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Psychological burden, coping and quality of life of caregivers of patients with mental illness at the Accra Psychiatric Hospital in the Korley Klottey Municipality.

BY

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This dissertation is submitted to the University of Ghana, Legon in Partial Fulfilment of the requirement for the award of a Master of Public Health (MPH).

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DECLARATION

I, Dorcas Acheampong, declare that this work is the result of my research and has not been submitted for the award of any degree in any institution. The research was done under the supervision of Professor Irene M.A. Kretchy. All resources or references used in the process have been duly acknowledged.

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Date **5th December 2025**

DEDICATION

I wish to dedicate this work to the Glory of God and to my Father Mr Albert Duodu Acheampong for his immense support, prayers and encouragement.

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My deepest gratitude to all who have contributed to the completion of this research work. I could not have completed this research work without your prayers and moral support. I am profoundly thankful to my Supervisor Professor Irene Kretchy whose insightful guidance, critical feedback, and unwavering support have shaped this study in meaningful ways.

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LIST OF ABBREVIATIONS

APA	American Psychological Association
APH	Accra Psychiatric Hospital
ANOVA	Analysis of Variance
BAD	Bipolar Affective Disorder
BRIEF-COPE	Coping, Orientation to Problems Experienced
CDC	Centres for Disease Control and Prevention
DASS	Depression, Anxiety Stress Scale
ECT	Electroconvulsive Therapy
GAD	Generalised Anxiety Disorder
GBD	Global Burden of Diseases
GHS-ERC	Ghana Health Service- Ethics Review Committee
MDD	Major Depressive Disorder
NIMH	National Institute of Mental Health
OPD	Outpatient Department
PTSD	Post Traumatic Stress Disorders
QoL	Quality of Life
SSA	Sub-Saharan Africa
SD	Standard Deviation
SDG	Sustainable Development Goals

SEM	Structural Equation Modelling
SPM	Stress Process Model
SPSS	Statistical Package for Social Sciences
VIP	Very Important Persons
WHO	World Health Organisation
WHOQoL-SRPB	World Health Organisation Quality of Life, Spirituality, Religiousness, and Personal Beliefs.
WHOQoL	World Health Organisation Quality of Life

ABSTRACT

Caregivers of patients with mental illness often experience a significant psychological burden that profoundly impacts their overall wellbeing and quality of life. The study explored the multifaceted difficulties that caregivers face in undertaking their caregiving activities and examined the nature and extent of the psychological burden, the coping strategies deployed, and the analysis of how these factors influenced the overall QoL of caregivers of patients with mental illness. The study employed the cross-sectional research design with a sample of 384 family caregivers of patients diagnosed with Schizophrenia, Anxiety and Depressive Disorders (ADD), Bipolar Affective Disorders (BAD), and Stress and Post Traumatic Stress Disorders (PTSD). The outcome showed that caregivers of patients with mental illness experience a moderate level of depression (DASS-21 score of 19.88), extremely severe level of anxiety (DASS-21 score of 20.11), and severe level of stress (DASS-21 score of 26.22) on the DASS-21 scale. The results further showed that caregivers of patients with mental illness adopted positive reframing, emotional support, and planning as the most used adaptive coping strategies. The findings highlight the influence of demographic factors such as age, gender, marital status, and sociocultural factors in determining the quality of life of caregivers of patients with mental illness. Further, the study identified avoidant coping, and problem-focused coping as having both direct and indirect paths to depression and anxiety. The outcome of the study illustrates the need to design concrete programmes including social support programmes, creating a more convenient means for caregivers to seek counselling, and financial support. Other targeted programmes such as community-based volunteer networks or faith-based respite initiatives could be introduced to help reduce the burden on caregivers.

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CHAPTER ONE

INTRODUCTION

1.1 Background

Mental disorders represent a major public health concern and are among the leading contributors to the global health burden and widely acknowledged as a significant public health and societal issue requiring attention. Approximately 12% of the world's population is affected by mental disorders, and account for about 5% of global disability-adjusted life years (DALYs) (Yangyan, Ahui, Zhiping, & Daiming, 2025; Schuch, & Vancampfort, 2021; Rehm, & Shield, 2019). The global disease burden estimates about 444million incident cases and 155million DALYs from mental disorders in 2021(Yangyan, Ahui, & Zhiping, 2025), whiles the 2022 world mental health report recorded about 970 million people worldwide suffering from mental illness with about 82% living in low- and middle-income countries (WHO, 2022c). Mental health illnesses contribute to the global burden of diseases (WHO, 2022) and affect the quality of life of caregivers of patients with mental illness.

Research indicates that major depressive and anxiety disorders have remained the leading contributors to the global mental health burden since 1990, with no significant decrease observed (Yangyan, Ahui, & Daiming, 2025) over the years. According to the WHO Regional Office for Africa, around 150 million people are affected by mental disorders, yet care services for these individuals remain inadequate (WHO, 2025). A scoping review undertaken in 12 African countries found a lifetime prevalence rate of anxiety ranging from 5.7% to 15.8%, and depression from 3.3% too 9.8% (Greene, et al, 2021). In Ghana, it is estimated that about 13% of adults are experiencing mental disorders with only about 2% receiving treatment (Oppong,

Kretchy, Imbeah, & Frane, 2016; Eaton, & Ohene, 2016). Family and community caregiving remains the foundation of support for people with mental illness with almost everyday care provided by relatives, faith-based groups and information community networks. Caregiving encompasses the provision of support services to individuals with mental health conditions. Those caring for patients with mental illness face distinct challenges in fulfilling their responsibilities, as these conditions frequently necessitate sustained daily assistance over an extended period.

According to Baja, (2023) caregivers of patients with mental illness experience elevated levels of stress, anxiety, and depression because of the demanding nature of caregiving responsibilities. In low-income countries where resources are limited, caregivers face emotional stress, stigma, and social isolation and thus increasing the caregiving burden. Research into the effect of caregiving shows that 33% to 50% of carers experience substantial psychological distress and higher levels of mental illness compared to the overall populace (Shah, Wadoo, & Latoo, 2010).

Mental health illnesses are medical conditions that impact thoughts, emotions, relationships, and daily functioning (Hossain et al. 2014), making support from family and friends essential for effective management. Worldwide, mental healthcare services are progressively shifting from prolonged institutional care to community-based and outpatient models. As a result, families and informal caregivers increasingly assume responsibility for the daily care, supervision, and financial support of individuals with mental disorders (Cham, et al., 2022; Vun, Cheah, & Helmy, 2019). The findings from a global systematic review indicate a considerable pooled prevalence of clinically significant caregiver burden, with increased levels observed among those supporting individuals with psychosis, severe symptoms, or hospital care requirements (Cham, et

al., 2022). Economic analyses underscore the indirect costs including lost productivity, time investment, and out-of-pocket expenses which collectively intensify the psychological strain experienced by caregivers in diverse income settings (Addo, et al., 2018; Cham, et al., 2022). Globally studies have shown that approximately one in four families includes at least one member currently experiencing mental illness, with over 90% of individuals with mental health conditions residing with and receiving support from their families (Malhotra, 2016; Munie, et al., 2024).

The WHO highlights gaining universal health coverage and eliminating health inequities as fundamental to primary health care for mental health (WHO, 2019) and has included as part of its target, the provision of psychosocial support to people suffering from the conditions. However, mental health, for many years, has received limited attention despite its burden on health and health systems. Research conducted throughout Africa indicates a notably high prevalence of caregiver burden. A 2024 systematic review and meta-analysis found that approximately 62% of caregivers experience significant burden, with contributing factors including stigma, limited decentralisation of mental health services, and resource constraints (Andualem, et al., 2024). A separate systematic study conducted in Africa revealed that five out of seven respondents caring for others (71%) bore the total financial responsibility for individuals with serious mental illness (Addo, et al., 2018).

In Ghana, an estimated 10% of Ghanaians suffer from common mental health issues, whereas 1-3% suffer from severe mental health illnesses such as schizophrenia, yet only 2% of such people get treated (WHO, 2023). As the number of individuals experiencing mental illness increases, the demand for caregivers and support services

also grows. Studies have shown that whiles healthcare system plays an important role in mental health treatment, a greater proportion of the responsibilities for caring for persons with mental illness rest with family caregivers (Cheng, et al, 2022). Caregivers are expected to provide emotional care, physical assistance, financial support, among others. Providing these supports poses a greater challenge and burden with far-reaching implications for caregivers which invariably affect their quality of life. According to Ebrahim, Al-Alter, Gabra, & Osman, (2020) and Kamil, & Velligan, (2019) the role of family caregivers comes with considerable challenges and burdens which further puts significant strain on them. In their study, Agyemang-Duah, Abdullah, & Rosenberg, (2024) found high levels of caregiving burden in Ghana and its adverse influence on caregivers' health-related quality of life.

The mental health of caregivers of patients with mental illness is important as it affects how they provide services to patients (Lohrasbi, et al., 2023). Caring for persons with mental illness requires a significant investment of personal resources in terms of effort, energy and empathy, which greatly impact the daily lives of caregivers (Andualem, et al, 2024). The performance of daily assistance tasks, financial strain, patient behaviour monitoring, and disturbance of family routine are all objective ways to measure performance of caregivers and the challenges the performance of these activities poses to them (Christiansen, Rogers, & Haertl, 2012, pp. 243-288). Additionally, caregivers may experience particularly an all-embracing sentiments which may be unsettling during the caregiving process (Zeng, et al., 2017). According to Muller, (2025), and APA, (2025), the endless stress of caregiving may negatively affect caregivers' physical and mental health. Studies by the American Psychological Association (APA), highlighted the fact that caregivers experience increasing levels

of strain which in some cases result in increased levels of depression and physical health difficulties (APA, 2015). Research has identified an association between caregiving responsibilities and adverse health outcomes, including depression, physical illnesses, anxiety, and disrupted sleep patterns among caregivers (Gupta, & Sharma, 2013). Chadda, (2014) notes that caregivers of patients with mental illness who do not adhere to medication often experience stress, anxiety, and low mood due to the chronic nature of the illness.

In Ghana, approximately 56.2%, 66.2% and 78% of the caregivers experienced severe anxiety, severe depression and moderate to severe stress symptoms respectively (Ocansey, et al., 2021). The continual stress caregivers experience may have a negative impact on their psychological well-being. For instance, it has been found that, insomnia is also associated with higher caregiver burden (Fernández-Puerta, et al., 2023). Unfortunately, these psychological problems harmfully affect the quality of life (QoL) of caregivers (Cui, et al, 2024). An individual's QoL is their perception of their position in life in relation to their goals, expectations, standards, concerns, and the cultural and value systems in which they exist.

According to Yikilkan, et al., (2014) caregivers' QoL plays a significant role in reflecting the standard of care provided to individuals diagnosed with mental illness, thereby supporting their recovery or stability. Furthermore, caregivers' QoL can influence patient progress and treatment outcomes (Yıkılkan, et al., 2014). Studies have shown that, caregivers of patients with mental illness have diminished QoL levels (Ndikuno, et al., 2016). Caregivers may encounter lower level of productivity at home and in the workplace leading to wage loses (Dalui, et al., 2014). This coalesced with the health care costs for patients diagnosed with severe mental illness affect the

caregivers' financial conditions and create or worsen poverty (Dalui, et al., 2014) level among caregivers. Caregivers of patients with mental illness often encounter social challenges such as disrupted networks, stigma, and discrimination, which increase their risk of depression, stress, and anxiety (Yıkılkan, et al., 2014; Dalui et al., 2014). According to Wong, et al,.(2012) the social, economic and psychological changes adversely affect caregivers' Quality of Life.

The surge in perceived burden has also been reported among caregivers who adopt more emotion-focused coping strategies. For instance, among caregivers of patients with schizophrenia and bipolar disorder, Chadda, Singh, & Ganguly, (2007) found that avoidance coping was associated with greater burden compared with problem-focused coping. In Ghana, self-motivation, religious coping, social support and engagement in leisure activities were major coping strategies employed by caregivers of patients with mental illness (Daliri, et al., 2024). Religious beliefs and practices such as prayer and faith in God are said to be ingrained in the Ghanaian culture. These religious beliefs have been associated positively with resilience in the face of adversity (Du, 2024). Few studies address institutional support for informal caregiving by mental healthcare providers in Ghana.

Although research has sampled the three main psychiatric hospitals, it has not fully explored caregivers' psychological burden, coping, and quality of life. For example, Odue, et al., (2018) examined caregiver experiences with schizophrenia patients from all three hospitals, while Dadson, Annor, & Yendork, (2018) studied care burden and coping strategies. There is no study specifically covering the topic with APH as the subject of study. A human rights assessment at APH found systemic issues such as overcrowding, limited resources, and shortcomings in rights protection (Chimbar,

2020) of patients. These challenges affect the daily experiences of service users, their families, and caregivers, who must manage access, consent, and ongoing care under pressure, ultimately impacting their wellbeing. Caregivers experience emotional, financial, social, and physical strain, which is heightened for APH due to systemic issues like poor living conditions, lack of therapeutic activities, and limited community inclusion. These gaps increase family caregivers' responsibilities after discharge, worsening their burden (Odue, et al., 2018; Chimbar, 2020). Although caregivers of patients with mental illnesses are at higher risk of psychological burden, their mental health has received limited attention Daliri, et al, 2024). Also, while caregivers are fundamental in giving care to patients diagnosed with severe mental illness, there is limited documentation on the QoL of the caregivers for these patients (Cheng, et al, 2022).

In the case of Ghana and particularly Korley Klottey Municipality, a search in the literature produced no evidence of studies on psychological burden, coping strategies and its impact on quality of life of caregivers of patients with mental illness within the study area. Particularly in the Korley Klottey area, there are no reliable published record on incidence of mental illness specific to the area as most reports are national in nature. Further there are no studies providing evidence about caregivers and the burden they face, and the coping strategies adopted. The study therefore seeks to close these gaps in the literature.

1.2 Problem statement

Sub-Saharan Africa (SSA) lacks sufficient resources for mental health services, and family members are frequently expected to care for their mentally ill patients (Dube-Marimbe, et al., 2016). This is however not the case since this responsibility is mostly

relegated to one person (Read, 2012). As a result, caregivers of patients with mental illness are often under stress. Researchers have maintained that caregivers in SSA face numerous challenges, such as psychological discomfort, physical, emotional, social, and financial responsibilities, similar to the predominantly individualistic trends globally (Kretchy, et al., 2018; Zeng, et al., 2017)

In Ghana, resources allocated for mental health facilities are limited. Challenges in the sector include a lack of infrastructure, limited access to professional care, and societal stigma linked to mental illness (Ofori-Atta, et al., 2010). Caregivers frequently become the main support for individuals with mental illnesses, assisting with daily tasks, medication management, therapy appointments, and managing their emotional well-being (Ofori-Atta, et al., 2010). Studies conducted in Ghana found caregiver burdens to include social marginalisation, depression, and inadequate time to undertake social obligations (Bekui et al., 2023). The absence of extensive studies on this aspect of caregiving creates a contextual gap in understanding the struggles of caregivers of patients with mental illnesses, and the extent of the effectiveness of the coping strategies adopted (Cheng, et al., 2022; Chadda, 2014; Cham, et al., 2022).

In Ghana, mental health care is highly centralized, with APH serving as one of the country's principal referral centres. Research indicates that caregivers in Ghana encounter distinct challenges at the facility (among other mental healthcare facilities), including stigma, discrimination, limited institutional support, economic pressures, and cultural expectations (Atakora, Ibrahim, & Asampong, 2020). Current research provides little information about how caregivers in Ghana especially those at APH in Korley Klottey Municipality manage the psychological difficulties of caregiving, what coping methods they use, and how these factors affect their quality of life. While

existing literature extensively documents the challenges faced by caregivers, most notably the adverse effects of elevated stress levels, anxiety, and depression resulting from the chronic nature of mental health conditions and caregiving responsibilities, the psychological burden, coping mechanisms, and their influence on the quality of life of caregivers within the Ghanaian context remain underexplored.

It must be emphasised that caregivers of patients with mental illness within Korley Klottey are not immune from the challenges encountered across. Family caregivers within the area have become the backbone of mental health care providing daily support, advocacy, and emotional resilience but not without challenges such as financial, social and psychological. Evidence gathered from observation of hospital attendance indicate that most of the caregivers within the municipality are predominantly relatives- parents, siblings, spouses, adult children rather than professional caregivers. These family caregivers accompany patients to APH for medication/treatment sessions, supervise medication, manage crises moments, provide food, shelter and hygiene support.

In Korley Klottey, as in other locations of Ghana, caregiving for individuals with mental illness is deeply shaped by cultural expectations of filial responsibility and religious beliefs, which frame caregiving as both a moral and spiritual duty (Agyeman, et al., 2025). Nevertheless, caregivers frequently encounter social exclusion, negative labelling, and persistent stigmatization. As a result, many choose to avoid public gatherings to safeguard themselves and their relatives, which contributes to heightened levels of stress, depression, anxiety, and additional social burdens for caregivers (Agyeman, et al., 2025; Daliri, et al., 2024). A search in the literature revealed that there is no study specifically dealing with the issue of psychological

burden of caregivers within the Korley Klottey area. This study aims to close that gap by assessing how anxiety, depression, and stress affect the well-being of caregivers for patients with mental health conditions. Further, the study assesses the coping strategies or mechanisms deployed by caregivers to minimise the effects of caregiving on their quality of life. Understanding caregivers' burden is critical for designing culturally responsive support systems intended at reducing the load and improving the overall well-being of caregivers.

This study therefore seeks to determine the psychosocial burden and coping strategies that impact the quality of life of caregivers of mentally ill patients. The study is expected to provide empirical evidence of the burden and how multiple coping mechanisms interact in affecting the overall wellbeing of care providers. Existing research on caregiver burden and coping within mental health contexts has predominantly originated from Western countries.

In certain instances, studies have generalised findings from African samples, frequently concentrating solely on either caregiver burden or coping strategies, with a particular focus on one aspect of mental health conditions (Kate, Grover, Kulhara, & Nehra, 2013; Stanley, Balakrishnan, & Ilangovan, 2017). This study stands out by combining factors like burden, coping, and quality of life into an all-encompassing framework. It focuses especially on Ghanaian cultural norms, issues of stigma, family caregiving responsibilities, coping methods, and overall well-being of caregivers within the Korley Klottey Municipal area. There is no study specifically dealing with burden of care in the manner described above in Ghana in a single study and is expected to close that gap in the literature.

1.3 Objectives

1.3.1 General objective

To assess the psychological burden and coping strategies associated with the quality of life of caregivers of patients with mental illness.

1.3.2 Specific objectives

1. Assess the symptoms of depression, anxiety, and stress among caregivers of patients with mental illness.
2. Assess the role of depression, anxiety, and stress on the quality of life of caregivers of patients with mental illness.
3. Assess the coping strategies adopted by caregivers of patients with mental illness and how the strategies mediate the linkages between psychological burden and quality of life.

1.4. Research Question

To achieve the research objectives, the following shall be the research questions.

1. What are the symptoms of depression, anxiety, and stress that impact the quality of life of caregivers of persons with mental illness?
2. What role do depression, anxiety, and stress play in influencing the quality of life of caregivers of mentally ill patients?
3. What are the coping strategies adopted by caregivers of mentally ill patients and how do they mediate the association between the psychological burden and quality of life?

1.5. Justification

Caregivers are frequently the primary sources of support for people suffering from mental illness, particularly in resource-constrained situations (Taylor-Dietz, & Kelly, 2023). As such studies into the psychological burden and coping strategies deployed

to help improve the quality of life to caregivers are crucial. Understanding caregivers' burden is critical in designing appropriate strategies to provide the necessary support to caregivers. Additionally, the outcome is expected to provide a consistent approach to quantifying and understanding the psychological burden that caregivers experience, including anxiety and depression and the techniques to adopt in coping. Caregivers of persons suffering from mental illness most often experience high stress level, anxiety, and depression because of the chronic nature of the condition and the demanding responsibilities of the caregiver.

The psychological burden could lead to burnout and eventually result in diminished quality of life, and negative health outcomes (Cheng, et al., 2022). Thus, the outcome of this study is expected to provide valuable insights into the challenges that caregivers encounter and offering concrete measures such as providing counselling support, advocating financial support to caregivers and promoting community campaigns among other targeted support to caregivers.

Further, the background of the people play an important role in shaping caregiving experiences and coping strategies. In Ghana cultural beliefs, social norms, stigma associated with the mental health conditions directly impact caregivers' experiences and the overall support caregivers receive (Tawiah, Adongo, & Aikins, 2015). The outcome of the study is expected to provide valuable insights into the unique cultural antecedents that caregivers must grapple with thereby helping to provide culturally sensitive interventions to caregivers.

The study would provide a comprehensive understanding of the factors that affect the quality of life of caregivers of patients of mental illness and advise appropriate strategies in designing support systems and resources with a view to improving the

overall wellbeing of caregivers. The findings from the study can inform healthcare policy formulation and practices. This may result in the implementation of sustainable caregiving practices which will inure to the benefit of both caregivers and persons with mental illness.

1.6 Theoretical and Conceptual Framework.

1.6.1. Theoretical Framework

The Stress Process Model (SPM) as a theoretical framework that aids in explaining how stress affects individuals and their mental health was originally developed by Pearlin, Menaghan, Lieberman, & Mullan, (1981). According to Pearlin, Mullan, Semple, & Skaff, (1990), the SPM is a well-structured theoretical framework that show in detail the linkages between stressors, resources and psychological wellbeing in caregiving. The proponents maintained that caregivers face distinctive stressors and difficulties that may significantly affect their wellbeing and their coping capability.

The model illustrate key aspects relevant for the study (Dash, & Mishra, 2022; Aliegro, 2019), and these includes: a) stressors which refers to the existence of chronic conditions, socioeconomic factors such as financial challenges, or lack of access to healthcare systems, and psychosocial stressors reflected in family conflicts, job stress, or mental health challenges, influence the caregivers wellbeing which invariably affect their quality of life; b) mediators- which refers to factors like the level of social support, coping strategies, and the caregivers' own mental wellbeing tend to mitigate the impact of the stressors; and, c) outcome which could be physical (such as fatigue, sleep disturbances, etc), psychological (such as anxiety, depression, etc) and behavioural (including substance abuse), among others (Aneshensel, & Mitchell,

2014; Pearlin, Menaghan, & Mullan,1981). According to Wheaton, Young, Montazer, & Stuart-Lahman, (2013) stressors indicate the presence of threats, challenges or demands including both external and internal mechanisms that may influence the individual's ability to ordinarily adapt either positively or adversely to the changing conditions. The model emphasises the role of the environmental, psychological, and social systems in shaping individual's exposure to stressors and resources whiles the mediators or moderators points out the importance of social and personal resources and how these affect stressors on mental health of caregivers (Jurner, 2009; Aneshensel, & Mitchell, 2013). According to Aneshensel, & Mitchell, (2014), the outcome component of the model illustrates the mental health consequences of stressors which include depression, anxiety and other psychological conditions. The model offers a helpful structure for understanding how psychological burden, and coping strategies adopted influence the quality of life of caregivers of mentally ill patients. The framework illustrates how the interplay of different factors emanating from stressors, individual features, social support and coping expectation combine to determine the quality of life of caregivers of patients with mental illness.

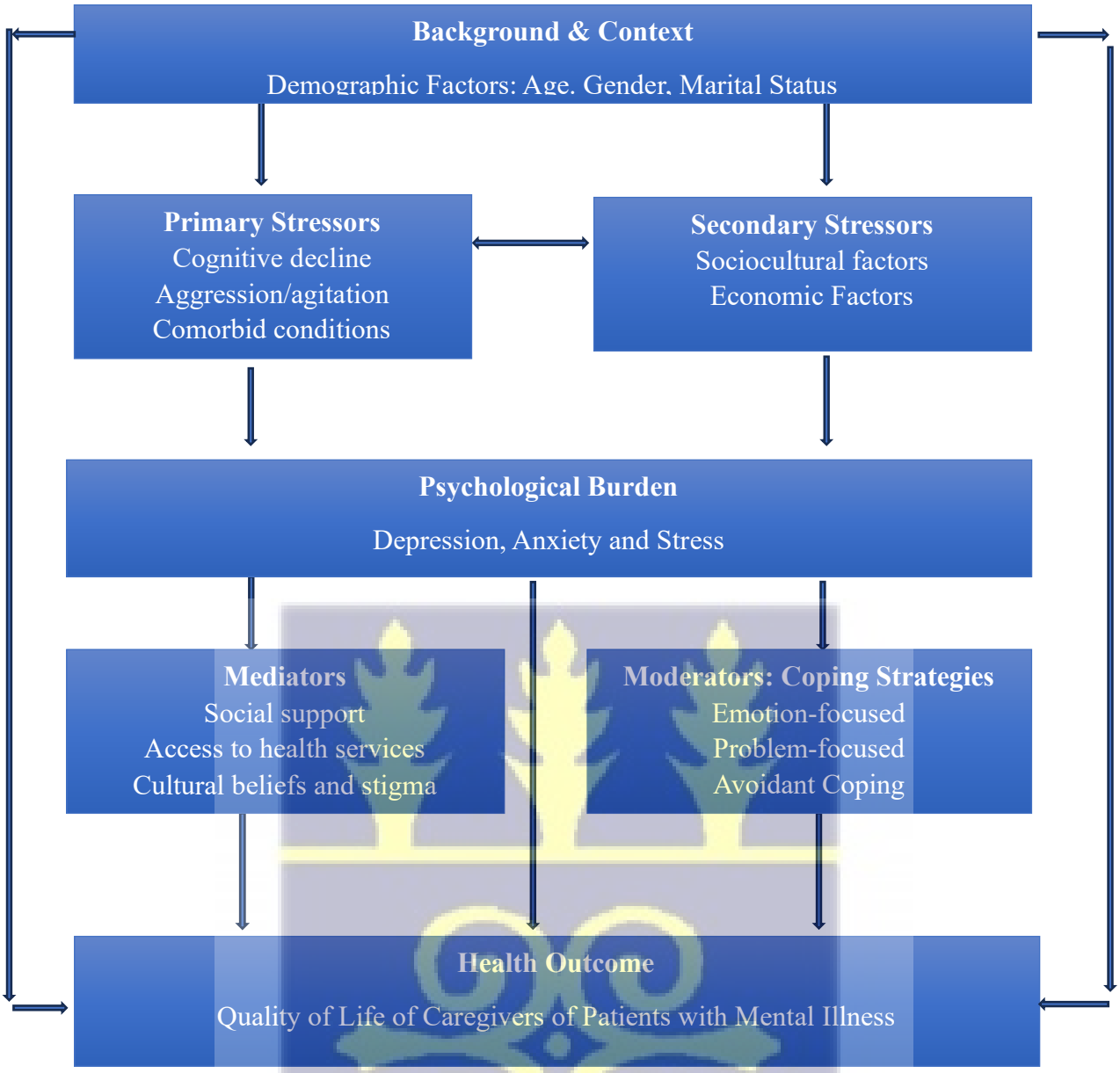
1.6.2. Conceptual Framework:

To conceptualise the study, the key aspects of the stress process model was adopted in designing the study structure. The three key aspects of SPM, mainly stressors, mediators and outcomes formed the core of the study framework. Stressors refer to events, conditions or factors that may cause or trigger a stress process, and this could be due to internal or external factors. Internal primary stressors develop within an individual as immediate responses to specific problems, often linked to illness or episodic events experienced during caregiving roles.

In contrast, external primary stressors originate from the environment or social context, presenting direct and objective demands or tasks related to certain events or roles. Primary stressors act as immediate catalysts for acute psychological strain, generating urgent demands that elevate the overall level of stress (Cheng, et al.,2022; Aneshensel, & Mitchell, 2014) of caregivers of patients with mental illness. The literature provide evidence to support the association between background and context as constant factors impacting primary stressors, secondary stressors and health outcomes (Cheng, et al., 2022). Further studies have shown that there is positive association between care burden, anxiety and quality of life, with other studies examining the relationship between care burden and depression and indicated a possible pathway through heavy care burden to depression, and then depression to lower QoL (Ullrich, et al., 2017; Geng, et al., 2018; Barbe, et al., 2018).

Mediators and moderators on the other hand are variables which explain the way stressors affect health outcomes (Aneshensel, & Mitchell, 2014; Hish, et al., 2019). The interaction of the stressors which include the demographic factors, psychosocial factors, secondary stressors (i.e. sociocultural and economic factors), and mediators coping mechanisms, social support system, training, etc. shape the health outcome of caregivers of patients with mental illness. These intend determines the quality of life (QoL) of caregivers of patients with mental illness. The diagram below illustrates the application of the SPM framework for purposes of conceptualising the study.

Fig 1.1. Conceptual Framework



1.6.3. Narrative on the Conceptual Framework.

The conceptual framework above is organised along the Stress Process Model. It illustrates the pathways and interactions between various factors that influence QoL of caregivers of patients with mental illness. The framework presents how demographic, sociocultural and economic stressors converge to produce psychological burdens mainly depression, anxiety and stress (Aneshensel, & Mitchell, 2014; Wheaton, 2010). The demographic factors (age, gender, and marital status)

constitute the primary stressors which directly influence the psychological burden and impact health outcomes for caregivers of patients with mental illness. Brown, Hargrove, Homan, & Adkins, (2023) assert that demographic factors such as age, gender, marital status, are not merely background variables but instead, they represent structurally embedded dimensions that interact with other characteristics, such as ethnic orientation and race, to influence health outcomes. Demographic factors, beyond influencing psychological burden, directly affects the QoL of caregivers of patient with mental illness. Secondary stressors emanate from cultural and economic context in which caregiving unfolds.

The sociocultural stressors (construed in the present study as ethnicity, religious background, and education) interact with the demographic factors to influence psychological burden on caregivers of patients with mental illness which invariably influence coping trajectories and determine health outcomes (Carr, & Umberson, 2013). It further directly influences the caregiver's perceived quality of life. The economic factors which include household income, employment status, etc, (Walde, 2017) are noticeable stressors which exacerbate psychological burden on caregivers and influence the coping mechanism deployed and determines the subsequent health outcome including their quality of life.

The mediators are psychological, social and behavioural mechanisms which explains how the primary and secondary stressors produce changes in the health outcome for caregivers and their quality of life. The social support, access to healthcare services, and cultural beliefs among others constructs provide buffers between the psychological burden and QoL and these further either enhances or diminishes the QoL of caregivers of patients with mental illness (Wang, et al., 2025). In this present

study, the moderators as indicated in the framework illustrates how coping strategies influence the strength of the relationship between stressors (demographic factors, and secondary stressors), psychological burden, and health outcome. The framework illustrates how the coping strategies outlined (problem-focused, emotion-focused, and avoidant coping) change the trajectory of health outcome (quality of life) of caregivers of patients with mental illness (Compas, Vreeland, & Henry, 2020; Acoba, 2024; Wethington, Glanz, & Schwartz, 2015).

The framework illustrates how demographic, sociocultural, and economic stressors shape the psychological burden (depression, anxiety, and stress) among caregivers of patients with mental illness. It further highlights the critical role of moderators (i.e. coping strategies) in influencing the QoL outcomes of caregivers of patients with mental illness. In this study, pathway analysis will be performed exclusively with moderators, as such an approach provides direct insight into targeting strategies that enable prioritisation of health interventions for specific population subgroups. Furthermore, the results of moderation analysis can inform the development of stratified or adaptive interventions and support policy decisions regarding resource allocation.

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction:

This section of the study covered the empirical review of the literature and incidence of mental health in Ghana, key factors resulting in psychological burden, coping mechanisms, and quality of life of caregivers of persons with mental illness. In undertaking the literature review, electronic resources were obtained from Google Scholar, PubMed, SSRN, PsycINFO (via EBSCO), JSTOR, Directory of Open Access Journals, and PLoS.

2.1. Mental health in sub-Saharan Africa

According to WHO (2022), mental health is a state of mental well-being that empowers individuals to manage with the stresses of life, recognise their abilities, learn well, work well, and contribute meaningfully to their society. The WHO definition reflects the progress in conceptualizing mental health in the context of the absence of mental illnesses and identifies positive emotions and functioning as key factors for mental health.

Other scholars have characterised mental health as encompassing intellectual, emotional, and spiritual development, a positive self-concept, a sense of self-worth, physical well-being, and intrapersonal harmony (Bhugra, Till, & Sartorius, 2013; MHF, 2008). The Centres for Disease Control and Prevention (CDC) views mental health as including people's emotional, psychological, and social well-being and how it affects how the individual thinks, feels, and acts (CDC, 2023).

The Sustainable Development Goals (SDGs), which were adopted in 2015, aim to ensure that developing countries around the world can accomplish 17 development-

oriented goals by 2030. Goal three proposes to safeguard healthy lifestyles and stimulate well-being for people of all ages with objective 3.4 focusing on boosting mental health and well-being for all by 2030. Despite attempts by several developing nations to meet the SDG targets, mental health difficulties continue to be a key public health concern, with around 792 million (10.7%) individuals suffering from such issues, making it one of the biggest sources of infirmity worldwide (WHO, 2022).

Studies have shown that mental health underpins emotions, communication, learning, resilience, hope, self-esteem, etc., and forms an essential aspect of overall well-being that facilitates relationship building and helps individuals to contribute to the community or society (Njoku, 2022; APA, 2022). Mental disorders on the other hand indicate a state of mind with a clinically substantial interruption in the individual's cognition, emotional regulation, or behaviour, and is generally linked to distress or impairment in key aspects of effective functioning (WHO, 2022; WHO, 2022a). The DSM-5 tool refers to mental disorders as behavioural or psychological syndrome or pattern that occurs in a person and reflects an underlying psychological dysfunction, with consequences that are clinically significant such as distress or disability in important areas of functioning (Raskin, 2012).

The WHO lists various types of mental disorders, and this include anxiety disorders which is the most common mental health concern. Patients experiencing mental disorders experience excessive fear, anxiety, and related behavioural disturbances (Pugle, 2023). The National Institute of Mental Health (NIMH) list generalised anxiety disorder (GAD), panic disorder, social anxiety disorder, and specific phobias (NIMH, 2025) as forms of anxiety disorder. There are also Mood Disorders which include major depressive disorder (MDD), bipolar disorder and dysthymia; Psychotic

disorders consisting of schizophrenia, and delusional disorder. Other types include eating disorders, personality disorder, and dissociative disorders (NIMH, 2025). WHO further list neurodevelopmental disorders (which includes intellectual development disorders, autism spectrum disorder, and attention deficit hyperactivity disorder), and post-traumatic stress disorder as among the common mental disorders in the world (WHO, 2022a). Mental disorders are a significant contributor to ill health in sub-Saharan Africa, largely due to social factors such as poverty, unemployment, infectious diseases, conflicts, and climate shocks (WHO, 2022c). A systematic review in Africa found that five out of seven respondents (71%) reported bearing the full financial burden placed on carers by serious mental illness (Addo, et al., 2018). Research indicates significant gaps in the treatment and care provided for individuals with mental disorders. In low-income countries, only 25% of individuals with mental disorders receive treatment, while the figure drops to 15% in middle-income countries. Further health-systems across sub-Saharan Africa serves as a core barrier to access, with low mental health budgets across and minimal specialist workforce density, and incomplete primary care integration into the overall healthcare systems (WHO, 2023; Ritcher, & Roser, 2018).

2.2. Mental Health Disorders Statistics in Ghana

The common type of mental illness experience in Ghana includes bipolar disorder, dementia, anxiety disorders, depression, schizophrenia and other psychotic disorders. In 2022, approximately 24,790 persons presented schizophrenia at OPDs rising from 19,856, and 20,755 in 2020 and 2021 respectively representing about 39% of all psychiatric OPD attendance in 2022 (GNA, 2023; MHA, 2022). The 2023 STEPS report indicated that about 8% of the population experienced moderate to severe levels

of depression (STEPS Report, 2024) with adults' prevalence estimated (using the Kessler Psychological Distress Scale-K10) at between 10-12% (Amenah, et al., 2025).

Further the Mental Health Authority (MHA) records indicate an increasing trend in bipolar disorders in Ghana from 1,337 cases in 2019 to 1,415, and 1669 cases in 2020 and 2021 respectively (GNA, 2023a). In preliminary findings from a systematic review of anxiety and depression, Awortwe, et al., (2024) found high prevalence of about 43% and 37% for anxiety and depression among the adult population in Ghana. Ritcher, & Roser, (2018) on the other hand indicated that the average prevalence of depression, anxiety disorders, and schizophrenia over the period 1990 to 2017 was 3.3%, 2.9% and 0.17% respectively. A search in the literature shows the absence of reliable data on mental disorders in Ghana and insufficient studies of the subject of burden of care and its implication on the quality of life of caregivers. For this study, bipolar disorder, depression, anxiety disorders, schizophrenia and post-traumatic stress disorders would form the basis of the study.

2.2.1. Bipolar Affective Disorders (BAD)

According to WHO, approximately 40 million people worldwide suffered from bipolar affective disorders (WHO, 2022a). Bipolar disorders affect the individual's mood, vitality, action and thought and is characterized by manic and depressive episodes, with individuals experiencing difficulties in many areas of life (WHO, 2024). Caring for someone with bipolar affective disorder can significantly impact the quality of life of caregivers.

According to Swapna, Sudarshan, & Begum, (2012), and Cheng, et al., (2022), caregivers of bipolar disorders often experience elevated heights of stress, anxiety and depression due to the unpredictability of the condition. According to Cheng, et al.,

(2022) the overall burden of care including physical, psychological, social and financial constraints invariably affects the quality of life of caregivers.

2.2.2. Schizophrenia

Schizophrenia is considered the commonest type of mental illness treated in mental health facilities. Approximately 52% of mental illnesses treated in out- patient health facilities are schizophrenia related and 49% of hospital in-patients are diagnosed with it (WHO, 2011). According to Biedel, & Frueh, (2018), and Chan, (2011) schizophrenia is the most debilitating and costly conditions afflicting approximately seven out of thousand people aged between 15 to 35 years. Caregivers usually experience an intense level of stress, anxiety, and depression due to the unpredictable nature of the condition. The strain on caregivers could result in conflicts and disruptions in family relationships in addition to caregivers becoming socially isolated due to the time-consuming nature of caregiving and the stigma associated with schizophrenia (Shiraishi, & Reilly, 2019).

2.2.3. Anxiety and Depressive Disorders:

Anxiety and depressive disorders affects about 450 million people globally with approximately one in four persons developing the disorder during their lifetime (Uddin, et al., 2019). According to WHO, about 301 million people worldwide live with anxiety disorders in 2019 while about 280million people live with depression in the same year (WHO, 2022a). Thus, anxiety disorders and depression have been estimated to affect 4.4% and 3.6% of the population globally, respectively (WHO, 2017).

A high prevalence of common mental disorders, such as major depressive disorder (MDD) at 4.5%, generalised anxiety disorder (GAD) at 3.5% at the global level have been found to pose a higher caregiving burden (Jorns-Presentati, et al, 2021; Ng, et al., 2020; GBD, 2022). According to Philips, et al., (2021), caregivers of persons suffering from these conditions experience chronic stress which may arise from the challenging nature of caring for patients. Further researchers have maintained that higher care burdens are associated with rising levels of anxiety and depression, which affect caregivers' self-esteem and thus impact their quality of life (Ozgonul, & Bademli, 2022; Philips, et al, 2021).

2.2.4. Stress and Post Traumatic Stress Disorders (PTSD)

PTSD occurs where the individual experiences or witnesses a shocking event, and may experience symptoms such as flashbacks, hallucinations, severe anxiety and hysterical thoughts concerning an event or incident (Yehuda, et al., 2015; WHO, 2024a). WHO estimated about 3.9% of global population suffers from PTSD with women more affected than men, and common among adults aging between 45 to 49 years old (WHO, 2024a; Nina, 2024).

Carmassi, et al., (2020) maintained that caregivers of persons suffering from PTSD usually experience high levels of emotional and psychological distress which can lead to feelings of stress, anxiety, and depression. Stress is described as a natural response to challenging or threatening situations. According to WHO, stress is defined as a state of worry or mental tension caused by a difficult situation (WHO, 2023). Chronic stress could lead to physical and mental health problems. Stress affects both the mind and the body, and can manifest anxiety, irritability, difficulty concentrating, headaches, trouble sleeping, among others (WHO, 2023).

Stressful situations could increase mental health conditions with the commonest being anxiety and depression and this is common among populations experiencing prolonged stressors like economic crises, natural disasters, and conflicts. Caregivers of persons with mental illness experiences significant levels of stress including emotional distress, social isolation, physical health issues, financial challenges, among others (APA, 2015; Brown, & Brown, 2014).

2.3. Implication of Psychological Burden on QoL of Caregivers of Patients with Mental Illness.

Numerous research studies have examined the quality of life experienced by caregivers supporting individuals with mental illness. Stress, depression and anxiety have been found to have profound impact on the QoL of caregivers of patients with mental illness. Swaroop, et al., (2013), Vadher, et al., (2020); and Carmassi, et al., (2020), found in their research that caregivers with intense burden of care because of a mental condition have higher levels of depression and anxiety as well as low quality of life when compared with non-carers.

According to Basheer, et al., (2015) caregivers who experiences chronic stress levels are more likely to suffer from headaches, engage in family conflicts, and thus results in overall lower level of wellbeing. Studies have shown that chronic stress conditions associated with patients' support increase the risk for caregivers and could lead to cognitive decline and dementia in addition to other negative health outcomes which influence the overall quality of life of caregivers (Correa, et al., 2019; and Richardson, Lee, Berg-Weger, & Grossberg, 2013).

Further, Cabral, Duarte, Ferreira, & dos-Santos, (2014) argued that caregivers become susceptible to psychological conditions and may encounter critical health conditions

due to debilitating factors of stress, irritation, diminished social engagement, anxiety, depression and reduced self-esteem. According to Cabral, et al., (2014), these factors could result in physical, psychological, emotional, social and financial challenges for caregivers which affect their overall quality of life.

Depression has the potential of derailing the overall well-being of caregivers. Offering physical and emotional support to a loved one can have a significant harmful impact on the caregiver's own mental and physical health (Choi, & Seo, 2019). Caring for someone with mental illness can cause psychological distress, strained relationships, spiritual challenges, and financial hardship. If not addressed, these issues may result in psychiatric diagnoses, poorer physical health, and decreased quality of life for caregivers (Choi, & Seo, 2019; Slaunwhite, et al., 2016; Wieczorek, et al., 2021). A study in Ghana reported that 56.2% of caregivers experienced severe anxiety, 66.2% severe depression, and 78% moderate to severe stress while caring for patients with mental health disorders (Ocansey, et al., 2021).

2.4. Coping Strategies among Caregivers of Patients with Mental Illness

Caregivers of patient with mental illness adopt different coping approaches in dealing with caregiving burden. Coping is a process that defines the techniques or methods that caregivers adopt in managing stress, emotions, and challenges in life. According to Rice, (2012) coping can be classified into two broad themes mainly emotion-focused and problem-focused coping strategies.

Emotion-focused coping strategies are positive and help reduce stress and promote better wellbeing, whiles problem-focused coping strategies attempt to address the problems causing stress, depression or anxiety among caregivers (Chowdhury, 2019). It is centred on activities that practically solve the challenges and stressors inherent in

caregiving (Gitlin, & Hodgson, 2015). Problem-focused coping strategies include actions such as communicating caregivers' needs and limits to others (including patients) to prevent overcommitment, organizing schedules for medical appointments, seeking support from professional health care providers, gathering information about the patient's condition, and adjusting the environment (Gitlin & Hodgson, 2015; Dash & Mishra, 2022).

According to Dash, & Mishra, (2022) emotion-focused coping strategies include wishful thinking, distancing, avoidance, and positive reappraisal. The emotion-focused coping involves acknowledging and expressing one's emotions, seeking emotional support, and utilizing relaxation techniques as strategies to cope with the burden of caregiving (Chowdhury, 2019; Dash, & Mishra, 2022). According to Chowdhury, (2019), and Bippus, & Young, (2012), positive coping mechanism such as physical wellness and related activities including yoga, daily physical exercise, among others results in the release of endorphins which regulate the circulatory system of individuals and thereby improving the wellbeing of caregivers of patients with mental illness.

A review of the literature shows that care activities performed by informal family caregivers poses significant burden, and is associated with poor health outcomes including depression, anxiety, etc (Daliri, et al., 2024), whiles other studies have confirmed that caregivers experiences stress, tiredness, and frustration when providing care for individuals suffering from mental disorders (Mulud, & McCarthy, 2017; Daliri, et al., 2024). The impact of mental illness thus extends beyond the individual patient to affect the lives of the family members, friends, and healthcare professionals.

As a result of the burden arising out of caregiving, caregivers tend to adopt coping strategies to deal with the challenges. In a study by Bonsu, & Yendork, (2019), they reported that family caregivers normally resorted to rationalisation, self-motivation, acceptance and religion as a means of coping with the situation in Ghana. Other studies have indicated that emotion-focused coping strategies such as religious coping, humor, acceptance, and avoidance are among the most utilized approaches by caregivers in Ghana (Dadson, Annor, & Yendork, 2018). Daliri, et al. (2024) discovered that family caregivers of individuals with mental illness in Ghana commonly use self-motivation as a coping strategy. This approach resonates with caregivers and reflects cultural values of resilience and perseverance in overcoming challenges. Ae-Ngibise, Doku, Asante, & Owusu-Agyei, (2015) report that caregivers in Ghana often rely on prayers offered by pastors and other religious figures, anticipating both miraculous intervention and the development of new treatment regimens as coping strategies for managing the stress associated with caring for individuals with mental illness.

2.5. Influence of Demographic, Sociocultural and Economic Factors on QoL.

The QoL of caregivers of patients with mental illness is the overall wellbeing and satisfaction with life while dealing with the tasks of caregiving (Cheng, et al., 2022). A prior study conducted in Uganda reported that 57.3% of caregivers for individuals with mental illness experienced poor quality of life (Ndikuno, et al., 2016; Lima-Rodriguez, Medina-Moragas, Fernandez-Fernandez, & Lima-Serrano, 2022) due to demographic, sociocultural and economic determinants which contributes to the level of caregivers' psychological burden.

Further, studies in Hong Kong and Europe also reported poor QoL of caregivers when compared with the overall population (Wong, et al., 2012; Beinart, et al., 2012). Due to increased responsibilities and stress, caregivers often lack the resources needed to manage their roles, which significantly impacts their physical and psychological health and overall quality of life(Olwit, et al., 2015; Vazque, et al., 2018).

Research has shown that sociodemographic factors, including gender, age, sociocultural and economic status, among others tend to influence the quality of life of caregivers of patients with mental illness (Hsiao, Lu, & Tsai, 2020; Cohen, et al., 2021). Studies have found that female caregivers tend to have poorer QoL and this is attributed to the traditional family roles in different cultures (Cohen, et al, 2021) whiles in a prior study, Young, McPherson, Jacob, & Vandyk (2019) found that parent caregivers of schizophrenia patients tend to have poorer QoL compared with other family caregivers.

2.5.1: Demographic Factors:

The burden of caregiving is influenced by many factors, and these include demographic factors, sociocultural, economic, and environmental factors. These factors serve as stressors that trigger higher levels of stress, depression and anxiety among caregivers. According to Ayalew, et al., (2019), the age of the caregiver, gender, number of contact hours with the patient each day, perceived stigma, and providing care for patients with a history of substance use were associated with a higher burden of care and a poorer quality of life. In Nigeria, a study found that there is high prevalence of psychological morbidity and burden of care among family caregivers of persons with mental illness (Udoh, et al., 2021).

2.5.2: Economic Factors:

A methodical review conducted in sub-Saharan Africa reported that, caregivers' level of income and employment status, including severity of patient's condition and duration of mental illness were found to negatively affect the economic burden experienced by caregivers (Addo, et al., 2018). Studies have shown that caregivers may be confronted with obstacles connected to psychosocial experiences such as financial difficulties, inadequate or lack of social support, (Iseselo, et al., 2016) which impair their own ability to function effectively in the society.

According to Sin, et al., (2021), caregivers of adult with mental illness are at an elevated risk of poor mental health and low levels quality of life due to economic difficulties that they may encounter. Economic cost of caregiving has been found to average $273.28 with indirect cost being $242.95 per month in Ghana (Opoku-Boateng, et al., 2017) which is above the average caregiver and thus complicating the burden of care and their quality of life.

2.5.3. Sociocultural Factors

A distinctive experience of caregivers of patients with mental illness and addictions related issues, is the higher perceived lack of social support because of inadequate professional treatment assistance, breakdown of family functioning, stigma, discrimination and disorderly conduct contribute to heightened burden (Biegel, et al., 2007; Hastrup, et al., 2011) which affects caregivers' wellbeing and quality of life.

Furthermore, studies have noted that informal carers' psychosocial wellbeing, help-seeking behaviours, access to healthcare, and general quality of life are all impacted by the stigma they experience from being associated with someone who has mental illness or addiction problems (Corrigan, 2004; Knaak, et al., 2017; Patel, et al., 2019;

van der Sanden, et al., 2016) and thus affect their overall quality of life. Sociocultural factors such as education, religion and ethnicity tend to predicts caregivers' quality of life. Studies by Semaan, et al, (2023), and Agyemang-Duah, Abdullah, & Rosenberg, (2024) found the level of education, ethnic background and religious practices as influencing the quality of life with higher education and spirituality scores linked to better physical and mental health aspects of QoL of family caregivers of patients with mental illness.

2.6. Conclusion.

The above review of the literature has shown the condition of the caregivers of mentally ill patients, and the implications of demographic, sociocultural, economic, and psychological factors among others on the overall wellbeing of caregivers.

CHAPTER THREE

METHODS

3.1 Introduction

This chapter outlines the step-by-step procedure to assess anxiety, depression, and stress among caregivers of patients with mental illness. It includes a detailed description of the study type, the hospital setting, sample size calculation, study population, inclusion and exclusion criteria, sampling procedure, data analysis, and ethical considerations.

3.2 Study Design

The study adopted a hospital-based cross-sectional study among family caregivers of patient with mental illness at the Accra Psychiatric Hospital (APH). As part of the study's design, unpaid family caregivers of patients diagnosed with schizophrenia, bipolar affective disorder, anxiety and depressive disorders, as well as stress and post-traumatic stress disorder, were selected from APH in both inpatient wards and outpatient clinics. Participants were required to be at least 18 years old and able to provide informed consent. Consecutive caregivers were sampled during clinic days on Tuesdays and in-ward visitation days over four weeks period after a brief pre-selection screening to ensure that sample are within the inclusion criteria.

A cross-sectional survey using structured instruments and random sampling was conducted once per participant to estimate the prevalence of low, moderate, or high caregiver burden. This approach ensures that data are collected from defined population. The rationale for using this approach was to ensure that caregivers' psychological burden, coping strategies and its impact on their quality of life are captured at a single point in time. This design facilitates the simultaneous collection

of both exposure and outcome variables. It enables rapid estimation of prevalence while allowing for the examination of multiple exposures concurrently.

3.3 Study Site

The study was conducted at the Accra Psychiatric Hospital in Adabraka, a suburb of Accra (Fig 1). This facility is committed to the care, administration, treatment, rehabilitation, and well-being of people with mental health issues. With the ability to accept up to 600 clients on a regular basis, the hospital is an important institution in Ghana's mental health system. It provides high-quality psychiatric care through a dedicated team of healthcare experts in a patient-centred setting.

The hospital provides a variety of services, including an outpatient department (OPD), clinical psychological support, electroconvulsive therapy (ECT), a 24-hour pharmacy, and social work services. It also offers community psychiatric nursing, alcohol addiction treatment, VIP wards, a special school for people with mental illnesses, public education programs, teaching and research possibilities, and an in-service training unit (APH, n.d). These programs are intended to meet the different requirements of patients and advance mental healthcare delivery.

APH oversees the care, management, training, and rehabilitation of individuals with mental illness. The hospital treats mental health conditions, primarily schizophrenia, depression, bipolar disorder, seizure disorder, alcohol and substance abuse, acute psychotic disorder, dementia, anxiety disorders, intellectual disability, and migraine (APH, n.d.).

APH have put in place measures to serve both patients and caregivers. Caregivers have access to 24-hour emergency care for both in-patients and out-patients care, and to mental health professionals to receive personalized care for their patients. The

hospital has support groups which caregivers can join for additional support in the care process, among many others including clinical psychology services, occupational therapy, and stress management for caregivers.

Figure 1 Location of Accra Psychiatric Hospital in Accra

3.4 Study Population

The study population were caregivers of patients with mental health illness receiving care at the Accra Psychiatric Hospital and resides within the Korley Klottey Municipality in Accra. Caregivers in this study were unpaid family members who assist with the daily activities and medical care for the patients with mental health illness.

3.5 Inclusion and Exclusion Criteria

The study population was restricted to caregivers of patients suffering from mental illness within the study area only. The population covered only caregivers who met the following criteria:

a) adult caregivers aged 18 years or older,

b) has direct involvement (primary or informal) caregiving responsibilities,

c) provides caregiving to persons with clinically confirmed diagnoses of mental illness,

d) resident in the study area for at least six months period,

e) has been involve in caregiving responsibilities for more than six months,

f) understand and communicate in the languages used for data collection.

Exclusion criteria

The population excludes caregivers who are not primarily responsible for the daily care of the patients though they sometimes undertake temporary care, and caregivers who are receiving compensations for undertaking the caring responsibilities.

3.6 Sample size

In determining the sample size for the study, the Cochran's formula for sample size estimation was used as it allows for the calculation of ideal sample size. A Cochran sample-size estimation provides the minimum sample size required to estimate a proportion of a population of study based on specified assumptions. The Cochran's formula underscore two critical factors mainly, the risk the researcher is willing to accept (usually known as margin of error), and second, the alpha level which determines the acceptable risk the research is willing to accept that the true margin for error exceeds the acceptable margin of error (Cochran, 1977). The assumptions underpinning the application of the formulae include setting a desired level of precision, desired confidence level and the estimated proportion of the attribute present in the population. In this present study a reliability coefficient of 1.96 at 95% confidence level, and desired accuracy of the estimate at 5%=0.05 was applied to derived the sample size.

Based on Cochran's formula, the sample size was computed using the formulae as: $N = Z^2pq/d^2$ where N= Sample size; Z= the desired confidence level (α); P= expected coverage and d= the desired width of the confidence internal (Cochran, 1997, pp. 5-17). Applying the assumed confidence level of 95% (for α= 0.05, Z= 1.96), prevalence of quality of life (P) of 49% (Cochran, 1977, pp. 5-17) and a desired width of the confidence interval of ±10% (d= 0.1), the minimum number of respondents were computed as;

$$\frac{(1.96)^2\times(0.49\times0.51)}{(0.05)^2} = \frac{0.9600}{0.0025} = 384$$

Based on the application of Cohran's formula, the sample size desired for the study was 384 (Cochran, 1977, pp. 5-17), with 10% buffer making a total of 422. The buffer was created to cater for instances where some selected caregivers may decline participation or may be unreachable. The rationale for using this sample design method in obtaining the sample size is due to its suitability where the primary objective is to produce a prevalence or proportion estimate with known precision (Malhotra, 2010, pp 342-344).

3.7 Sampling Technique.

The study employed probability sampling to select participants. This approach was chosen to ensure that every individual in the population had an equal opportunity to be included in the sample. In this technique, simple random sampling was used to ensure that each member had an equal probability of being selected for the study. The rationale for the using this technique was because of the homogenous nature of the sample population (Bhardwaj, 2019). In applying the simple random sampling technique, a list of eligible caregivers in the study area were obtained from the APH registry. A total of 3500 records were compiled using excel with each person given

anonymised codename and their contact information. The next step was to verify the inclusion criteria which led to the dropping of 550 of the selected lists of potential participants. Everyone was assigned an identification number (ID, CGP0001, CGP0002, CGP0003…...CGP2950) and the "Rand ()" in excel was used to calculate unique random value between 0 and 1. The random values were sorted from smallest to largest and through that the 422 potential participants were picked for the study.

3.8 Data collection methods and instruments.

The structured interviewer-administered questionnaires were administered to caregivers. The questionnaires comprised of sections on caregivers' demographic characteristics, psychological burden using the 21-item Depression, Anxiety, Stress Scale (DASS); coping strategies using the Brief-COPE questionnaires and the World Health Organisation Quality of Life-BREF (WHOQOL-BREF) for the evaluation of quality of life of caregivers. The details of each of the data collection instruments used in the process.

3.8.1 Depression, Anxiety and Stress Scale-DASS-21

The DASS-21 scale is wildly adopted to assess symptoms of depression, anxiety and stress (Marschall, & Block, 2024). The tool was developed by Lovibond, P and Lovibond, S in 1995 to assist to define, understand, and measure clinically significant emotional conditions (Lovibond, & Lovibond, 1995; Marschall, & Block, 2024). The scale is valid and reliable based on psychometric properties established in other studies (Coker, Coker & Sanni, 2018; Le, et al., 2017). It is made up of 21 items rated on a 4-point Likert Scale ranging from 0 "did not apply to me at all" to 3 "applied to me very much".

Depression, anxiety and stress subscales are made of seven (7) questions each with similar ratings. Questions for depression, anxiety and stress were summed and divided by 2 to obtain final scores. Increase in scores across all subscales indicate increase in psychological distress (Gomez, 2016).

3.8.2 Brief-COPE Questionnaire

The Brief-COPE (Coping, Orientation to Problems Experienced) was developed by Charles S. Carver in 1997. The scale was designed to assess proficient and unproductive ways of coping with adverse events. It has 28 items ranked on a 4-point Likert scale type, namely, 1 = "I haven't been doing this at all," 2 = "A little bit," 3 = "A medium amount" and 4 = "I've been doing this a lot." There are 14 subscales (each contains 2 items) which are "Self-distraction, Active coping, Denial, Substance use, Use of emotional support, Use of instrumental support, Behavioural disengagement, Venting, Positive reframing, Planning, Humour, Acceptance, Religion, & Self-blame." The 14 subscales measure coping style in two major ways, namely, "Approach Coping, and Avoidant Coping

3.8.3 WHOQOL-BREF

The WHOQOL-BREF is a 26-item, self-administered questionnaire, which contains a total of 24 questions and two items that assess overall QoL and general health conditions. Caregivers were allowed to express how much they have experienced the items in the preceding 2 weeks on a 5-point Likert scale ranging from 1 (not at all) to 5 (completely). The WHOQOL-BREF contains 2 items from the overall QoL and general health facet and 1 item from each of the remaining 24 facets making a total of 26 question items. The 24 facets of QoL make up the four-domains namely: physical

health that comprises 7 items, psychological wellbeing that comprises 6 items, social relationship that comprises 3 items, and environment that comprises 8 items.

3.9 Quality control

For data assurance and quality purposes, standard data collection tools were used. Psychometric properties were examined for all scales. Research assistants were trained a week prior to actual data collection. At the end of each data collection session, validation of questionnaires was performed. This help avoid misinterpretation of questions and allow modification of ambiguous questions. Data collection tools were pretested at the Hospital.

3.10 Variables

The following variables were considered in this study.

Table 3.1: Study Variables(Independent and Dependent)

Dependent Variable	Quality of Life(QoL)
Independent Variables	Age
	Gender
	Educational Level
	Socio-economic Status
	Religion
	Annual Household Income
	Ethnicity
	Employment
	Marital Status
	Depression
	Anxiety
	Stress
	Coping Strategies

3.11 Data Collection Procedure

Data were collected using questionnaires extracted from the DASS-21, Brief-COPE and WHOQoL BREF standard tools. The questionnaires were self- administered with the support of professional community health workers within the study area. A pilot testing was undertaken prior to the commencement of the questionnaire administration process. The pilot was undertaken with 3 healthcare workers covering 10 walk-in caregivers who are non-resident of the study area from 29 May to 6 June 2025. The objective for the piloting was to try the data collection instruments and the procedures outlined for the actual data collection. it also serves as a means of testing the soundness, reliability, feasibility and ethical safety before the actual fieldwork (Malmqvist, et al., 2019). The actual fieldwork commenced on Tuesday 19 June 2025 and ended in July 19, 2025, spanning almost 40 days period.

The fieldwork was carried out by a team of volunteers grouped into 3 with each group comprising of 3 people and attending to approximately 3 participants in a day. The reminder of the respondents was attended by the researcher. The interviews were conducted at the two stations mainly the residence of the participants and at the Accra Psychiatric Hospital. almost 80% of the participants were however interviewed at the Hospital, though there were instances where follow ups were made to the residence of participants. Each interview section lasted for 30 minutes per participants.

The structured interview questionnaires were administered in English, Ga, Hausa, and Akan (as applicable). To minimize potential conceptual discrepancies arising from translations across different languages, support personnel fluent in the four predominant languages of the area (English, Ga, Hausa, and Akan) were selected. Participants were then matched with personnel proficient in their respective languages

to facilitate effective communication. Many of the participants however were fluent in English and thus resulted in less than 8% translation of the questionnaires from English to the respective languages of the participants. The raw data gathered was exported into excel file for cleaning purposes. The variable names were standardised, and labels coded (Yes=1, No= 2; strongly disagree=1; disagree =2; etc). The free text numeric entries were converted to numeric values, whiles unifying missing value markers such as replacing 'N/A', "don't know" with a single unit ''NA" and coded accordingly. Further all the duplicate columns were removed, and the data was inspected in terms of checking row count, column list, data types, missing variables etc. The cleaned data was then uploaded into IBM SPSS for purposes of undertaking the analysis.

3.12 Data Analysis

IBM SPSS and Microsoft Excel were used to analyse the data gathered. Descriptive statistical techniques including the mean and standard deviations were used to summarize continuous variables. Categorical variables were summarized using frequencies and proportions. Relationship between psychological variables (stress, anxiety and depression) and socio-demographic characteristics were analysed using analysis of variance (ANOVA), and Pearson correlations. Logistic regression models were applied to evaluate the relationship between psychological burden and quality of life. Cronbach's alphas were used to assess reliability and consistency of data collection tools. Structural equation modelling (SEM) was used to assess the mediating pathways adopted by the respondents in moderating the effect of the psychological burden on the quality of life of caregivers of patients with mental illness.

3.13 Ethical Consideration

Ethical approval for the study was obtained from the Ghana Health Service Ethics Review Committee (GHS-ERC-072/04/25). Authorization was also received from the administrative management of the Accra Psychiatric Hospital. The study after approval from GHS-ERC provided an information sheet to caregivers which outlined key aspects for the attention of participants. Key ethical issues considered among others included informed consent and autonomy, confidentiality and data protection, non-maleficence and managing emotional distress, beneficence and the pursuit of positive outcomes, cultural sensitivities and respect for local norms, and gender dynamics, equity and social justice. These were addressed as part of the ethics review clearance.

CHAPTER FOUR

RESULTS

4.0. Demographic Characteristics of Respondents.

The socio-demographic profile of caregivers supporting individuals with mental illness is presented in Table 4.1 below. The average age of the respondents was 64 years.

Table 4.1. Socio-Demographic Characteristics of the Respondents

Variable	Number	Percentage	Variable	Number	Percentage
Age			**Religious Background**		
18-25	61	15.9	Christian	287	74.7
26-35	98	25.5	Muslim	69	18.0
36-45	97	25.3	Traditionalist	24	6.3
46-55	41	10.7	Others	4	1.0
55-65	70	18.2	**Employment**		
66+	17	4.4	Employed	143	37.2
Gender			Unemployed	84	21.9
Male	175	45.6	Self-employed	135	35.2
Female	201	52.3	Retirement	18	4.7
Prefer not to Disclose	8	2.1	Never been employed	4	1.0
Marital Status			**Ethnic Origin or Tribe**		
Single	189	49.2	Akan	111	28.9
Married	154	40.1	Ewe	83	21.6
Widowed	28	7.3	Ga-Dangbe	91	23.7
Divorce	13	3.4	Grusi	18	4.7
Level of Education			Guan	42	10.9
Basic School	32	8.3	Mande	15	3.9
Secondary Level	68	17.7	Mole- Dagbani	24	6.3
Voc. Training	56	14.6	**Annual Household Income**		
University Level	167	43.5	Less than GHS 10,000.00	207	53.9
Prof. Certificate	35	9.1	GHS10,001.00-GHS50,000.00	96	25
Uneducated	21	5.5	GHS50,001.00-GHS 100,000.(	50	13
Others	5	1.3	GHS100,001.00-GHS 199,999	14	3.6
			GHS200,000.00- GHS299,999	3	0.9
			GHS 300,000.00 and above	14	3.6

The age group between 26-35 (n=98), and 36-45(n=97) constituted 50.8% of the sample reflecting the concentration of the sample within the relatively younger group.

Nearly 53%(n=201) of the sample were female and about 45%(n=175) male with about 2% not disclosing their gender. In terms of marital status single respondents constituted 49%(n-189) whiles about 40%(n=154) were married with about 7% and 3% being widowed and divorce respectively. About 84% of the respondents had gained various form of education (from secondary to university including professional certifications) whiles about 5% (n=21) remained uneducated. 8% (n=32) of the respondents had obtained basic level education. Within the educated category university level education constituted 43.5%(n=167), whiles 17.7%, 14.6%, and 9.1% covers the secondary (n=68), vocational (n=56), and professional certificates (n=35) respectively. About 72% of the sample respondents were engaged in productive activities i.e. self-employed n=135 (35.2%); employed n=143 (37.2%). About 21.9% (n=84) remained unemployed. Less than 5% were within the retirement (n=18) category.

Majority of the sample respondents were Christians (74.7%; n=287) and about 18% being Muslim(n=68). In terms of ethnic background, 28% of the respondents were Akans (n=111), with Ga-adangbe and Ewe following with 23.7% (n=91) and 21.6% (n=83) respectively. Regarding annual household income of the respondents, about 53% earn less than GHS10,000.00(n=207) per annum with about 25% (n=96) earning between GHS10,000.00 to GHSGHS50,000.00. Less than 21% of the sample earn annual income more than GHS50,000.00 per annum.

4.2. DASS-21 Analysis.

The DASS-21 was divided into three subscales, each consisting of seven items: Depression (DASS-D), Anxiety (DASS-A), and Stress (DASS-S). The Depression subscale assessed dimensions such as hopelessness, diminished self-esteem, and

reduced positive affect, while the Anxiety subscale evaluated symptoms including physiological arousal, feelings of fear, and anxiety-related worry. DASS-S on the other hand measured stress in the form of agitation, negative effect, tension, irritability, etc.

Table 4.2. DASS 21 Score Interpretation

Item	Depression	Anxiety	Stress
Normal	0-9	0--7	0--14
Mild	10--13	8--9	15--18
Moderate	14--20	10--14	19--25
Severe	21--27	15--19	26--33
Extremely Severe	28--42	20--42	34--42
Raw Score	**19.88**	**20.11**	**26.22**

In scoring the results, the DASS 21 interpretation manual score cutoff (Lovibond, & Lovibond, 1995) was adopted **(Table 4.2 above)**. The results indicated the presence of moderate level of depression (*DASS- D score <20)*, extremely severe state of anxiety (DASS-A score >19), and severe level of stress (DASS -S, score >25). As there were no missing variables in the responses gathered, all the sample (n=384) met the criteria for moderate to severe or extremely severe in all the DASS subscales as shown in table 4.2 above. Internal consistency reliability for each of the DASS-21 subscales was assessed using the Cronbach's alpha. It was observed that all the DASS-21 subscales demonstrated excellent consistency (**Table 4.3 below**). This high reliability indices across subscales attest to the instrument's consistency within the sample and affirms the consistency required for such psychological and mental health studies (DeVilles, 2017, p.49-65). **Table 4.3** illustrates the means and the alpha of each DASS 21 subscales.

Table 4.3 DASS 21 Subscales Internal Reliability Outcome

Subscale	Mean	Inter-item Correlations	Alpha
Anxiety	137.89	0.937	0.98
Stress	179.82	0.978	0.992
Depression	136.32	0.961	0.985

The Cronbach alphas among the subscales are elevated above the acceptable range posing potential redundancy in the constructs. Factor analysis conducted (Principal Component Analysis-PCA) extracted a single dominant component accounting for 72% of the variance. All the 21 items loaded strongly on this component (ranging from 0.742 to 0.882) indicating a general distress factor within the sample. The factor analysis conducted (PCA) therefore reinforces the fact that the subscales are not empirically independent in the sample. Given the nature of the study, this outcome is not unexpected. It is reflective of the cultural nuances pertaining in the area which tended to influence the respondents view of the DASS-21 subscales. The KMO outcome of 0.974, and the Bartlett's test (x^2=9307.94, df=210, $p<.001$) illustrates the fact that the items share common variance and strong correlation with one another.

4.3. Analysis of Coping Strategies.

The Brief-COPE scale was subdivided into 14 subscales with each category assessed with two items. **Table 4.4.** shows the summary of the average raw scores for each of the coping subscales adopted by the respondents and grouped under the three main aspect of the Brief-COPE scale.

Table 4.4: Brief-COPE Average Scores

Coping Strategy- Subscales	Not at all	A little bit	Medium amount	All the time
Avoidant Coping				
Self-Distraction	107	86	105.5	85.5
Denial	134	95.5	95	59.5
Substance Use	201	63	85.5	34.5
Behavioural Disengagement	131.5	75	109.5	68
Venting	101.5	101.5	110	71
Emotion-focused Coping				
Emotional Support	79.5	148	99	57.5
Humour	93.5	95.5	143	52
Positive Reframing	69	98	155.5	61.5
Acceptance	90.5	109	115	69
Religion	53.5	141	101	88.5
Self-blame	78	135	91	80
Problem-focused Coping				
Active Coping	102	111	98	73
Informational Support	92	134	104.5	53.5
Planning	75	84	143	82

Further the Brief-COPE data was segmented into adaptive and maladaptive coping categories.

Table 4.5. Adaptive Coping Strategies

Adaptive Coping Strategy	Highest Average Score	Percentage of Respondents
Active Coping	111	28.9
Positive Reframing	155.5	40.5
Planning	143	37.2
Acceptance	115	30
Emotional Support	148	38.5
Instrumental Support	134	34.9
Religion	141	36.7
Humour	143	37.2

Within the adaptive coping strategies (comprising of active coping, positive reframing, acceptance, planning, emotional support, religion, humor, and instrumental support), **(see Table 4.5 above)** positive reframing (40%, n=384) was the most used coping strategy adopted by the respondents. Emotional support (38.5%, n=384), planning (37.2%, n=384), humor (37.2%, n=384), and religion (36.7%, n=384), constituted the main adaptive coping strategies adopted by the

respondents. The maladaptive coping strategies illustrate behaviour patterns that provide temporary relief but worsen stressful situations or inhibits the individual's ability to perform (Sutton, 2020). Results of the maladaptive coping subscales (**Table 4.6 below**) based on the average score show venting subscale remaining relatively stable across all the four levels of engagement which suggest venting as a habit across respondents and not necessarily a destructive pattern. Table 4.6 below show the outcome of the maladaptive subscales.

Table 4.6: Maladaptive Coping Strategies

Maladaptive Coping Strategies	Not At all	A Little bit	Medium Amount	All the Time	Percent (Highest Average Score)	Percent (Lowest Average Score)
Self-distraction	107.0	86.0	105.5	85.5	27.9	22.3
Denial	134.0	95.5	95.0	59.5	36.8	15.5
Substance Use	201.0	63.0	85.5	34.5	52.3	9.0
Behavioural Disengagement	131.5	75.0	109.5	68.0	34.1	17.7
Venting	101.5	101.5	110.0	71.0	28.7	18.5
Self-blame	78.0	135.0	91.0	80.0	35.2	20.3

Substance use was the least common coping strategy, with 52% of respondents not using it at all and 9% using it frequently. About 36% and 35% of the respondents had not deployed at all denial and self-blame strategies respectively as coping mechanism. Table 4.6 above illustrates the most frequently employed strategies consistently over time as self-distraction (22.3%), self-blame (20.3%), venting (18.5%), and behavioural disengagement (17.7%).

Cronbach's alpha was computed using the two variables within each subscale, as shown in Table 4.7 below to evaluate data reliability and consistency within the dataset. Religion yielded the highest mean score at 5.17, whereas substance use as a coping strategy had the lowest mean score at 3.78, indicating it as the least commonly

employed coping mechanism. Table 4.7 below shows the results of the Cronbach alpha computed.

Table 4.7: Cronbach's Alpha Results- Coping Strategies

Subscale	Mean	Standard Deviation	Item-Means	Inter-item Correlations	Alpha
Self-Distraction	4.88	1.929	2.441	0.510	0.676
Active Coping	4.74	1.855	2.320	0.504	0.669
Denial	4.42	1.961	2.208	0.640	0.779
Substance Use	3.78	1.868	1.879	0.598	0.748
Emotional Support	4.70	1.675	2.350	0.497	0.664
Instrumental Support	4.62	1.673	2.311	0.451	0.616
Behavioural Disengagement	4.59	2.011	2.297	0.616	0.762
Venting	4.78	1.893	2.392	0.576	0.729
Positive Reframing	4.59	1.904	2.293	0.594	0.745
Planning	4.87	1.988	2.435	0.613	0.759
Humor	4.43	1.808	2.217	0.471	0.639
Acceptance	4.84	1.892	2.422	0.657	0.793
Religion	5.17	1.730	2.585	0.543	0.702
Self-blame	4.90	1.847	2.451	0.594	0.745

The mean score of adaptive coping strategies such as planning (4.87), acceptance (4.84), and positive reframing (4.59) illustrate relatively high mean score showing their strong adoption by majority of the respondents. Denial and behavioural disengagement had mean score values of 4.42, and 4.59 respectively indicating moderate usage of avoidance-based coping. The higher standard deviation (SD) illustrates variations across individuals.

Behavioural disengagement had SD 2.011 indicating the variation in the responses by individuals within the sample with some withdrawing from responsibilities whiles others rarely do. The higher item-means further indicate a strong reliance on structured coping strategies such as religion (2.585), acceptance (2.422) and planning (2.435), whiles self-blame with moderate item-means (2.451) suggest that individual's guilt play a critical role in how people process stress. Responses within the subscale are

consistent across individuals, and higher alpha values (greater than 0.70) indicate strong internal reliability within the data.

4.3.1 Mediation Role of Coping Strategies.

A structural equation model in which DASS-21 (depression, anxiety, and stress) served as latent stressors, Brief-COPE (emotion-focused, avoidant, and problem focused coping strategies) as mediators; and WHOQoL- BREF (physical, psychological, social and environmental domains) as outcome was performed. Table 4.8 illustrates the summary of the mediation pathways.

Table 4.8: Summary of the Mediation Pathways with Brief- COPE Data

Path	Effect Type	Mediator
Depression[a] → Psychological QoL	Direct	-
Anxiety[a] → Physical QoL	Direct	-
Stress[a] → Social QoL	Direct	-
Depression[b] → Avoidant Coping	Direct(a-path)	-
Stress[b] → Emotion-focused Coping	Direct(a-path)	-
Anxiety[b] → Problem-focused Coping	Direct(a-path)	-
Depression → Social QoL via Avoidant Coping	Indirect(a-b)	Avoidant Coping
Anxiety → Physical QoL via Problem-Focused Coping	Indirect(a-b)	Problem-focused Coping
Stress → Psychological QoL via Emotion-Focused Coping	Indirect (a-b)	Emotion-focused Coping

The direct and indirect effects of the mediation process together with the standardised coefficients are shown in table 4.9 below.

Table 4.9: Summarised Outcome of the SEM

Path	β	SE	p-value	95% CI
Depression → Psychological QoL	-0.44	0.05	< .001	-.54, -.34
Depression → Avoidant Coping	0.51	0.04	< .001	.43, .59
Depression → Social QoL (indirect via Avoidant)	-0.13	0.03	< .001	-.19, - .07
Anxiety → Physical QoL	-0.28	0.06	<.01	-.40, -.16
Anxiety → Physical QoL (indirect via Problem-Focused)	0.1	0.03	<.01	.04, .16

The higher depression score with a coefficient of β= *-0.44, p< .001* is strongly correlated with lower psychological quality of life. However, when avoidant coping

is introduced, depression is strongly and positively related to avoidant coping strategies (β= *0.51, p< .001*). With a coefficient of *β= -0.13, p< .001,* depression indirectly reduces the social QoL of caregivers through its effects on avoidant coping strategies. Anxiety score of *β= -0.28, p< .01,* indicates a moderate negative association between anxiety levels and the physical QoL among caregivers of patients with mental illness. Based on the outcome of the model, anxiety scored (β= *0.10, p< .01)* illustrates a small but significant positive indirect effect on physical QoL through problem-focused coping. Emotion-focused coping demonstrated minimal mediation effects on stress, both directly and indirectly, in all domains of the WHOQoL. All the model fit indices met or exceeded the common benchmarks, supporting the confidence in the overall model structure. Tabel 4.10 illustrates the indices for the model fit.

Table 4.10: Model Fit Indices

Fit Index	Value	Threshold	Interpretation
χ^2 (df = 342)	385.1, p = .08	p > .05	Acceptable; no significant misfit
CFI	0.97	≥ 0.95	Excellent comparative fit
RMSEA	0.04 (90% CI 0.03, 0.05)	≤ 0.05	Indicates close approximate fit
SRMR	0.05	≤ 0.08	Good standardized residual fit

Table 4.11 below shows the domain specific explained variances in the model and further illustrates the robustness of the model.

Table 4.11: Domain Specific Explained Variance and Intepretation

Domain	R^2	Interpretation
Physical QoL	0.5	DASS predicts 50% of the variability in physical wellbeing of caregivers.
Psychological QoL	0.52	Predictors account for 52% of the mental and emotional QoL of Caregivers
Social QoL	0.39	39% of social relation quality is explained by the predictors
Environmental QoL	0.45	45% of perceived environmental aspects of QoL are determined by the predictors

The R-squared which quantifies the proportion of the variance in the dependent variable explained by the predictors show that about 50% and 52% of the physical

wellbeing and psychological aspect of quality of life respectively are explained by DASS components. The effect on the social domain of the QoL is moderate (39%), whiles 45% of the variation in in the environmental domain is accounted for by the independent variables (DASS).

4.5. WHOQoL BREF Analysis.

The WHOQoL has 26 items with the first 2 items relating to general quality of life or health questions, and 24 items that contribute to 4 unique domains. The 4 main domains measured are physical health, psychological state, social relationships, and environmental factors. The questionnaires within each domain phrased negatively were reversed-scored (maximum possible score plus minimum possible score minus original score) to align responses to the same direction towards the final score. The scores within each domain were converted into a standardised scale of 0-100 using the transformed score approach (actual domain score minus minimum score) / (maximum score minus minimum) *100. Table 4.12 shows summarised outcome of transformed scores and the (average) mean score compared with the standardised score.

Table 4.12 : Summarised Outcome of Transformed WHOQoL - BREF Scores

Domain	Raw Score	Score Mean	Transformed Score	Transformed Score Mean	Standardised Score
Physical Health	8056	20.98	19171.4	49.9	0-100
Psychological Status	6745	17.6	18504.2	48.2	0-100
Social Relationship	3176	8.27	16866.7	43.9	0-100
Environmental	8442	21.98	16781.3	43.7	0-100

Analysis of the summarised data above (Table 4.12) reveal that while physical health and psychological status are rated close to the midpoint of the standardised scale of 0-100 (i.e. transformed means physical, 49.9, and psychological, 48.2), social relationships, and environmental factors recorded lower transformed mean scores of 43.92 and 43.70 respectively. The midpoint responses within the physical health and

psychological domains indicate that the respondents have average or moderate quality of life in these aspect whiles both the score within the social relationships and environmental domains portray a diminished quality of life relative to physical health and psychological domains of the scale. This illustrate the multidimensional nature of QoL and the essence of assessing in this manner is to preserve content validity, reinforce the underlying theoretical distinction, and to present how each of the domains reflects in the life of caregivers of patients with mental disorder.

4.6. Evaluation of QoL of Caregivers of Patients with Mental Illness

4.6.1. Influence of Age, Gender, and Marital Status on Quality of Life (QoL)

A one-way ANOVA was conducted to assess whether the mean QoL scores differ across the categorical variables (i.e. gender, age, and marital status). Table 4.13 illustrates the outcome of the influence of age, gender and marital status on the QoL of caregivers of patients with mental illness.

Table 4.13. ANOVA Outcome Summary

Factor	df(between, within)	F	*p-(Sig)*	Effect Size(Eta-square/R-square)
Corrected Model	12, 371	2.48	0.004	R=squared= 0.74
Gender(one-way	2,381	3.792	0.023	Eta -squared= 0.020
Age(One-way)	5,378	2.377	0.038	Eta -squared= 0.030
Marital Status(One-way)	3,380	4.852	0.003	Eta -squared= 0.037
Marital Status * Gender (Interaction)	6,371	0.961	0.452	-

The corrected model indicates a statistically significant but modest overall fit with $F(12, 371) = 2.48$, $p = 0.004$, and $R^2 = 0.74(74\%)$. This shows that gender, age and marital status as a set of factors in the model explains a significant proportion of the variation in the quality of life of caregivers of patients with mental illness. The independent variables account for some systematic between-group differences in quality of life but most of the variability is unexplained by the factors in the model.

Marital status produced the largest and most robust group effect *{F (2,380) =4.852, p=0.0003, and R^2 of 0.037)}*, with married respondents showing the highest mean QoL (≈ 72.62) and single respondents showing the lowest mean QoL (≈65.61). Gender showed a statistically significant between-groups effect *{F (2, 381) =3.792, P=0.023, R^2=0.020)}*. This was driven mainly by the higher mean recorded for the "prefer not to disclose" group (≈78.70). Age also recorded statistical significance *{F (5, 378) =2.377, P=0.038, R^2=0.030)}* with the age band "36-45' having the highest mean (≈73.24) and the 56-66 band recording the lowest (≈64.86). The interaction between gender and marital status was not significant *{F (6, 371) =0.961, P=0.452}* illustrating that there is no evidence that gender moderates marital-status differences in the quality of life of caregivers of patients with mental illness.

4.6.2. Impact of Household Income and Employment on QoL

A one-way analysis of variance (one-way ANOVA) was conducted to examine differences in QoL scores among groups, with QoL as the dependent variable and employment and household income as predictors. Table 4.14 below shows the outcome of the correlation table.

Table 4.14. ANOVA-Employment and Quality of Life

QoL/Employment

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	235831.917	4	58957.979	917.787	0
Within Groups	24346.684	379	64.239		
Total	260178.602	383			

The outcome shows that QoL differ significantly by employment status *F = 917.79, p<.001,* and thus illustrate strong associations with caregivers' quality of life. The *p-value (*0.001) confirms the robust statistical significance of employment and QoL of

caregivers. Further QoL differs strongly across income brackets with very large between-group (*SS 222,095.673)* differences relative to the within-group (*SS 38,082.929)* variability. Table 4.14 illustrates the ANOVA outcome.

Table 4.14a. ANOVA-Household Income and Quality of Life

QoL/Household Income					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	222095.673	5	44419.135	440.891	0
Within Groups	38082.929	378	100.748		
Total	260178.602	383			

The outcome further illustrates that income bracket (group membership) better explains QoL status than individual variability within the income brackets. Comparing the effect sizes, the standardised betas indicates that employment is the dominant predictor (β=0.794) indicating the significant contribution of employment to the quality of life of caregivers than income ((β=0.184). To provide a standardised measure of the magnitude of the effect or the group differences and evaluate the practical significance, the Eta-Squared (η^2) and Cohen's f were computed for both employment level and household income

Table 4.15: Eta-Squared and Cohen's Measure of Group Effects

Independent Variable	**Eta-Squared (h^2)**	**Cohen's f**
Employment	0.9064	3.1
Annual Household Income	0.8536	2.41

The above showed that about 90.6% and 85.4% of the variance in the dependent variable (QoL) is explained by the group differences mainly employment and household income respectively. The large Cohen's effect illustrates not only statistically significant relationship but also the practically strong group effects.

4.6.3. Sociocultural impact on Quality of Life

Analysis of the sociocultural influence on QoL of caregivers using correlation matrix (Table 4.16 below) show that each pair of variables (i.e. ethnic, religion and education) have a strong positive Pearson correlation coefficient with a strong significance level (*p-value statistically significant at 0.01 level).*

Table 4.16. Correlation Matrix: Socicultural Factors and QoL

		Ethnic Background	Educational Level	Religious Backgroun	QoL
Ethnic Background	Pearson Correlation	1	.885**	.879**	.933**
	Sig. (2-tailed)		0	0	0
	N	384	384	384	384
Educational Level	Pearson Correlation	.885**	1	.699**	.931**
	Sig. (2-tailed)	0		0	0
	N	384	384	384	384
Religious Background	Pearson Correlation	.879**	.699**	1	.735**
	Sig. (2-tailed)	0	0		0
	N	384	384	384	384
WHOQoL	Pearson Correlation	.933**	.931**	.735**	1
	Sig. (2-tailed)	0	0	0	
	N	384	384	384	384

**. Correlation is significant at the 0.01 level (2-tailed).

Ethnic background, religious background, and education level have strong positive correlation coefficient (ethnic background, $r = 0.933$, religious background, $r = 0.735$; and education level, $r = 0.931$) and reflect how closely the variables are correlated with differences in QoL of caregivers. Compared with ethnic background, and educational level, religious background has a lower correlation coefficient (*r= 0.735)* suggesting that the effect of religious background on the quality of life is not tremendously high as the other two factors. Exploratory factor analysis (EFA) was conducted to examine the underlying structure among the sociocultural variables and QoL given their highly intercorrelations (i.e. ethnic background, educational level, religious background, and quality of life), based on the Pearson correlation matrix with all coefficients exceeding 0.70, and with statistical significance at the 0.01 level(2-tailed). The essence of undertaking the EFA was to assess dimensionality reduction,

measurement refinement and assessing the validity of the construct on the back of the high Pearson correlation recorded. Factorability was strongly supported by the magnitude of the intercorrelations particularly the near-perfect associations between QoL and both ethnic (.933) and educational (.931). Principal axis factoring resulted in a dominant single-factor solution accounting for approximately 88.3% of the shared variance (Eigenvalue ≈ 3.53). Loadings on the latent factor (sociocultural variables) ranged from 0.86 to 0.96 with communalities ranging from 0.74 to 0.92 demonstrating that most of the variance in each of the observed variable was explained by the underlying construct. The unidimensional analysis of QoL was aimed at simplifying interpretation of the associations with the psychological burden whiles facilitating comparison with other studies.

4.6.4. Impact of Depression, Anxiety and Stress on Quality of Life.

A linear regression analysis was conducted to evaluate the impact of depression, anxiety, and stress on caregivers' QoL based on the assumption that there are no mediating factors in the process. Table 4.17 below illustrates the summary of the outcome of the regression analysis (additional details shown in Appendix III).

Table 4.17: Model Summary of Regression Output(QoL, and DASS 21)

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.973[a]	0.947	0.947	5.98013	0.947	6893.279	1	382	0
2	.978[b]	0.956	0.956	5.47105	0.009	75.398	1	381	0
3	.979[c]	0.958	0.957	5.37768	0.002	14.345	1	380	0

a. Predictors: (Constant), Depression
b. Predictors: (Constant), Depression, Stress
c. Predictors: (Constant), Depression, Stress, Anxiety

Model 1 showed a strong association with QoL as reflected in the strong positive Pearson's correlation coefficient of r=*0.973* and R^2 of 0.947 suggesting that

approximately 94.7% of the variation in QoL was explained by depression (predictor). The inclusion of model 2 (stress) resulted in a significant increase in the explained variance with R^2 rising to 0.958 (a change of 0.009). The incremental improvement was statistically significant (*p <0.001)* as the *F-Change (75.398)* statistic indicated. The decrease in the standard error of the estimates to 5.47105 from 5.98013 illustrates the improvement in the precision in the model predictions. Model 3 (anxiety) on the other hand produced a marginal improvement in R^2 (marginally increasing to 0.958). Though the R^2 change was 0.002, the F-Change Statistic (*p <0.001)* remained statistically significant, the overall outcome of the analyses suggest that the set of predictors (Depression, stress, and anxiety) collectively accounts for close to 96% of the variance in the predicted (QoL). Despite the robustness of the model in explaining the variance in the dependent variable (about 96%), it is important to reiterate the potential model limitation that may have arisen including potential multicollinearity issues, omitted variable bias, among others which may have affected the outcome of the regression.

4.6.5. Overall Quality of Life and Independent Variables.

Analysis of the outcome of the regression model (Table 4.18 below) shows that predictors (demographic, sociocultural, economic and the psychological factors) have an almost perfect linear relationship with the dependent variable (QoL).

Table 4.18 Regression Analysis of Independent and Dependent Variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estim	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.995[a]	0.991	0.991	2.42463	0.991	6707.941	6	369	0

a. Predictors: (Constant), Economic Factors, Stress, Social factors, Demog, Anxiety, Depression

b. Dependent Variable: WHOQoL

With an R-squared of 0.991, the predictors explain the variability in the QoL score by about 99.1%. Practically, nearly all the variations in the QoL scores are captured by these variables suggesting that the model has extraordinary predictive power which is not uncommon in psychological studies of this nature. The ANOVA summary **(Table 4.19)** below reinforces the R-squared value indicating the extent to which the overall variability in the predicted is explained by the predictors.

Table 4.19: Anova Summary of Regression Analysis

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	236608.586	6	39434.764	6707.941	.000[b]
	Residual	2169.284	369	5.879		
	Total	238777.87	375			

a. Dependent Variable: WHOQoL

b. Predictors: (Constant), Economic Factors, Stress, Social factors, Demog, Anxiety, Depression

Though the analysis does not provide individual regression coefficients, the nearly perfect overall fit indicates that each of the independent variables encompassing economic conditions, stress, sociocultural factors, demographic characteristics, anxiety and depression is closely linked to and adds to the collective understanding of an individual's QoL (Agyemang-Duah, Abdullah, Rosenberg, 2024; Guo, Chen, & Chan, 2025). The high predictive power of the model aligns with prior studies where the deployment of similar variables (economic stability, stress, depression, anxiety, etc.) together almost wholly explained the variations in the observed QoL of caregivers (Shahbazi, Shahbazi, & Poorolajal, 2022). Additionally, the *F value* (6707.941) with corresponding *p-value 0.000* corroborates that the model is statistically significant and that the combined effect of all the predictors (i.e. depression, stress, anxiety, demographic, social and economic factors) are highly unlikely to be owing to random coincidence or chance. However, the betas of each of

the variables offer diverse influence on QoL. The extract below (table 4.20) illustrated the betas and the related significance from the regression model.

Table 4.20. Model Beta

Model		Unstandardized		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	11.982	0.751		15.95	0.000
	Depression	-0.048	0.154	-0.014	-0.313	0.75
	Economicfactors	3.657	0.25	0.276	14.65	0.000
	Demogfactors	2.1	0.272	0.204	7.709	0.000
	Sociocultural	0.605	0.152	0.08	3.968	0.000
	Anxiety	-0.502	0.134	-0.15	-3.745	0.000
	Stress	2.328	0.087	0.632	26.77	0.000

a. Dependent Variable: WHOQoL

From the table above, the beta of the individual predictors varied from negligible to significant influence on QoL. Stress (beta=0.632) appears to be the predominant predictor by magnitude. Depression and anxiety recorded beta coefficients of -0.014 and -0.15 respectively and have negative effect on quality of life. Economic factors and demographic factors have moderate positive effects relative to the other predictors whiles sociocultural factors have minor to negligible effect on quality of life based on the betas from the model.

CHAPTER FIVE

DISCUSSION

5.1. Introduction

The study aimed at evaluating the psychological burden faced by caregivers of patients with mental illness and the coping strategies adopted to facilitate their quality of life. This section discussed the findings from the study in line with the three main objectives set. The section further compares the findings with other relevant studies conducted globally.

5.2. Impact of Demographic Factors on Caregivers' QoL

The association between age range, gender and marital status grouped as demographic factors shows a positive and statistically significant association with QoL and explains a substantial proportion of the variation in caregivers' QoL. On individual level, the significant correlation between QoL and age suggest that as caregivers advance in age, their QoL tends to improve compared with younger adults. Thus, older caregivers of patients with mental illness may benefit from accumulated life experiences, adopt established coping strategies and may have a more robust social networks which cumulatively may bolster both physical and psychological QoL domains. This finding aligns with previous research indicating that older caregivers often develop resilient coping strategies over time and report enhanced life satisfaction due to their accumulated experiences (Sridhar, & Kuriakose, 2024; Fernandez-Carro, et al.,2025). While ageing usually leads to health declines, studies show that older adults with strong social networks and family ties often experience better quality of life (Unsar, Erol, & Sut, 2016). However, though the studies of Agyemang-Duah, Abdullah, & Rosenberg (2024), and Mwini-Nyaledzigbor, et al., (2016) was not directly linked to

caregivers of patient with mental illness, their findings regarding the fact that the burden of caregiving intensifies with ageing and increases the risk of debilitating health problems, greater psychological distress and reduced social engagements which invariably lowers caregivers QoL, provides an anecdotal support to the findings of the current studies.

Similarly, the statistically significant correlation between QoL and marital status underscore the role that emotional, and practical social support available in a marital relationship offer in caregiving process. The finding of the current study suggests that marital status influences the variation in the QoL of caregivers of patients with mental illness. Caregivers who have quality marital relationship or in stable relationships have been found to report higher social and emotional wellbeing and this is attributable to adequate social support and or spousal support which tend to diffuse caregiving burden and provide emotional reassurance (Tough, Brinkhof, & Fekete, 2022). A study conducted in Brazil among caregivers of patients with mental illness found that where factors such as support from relatives, and satisfying marital relationship exist, caregivers experienced better QoL outcomes than non-married caregivers (Nogueira, et al., 2019). Marital status can serve as a proxy for social support, economic stability, and emotional well-being. In many studies, being in a stable, supportive relationship is associated with higher quality of life (Unsar, Erol, & Sut, 2016; Nogueira, et al, 2019). The findings reinforce the idea that marital circumstances are a critical factor in the perceived quality of life.

Further gender was also found to have a positive effect on the QoL of caregivers of patients of mental illness based on the current studies. The significant gender effect is consistent with the literature reporting gender differences in many social and health

outcomes. This indicates that there is a notable difference in reported quality of life between gender groups, which may be attributed to gender-specific roles, coping mechanisms, and varying levels of access to external support. Thus, within this sample group, gender is closely linked to self-reported wellbeing. Though their study is not linked directly to caregivers of patients with mental illness, it has been found in the Ghanaian context that older men turn to experience higher quality of life scores than women reflecting the gendered differences in social support, economic resources and access to health services (Lee, Xu, & Wu, 2020). Empirical studies have reported that marital advantages differ for men and women with gender moderating how marital transitions relate to well-being, but from the results (Table 4.13), the study found no supporting evidence to the effect that marital status effects differ statistically by gender in this sample (Hsu, & Barrett, 2020).

5.3. Impact of Sociocultural factors on Quality of Life.

The strong and statistically significant associations between ethnic background, educational level, religious background and QoL with strong correlation significance illustrates the robust relationships existing across the variables. The correlation between ethnic background and QoL (Table 4.16) is very strong indicating that ethnic identity of respondents constituted a major determinant of the perceived QoL within the sample. The finding reflects the Ghanaian context where ethnicity shapes social networks, create norms around mental illness and serve as sources of informal support to caregivers and patients alike. Among the Akan, Ga-Dangbe, and other groups, extended families and clans pool resources for childcare, financial support, and shared housing.

This collective approach reduces caregiver stress and improves their quality of life (Anum, Adjorlolo, Akotia, & Aikins, 2021). The observation is in line with prior findings by Grant, & Bowling, (2011) where it was observed that ethnic background significantly influenced quality of life scores among older adults. In Ghana, ethnic identity intersects with regional disparities in healthcare infrastructure, resulting in caregivers from underserved communities often reporting a lower quality of life, even when strong communal relationships are present.

Educational level equally showed a very strong positive correlation with QoL. This finding is well established in the body of literature that supports the association between caregivers' educational level and their QoL. Studies have found that lower level of education of caregivers tend to be linked to lower quality of life (Jeyagurunathan, et al, 2017; Cheng, et al., 2022). Other studies have found the opposite to be true where caregivers with higher level of education were found to experience higher quality of life (Oikonomou, Gkintoni, Halkiopoulos, & Karademas, 2024; Teixeira, et al., 2022; Casarez, Barlow, Iyengar, Soares, & Meyer, 2019).

Education enhances access to resources, health literacy and adoption of structured coping strategies which positively contributes to improved quality of life of caregivers. Formal education provides caregivers with essential knowledge and skills necessary for effectively navigating healthcare systems, advocating for patient needs, and managing stress. These competencies contribute significantly to improving the QoL among caregivers of patients with mental illness. However religious background appears to have a moderate influence on quality of life recording moderately strong correlation coefficient compared with the influence of ethnicity and education on QoL. The findings suggest that religious affiliation or spiritual orientation of participants

plays a meaningful role in shaping participants perception of well-being, but the strength of the relationship may vary depending on the cultural context. There exist conflicting results regarding the impact of religion and or spirituality on QoL with some past studies finding no significant statistical relationship (Caqueo-Urizar, et al., 2016), whiles other outcomes have found some level of relationships (Gonzalez-Rivera, & Rosario-Rodriguez, 2018). Religious background is often seen as a coping strategy adopted in managing the burden of caregiving. Research in Ghana shows that Christian and Muslim communities often act as first responders to mental health issues, with caregivers frequently seeking pastoral counseling for spiritual and communal support. However, some practices tend to disrupt medical treatment or increase caregiver stress (Bartlett, 2016).

Religion fosters hope, and help cultivate resilience, which aligns with physical and psychological domains of the WHOQoL, where meaning in life, inner peace, and hope is central. Research has found facets of faith, connectedness, and spiritual strength captured in a distinct coping strategy as a good predictor of the quality of life (Krageloh, Billington, Henning, & Chai, 2015). Future research on the overall impact of religion on the quality of life in general could combine the Brief-COPE and WHOQoL- SRPB approach to evaluate the relationship between QoL and religion.

5.4. Impact of Economic Factors on Quality of Life (QoL).

The outcome of the analysis indicates that both employment and household income have statistically significant effects on QoL. It was observed that the variability in QoL among caregivers were attributable to differences in employment status and household income levels. This clearly illustrate the role of the economic factors as major determinants of life satisfaction and wellbeing. These findings align with prior

studies by Nanor, Poku-Bonsi, & Adarkwa, (2018) where it was observed that objective quality of life indices varied considerably in urban Ghana on the back of differences in household income and other economic factors. Further the present study confirms the findings of Kim, & Park, (2015) who observed that lower household income was pointedly connected with inferior QoL, thus underscoring the importance of economic resources in health-related matters and overall wellbeing measures.

From the perspective of the Stress Process Model, the robust effects of both employment and income in the variations in quality of life underscore the view that a caregiver's position in the labour market and the economic hierarchy functions as forceful stressors and requires moderating factors to minimise its impact on stress. The high effect sizes observed in the analysis can be perceived as empirical evidence that economic inequalities expressed in employment status and income level are deeply intertwined with an individual's overall quality of life. Though the result of the analysis is compelling, it is important to note that the one-way ANOVA does not pinpoint which specific groups differ. Future research could deploy po-hoc comparison such as the Tukey's HSD to help identify specific pairwise differences. The high effect sizes, though impressive may also warrant further investigation into potential measurement issues in future studies.

5.5. Psychological Burden of Caregivers of Patients with Mental Illness

Analysis of the caregivers' burden using the DASS-21 Scale revealed that they experience moderate state of depression. The score indicates that caregivers exhibit moderate symptoms of depression, such as persistent low mood, decreased motivation, or feelings of hopelessness. These affective symptoms may influence daily activities and might require additional clinical evaluation. Although the

experiences may not be debilitating, it does imply significant emotional distress that may require provision of psychological support and lifestyle adjustments. In contrast, the anxiety score is indicative of an extremely severe level of anxiety, pointing to heightened and possibly debilitating levels of anxiety among participants. This finding suggest that caregivers may be reporting very high anxiety levels reflected in intense worry, panic sensations, fear, or physiological hyperarousal, and restlessness. Additionally, the stress score reflects severe level of stress among the participants, and suggest that participants experience chronic tension, irritability, overactivation of the sympathetic nervous system, and challenges in managing daily stressors. The outcome of the DASS 21 reflects participant profile that is emblematic of the Stress Process Model (SPM) which outlines that chronic exposure to pervasive stressors coupled with insufficient coping resources can manifest in multiple, overlapping negative emotional states which affect the QoL of caregivers of patients with mental illness.

The moderate depression score may reflect the long-term effects of sustained daily stressors, while the extremely severe anxiety score suggests the need for immediate response to acute stress events or compounded secondary stressors. In line with studies by Aneshensel, & Mitchell (2014), the findings underscore the relevance of evaluating both stress exposure and the intervening function of social support networks in future research findings. The findings corroborate prior studies on the internal reliability of the DASS 21. The notably high Cronbach's alpha values, along with the inter-item correlations presented in Table 4.3, align with previous evaluations of the tool (Ali, Alkhamees, Hori, Kim, & Kunugi, 2021; Moya, et al., 2022). Whiles the high values confirms the consistency of the measurement, it also raises discussions regarding the existence of potential item redundancy. Redundant items while bolstering reliability

coefficients may not contribute any unique information about the constructs of anxiety, stress, and depression. However, the Kaiser- Meyer Olkin(KMO) measure of sampling adequacy (0.974) though exceeded the recommended threshold (0.90) coupled with the Bartlett's test of sphericity being significant confirms that the observed correlation was not an identity matrix but a demonstration of the suitability of the data in confirming that power of the items in measuring the underlying latent constructs in a coherent manner. Future research could explore alternative diagnostics such as determinant of the correlation matrix, item level measures of sampling adequacy and anti-image correlation matrix confirmatory to determine if a simplified version of the DASS-21 could retain its strong psychometric properties while reducing potential redundancy.

5.6. Caregivers QoL based on WHOQoL BREF Analysis.

The study found that caregivers report moderate level of physical and psychological health domains of the WHOQoL. This suggest that whiles caregivers continue to manage their physical responsibilities, the demand of caregiving is likely contributing to diminishing quality of life due to physical strain. The psychological domain outcome reveal that caregivers may be experiencing stress, anxiety or emotional exhaustion. The findings align with prior study where caregivers of patients with mental illness were often found to experience physical burden due to prolonged caregiving duties (Karakas, & Pehlivan, 2020).

The findings relating to psychological domain is consistent with prior studies which found that psychological well-being was considerably compromised among caregivers of patients with mental illness (Ndikuno, Namutebi, Kuteesa, Mukunya, & Olwit, 2016; Beinart, Weiman, Wade, & Brady, 2012). The lower scores in social

relationships and environmental conditions highlight important areas of interest. Themes such as social isolation, reduced family interaction, and inadequate or lack of community engagement frequently appear in caregiving literature, supporting these findings (Venkateswaramurthy, Munavvar, Sudha, & Sambathkumar, 2022). Studies indicate that caregivers of psychiatric patients face reduced social engagement and heightened strain on personal relationships because of their caregiving duties.

Environmental challenges such as economic hardships, inadequate healthcare access, limited support services, and unsafe environments highlight the systemic issues that impact the quality of life of caregivers of patients with mental illness (Karakas & Pehlivan, 2020). These findings corroborate broader global research, which has shown that caregivers of patients with mental illness in low-resource environments suffer from both external stressors (including poor infrastructure) and internal strain (example unmet emotional needs), collectively impairing their overall well-being (Kusi, et al., 2021).

Further the disparities between the physical and psychological domains on one hand, and the social and environmental domains on the other hand may be reflective of limited community and institutional structures supporting caregiving. According to Alvariza et al, (2018) in societies where strong social capital or organised support services exist, caregivers tend to report more favourable outcomes across all the quality-of-life domains.

5.7. Impact of DASS on QoL and Coping Strategies.

The regression analysis performed illustrate a strong relationship between depression, anxiety, and stress on one hand and quality of life as measured by WHOQoL tool. In the initial model (table 4.17), it was observed that depression alone reported a

substantial percentage of the variance in the quality of life of caregivers suggesting that depressive symptoms within the sample are closely linked to how individuals assess their overall well-being. The inclusion of stress in model 2 increased the explained variance by a statistically significant improvement (table 4.17). This finding reinforces existing literature that identifies stress as an important though secondary determinant of quality of life and that even after controlling for depressive signs, stress provides additional predictive power attributable to its unique influence on physical and psychological functioning of individuals (Clavechillas, & Perez, 2020). The subsequent inclusion of anxiety (model 3) resulted in a modest increase in the explained variable. Though the contribution of anxiety is modest, its statistical significance suggests that beyond the common variance shared with depression and stress, anxiety uniquely informs quality of life outcomes among individuals.

The steeped increases in R-squared, together with highly significant ANOVA results across all the three models illustrate that whiles depression is the predominant predictor, both stress and anxiety serve to refine the model. The pattern of findings is consistent with systematic reviews of longitudinal studies in mental health, where overlapping yet distinct impacts of depression, stress and anxiety on QoL have been recognised (Hohls, Konig, Quirke, & Hajek, 2021).

It must however be noted that despite the compelling outcome of the analysis, the diminishing incremental variance when moving from stress to anxiety may suggests potential multicollinearity or that the constructs share substantial overlap. Given that depression, anxiety and stress are conceptually and statistically interrelated, there may be potential possibility that much of the variance captured by anxiety may already be accounted for by depression and stress. These findings warrant future research which

may use methods such as structural equation modelling (SEM) to unravel the direct and indirect effects among the variables. It is also important for future studies to note the high R-squared values observed and examined whether such levels of explained variance are specific to the sample or are influenced by factors such as measurement redundancy.

5.8. Coping Strategies and its mediating role in determining QoL.

5.8.1. Direct effects of Depression, Anxiety and Stress on QoL.

Based on the outcome of the SEM model, the study found substantive direct effects of psychological burden (i.e. depression, anxiety and stress) on QoL, and meaningful indirect pathways across avoidant and problem-focused coping strategies. The model accounted for a significant percentage (table 4.10) of the variances across the four QoL domains suggesting a strong predictive ability of the model. Depression showed a robust negative relationship with psychological QoL (see Table 4.9), and this suggest that higher depressive symptoms significantly undermine caregivers of patient with mental illness' perceptions of mental and emotional wellbeing. Depression was found to exert profound and detrimental direct effects on the QoL domains.

The model illustrated that anxiety was inversely related to physical QoL (see Table 4.9), indicating that anxiety symptoms are associated with worse physical health perceptions among caregivers of patients with mental illness. Stress also demonstrated comparable negative direct effect on the social domain of QoL. This implies that elevated levels of stress can erode the quality of interpersonal relationships and social integration among caregivers of patients with mental illness. The findings align with studies undertaken which found that elevated level of distress among caregivers is directly detrimental to the multiple facets of wellbeing (Yadav, et al., 2024).

5.8.2. Mediating Role of Coping Strategies.

The model showed that coping responses partly mediate the effects of psychological burden on QoL. Depression was found to be strongly related to avoidant coping strategies. This in turn resulted in lower predicted social QoL which further yielded negative indirect effect on QoL. Anxiety on the other hand was found to foster greater use of the problem-focused coping approaches and thus contributed to improved physical QoL. Though stress was positively associated with emotion-focused strategy, there was no meaningful indirect effects of the approach on stress.

The outcome aligns with the stress process model which conceptualises stress as arising from primary stressors, such as depressive and anxiety symptoms which further exacerbates secondary pressures. This ultimately influence health and wellbeing outcome of caregivers of patients with mental illness. The findings from the study aligns with similar findings by Yadav, et al., (2024) where using path analysis to map depression, anxiety, and QoL found both depression and stress as having a negative effect on QoL.

5.9. Overall Impact of the Independent Variables in Determining QoL.

The outcome of the regression model (Tables 4.18; 4.19 and 4.10) reflecting all the independent variables in a single model underscore the intertwined roles of economic status, psychosocial stressors and demographic features in shaping the overall well-being of caregivers. The WHO researchers have highlighted how rising stress levels, anxiety, and depression are interwoven with socioeconomic conditions to influence overall health outcomes (WHO, & Calouste Gulbenkian Foundation, 2014). In sum, the regression analysis confirms that economic and social stressors, along with psychological conditions such as anxiety, depression, and stress are deeply entangled

to individuals' quality of life as measured by WHOQoL. The exceptionally high R-squared and F-statistics echo a consensus in current research that a multifaceted approach that integrate economic, social, and psychological factors is necessary to understand and improve quality-of-life outcomes. In their studies, Piao, Xie, & Managi, (2024) observed the increasing trends in stress, anxiety and depression, and related socioeconomic and demographic factors in providing supportive evidence for the influence observed in this study. However, the betas recorded from the regression model offers varied directions of the relationship between the individual independent variable and quality of life of caregivers of patients with mental illness. The different directions of the relationships support warrant further studies in this area using difference approach. Future research may adopt a more diversified sampling approach to reduce clustering effect on the model.

CHAPTER SIX

CONCLUSIONS, RECOMMENDATIONS, STRENGTHS AND LIMITATIONS

6.1 Introduction

This chapter of the study summarises the key insights gleaned from the findings whiles offering targeted intervention measures in a form of recommendation to stakeholders with the view of enhancing the overall wellbeing of caregivers and patients alike. The chapter further addresses the strengths as well as the limitations of the study.

6.2. Conclusions

This study evaluated the psychological burden, and coping strategies deployed by caregivers of patients with mental illness and how the burden influences their QoL. The study evaluated the influence of psychological constructs such as depression, stress, anxiety, on one hand, and sociocultural and economic factors on QoL of caregivers. The study outcome has shown that caregivers of patients with mental illness experience psychological burden in a form of depression, anxiety and stress and this in-turn influences their QoL. The study has further shown that the QoL of caregivers is greatly influence by demographic factors (such as age, gender, and marital status), sociocultural factors including ethnicity, religious background, and educational level of caregivers, and economic factors (mainly employment status and household income).

The study highlighted the critical role of depression in influencing the quality of life although other psychological variables (stress and anxiety) statistically contributed to the overall QoL of caregivers. The study further reiterated the interwoven nature of these psychological factors with sociocultural and economic factors in determining the QoL of caregivers of patients with mental illness.

The outcome of the study showed that caregivers who have attained higher educational status and good household income tends to experience better QoL than lower income and unemployed caregivers. Further the essence of emotional and social support in caregiving cannot be overemphasised as the study showed that caregivers in marital settings and or obtain family assistance tended to gain emotional support which help improve their QoL than those with no marital support or family assistance.

Religion was found to be the most adopted coping strategy with majority of the participants deploying problem focused coping strategies. The least adopted coping strategy lies in substance use category with few participants deploying this maladaptive approach in dealing with the burden of caregiving. The study further illustrates the mediating role of coping strategies in managing caregivers' psychological burden. From the study, it was evident that depression correlated with lower psychological aspects of quality of life but correlated positively when avoidant coping strategy is adopted.

Again, it is evident that depression indirectly reduces the social aspect of quality of life of caregivers as illustrated in the SEM outcome. The study has further shown that anxiety though has moderate negative association with quality of life, it is evident that it has though small, a positive indirect effect on quality of life through problem-focused coping strategy. Finally, the study has shown that emotion-focused coping strategy has minimal moderating effect on stress both directly and indirectly.

6.3. Recommendations.

The following are recommended to public health practitioners, policy makers, caregivers, hospital authorities and governments based on the outcome of the analysis and discussions above.

6.3.1. Caregivers of Mentally Ill Patients

- Prioritize early detection and management of depression and stress. Train caregivers to recognize early symptoms and seek timely professional help. Frontline mental health workers should provide training, implement routine mental health checks, and promote open conversations for early detection and professional assistance. Caregivers may be assisted to deploy low intensity interventions such as talk therapy, peer support, or guided self-help in early stages of caregiving.
- Foster supportive home environments: Chronic stress can worsen depression's effect on caregivers' QoL. To mitigate this, caregivers should create routines that offer emotional support and reduce psychological triggers. Encourage open, non-judgmental, communication, celebrate small achievements, establish regular meal and sleep schedules, and minimize household changes to create a congenial environment.

6.3.2. Mental Health Care Practitioners.

- Integrate demographic sensitivities into assessment and care planning. Considering the connectedness between QoL and demographic factors, care practitioners are encouraged to include demographic assessments in their process. This allows them to customize interventions to address age-specific developmental challenges and gender-related psychosocial stressors.
- Strengthening Psychosocial Support Systems through Relationship Centered-Interventions. Practitioners should focus on interventions that address relationship stability to improve caregivers' well-being. Counselling, family

therapy, and interpersonal skills programs can enhance the quality of life for both caregivers and patients.

- designing of preventive programmes using the Life- Course Approach. The interconnected demographic correlations indicate that quality of life is linked to life stages and social roles. Practitioners should consider interventions like psychoeducation for various age groups or support networks for single, married, or widowed caregivers to foster resilience and psychological well-being throughout life.

6.3.3 Policy Makers and Mental Healthcare Providers.

- Design culturally responsive mental health policies. The strong link between ethnic background and quality of life highlights the importance of cultural identity in well-being. Caregiving policies should promote culturally sensitive care, incorporating local traditions, language preferences, and community structures to facilitate acceptance.
- Utilize Faith-based Networks and Education to Deliver Psychosocial Support. Given the connections between religious background, education and quality of life of caregivers, policymakers could consider collaborating with religious institutions to provide services in familiar, trusted environments. This approach may reduce caregiver burdens while providing support to both caregivers and patients. Additionally, investing in equitable and inclusive education can underpin mental health interventions, including caregiving, particularly in underserved regions of Ghana.
- Ensure diversity and inclusion in mental healthcare. Systems should include ethnic and religious diversity in workforce training, service delivery, and public

messaging. This can enhance service relevance for diverse groups. Authorities should collect data on ethnicity, education, gender, age, and religion to identify disparities and target interventions effectively.

6.3.4 Governments and Stakeholders.

- Integrate Mental Health Screening in Primary Health Care Systems. Routine screening for depression, anxiety, and stress at the community level can lead to early diagnoses and potentially reduce the influence on QoL among caregivers and the broader population. Including mental healthcare in primary health care systems could help minimize social stigma and provide a supportive platform, thus alleviating some of the burdens associated with caregiving.
- Develop and scale community-based mental health services. The government should implement measures to provide affordable, accessible, and culturally competent mental health services to vulnerable populations, particularly in underserved communities. Additionally, policies across education, employment, housing, and other areas should be designed to incorporate mental health outcomes.

6.4 Strengths of the Study.

The study of psychological burden and the coping strategies adopted, and caregivers' quality of life offers crucial insights that not only improve caregiver support but also strengthens mental health systems across the mental healthcare delivery in the country. Key strengths of the study among others included:

- The use of standardised instruments such as DASS- 21, Brief-COPE and WHOQoL BREF ensured reliable evaluation of caregivers' psychological

burden, their coping strategies and QoL, thus facilitating comparison with international research.

- High response rates and complete data from in-person interviews by trained mental-health professionals ensured strong participation and minimal missing data. Additionally, a diverse and adequately sized sample of caregivers across various demographics enhanced the research's generalisability.
- The study prioritized ethical standards and participant welfare by obtaining institutional review board approval and getting informed consent. This approach ensured transparency and trust between participants and the researcher, thereby facilitating the data collection process.
- The contribution to policy and practice directly informs caregiver support initiatives, resource allocation, and training programmes at the hospital, with potential scalability to other parts of the country. Additionally, it serves as a foundation for future research by identifying key burden predictors and coping gaps and lays the groundwork for longitudinal interventions and comparative analyses across different psychiatric settings.

6.5 Limitations.

The perceived limitations of the study are as follows.

- The study may have experienced methodological constraints. The absence of a control or comparison group (e.g., caregivers of patients with physical illness) limits understanding of whether the observed psychological burdens are specific to mental health contexts or common across all healthcare settings.
- Measurement and reporting bias may have been encountered. The use of standardised tools may have led to social-desirability and recall biases. Additionally, cultural nuances in how caregivers interpret and respond to

standardised questionnaires may have affected the validity of scores in this context.

- There is a potential of insufficient sampling approach and generalisability of findings. The single-site recruitment of participants at the hospital has the tendency of reducing external validity and thus findings may not be transferrable to other parts. Further there is also the tendency of underrepresenting certain caregiver subgroups (example varied language, professional paid caregivers, caregivers with disabilities, single parent or caregivers heading families, etc). this may have skew results toward the experiences of most of the population.
- The analysis may have been affected by potential confounding factors such as the severity of patient illness, duration of caregiving, and caregivers' own mental health history, were not fully integrated into the models. Furthermore, cross-sectional correlations do not establish causality, and that high burden may have influenced coping styles, and coping strategies may have potentially moderated perceived burden.
- Resource constraints prevented the incorporation of qualitative interviews that could have enriched the understanding of coping mechanisms and support needs. The study did not account for informal support networks outside the hospital (i.e., extended family members, faith communities, etc.), which constitute an important aspect of caregiving in Ghana.

7.0. Future Studies

Future studies in this area may consider deploying the mixed method technique to enhance the assessment of the psychological burden, coping strategies and the QoL of caregivers of patients with mental illness. This would provide scale and depth which may help uncover culturally embedded coping resources and other unmet needs of caregivers in Ghana.

Further future studies may undertake the study at multi-sites and deploy rural urban dichotomy for better comparative analysis. Caregivers in the cities may have different experiences compared to caregivers in the districts and community clinics. This approach may reveal the structural barriers and diverse support ecosystems required by caregivers.

Finally future studies may consider disorder- specific comparative research. As mental illnesses differ in severity, a fit-all interventions approach may not result in the desired outcomes. Thus, delving into specific disorders may support the idea of designing specific caregiving strategies for caregivers.

APPENDICES

APPENDIX I: REFERENCES

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APPENDIX II: QUESTIONNAIRES

UNIVERSITY OF GHANA

SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF SOCIAL & BEHAVIOURAL SCIENCE

SURVEY QUESTIONNAIRES

These questionnaires examine the psychosocial factors associated with the quality of life of caregivers of patients with mental illness at the Accra Psychiatric Hospital in the Korle Klottey Municipal Assembly of the Greater Accra Region. It forms part of studies towards the satisfaction of the requirements for the award of a Master of Public Health degree, and your participation is critical for the success of the study.

The responses to the questionnaires below would be kept in a confidential manner and would not be traceable to you as an individual participant. All information provided is for academic purposes only and your identity would not be disclosed to any person or institutions or agency of the state. There are no right or wrong answers to the questions below. My objective for this exercise is to evaluate the psychosocial factors associated with the quality of life of caregivers of patients with mental illness.

PART I: DEMOGRAPHIC PROFILE

1. **Gender:** a) Male b) Female c) prefer not to disclose
2. **Age Range** a). 18-25 b) 26-35 c) 36-45 d) 46-55 e) 56-65 f). 66+ years.
3. **Marital Status:** a) Married b) Widowed c) Unmarried d) Divorced e) Others (Please specify) …….
4. **Level of Education**

a) Basic School b) Secondary level c) Vocational Training d) University level

e) Professional Certification f) Uneducated g) Others (please specify) …….

5. **Employment Status**

a) Employed b) Unemployed c) Self-employed d) Retirement e) Never been employed

6. **Religious Background:**

a) Christian b) Traditionalist c) Muslim d) Others please specify …….

7. **Ethnic Origin or Tribe**

a) Akan b) Mole-Dagbon c) Ewe d) Ga-Dangme e) Guan f) Mande g) Grusi h) Others please specify …….

8. **Annual Household Income**

a) Less than GHS10,000.00. b) GHS10,001 – GHS 50,000.00 c) GHS 50,001.00 – GHS100,000.00 d) GHS100,001- GHS199,999.00. e) 200,000.00 -299,999.00 f) GHS 300,000.00 and above.

PART II: DASS-21 for Depression, Anxiety and Stress

This Part of the questionnaire uses the depression, anxiety, and stress scale (DASS-21) to assess the impact of these variables (i.e. depression, anxiety, and stress) on the quality of life of caregivers of mentally ill patients.

Depression, Anxiety and Stress				
Code	Questions	Responses	Answer	Memo

WK-1	In the recent one year, have you felt any sadness or despair for 2 weeks or more consecutively that it had impact on daily life?	1- Yes 2- No 3- Don't Know 4- No responses		If no skip
WK-2	In recent one year, have you gone to a health center or CHPS to receive counseling for sadness or despair?	1- Yes 2- No 3- Don't Know 4- No responses		
WK-3	I found it hard to wind down	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		Stress
WK-4	I was aware of the dryness of my mouth	1) Did not apply to me at all		

		2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		
WK-5	I couldn't seem to experience any positive to do things	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		Depression

WK-6	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		Anxiety
WK-7	I found it difficult to work up the initiative to do things	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know		Depression

		6) No response		
WK8	I tended to over-reach to situations	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		Stress
WK9	I experienced trembling (e.g. in the hands)	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time		Anxiety

		5) Don't know 6) No response		
WK10	I felt that I was using a lot of nervous energy	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		Stress
WK11	I was worried about situations in which I might panic and make a fool of myself	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time		Anxiety

		4) Applied to me very much or most of the time 5) Don't know 6) No response		
WK12	I felt that U had nothing to look forward to	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		Depression
WK13	I found myself getting agitated	1) Did not apply to me at all 2) Applied to me to some degree or some of the time		Stress

		3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		
WK14	I found it difficult to relax	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		
WK15	I felt downhearted and blue	1) Did not apply to me at all		Depression

		2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		
WK16	I was intolerant of anything that kept me from getting on with what I was doing	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		Stress

WK17	I felt I was close to panic	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		Anxiety
WK18	I was unable to become enthusiastic about anything	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know		Depression

		6) No response		
WK19	I felt I wasn't worth much as a person	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		Depression
WK20	I felt that I was rather touchy	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time		Stress

		5) Don't know 6) No response		
WK21	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time 4) Applied to me very much or most of the time 5) Don't know 6) No response		Anxiety
WK22	I felt scared without any good reason	1) Did not apply to me at all 2) Applied to me to some degree or some of the time 3) Applied to me to a considerable degree of a good part of time		Anxiety

		4) Applied to me very much or most of the time 5) Don't know 6) No response		

PART III: Brief -COPE (Coping Orientation to Problems Experienced Inventory)

This Part of the questionnaires adopts the coping orientation to problems experienced inventory to assess the coping strategies deployed by caregivers of patients with mental illness and how this help improve the quality of life of caregivers.

Questions	I have not been doing this at all	I have been doing this a little bit	I have been doing a medium amount	I have been doing this all the time
I've been turning to work or other activities to take my mind off things				
I've been concentrating my efforts on doing something about the situation I'm in				

I've been saying to myself "this isn't real".				
I've been using alcohol or other drugs to myself feel better.				
I've been using alcohol or other drugs to myself feel better.				
I've been getting emotional support from others.				
I've been giving up trying to deal with it.				
I've been taking action to try to make the situation better.				
I've been refusing to believe that it has happened.				
I've been saying things to let my unpleasant feeling escape.				
I've been getting help and advice from other people.				

I've been using alcohol or other drugs to help me get through it				
I've been trying to see it in a different light, to make it seem more positive.				
I've been criticizing myself.				
I've been trying to come up with a strategy about what to do.				
I've been getting comfort and understanding from someone.				
I've been giving up the attempt to cope.				
I've been looking for something good about what is happening.				
I've been making jokes about it.				
I've been doing something to think about it less, such as going to movies, watching				

TV, reading, daydreaming, sleeping, or shopping.				
I've been accepting the reality of the fact that it has happened.				
I've been expressing my negative feelings				
I've been trying to find comfort in my religion or spiritual beliefs.				
I've been trying to get advice or help from other people about what to do.				
I've been learning to live with it.				
I've been thinking hard about what steps to take.				
I've been blaming myself for things that happened.				
I've been praying or meditating.				

I've been making fun of the situation.				

PART IV: WHOQoL-BREF (World Health Organisation Quality of Life-BREF)

This part of the questionnaires assesses the Quality of Life (QoL) of caregivers of mentally ill patients. The assessment seeks to evaluate how caregivers of mentally ill patients feel about their quality of life in terms of health (in the form of physical health, psychological health, social relationships, and the environment).

S/N	Description	Very Poor	Poor	Neither	Good	Very good
1	How would you rate your quality of life?					
		V. Dissatisfied	**Dissatisfied**	**Neither**	**Satisfied**	**Very Satisfied**
2	How satisfied are you with your health?					
The following questions ask about **how much** you have experienced certain things in the last four weeks.						

		Not at all	Little	Moderate	Very Much	Extreme
3	To what extent do you feel that (physical) pain prevents you from doing what you need to do?					
4	How much do you need any medical treatment to function in your daily life?					
5	How much do you enjoy life?					
6	To what extent do you					

	feel your life to be meaningful?					
7	How well are you able to concentrate?					
8	How safe do you feel in your daily life?					
9	How healthy is your physical environment?					
The following questions ask about how completely you experience or were able to do certain things in the last four weeks.						
		Not at All	**A Little**	**Moderately**	**Mostly**	**Completely**
10	Do you have enough energy for everyday life?					

11	Are you able to accept your bodily appearance?					
12	Have you enough money to meet your needs					
13	How available is the information that you need in your day-to-day life?					
14	To what extent do you have the opportunity for leisure activities?					
		Very Poor	**Poor**	**Neither**	**Good**	**Very Good**

15	How well are you able to get around?					
The following questions ask you to say how good or satisfied you have felt about various aspects of your life over the past four weeks.						
		V. Dissatisfied	**Dissatisfied**	**Neither dissatisfied nor satisfied**	**Satisfied**	**Very Satisfied**
16	How satisfied are you with your sleep?					
17	How satisfied are you with your ability to perform your daily living activities?					
18	How satisfied are you with your capacity for work?					

19	How satisfied are you with yourself?					
20	How satisfied are you with your personal relationships?					
21	How satisfied are you with your sex life?					
22	How satisfied are you with the support you get from your friends?					
23	How satisfied are you with the conditions of your living place?					
24	How satisfied are you with your access to					

	health services?					
25	How satisfied are you with your transport?					
	The following question refers to how often you have flet or experienced certain things in the last four weeks?					
		Never	**Seldom**	**Quite Often**	**Very Often**	**Always**
26	How often do you have negative feelings such as blue mood, despair, anxiety, and depression?					

APPENDIX III

Regression Analysis of QoL and DASS 21 Subscales

(Additional Regression Data linked to Table 4.17)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.973[a]	0.947	0.947	5.98013	0.947	6893.279	1	382	0
2	.978[b]	0.956	0.956	5.47105	0.009	75.398	1	381	0
3	.979[c]	0.958	0.957	5.37768	0.002	14.345	1	380	0

a. Predictors: (Constant), Depression

b. Predictors: (Constant), Depression, Stress

c. Predictors: (Constant), Depression, Stress, Anxiety

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	246517.514	1	246517.51	6893.279	.000[b]
	Residual	13661.087	382	35.762		
	Total	260178.602	383			
2	Regression	248774.361	2	124387.18	4155.605	.000[c]
	Residual	11404.24	381	29.932		
	Total	260178.602	383			
3	Regression	249189.219	3	83063.073	2872.224	.000[d]

	Residual	10989.382	380	28.919		
	Total	260178.602	383			

a. Dependent Variable: WHOQoL

b. Predictors: (Constant), Depression

c. Predictors: (Constant), Depression, Stress

d. Predictors: (Constant), Depression, Stress, Anxiety

APPENDIX IV

PARTICIPANT'S INFORMATION FORM

TITLE OF STUDY: PSYCHOLOGICAL BURDEN, COPING AND QUALITY OF LIFE OF CAREGIVERS OF PATIENTS WITH MENTAL ILLNESS AT THE ACCRA PSYCHIATRIC HOSPITAL

PARTICIPANT'S STATEMENT

I acknowledge that I have read or have had the purpose and contents of the Participants' Information Sheet. I have read the Participant's Information Sheet, and all questions satisfactorily explained to me in a language I understand (English, Ga, and Twi). I fully understand the contents and any potential implications as well as my right to change my mind (i.e. withdraw from the research) even after I have signed this form. I voluntarily agree to be part of this research.

Name of Participant……

Participants' Signature …….. OR Thumb Print……

Date ……

INVESTIGATOR'S STATEMENT AND SIGNATURE

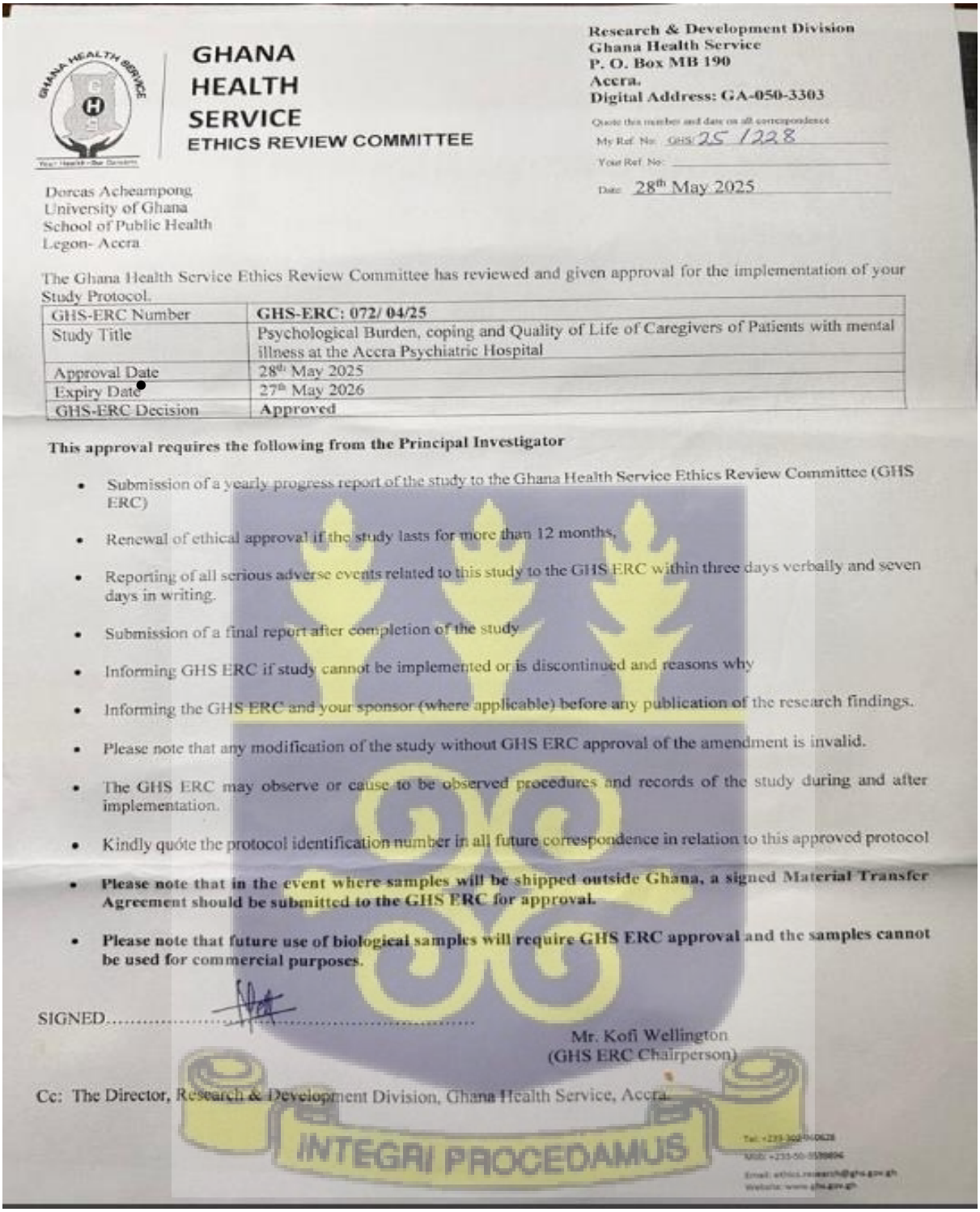
I certify that the participant has been given ample time to read and learn about the study. All questions and clarifications raised by the participant have been addressed.

Researcher's name……

Signature ……Date……

APPENDIX V

ETHICAL CLEARANCE



GHANA HEALTH SERVICE
ETHICS REVIEW COMMITTEE

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra.
Digital Address: GA-050-3303

Quote this number and date on all correspondence
My Ref. No: GHS/ 25 /1228
Your Ref. No:
Date: 28th May 2025

Dorcas Acheampong
University of Ghana
School of Public Health
Legon- Accra

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	**GHS-ERC: 072/ 04/25**
Study Title	Psychological Burden, coping and Quality of Life of Caregivers of Patients with mental illness at the Accra Psychiatric Hospital
Approval Date	28th May 2025
Expiry Date	27th May 2026
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of a yearly progress report of the study to the Ghana Health Service Ethics Review Committee (GHS ERC)
- Renewal of ethical approval if the study lasts for more than 12 months.
- Reporting of all serious adverse events related to this study to the GHS ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing GHS ERC if study cannot be implemented or is discontinued and reasons why
- Informing the GHS ERC and your sponsor (where applicable) before any publication of the research findings.
- Please note that any modification of the study without GHS ERC approval of the amendment is invalid.
- The GHS ERC may observe or cause to be observed procedures and records of the study during and after implementation.
- Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol
- **Please note that in the event where samples will be shipped outside Ghana, a signed Material Transfer Agreement should be submitted to the GHS ERC for approval.**
- **Please note that future use of biological samples will require GHS ERC approval and the samples cannot be used for commercial purposes.**

SIGNED.....

Mr. Kofi Wellington
(GHS ERC Chairperson)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra.

INTEGRI PROCEDAMUS