury if possible, to avoid its visibility.

...Because of my burns, I have limited my movement and outing. ***(FP1; 35yrs)***

...I do not mind them and secondly, I get busy with my baby, so I do not pay attention to whatever others do. ***(FP5; 32yrs)***

...I cover my burns anytime I'm going out so that people cannot see. ***(MP6; 35yrs)***

...Every time I go to the hospital, I have a scarf that I put around my hands to cover up. ***(FP2; 35yrs)***

...I put a cloth around my hand and tie it over my neck when going out. ***(FP10; 57yrs)***

4.6.2 Endurance

From the interviews, most of the participants expressed that they had to maintain a positive mind-set and condition themselves to endure the burn experience and they also prayed and hoped to recover. Some of the participants also disclosed that the thought of who will care for their children should they not survive, gave them the will power to endure hence cope with all the unpleasant circumstances related to burn injury such as painful wound dressings, changes in their skin, among others.

... I psyche myself to endure…personally, I was in a hurry to leave the hospital so I had to endure everything…fight through it. ***(MP3; 37yrs)***

... I was pregnant and anytime the baby kicks, I'm happy and it inspires me to endure. My husband was always giving me hope and tells me we would be out of here soon. ***(FP5; 32yrs)***

...Was enduring and trusting God would heal me. ***(FP9; 43yrs)***

... Wanted to get better early so I just closed my eyes to take in all the pain. ***(MP7; 29yrs)***

... Encouragement and love from health professionals helped me endure. ***(FP10; 57yrs)***

4.6.3 Emotional Support

The study findings revealed that the physical presence of family and friends, as well as the friendly and empathic nature of health professionals, were contributing factors to the recovery of the burn survivors. The words of encouragement and constant reassurance by the health professionals, family and friends helped them go through the burn injury experience.

...The nurses and doctors encouraged me to have a positive mind and thoughts as that helps with the healing. Words of encouragement and jokes shared by health personnel

signalled that I was getting better and this made me have hope. ***(FP1; 35yrs)***

...Some of the health professionals were really empathetic. ***(FP5; 32yrs)***

...Being close to the Nurses and opening up to them also helped me. ***(MP6; 35yrs)***

Some participants corroborated the experience as follows:

...First, I was afraid to walk but one of the Nurses encouraged me and I was able to start walking though it was painful when I started. ***(MP7; 29yrs)***

...They were very, very, very helpful, the way they spoke to me gave me hope. Some cracked jokes with me to feel happy. During dressing, some would come to me and say they would put plenty of oil on it so I don't feel any pain. ***(FP9; 43yrs)***

...Encouragement and love from health professionals helped me endure. ***(FP10; 57yrs)***

...The encouragement from Nurses and Doctors is very important. It helps you to push on. My siblings also came around which gave me some assurance and care. ***(MP8; 61yrs)***

4.6.4 Social Support

Although the coping strategies of burn survivors largely depend on the burn victim's self-efficacy and endurance, the participants revealed that social support from health professionals, family, friends, colleagues and some institutions such as the workplace and place of worship (specifically, the church in all cases as all the participants are Christians) helped them to endure the burn injury experience and care. The study found that health professionals played a vital role in the recovery of burn survivors as they shared words of encouragement, jokes and positive comments to cheer and put smiles on the faces of the burn victims. The following are some responses from participants to support this finding:

... The services received from the health professionals was splendid and that was even a positive effect towards my recovery. ***(MP2; 50yrs)***

... They encouraged me a lot. One nurse told me it is not the end of my life and I should not be disturbed. The physiotherapist also came to help me do a little exercise which was painful, but they explained to me and I appreciated it. ***(MP8; 61yrs)***

...My friends were also calling to give words of encouragement. ***(FP9; 43yrs)***

... They helped a lot because they were always around, talk to you and encourage you, tell you stories of worse scenarios ***(MP11; 29yrs)***

Regarding support from family, friends and colleagues, the participants revealed that their physical presence, words of encouragement, donations and gifts either financially or in-kind made them feel loved, and this encouraged them to endure and build strong positive attitudes and self-efficacy to overcome any negative effect (psychologically and socially) associated with burn injury. The church and their workplaces also supported financially and with prayers. The following are some quotes from the participant concerning these findings:

... Received helped from the church and past employees who heard about my incident. I remember one man gave me Ghc10, 000.00 ***(MP3; 37yrs)***

... I received financial support from the church. The church was also praying for me and in some instance, representatives of the church visited and encouraged me. ***(FP5; 32yrs)***

... My family and friends purchased all drugs, gave words of encouragement, and were always available even when it was not visiting hours. They made me feel loved. ***(MP6; 35yrs)***

... A school year group raised part of my surgery fee. Other friends also supported me with foodstuffs, money and some also paid for my medicine. Some also gave donations. ***(FP9; 43yrs)***

As the participants responded to how the experience has changed their lives, they indicated that they are more cautious and very careful especially with gas, some also admitted that the experience has gotten them closer to God while others disclosed that the experience has made them appreciate people more. Therefore, the researcher identifies these findings as preventive strategies or mitigating strategies adopted by the burn participants.

...I have bought a pressure tube which is placed on the regulator of the gas cylinder and alerts you by blinking red when the regulator is not well fitted on the cylinder or when the gas is leaking. ***(FP2; 35yrs)***

... Nowadays, anywhere I go and I see people preparing food with a gas cylinder and charcoal at the same time, I advise them to separate the cylinder and the charcoal to prevent any accident. I am extremely careful. ***(MP3; 37yrs)***

Other participants shared their experiences as follows:

... Now very cautious during work. I need to protect myself well when working, use protective measures when working with electricals. ***(MP7; 29yrs)***

... It has made me know that we are nothing without each other. It's people who have helped me to get this far. ***(MP6; 35yrs)***

... My life is still changing. After the incident I now know God better. ***(MP6; 35yrs)***

…To be free and closer with people. The incident thought me to be free, humble and respect others. ***(MP11; 29yrs)***

…We do not repair faulty appliances at home, we buy new ones because the cost of repair would not solve the problem entirely and the cost of buying a new one is far below the charges for burn treatment. I spent over Ghc10, 000.00 so I am very cautious and careful. ***(MP3; 37yrs)***

4.8 Chapter Summary

The findings of this study were guided by the transactional model of stress and coping to explore the experiences of persons who had suffered burns. The major findings were grouped under the headings psychological experiences: anxiety, depression, post-traumatic stress disorder; social experiences included; positive regard, acceptance by family members as well as some stigmatization, discrimination, social withdrawal among others. Coping experiences: crying, avoidance, acceptance, hoping, believing in God, feelings of gratitude, social support, among others.

The findings of the study affirmed that burn survivors suffered psychological and social effects however, support from health professionals, family and friends was key in their recovery process and also contributed to a positive coping outcome.

CHAPTER FIVE

DISCUSSION OF FINDINGS

The chapter presents a discussion on the study findings. The study findings are discussed under the main themes and in relation to existing literature. The discussion is also based on the constructs of the theory that guides the study. The background information of the participants is discussed, followed by the main themes.

5.1 Background Information of Participants

The background information of all the participants showed that the majority of them had their burn injury through a gas explosion with a few being electrical burns. This can be attributed to the fact that most homes in the cities and towns in Ghana use liquefied petroleum gas (LPG) as the main source for cooking to minimize charcoal use to help save the forest. Also, LPG is more convenient and efficient compared with charcoal. The findings also revealed that all the female participants sustained their burn injury through a domestic gas explosion. This can be attributed to the fact that in a typical African setting, the Ghanaian setting for that matter, women play the traditional role of doing household chores and preparing food for the family hence are at higher risk of sustaining burn injury from a domestic gas explosion. This finding is consistent with a community survey conducted in Bangladesh and Ethiopia which showed that 80-90% of burns occurred at home, and women and children were mostly involved (WHO, 2018). It tells a historic story of the domestic role of women in our societies cut across cultures and boundaries. One of the male participants revealed that he had to enter the kitchen to prepare food for the family on the day the unfortunate incident happened (gas explosion) because his wife had just delivered through cesarean section (C/S).

This finding is also consistent with a study carried out in the Sub-Saharan African regions, which revealed that the higher risk for females is associated with open fire cooking, or inherently unsafe cookstoves, which can ignite loose clothing (WHO, 2019). Women are usually burned in domestic kitchens, from hot liquids (water, porridge, soup, beverages, etc.), flames, or gas cylinder explosions. Men are most likely to be burned in the workplace due to fire, scalds, chemical and electrical burns. It reinforces the status quo. However, with the emerging trends in the family system, this knowledge may not stand the test of time.

Again, although homes are considered a safe place (WHO, 2018), from the findings, it was the main setting for the occurrence of burn injuries. The use of open fire for cooking and poorly regulated LPG cylinders increases the risk of burn, especially in instances where these cylinders are used in enclosed spaces with poor ventilation. Similarly, the use of traditional open fire (coal pot) and LPG cylinders have been reported, which predisposes most households to burns. Usually, LPG cylinders are kept indoors for fear of being stolen and this makes it easy for the faulty cylinder to leak its content within the kitchen. Also, most households may avoid reporting problems associated with their cylinders at the earliest possible time and instead use heavy stones or wet clothes on the regulator.

Another setting where burn injury occurred per the background information of the participants was the workplace. This finding aligns with a study carried out among burn injury survivors which revealed that the majority of burns incidence were from explosive sources, either at home or the workplace (WHO, 2018; Yarney et. al., 2019).

The findings also showed that despite the variations in the age and gender of the participants, their psychosocial experiences were similar. All the participants narrated similar psychological, emotional and social experiences. Concerning coping, they also reported similar

coping strategies hence despite the differences in age and gender, they employed similar coping strategies in adapting to their burn experience. Much research has not been done in Ghana to suggest different disposition between men and women, or age when it comes to burn injury. However, a study carried out at the emergency centres in Western Cape, South Africa, posit that males suffered more effects from burn injuries, especially fire-related than their female counterparts, who were mostly treated and discharged early (Blom et. al, 2016).

Again, through the narrations of the participants, it was revealed that the male participants better endured the burn treatment than the female participants. This study, therefore, did not corroborate what Blom et al (2016) found. Some of the female participants disclosed that at a point in time during treatment, they gave up and were sure they would not survive. This could be attributed to the excruciating pains (from the burn wounds, wound dressings, skin graft, and other repetitive treatment procedures) which were physiologic in the early stages of treatment but became more of a psychological pain as treatment progressed.

The findings also revealed that, although the family members of the participants played a significant role in their recovery process, some were affected emotionally and psychologically, including their spouses and children. Most of the participants disclosed that their children were shocked and it took some time before their children adjusted to their new looks as a result of the burn injury. This finding is similar to a study carried out at a national burn centre in Sweden to explore the experiences and needs of family members of burn survivors, which revealed feelings of shock and chaos among others (Backstrom, 2018).

This study found out that although the participants belonged to varied ethnic groups, this did not impact their health-seeking behaviours. Their first point of call when the burn injury occurred was the hospital. Most of them reported to the nearest clinic/hospital for first aid and a

few reported directly to the emergency centre and they were all subsequently sent to the burns centre for specialized care. This shows that they did not attribute their burn injury to any metaphysical cause or believed their injury was related to a spiritual cause. Some described the burn injury as an unfortunate incidence and for some, an unfortunate accident.

All the participants being Christians were trusting and believing God to heal them. This helped them to endure and cope with the burn experience. However, some gave up at some point as noted earlier, showing that when humans are overwhelmed with pain they are more likely to give up despite their faith in God.

Additionally, all the participants were engaged in some form of employment except one participant who was retired. A few had resumed work while the rest were yet to resume work after their burn injury. This could be attributed to the fact that they wanted to recover fully before engaging in active employment. It could also be attributed to post-burn body image dissatisfaction and functional inability. This finding is consistent with a study carried out among burn survivors which revealed that the majority of them had a high chance of going back to work with a few of them not being able to resume work due to post-burn complications (Carrougher et.al, 2020). Contrary to this, a study conducted among survivors of severe burn injury, found that majority of the burn survivors never returned to any form of employment (Mason et. al, 2012).

The findings of the study also revealed that, although the participants had varied educational levels, they had little knowledge about burn injuries, before their experience with burns. A few had heard about burn injury on radios or seen something about burns on television. Others had bits and pieces of information from hearsay. However, all the participants developed an interest in any information concerning burns after their burn injury experience. Some read on it online, sourced articles on burns, and developed a keen interest in discussions on burns on the

radio or television. One participant disclosed that she joined an international burns survivors club online when she was discharged, and that inspired her and also contributed to the acceptance of her body image alteration hence led to body image satisfaction though it was difficult in the initial stages.

5.2 Psychological Experiences of Burn Injury Survivors

The findings of the study affirm that burn survivors suffer psychological and social effects due to burn injuries as found by many scholars including Bardach et al. (2017) and Lawrence et al. (2012). Burn injuries are traumatic and very painful. The study found that all the participants dread their burn experience as they all indicated that they experienced excruciating pain. Reliving this pain was demonstrated as participants recall memories of pain, especially during bathing, wound dressing and skin grafting. This finding aligns with the assertion of Kurian et al. (2019) who described burn injuries as a devastating and distressful trauma. Memories of pain created through burns are also easily relived by retelling the experience. Participants also corroborated their anxiety and depression which was mainly related to body image.

Apart from severe pain, the study found that the burn participants were emotionally stressed, and this led to anxiety and depression for some of the participants. According to the participants, they experienced sleepless nights, nightmares and panic attacks and this made them anxious. Davydow et al. (2009) identified sleepless nights, pain and anxiety as aftermath symptoms of burn injuries and this was confirmed by the study findings. Similarly, Lawrence et al. (2008) found that anxiety and depression were psychological effects of burn injuries suffered by burn survivors and this was confirmed by the study findings as participants empirically revealed that they experienced anxiety and depression. This finding is also consistent with a study carried

out among burn survivors, which revealed that the physical and psychological effects of burns were unbearable (Yarney, et.al, 2019).

Although depression was not prevalent among all the study participants, the findings disclosed that some burn victims were depressed. This was mainly caused by dissatisfaction with body image. Connell et al. (2014) and Lawrence et al. (2012) in their respective study discovered that scaring due to burn injuries causes body image dissatisfaction which leads to depression among burn survivors. Hence, the study findings on depression concur with these scholars' findings.

Aside from anxiety and depression, the narrations of some of the participants revealed that they experienced post-traumatic stress disorder. Some described instances where they had vivid flashbacks, and nightmares. One participant disclosed that he kept remembering the ward where he was admitted as well as what he went through during treatment. It was after some time that the memories stopped. This can be described as reliving his burn experience. Van Loey and Van Son (2003) posit that the traumatic nature of burn events and injuries in many cases lead to post-traumatic stress disorders (PTSD) symptoms such as depressed mood, flashbacks, fear, panics, intrusive thoughts and nightmares. These symptoms were confirmed by the participants as they narrated their burn experiences.

The findings also revealed that participants were emotionally stressed. They experienced fear, sadness and were worried at one point or the other while on admission at the burns ward and even after they were discharged. This could be attributed to post-burn body image, thoughts as to whether they will survive and for some, how their family (mainly spouse and children) were fairing at home. For some of the participants, the sufferings of other burn victims with whom they shared

the same ward, especially those who had very severe burns compared to theirs, affected them emotionally.

5.3 Social Experiences of Burn Injury Survivors

Regarding their social experiences, the participant disclosed that they experienced some form of stigmatisation in the form of, fixated gazing, double looks, excessive starring and some unpleasant commentaries, which led them to avoid social activities, mostly kept to themselves or stayed at home (social isolation), made them uncomfortable, and even change the routes that they usually used in their places of residence. However, limiting movements and outings as a coping strategy to stigmatisation can be considered as social withdrawal hence, the study identified social withdrawal, isolation and stigmatisation as social effects of burn injury. This finding aligns with Kurian et al. (2019) who argued that the new look of burn survivors lead to crude and subtle social behaviours against burn survivors. The study finding on stigmatisation also supports the findings of Moi et al. (2008) who presented that apart from depression, burn survivors suffered social withdrawal and stigmatisation. This experience means that persons with burn injury are constantly reminded of their new bodies and changes that they live with for the rest of their lives.

5.4 Coping Strategies Adopted by Burn Injury Survivors

The study unearthed that developing strong self-efficacy and endurance were the main coping strategies adopted by the study participants. The confidence of believing in themselves as burn injury survivors have resulted in covering their burn injuries or scars, limiting movement (social withdrawal) and ignoring looks and comments as strategies for dealing with stigmatisation. Apart from inner strength, a positive attitude and mindset, having hope and faith in God, every participant recognised that, social support from health professionals, family, co-workers, the church, their place of work, and friends was also very significant to their recovery process.

Social support can, therefore, be said to be a catalyst, enhancing the coping strategies of burn injury survivors. This supports the study by Badger and Royse (2010) that social support from peers including other burn survivors was significant and helpful in the treatment and rehabilitation process of burn survivors. The study did not find low social support from family and friends as identified in the findings of Kurian et al. (2019) and Waqas et al. (2016), however, the study agrees with Waqas et al. (2016) that there is a positive correlation between social support and resilience among burn survivors as the participants reiterated countless times that the tangible support (money, gifts, donations), companionship (physical presence), informational support (ideas and ways to manage the burn situation) and emotional support (words of encouragement) inspired and motivated them to maintain positive attitudes, and endurance during the entire burn injury treatment process.

Relating the study findings to the transactional model of stress and coping (Lazarus and Folkman, 1984), burn survivors are naturally put into a dilemma where they begin to appraise how they feel post-burn and how others see and behave towards them. This creates the individual and environment relationship discussed by Lazarus and Folkman (1984). Substantively, serious burn injuries that leave scars and deforms burn survivors would be considered a stressful transaction effect as it harms, threatens, and challenges the well-being of the burn victim. The interpretation and identification of the stressful transaction occur during the primary appraisal. Burn survivors who have identified the transactional effect to be stressful begin to search and think about what can be done to manage their stressful situation through secondary appraisal. If the available resources to manage the stressful situation are insufficient, burn survivors begin to access coping strategies either EFC or/and PFC in managing their emotions. Through reappraisal, the burn

survivors know whether their coping strategy has been effective or not. In cases where the result is negative, alternative coping strategies are developed or burn survivors go through further psychological stress and consequential adverse effects like depression, anxiety, and post-traumatic stress disorders (PTSD). However, in instances where the burn survivor perceives available resources as sufficient, there is a positive emotion and a resultant, positive coping outcome.

Per the findings from the study, the transactional effect suffered by the burn victims was stressful as the burn injuries sustained; harmed, threatened and challenged their wellbeing. Through, the cognitive appraisal process, the burn participants developed stressors that needed to be managed hence formulating strong self-efficacy and endurance as coping strategies were needed to manage the developed stressors. The psychological adjustments made by the burn participants had a positive effect on their recovery process signalling the effectiveness of the coping strategies adopted. Again, the coping strategies of the burn survivors revealed that both emotion-focused coping (EFC) strategies such as; positive thoughts, endurance, and strong self-efficacy and problem-focused coping (PFC) strategies such as; covering of scar or burnt skin, limiting movements, ignoring were used in managing the stressors developed due to burn injuries. The availability of resources such as emotional, social, financial and informational support also contributed to positive emotion and positive coping outcome.

In summary, the findings of the study affirm that burn survivors suffer psychological and social effects due to burn injuries. The experiences cut across all cultures and the extent of appraisal will determine how individuals will manage their lives post burn injury. The psychological effects of burn injury include psychological pain, emotional stress, anxiety, depression and post-traumatic stress disorder while social withdrawal, social isolation and

stigmatisation were the social effects experienced by burn survivors. Individuals who practice faith in God expressed hope in response to these psychosocial effects of burn injury. Building strong self-efficacy, endurance, covering scar or burn injuries, ignoring, limiting movement and relying on social support (tangible, emotional, informational, companionship) from health professionals, family, friends, church and workplace helped to cope and survive the burn experience.

CHAPTER SIX

SUMMARY, IMPLICATIONS, LIMITATIONS, CONCLUSION AND RECOMMENDATIONS

This chapter presents a summary of the study, implications, conclusion and recommendations of the study.

6.1 Summary of the Study

The study explored the psychosocial effects of burns and coping strategies among burn injury survivors. The transactional model of stress and coping is the theoretical framework guiding the study. Ethical approval was obtained from the Korle Bu Teaching Hospital (KBTH) Institutional Review Board. Data collection was done over a period of twelve (12) weeks at the National Reconstructive Plastic Surgery and Burns Centre (NRPS/BC), KBTH. The participants consented to the study by signing a consent form before the interview. Data collected were audiotaped and transcribed verbatim, after which it was analyzed using thematic content analysis.

The escalating prevalence of burns and their consequential effects such as deformity, disability, morbidity and death, has warranted the declaration of burn injuries as a global health problem by the World Health Organization (WHO). Burn injuries are traumatizing and have a lifelong effect on burn survivors. Severe burn injuries have negative effects on burn survivors thereby affecting their well-being hence the post-burn life of burn survivors is never the same.

Through innovation and modernization, burn care and treatments are improving especially in high-income countries. However, the challenge is that the prevalence of burns in Ghana is rising and with the improving burn care and treatment, more burn victims would be saved inferring that these burn survivors would have to live a challenging post-burn life. Therefore, the study zooms in on the psychosocial effects of burn injury and coping strategies of burn survivors in Ghana. The specific objectives of the study were to:

1. Explore the psychological experiences from burn injury among burn survivors.
2. Explore the social experiences from burn injury among burn survivors.
3. Identify and describe the coping strategies burns survivors adopt.

To answer the research questions developed around the study objectives, the qualitative exploratory descriptive design was adopted allowing the researcher to have access to first-hand information directly from burn survivors. Using purposive sampling, 12 burn survivors were sampled and interviewed. Key findings from the study include:

- The majority (9 out of 12) of the burn survivors sustained severe third-degree burn injuries through gas explosion affirming that fire-related burns are the most prevalent among other forms of burns.
- Burn survivors go through excruciating incessant pain and the pain is intensified during burns care and treatment especially during bathing, wound dressings, and skin graft.
- Burn survivors undergo emotional stress (worrying, sadness and fear) due to their condition and the state of other burn survivors in the burns ward, which affects their state of mind and well-being.
- Burn survivors suffer anxiety, depression and PTSD. Anxiety due to sleepless nights, nightmares, panics and continuous worrying and depression mainly because of dissatisfaction with post-burns body image. PTSD, during which they relive their burn experiences or have vivid flashbacks.
- Burn survivors are stigmatized (fixated gazing, starring, double looks and unpleasant comments) intentionally and unintentionally.
- Building strong self-efficacy and endurance were the main coping strategies of burn survivors in dealing with the psychosocial effects of burn injuries. Burn survivors resort to

limited movement/outing, covering of burn injuries or scar, and ignoring looks and comments from others as coping strategies. As a preventive strategy, burn survivors are becoming more cautious and careful about how they go about doing things related to sources of burn injury especially fire-related.

- Social support from health professionals, family, friends, church and workplace aided burn survivors to cope and develop a positive attitude which aided their recovery process. Social support in the form of tangible (money, gifts, donations), informational, companionship (physical presence) and emotional (words of encouragement) support made burn survivors feel loved, cared for and gave them a reason to carry on.
- In as much as health professionals play a pivotal role in the treatment and recovery of burn survivors, some health professionals are overwhelmed by work putting them in a stressful state and acting impatiently towards burn survivors.

6.2 Study Implications

The implications of the study to nursing education, practice and research are presented in this section of the chapter.

6.2.1 Implication for Nursing Education

Generally, clinical Nurses and other health professionals are tasked with the mandate of ensuring ill-health people regain their health and stay alive. This is a huge responsibility borne by health professionals. As such, Nurses should be given burns management skills through education for the best execution of their roles and responsibilities. This study has unveiled that patient-nurse or patient-health professional communication should be considered as a subtle medication for curing ill-health patients. As confirmed by the study, words of encouragement, story-telling and

humouring, gave the burn patients hope, helped them develop positive attitudes and also put smiles on their faces, all of which contributed significantly to their recovery. Nursing education should therefore include courses for learning effective and efficient patient-health professional communication skills. These skills elude many health professionals as only a few have such creative skills. Therefore, introducing courses such as a curriculum on therapeutic communication would help health professionals to consciously learn these skills and apply them at the workplace.

The study found that workload stresses are sometimes transferred from health professionals to burn survivors hence it is important that Nurse Educators also focus on training students on how to cope and work with different patients in different ward environments.

6.2.2 Implication for Nursing Practice

The vital role played by Nurses was stressed by the study findings as burn participants excessively appreciated their involvement in their burn injuries treatment and recovery. In that regard, Nurses should feel hailed and appreciated for their laudable contribution to the lives of many ill-health patients especially burn survivors. Despite this, they also need to keep their temperament in check and try as much as possible to manage the stress associated with the profession. This is crucial as the study findings revealed that some of the Nurses communicated harshly while others were impatient in the handling of burn survivors during treatment as a result of stress from work. Nurses should also take time to interact with the burn patient more often to help them develop coping strategies. Counselling sessions and focus group discussions could be organized.

Nurses on the Burns Unit especially must be taken through refresher courses periodically to become abreast with new trends of nursing burn patients and how best they can cope with the very stressful work environment. They should also be closely monitored and meetings (ward

conferences, general meetings, etc.) held periodically for them to voice out their concerns, anxieties and challenges with the highly demanding and emotionally challenging work environment of the burns unit.

6.2.3 Implication for Nursing Research

Not many burn-related studies have been conducted in Ghana. However, the prevalence of burns in the country is rising and much knowledge is needed on burns and its management. As a result, this study emerges one of such studies that fill an aspect of the burns literature gap by empirically investigating the psychosocial effects of burn injuries and coping strategies among burn survivors. The study findings are unique to adult burn survivors as minors and the elderly were excluded from the study. Therefore, future researches that consider participants across the life span and other burn-related studies are needed to build sufficient literature on burns in Ghana.

Nurses in the clinical field and teaching field should be encouraged to research more into this area, to add to existing literature. The research findings can also be used to improve practice and add to the knowledge of the subject matter, as it is of the essence for Nurses to have the technical know-how and scientific knowledge required, to render comprehensive and holistic care to burn patient as their healthcare needs tend to be complex and the Nurse must be emotionally and psychologically prepared to champion the challenging and confronting nature of working on the Burns Unit.

6.2.4 Implications for Policy Makers

Based on the rising prevalence of burns in Ghana and the finding that fire-related burns mainly from a gas explosion at home are predominant, government and relevant policymakers must take stringent measures to create awareness and educate the public on safety measures that can help prevent gas explosions; consequences of burn injuries and the need to be vigilant to avoid

burns. Such educative information and messages should be continuously broadcast on television, radio and circulated through social media (WhatsApp, Twitter, Facebook and others).

Again, the work being done by health workers is remarkable as they are always at the forefront of all health-related issues. The finding that health professionals play a vital role in the treatment and recovery of burn survivors speaks volume, hence this study can contribute to government or policy makers' decision to ensure that health workers are well-motivated and remunerated to give their best, not towards burn survivors alone but in all their endeavours. Apart from salaries, award schemes and other allowances should be put in place for health workers especially Nurses.

Also, health-related issues occur on daily basis and this puts loads of work on health professionals. As the study found that, some Nurses are sometimes impatient with burn survivors because of work stress as they have to attend to a lot of patients, government and the management of health institutions should ensure that health facilities are well-staffed with the needed number of health professionals. This would reduce the workload on individual health workers and enable them to better attend to their patients and not be in hurry to attend to other patients who are waiting.

The aftermaths of burn injuries are lifelong and based on the finding that social support from different sources (family, friends, churches, workplace, health professionals) and in varied forms (tangible, informational, companionship, emotional) plays a significant role in the treatment and recovery of burn victims, there is the need for continuous social support for burn survivors even after they have been discharged. This is because recovering from burn injuries could take years, scaring from burn injuries causes burn survivors to relive their experience and post-burn body image would lead to some stigmatization hence, apart from family and friends, policymakers

and relevant stakeholders should promote the formation of a burns rehabilitation centre, burns survival clubs, among others to help them better adapt physically, psychologically and socially.

6.3 Study Limitations

The methodology adopted in this study can only speak to the findings in this study although it was used to get an in-depth understanding of the psychological and social experiences of burn survivors. In that regard, it is proposed that a longitudinal mixed-method or a quantitative study is carried out, making use of larger sample sizes which include children and the elderly and then findings can be generalized.

6.4 Conclusion

The study shows that the psychological experiences of burn survivors are in two folds. The first being that burn survivors develop and suffer negative psychological effects such as emotional stress, anxiety and depression and second, they psychologically prepare themselves by maintaining positive attitudes, strong self-efficacy and endurance to be able to undergo burns treatment and recovery.

Again, burn survivors shared their social experiences which revealed stigmatization, social withdrawal and social isolation as these burn survivors tried to avoid being in the midst of many people, seen in public places or the open. The stigmatization act happened intentionally (looks and comments from outsiders) or unintentionally (looks, reactions or comments from close relations).

Also, the study affirms that burn injuries have psychological and social effects on burn survivors and as a result, they develop coping strategies which include building strong self-efficacy, endurance, covering of burn injuries/scars and limited movements to manage these effects.

Therefore, the study concludes that burn survivors suffer excruciating pain (this becomes more of a psychological pain as treatment progresses), emotional stress, anxiety, depression and PTSD as psychological effects; stigmatization, social withdrawal and social isolation as social effects and develop strong efficacy, endurance, ignoring looks and comments, covering scars and limiting movement as coping strategies in dealing with the psychosocial effects associated with burn injuries. The study also concludes that all forms of social support (tangible, informational, emotional and companionship) are significant and necessary in helping burn survivors undergo treatment and recovery.

Burns experiences open new chapters in people's lives such as finding new ways to cope with how they see themselves and how they are seen. Burn injury completely impact all dimensions of the person and victims will need incessant support for the rest of their lives.

6.5 Recommendations

The following recommendations have been made based on the study findings.

6.5.1 Policy Makers

Policymakers should;

- Formulate policies that favour the distribution of specialized burn care centres all over the country to reduce the increased patient load on the existing centres, Korle Bu Teaching Hospital (KBTH), Greater Accra Regional Hospital, 37 Military Hospital and Komfo Anokye Teaching Hospital (KATH) especially KBTH in recent times.
- Formulate social support systems in terms of funds or stimulus packages for burn injury survivors especially for those who have very little or no forms of support. The general public including media houses, telecommunication networks, cooperate organizations,

churches, Non-governmental Organizations (NGOs), Philanthropist and individuals must be involved and solicited to donate to the fund.

- Consider making the National Health Insurance Scheme (NHIS) more effective for burn injury survivors by including a significant portion of the cost of burns care on the scheme.

6.5.2 Health Professionals

Health professionals should;

- Intensify counselling and emotional support given to burn injury survivors. This would help boost the resilience and overall coping strategies of burn survivors hence contribute immensely to their recovery process.
- Organize therapeutic sessions for burn survivors, post-burn treatment. This would help build on their resilience, self-esteem and improve their well-being and social life. This can be in the form of periodic reviews and centralized events to share ideas and experiences.
- Maintain the highest level of professionalism by controlling their temperament and managing stress associated with workloads. Where necessary, workshops/seminars on emotional intelligence and stress management should be offered.

6.5.3 Ministry of Health (MOH)

MOH should;

- Collaborate with the appropriate authorities to provide specialized burn care training for health care providers including nurses, doctors and paramedical staff.
- Collaborate with the appropriate authorities and agencies to build appropriate facilities for the management of burn injuries with all of the required equipment, resources and logistics.
- Collaborate with the government and all other key stakeholders to provide rehabilitation centres to meet the physical, psychological, emotional and social needs of burn survivors

post burn injury. Also, provide counselling and emotional support, and continually inspire burn survivors.

6.5.4 Ghana Health Service (GHS)

GHS should;

- Organize community awareness programmes and educate members of the community on the causes and prevention of burns, basic guidance on first aid for burns as well as where to seek burn care to prevent delays in treatment.
- Consider a collaboration between burns care practitioners and public health experts in the design and implementation of preventive measures to reduce the burden of the injury.
- Carry out proper epidemiological research and utilize the information for planning preventive strategies.

6.5.5 Ministry of Education (MOE)

MOE should;

- Make burn awareness a part of the basic and senior high school education. Most of these schools have various clubs such as; Writers and Debaters Club, Red Cross, French club, Music and Dance, etc. hence a burn awareness club can be added to their list of clubs in the school. Members of the club will be educated on the causes, ways by which burns of all forms can be prevented and the first aid for all forms of burn injury, including what to do and what not to do. This can be done from time to time by some members of the Burns health care team, who will have to interact with these students from time to time so that as early as basic school children and the youth will be aware of the dangers of burns and will share their knowledge about burns with friends and family.

6.5.6 Nurses and Midwifery Council of Ghana (NMCG)

NMCG should;

- Consider developing and incorporating a curriculum for burns nursing in the courses for the training of Nurses.

6.5.7 Korle Bu Teaching Hospital (KBTH)

KBTH should;

- Consider developing burn care modules to train personnel locally in the practice of burns management.
- Organize periodic training of staff on customer care and human relations.
- Organize refresher courses, workshops/seminars on burns management.
- Collaborate with the media houses (TV stations and the various Radio stations) to regularly create awareness on burns and also host from time to time, burn health care providers to educate the general public. Social media spaces can also be used as another platform for awareness creation.
- Put in place all the necessary measures to ensure that all the COVID-19 Protocols for the Burns Unit is strictly adhered to, to prevent the spread of the virus in the wards.
- Ensure that health care providers, most especially those at the Burns Unit, and especially the Nurses, are encouraged and sponsored to carry out various research to help make informed decisions on burns management and also add up to existing knowledge and improve practice as findings from these research can be used to draw up protocols and standards for care hence promote evidence-based burns care.

6.5.8 National Reconstructive Plastic Surgery and Burns Centre (NRPS/BC)

NRPS/BC should;

- Develop an effective pain management protocol for the treatment and management of burns.
- Actively involve the Clinical Psychologist throughout the treatment and management of burn injury survivors.
- Ensure that the multidisciplinary team (Nurses, Doctors, Physiotherapist, Dietician, Pharmacist, etc) involved in the treatment and management of burn survivors also take a keen interest in the psychosocial dimension of burn injury.
- Organize seminars on emotional intelligence and stress management for their staff.

REFERENCES

Akorsu, A. D. (2010). *Labour Standards Application in Ghana: Influences, Patterns and Solutions*. (Unpublished doctoral thesis). University of Manchester, England.

Al-Shamsi, M., & Othman, N. (2017). The epidemiology of burns in Basra, Iraq. *Annals of Burns and Fire Disasters*, *30*(3), 167-171.

American Burn Association. (1984). Guidelines for service standards and severity classifications in the treatment of burn injury. *Bull Am Coll Surg*, *69*(10), 24-30.

American Psychiatric Association (1994). Diagnostic and Statistical Manual of Mental Disorders (4th ed). Washington DC: American Psychiatric Press Inc.

Andrews, R. M., Browne, A. L., Drummond, P. D., & Wood, F. M. (2010). The impact of personality and coping on the development of depressive symptoms in adult burns survivors. *Burns*, *36*(1), 29-37.

Anney, V.N. (2014). Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS), 2(5), 272-281.*

Anzarut, A., Chen, M., Shankowsky, H., & Tredget, E. E. (2005). Quality-of-life and outcome predictors following massive burn injury. *Plastic and Reconstructive Surgery*, *116*(3), 791-797.

Asuquo, M. E., Ekpo, R., & Ngim, O. (2009). A prospective study of burns trauma in children in the University of Calabar Teaching Hospital, Calabar, south-south Nigeria. *Burns*, *35*(3), 433-436.

Bäckström, J. (2013). *Family members of patients with burns: experiences of a distressful episode* (Doctoral dissertation, Acta Universitatis Upsaliensis).PA, Washington DC.

Backstrom, J. Willebrand, M., Sjoberg, F. & Haglund, K (2018). Being a family member of a burn survivor: Experiences and needs. *Burns Open, 2*(4), 193-198.

Badger, K., & Royse, D. (2010). Adult burn survivors' views of peer support: a qualitative study. *Social Work in Health Care*, *49*(4), 299-313.

Bardach, A. E., Caporale, J. E., Rubinstein, A. L., & Danaei, G. (2017). Impact of level and patterns of alcohol drinking on coronary heart disease and stroke burden in Argentina. *PLoS One*, *12*(3), 17-37.

Bernstein, N. R. (1976). *Emotional care of the facially burned and disfigured*. Little Brown & Company.

Biggs, A., Brough, P., & Drummond, S. (2017). Lazarus and Folkman's psychological stress and coping theory. *The handbook of stress and health: A guide to research and practice*, 351-364.

Bisson, J. I., Shepherd, J. P., & Dhutia, M. (1997). Psychological sequelae of facial trauma. *Journal of Trauma and Acute Care Surgery*, *43*(3), 496-500.

Blom, L. et. al. (2016). Gender differences in burns: A study from emergency centres in Western Cape, South Africa. Burns: Elsevier Ltd. Retrieved 30/08/2020 from https://doi.org/10.1016/j.burns.2016.05.003

Boyd, N. G., Lewin, J. E., and Sager, J. K. (2009). A model of stress and coping and their influence on individual and organizational outcomes. *Journal of Vocational Behavior*, *75*(1), 197–211.

Braš, M., Lončar, Z., Brajković, L., Gregurek, R., & Mičković, V. (2007). Coping with severe burns in the early stage after burn injury. *Collegium Antropologicum*, *31*(1), 159-163.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.

Bull R.H.C. & Rumsey N. (1988). The Social Psychology of facial appearance. Springer-Verlag, New York.

Burmeister, E., & Aitken, L. M. (2012). Sample size: How many is enough? *Australian Critical Care*, *25*(4), 271-274.

Byrne, M. (2001). Data analysis strategies for qualitative research. *Association of Operating Room Nurses*, *74* (6), 904-905.

Carrougher G.J., Bamer, A.M., Mandell, S.P., Brych, S. & Jeffrey, C. (2020). Factors affecting employment after burn injury in the United States: A burn model system national database investigation. *Archives of Physical Medicine and Rehabilitation*, *101*(1), 71-85.

Cheng, H., Li, X., Miao, H., & Li, R. (2015). The role of coping behavior in severely burned patients with posttraumatic stress disorder. *The Journal of Neuropsychiatry and Clinical Neurosciences*, *27*(3), 188-192.

Colorafi, K. J., & Evans, B. (2016). Qualitative descriptive methods in health science research. *HERD: Health Environments Research & Design Journal*, *9*(4), 16-25.

Connell, K. M., Coates, R., & Wood, F. M. (2014). Sexuality following trauma injury: A literature review. *Burns & Trauma*, *2*(2), 2321-3868.

Corbin, J., & Strauss, A. (2008). Basics of qualitative research: Techniques and procedures for developing grounded theory. *Thousand Oaks*.

Creswell, J. W. (2008). *Research Design: Qualitative, Quantitative and Mixed Method Approaches* (3rd ed.). Los Angeles: SAGE Publications Inc.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches.* (3rd ed.). Los Angeles: SAGE Publications Inc.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Creswell, J. W., Harrison, R. L. & Reilly, T. M., & (2020). Methodological rigor in mixed methods: An application in management studies. *Journal of Mixed Methods Research*, *14*(4), 473-495.

Dalal, P. K., Saha, R., & Agarwal, M. (2010). Psychiatric aspects of burn. *Indian Journal of Plastic Surgery: Official Publication of the Association of Plastic Surgeons of India*, *43*(1), 136-142.

Daly, K. (2007). *Qualitative methods for family studies and human development*. Thousand Oaks, CA: Sage.

Davydow, D. S., Katon, W. J., & Zatzick, D. F. (2009). Psychiatric morbidity and functional impairments in survivors of burns, traumatic injuries, and ICU stays for other critical illnesses: a review of the literature. *International Review of Psychiatry*, *21*(6), 531-538.

Denzin, N. K., & Lincoln, Y. S. (2005). The Sage handbook of qualitative research. *Thousand Oaks, CA: Sage Publication*, 695-728.

Dewe, P., and Cooper, C. L. (2007). Coping research and measurement in the context of work-related stress. In G.P. Hodgkinson and J. K. Ford (Eds.), *International Review of Industrial and Organizational Psychology*, vol. 22 (141–191). Chichester, UK: John Wiley & Sons.

Fauerbach, J. A., Heinberg, L. J., Lawrence, J. W., Bryant, A. G., Richter, L., & Spence, R. J. (2002). Coping with body image changes following a disfiguring burn injury. *Health Psychology*, *21*(2), 115-121.

Fava, M., Rankin, M. A., Wright, E. C., Alpert, J. E., Nierenberg, A. A., Pava, J., & Rosenbaum, J. F. (2000). Anxiety disorders in major depression. *Comprehensive Psychiatry*, *41*(2), 97-102.

Finnerty, C. C., Jeschke, M. G., Branski, L. K., Barret, J. P., Dziewulski, P., & Herndon, D. N. (2016). Hypertrophic scarring: the greatest unmet challenge after burn injury. *The Lancet*, *388*(10052), 1427-1436.

Fraenkel, J. R., & Wallen, N. E. (2003). *How to Design and Evaluate Research in Education* (5th ed.). New York: McGraw-Hill.

Freund P.R. & Marvin J.A. (1990). Postburn pain. In Bonica J.J. (eds) *The management of pain*. Lea & Felbiger, Philadelphia.

Graneheim, U.H & Lundman, B. (2004). Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today, 24*(2), 105-112.

Graven, L. J., Grant, J. S., Vance, D. E., Pryor, E. R., Grubbs, L., & Karioth, S. (2014). Coping styles associated with heart failure outcomes: A systematic review. *Journal of Nursing Education and Practice*, *4*(2), 227-242.

Greenhalgh, D. G. (2019). Management of burns. *New England Journal of Medicine*, *380*(24), 2349-2359.

Guccione, A. A. (2014). Resilience and self-efficacy as mediators of quality of life in geriatric rehabilitation. *Topics in Geriatric Rehabilitation*, *30*(3), 164-169.

Gwaram, U. A., & Ameh, E. A. (2017). Timing of death at National Trauma Center, Abuja, Nigeria. *East and Central African Journal of Surgery*, *22*(3), 57-67.

Hansen, H. (2006). The ethnonarrative approach. *Human relations*, *59*(8), 1049-1075.

Harrison, R. L., Reilly, T. M., & Creswell, J. W. (2020). Methodological rigor in mixed methods: An application in management studies. *Journal of Mixed Methods Research*, *14*(4), 473-495.

Hasson-Ohayon, I., Goldzweig, G., Dorfman, C., & Uziely, B. (2014). Hope and social support utilisation among different age groups of women with breast cancer and their spouses. *Psychology & Health*, *29*(11), 1303-1319.

Hennink, M., Hutter, I., & Bailey, A. (2020). *Qualitative research methods*: SAGE Publications Limited.

Horwitz, A. G., Hill, R. M., & King, C. A. (2011). Specific coping behaviors in relation to adolescent depression and suicidal ideation. *Journal of Adolescence*, *34*(5), 1077-1085.

Hulbert-Williams N.J., Hulbert-Williams S.L., Mcilroy D. & Bunting B. (2008). Anxiety in recovery from severe burn injury: An experimental comparison. *Psychology, Health & Medicine, 13*(2), 162-167.

Hurst, S., Arulogun, O. S., Owolabi, M. O., Akinyemi, R., Uvere, E., Warth, S., & Ovbiagele, B. (2015). Pretesting qualitative data collection procedures to facilitate methodological adherence and team building in Nigeria. *International Journal of Qualitative Methods*, *14*(1), 53-64.Retrieved 12/06/2020 from https://doi.org/10.1177/160940691501400106

Jain, A., Rathore, S., Jain, R., Gupta, I. D., & Choudhary, G. L. (2015). Assessment of the depression and the quality of life in burn patients seeking reconstruction surgery. *Indian Journal of Burns*, *23*(1), 37.

Karabeg, R., Dujso, V., Jakirlic, M., & Hizar, I. (2009). Social Rehabilitation of Patients Who Have Suffered Burns. *Materia Socio-Medica*, *21*(2), 82-84.

Kellehear, A., & Gliksman, M. (1997). *The public health researcher: A methodological guide*. Oxford University Press.

Korle Bu Teaching Hospital (2013). 2013 Annual Report. Retrieved 20/05/2020 from kbth.gov.gh

Korle Bu Teaching Hospital (2016). 2016 Annual Report. Retrieved 20/05/2020 from kbth.gov.gh

Kurian, S., Padickaparambil, S., Thomas, J., Sreekumar, N. C., & James, A. R. (2019). Psychological evaluation of adult burn survivors: a pilot study. *International Surgery Journal*, *6*(12), 4428-4434.

LaGreca, A. M. (1992). Peer influences in pediatric chronic illness: An update. *Journal of Pediatric Psychology*, *17*(6), 775-784.

Lambert, V. A., & Lambert, C. E. (2012). Qualitative descriptive research: An acceptable design. *Pacific Rim International Journal of Nursing Research*, *16*(4), 255-256.

Lau, Y. S. (2006). An insight into burns in a developing country: a Sri Lankan experience. *Public Health*, *120*(10), 958-965.

Lawrence J.W., Fauerbach J.A. & Thombs B.D. (2006a). Frequency and correlates of depression symptoms among long-term adult burn survivors. *Rehabilitation Psychology, 51*(4), 306-313.

Lawrence, J. W., Mason, S. T., Schomer, K., & Klein, M. B. (2012). Epidemiology and impact of scarring after burn injury: a systematic review of the literature. *Journal of Burn Care & Research*, *33*(1), 136-146.

Lazarus, R. S. (1966). Psychological stress and the coping process. New York: McGraw- Hill.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer Publishing Company.

Liang, C. Y., Wang, H. J., Yao, K. P., Pan, H. H., & Wang, K. Y. (2012). Predictors of health-care needs in discharged burn patients. *Burns*, *38*(2), 172-179.

Liao, C. C., & Rossignol, A. M. (2000). Landmarks in burn prevention. *Burns*, *26*(5), 422-434.

Lincoln, Y., & Guba, E. (1985a). Naturalistic Inquiry Vol. 75 Sage. *Beverly Hills, CA*.

Lincoln, Y. S., & Guba, E. G. (1985b). Naturalistic inquiry (vol. 75). In: Sage Thousand Oaks, CA.

Macgregor, F. C. (1990). Facial disfigurement: problems and management of social interaction and implications for mental health. *Aesthetic Plastic Surgery*, *14*(1), 249-257.

MacNeil, C., & Mead, S. (2005). A narrative approach to developing standards for trauma-informed peer support. *American Journal of Evaluation*, *26*(2), 231-244.

Mason, M. (2010). *Sample size and saturation in PhD studies using qualitative interviews.* Paper presented at the Forum qualitative Sozialforschung/Forum: qualitative social research.

Mason, S. T., Esselman, P., Fraser, R., Schomer, K., Truitt, A., & Johnson, K. (2012). Return to work after burn injury: a systematic review. *Journal of Burn Care & Research*, *33*(1), 101-109.

Meaney, P. M., Geimer, S. D., Augustine, R., & Paulsen, K. D. (2019, March). Quasi-Open-Ended Coaxial Dielectric Probe Array for Skin Burn Characterization. In *2019 13th European Conference on Antennas and Propagation (EuCAP)* (pp. 1-3). IEEE.

Mitchell, D. (2004). *Stress, coping, and appraisal in an HIV-Seropositive rural sample: a test of the goodness-of-fit hypothesis* (Doctoral dissertation, Ohio University).

Mock, C., Peck, M., Peden, M., Krug, E., & World Health Organization (WHO). (2008). A WHO plan for burn prevention and care. *Geneva: World Health Organization*, *3*.

Moi A.L., Vindenes H.A. & Gjengedal E. (2008). The experience of life after burn injury: a new bodily awareness. *Journal of Advanced Nursing*, *64*(3), 278-286.

Neuendorf, K. (2017). *The content analysis guidebook* (2nd ed.). SAGE Publications, Inc. Retrieved 16/06/2020 from https://www.doi.org/10.4135/9781071802878

Padgett, D. K. (2016). *Qualitative methods in social work research* (Vol. 36): Sage Publications.

Palmu, R., Partonen, T., Suominen, K., Vuola, J., & Isometsä, E. (2016). Functioning, disability, and social adaptation six months after burn injury. *Journal of Burn Care & Research*, *37*(3), e234-e243.

Papadopoulos, L., Bor, R., & Legg, C. (1999). Psychological factors in cutaneous disease: an overview of research. *Psychology, Health & Medicine*, *4*(2), 107-126.

Pateria, D., Thakur, P. S., Agrawal, R., Singh, B. K., & Tomar, J. (2019). Autopsy based profile of death in burn cases-One-year prospective study. *Indian Journal of Forensic and Community Medicine*, *5*(4), 236-239.

Peck, M. D., & Toppi, J. T. (2020). Epidemiology and Prevention of Burns throughout the World. In *Handbook of Burns Volume 1* (pp. 17-57). Springer, Cham.

Polit-O'Hara, D., & Beck, C. T. (2006). *Essentials of nursing research: Methods, appraisal, and utilization* (Vol. 1): Lippincott Williams & Wilkins.

Price, B. (1990). A model for body-image care. *Journal of Advanced Nursing*, *15*(5), 585-593.

Qader, A. R., & Muhamad, J. A. (2010). Nosocomial infection in Sulaimani burn hospital, Iraq. *Annals of Burns and Fire Disasters*, *23*(4), 177-181.

Reddy, K. S. (2017). The essentials of forensic medicine and toxicology. *Journal of Punjab Academy of Forensic Medicine & Toxicology*, *5*(5), 53-63.

Sadeghi-Bazargani, H., Zare, Z., & Ranjbar, F. (2017). Factor structure of the Persian version of general, social, and negative self-consciousness of appearance domains of derriford

appearance scale 59: An application in the field of burn injuries. *Neuropsychiatric Disease and Treatment*, *13*, 147.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, *22*(2), 63-75.

Shepherd, J. P., Qureshi, R., Preston, M. S., & Levers, B. G. (1990). Psychological distress after assaults and accidents. *BMJ: British Medical Journal*, *301*(6756), 849-850.

Silverman, D. (2013). *Doing qualitative research: A practical handbook*. SAGE Publications Limited.

Smith, H. (2000). Challenging disfigurement. *Community Practitioner*, *73*(6), 637-643.

Tandon, S. D., Dariotis, J. K., Tucker, M. G., & Sonenstein, F. L. (2013). Coping, stress, and social support associations with internalizing and externalizing behavior among urban adolescents and young adults: revelations from a cluster analysis. *Journal of Adolescent Health*, *52*(5), 627-633.

Tebble, N. J., Thomas, D. W., & Price, P. (2004). Anxiety and self-consciousness in patients with minor facial lacerations. *Journal of Advanced Nursing*, *47*(4), 417-426.

Tehranineshat, B., Mohammadi, F., Tazangi, R. M., Sohrabpour, M., Parviniannasab, A. M., & Bijani, M. (2020). A Study of the Relationship among Burned Patients' Resilience and Self-Efficacy and Their Quality of Life. *Patient Preference and Adherence*, *14(1)*, 1361-1369.

Thombs, B. D., Lawrence, J. W., Magyar-Russell, G., Bresnick, M. G., & Fauerbach, J. A. (2008). From survival to socialization: a longitudinal study of body image in survivors of severe burn injury. *Journal of Psychosomatic Research*, *64*(2), 205-212.

Tobin, G. A., & Begley, C. M. (2004). Methodological rigour within a qualitative framework. *Journal of Advanced Nursing*, *48*(4), 388-396.

Torabian, S., & Saba, M. S. (2009). Epidemiology of paediatric burn injuries in Hamadan, Iran. *Burns*, *35*(8), 1147-1151.

Tropez-Arceneaux, L. L., Castillo Alaniz, A. T., Lucia Icaza, I., & Alejandra Murillo, E. (2017). The psychological impact of first burn camp in Nicaragua. *Journal of Burn Care & Research*, *38*(1), e1-e7.

Turner-Cobb, J., & Hawken, T. (2019). Stress and Coping Assessment. In C. Llewellyn, S. Ayers, C. McManus, S. Newman, K. Petrie, T. Revenson, et al. (Eds.), *Cambridge Handbook of Psychology, Health and Medicine* (Cambridge Handbooks in Psychology, 229-236). Cambridge: Cambridge University Press.

Uchino, B. N. (2009). Understanding the links between social support and physical health: A life-span perspective with emphasis on the separability of perceived and received support. *Perspectives on Psychological Science*, *4*(3), 236-255.

Ullrich P.M., Askay S.W. & Patterson D.R. (2009). Pain, depression, and physical functioning following burn injury. *Rehabilitation Psychology, 54*(2), 211-216.

Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*, *15*(3), 398-405.

Van Loey, N. E., & Van Son, M. J. (2003). Psychopathology and psychological problems in patients with burn scars. *American Journal of Clinical Dermatology*, *4*(4), 245-272.

Vitaliano, P. P., Maiuro, R. D., Russo, J., & Becker, J. (1987). Raw versus relative scores in the assessment of coping strategies. *Journal of Behavioral Medicine*, *10*(1), 1-18.

Wanjeri, J. K., Kinoti, M., & Olewe, T. H. (2018). Risk factors for burn injuries and fire safety awareness among patients hospitalized at a public hospital in Nairobi, Kenya: A case control study. *Burns*, *44*(4), 962-968.

Waqas, A., Naveed, S., Bhuiyan, M. M., Usman, J., Inam-ul-Haq, A., & Cheema, S. S. (2016). Social support and resilience among patients with burn injury in Lahore, Pakistan. *Cureus*, *8*(11).

Wiechman, S., Hoyt, M. A., & Patterson, D. R. (2020). Using a biopsychosocial model to understand long-term outcomes in persons with burn injuries. *Archives of Physical Medicine and Rehabilitation*, *101*(1), S55-S62.

Wisely, J.A., Hoyle, E. Tarrier, N. & Edwards, J. (2007). Where to start? Attempting to meet the psychological needs of burned patients. *Burns*, *33*(6), 736-746.

Wisely, J. A., & Tarrier, N. (2001). A survey of the need for psychological input in a follow-up service for adult burn-injured patients. *Burns*, *27*(8), 801-807.

World Health Organization [WHO] (2014). *Burn Fact Sheet*. Retrieved 18/05/2020 from

http://www.who.int/ mediacentre/factsheets/fs365/en/.

World Health Organization [WHO] (2018). *Burn Fact Sheet*. Retrieved 18/05/2020 from http://www.who.int/es/news-room/fact-sheets/detail/burns.

World Health Organization [WHO] (2019). *Burn Fact Sheet*. Retrieved 18/05/2020 from http://www.who.int/violence_injury_prevention/ other _injury/burns/en.

Woods, M. (2011). Interviewing for research and analysing qualitative data: An overview. *School of Humanities and Social Sciences, Massey University*, 1-8. Retrieved 30/05/2020 from http://owll.massey.ac.nz/pdf/interviewing-for-research-and-analysing-qualitative-data.pdf

Yarney, L., Yeboah, E., & Hansen-Garshong, R. (2019). Experiences of burn patients in Ghana: A qualitative study at the Korle-Bu Teaching Hospital in Accra. *Indian Journal of Burns*, *27*(1), 49-56.

Zorita L.D., Blanes L., Veiga D.F., Augusto F.D., & Ferreira L.M. (2016). Health-related quality of life and self-esteem among burn patients. *Wounds 28*(1): 27-34.

APPENDICES

Appendix I: Ethical Clearance

In case of reply the number
And the date of this
Letter should be quoted
My Ref. No. KBTH/IRB/08/20
Your Ref. No.

KORLE BU TEACHING HOSPITAL
P. O. BOX KB 77,
KORLE BU, ACCRA.

Tel: +233 302 667759/673034-6
Fax: +233 302 667759
Email: Info@kbth.gov.gh
pr@kbth.gov.gh
Website: www.kbth.gov.gh

2nd October, 2020

ENID AFI FRENCH-CUDJOE
C/O PLASTIC SURGERY & BURNS CENTRE
KORLE BU TEACHING HOSPITAL
P.O. BOX 77 KORLE BU, ACCRA

"EXPLORING THE PSYCHOSOCIAL EFFECTS AND COPING STRATEGIES IN BURN INJURY SURVIVORS"

KBTH-IRB /00099/2020

Investigator: Enid Afi French-Cudjoe

The Korle Bu Teaching Hospital Institutional Review Board (KBTH IRB) reviewed and granted approval to the study entitled: "Exploring the Psychosocial Effects and Coping Strategies in Burn Injury Survivors"

Please note that the Board requires you to submit a final review report on completion of this study to the KBTH-IRB.

Kindly, note that, any modification/amendment to the approved study protocol without approval from KBTH-IRB renders this certificate invalid.

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

This IRB approval is valid till 30th August, 2021. You are to submit annual report for continuing review.

Sincere regards,

DR. DANIEL ANKRAH
VICE CHAIR (KBTH-IRB)
FOR: CHAIR (KBTH-IRB

Cc: The Chief Executive Officer, KBTH

The Director of Medical Affairs, KBTH

Appendix II: Introductory Letter

UNIVERSITY OF GHANA
DEPARTMENT OF MENTAL HEALTH
SCHOOL OF NURSING

Ref. No.:.....*ID: 10804726*.....

October 14, 2020

The Head
National Reconstructive Plastic
Surgery and Burns Centre
Korle-Bu Teaching Hospital
Korle-Bu

Dear Sir/Madam,

LETTER OF INTRODUCTION

I write to introduce to you **Enid Afi French-Cudjoe**, an MSc Nursing student at the School of Nursing and Midwifery, University of Ghana, Legon.

As part of the requirements of the MSc. programme, the student is to undertake a research study and she intends to use your facility as one of the main study sites for data collection.

The title of her research is **"Exploring the Psychosocial Effects and Coping Strategies of Burn Injury Survivors at Korle Bu Teaching Hospital (KBTH)."**

It will be appreciated if she is given the necessary assistance to collect data on her study.

Thank you.

Yours faithfully,

for

Dr. Gideon Puplampu
Supervisor

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

Appendix III: Information Sheet

Information Sheet

Title of Research: Exploring the Psychosocial Effects and Coping Strategies in Burn Injury Survivors at Korle Bu Teaching Hospital**.**

Purpose of the study: To explore the psychosocial effects and coping strategies in burn injury survivors at Korle Bu Teaching Hospital in the Accra Metropolis.

Specific Objectives:

The specific objectives of this study are to;

1. Explore the psychological experiences from burn injury among burn survivors.
2. Explore the social experiences from burn injury among burn survivors.
3. Identify and describe the coping strategies burns survivors adopt.

Participants of the Study

Inclusion criteria: This will include burn survivors: 18years and above; **(b)** who had received and completed their burns care at least three months prior to this study; and **(c)** who could speak English, Twi or Ga.

Exclusion criteria: This will include burn survivors: **(a)** below 18 years or above 65 years **(b)** discharged but are still in pain **(c)** who could not speak English, Twi or Ga.

Ethical Considerations

This study has received ethical approval from the Institutional Review Board (IRB) of Korle-Bu Teaching Hospital. Consent procedures, ensuring confidentiality, privacy, risk and benefit will be followed and the researcher will explain the purpose, objectives and potential risk and benefits to participants in their preferred language. Participants will be given adequate time to decide on their participation.

Possible Risk and Discomfort

No form of harm is expected in the process of the interview. Emotional distress and physical tiredness may occur. In that case, the interview will be paused and continued at a later time when the participant is ready. A clinical psychologist's service may be made available for free when emotional distress is experienced during the interview.

Possible Benefits

Findings shall help provide efficient care to patients with a similar condition. Findings shall also help render competent care to patients who may receive burns care in the future.

Confidentiality

All information obtained from you will be kept on a CD-ROM and pen drive, and any hard copies kept under lock and key in a cabinet hence prevent access by unauthorized persons except the researcher, supervisor and independent coder who will have access to the data. Data will be used for only academic purposes hence the device that will be used to audiotape the interview will not be shared with any other person (s). Your biographic data will not be audiotaped, and your name too will not be mentioned throughout the research process. Only pseudonyms will be used.

Compensation

You will be given snacks such as pastry, soft drink and water.

Voluntary Participation and Right to Leave the Research

To voluntarily participate or withdraw from the study is solely your right. If you decide to withdraw at any point in time of the study, there is no risk of penalty.

Contacts for Additional Information

If there are any concerns or you need additional information, the following people can be contacted using these addresses;

Dr Gideon Puplampu
Department of Mental Health
School of Nursing and Midwifery
College of Health Sciences
University of Ghana.
Contact: 0507893242/gpuplampu@ug.edu.gh

Enid Afi French-Cudjoe
Department of Mental Health
School of Nursing and Midwifery
College of Health Sciences,
University of Ghana, Legon.
Contact: 0243924409/kafuifc@gmail.com

Mr Victor Nortey
IRB Administrator
Korle Bu Teaching Hospital
Contact: 0245194761/vonnortey@gmail.com

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Korle-Bu Teaching Hospital. If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8 am-5 pm through the landline **0302666766 or email address: rdo@kbth.gov.gh**

Appendix IV: Consent Form

Consent Form

Title: Exploring the Psychosocial Effects and Coping Strategies in Burn Injury Survivors at Korle Bu Teaching Hospital.

Principal Investigator: French-Cudjoe Enid

Address: Department of Mental Health, School of Nursing and Midwifery

College of Health Sciences, P.O. BOX LG 43. University of Ghana, Legon.

General Information about Research: The study aims to explore your experiences with burns and factors that influenced your ability to cope during treatment. I will be grateful if you could provide me with information on how family, social groups, friends, Nurses and the health team supported you in your recovery. I will be using a face to face interview which will be audiotaped with your consent. The interview is expected to last between 30 to 60 minutes and shall be held at a place and time convenient for you. You will be required to sign a consent form before the interview. The interview shall be in English, Twi or Ga. Your details will be recorded but not audiotaped. Your information provided shall be between only the researcher, research assistants, and supervisor. No other persons will have access to it.

Your name will not be mentioned anywhere in the write-up.

Possible Risks and Discomforts: No form of harm is expected in the process of the interview. Emotional distress and physical tiredness may occur. In that case, the interview will be paused and continued at a later time when the participant is ready. A clinical psychologist's service may be made available for free when emotional distress is experienced during the interview.

Possible Benefits*:* Findings shall help provide efficient care to patients with a similar condition. Findings shall also help render competent care to patients who may receive burns care in the future.

Confidentiality: Every piece of information obtained from you will be kept on a CD-ROM and pen drive, and any hard copies kept under lock and key in a cabinet hence prevent access

by unauthorized persons except the researcher, supervisor and independent coder who will have access to the data. Data will be used for only academic purposes hence the device that will be used to audiotape the interview will not be shared with any other person (s). Your biographic data will not be audiotaped, and your name too will not be mentioned throughout the research process. Only pseudonyms will be used.

Compensation: You will be given snacks such as pastry, soft drink and water.

Voluntary Participation and Right to Leave the Research: To voluntarily participate or withdraw from the study is solely your right. If you decide to withdraw at any point in time of the study, there is no risk of penalty.

Contacts for Additional Information

In case of further information regarding my study, you can reach me on **0243924409/**kafuifc@gmail.com or **Dr Puplampu.** School of Nursing and Midwifery, College of Health Sciences, University of Ghana. **Contact:0507893242/gpuplampu@ug.edu.gh**

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Korle-Bu Teaching Hospital. If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8 am-5 pm through the landline **0302666766 or email address: rdo@kbth.gov.gh**

VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research title "**Exploring the Psychosocial Effects and Coping Strategies in Burn Injury Survivors at Korle-Bu Teaching Hospital"** has been read and explained to me. I have been allowed to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

…….. ……

Name and signature or mark of volunteer Date

Appendix V: Interview Guide

Section A

Demographic Information

Pseudonym……

1. Sex……..
2. Age…….
3. Marital status……..…….
4. Number of children……..
5. Occupation……
6. Current status of employment……
7. Date of Burns diagnosis……
8. Date of completed treatment…….....
9. Religion…….
10. Tribe……..

Section B

Guiding Questions

1. Please can you tell me your experience following burn injury and treatment?
2. How has the experience changed your life?
3. Please describe the most difficult time for you during treatment?
    - Probe:

        -Why was it the most difficult?
4. What did you do by yourself that got you through the treatment of burns?
    - Probes:

        -Confidence

-Inner strength

-Hope

-Pray

5. How did you endure during treatment?
6. How did the health professionals help you to endure during treatment?
   - Probes:
     - Empathy from Nurses and health team
     -Education on condition by Nurses and health team
     -Effective communication
     -Efficient treatment regime
     -Respect for time by medical staff
7. How has your family helped you to adjust during treatment?
   - Probes:
     -Spouse
     -Children
     -Siblings
8. What other things helped you to cope during treatment?
   - Probes:
     - Non-governmental organizations
     -Church members/ religious groups
     -Financial institutions
     -Support groups,
     -Health care professionals
     -Friends
9. Is there any other thing that I have not asked you that you want me to know?