UNIVERSITY OF CAPE COAST

SELF-ESTEEM, RESILIENCE AND QUALITY OF LIFE OF PERSONS WITH RHEUMATOID ARTHRITIS AT KORLE-BU TEACHING HOSPITAL, GHANA

BY

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Thesis submitted to the Department of Education and Psychology of the Faculty of Educational Foundations, College of Education Studies, University of Cape Coast, in partial fulfillment of the requirements for the award of Master of Philosophy degree in Clinical Health Psychology

NOVEMBER 2020

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature……Date……

Name: ……

Supervisor's Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Principal Supervisor's Signature …….. Date……

Name: ……

Co-Supervisor's Signature…… Date…….

Name: ……

ABSTRACT

The study aimed to investigate the relationship between self-esteem, resilience, and quality of life of persons with rheumatoid arthritis. A cross-sectional survey was the design used for the study. Data were collected from 117 persons receiving treatment for rheumatoid arthritis at Korle-Bu Teaching Hospital using a purposive and convenient sampling technique. Rosenberg Self-esteem scale, Connor-Davidson Resilience scale (CD-RISC-10), and World Health Organisation Quality of Life scale (WHOQOL-Bref) were the scales used for the data collection. The findings from the study indicated that self-esteem, resilience, and quality of life levels in the participants were moderate to high. The results also revealed that self-esteem and resilience positively related to the quality of life of patients with rheumatoid arthritis. The study also found resilience to be a significant mediator in the relationship between self-esteem and quality of life of persons with rheumatoid arthritis at Korle-Bu Teaching Hospital. It was concluded that a relationship exists between self-esteem, resilience, and quality of life. The study, therefore, recommended that policy makers on the treatment of rheumatoid arthritis and medical practitioners should not only focus on the physiological treatment of arthritis patients but should take into consideration their psychological and mental health since these could also affect the progression of the disease.

ACKNOWLEDGMENTS

This work would probably not have been accomplished without the academic, moral, material, and financial support of diverse individuals and groups of people. I am very grateful to my parents and family for supporting me to pursue this dream.

I wish to acknowledge my supervisors, Dr. Mark O. Amponsah and Dr. Lebbaeus Asameni for their academic and intellectual support and guidance throughout the study. Also not to be forgotten are my lecturers in the Department of Education and Psychology.

My appreciation goes to the management and staff of the rheumatoid arthritis unit of the Korle-Bu Teaching Hospital for their support of the study. My special thanks go to the following persons for their ceaseless and diverse assistance to the study: Mr. John Ahadjie, Mr. Karl Osei, and Mr. Prince Atorkey.

DEDICATION

To my family, especially my parents, who had to endure a lot of challenges in other to see me through.

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CHAPTER ONE

INTRODUCTION

This chapter provides detailed background information on what rheumatoid arthritis is, its prevalence from a global perspective to the Ghanaian context, and its psychological effects. The background information primarily throws light on variables such as self-esteem and resilience and how they impact the quality of life of patients with rheumatoid arthritis. This is followed by the statement of the research problem, the purpose of study, objectives of the study, research questions, hypotheses, the significance of the study, delimitation, and limitations of the study, the definition of terms, and the organisation of the study.

Background to the Study

Non-communicable diseases account for more than half of the global burden of disease (Benziger et al., 2016). Musculoskeletal disorder, which is considered a non-communicable disease is a key alarming health condition in ageing across the world and is the second-highest cause of years lived with disability in low and middle-income countries (LMIC) with its prevalence still on the rise (Brennan-Olsen et al., 2017). Significantly contributing to the global disability burden of the musculoskeletal system are arthritic diseases (Brennan-Olsen et al., 2017).

Musculoskeletal disorders are conditions that can affect the muscles, bones, and joints (Luttmann et al., 2003). They are the leading contributor to disability worldwide and are not just conditions of old age – but are prevalent

across the life course. One out of five people (including children) suffer from a painful and disabling musculoskeletal condition (Luttmann et al., 2003). Musculoskeletal conditions restrict dexterity and movement significantly, leading to retirement from work early in life, reduction in accumulated wealth, and reduction in ones' ability to take part in social activities (Gaskell & Williams, 2019). The most common and disabling musculoskeletal conditions are back and neck pain, fractures associated with bone fragility, injuries, and arthritis (de Leon Arabit, 2019; Woolf & Pfleger, 2003).

Arthritis is an inflammatory disorder affecting one or more joints of the body with varying causal factors, including infections, autoimmune disorders, ageing, and others (Samir, 2018). Irrespective of the cause, arthritis involves the breakdown of cartilage, which protects surfaces of bones at the joints, leading to the loss of smooth glide at the joint during movement and this frictional rubbing results in pain, swelling, and stiffness at the joint and eventual muscles strain due to difficulty moving the joint (Usenbo et al., 2015). There are many types of arthritis, with fibromyalgia, rheumatoid arthritis, osteoarthritis, juvenile, ankylosing spondylitis, psoriatic arthritis, gouty arthritis being the main types (Usenbo et al., 2015). According to World Health Organisation, rheumatoid arthritis is one of the commonest and disabling types of arthritis (Cadena et al., 2003; Woolf & Pfleger, 2003). Since the causes of rheumatoid arthritis are still not known as well as cures not discovered yet, all treatments and therapies which are applied so far are intended only to reduce symptoms and delay the progress of the disease (Guo et al., 2018). The onset of rheumatoid arthritis arises usually between the age of 30 and 50, but may also occur at any other age. Women are three times

more affected by it than men and people who are less educated and with fewer socioeconomic resources experience more problems emerging as a result of rheumatoid arthritis (Guo et al., 2018).

The majority of research examining the prevalence of arthritis has been undertaken in higher-income countries but few studies have been conducted in low and middle-income countries (Brennan-Olsen et al., 2017). Data from the 2010 global burden of disease study provides some evidence that Low or Middle-Income Countries (LMICs) may have greater arthritis prevalence than higher-income countries (Brennan-Olsen et al., 2017). A specific figure of prevalence rate in Africa is unknown however sub-Saharan countries have a prevalence of rheumatoid arthritis ranging from 0.05% to 0.9% (Slimani & Ladjouze-Rezig, 2014).

Globally, rheumatoid arthritis has been reported to have a 1% prevalence rate with some countries showing reduced prevalence (Gibofsky, 2012). In sub-Saharan African countries, the prevalence of rheumatoid arthritis ranges from 0.05% to 0.9% (Slimani & Ladjouze-Rezig, 2014). The exact figure for prevalence in Ghana is unknown however, a study conducted in Korle-Bu Teaching Hospital (Ghana's largest hospital) found that 63% of autoimmune diseases are rheumatoid arthritis cases (Ampofo et al., 2016). Rheumatoid arthritis is an autoimmune disease with unknown aetiology which has symptoms such as joint pain, swelling, stiffness, and the progressive destruction of bones and joints (Liu et al., 2017). It is autoimmune in that, the immune system mistakes the body's cells for foreign invaders and repeatedly attacks healthy tissues (Hirohata, 2000). It is chronic and may cause disability as the disease progresses (Kurt et al., 2013). It has been difficult to prove the

occurrence rate of rheumatoid arthritis due to its wide variety of symptoms patients present while seeking medical help and the associated delay in seeking medical help (Gibofsky, 2012).

Not only does rheumatoid arthritis commonly affect the joints of the hand, feet, wrists, elbows, knees, and ankles but most people experience fatigue, loss of appetite, and a low-grade fever (Hirohata & Sakakibara, 2000). The disease usually begins in the small joints of the hands and the feet, spreading later to the larger joints (Suresh, 2004). Aside from all the physical effects, rheumatoid arthritis has on patients; it has a psychological impact as well. The irreversibility of its damage may cause psychological problems like negative thoughts, depression, and anxiety. These negative thoughts trigger more fear and anxiety, which in turn causes neural pathways in the brain to perceive pain (Lumley et al., 2011). In the case of rheumatoid arthritis, the severity of pain is due to the degree of inflammation, the progress of joint damages, and deviations, although these symptoms could be improved by treatments, there could be temporary pain relief which could be present to a high level (Heidari, 2011).

In rheumatoid arthritics, the pain becomes a constant part of the lives of affected people. When at rest, the joints are swollen, sensitive to pressure, and warm, and mostly underlie the so-called morning stiffness (Punzi et al., 2010). The latter complicates affected people's movement abilities, especially in the morning. Once the joint structures are partly damaged, the pain also appears during exercising and becomes chronic. This sensation restricts people's activities and the affected joints get conserved by avoiding everyday activities as far as possible.

However, afflicted people fend mostly for themselves because physicians still rarely delve into the mental discomfort of patients, such as great complaints of fatigue, loss of appetite and energy, stress, and social isolation (Hewlett et al., 2005). These multifaceted non-physical symptoms related to rheumatoid arthritis impair all areas of life and thus the quality of life (Szotek, 2010). The destruction of joints leads to pain and immobilization, which further reduces several activities like walking, playing around with children, and personal hygiene to a minimum. Moreover, the pain related to rheumatoid arthritis leads to frustration and feelings of losing control of the situation. Also, fatigue occurs and such people draw back more and more which can consequently result in restrictions in social lives. These restrictions can assume broad proportions in people's life. It can impair their leisure activities with friends, occupation, as the people affected, cannot further fulfill their common workload and the ability to comply with social roles which also form restrictions for other family members (Gignac et al., 2011; Hewlett et al., 2005). These symptoms experienced by patients with rheumatoid arthritis may affect their quality of life. Quality of life is a concept that differs from health, but is related since one's health can be determined by his or her quality of life.

The term quality of life encompasses one's behaviour, functional status, living conditions, perception, symptoms, and lifestyle. Quality of life is defined as a conscious cognitive judgment about satisfaction with life (Farshi et al., 2013). Accordingly, when a person becomes chronically ill, physical symptoms, prognosis, treatment regimen, and related issues can have significant effects on the overall perception of life satisfaction (Rejeski & Mihalko, 2001). The presence of chronic illness is related to unhappiness and

psychological distress, resulting in low quality of life for both men and women (Walker, 2007). A study conducted by Haroon et al. (2007) found out that quality of life is significantly lower in patients with Rheumatoid arthritis than in the normal population. However, many studies have found that chronic patients with similar diseases and treatment statuses have significantly different quality of life (Lawford & Eiser, 2001; Tian & Hong, 2014). Studies have shown that quality of life decreases as a result of low self-esteem which is due to loss of self-control in patients with chronic diseases (Hemati & Kiani, 2016). This suggests self-esteem as a contributing factor to quality of life.

Self-esteem, generally, refers to an individual's overall evaluation of his/her worth as a person, of his/her capabilities, or generalized feelings of self-acceptance, goodness, and self-respect (Cast & Burke, 2002). Patients with chronic illness present psychological problems which cause changes in their self-esteem, since their perception of body image are related to this new condition of life (Maria de Nazaré de Souza Ribeiro* et al., 2017). It has been reported that the levels of self-esteem and body image affect the resistance against psychological and physiological diseases; therefore, individuals with low self-esteem and body image refuse positive feedback and do not collaborate in treatment (Jorge et al., 2010).

Psychologists believe that resilience is the main factor that causes patients with similar conditions to have different perceptions of their quality of life (Richardson, 2002; Yi et al., 2008). Resilience is a construct that refers to the human being's capacity to respond positively to adverse situations they face, even when these pose a potential risk to his/her health or development (Cal, Sá, Glustak, & Santiago, 2015). The resilience approach focuses on

identifying the strengths within a person, and in his or her social world that permit successful adaptation (Evers et al., 2011). Although it may seem logical to think that the presence of risk implies the absence of resilience, an advanced concept of this field has to recognize the individual and his or her family's role in developing resilience (Evers et al., 2011).

Resilience is also defined using constructs such as coping self-efficacy, hope/optimism, active coping, and social support (Skoch, 2003). According to Zautra et al. (2010), resilience brings about the evidence of new learning, growth, and development as consequences of adversity, allowing the individual to be transformed by going through the experience. Previous studies suggest that protective factors involved in resilience include optimism and positive mood, self-esteem, self-care, independence, social support and reduced anxiety. These protective factors are related to health including biologic processes such as neuroendocrine and immune function (Zautra et al., 2010). This can therefore affect the quality of life of people living with rheumatoid arthritis. Studies have found that resilience can strongly predict patients' fatigue from treatment and shorten the time of bodily function recovery and patients with good resilience are able to treat their disease correctly and maintain a relatively good psychological state, thereby resulting in a better quality of life (Hou et al., 2010; Strauss et al., 2007; Wenzel et al., 2002).

Self-esteem is often viewed as an important part of resilience (Friborg et al., 2005; Schei et al., 2018; Skrove et al., 2013). Resilience is used to describe individual differences in the ability to overcome stress or adversity (Rutter, 2006). Thus, resilience plays an important role in an individual´s

psychological outcomes when put under stress (Shastri, 2013). It is believed that the development of resilience abilities involves the activation of their self-esteem abilities (de Souza Ribeiro et al., 2017). By interfering in affective, social, and psychological conditions of individuals, self-esteem becomes an indicator, or a meter, of mental health, well-being, and quality of life. Resilient characteristics show sufficient evidence that there is a close relationship with self-esteem, because it allows for a better adaptation of the individual to the environment, besides providing a greater capacity to withstand pressures and face situations (de Souza Ribeiro et al., 2017)

The preceding paragraphs indicate that rheumatoid arthritis is a serious health problem in Ghana, which threatens the psychological health of patients due to necessary changes in the course of the disease and its treatments, which further result in diminished quality of life (Baloglu et al., 2015; Chiu et al., 2014; Kingsley et al., 2011; Sasane et al., 2016). There is therefore the need to help improve self-esteem and resilience to increase the quality of life of rheumatoid arthritis patients.

Statement of the Problem

Data on the prevalence rate of arthritis in Ghana is generally scarce. A study conducted in Ghana on the prevalence of autoimmune disorders found out 63% of autoimmune patients are rheumatoid arthritics (Ampofo et al., 2016). This is alarming because arthritis is a contributor to the global disability burden of the musculoskeletal system. This would in turn affect the socio-economic status of the country since most patients with rheumatoid arthritis are unable to work as they used to, affecting the country's gross domestic product.

As stated in the background to the study, studies have shown how rheumatoid arthritis affects the quality of life (Baloglu et al., 2015; Chiu et al., 2014; Martinec et al., 2019). This is due to some symptoms of Rheumatoid arthritis like the pain, which affects afflicted person's lives as a constant companion, the swollen joints, sensitivity to pressure and warmth which mostly underlie the so-called morning stiffness, complicating movement abilities, especially in the morning, partly damaged joint structures with the pain appearing during exercise and becomes chronic. This sensation constrains people's activities painfully and the affected joints get conserved by avoiding everyday activities as far as possible (Szotek, 2010). This leads to job instability, therefore, causing loss of job permanently and financial crisis later, not forgetting the high cost for treating rheumatoid arthritis, therefore leading to reduced quality of life.

It has also been found that a reverse relationship exists between the quality of life and self-esteem (ANA-MARIA, 2015; MacLean & Kermode, 2001; Tavares et al., 2016). This presupposes that having low quality of life as a result of having rheumatoid arthritis leads to low self-esteem. However, some studies have found that chronic patients with similar diseases and treatment status have significantly different quality of life which some psychologists suggest resilience as the cause of this phenomenon (Lawford & Eiser, 2001; Richardson, 2002; Tian & Hong, 2014; Yi et al., 2008). From the above, it can be concluded that dealing with a chronic disease like rheumatoid arthritis depends not only on treatment but also on personal characteristics like self-esteem, coping strategies or resilience, and quality of life. A study by Dubois, Lopez, Beale, Healy, Boehm, and Huffman in 2016 found that these

positive constructs have a positive effect on an individual's health (DuBois et al., 2015).

However, not many studies have been done on positive psychological constructs of rheumatoid arthritics in Ghana. Therefore, the current study would focus on two related constructs-self-esteem and resilience, their influence on the quality of life, and also investigate the mediating role of resilience in the relationship between self-esteem and quality of life in persons with rheumatoid arthritis.

Purpose of the Study

The purpose of this study was to find out the relationship that exists between self-esteem, resilience, and quality of life of people seeking treatment for rheumatoid arthritis in Korle-Bu Teaching Hospital. Specific objectives of the study are to:

1. Examine the level of self-esteem of people with rheumatoid arthritis at Korle-Bu Teaching Hospital.
2. Assess the resilience level of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital.
3. Examine the quality of life of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital.
4. Examine the influence of self-esteem and resilience on the quality of life of patients with rheumatoid arthritis receiving treatment in Korle-Bu Teaching Hospital.
5. Explore the mediating role of resilience on self-esteem and quality of life of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital.

Research Questions

1. What is the self-esteem level of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital?
2. What is the resilience level of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital?
3. What is the level of quality of life of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital?

Hypotheses

1. There will be a significant influence of (a) self-esteem and (b) resilience on the quality of life of patients with rheumatoid arthritis receiving treatment in Korle-Bu Teaching Hospital.
2. Resilience will mediate the relationship between self-esteem and quality of life.

Significance of the Study

The findings of this study would enlighten arthritis patients and caregivers on their condition and the effect it has on their psychological well-being. It would also help medical practitioners to understand the effect of rheumatoid arthritis so that they not only focus on the physiological treatment of arthritis patients but should take into consideration their psychological and mental health since these could also affect the prognosis of the disease. Also, the findings of the study would be beneficial to policy makers on the treatment of arthritis and other chronic conditions by including psychological treatment like psychotherapy to the treatment of arthritis alongside drug therapy. Furthermore, the findings of this study would inform the development of

possible psychological interventions that would improve the resilience, self-esteem, and quality of life of people with rheumatoid arthritis.

Delimitation

The study was confined to only patients with rheumatoid arthritis that have been medically diagnosed by physicians and are on drug treatment. The study was confined to patients with rheumatoid arthritis patients seeking treatment in Korle-Bu Teaching Hospital of Ghana. The content of the study was also restricted to the self-esteem, resilience, and quality of life levels of patients with rheumatoid arthritis and how these variables affect each other.

Limitations

There was difficulty in determining whether the outcome was due to the type of research design that was used. The study was susceptible to biases such as respondent or recall bias and social acceptability bias which is a result of the method of data collection.

Definition of Key Terms

Rheumatoid Arthritis: is a chronic, systemic and progressive inflammatory disease that includes some disease-specific symptoms such as joint pain, stiffness, swelling, and fatigue (Liu et al., 2017).

Self-esteem: refers to an individual's overall evaluation of his/her worth as a person, of his/her capabilities, or generalized feelings of self-acceptance, goodness, and self-respect (Cast & Burke, 2002).

Resilience: It refers to the human being's capacity to respond positively to adverse situations they face, even when these pose a potential risk to his/her health or development (Luthar et al., 2000).

Quality of Life: It is the measure of the wellbeing of an individual which includes life satisfaction, happiness, meaning in life, biological balance, and realizing life potentials.

Organization of the Study

Chapter Two of the study discussed theories and literature related to the study. The chapter focused specifically on the theoretical framework, empirical review, and conceptual framework. Chapter Three of this study described the methodology of the study. This included the research design, population, the sample and sampling procedures, the research instruments, the validity and reliability of the instruments, the data collection procedure, and the analysis of data. Chapter Four outlined the research results and discussed the findings of the study in relation to the reviewed literature. Chapter Five presented the summary of the findings, conclusions, and recommendations based on the research findings.

Chapter Summary

Chapter one dealt with the background to the study where the situation of rheumatoid arthritis in the world, Africa, developed and developing countries and Ghana was introduced. The statement of the problem, which is, the inadequate literature on the relationship among self-esteem, resilience, and quality of life on the health outcome of persons with rheumatoid arthritis. It also focused on the various hypotheses and research questions guiding the study, the delimitations, and limitations, the operational definition of terms used in the work, and the organization of the rest of the work.

CHAPTER TWO

LITERATURE REVIEW

This chapter presents the review of literature related to the study. Concepts and theories underpinning the study will be reviewed. Empirical evidence in line with the relationship among self-esteem, resilience, and quality of life is reviewed.

Theoretical Framework

Self-determination theory

Self-determination theory (SDT) is broadly a theory of human motivation and personality that explains the extent to which one's behaviour is self-motivated and self-determined. It is an organismic meta-theory that proposes that the basis for self-motivation and personality development are inherent growth tendencies and innate psychological needs as well for the conditions that foster positive processes (Ryan et al., 1997). In other words, the theory also highlights the essence of evolving inner resources of humans for personality development and behavioural regulations like self-esteem.

According to Deci and Ryan, competence, autonomy, and relatedness are the three psychological needs that influence the self to initiate behaviour and appear to be essential for facilitating optimal functioning of the natural propensities for growth and integration, as well as for constructive social development and personal well-being (Ryan & Deci, 2000). These needs are universal, innate, psychological, and essential for psychological health and wellbeing. Behaviour could be overt (observable behaviours) or covert

(thoughts and feelings) and this explains why self-esteem (one's evaluation of his or her self-worth) can be termed behaviour. According to Deci and Ryan (1995), self-esteem stemmed from the true self or sense of self which is suggested to develop as one acts within a context that allows satisfaction of the three fundamental psychological needs for autonomy, competence, and relatedness (Coatsworth & Conroy, 2009). These three psychological needs are explored in relation to the current study.

Autonomy is defined as the ability to act and make decisions without being controlled by anyone else (Stevenson, 2010). In other words, autonomy means the ability to follow a course of action independently. Autonomy in patients with rheumatoid arthritis could be understood as being able to perform daily activities as they used to (before diagnosis) at home and outside the home. Persons with rheumatoid arthritis might have expectations to accomplish certain goals on their own but cannot due to the effect of the disease condition. It has been found that just having high efficacy expectations with regards to goals is not enough to ensure positive well-being and true self-esteem, those expectations must be associated with greater autonomy (Kernis, 1995). In the case of a patient with rheumatoid arthritis who has less autonomy, due to the disease condition, it is expected that their self-esteem would be affected too.

The term relatedness means the will to interact with, be connected to, and experience caring for others (Cook & Artino Jr, 2016; Tyack & Wyeth, 2017). Relatedness or social relationship brings a sense of belongingness which could play a part in one's contingent self-esteem. A meta-analysis conducted in 2019 supported theories with the assumption that social

relationships influence self-esteem (Harris & Orth, 2020). Therefore, someone with rheumatoid arthritis who is unable to partake in social activities because of the effects of the disease would not feel loved and belonging, and this would affect their self-esteem.

Competence is explained as being able to do something successfully or efficiently. In other words, competence is the ability to control one's outcome and experience mastery. An article presents self-esteem in a two-factor approach by demonstrating how explaining it as a relationship between competence and worthiness helps to resolve issues that other leading definitions do not, especially commonly defining self-esteem simply as a feeling of worth (Mruk, 2013). According to Mruk, competence being a part of the definition of self-esteem integrates the cognitive and affective dimensions of self-esteem. This explains that an individual's ability to do something efficiently helps to psychologically improve their self-esteem.

These three concepts go hand in hand because someone can decide by himself what he wants to do and need to do (autonomy) but sometimes, their incompetency coupled with problems in a social context (relatedness) could aggravate the disease condition and may eventually affect self-esteem.

The Resilience Doughnut Model (Worsley, 2015)

This model suggests multiple pathways to resilience. The model is explained using a graphical representation of a circle containing inner circles. The inner-circle depicts an individual's internal characteristics (the awareness of social resources, the sense of self, and experiences of self-efficacy) that contribute to personal resilience while the outer circle is grouped into seven segments that represent seven external environmental factors (the parent, the

skill, the family, the education, the peer, the community and the money factor) that influence the individual's resilience (Worsley, 2015). According to the model, our characteristics interact with external factors to determine our resilience.

Internal factors:

An awareness of social resources (I have) means resilient people know and appreciate the social resources they have. Awareness of social resources means knowing one's resources are embedded in his social network and ties. Some of these social resources are love, care, and support from friends, family, and the community at large (social support). Findings of studies indicated that both perceived social support and self-efficacy were significant predictors of resilience as higher scores on perceived social support predicted higher resilience (Baharudin & Zulkefly, 2009; Lian & Yusooff, 2009; Narayanan & Alexius Weng Onn, 2016).

A sense of self (I am) elaborates on how secured they are with their sense of self, which is shown in their adaptable behaviours during various life stages. Sense of self is defined as how one perceives himself and becomes aware of who they truly are (Ladkin & Taylor, 2010; Marsiglio et al., 2001). A significant positive relationship has been found between self-regulation and resilience (Artuch-Garde et al., 2017).

Experience of self-efficacy (I can) is explained as their belief in how their skills have helped them to alter their circumstances. Self-efficacy refers to an individual's evaluation of personal capabilities (Schwarzer & Warner, 2013). According to Bandura et al. (1999), self-efficacy is generated by four sources: mastery experience (provide the most authentic evidence of whether

one can master whatever it takes to succeed), vicarious experience (seeing others perform a behaviour and observing the consequences of their actions), verbal persuasion (someone else expressing faith in the capabilities of an individual), and somatic and affective states (physiological signs, such as arousal or tension, as a sign of being unprepared for a task or of poor performance). Studies have shown a relationship between self-efficacy and resilience (Howard & Johnson, 2004; Sagone & Caroli, 2013).

External factors:

This circle represents the person's external, relational or contextual factors and contributes to building and sustaining the internal "I have, I am and I can" characteristics. They include;

Researchers have shown parental factors that promote resilience in children include warmth, responsiveness, and stimulation; providing adequate and consistent role models; harmony between parents; promoting constructive use of leisure; consistent guidance; structure and rules during adolescence (Hammen, 2003; Howard & Johnson, 2004). These factors not only help to develop resilience intrinsically but directly mediate coping responses to some adversities like poverty and ill-health. Patients with RA who grew up in environments where they lacked such parental factors of influence are likely not to be resilient in these tough times.

Acquiring skills is related to the development of resilience. A Skill is defined as the ability to do something well (Green, 2011). Some of these skills include hardiness, optimistic thinking, and problem-solving, and being able to try new experiences. Also, feelings of success and achievement, being recognized for their skills, self-confidence, having people who encourage and

admire these skills are positive aspects of acquiring these skills which help the individual to acquire resilience (Connaughton et al., 2008; McMillan & Reed, 1994).

Findings from the research have shown that family structure and family system play a role in developing resilience (Hetherington, 2003). Other aspects of the family that can build or determine resilience are connectedness, having older adults interested who are interested in the life of the younger ones and vice versa (care), feeling accepted, a wider family network, strong spiritual values, and going through difficult times (Furstenberg, 2005; Jonker & Greeff, 2009; Kirmayer et al., 2009). These create significant identity formation among the family system, therefore developing resilience (Masten, 2006, 2007).

Researches have shown that the education system promotes some characteristics that are associated with the development of resilience. Some of these characteristics include the desire and participation in learning, sense of belongingness, curriculum that promotes resilience, participation in extra activities, and an inclusive environment (Johnson & Lazarus, 2008; Stewart et al., 2012).

According to the peer model, a sense of belongingness that is gotten from the development and maintenance of friendships associated with peers helps determine resilience. Other peer-group features like close friendship, forgiveness, cohesion, and conformity, care or concern, loyalty to the group, self-regulation, and self-awareness also develop resilience (Sanders & Munford, 2008).

Local communities have been found by research to contribute to building resilience as well as supportive social services being provided in these communities. Just like the family and peers, the community has similar features like connections to sports clubs, religious or activities among families that help to build resilience since families and peers come together to make up the local community (Henderson et al., 2007)

Research has shown that economic stability, sense of control over earning money, ability to be patient and thoughtful of money spending, attitudes towards the acquisition of material possession, ability to contribute to daily tasks, strong work ethics, care for material possessions, budgeting and planning has a role to play in the development of resilience (Duckworth & Seligman, 2006; Peterson et al., 2009) (Munford & Sanders, 2008).

The above factors point out some similar attributes which according to Zauszniewski et al. (2010), there are the seven main determinants for conquering adversity to become resilient, stronger, more flexible, and healthier. These factors are Acceptance, Hardiness, Mastery, Hope, and Optimism, Self-efficacy, Sense of cohesion, and Resourcefulness (Zauszniewski et al., 2010).

Previous researches suggest that, in building resilience, there is a potential that enhances positive beliefs within the individual in each of the seven environmental contexts (Benard, 2004; Henderson et al., 2007). It has also been suggested that not all resilient people have all seven contexts working well in their life (Dolbier et al., 2007). In relation to the theory, individuals who are exposed to these attributes (both internal and external) while growing up or in their current life are more likely to exhibit resiliency in

times of adversity. For instance, a person with rheumatoid arthritis who have a complete sense of self (being aware of social resource and self-efficacy) coupled with some external factors like a sense of belongingness (from parents, family, peers, or community) and/or ability to solve problems (skills) would be able to cope with the condition despite the fact that it may have caused permanent damages like chronic pain, deformity or loss of job and even becomes a better person. Therefore, describing a person with rheumatoid arthritis as resilient begins at any point in time when the person starts adapting to his or her condition. This means that the available external contexts would interact with the three internal concepts to positively influence an individual's overall resilience.

Integrated Theory of Quality of Life

This theory encompasses eight factual theories of qualities. According to Ventegodt et al. (2003a), quality of life should not be looked at separately since the eight factors together would better explain this concept. The eight theories include wellbeing, satisfaction with life, happiness, meaning in life, biological view of the quality of life, realizing life potential, fulfillment of needs, and objective factors. Integrated quality of life is a spectrum that ranges from the subjective to the objective quality of life via quality of life in the existential depths and it incorporates some existing quality of life theories (Ventegodt et al., 2003a). According to this theory, understanding quality of life completely means integrating the eight theories. Each of the eight theories is discussed below

Well-being is most naturally a subjective aspect of quality of life. Here the individual herself assesses his or her quality of life. It is defined as

assessing life positively and feeling good (Veenhoven, 2009). This tells us how well people perceive that their lives are going. The degree to which the individual meets the demands of the environment is an objective phenomenon, whereas perceptions of well-being are subjective (Kelley-Gillespie, 2009). An individual's wellbeing is fundamental to some objective factors like good living conditions, good health, availability and access to basic resources like shelter, income, and others, and positive relationships with family, friends, and community (Nordbakke & Schwanen, 2014). The degree to which the individual meets the demands of the environment is an objective phenomenon, whereas perceptions of well-being are subjective (Kelley-Gillespie, 2009). Such individual starts comparing how life used to be before the diagnosis and what has changed after the diagnosis. Before that, patients with rheumatoid arthritis patients were not restricted to doing stuff for themselves by the pain, stiffness, and other symptoms they experience (Portway & Johnson, 2005). They also enjoyed social relationships which in all included the fundamentals of their wellbeing.

Satisfaction with life means feeling that life is the way it should be. When one's expectations, needs, and desires in life are being met by the surrounding world, one is satisfied making satisfaction a mental state (Ventegodt et al., 2003a). Humans create some conception of what has happened to them in their lives based on the goals they had, and some beliefs about what will happen in the future because of the goals achieved already. In this situation, judgments are made about whether their lives match up with the ideal life-plan they had (Suikkanen, 2011). Life satisfaction theories have been grouped into three; the cognitive (thoughts that represent how well one's

actual life matches up to her life plan), affective (positive feelings based on an agent's conception of her life), and the hybrid, which requires both a cognitive judgment of how an agent's life matches up to her life-plan and a positive affective state based on that judgment (Frisch, 2005).

Happiness is synonymous with quality of life or wellbeing. Being happy is not just being cheerful and content and is a special feeling that is precious and very desirable, but one that is hard to attain (Ventegodt et al., 2003a). Studies have found that quality of life is being measured by how happy one is (Veenhoven, 2009; Ventegodt et al., 2003a). According to the cognitive theory of happiness, an individual's happiness is a product of his or her thinking and reflects discrepancies between present perceptions of life and notions of how life should be (Veenhoven, 2009). In a case where an individuals' expectation of life was to have good health and ability to provide her needs personally then along the line was diagnosed with rheumatoid arthritis which robs him or her of the ability to provide her needs personally, such a person would be unhappy. This would mean that, such a person has low quality of life. It is not enough to assess quality of life with happiness only not to talk of the discrepancies between one's expectations and reality because happiness is subjective and cannot be a standard for measuring quality of life without objective factors (Eckersley, 2000; Katschnig, 2006).

Meaning in life could mean the significance of life. According to Victor Frankl's theory of Life's meaning, an objective reality determines one's meaning in life rather than arbitrary human creations (D. L. Debats, 1996; D. L. H. M. Debats, 1996). This explains that meaning in life is not created and can only be found outside the person. This brings us to the conclusion that

quality of life should be looked at in whole therefore; the integrated theory should be employed.

A biological view of quality of life means that a good life depends on an individual's physical health. Where physical health reflects the state of the biological information system, as the cells of the body need precise information to function correctly and to keep the body healthy and well (Ventegodt et al., 2003a). As life experiences are also biologically conditioned, the experience that life has or does not have meaning can also be seen as conditioned by the state of the biological information system (Susniene & Jurkauskas, 2009). States of experience and conscious life would not be optimal if the interaction between the cells of the organism (human) is not optimal (Ventegodt et al., 2003a). But some arthritis patients are doing well while people who are not sick are not (Gibbs Jr, 2005). Persons susceptible to illnesses that have effects on their physical appearance and wellbeing of the body gradually lose meaning in life (Ventegodt et al., 2003a). The question now is can someone have rheumatoid arthritis and still have a good quality of life? Another question is would the biological view be enough to assess quality of life or should it be included among pointers of quality of life, therefore looking at its integrative approach?

Realizing life potential as a determinant of quality of life, according to theory, means achieving or being able to attain one's capabilities fully, in other words, realizing our biological information (Ormel et al., 1997). This theory links quality of life to human roots in nature. Human beings are in constant growth starting right from a fertilized egg (Brey, 2012). Just as a sunflower seed uses its potential to become a sunflower with flowers and

leaves, humans use a store of potential for creative activities, good social relations, a meaningful job, and starting a family: living life to the full (Ventegodt et al., 2003a). Losing potentials that are innate due to the presence of a chronic disease leaves one with no option but adjusting can prevent people from life's full potential (Joseph & Linley, 2005). This is because their biological system affects their lives as a whole.

Fulfilment of needs traditionally relates to quality of life such that, when your needs are fulfilled, it is believed that your quality of life is high. Our needs are an expression of nature: that is, something all human beings have in common. Maslow's concept of needs includes food, sex, and social relation (de Haan et al., 2014). For instance, the quality of life of patients with rheumatoid arthritis patients may be minimized because of their inability to independently feed themselves, engage in social and sexually related activities without being reminded of their pain- this we know is the basic needs of life. It is part of the theory of needs that we feel good once our needs have been fulfilled (Ventegodt et al., 2003a). Realizing life's potential differs from fulfilment of needs in that the former suggests strongly that life is all about realizing one's biological information (Ventegodt et al., 2003a).

The objective aspect of the quality of life is related to the external factors of life that are fairly easy to establish and these include income, marital status, state of health, and the number of daily contacts with other people (Ventegodt et al., 2003a). These are obvious factors that can be measured and therefore have standards for measurements. However, there is the need to distinguish these aspects of quality of life, because a good life is easily confused with the sort of life generally consider as being "right" or "rich". One

can be happy riding a bicycle while the other is unhappy in a sports car. It has been backed by evidence that there is often little agreement existing between a physician's evaluation of a person's (objective) quality of life and the patient's evaluation of his or her (subjective) quality of life.

Based on these individual theories, it can be said that employing the integrated quality of life theory would be more applicable to this study because quality of life would be viewed holistically, thus considering both tangible and intangible aspects of one's life. For instance, let's take a look at a patient with rheumatoid arthritis patient whose quality of life is measured by objective factors like his wealth, socio-economic factors, and others without considering his physical health (symptoms like pain, stiffness, and disability). These symptoms would prevent the person from going about his daily activities and doing things that make him happy and this can affect his psychological health thereby affecting subjective components of quality of life like life satisfaction, wellbeing, realizing life potential. Likewise using the subjective quality of life theories only to understand or measure quality of life would be incomplete.

Review of Concepts

Self-esteem

Generally, self-esteem indicates the overall value judgment about the self while domain-specific self-esteem involves subjective appraisal of one's value in a specific area (workplace, home, church, and others). Self-esteem refers to a person's subjective appraisal of his or her value (Holloway, 2016). It, being a subjective judgment may or may not reflect objective achievement. It is about one's affective self-evaluation which are assessments of one's

behaviour or attributes along some evaluative dimensions. It is related to emotions, that is the reason people not only know how good or bad they are being tagged by others but also experience positive or negative emotions that comes with it.

Also, how we evaluate ourselves determines our self-esteem. According to Deci and Ryan, self-esteem can be contingent or true based on the motivation behind and research has shown individual differences in these two (Deci & Ryan, 1991).

Contingent Self-Esteem is defined as feelings about oneself that are dependent on some standard of excellence or living up to expectations (interpersonal or intrapsychic) (Deci & Ryan, 1995; Kernis, 1995). In other words, this type of self-esteem is conditional. A person who feels or thinks his sense of worth increases only when he accomplishes a goal would be described as having contingent self-esteem. If this person keeps being successful with his goals, he would have a continuing high level of self-esteem (Baumeister et al., 2003; Kernis, 2003). This self-esteem becomes very weak, always requiring that such a person continually succeeds in life (Deci & Ryan, 1995). Meaning that one's self-esteem is based on outcomes. This type of self-esteem is often based on externally imposed criteria which later lead to social comparison (Baumeister et al., 2003). For instance, if the basis of a person's feeling good and a sense of worth about himself is his capabilities, how would such a person feel when being diagnosed with rheumatoid arthritis and is unable to do the things he used to do and would now have to depend on others?

True Self-Esteem refers to feelings about oneself that are independent of standards or expectations but rather based on being who one is (Kernis, 2003). It is more stable and secured based on a solid sense of self (Deci & Ryan, 1995). Self-worth would not be put to test continually therefore; the individual would avoid social comparisons and self-evaluations. Wealth, fame, health, capabilities, and other vacuous or narcissistic goals would not be the basis of self-esteem (Germain, 2017). If one has a more secure sense of self and a high level of true self-esteem (Harter, 2015). Of course, people with high true self-esteem have goals and aspirations but would not experience low self-esteem if they are unable to accomplish those goals because their self-esteem is not dependent on them. For instance, a true self-esteemed person with rheumatoid arthritis would still have a high sense of worth irrespective of the effects of disease condition.

Resilience

Resilience is defined as positive adaption despite adversity (Luthar et al., 2000). From this definition, resilience can be understood based on two dimensions: Positive adaption and Adversity. Positive adaptation means adjusting and responding confidently in a new situation. Adversity means a difficult and unpleasant situation. This means that resilience requires the presence of an unpleasant situation and this is what differentiates it from normal development (Luthar et al., 2000). In other words, the common qualifying condition for resilience is the presence of demonstrable, substantial risk facing the individual (Fleming & Ledogar, 2008).

Resilience used to be viewed as an individual asset until contemporary researchers added some external factors which themselves are protective

factors. These protective factors include the individual, family, and community (Rutter, 1979) as cited by Fleming and Ledogar (2008).

It was argued that resilience should be considered a process, not a trait and that protective factors are not enough, because they do not create resilience in all cases. Resilience is created when these factors initiate certain processes in the individual (Fleming & Ledogar, 2008). Three such processes were identified to include building a positive self-image, reducing the effect of the risk factors, and breaking a negative cycle to open up new opportunities for the individual. He also argued that because resilience is a process that changes through time, researchers should use qualifiers such as "relative" and "variable" to describe the process, rather than any term that might imply absoluteness (Rutter, 1990).

Quality of life

Quality of life is defined by World Health Organization as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns (Post, 2014). It is a broad concept ranging from the person's physical health, psychological state, personal beliefs, social relationships, and their relationship to important features of their environment. Simply defined, quality of life is how good or bad one's life is.

Quality of life can be grouped into 3 parts: The subjective quality of life can be explained as how good an individual feels his or her life is (Santos et al., 2007). The individual personally evaluates how he or she views things and his or her feelings and notions. Whether the individual thinks he or she is content with life and happy are aspects that determine the subjective quality of

life (Santos et al., 2007). The existential quality of life explains how good one's life is at a deeper level (Ventegodt et al., 2003a). It is assumed that the individual has an inner nature that deserves to be respected and that the individual can live in harmony with Ventegodt et al. (2003a). The objective quality of life is explained as how one's life is perceived by the outside world and this is influenced by the culture in which people live (Ventegodt et al., 2003a). (Objective is used in this case to mean non-subjective or objective facts. The external and easily established conditions of life that are obvious to rate by many people is what is termed non-subjective.) (Ventegodt et al., 2003b). The objective quality of life reveals itself in one's ability to adapt to the values of a culture and provides little information about that person's life. Examples may be social status or the status symbols one should have as a good member of that culture. For instance, in a culture that views a person who has a good job, married, has a good religious background and provides help to the society as one who has a good quality of life irrespective of having a chronic illness.

Meanwhile, in other cultures, a good life is measured by being happy and able to fulfil one's needs. This means that without these qualities, but the individual has good health, this person is not viewed as having a good quality of life. This, therefore, explains that status symbols for objective quality of life vary across cultures. Therefore, the degree to which the individual meets the demands of the environment is an objective phenomenon, whereas perceptions of well-being are subjective (Kelley-Gillespie, 2009). These three aspects of quality of life can be placed in a spectrum ranging from the subjective to the objective since they can overlap. The existential element is placed in the

middle because it unites the subjective and the objective. This existential centre also represents the depth of the being of humanity.

Empirical Review

The level of self-esteem in persons with rheumatoid arthritis

Coping with the effects of rheumatoid arthritis daily can have considerable detrimental effects on the mental state of the patient (Gettings, 2010). It affects physical and psychological health to a great extent. The disease course in rheumatoid arthritis may lead to insufficiency in some body functions and structures including musculoskeletal pain, malaise, joint stiffness, joint swelling, muscle weakness, and joint fractures, and deformities especially in hands and feet therefore limiting physical activity (Kurt et al., 2013).

Rheumatoid arthritis is closely related to psychological conditions including changes in body image and self-esteem because of deformities and disabilities and this relation is substantially significant clinically. It has also been shown that physical defects, deformities and physical illnesses in chronic diseases including rheumatoid arthritis decrease self-esteem (Farshi et al., 2013).

In a study conducted Kurt et al. (2013) examine the effect of socio-demographic characteristics, disease complaints, and use of necrosis factor (anti-TNF) on the body image and self-esteem in patients with rheumatoid arthritis. Using Body Image Scale (PfP) BIS, an Introductory Information Form, and the Coppersmith Self-Esteem Inventory (SEI) to collect data in 120 patients with rheumatoid arthritis and in 120 healthy controls and One-way analysis of variance, Tukey HDS analysis, t-test, Kruskal-Wallis test, the

Mann-Whitney U test, and Pearson's and Spearman's correlation coefficients to analyze the results and came out with some findings. Concerning the self-esteem levels of rheumatoid arthritis patients, 60% of the patients (20-44 years) scored high on their self-esteem levels. However, self-esteem levels were lower in patients who had changes in hands and body due to rheumatoid arthritis (Kurt et al., 2013).

MacKinnon and Miller (2011) conducted a study in 2003 using self-esteem, Activity of Daily Living (ADL), and quality of occupation scales to investigate the impact of quality of occupation on the rheumatoid arthritis-self-esteem relationship. Concerning their level of self-esteem, the result of the study showed statistically significant differences exist between persons with rheumatoid arthritis (M= 32, SD= 4.2) and the comparison group (M= 34.3, SD= 5.1) for self-esteem. Samples of individuals who had rheumatoid arthritis were confirmed to have a statistically significant lower level of self-esteem than their comparison group (healthy population).

A study published by Slama et al. (2014) found that low self-esteem was common among people with rheumatoid arthritis, especially among those who were more disabled, who had more severe pain and fatigue, and who reported anxiety and depression. It was also found from their study that persons with rheumatoid arthritis make comparisons of how things used to be before the diagnosis and this can increase the distress. This makes them feel damaged or worried that no one will want them. They also fear that being active might worsen physical symptoms and this often causes them to limit physical or social activity with friends and family. However, these activities

prompt the brain to release feel-good chemicals that can help boost mood and self-esteem.

The Level of Resilience of Persons with Rheumatoid Arthritis

According to Sturgeon and Zautra et al. (2010), people are generally resilient, but only a few are resilient to almost all circumstances that may befall them. George A Bonanno et al. (2004) explain that some people, when facing stressful conditions, maintain a firm equilibrium without reacting negatively, and that has been named resilience. The explanation is possibly that resilient people have a strong internal locus of control so they believe they can affect their situation (Buddelmeyer & Powdthavee, 2016). However, if the stressors increase, the ability to sustain resilience might become weighed down, and in this case, people might reach the breakdown stage. Therefore, the majority of people are relatively good at handling stressful circumstances, while others are not. According to him what makes people respond differently to stressors is their perception of the event, rather than the event itself.

The Level of Quality of Life of Persons with Rheumatoid Arthritis

Rheumatoid arthritis has intense consequences in various aspects of patients' quality of life – the physical, social and psychological aspects. Physical (Activities of personal care that is, activities of daily living, such as the ability to eat, dress, use the toilet or bath, transfer, get in and out of bed or chair), social (Patients' social integration, family and social relationships) and psychological (increased levels of depressed mood, anxiety) become frustrating and burdensome to rheumatoid arthritis patients (Nagyova, 2005).

Baloglu et al. (2015) found that rheumatoid arthritis reduces the health-related quality of life of patients. Also, the physical component of the quality

of life scale (SF-36) was associated with the level of pain, fatigue; body mass index, age, and depression whereas the mental component was related to the level of fatigue and depression. It was demonstrated from the finding that duration and activity of the disease, damage to joints and level of physical activity affect their quality of life level (Baloglu et al., 2015).

Also, a cross-sectional study was conducted in Taiwan to investigate how disease activity affects quality of life and its interaction with functional impairment and disease duration in 230 patients with rheumatoid arthritis and 227 healthy controls. Results from the study indicate a low level of quality of life of patients with this chronic condition due to disease activity and also aggravation in all domains of quality of life among those with longer duration of illness (Chiu et al., 2014).

However, in a preliminary study by Martinec et al. (2019) to investigate quality of life of patients with rheumatoid arthritis in Zagreb, Thailand with 25 participants using the quantitative approach, they found no statistical difference in the level of quality of life between subjects with Rheumatoid Arthritis and healthy population according to SF-36 Croatian norms (Martinec et al., 2019). Generalizing this finding may be questionable in the sense the sample size was 25 which would be considered too small to generalize the results. The results generated from various studies have shown the variations of how different respondents are going through rheumatoid arthritis disease.

The Influence of Self-Esteem on Quality of Life

A study by Tonsing and Ow (2018) assessed the quality of life among childhood cancer survivors. A survey (questionnaire) was used as a means for

data collection. Participants were educated on the voluntary nature of participation and confidentiality. The age range of participants was12 to 24 years (mean age = 17.2) of which 62% were male and the remaining, females, whiles 45.6% were in secondary grades (middle school or high school). Among their numerous findings, self-esteem emerged as an important predictor for the social domain of quality of life however; cancer-specific worry emerged as a predictor of overall quality of life (Tonsing & Ow, 2018).

A study evaluated the self-esteem and quality of life of people with HIV/AIDS in the Indian population using a correlational design. Thirty-two adults (both males and females) between the ages of 23 and 37 years, from Jammu and Delhi with HIV/AIDS were sampled. The study established a relationship between quality of life and self-esteem. It was also found that males in comparison to females scored high on the dimensions of self-esteem, perceived quality of life, and psychological dimension of quality of life, whereas females scored high only on the spiritual dimension of quality of life (Manhas, 2014).

Another study examined self-esteem, extraversion, neuroticism, and health as predictors of subjectively-assessed quality of life in a sample of 109 adolescents (69 healthy adolescents and 40 adolescents with upper respiratory tract disease). WHOQOL-BREF (WHO, 1998), Rosenberg´s self-esteem scale (Rosenberg, 1965), and NEO-FFI personality questionnaire were the research tools used for data collection. From the results, health was not found to be a predictor of subjectively-assessed quality of life in the research sample, however, self-esteem was confirmed as a predictor of psychological (48% variance) and environmental (25% variance) quality of life. Also, neuroticism

was found as a predictor only for physical quality of life with an 8% variance. Extraversion was also confirmed as a predictor for all the aspects of quality of life measured; physical (20% variance), psychological and environmental with 20%, 8%, and 10% variance respectively (Mikulášková & Babinčák, 2015).

Hemati and Kiani (2016) studied the relationship between self-esteem and quality of life of patients with Idiopathic Thrombocytopenic Purpura (ITP). This was a descriptive-analytical study on 64 patients with ITP who were referred to Isfahan's Sayed Al-Shohada Hospital, Iran. The inclusion criteria consisted of being 20 to 70 years old, living in Isfahan, being diagnosed conclusively as having ITP based on medical and laboratory findings (6 months had passed since their diagnosis), lacking mental and cognitive problems, and not experiencing a stressful event such as losing a relative during the previous month. These patients with ITP were selected randomly using a random number chart. At the end of the study, a chi-square test showed a significant relationship between self-esteem and quality of life of patients with ITP (Hemati & Kiani, 2016).

In another study, 757 participants had their quality of life, health and self-esteem assessed using a cross-sectional survey design, with questionnaire data collection methods from a non-probability sample. General Health Questionnaire by Goldberg 1972, Rosenberg Self Esteem Inventory developed in 1965, and Ferrans and Powers Quality of Life Index (QLI 1985) were the instruments used in assessing the variables in the study. At the end of the study, findings indicated that older people experienced a higher quality of life than people in other age groups. Variables contributing to a higher quality of life include having good relationships with their partner, with their children,

and God. Caring for others, or carrying a disability or illness diminished QOL scores. High positive self-esteem scores were important in overall indices of quality of life. High positive self-esteem and an absence of negative self-esteem were substantial contributors to the 'happiness' dimension of quality of life (MacLean & Kermode, 2001). The study is however limited to external validity since the non-probability sampling technique was used to select the sample. This, therefore, limits the generalizability of the findings.

A study conducted by ANA-MARIA (2015) aimed at finding out if self-esteem is an indicator of quality of life in students. Fifty-six persons (33 of them are freshmen students who take part in physical activity programs, and 23 are master students) were studied. The Rosenberg self-esteem scale was used to assess the self-esteem of participants. The study was found that self-esteem is an indicator of quality of life. However, it was concluded that self-esteem is not the only indicator of quality of life, psychical activities and other factors can determine one's quality of life as well (ANA-MARIA, 2015).

A cross-sectional, quantitative, and analytical household survey was conducted to investigate the association between the scores for quality of life and self-esteem among the elderly in an urban community. Out of a population of 24,714 elderly persons, 1,691 people met the inclusion criteria of the study which include being 60 years old or older, living in an urban area of the county and not having any cognitive impairment. Survey questionnaires were distributed privately at the homes of participants by well-trained research assistants or interviewers so that ethical concerns were not breached. Before the data was collected, the cognitive status of the sample was assessed using the Mini-Mental State Examination (MMSE). After which Rosenberg self-

esteem scale and the WHOQOL-OLD11 which is a specially designed instrument to assess quality of life in the elderly was applied jointly with the WHOQOL-BREF on those who were not cognitively impaired. The study found that the lowest scores of all the quality of life domains and topics (except for the death and dying topic) were associated with the worst levels of self-esteem, with emphasis on the psychological domain and the topic of intimacy (Tavares et al., 2016).

A quantitative, non-experimental, correlational study investigated self-esteem as it relates to both happiness levels and overall life satisfaction levels and whether happiness levels, life satisfaction levels, age and gender are associated with self-esteem. Seventy-one participants (38 males and 33 females) who were randomly sampled completed a pencil and paper questionnaire which included three scales; the Rosenberg Self-esteem Scale (RSES), the Satisfaction with Life Scale (SWLS) and the Subjective Happiness Scale (SHS). Participants included people who live in Ireland (Dublin) with ages ranging from 18 years to 40 years or older. Using a direct method of multiple linear regression analysis, preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. Also, the correlations between the predictor variables included in the study were examined before the analysis took place. It was found that self-esteem as a predictor variable was statistically correlated with both subjective happiness and satisfaction with life (Hill, 2015). Life satisfaction is used interchangeably with quality of life in some studies since according to Ventegodt's theory, life satisfaction and happiness are aspects of

quality of life. Therefore, the findings of the study imply that the higher one's self-esteem, the higher the quality of life and happiness they experience.

Another study was conducted to investigate the relationship between self-esteem and mental health with the quality of life in patients with skin diseases. One hundred and fifty patients suffering from skin diseases (46 patients with a diagnosis of acne, 34 patients with urticaria, 29 patients with alopecia areata and 40 patients with psoriasis) were selected using the convenient sampling method. The Persian version of Dermatology Life Quality Index (DLQI), General Health Questionnaire (CHQ-28) and Coppersmith Self-Esteem Inventory were used to evaluate variables. Using the correlational design, Pearson correlation and multiple regression methods were used to test research hypotheses. The results indicated that self-esteem is effective in predicting the quality of life (Farshi et al., 2013). This finding implies that there is a positive relationship between self-esteem and quality of life, meaning a high self-esteemed person has a quality life. The sampling procedure used limits the study in that it is difficult to generalize the findings of the study.

The Impact of Resilience on Quality of Life

In an observational study conducted by Tian and Hong in 2014, the relationship between resilience and quality of life in patients with digestive cancer was explored. The relationship between resilience and quality of life was statistically significant when psychological distress, fatigue, and side effects were absent from the regression model, whereas the adjusted regression coefficient of resilience was not statistically significant when these variables were added. This explains that resilience is not an independent

predictor of quality of life in patients with digestive cancer, but it is the main factor influencing psychological distress (Tian & Hong, 2014).

Temprado Albalat et al. (2020) also conducted a study in 2018 to investigate the relationship between resilience and adaptation to the placement of a drainage enterostomy. The multi-centre correlational cross-sectional study was conducted among 100 colo/ileostomised patients (64 males and 34 females) aged 36 to 87 years with an enterostomy, who had completed a post-surgery adaptation period of at least 3 in hospitals with a digestive surgery service. At the end of the study, Temprado and colleagues found that there was a positive relationship between high quality of life and resilience scores. The logistic regression model conducted shows that resilience is the main predictor of health-related quality of life (Temprado Albalat et al., 2020).

A systematic review was conducted to analyze literature in the Pubmed and PsycINFO databases, using the descriptors “resilience” and “chronic disease”. The study contemplated publications conducted from June 1993 to June 2013 of which twelve articles that met the inclusion criteria were identified. The selected articles focused on pathologies such as rheumatoid arthritis, ankylosing spondylitis, systemic erythe-matosus lupus, cancer, hepatitis, diabetes mellitus, depression, skin disorders, Parkinson’s disease, and chronic kidney disease (Cal, Sá, Glustak, Santiago, et al., 2015). The research methods used were predominantly of the descriptive methodological, cross-sectional, and prevalence or case-control type. Some articles that were reviewed found an association between resilience and quality of life and health promotional behaviour, while others pointed out a negative relationship between resilience and depression, anxiety, incapacitation, and somatization,

an inverse correlation between resilience scores and the progression of the illness (activity of the disease, control of glycemic level, and severity of depression) and generally, concluded that resilience may influence the process of illness and outcome in health (Cal, Sá, Glustak, Santiago, et al., 2015). Though resilience and quality of life were part of the focus of the review, only two articles analyzed in this study focused on the association between these variables.

In another study, the subjective quality of life and the variables important for adaptation in the face of stress associated with illness, treatment, and hospitalization were analyzed among chronically ill youth. The psychological variables measured include social skills/competencies, sense of self-efficacy, perceived social support, coping strategies, depression, and subjective quality of life. One hundred and fifty-four youth (102 females and 52 males) aged 11-18 who were hospitalized with chronic illnesses participated in the study. Participants were grouped into three; well-adapted and resilient individuals, individuals of intermediate levels of adaptation, and maladapted individuals (risk subgroup). Psychosocial variables, coping strategies, depressive symptoms, and subjective quality of life were assessed in all three groups. Results from the study show that resilience occurs simultaneously with adaptive coping strategies, low levels of depressive reactions, and high quality of life. This explains an association between resilience and subjective quality of life (Oleś, 2015).

Researches in different populations aside chronic patients found an established relationship between resilience and quality of life. In caregivers of schizophrenics and bipolar patients, a study by Jain and Singh in 2014 was

designed to explore their resilience and also to examine whether resilience affects the quality of life of these caregivers. A total of fifty caregivers (25 from each group) residing with these patients, who are between the ages 20-70 years were selected from the psychiatry department of hospitals, clinics, and organizations dealing with mentally ill persons located in Delhi, India's national capital. Using the correlational research design, the result indicated that there was a significant correlation between the quality of life and resilience in caregivers of individuals diagnosed with schizophrenia and bipolar disorder. However, this study did not compare the obtained results with a control group (group of individuals who are not caregivers) to see if there is a relationship and how their quality of life and resilience differ from that of caregivers (Jain & Singh, 2014).

A cross-sectional study was conducted in three hundred and thirty-eight students (151 males and 187 females) at the State University of Yasouj using random cluster sampling for 8 months by Bastaminia et al. (2016). The study aimed at determining the relationship between resiliency and quality of life in the State of Yasouj university students. Czech list of demographic data, World Health Organization Quality of Life Questionnaire (WHOQOL-BREF), and Iranian species and resilience questionnaire Kunar, and Davidson (CD-RIS) were used to measure resilience and quality of life of participants. Using the linear regression models, the study found that resilience played a significant role in determining the quality of life.

Relationship Between Self-Esteem and Resilience

Subjects' belief in their self-esteem and self-efficacy have been recognized as important factors in coping with the adverse experiences and

lifestyle changes that are required after the diagnosis of a chronic illness (Kralik et al., 2006). Self-esteem has also been highlighted as one of the intrinsic components of people's resilience (Bashir et al., 2013).

In Hong Kong, a study was conducted to understand the relationship between protective factors (self and surroundings), resilience, and self-esteem in 125 pre-medical dropouts within the ages of 17 to 20 years. At the end of the study, a significant positive relationship was found between self-esteem and resilience which implies that high self-worth and self-efficacy help adolescents buffer the negative effects of stress and frustration caused by a defect or failure (Mehrotra & Chaddha, 2013).

Another study investigated the relationship between resilience, self-esteem and the big five personality traits, in 192 samples of emerging adult students. Part of the objectives of the study was to verify the relationship between resilience to self-esteem. Two hundred students from the same university (The Polytechnic University of Bucharest) were randomized, of which the majority were in their first year. After removing incomplete questionnaires, the final sample was of 192 students of which 114 were males and 78 females, without significant difference in the average age. The questionnaires were administered at the end of a seminar for 20-25 minutes and participants were informed of the confidentiality of the results. At the end of the study, they found a positive correlation between resilience and self-esteem. This means that the higher their resilience, the higher their self-esteem and vice versa.

In an early study conducted in 1999, Dumont and Provost (1999) used 297 adolescents (141 eighth graders and 156 eleventh graders) by grouping

them into 3, based on their crossing scores of depressive symptoms and frequency of daily hassles: well adjusted, resilient, and vulnerable. Function analysis was conducted to investigate group differences in self-esteem, social support, different strategies of coping, and different aspects of social life. As part of the findings, the analysis revealed that resilient adolescents had higher self-esteem than vulnerable adolescents. Also, resilient adolescents had higher scores on problem-solving coping strategies than adolescents in the 2 other groups.

Another study conducted by Cazan and Dumitrescu (2016) explored the relationships between resilience, self-perception, and locus of control, with their main hypothesis stating that high resilience is associated with high self-esteem. The study was conducted on an adolescent sample from several high schools in Brasov with a total of 156 students of which 68 were females and 88 males aged between 13 and 19 years. The participants gave their informed consent to participate in the study. The questionnaires were completed during class time and anonymity was ensured with no compensation offered to participants. At the end of the study, the main hypothesis was confirmed. The results showed that highly resilient adolescents have a higher level of self-esteem.

Oshio et al. (2002) examined the relationship of resilience to self-esteem in adolescents with negative experiences and also develop validation information for the adolescent resilience scale. Two hundred undergraduates rated the adolescent resilience scale, self-esteem scale and their past experiences of negative life events. It was shown by the total score and three subscales that there is a significant positive correlation with self-esteem and

no significant correlation with their negative life experiences. A result of analysis of variance revealed that adolescents who have high scores on self-esteem showed higher resilience than those with low self-esteem when they experience much distress.

A study conducted by Karatas and Cakar (2011) aimed at exploring self-esteem and hopelessness as predictor of resiliency in adolescents. Using Beck Hopelessness Scale, California Healthy Kids Survey Resilience-Youth Development Module High School Questionnaire and Coopersmith Self-Esteem Scale, the study participants are two hundred and twenty-three high school students (90 females and 133 males). This includes adolescents who attend Cumhuriyet High School and Industrial Vocational High School in Burdur city of Turkey with ages ranging between 15 and 18. Participants were chosen randomly from different levels (9th, 10th, 11th and 12th grade) using the random numbers table technique. At the end of the study, the findings showed that self-esteem and hopelessness is a significant predictor of resilience in adolescents. Specifically, there was a positive relationship between self-esteem and resilience, but a negative relationship between hopelessness and resilience.

Mediating Role of Resilience on Self-Esteem and Quality of Life

Several studies have found a relationship between self-esteem and quality of life (MacLean & Kermode, 2001). However other studies have established that self-esteem is not the only determinant to quality of life and that other coping mechanisms to stress play a substantial role in the quality of life of people (Bastaminia et al., 2016; Cal, Sá, Glustak, Santiago, et al., 2015; Oleś, 2015; Temprado Albalat et al., 2020; Tian & Hong, 2014). Findings

from the studies mentioned above suggest a possible relationship among self-esteem, resilience and quality of life in people especially persons with rheumatoid arthritis.

However, a study by Wu et al. (2015) found resilience as a mediating role though not in the relationship between self-esteem and quality of life but between symptoms of cancer and quality of life. The objective of the study was to describe cancer symptom distress, quality of life, and resilience in adolescents with cancer and to determine whether resilience is a mediating variable. Forty adolescent cancer patients were recruited, and data were collected via a demographic questionnaire, the Cancer Symptom Distress Scale, the Resilience Scale, and the Minneapolis-Manchester Quality of Life Scale. Pearson's correlation, multiple regressions, and the Sobel test were conducted. It was found at the end of the study that resilience mediates the relationship between cancer symptom distress and quality of life (Wu et al., 2015). This finding raises a concern that if resilience can mediate the relationship between a negative (cancer symptom/ distress) and a positive variable (quality of life), would it mediate the relationship between two positive variables (self-esteem and quality of life)?

Much has not been found on the exact relationship among self-esteem, resilience and quality of life except for one study that found out that resilience is a mediating factor in the relationship between self-esteem and quality of life. A study aimed to examine the mediating role of positive and negative effects and self-esteem in the relationship between resilience and psychological well-being, which is an aspect of quality of life. The sample consisted of 387 high school students in Iran. The participants completed the

Resilience Scale, the Self-Esteem Scale, the Positive and Negative Affect Scale, the Psychological Well-Being Scale. The results of the study using path analysis indicated a direct effect of resilience on psychological well-being. Resilience had an indirect effect on increasing psychological well-being through positive affect and self-esteem. Meaning that positive affect and self-esteem played a mediating role in the relationship between resilience and psychological well-being. The findings of this study project a mediating role of self-esteem on resilience and quality of life because psychological wellbeing is an indicator of quality of life (Abu-Helalah et al., 2014; Warr, 1978).

A. Conceptual Framework

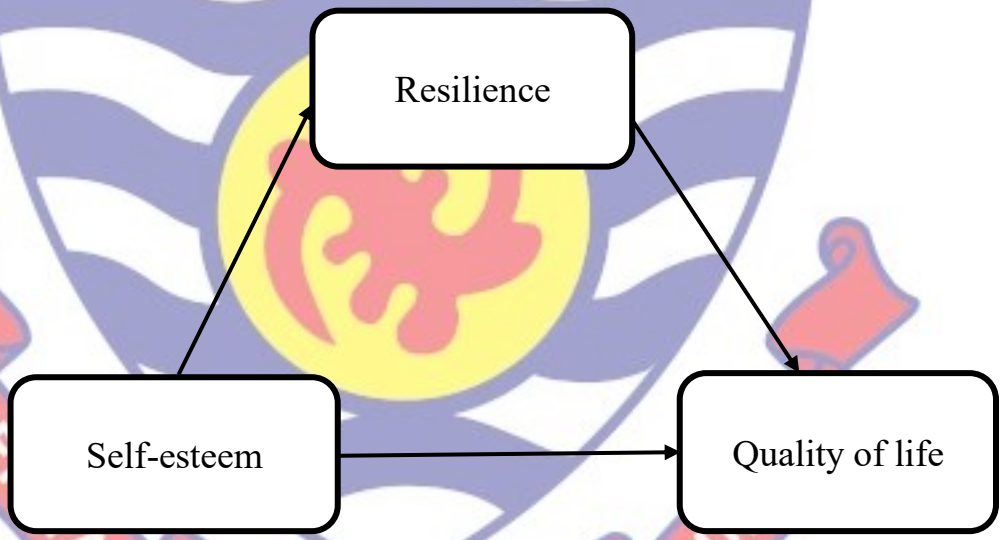

Figure 1: Proposed relationship between self-esteem and quality of life with resilience as a mediator

Chapter Summary

Chapter two covered the theories of self-esteem by Deci and Ryan (1991); Ryan et al. (1997), resilience by Worsley (2015) and quality of life by Ventegodt et al. (2003b). Conceptual and empirical views of self-esteem, resilience and quality of life of persons with rheumatoid arthritis were

explored. From literature, it was found that self-esteem levels in rheumatoid arthritis patients vary across studies. Most studies recorded low self-esteem (Farshi et al., 2013; MacKinnon & Miller, 2011; Slimani & Ladjouze-Rezig, 2014) while one study recorded high self-esteem (Kurt et al., 2013) in rheumatoid arthritics. Concerning the level of resilience in persons with rheumatoid arthritis, it was concluded that resilience is a trait therefore one's resilience is dependent on personality but not on circumstances that befall them (G. A. Bonanno et al., 2004; Zautra et al., 2010) though such circumstances are what tests resilience. Low quality of life levels was also found among arthritics. Again, it was found from the literature explored that self-esteem and resilience influence quality of life as much as resilience mediates the relationship between self-esteem and quality of life.

However, studies on the mediating role of resilience in the relationship between self-esteem and quality of life is scarce and that is the gap that this study seeks to fill. This chapter also covered the conceptual framework guiding the study.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter discussed the procedures that were adopted in carrying out the study. The chapter was organized under six sub-sections. These are the research design, study area, population, sample and sampling procedure, research instruments, pilot-testing of the instrument, data collection procedure, data analyses and ethical consideration.

Research Design

The research design that guided the study was the cross-sectional survey design. A cross-sectional design collects data to make inferences about a population of interest at a point in time (Cummings, 2018; Levin, 2006). This type of research design can be conducted using any mode of data collection including telephone, interviews, questionnaires, electronic mails and others. A cross-sectional survey was used in the current study because it aims at determining the frequency or level of particular attributes (self-esteem, resilience and quality of life) in a population of interest (persons with rheumatoid arthritis) at a particular point in time. This type of research design is described as snapshots of the populations about which data is gathered (Battaglia & Lavrakas, 2008).

A cross-sectional survey is most appropriate for the current study because the study looked at the prevailing characteristics in persons living with rheumatoid arthritis who are receiving treatment at Korle-Bu Teaching

Hospital and also because the study aims not to manipulate variables. Advantages of the cross-sectional survey are that the study takes place at a single point in time and it allows researchers to look at the prevailing characteristics in a given population. Cross-sectional surveys provide information about what is happening in a current population (Battaglia & Lavrakas, 2008).

Study Area

Korle-Bu Teaching Hospital (KBTH) was the study area. It is the premier health care facility in Ghana and currently the third-largest hospital in Africa. Established in 1923, KBTH is the only public tertiary hospital in the southern part of the country which also serves as the nation's leading referral centre. The hospital has grown from an initial 200 beds to 2,000 beds and has 17 clinical and diagnostic departments/units which include medicine, child health, obstetrics and gynaecology, pathology, laboratories, radiology, anaesthesia, surgery, polyclinic, accident centre and surgical/medical emergency, pharmacy, finance, engineering and general administration. Also, the facility offers specialized services including a rheumatology clinic which is under the medicine department. Korle-Bu teaching hospital was purposively sampled because it is the only hospital in Ghana with a rheumatology unit. This explains why it was a suitable area for the study.

KBTH is located at Guggisberg Ave, Korle-Bu opposite St Mary's senior high school in Accra Metropolis. Accra Metropolitan Area is one of the 254 metropolitans, municipal and districts in Ghana and is part of the 26 districts in the Greater Accra region with a population of 1,665,086 as of 2010. In 2018, the Metropolis spans an area of approximately 60km2 (23 square

metres). Currently, the Accra Metropolitan Area is part of the 10 districts that make up the Accra Metropolitan Area, serving as Ghana's capital.

The rheumatology unit in Korle-Bu Teaching Hospital (KBTH) where the study was conducted was established in 2009 by Dr Ida Dzifa Dey. The unit sees patients with rheumatologic diseases and other autoimmune conditions. It is located at the old medical block (Ward L) near Chenard (Obstetrics & Gynaecology unit). It runs a specialist clinic once a week specifically Thursdays, to see outpatients with such conditions and also carries procedures like Arthrocentesis for treatment.

Population

The population (total number of rheumatoid arthritis persons receiving treatment according to rheumatology records department) was 320 patients. Population, according to Cozby et al. (1977), is the group about which a researcher is interested in gaining information and drawing conclusions. It is a group of individuals who have one or more characteristics in common that are of interest to the researcher. The target population of this study included all rheumatoid arthritis patients in Accra Metropolitan Assembly, while the accessible population of the study comprised physician-diagnosed rheumatoid arthritis patients who assess health care at Korle-Bu Teaching Hospital. Their average age range of rheumatoid arthritics receiving treatment in KBTH is 30 to 40 years and about 85% of them are females. More than half of the population were educated (KBTH Rheumatology records in 2019).

Sample and Sampling Procedure

According to Cozby et al. (1977), sampling involves the process of selecting a portion of the population to represent the entire population.

According to the rheumatology unit of Korle-bu Teaching Hospital, as of 2019, 320 regular patients were catered for by the unit. For this study, the study assumes a proportion of patients (p) to be assessed in the study at 0.5. Having a known population size, the sample size for the study is determined using the following formula:

$$n = \frac{\frac{Z^2 \cdot p(1-p)}{e^2}}{1 + \left(\frac{Z^2 \cdot p(1-p)}{e^2 N}\right)}$$

Where n is the sample size to be determined, Z is the z-score, p is the population proportion, e is the margin of error, and N is the known population size. The study assumes a 95% confidence level, with margin of error of 0.05, and this corresponds to a z-score of 1.96. With the target population (N) at 320 people, the sample size is calculated as:

For numerator: $(1.96^2 \times 0.5(1\text{-}0.5)) \div (0.05^2)$

$= (3.8416 \times 0.25) \div 0.0025$

$= 0.9604 \div 0.0025$

$= 384.16$

for denominator: $1 + [(1.96^2 \times 0.5(1\text{-}0.5)) \div ((0.05^2) \times 320)]$

$= 1 + [(3.8416 \times 0.25) \div (0.0025 \times 320)]$

$= 1 + (0.9604 \div .80)$

$= 1 + 1.2005$

$= 2.2005$

Sample size: numerator ÷ denominator

$= 384.16 \div 2.2005$

$= 174.6$

Sample size = 175

With a determined sample size of 175, purposive and convenient sampling techniques of the non-probability sampling method was employed for this study. Specifically, patients who are outpatients were purposively selected for the study. Also, because the study targeted outpatients, respondents were conveniently sampled based on their presence at the Rheumatology Unit and their willingness to partake in the study during the period. Though the average life expectancy of Ghanaians is 63.8 years, the researcher extended the age range above that since she was interested in exploring the issues in all the age groups. This was done to prevent participants whose ages exceeded the average longevity age from being excluded.

The purposive sampling technique is a non-probability sampling method to obtain a sample of people who meet some predetermined criterion while the convenient sampling technique is also a nonprobability sampling procedure that aims at obtaining research participants based on their availability (Cozby et al., 1977). Purposive sampling was used in this study because the interest is on a specific target group which is patients with rheumatoid arthritis in the Korle-Bu Teaching Hospital and convenient sampling because of their accessibility.

Inclusion Criteria

The inclusion criteria for the study was persons with rheumatoid arthritis who were diagnosed by a physician and receiving treatment at Korle Bu Teaching Hospital. The participant had no comorbidity with other conditions other than rheumatoid arthritis and was willing to participate in the study. Finally, the participants were receiving outpatient treatment.

Exclusion Criteria

The exclusion criteria for the study were patients with RA who were not receiving treatment from Korle -Bu Teaching Hospital. Patients with rheumatoid arthritis who were receiving inpatient treatment were excluded from the study. Moreover, the study excluded patients with rheumatoid arthritis with other comorbidities like hypertension or diabetes and other chronic diseases.

Data Collection Instrument

Questionnaires were used to gather data for this study. The choice of the questionnaire was based on the assertion by Cohen et al. (2002) that it is useful for collecting survey information, providing structured, numerical data and being able to be administered without the presence of the researcher. The questionnaire was made up of closed-ended items.

The questionnaire was contained in 4 sections based on the research questions. The first section (Section A, items 1 to 5) covered background information of the respondents, the second (Section B, items 6 to 15) measured the self-esteem level of people living with rheumatoid arthritis, the third section (Section C, items 16 to 26) covered the resilience level of rheumatoid arthritis patients and the fourth (Section D, items 27 to 50) measured the quality of life of these patients.

Items in sections B, C and D were anchored on a four-point Likert scale for self-esteem, a five-point Likert type for both resilience and quality of life. The following questionnaires were adapted to ensure effective analysis of the data even though it restricted the free expression and perception of respondents in the study.

Rosenberg Self-Esteem Scale

This scale was developed by Rosenberg in 1965. It is a 10-item questionnaire with each of the items rated on a four-point Likert type of scale (1-4) ranging from strongly agree to strongly disagree. These ten sentences are linked to overall feelings of self-worth or self-acceptance. The reliability (internal consistency) scores of the scale were .77 to .88 with a criterion validity of .55. It has been validated for use with substance abusers and other clinical groups and is regularly used in treatment outcome studies. The scale has been validated for use among both male and female adolescent, adult and elderly populations (Rosenberg, 1965). The scale is unidimensional because all items on the questionnaire were geared towards assessing of self-esteem of respondents.

Items 2, 5, 6, 8, and 9 were reverse coded. The total score was calculated by summing the scores of all 10 items. The scale ranges from 10, being the minimum to 40, being the maximum with 20 as an average score. A higher score indicates higher self-esteem of the respondent.

Connor-Davidson Resilience Scale (CD-RISC 10)

This scale was originally developed by Connor and Davidson in 2003 as a 25-item questionnaire used to measure resilience. A 10-item version which is a brief version of CD-RISC 25 emerged later from an analysis conducted by Campbell-Sills and Stein in 2007 (Campbell-Sills & Stein, 2007). It is made of questions 1, 4, 6, 7, 8, 11, 14, 16, 17 and 19 from the original 25-item scale (Campbell-Sills & Stein, 2007). In their study, CD-RISC 10 was evaluated and found to have a Cronbach's alpha reliability of

.85. The scale is unidimensional because all items on the questionnaire assessed the resilience of respondents.

Each of the items on this scale has a minimum score of 0 and a maximum of 4. So a total score of CD-RISC 10 ranges from 0 (minimum) to 40 (maximum). The total score was calculated by summing the scores of all 10 items. A higher score indicates higher resilience of the respondent.

World Health Organization Quality of Life (WHOQOL-BREF)

It is the short-form of WHOQOL-100 developed in 1996, which may be considered lengthy for practical use. WHOQOL-BREF was developed by the WHOQOL group, the authors of the initial version in the year 1991. It is made up of 26 items with one item from each of the 24 facets of the 4 domains contained in WHOQOL-100 and an addition of 2 items from the overall quality of life and general health facet have been included (Skevington et al., 2004). The four domains include physical health, psychological, social relation and the environment. This instrument has a test-retest reliability ranging from .71 to .91 when tested on rheumatoid arthritis patients. On this same population, internal consistency was adequate except for the social relationship domain (α = .64 to .87) (Taylor et al., 2004).

This scale was chosen over other quality of life scales based on a conclusion made from another study which has its results indicating that overall, the WHOQOL-BREF is a sound, cross-culturally valid assessment of QOL, and also because it has been grouped further into four domains: physical, psychological, social and environment (Skevington et al., 2004). The scale is a multi-dimensional scale because the scale has four subscales (physical health, psychological, social relation and environmental aspects of

quality of life) of which items on the questionnaire are grouped under, though the overall scale is assessing one construct.

Before the scoring of this scale, reverse coding was done for items 3, 4 and 26. After which the mean score of items within each domain was used to calculate the domain score. Mean scores were later multiplied by 4 to make domain scores comparable with the scores used in the WHOQOL-100. Domain scores of these instruments were scaled in a positive direction (meaning, higher scores denoted higher quality of life while lower scores indicate lower quality of life.

Pilot-testing

The instrument was pilot-tested on 18 patients with rheumatoid arthritis in Tema General Hospital to validate and ensure the reliability of the research instrument. According to Connelly (2008), 10% of the projected sample (175) is an appropriate sample size for pilot testing. Running analysis after pilot testing, the Cronbach's alpha for the self-esteem scale was .67, resilience scale was .89 and that of quality of life was .89 which according to Field (2013) is appropriate. Only one item in the quality of life scale was altered (a word in item number 26 was changed from blue mood to sad mood) based on the responses given by participants.

Pilot testing was important because it gave warning about where the main study or instrument can fail, where research protocols may be broken, or whether proposed methods were appropriate or too complicated (Van Teijlingen & Hundley, 2002). It was also carried out to determine the appropriateness of instruments before using them for the main study. This was to identify items on the questionnaire that respondents might have difficulty

understanding or interpreting as intended. Pilot testing of instruments offered the researcher the opportunity to identify instructions and questions that are unclear or misleading, devoid of ambiguity as well as to try out the coding and classification system for the data analysis.

Data Collection Procedure

Before embarking on the data collection, the researcher obtained ethical clearance from the University of Cape Coast Institutional Review Board. After which the researcher again obtained a letter of introduction from the Department of Education and Psychology. Ethical clearance was also obtained from the ethical review board of Korle-Bu Teaching Hospital before the administration of the questionnaires. With support from the officers at the Rheumatology Unit, the study was announced to patients at each visit and on their WhatsApp platform since a google form also was created. Using the convenient sampling approach, the researcher approached patients individually to determine whether they wanted to participate in the study. Once interest was expressed, the consent form was provided and completed before the administration of each questionnaire. Participants were asked to read the items of the questionnaire and check which of the options that best suits them. To ensure clarity of how the questionnaire should be completed, the researcher administered the questionnaires personally to all the participants involved in the study. Participants took 15-20 minutes to respond to the questionnaire after which they were given back to the researcher. In six weeks, only 16 of the questionnaires were administered. Only a few of the patients visited the clinic due to the Covid 19 pandemic.

According to the staff at the unit, client review is done on social media where their prescriptions are sent to them on WhatsApp so only those who were supposed to take a scan or present their lab results attend the clinic. They suggested I create a google form since clients have a WhatsApp platform. Those who could not come to the facility as a result of the Covid 19 pandemic assessed the questionnaire in a google form. So the questionnaire in a google form was created and the link was shared on their WhatsApp platform where 101 responses were recorded in two weeks.

In all 117 persons participated in the study, which is equal to a 67% return rate. According to Cohen, Manion and Morrison (2004), this return rate is appropriate for a quantitative study. The instruments for the study included the Rosenberg self-esteem scale, Connor-Davidson resilience scale, the WHOQOL-BREF. The researcher used two months to collect data.

Data Processing and Analysis

At the end of the data collection, the 16 responded questionnaires (hard copies) were entered into google form by the researcher to add up to the 101 data already collected via a google form, from the patients who could not come to the facility. After which the data were imported to MS Excel and data cleaning (exploring the data to check whether respondents had followed directions correctly and whether all items had been responded to) was done. After this, the data in MS Excel was imported into IBM SPSS. The researcher processed and managed the data by using IBM SPSS version 22 to code the raw data into a form useful for analysis and also generate results.

Section A included some demographic data of the respondents. Descriptive statistics were employed to analyse using frequencies and

percentages to find out the mean, minimum and maximum scores for data because it is suitable for meaningful interpretation, conclusions and recommendation of data. The unit of analysis for the study was patients with rheumatoid arthritis (both males and females) since the study is interested in exploring the relationship that exists among the three variables (self-esteem, resilience and quality of life) in rheumatoid arthritis patients.

Research questions one to three were analysed using descriptive statistics (frequencies and percentages) because their objectives were to measure the levels of self-esteem, resilience and quality of life of rheumatoid arthritis persons in Korle-Bu. Hypothesis one was tested using regression to determine the impact self-esteem and resilience have on quality of life of patients with rheumatoid arthritis patients as well as showing if there is a relationship among them. Hypothesis two was tested using mediation analysis (PROCESS by Andrew Hayes) to investigate the relationship between self-esteem and quality of life through resilience.

Ethical Considerations

Ethical approval was first sought from the Institutional Review Board of University of Cape Coast. After which another ethical approval was obtained from the Institutional Review Board of Korle-Bu Teaching Hospital. Also, each participant was given a written informed consent to read and understand before he or she was allowed to be part of the study. Questions that were likely to cause some emotional or psychological distress to the participants due to their sensitivity were carefully framed to either prevent or reduce the risk. However, in any case of a question causing some form of emotional or psychological distress to the participants, the researcher engaged

participants in some relaxation techniques to calm them down and also encourage them to practice them at home too.

Those who chose to participate were also at will to withdraw from participating if they desire to do so and these did not in any way affect them. Anonymity was ensured by assigning codes to study participants and information collected was confidential and used for research purposes only. Confidentiality and privacy of information obtained from each participant were ensured by preventing unauthorized access to their information. The data was kept at a secured place and locked (a password protected computer). No one other than the researcher knew participants' responses to the questions. Unique personal identifiers were used attached to the data. Data was entered and stored on a password-protected computer.

Chapter Summary

The chapter presented the research design employed in the study; the cross-sectional survey design, the study area, which is Korle-Bu Teaching Hospital, the population of the study which included persons living with rheumatoid arthritis, the sampling procedures used and the sample size for the study. The chapter also presented ethical issues, data collection procedures and data processing and analysis addressed in the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents the results of the analysis and the discussion in relation to the hypotheses stated in chapter one. The result and the discussion cover demographic data of respondents, testing the study hypotheses and other relevant findings from the study.

Socio-Demographic Characteristics of the Participants

The study was conducted at Korle-Bu Teaching Hospital in Accra. The target population was persons living with rheumatoid arthritis who are receiving treatment at Korle-Bu Teaching Hospital. The age range for the study was between 9 years to 85 years and above. One hundred and seventeen participants responded to the questionnaire. The demographic data include the respondent's gender, age, educational status, and duration of diagnosis. These are presented using frequencies and percentages.

Table 1- *Distribution of Respondents by Age*

Age	Frequency	Percent
9-17 years	4	3.42
18-35 years	59	50.43
36-45 years	18	15.38
46-59 years	16	13.68
60-87 years	20	17.09
Total	117	100.00

Source: *Field Survey 2020*

Item 1 in Section A of the questionnaire elicited information about age of the respondents. The results of the analysis are presented in the table above. From the demographic table, approximately 50% of the participants are within the age 18 to 35 years and 3% are within 9-17 years. Therefore, it can be concluded that majority of respondents are within age 18 to 35 years.

Research Question 1: ***What is the level of self-esteem of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital?***

The question sought to investigate the self-esteem level of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital. To answer the research question, ten (10) items under the self-esteem scale were used and their level of self-esteem was determined based on low (10-20), moderate (21-30) and high (31-40). Five of the items were negatively stated, for which these items were reverse coded.

Table 2- *Self-esteem level of persons with rheumatoid arthritis*

Score Range	Frequency	Percentage	Interpretation
10-20	47	40.2	Low
21-30	33	28.2	Moderate
31-40	37	31.6	High

Source: *Field Survey 2020*

Table 1 presented results on self-esteem level based on the range of scores. From the results, it was determined that though many respondents (40.2%) had low self-esteem, a majority (59.8%) of the respondents had moderate to high levels of self-esteem.

Research Question 2: ***What is the resilience level of persons with Rheumatoid Arthritis in Korle-Bu Teaching Hospital?***

The research question sought to investigate the resilience level of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital. To answer the research question, ten (10) items under the resilience scale were used and their level of resilience was determined based on low (0-14), moderate (15-29) and high (30-40).

Table 3- *Resilience level of persons with rheumatoid arthritis*

Score Range	Frequency	Percentage	Interpretation
0-14	43	36.8	Low
15-29	40	34.2	Moderate
30-40	34	29	High

Source: *Field Survey 2020*

Table 3 presented results on resilience level based on the range of scores. The results from the table show that majority of the respondents had moderate to high levels of self-resilience (63.2%), with 36.8% of the participants scoring low on resilience.

Research Question 3: ***What is the level of quality of life of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital?***

The question sought to investigate the quality of life level of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital. To answer the research question, twenty-six (26) items under the quality of life scale were used and determination of their level of quality of life was based on low (26-61), moderate (62-95) and high (96-130). Reverse coding was done for items that were negatively stated.

Table 4- *Quality of life levels of persons with Rheumatoid Arthritis*

Score Range	Frequency	Percentage	Interpretation
26-61	41	35	Low
62-95	36	30.8	Moderate
96-130	40	34.2	High

Source: *Field Survey 2020*

Table 4 presented results on the level of quality of life, based on the score ranges. It could be deduced from the results that the majority (65%) of persons with rheumatoid arthritis receiving treatment at Korle-Bu Teaching Hospital have moderate to high quality of life levels, while low levels of quality of life were recorded among 35% of the participants.

Hypothesis 1 (a & b): There will be a significant influence on (a) self-esteem and (b) resilience on quality of life of patients with rheumatoid arthritis receiving treatment in Korle-Bu Teaching Hospital.

The purpose of this study was to investigate the influence of self-esteem and resilience on quality of life of persons with rheumatoid arthritis and this hypothesis was tested using multiple regression. Certain assumptions were to be met before performing regression analysis and these are normality test, linearity and multi-collinearity test. These assumptions were checked before the regression analysis was conducted. The graphs showing the normality and linearity of the dependent variable (quality of life) are presented below

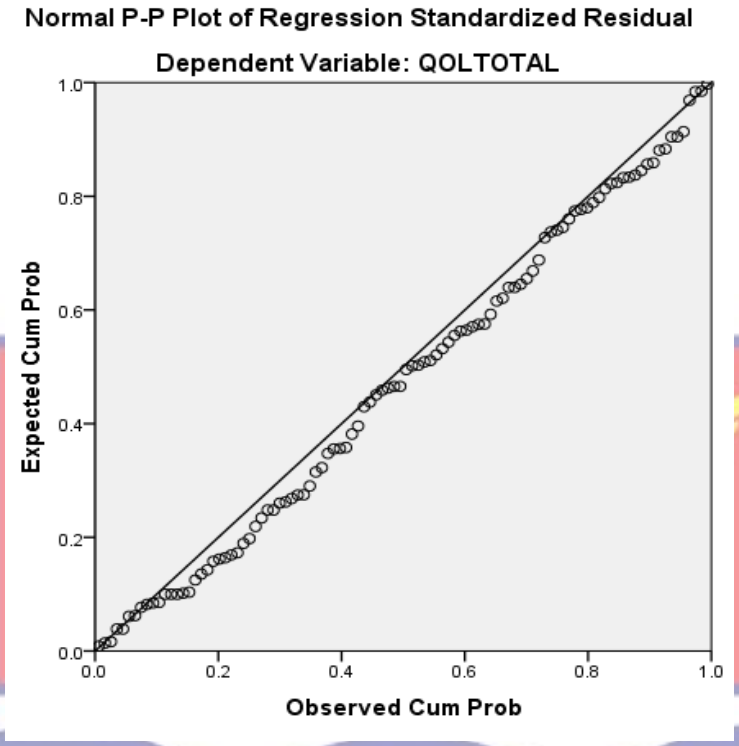

Figure 2: Normal P-P Plot for Quality of Life

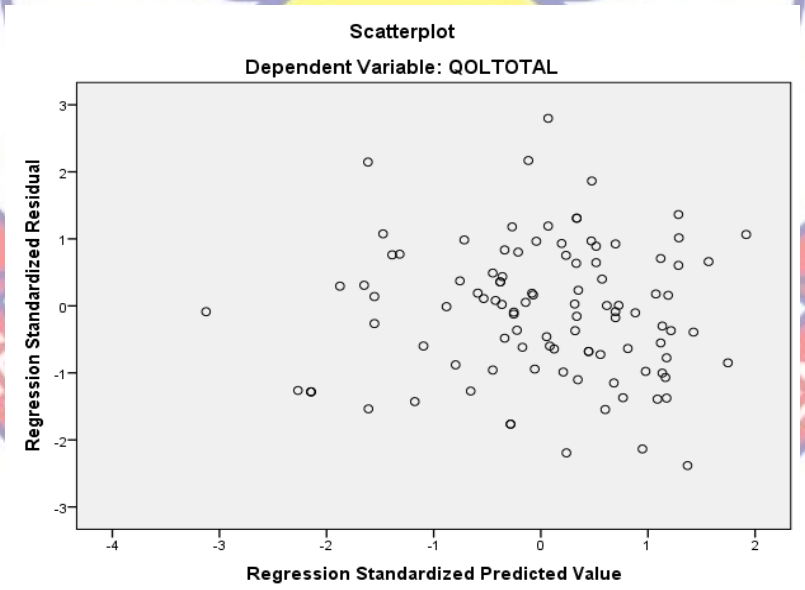

Figure 3: Linearity Graph for Quality of Life

From figure 3, the data was presented as normal since the diagonal line runs through a bunch of little circles from down left to up-right and this is an indication that the requirement for regression analysis has been met. Figure 3 indicated that the relationship between the independent and dependent

variables was linear, which also explains homoscedasticity. It was also indicated that no multi-collinearity existed among the variables, since the coefficient output of the collinearity statistics gave a Variable Index Factor (VIF) of 1.397 that is between the range 1 and 10.

Table 5- *Results of Descriptive Statistics*

Variables	**Mean**	**SD**
Self-esteem	29.98	5.30
Resilience	23.05	6.71
Quality of life	53.99	10.83

Source: *Field Survey 2020*

Table 5 presented the descriptive statistics (means and standard deviations) of the variables. The results showed that quality of life had the highest mean and standard deviation (*M*=53.99, *SD*=10.83) followed by self-esteem (*M*=29.98, *SD*=5.30) and resilience which also recorded a mean and standard deviation of (*M*=23.05, *SD*=6.71). The table below presents regression results.

Table 6- *Regression Analysis of Influence of Self-esteem and Resilience on Quality of life*

Variable	**B**	**SEB**	**B**	**R**	**T**	**Sig.**	**R^2**	**Ad R^2**	**F**	**p**
SE	1.036	.155	.507	.698	6.676	.000	.579	.571	70.264	.000
RES	.579	.122	.359	.629	4.730	.000				

Source: Field Survey (2020) **Significant at 0.05 level*

a. *Predictors: (Constant), (Self-esteem and Resilience)*
b. *Dependent Variable: Quality of life*

Table 6 presents the regression result of self-esteem and resilience on the quality of life of persons with rheumatoid arthritis. It is shown from the result

that self-esteem (r=.698) and resilience (r=.629) had a significant positive relationship with quality of life of persons with rheumatoid arthritis. The results of the regression presented that the two predictors (self-esteem and resilience) explained 57.9% of the variance (R^2=.579, F (2,115) =70.264, p=.000) in quality of life. It was found that self-esteem significantly predicted quality of life (β = .507, p=.000), as resilience did (β = .359, p=.000).

Hypothesis Two: The hypothesis which states that "resilience will mediate the relationship between self-esteem and quality of life" was investigated using PROCESS (model 4) by Andrew Hayes. The results of the analysis were presented in Table 7.

Table 7- *Mediating role of resilience in the relationship between self-esteem*

	Coeff	BootSE	t-value	p	BLLCI	BULCI
X→ Y	1.384	.1416	9.771	.000	1.103	1.665
X→ M	.6465	.1081	5.980	.000	.4320	.8611
M/X→ Y	.5351	.1214	4.407	.000	.2941	.7761
X|M → Y	1.0379	.1518	6.836	.000	.7366	1.339
	Effects					
Total effect of X on Y	1.384	.1416	9.771	.000	1.103	1.665
Direct effect of X on Y	1.0379	.1518	6.836	.000	.7366	1.339
Indirect effect of X on Y	.3460	.1198			.1320	.6017

X- Self-esteem, Y- Quality of life, M- Resilience

Source: *Field Survey, 2020*

The results in Table 7show that self-esteem was a significant predictor of quality of life, *b* = 1.384, p <.001. Self-esteem was also a significant predictor of the mediator (resilience) *b* = .6465, p <.001. Again, the mediation process showed that the mediator (resilience), controlling self-esteem, was significant, *b* = .5351, p <.001. And the analyses revealed that controlling for

the mediator (resilience), self-esteem was a significant predictor of quality of life, *b* = 1.0379, p <.001. These results indicated that there is a partial mediation effect. A measure for the indirect effect of X on Y revealed a significant indirect effect of self-esteem on quality of life, *b* = .35, 95%CI (.1320 and .6017) at a bootstrap level of 5000. The results indicate that the effect self-esteem has on quality of life are explained partially by the resilience level of the patients. This means that resilience may not be the only reason why a patient with high self-esteem has a good quality of life. That is, variables other than resilience could be a part of the reason for the relationship between self-esteem and quality of life of persons with rheumatoid arthritis.

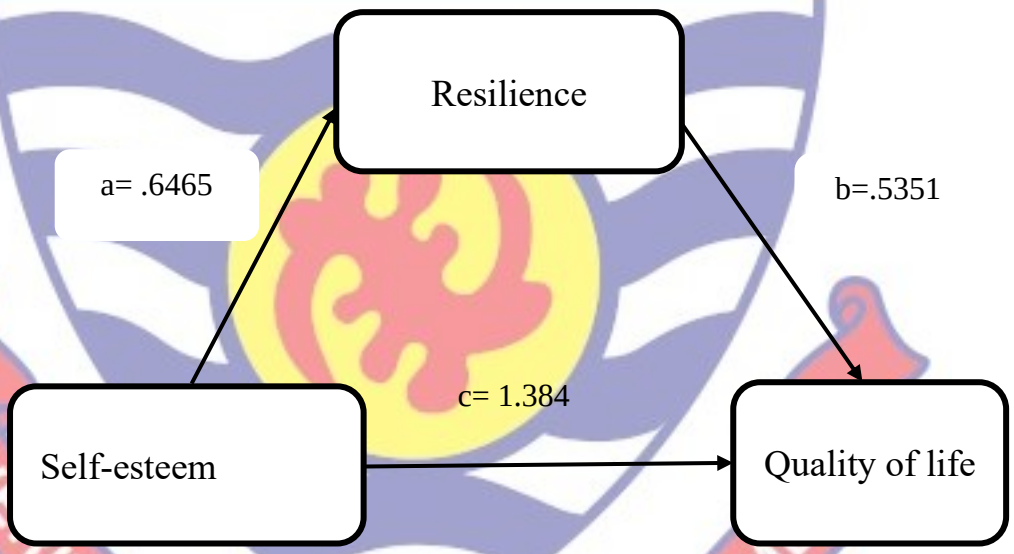

Figure 4: Relationship between self-esteem and quality of life with resilience as a mediator

Discussion of Findings

This part of the chapter discusses the key findings in relation to previous findings and theories guiding the study to establish a conclusion on the observed phenomenon.

Levels of self-esteem in persons with rheumatoid arthritis

The question seeks to establish the level of self-esteem of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital. The study revealed that the level of self-esteem was moderate to high as the highest frequency score fell between moderate and high score range, though quite a number of them scored low on self-esteem. This indicates that the majority of the patients have moderate to high self-esteem irrespective of their condition.

This finding is consistent with other study findings (Kurt et al., 2013) which stated that 60% of rheumatoid arthritis in their study had high levels of self-esteem. However, self-esteem levels were lower in patients who had changes in hands and body due to the rheumatoid arthritis (Kurt et al., 2013). The current study findings contradict that of Slimani and Ladjouze-Rezig (2014) which states that low self-esteem was common among people with rheumatoid arthritis, especially among those who were more disabled, who had more severe pain and fatigue, and who reported anxiety and depression.

It can be explained that these persons are exhibiting more of true self-esteem, where the evaluation of their self-worth or feelings about themselves are independent of standards or expectations on the physical health but rather based on being who they are. It is believed that these patients do not put their self-worth to test continually therefore, they avoid social comparisons and self-evaluations. Since wealth, fame, health, capabilities and other vacuous or narcissistic goals are not the basis of their self-esteem, these patients with rheumatoid arthritis have a more secure sense of self and high levels of true self-esteem.

It can be said that the remaining persons with rheumatoid arthritis who scored low on self-esteem have contingent self-esteem, a feeling about oneself that is dependent on some standard of excellence or living up to expectations. In other words, these patients feel or think their sense of worth increases only when they accomplish a goal or have good health (in this case, not having rheumatoid arthritis). If these persons were not diagnosed with rheumatoid arthritis or any chronic condition, they would have a continuing high level of self-esteem. This self-esteem is unstable and very weak, always requiring that these persons continually have things going on well for them. Meaning that their self-esteem is based on outcomes. For instance, if the basis of their feeling good and sense of worth about themselves are their capabilities and physical looks, then being diagnosed of rheumatoid arthritis and being unable to do the things they used to do and looking deformed in some joints would change their sense of worth.

Resilience levels of persons with rheumatoid arthritis

The research question sought to find out the level of resilience among persons with rheumatoid arthritis receiving treatment at Korle-Bu Teaching Hospital. The study found that the majority of the patients had moderate to high levels of resilience, even though some score low on resilience. This revelation may not be surprising because Sturgeon and Zautra (2010) and Zautra et al. (2010) found that people are generally resilient, but only a few are resilient to almost all circumstances that may befall them. This is consistent with the findings of G. A. Bonanno et al. (2004) which stated that some people when facing stressful conditions, maintain a firm equilibrium without reacting negatively. It could be explained that possibly resilient people have a strong

internal locus of control so they believe they can affect their situation (Kirkcaldy et al., 2002).

In relation to the resilience doughnut model, it can be explained that these persons with rheumatoid arthritis (who scored moderate to high resilience scores) were exposed to both internal (the awareness of social resources, the sense of self and experiences of self-efficacy) and external (the parent, the skill, the family, the education, the peer, the community and the money factor) attributes while growing up or in their current life which is the reason they exhibit resilience in times of adversity (diagnosed of a chronic illness).

For instance, having a complete sense of self (being aware of social resources and self-efficacy) coupled with some external factors like a sense of belongingness (from parents, family, peers or community) and/or ability to solve problems (skills) helps them to be able to cope with their rheumatoid arthritis even though it may have caused permanent damages like chronic pain, deformity or loss of job and even becomes a better person. Therefore, their available external contexts interact with the three internal concepts to positively influence an individual's overall resilience.

Quality of life levels of persons with rheumatoid arthritis in Korle-Bu Teaching Hospital

The quality of life levels of persons with rheumatoid arthritis was also assessed among persons with rheumatoid arthritis in Korle-Bu Teaching Hospital. It was revealed from the study that quality of life of participants was high since the highest frequency score fell in the moderate and high score range. This indicates that the majority of persons with rheumatoid arthritis in

the study have moderate to high quality of life. The study supports the findings of a study conducted by Chiu et al. (2014) which found a low level of quality of life of patients with this chronic condition due to disease activity and also aggravation in all domains of quality of life among those with longer duration of illness. Conversely, the findings of Martinec et al. (2019) refuted that of the current study by stating that there was no statistical difference in the level of quality of life between patients with rheumatoid arthritis and healthy population.

This finding could be explained that the quality of life is measured in this study was their subjective quality of life, which means how good an individual feels his or her life is (Santos et al., 2007). Persons with rheumatoid arthritis personally evaluated how they view things, their feelings and notions concerning their life. However, the case might be different if quality of life was measured objectively. Explaining this finding using the individual subjective quality of life theories (satisfaction in life, wellbeing, happiness and meaning in life, biological view of quality of life, realizing life potential, fulfilment of needs and objective factors.) would mean that though persons with rheumatoid arthritis face the consequences of their condition, they still perceive their life as quality. The objective quality of life theories (biological view of quality of life and objective factors) explains why some patients with rheumatoid arthritis have a low quality of life. That is, the external and obvious facts like the chronic pain they experience, some job loss as a result of the symptoms and other consequences may explain why their quality of life is low.

Influence of self-esteem and resilience on quality of life of patients with rheumatoid arthritis receiving treatment in Korle-Bu Teaching Hospital.

The hypothesis sought to test if self-esteem and resilience could influence quality of life of persons with rheumatoid arthritis in Korle-Bu Teaching hospital of which the data analysis shows that hypothesis one was confirmed.

The results of the present study show that there is a strong positive relationship between self-esteem scores and quality of life. The study also revealed that self-esteem is a predictor of quality of life. This result is in line with findings of previous studies (ANA-MARIA, 2015; Farshi et al., 2013; Hemati & Kiani, 2016; Hill, 2015; MacLean & Kermode, 2001; Manhas, 2014; Mikulášková & Babinčák, 2015; Tavares et al., 2016; Tonsing & Ow, 2018) which not only revealed a relationship but reported that self-esteem predicts quality of life. Though these studies were conducted in varying populations (both healthy and non-healthy persons), the majority of them focused on self-esteem and quality of life among persons with chronic diseases of which rheumatoid arthritis falls under. Based on the self-determination theory by Deci and Ryan (1991), the three psychological needs; competence, autonomy and relatedness are believed to influence one's self-esteem (behaviour) which in turn facilitates growth and integration as well as constructive social development (quality of life). This explains why self-esteem influences quality of life in that, persons with rheumatoid arthritis who reported high levels of self-esteem are believed to have a satisfying sense of competency, autonomy and relatedness. Persons with rheumatoid arthritis who

have low quality of life as a result of their low self-esteem would be said to have their symptoms either worsening or not been on treatment for long.

Evaluating one's self-worth (self-esteem) based on the ability to interact (relatedness) and do the things we want (autonomy and competence) is said to affect how one perceives his or her life quality. For instance, in a case where a person before diagnosis perceived him or herself as having a good life but as he or she starts experiencing rheumatoid arthritis symptoms such as joint pain, stiffness, swollenness, deformity and many others which prevent them to do the things they used to do (daily activities) or from social events/interactions thereby relying on other people. This often leads them to think of their life as burdensome or not good enough especially because of some objective factors like job loss, financial crisis, inability to interact or participate in social events and many other effects that been diagnosed of rheumatoid arthritis comes with, which in turn affect their perception of quality of life.

The study also revealed resilience as a predictor of quality of life among persons with rheumatoid arthritis receiving treatment at Korle-Bu teaching hospital. Meaning that, resilience influences quality of life as much as the correlation results also reveal a strong positive relationship between resilience and quality of life, that is, the higher an individual's resilience, the higher their quality of life and vice versa. Persons with rheumatoid arthritis who can adjust or cope with challenging situations or the onset of this diagnosis perceived their life as good (scoring high on quality of life) irrespective of the state of their health. However, persons with rheumatoid

arthritis who are unable to adjust to new and challenging situations (less resilient people) are reported to have a low quality of life.

This is consistent with findings from previous studies (Bastaminia et al., 2016; Cal, Sá, Glustak, Santiago, et al., 2015; Jain & Singh, 2014; Oleś, 2015; Temprado Albalat et al., 2020; Tian & Hong, 2014) which reported a relationship between resilience and quality of life though not in the same population. Some of these studies (Bastaminia et al., 2016; Temprado Albalat et al., 2020; Tian & Hong, 2014) further reported resilience as a predictor of quality of life. This corresponds to the current study findings which stated that resilience is a predictor of quality of life. However, (Tian & Hong) study in 2014 found that resilience is not an independent predictor of quality of life in patients with digestive cancer, but it is the main factor influencing psychological distress (Tian & Hong, 2014).

From the resilience doughnut model, it can be explained that the quality of life of a person with rheumatoid arthritis is determined by both internal characteristics (the awareness of social resources, the sense of self and experiences of self-efficacy) and external environmental factors (the parent, the skill, the family, the education, the peer, the community and the money factor) that forms one's resilience (Worsley, 2015). Scoring low on resilience would mean lacking these internal and external characteristics.

This presupposes that being unaware of your social resources, unsecured sense of self and low self-efficacy, inadequate parental and social support, skills and other factors would lead to having low quality of life in terms of one's wellbeing, satisfaction with life, meaningful life, happiness,

realizing life potential and fulfilling their needs. It is therefore worth noting that self-esteem and resilience influence one's quality of life.

Mediating role of resilience on self-esteem and quality of life

Results from data analysis show that the fourth hypothesis was also accepted. The study results found resilience as a mediating variable between self-esteem and quality of life while holding years on treatment and age constant. This implies that resilience explains the relationship between self-esteem and quality of life. This means that to clarify the nature of the relationship between self-esteem and quality of life in persons with rheumatoid arthritis, the individuals' resilience level should be taken into consideration. Thus, the process that underlies the observed relationship is resilience.

There are limited studies in this area, however, findings from a study that examined the mediating role of positive and negative effects and self-esteem in the relationship between resilience and psychological well-being (an aspect of quality of life) by (Wu et al., 2015) is consistent with the current study findings which state a mediating role of resilience on self-esteem and quality of life.

Chapter Summary

The chapter presented the study findings and the discussion of the results. From the results, self-esteem and resilience were found to influence the quality of life in rheumatoid arthritics receiving treatment in Korle-Bu Teaching Hospital, therefore, indicating a relationship among self-esteem, resilience and quality of life. It was also found that, resilience plays a mediating role between self-esteem and quality of life.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the overview of the study, methodology, summary of key findings, conclusion, and recommendations of the study (including that of future studies).

Overview of the Study

The study was conducted to investigate the self-esteem, resilience and quality of life of persons with rheumatoid arthritis who are receiving treatment in Korle Bu Teaching Hospital. The study design was a cross-sectional survey with a sample of 117 respondents who were selected using purposive and convenient sampling procedures. Adapted questionnaires namely, the Rosenberg self-esteem scale (10 items), Connor-Davidson Resilience Scale (CD-RISC 10) and World Health Organization Quality of Life (WHOQOL-BREF 26) were the instruments used in collecting the data for this study. The questionnaires were made up of 56 closed-ended with one open-ended question which covered the various variables of interest.

Summary of the Findings

1. The findings revealed that the majority of persons with rheumatoid arthritis receiving treatment at Korle-Bu Teaching Hospital have moderate to high levels of self-esteem though some had low self-esteem.
2. The study also revealed that the majority of the patients had moderate to high levels of self-resilience, with few of them scoring low on resilience.

3. It was also found from the study that the majority of persons with rheumatoid arthritis receiving treatment at Korle-Bu Teaching Hospital have moderate to high quality of life levels, while low levels of quality of life were recorded among some of the participants.
4. Also, the study found that self-esteem and resilience influences the quality of life of patients with rheumatoid arthritis receiving treatment in Korle-Bu Teaching Hospital. The regression results for this finding presented that the two predictors (self-esteem and resilience) explained 57.9% of the variance in quality of life.
5. The findings of the study also show resilience as a mediating variable between the relationship between self-esteem and quality of life. From the mediation results, the indirect effect of self-esteem (X) on quality of life (Y) through resilience (M) showed a co-efficient of .35 and this is significant because none of the confidence intervals (.13 and .60) includes zero. This means that to clarify the nature of the relationship between Self-esteem and quality of life, resilience should be taken into consideration.

Conclusions

The study sought to assess the levels of self-esteem, resilience and quality of life of patients with rheumatoid arthritis accessing care at Korle-Bu Teaching Hospital and the relationship that exists among them. From the results, it was determined that the majority of respondents had moderate to high levels of self-esteem, resilience and quality of life. A relationship was found among self-esteem, resilience and quality of life, specifically, self-esteem and resilience influence the quality of life of persons with rheumatoid arthritis. Also, resilience plays a mediating role in the relationship between

self-esteem and quality of life. Interestingly, the study contradicts other study findings (Baloglu et al., 2015; Chiu et al., 2014) which reported that patients with rheumatoid arthritis mostly have low levels of quality of life.

This study has contributed to the understanding that self-esteem and resilience influence the quality of life of persons with rheumatoid arthritis. And the reason for this relationship is that people's capacity to adapt or respond positively in times of adversity even when it poses potential health risks and come out as much better individuals or even grow to be stronger than they were before the diagnosis of the condition.

Recommendations

The following is recommended based on the study findings and conclusions:

1. Persons with rheumatoid arthritis and their caregivers should be enlightened by Clinical Health Psychologists (Ghana Psychology Council) on their condition and how psychological wellbeing would improve their health aside from the drug treatment.
2. Medical practitioners at Korle-bu Teaching Hospital should not only focus on the physiological treatment of arthritis patients but should take into consideration their psychological and mental health since these could also affect the progression of the disease.
3. Ghana Health Service, Ministry of Health and NGOs in the treatment of arthritis and other chronic conditions should include psychological treatment like psychotherapy to the treatment of arthritis alongside drug therapy. This can be done by making sure departments in the hospital that treat rheumatoid arthritis and other chronic conditions should have Clinical

Health Psychologists that would attend solely to their psychological health since psychological health affects physical health too.

4. Furthermore, possible psychological interventions that would improve the resilience and self-esteem of people with rheumatoid arthritis should be developed by Ghana Psychology Council since this would influence their quality of life.

Suggestions for Future Research

Researchers should consider the use of qualitative methods to study these constructs (self-esteem, resilience and quality of life) since these concepts are not adequately captured when using surveys. The quantitative method used in the current study did not gather in-depth information on the phenomena of study. However, qualitative research is capable of uncovering the ambiguity that surrounds these three related concepts.

Future research should also consider widening the scope of the population to other rheumatology clinics in Ghana since the current study focused on Korle-Bu Teaching Hospital. Researchers in Ghana should also venture into psychologically related studies of persons with rheumatoid arthritis. Also, future researchers in this field should focus on other psychological or non-psychological variables that could be part of the reasons that self-esteem relates to quality of life.

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APPENDICES

APPENDIX A

UNIVERSITY OF CAPE COAST

COLLEGE OF EDUCATION STUDIES

FACULTY OF EDUCATIONAL FOUNDATIONS

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

QUESTIONNAIRE FOR RHEUMATOID ARTHRITIS PATIENTS

INTRODUCTION AND CONSENT

This questionnaire seeks to find out the self-esteem, resilience and quality of life of persons with rheumatoid arthritis. I would be very grateful if you participate in the study, however you are under no obligation to be a part of the study since this is voluntary. Note that your responses would be treated confidential and anonymity would be ensured. **Your responses would be used for academic purpose only.**

Please answer the following questions which would take about 15-20 minutes of your time. In case of ambiguity, please ask for clearance from the researcher. Thank you!

Gifty Selorm Amenya - 0241292819

SECTION A

1. Age (as at last birthday): ……. years
2. Sex: Male [ ] Female [ ]
3. Level of education completed?
   a. No formal education [ ] b. Primary [ ] c. JHS/Middle School [ ]
   d. SHS/Technical/Vocational [ ] e. Tertiary [ ] f. Other (specify) ……
4. Years on treatment: ……

SECTION B

To what extent do you disagree or agree with the following statements?

1=Strongly Disagree

2=Slightly Disagree

3=Slightly Agree

4=Strongly Agree

Statements	1	2	3	4
4. On the whole, I am satisfied with myself.				
5. At times I think I am no good at all.				
6. I feel that I have a number of good qualities.				
7. I am able to do things as well as most other people.				
8. I feel I do not have much to be proud of.				
9. I certainly feel useless at times.				
10. I feel that I'm a person of worth, at least on a level equal with others.				
11. I wish I could have more respect for myself.				
12. All in all, I am inclined to feel that I'm a failure.				
13. I take a positive attitude toward myself.				

SECTION C

To what extent do you agree with the following statements?

0= Not true at all

1 = Rarely true

2 = Sometimes true

3= Often true

4= True nearly all the time

Statements	**0**	**1**	**2**	**3**	**4**
14. I am able to adapt when changes occur					
15. I can deal with whatever comes my way.					
16. I try to see the humorous side of things when I am faced with problems.					
17. Having to cope with stress makes me stronger.					
18. I tend to bounce back after illness, injury, or other hardships					
19. I believe I can achieve my goals, even if there are obstacles.					
20. Under pressure, I stay focused and think					

clearly.					
21. I am not easily discouraged by failure					
22. I think of myself as a strong person when dealing with life's challenges and difficulties					
23. I can handle unpleasant feeling					

SECTION D

The following questions ask how you feel about your quality of life, health, or other areas of your life. I will read out each question to you, along with the response options. Please choose the answer that appears most appropriate. If you are unsure about which response to give to a question, the first response you think of is often the best one.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life **in the last four weeks.**

		Very Poor	Poor	Neither Poor nor Good	Good	Very Good
24	How would you rate your quality of life?	1	2	3	4	5

		Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
25.	How satisfied are you with your health?	1	2	3	4	5

The following questions ask about **how much** you have experienced certain things in the last four weeks.

		Not at all	A Little	A moderate amount	Very much	An extreme amount
26.	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
27.	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
28.	How much do you enjoy life?	1	2	3	4	5
29.	To what extent do you feel your life to be meaningful?	1	2	3	4	5
30.	How well are you able to concentrate?	1	2	3	4	5
31.	How safe do you feel in your daily life?	1	2	3	4	5
32.	How healthy is your physical environment?	1	2	3	4	5

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
33.	Do you have enough energy for everyday life?	1	2	3	4	5
34.	Are you able to accept your bodily appearance?	1	2	3	4	5
35.	Have you enough money to meet your needs?	1	2	3	4	5
36.	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
37.	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very Poor	Poor	Neither Poor nor Good	Good	Very Good
38.	How well are you able to get around?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied
39.	How satisfied are you with your sleep?	1	2	3	4	5
40.	How satisfied are you with	1	2	3	4	5

	your ability to perform your daily living activities?					
41.	How satisfied are you with your capacity for work?	1	2	3	4	5
42.	How satisfied are you with yourself?	1	2	3	4	5
43.	How satisfied are you with your personal relationships?	1	2	3	4	5
44.	How satisfied are you with your sex life?	1	2	3	4	5
45.	How satisfied are you with the support you get from your friends?	1	2	3	4	5
46.	How satisfied are you with the conditions of your living place?	1	2	3	4	5
47.	How satisfied are you with your access to health services?	1	2	3	4	5

48.	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to how often you have felt or experienced certain things in the last four weeks.

		Never	Seldom	Quite Often	Very Often	Always
49	How often do you have negative feelings such as sad mood, despair, anxiety, depression?	1	2	3	4	5

50. **Do you have any comments about the assessment?**

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THANK YOU

APPENDIX B

ETHICAL CLEARANCE

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: CES-ERB/ucc.edu/v4/20-06
Your Ref: .....
Date: January 15, 2020

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

The bearer, Gifty Selorm Amenya., Reg. No. EF/CHP/18/0004 is an M.Phil. ~~/Ph.D~~. student in the Department of Education and Psychology in the College of Education Studies, University of Cape Coast, Cape Coast, Ghana. ~~He~~ / She wishes to undertake a research study on the topic:

Self-esteem, resilience and quality of life of persons with rheumatoid arthritis at the Korle-Bu Teaching Hospital

The Ethical Review Board (ERB) of the College of Education Studies (CES) has assessed ~~his~~/her proposal and confirm that the proposal satisfies the College's ethical requirements for the conduct of the study.

In view of the above, the researcher has been cleared and given approval to commence ~~his~~/her study. The ERB would be grateful if you would give ~~him~~/her the necessary assistance to facilitate the conduct of the said research.

Thank you.
Yours faithfully,

Prof. Linda Dzama Forde
(Secretary, CES-ERB)

Chairman, CES-ERB
Prof. J. A. Omotosho
jomotosho@ucc.edu.gh
0243784739

Vice-Chairman, CES-ERB
Prof. K. Edjah
kedjah@ucc.edu.gh
0244742357

Secretary, CES-ERB
Prof. Linda Dzama Forde
lforde@ucc.edu.gh
0244786680

APPENDIX C

INTRODUCTORY LETTER

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF EDUCATIONAL FOUNDATIONS
DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Telephone: 233-3321-32440/4 & 32480/3
Direct: 033 20 91697
Fax: 03321-30184
Telex: 2552, UCC, GH.
Telegram & Cables: University, Cape Coast
Email: edufound@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

21st January, 2020

Our Ref:

Your Ref:

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

THESIS WORK
LETTER OF INTRODUCTION: GIFTY SELORM AMENYA

We introduce to you Ms. Amenya, a student from the Department of Education and Psychology, University of Cape Coast. She is pursuing Master of Philosophy Degree in Clinical Health Psychology and she is currently at the thesis stage.

Ms. Amenya is researching on the topic: **"SELF-ESTEEM, RESILIENCE AND QUALITY OF LIFE OF PERSONS WITH RHEUMATOID ARTHRITIS AT KORLE-BU TEACHING HOSPITAL."**

She has opted to collect data at your institution/establishment for her Thesis work.

We would be most grateful if you could provide her the opportunity and assistance for the study.

Any information provided would be treated strictly as confidential.

We sincerely appreciate your co-operation and assistance in this direction.

Thank you.

Yours faithfully,

Theophilus Amuzu Fiadzomor
Principal Administrative Assistant

For:
(Dr. Irene Vanderpuye)
HEAD

KORLE - BU TEACHING HO...
RECEIVED
03 JUN 2020
MEDICAL SUB - EX...

M.3

MEDICAL DIRECTORATE
KORLE BU TEACHING HOSPITAL

2nd June, 2020

THE HEAD
DEPT. OF MEDICINE
KORLE BU

LETTER OF INTRODUCTION – GIFTY SELORM AMENYA
"SELF-ESTEEM RESILIENCE AND QUALITY OF LIFE OF PERSONS LIVING WITH RHEUMATOID ARTHRITIS IN KORLE BU TEACHING HOSPITAL"

I have the pleasure to introduce to you the above-named Investigator from Department of Education and Psychology, Cape Coast. Gifty Serlorm Amenya sought and has been granted approval to conduct a study entitled: "Self-Esteem resilience and quality of life of persons living with rheumatoid arthritis in Korle Bu Teaching Hospital".

She is to contact you to discuss the commencement date of the study.

Please verify her identity with a Government issued National ID card and accord her the needed assistance.

Attached is the Scientific and Technical Committee and Institutional Review Board approval, which specifies the terms.

Sincere regards,

Dr. Ali Samba
Director of Medical Affairs
For: Chief Executive

Kean file please

3/6/2020

In case of reply the number
And the date of this
Letter should be quoted

My Ref. No. KBTH/STC/13/20

Your Ref. No......

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

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

14th April, 2020

GIFTY SELORM AMENYA
DEPT OF EDUCATION AND PSYCHOLOGY
UNIVERSITY OF CAPE COAST
CAPE COAST

SCIENTIFIC AND TECHNICAL COMMITTEE APPROVAL
PROTOCOL IDENTIFICATION NUMBER: KBTH-STC 00014/2020

The Korle Bu Teaching Hospital Scientific and Technical Committee (KBTH-STC), on 14th April, 2020 approved your submitted study protocol.

TITLE OF PROTOCOL: "Self-esteem, Resilience and quality of life of persons living with rheumatoid arthritis in Korle Bu Teaching Hospital"

PRINCIPAL INVESTIGATOR: Gifty Selorm Amenya

This approval requires that you **forward your approved document to Korle Bu Teaching Hospital – Institutional Review Board (KBTH-IRB) for the ethical aspect of the proposal to be assessed before the project can be initiated.**

This STC approval is valid till 30th July, 2020
You may, however, request extension of the approval period, or renewal as the case may be, should the study extend beyond the stated period.

Upon completion, you are required to submit a final report on the study to the STC. This is to enable the STC ensure among others that, the project has been implemented as per the approved protocol. You are also required to inform the KBTH-STC and Research Directorate of any publications that may emanate from the research findings.

Kindly note that, should the need arise, the KBTH-STC or IRB may institute appropriate measures to satisfy itself that study is being conducted according to the highest scientific and ethical standards.

Please note that any modification to the study protocol without Scientific Technical Committee (STC) approval renders this approval invalid.

Sincere regards,

Prof. G. Obeng Adjei
Chairman, KBTH-STC

Cc: The Chairman, KBTH-IRB

In case of reply the number
And the date of this
Letter should be quoted

My Ref. No. KBTH/00014/03/2020

Your Ref. No.....

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

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

18th May, 2020

GIFTY SELORM AMENYA
DEPT. OF EDUCATION AND PSYCHOLOGY
UNIVERSITY OF CAPE COAST, CAPE COAST

SELF-ESTEEM RESILIENCE AND QUALITY OF LIFE OF PERSONS LIVING WITH RHEUMATOID ARTHRITIS IN KORLE BU TEACHING HOSPITAL

KBTH-IRB /00014/2020

Investigator: GIFTY SELORM AMENYA

The Korle Bu Teaching Hospital Institutional Review Board (KBTH IRB) reviewed and granted approval to the study entitled: "**Self-Esteem Resilience and Quality Of Life of Persons Living with Rheumatoid Arthritis in Korle Bu Teaching Hospital**"

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

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

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

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

Sincere regards,

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

Cc: The Chief Executive Officer, KBTH

The Director of Medical Affairs, KBTH

APPENDIX D

CONSENT FORM

CONSENT FORM

Title: Self-esteem, resilience and quality of life of persons with rheumatoid arthritis at Korle-Bu Teaching Hospital.

Principal Investigator: Gifty Selorm Amenya

Department of Education and Psychology

University of Cape Coast

0241292819

gifty.amenya@stu.ucc.edu.gh

Address: University of Cape Coast

KBTH-IRB CONTACT: 0302739510

BACKGROUND TO THE STUDY

Rheumatoid arthritis is a chronic, debilitating autoimmune disease that significantly impacts the patients' quality of life. RA has 1% prevalence worldwide, ranges from 0.05% to 0.9% in sub-Saharan Africa and in Ghana (KBTH), 63% of autoimmune patients have RA. RA has several negative health consequences on the patient. Some of these consequences such as low self-esteem, have been shown to lead to low quality of life. Some studies found no association between self-esteem and quality of life of RA patient. However, other studies suggest that a relationship between self-esteem and quality of life exist but this may be due to resilience in RA patient.

PROCEDURE

After introducing herself to the Rheumatology unit. With support from the officers at the unit, the study would be announced to patients at each visit. The researcher will approach patients individually to determine whether they would like to participate in the study. Once an interest is expressed, the consent form will be provided and completed before administration of each questionnaire. Participants would be asked to read the items of the questionnaire and check which of the options that best suits them. The researcher will first of all, explain to participants the purpose of the study and procedure for responding to the questionnaire. In order to ensure clarity of how the questionnaire will be completed, the researcher will administer the questionnaires personally to all the participants involved in the study. The researcher will use a period of two months to collect data. Participants will be given 15-20 minutes to respond to the questionnaire after which it would be given back to the researcher. After collecting quantitative data, the researcher would interview some participants with the help of an interview guide to gather qualitative data. The interview would be recorded and would take 20-30 minutes

PURPOSE OF STUDY

The purpose of this study is to examine the relationship among self-esteem, resilience and quality of life of persons with rheumatoid arthritis at Korle-Bu Teaching Hospital.

Possible Benefits

Participants may not benefit directly from this study, however, I hope that the information obtained from this study would be shared with the hospital and participants (patients with rheumatoid arthritis) to educate them on the importance of improving their psychological wellbeing, how this would positively impact on their condition and quality of life as a whole. It would also inform caregivers including doctors and nurses to consider this in their treatment plans. Furthermore, the findings of this study will help in policy formulation by the Ministry of Health (MOH) to consider promoting psychological aspect in treatment of chronic diseases including rheumatoid arthritis.

Potential Risks

Some questions are likely to cause some emotional or psychological distress to the participants due to their sensitivity. The researcher would engage participants in some relaxation techniques to calm them down and encourage them to practice it at home too.

Confidentiality

Every effort will be made by the researcher to preserve your confidentiality. Confidentiality and privacy of information obtained would be ensured by preventing unauthorized access to their information. Unique personal identifiers would be entered and stored on a password protected computer. Your responses to this survey will be anonymous by assigning code names/numbers to participants that will be used on all research notes and documents. Also, every information about you will be protected and you will not be named in any reports or journal or magazine.

Contacts for Additional Information

In case of any questions about this study, or you experience adverse effects as the result of participating in this study, you may contact the researcher through mobile number 0241292819. The following people can also be contacted for further information about the research. Dr. Mark Amponsah 0242524710, Dr. Lebbeaus Asemani 0242122281 and KBTH-IRB 0302739510.

Voluntary Participation and Right to Leave the Research

Your participation in this study is voluntary. You can choose to decline the offer of partaking in this study. If you decide to take part in this study, you will be asked to sign a consent form. After you sign the consent form, you are still free to withdraw at any particular point in time without giving a reason. Withdrawing from this study will not negatively affect your care in the hospital. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

CONSENT

I have read and understood the provided information and had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I understand that I will be given a copy of this consent form. I voluntarily agree to take part in this study.

Participant's signature _____ Date _____

Investigator's signature _____ Date _____

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

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

_____ _____

Date Name and signature of witness