UNIVERSITY OF CAPE COAST

PSYCHOLOGICAL DISTRESS AND COPING AMONG MARRIED INDIVIDUALS WITH TYPE 2 DIABETES ATTENDING THE EFUA NKWANTA HOSPITAL IN THE SEKONDI TAKORADI METROPOLIS

GEORGE ARCHIE YAW AKUAMOAH-BOATENG

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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 fulfilment of the requirements for the award of Master of Philosophy Degree in Clinical Health Psychology

APRIL 2022

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own 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

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

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

Name: …….

ABSTRACT

This study employed a descriptive survey to assess psychological distress and coping among married individuals with type 2 diabetes attending the Efua Nkwanta Hospital in Takoradi. Using a convenient sampling technique, a total number of 120 married people having type 2 diabetes were used. Questionnaires were adopted to collect data. Frequencies and percentages, Pearson's Product Moment correlation and independent samples t-test were used in analysing data. This inquiry found that many respondents had moderate, moderate to high and severe levels of stress, anxiety and depression, respectively. Stress, anxiety and depression all had a relationship with each other. Further, no substantial variation was found in the degrees or magnitude of stress, anxiety and depression of with sex. It was concluded that most of the respondents encountered moderate magnitude of stress, moderate to high levels of anxiety and severe depressive symptoms. The study recommended that clinical health psychologists at the Efua Nkwanta Hospital should help type 2 diabetics to manage their psychological distress.

KEYWORDS

Anxiety

Stress

Depression

Type 2 Diabetics

Sekondi Takoradi Metropolis

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DEDICATION

To my wife Mrs. Millicent Akuamoah-Boateng.

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CHAPTER ONE

INTRODUCTION

Scholars across the length and breadth of the globe have identified type 2 diabetes as one of the health conditions that contribute significantly to mortality rates annually (Sarkar et al., 2017; World Health Organisation [WHO], 2017). Scientifically, type 2 diabetes is characterised by psychological complications including depression, uncontrolled anxiety, psychological stress, and many other conditions (Nicolucci et al., 2013; Tan et al., 2015). According to WHO, these psychological experiences further aggravate the status of sufferers of type 2 diabetes and could even contribute to their death prematurely. Considering the loaded schedules of married individuals both from home and at work, those who through clinical means have been identified as type 2 diabetics may stand a higher chance of experiencing nervous moments, tensed moments and symptoms of sadness. However, it appears that research regarding the prevalence of nervous moments, tensed moments and symptoms of sadness among married individuals battling with type 2 diabetes is scanty. This creates a vacuum in literature of which this study attempts to address. Therefore, married individuals identified as type 2 diabetics in the Sekondi Takoradi Metropolis were used in filling this gap among others.

Background to the Study

Estimates of 615 million people suffering from serious psychiatric illnesses such as anxiety and depression were recorded by the WHO (WHO, 2017). To WHO, such psychiatric illnesses impact approximately 10% of this globe's inhabitants and 30% of worldwide non-fatal illness incidence is mental

disorders. Previous studies from WHO and Prince et al. (2007) have reported that mental illnesses account for about 13-14 percent of the worldwide overall ill-health burden. The world economy spends about US$ 1 trillion per year for stress and anxiety problems. Similarly, WHO reports that depression and anxiety will impact as much as 1 in 5 individuals. The greatest source of ill health and disability worldwide was stated to be depression, and research conducted by WHO and Prince et al. found that more than 300 million individuals currently suffer depression with more than 18 percent of population in 2005-2015.

Depression is a serious psychiatric illness marked by chronic reality, lack of confidence, loss of motivation and inactiveness for at least two weeks in tasks you usually enjoy. However, individuals with depression can often be influenced by a drop of appetite; fewer or more rest, worry, attention problems, restlessness, and depressive or suicidal thoughts are only a few of the symptoms (WHO, 2017). With respect to anxiety, it is an emotional state of stress, nervous feelings and physical improvement, such as elevated blood pressure. Anxious people may also have repetitive thoughts or fears on a daily basis (American Psychological Association [APA], 2017). According to APA, the gastrointestinal, cardiac, neuroendocrine, and central nervous systems can all be negatively impacted by stress, which is an upsetting cognitive state that also causes ordinary metabolic, neurological, and excretion from the body alterations.

Despite numerous scientific data demonstrating that mental diseases emerge in countries that are predominantly low and middle income worldwide, it was also sadly recognised by psychiatrists, general practitioners

and family members that people suffering from serious psychiatric problems such as depression and anxiety did not individually manage them (Prince et al., 2007; WHO, 2006; WHO, 2017). According to Prince et al. and WHO, effective identification of individuals with serious psychiatric conditions would also be very critical in delivering effective therapeutic treatments in both clinical and non-clinical circumstances.

As a result of the aggravating occurrence of serious psychological illnesses in least developed economies, it seems crucial that there be a psychometric method which clinicians may use to rapidly test and diagnose specific mental health problems within the medical and non-medical environments (WHO, 2006; Prince et al., 2007; WHO, 2017; Sarkar et al., 2017). Studies by WHO, Prince et al., and Sarkar et al. have also shown the capacity for similarities in signs of depression, anxiety and stress that may make life more challenging for clinicians with little experience. Psychological stress is believed to have some substantial part in the initiation and advancement of type 2 diabetes; however, the inherent biological processes are unknown (Steptoe et al., 2014).

Many scholars have studied the prevalence of psychological variables (i.e., stress, diabetes and anxiety) amid type 2 diabetic individuals and found overwhelmingly high prevalence among them (Bhandary & Rao, 2013; Tan et al., 2015; Chew, Vos, Mohd-Sidik & Rutten, 2016). For example, Bhandary and Rao determined the consequence of apparent stress and relatives functioning on type 2 diabetics' behaviours in Mangalore city in Karnataka state and found that stress was high among diabetics as against their non-diabetic peers. Tan et al. also studied the sadness, nervousness and stress

occurrence in diabetic folks who were twenty years and above who were being treated in primary care. Tan et al. observed high occurrence of stress (19.4%) and depression (26.6%) among the respondents. Further, the results of a foreign study on diabetes-related behaviours, expectations and needs, showed that 19.2% of patients living with diabetes are aggrieved with depression while closely 57% endure elevated and complicated emotional stress (Nicolucci et al., 2013). Consequently, it is important to cope with these psychological difficulties.

Coping is intended to reduce the physical, mental and psychological pressure involved with traumatic life and everyday struggles (Snyder, 1999). Adaptation behaviour requires commitment, which is known as adjustment. It is the initiative factor that helps one to differentiate between coping and ready-made adaptive tools like reflexes. Per Lazarus and Folkman (1984), coping is a continually changing approach of cognition, conduct and emotion of managing certain externalising and/or internalising pressures considered to impose or to exceed the capacity of the person.

Strategies of coping are essentially grouped as emotional and problem-oriented strategies. Emotional strategies are strategies by which victims express their sentiments or feelings through action and thought. Once people follow a “problem-focused” approach, they feel they may control or change the condition induced by their illness and this form of technique is important in terms of preserving the quality of life. Coping techniques that rely on anger and dilemma may be utilised together or similarly. Therefore, in coping it is important to distinguish between these categories (Folkman & Moskowtz 2000). Adaptation or maladaptation is the product of the coping cycle. The

degree to which the patients deal with their persistent condition is described in psychiatry, culture and physiology (Canam, 1993).

Some available studies (McCoy & Theeke, 2019; Tuncay, Musabak, Gok & Kutlu, 2008) have endeavoured to examine how type 2 diabetics cope with the condition and discovered their employment of strategies in living with the condition. For instance, McCoy and Theeke conducted a systematic review including a compilation of observations from 22 statistical tests of psychosocial elements and coping of type 2 diabetic adults and found that a proactive "problem-focused" technique of adjusting was linked with better cognitive functioning as well as physical wellbeing. Similarly, Tuncay et al. conducted a study providing important information regarding Turkish diabetic patients (i.e., both type 1 and 2), including anxiety stages, coping skills adopted, and the nexus between anxiety, coping mechanisms, demographical, and medical variables.

Statement of the Problem

Evidence has shown a stronger and stronger connection between diabetes and multiple issues with mental wellbeing. These include psychiatric diagnostic and other diabetes-specific conditions (Hagger, Hendrieckx, Sturt, Skinner & Speight, 2016). Stress and fear are usually caused by depression. One study has highlighted that nearly 14% of diabetics have systemic anxiety problems, half as many with subclinical anxiety disorders and twice as many with at least other anxiety symptoms (Katon, Lin & Kroenke, 2007). Anxiety disorder has been detected with heightened depression and a lower functional magnitude in one-third of victims of severe psychological illness as well as type 2 diabetes. Likelihood or the chance of contracting type 2 diabetes is

linked with lasting anxiety (Grigsby, Anderson, Freedland, Clouse & Lustman, 2002). Diagnosed Ghanaian tests revealed comorbidities and symptoms including general malaise, luminous hallucinations, unhealed wounds, marital disorders, vision disability, physical deficiencies, arthritis, diabetes, gout, insomnia and neuropsychological deficits. Studies documented general malaise and symptoms (de-Graft Aikins, 2003; Sarfo, 2013; Sarfo, 2014; Sarfo, & Mate-Kole, 2014). The above studies clearly show presence of psychological comorbidities coupled with diabetes in the world and in Ghana.

According to the tenth edition of the IDF Diabetes Atlas, there has been a continuing rise in the prevalence of diabetes across the world. These findings demonstrate that diabetes is a huge worldwide issue to the health and well-being of people, families, and society. According to the data provided, there are 537 million persons (ages 20-79) who are living with diabetes (1 in 10 people). It is anticipated that this number would reach 643 million by the year 2030 and 783 million by the year 2045. Despite the establishment of this fact, the literature on the variables used general populations suffering from diabetes. Literature on the evidence of the phenomenon in married individuals living with diabetes is silent in literature.

In Africa, evidence of the prevalence of diabetes has been shown in some reports (Suglo & Evans, 2020; Ramkisson, Pillay, & Sartorius, 2016). These reports have revealed that most hospital patients have the diabetes disease are undergoing various treatments. For instance, a systematic review by Suglo and Evans (2020) which included sixteen studies made up of 426 folks coming from 7 nations revealed that diabetes is prevalent in Africa and it is an issue worth investigating into. In Ghana, around 4.16 million persons

were diagnosed with type 2 diabetes during the years 2019 and 2022. On the other hand, there were around 4.6 million persons who were diagnosed as having prediabetes. As of the year 2022, the average cost of diabetes treatment on a per-person basis was 53.5 Ghanaian cedis, which is equivalent to around 5.3 dollars. Specifically in Ghana, Sakyi (2013) conducted a study at the Efua-Nkwanta Hospital and it was found that there was a prevalence of Diabetes among patients at the hospital. This evidence specifically points out that diabetes is a great concern at the community of Efua-Nkwanta as well as the hospital. Amankwah-Poku, Amoah, Sefa-Dedeh, and Akpalu (2020) also conducted an inquiry on the link between psychological distress and personal care of diabetic patients and concluded that diabetes is a prevalent condition among hospital patients especially among married individuals.

More so, the findings that were observed in this study as well as previously mentioned studies which only considered the general population may not necessarily be applicable to married individuals who are battling diabetes in Ghana, precisely the Secondi Takoradi Municipality in the Western region. This is because, it cannot be assumed that diabetic individuals in the general population have same characteristics as those married individual having diabetes. This makes it difficult for public health practitioners to design and implement specific health interventions that appropriately help in dealing with the phenomenon among diabetic married individuals. This creates a dearth in literature on the married individuals living with diabetes which this work seeks addressing. Again, the review of literature had exposed the little attention to the two types of diabetes. The study therefore focused on type 2 diabetes. This current investigation was carried out in Ghana's Western region

and seeks to find out the presence of psychological comorbidities (i.e., stress, anxiety and depression) amid married type 2 diabetic individuals in Sekondi Takoradi Metropolis.

Coping requires a close association with attitude management throughout the overall stress cycle which is recognised as one of the central principles of behavioural psychology and the environment of quality of life (Folkman & Moskowitz, 2004). Nonetheless, there is little agreement on the most successful coping mechanisms and how effectively coping methods should be utilised to fix issues and relieve social distress. A scholarly work has demonstrated, however, that relational coping mechanisms are less tailor-made in the long run than problematic-oriented, while they tend to be focused on the specific constressts placed by difficult circumstances (Karlsen & Bru, 2002). Although accuracy is shown in this, the employment of "problem-focused" or "emotion-focused" techniques may be influenced by the character of the one sick.

Coping strategies are linked to controlling fear in patients with diabetes during the disease cycle, and several findings have found that problem-oriented coping methods involve fewer distress and are correlated with more agitation in an interpersonal manner (Cohen & Kanter, 2004). Nonetheless, in the particular situations where they exist, the physiological quality of various coping mechanisms must be tested. Because Ghana does not have access to sufficient public health care, information about the mental health of diabetes patients and the coping strategies they use is unclear and needs to be gathered. This notwithstanding, no pertinent empirical investigations in Ghana to the best of my knowledge was reached. In addressing such an information gap, the

study's intent was fixed at exploring coping strategies used in managing stress, sadness and nervousness among type 2 diabetic sufferers who are married.

Purpose of the Study

The investigation's intent was to look at psychological distress and coping among married type 2 diabetic individuals at the Effia-Nkwanta Hospital. The study's specific objectives were to;

1. Identify the stress levels among married type 2 diabetic individuals at the Efua-Nkwanta Hospital in Sekondi-Takoradi.
2. Ascertain the anxiety levels among married type 2 diabetic individuals at the Efua-Nkwanta Hospital in Sekondi-Takoradi.
3. Identify The depression levels among married type 2 diabetic individuals at the Efua-Nkwanta Hospital in Sekondi-Takoradi.
4. Assess the coping strategies for stress, anxiety and depression among married type 2 diabetic individuals at the Efua-Nkwanta Hospital in Sekondi-Takoradi.
5. Explore the link or association between the use of the various coping strategies and anxiety, stress and depression among married type 2 diabetic individuals at the Efua-Nkwanta Hospital in Sekondi-Takoradi.

Research Questions

The ensuing queries were asked to help in the investigation.

1. What are the stress levels among married type 2 diabetic individuals at the Efua-Nkwanta Hospital in Sekondi-Takoradi?
2. What are the anxiety levels among married type 2 diabetic individuals at the Efua-Nkwanta Hospital in Sekondi-Takoradi?

3. What are the depression levels among married type 2 diabetic individuals at the Efua-Nkwanta Hospital in Sekondi-Takoradi?
4. What are the coping strategies for stress, anxiety and depression amongst married type 2 diabetic individuals at the Efua-Nkwanta Hospital in Sekondi-Takoradi?
5. What is the correlation or link between the adoption of various coping strategies and anxiety, stress and depression among married type 2 diabetic at the Efua-Nkwanta Hospital in Sekondi-Takoradi?

Research Hypotheses

1. H_o: No statistically meaningful link exists between stress and anxiety levels among married type 2 diabetic individuals in Sekondi Takoradi Metropolis.

   H_1: A statistically meaningful link exists between stress and anxiety levels among married type 2 diabetic individuals in Sekondi Takoradi Metropolis.
2. H_o: No statistically meaningful link exists between stress and depression levels among married type 2 diabetic individuals in Sekondi Takoradi Metropolis.

   H_1: A statistically meaningful link exists between stress and depression levels among married type 2 diabetic individuals in Sekondi Takoradi Metropolis.
3. H_o: No statistically meaningful link exists between anxiety and depression levels among married individuals type 2 diabetic individuals in Sekondi Takoradi Metropolis.

H_1: A statistically meaningful link exists between anxiety and depression levels among married type 2 diabetic individuals in Sekondi Takoradi Metropolis.

4. H_o: No statistically meaningful variation exists in stress levels between married men and women type2 diabetics in Sekondi Takoradi Metropolis.

   H_1: A statistically meaningful variation exists in stress differences in stress levels between married gents and ladies type2 diabetics in Sekondi Takoradi Metropolis.

5. H_o: There are no statistically key variations in anxiety levels between married gents and ladies type2 diabetics in Sekondi Takoradi Metropolis.

   H_1: There are statistically key variations in anxiety levels between married gents and ladies type2 diabetics in Sekondi Takoradi Metropolis.

6. H_o: There are no statistically key variations in depression levels between married gents and ladies type2 diabetics in Sekondi Takoradi Metropolis.

   H_1: There are statistically key variations in depression levels between married gents and ladies type2 diabetics in Sekondi Takoradi Metropolis.

Significance of the Study

The outcomes of the investigation are expected to be of immense benefit to Stakeholders of the diabetic disease such as the Ghana Health Service, Diabetic Association of Ghana as well as other health professionals

such as nurses and doctors as they will gain more information on the psychological conditions (nervousness, stress or pressure and sadness) of diabetic sufferers in the society and map out strategies to assist them.

Again, the outcome of this investigation will go a long way to be of great and intense benefit to married individuals living with type 2 diabetes, clinical health psychologists, students and researchers. Married individuals will better understand the dynamics of the interplay between diabetes and psychological conditions and how to cope with the conditions. Clinical health psychologists who treat psychological conditions will be able to apply the findings to better deal with managing the clients who have diabetes and the psychological conditions associated with that. Students and other researchers will fall on this work as a source of references for other studies. Researchers in the field of psychological morbidities and diabetes could also advance more studies in this area of study.

Delimitation

This research work was conducted within Ghana's Western region, specifically, Sekondi Takoradi Metropolis. The study took into consideration married individuals living with diabetes who visit hospitals for review. The study was specifically delimited to only patients at the Efua-Nkwanta Hospital. Stress, anxiety, depression and coping were the only variables that were studied. The investigation or inquiry was also delimited to the chosen methodology as survey was the specific design utilised in this inquiry. Lastly, only quantitative data was collected for analysis and interpretations.

Limitations

Despite the merits of this investigation (including the use of rigorous statistical procedures), the weaknesses of this study are also acknowledged. First, the use of descriptive survey implies that the findings one cannot draw a causal relationship between the variables under study. Moreover, since the study required employed a self-reported instrument, it could be that respondents might have over reported or under-reported their experiences as a result of recall bias. Additionally, this study acknowledges that some of the rich experiences of the respondents may not have been captured to enrich the findings as a result of using questionnaires which may not necessarily state respondents' real experiences or feelings.

Organisation of the Study

The outcomes of this study project were presented in five distinct sections. In the first section, the writer discussed the background of the investigation, the problem that needed to be solved, the reason for conducting the study and its strategic goals, the research questions that needed to be answered, the relevance of the survey, the scope of the investigation (which we referred to as "delimitation"), the survey's shortcomings (which i referred to as "limitations"), and the organisation of the investigation. In Chapter Two, we discussed the review of the relevant literature. The third section was devoted to providing a description of the research methodology, which includes the research design, the study area, the population, sampling methods, research tool, data collecting processes, processes in analyzing the data gathered, and ethical considerations. The outcomes of the survey as well as a discussion of the findings were offered in the fourth section. In Section Five, a

summary of the inquiry, its findings, and its suggestions for additional action and investigation are presented.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The aim of this investigation was to investigate the levels of psychological distress and coping strategies used by married people living with type 2 diabetes in the Sekondi Takoradi Metropolis. This section serves as a foundation, and it explains the nature of this investigation, by presenting information and other relevant books, articles, and unpublished theses linked to the subject of inquiry. The substantive chapter further elaborates the theoretical framework, conceptual review, assessment of empirical works as well as the conceptual framework.

Theoretical Framework

Theory of Stress, Coping and Adaptation

The ideology of pressure, having to cope, and adjustment that Lazarus and Folkman wrote in 1984 serves as the basis hypothesis for this body of scholarly work since it was published in 1984. This school of thought examines the many ways in which individuals deal with stressful situations. Pressure, learning to cope, adaptability, threats, person-environment interaction, and evaluation are the key pillars of the theory, as outlined by Lazarus and Folkman as cited in (McEwen & Wills, 2014). As per McEwen and Wills (2014), the notion puts emphasis on an individual's affective states to a stressful situation, such as anxiousness and hopelessness. This philosophy helps in determining the strategies that the married individuals living with diabetes use to manage their nervousness, sadness and pressure. The theory also provides the connection among stress, coping strategies and the

psychological reactions of married type 2 diabetic individuals to their levels of perceived stress (i.e., stress), anxiety and despair (i.e., depression).

The theory is what the inquiry is based on since it investigates how folks deal with the negative impacts of stress in their lives. Folks who have diabetes may deal with stress in a number of ways, based on their own particular needs and desires and/or the needs of their surroundings. The method of handling stress is fluid, meaning that it may alter from one instant to the next. This requires regular re-evaluation of whether the hurdle to overcome poses a danger, damage, or task, as well as if there are adequate coping mechanisms available.

Biopsychosocialspiritual Model

In order to comprehend health, sickness, and health care delivery, the biopsychosocialspiritual model takes into account biophysical, psychological, sociological, and spiritual components, as well as their composite relationships (Taukeni, 2019). The biopsychosocialspiritual model of health and sickness is a theory that asserts that interrelations among biophysical, psychological, sociological, and spiritual aspects influence the etiology, presentation, and result of wellbeing and ailment. Historically, prominent theories such as the "nature" versus "nurture" argument suggested that any one of these influences was significant to alter the direction of development (Sarafino & Smith, 2014). The biopsychosocialspiritual paradigm contends that no one element is enough; people's biological makeup (i.e., hereditary), mental health and behavioural patterns (i.e., psychology), social and cultural context and spiritual factors that regulate their health-related results path (Engel, 1977).

Biological factors (e.g., genes), behavioural indicators (including lifestyle, stress, and health perceptions), social circumstances (including cultural impacts, family relations, and support networks), and spiritual considerations all play a role in health and illness behaviours, according to the biopsychosocial model. According to the biopsychosocialspiritual framework, the body, cognition, and surroundings all have an impact on one another. According to this concept, none of those elements are adequate in and of themselves to cause definitive health or sickness; it is the complex interrelationship of all three that causes a certain outcome (Friedman & Adler, 2007).

This theory underpins the study because the biopsychosocial-spiritual model is a very broad concept that recognizes the interplay between the physiological, mental, societal, and spiritual elements of diabetes service to the sufferers and the overall health of diabetic patients.

Conceptual Review

Diabetes Mellitus

Diabetes mellitus remains a persistent metabolic disorder induced by dysfunction or insulin shortage in pancreas development. The diabetes mellitus (T2DM) is split between type 1 and 2 diabetes. Medically, T2DM is detected when the particular sufferer is displaying an elevated plasma glucose level equivalent to about 7,0 mmol / L, a plasma glucose degree of about 1.1 in a 2-hour oral plasma glucose tolerance check of 75 g and a 6.5 percent average level of glycated hemoglobin A1c. There have been reports of ocular, renal, circulatory, neurodegenerative, and musculoskeletal problems. According to WHO (Punthakee, Goldenberg, & Katz, 2018), 422 million

people suffered from diabetes in 2014, comprising 8.5% of living entities. The spread of Diabetes is rising steadily worldwide. Actually, we have about 285 million diabetes sufferers in the developed countries, and by 2030 this number is anticipated to escalate to roughly 438 million.

Type 2 diabetes

According to WHO (2017), diabetes mellitus is a long-term condition caused by problems with secretion of insulin and/or activity. Insulin is a hormone that is generated by the pancreas. It assists glucose in being absorbed into the cells and tissues of the human system so that it may be used as a source of energy. Diabetes has become a global public health challenge in the twenty-first century, and societies must take precautions because the condition affects people of all ages and socioeconomic backgrounds. The overall occurrence of diabetes mellitus across the world among adults who are from age 27 to 79 by 2015 was approximated to stand at 415 million. This figure is also approximated to worsen to nearly 642 million provided no critical action is advanced to mitigate the condition. According to International Diabetes Federation (IDF) (2015), diabetes was expected to cost $465 billion in global financial expenditures in 2013.

Per a report done by Centres for Disease Control and Prevention (CDC) (2014) in the United States, managing diabetes costs the health sector $245 in 2012, which represents the average medical expenditure. Diabetes is an outbreak and the major cause of mortality globally, as claimed by the WHO and the IDF, with T2DM incidence increasing as a consequence of elevated lifespan, overweight, reduced physical activity, and obesity (IDF, 2015). Seemingly, there happens to be an epidemiological change from infectious to

non-infectious ailments, with the tendency leading to an upsurge in long-lasting diseases like heart ailments, diabetes, hyperstress, osteoarthritis, and cancer. According to CDC (2014), this growth is probable to be recognised in poorer countries sooner than expected, resulting in a severe socioeconomic and public health problem.

According to the WHO, diabetes affects more than seven million Africans, making it the 4th source of mortality in emerging economies. Per IDF Atlas, nearly 11 million individuals in sub-Saharan Africa (SSA) were burdened with diabetes in 2006, and there are expectations to see an increase up to around 19 million by 2025. This according to WHO (2017) represents approximately 80% increase which is higher than the predicted 55% global upsurge.

According to the IDF, SSA would face a disease twofold burden on non- infectious and infectious diseases by 2010, up from 0.5 to 3% currently. However, Murray and Lopez (2017) concurred that transmissible diseases still prevail in several nations. Early diabetic consequences originating from delayed diagnosis are indicated by a lack of needed medical assistance leading to incorrect disease management, resulting in a substantial societal as well as financial burden of illnesses that patients and their households are responsible for caring for by directing their resources to this care (Mbanya, Motala, Sobngwi, Assah, & Enoru, 2019).

The majority of Africans have abandoned their indigenous old norms in developing nations, which included engaging in common and strenuous regular exercise, consuming diets high in fibre and whole grains and rich in plant-based foods (such as freshly picked fruits and vegetables) as a result of

most Africans' adoption of western cultures and urbanisation. As a result, people rely on motorcycles and automobiles for transportation, as well as unhealthy meals high in fats, carbohydrates, and sodium (Mbanya et al., 2019).

According to the WHO (2017), over one-third and one-fourth of African women and men, respectively, are overweight, a controllable risk factor for type 2 diabetes, and it is expected that this number will rise to around 41% and 30%, respectively, during the next decade. In addition to this, the World Health Organization (2017) said that the majority of African nations, South Africa included, continue to face challenges with the diagnoses and prevention of the illness.

In SSA, the key risk factors for diabetes are either non-modifiable, like rising age and ethnicity, or modifiable, like urbanisation, obesity, and sedentary living. Monteiro, Conde, Lu and Popkin (2004) stated that, in Africa, lifestyle modifications together with urbanisation, continue to contribute to diabetes occurrence, with many people becoming overweight or obese as an aftermath of sedentary living. To Whiting, Hayes and Unwin (2003), patients' ability to achieve glycemic control was reported to be hampered by abnormally high blood pressure, Inadequate patient treatment and follow-up, a shortage of human resources in health-care facilities, the early start of complications, and a lack of continuous diabetes awareness are all factors that contribute to the disease. Several African states are still struggling to establish diabetes strategy institutions, with the significant portion of them possessing no diabetic associations.

Stress

Stress describes how the body responds to external adjustments and is defined as a non-specific corporate reaction to pressure for change (Waghachavare, 2013). Stress, according to Waghachavare may influence people, whether they be physical or psychological, through headaches, gastrointestinal pain, impaired memory, and trouble concentration. Marksberry (2011), has described stress to be a state or sensitivity where an individual notices that his expectations are higher than the available resources. Stress is the body's and mind's adaptive response to a demanding circumstance, which leads to physical, mental, and compartmental aberrations, according to Feldman (2008). For example, financial burdens, health concerns, relationship disputes, both bearing stress or burden on the mind, body and spirit of the individual. There is a certain amount of pressure from the environment, but it is most often in the shape of melancholy, loss of confidence, despondency, worry, and nervousness.

Pargman (2006) explained stress as "uncertain response to external and internal influences" which implies that environmental stimuli are adversely or favorably reacted (p. 5). This is how the whole body is dealing with shifting and strange circumstances. According to American Heart Association (AHA) (2019), vital indicators including pulsation, blood pressure, temperature and the body's respiratory rate are quickly changing during the time and other hormonal reactions according to Ranabir and Reetu (2011) are at their highest state. Stress is viewed as "psychological and physiological" response to pain, commonly referred to as stressors. Although stress is most generally deemed detrimental, the reactions to stress vary from the least-discussed stress (where

beneficial reactions such as innovation and higher development outcomes) to depression (related to the better-known negative stress outcomes of various degrees) (Dagget, 2016). An individual's stress level depends on the cause of distress, personal attributes, perceptions and coping capacity. There is a global epidemic of pain, stress-related disorders and consequent handicaps (Wilkinson, 2012).

Anxiety

From the perspective of WHO (2017), anxiety is characterised as a sense of unease, nervousness or discomfort over an unsafe result; while stress connotes a condition of psychological or emotional pressure or discomfort caused by undesirable situations. Anxiety is the description of how individuals feel normal in the face of challenges, hazards, or stress. Usually, they are upset, uncomfortable and tense when people get nervous. Symptoms of anxiety can be the result of life events such as work loss, partnership dissolution, medical illness, a severe injury, or a near-death event. Under such cases we are obviously nervous and usually just for a short period (Heinen, 2017) we are worried.

Overblown anxieties and anticipation of adverse consequences in unfamiliar scenarios are frequently accompanied by bodily symptoms and are common symptoms that characterise anxiety. Muscle spasms, migraines, abdominal discomfort, and excessive urination are part of such symptoms. The fear of an individual who reacts to signals that suggest a present or past danger and also signal signals that are not really a true hazard may also be defined as the presence of self-reported symptoms of elevated anxiety (Craske et al., 2015).

Depression

Depression is a feeling of deep distress, anxiety, a sense of irrelevance and remorse, withdrawing from life, lack of adequate sleep, cravings and erotic attraction, losing confidence and desire in normal events, according to Kring, Davison, Neale and Johnson (2010). Per WHO (2017), depression is some psychiatric disorder, a lack of confidence or enjoyment, sensitivity of remorse or poor self-esteem, distorted time of relaxation or cravings, sensitivity of fatigue as well as weak focus. It may be resilient or persistent, seriously damaging an individual's capacity to operate or to contribute to daily life. It may be long-term.

Depression, a mental condition marked by persistent sensitivity of despair and misery, has risen to now become the leading reason for people being unable to function efficaciously and ranks as the fourth most common cause of sickness in the whole globe. Depressive disorders frequently begin at the early years of life; they diminish the functioning of humans and are usually habitual (World Health Organisation, 2017). Depression is a grave and chronic disease that bears a negative effect on folk's feeling, thinking and behaviour. Folks with depression may also have a sensation of anxiety, pressure and apprehensive thinking, missed with stress and alteration in their physical environment, which is described as an overriding connection among individuals and their surroundings and therefore putting their well-being in danger (WHO, 2017). Such adverse sentiments impact life's quality at all levels, as well as relaxation, nourishment, education, employment, relationships, and patterns of well-being. Throughout 2015, WHO estimated the incidence of stress or anxiety conditions in between 4.4% and 3.6%

(WHO, 2017). Individuals with depressed indications may also be susceptible to ailments like HIV, diabetes and suicide-related mortality (Pitpitan et al., 2012).

Empirical Review

This section concentrates on investigations that exist as done by other investigators. This review looks at the studies available in literature and hinges on the purposes or identified questions the research work intends to address.

Specific studies were conducted in order to find the occurrence of stress, sadness and nervousness amongst diabetics. It has been shown that those with depression and diabetes have poorer outcomes when managing disease. This places a significant stress on healthcare services and costs, as well as having a direct influence on victims' life quality (World Health Organisation, 2017). Today, nearly 285 million diabetes sufferers are projected to grow to more than 70% of the population of developed nations, reaching 438 million by 2030. Nervousness and exhaustion are also a common issue for all people around the world (Collins, 2009), and it was reported that diabetic complications were about twice as large as diabetes survivors.

Past work has indicated that social interactions have contributed to a weak diabetic regulation of essential intervening factors in the secretion of insulin (Kohei, 2010). According to facts, the interaction between these conditions is two-way. It is remarkable that depressed and diabetes patients were linked to deprived personal and medical care, poor glycemic regulation, additional diabetes complexities than patients who were alone diabetic. Depression has proven to be attributed to the social-economic position of individuals with diabeteria, family wealth, obesity, drinking, physical activity

and sedentary existence (Collins, 2009). In fact, depression is linked with elevated likelihood of morbidity and all-cause death in diabetes patients. It has also been noted that premature illness and death are connected with both diabetic complications and anxiety/depression (Kohei, 2010).

Khuwaja et al.'s (2010) work revealed that 44 percent and 58 percent of type 2 diabetic adults were prevalent of being depressed and anxious. The impact of both stress and anxiety on diabetes is negative. During the creation of signs of stress, well-being-related living environments during people with type 2 diabetes are substantially decreased (Ali, 2010). Anxiety and depression signs are still not identified and often untreated. The diagnosis of anxiety and depression and its care will lead to better wellbeing and overall health. Estimating the pervasiveness of anxiety and depressive symptoms together with the elements that are connected with such symptomatology in diabetes victims remains significant. In type 2 diabetic sufferers, minimal or conflicting evidence about factors related with anxiousness and depressive symptoms exist according to Ali.

Stress Among Married Type 2 Diabetic individuals

The frequency as well as the prevalence of diabetes are growing worldwide and are presently among the world's largest roots or origins of mortality. Epidemiological reports on diabetes mellitus were studied by Singh et al. (2011) among Geriatric citizens in Nagpur, India. One conclusion from their analysis was that the most significant diabetes risk factors is stress (64.79%). An analysis of patient spouse with severe hypoglycemia conducted by Singh et al. (2011) revealed greater anxiety and stress in marriages than those with no partner suffering from hypoglycemia. Recent research indicates

that managing type 2 diabetes remains a marital stress source, since a healthy spouse is subject to the same problems as the patient (Berg & Upchurch, 2007). As consequence of type 2 diabetes' restrictions on diabetics, the emotional costs for living with type 2 diabetic patients are significant (Walker, 2005). Spouses experience anxiety, isolation, guilt, frustrations or anger.

Steptoe et al. (2014) also conducted a study to see if type 2 diabetics have prolonged allostatic load, which displays as versatile disruptions in stress reactivity and recovery across numerous biological structures (e.g., circulatory, neuroendocrine, inflammatory, metabolic), as well as a high level of recurring stressful events. By way of data analysis, means were used to compute the average systolic blood pressure (BP), diastolic BP as well as heart rate (HR). Steptoe et al.'s study was an experimental study which compared 140 male and female type 2 diabetics with ages 50-75 years with 280 healthy individuals. The study revealed that diabetic patients reported greater stress experience compared with compared with healthy controls.

Similarly, Kaur, Tee, Ariaratnam, Krishnapillai and China (2013) in the urbanised city of Malaysia's Klang Valley, determined the pervasiveness and factors can lead to feelings of despair, nervousness, and stress in folks with type 2 diabetes accessing government primary treatment centers. Kaur et al. conducted the research in 12 haphazardly chosen primary treatment centers using a cross-sectional approach. The study included 2,508 qualified consenting individuals. The Depression, Anxiety, and Stress Scale (DASS), which had 21 questions, was used to evaluate the presence of indicators associated with depression, anxiety, and stress. The acquired information were analysed using a number of statistical tools, including averages, standard

deviations, frequency, and percentages. Kaur et al. detected that the pervasiveness of stress symptomatology of type 2 diabetics was high. The study concluded that, testing individuals who have a higher propensity of being type 2 diabetics of stress symptoms in the treatment centers should be done frequently.

Bhandary and Rao (2013) determined the contributions of "perceived stress" and "family functioning" on type 2 diabetics' behaviours in Mangalore city in Karnataka state. The research work followed a case-control approach. The cumulative number of individuals was 500, with 250 T2DM patients and 250 non-diabetes victims, in line with WHO guidelines. Respondents were selected at random for both case and control trials, and they came from various socioeconomic backgrounds. The study respondents were chosen from India's Dakshina Kannada region. Patients with a high school diploma or higher were presented with questionnaires to complete for self-evaluation. In analysing data derived from the study, independents t-test, Chi-square and Pearson's correlation tests were carried out. The study found that stress was high among diabetics as against their non-diabetic peers.

Chew, Vos, Mohd-Sidik and Rutten (2016) studied the pervasiveness of distress associated with diabetes and depression, as well as their accompanying factors among adult T2DM patients in Asia. Diabetes-related anxiety and depression were measured using the Diabetes Distress Scale (DDS) and the Patient Health Questionnaire (PHQ), respectively, over the course of the inquiry that was carried out at three health facilities that are owned and operated by the state. In all, 494 patients were utilised in the research. Frequencies and percentages were used in analysing the diabetes

related distress data obtained from the survey. The study found that the pervasiveness of distress associated with diabetes of the studied individuals was high.

Tan et al. (2015) studied the occurrence of depression, anxiety and stress in diabetics who had attained their 20th birthday or older at the health center. The study employed cross-sectional research design. Questionnaires were distributed across eight private and public-owned health centers in two cities in Malasia (i.e., Palau Pinang and Melaka). In testing for indicators of depression, anxiety and stress, DASS-21 questionnaire which have been authenticated was utilised. In all, 320 diabetics were conveniently engaged. Means, standard deviations, percentages and frequencies helped as data analysis tools. Tan et al. discovered that the pervasiveness of stress was profound (19.4%) among diabetics as against the healthy individuals.

Ahangari, Moasheri, Norouzi and Shayesteh (2016) determined the occurrence of stress, sadness and nervousness in type 2 diabetics together with the connectedness with their background features. Employing the descriptive cross-sectional design, 201 diabetics were chosen conveniently from a health center in Tehran. The DASS was utilsed as the principal instrument for gathering data. Frequencies, percentages, means and standard deviation were employed in analysing data. Ahangari et al. observed a profound (78.1%) stress occurrence stress among the study participants.

Sendhilkumar et al. (2017) ascertained the apparent stress levels of adults who have attained their 20th year and above and are living with T2DM in an Indian advanced health center that is specifically for diabetes care. The study employed mixed-methods (i.e., triangulation) design with both

quantitative and qualitative approaches. A five-point perceived stress scale helped in measuring T2DM victims' stress levels. Frequencies and percentages, and thematic content analysis were used in analysing data. In all, 376 individuals battling with T2DM were selected at chance and used for the research work. The study found that the prevalence of profound or extremely profound stress stood at 35% among T2DM victims.

In Ghana, Chilunga et al. (2022) investigated stress among type 2 diabetic patients. The researchers investigated the connections between psychosocial pressures, the presence or absence of type 2 diabetes, and glycemic control in Ghanaian subjects. They utilised the data from the RODAM project, which stands for the Survey on Obesity and Diabetes among African Migrants. We used logistic and linear regression models to investigate the relationship between psychosocial pressures and type 2 diabetes and HbA1c, respectively, making appropriate adjustments for factors such as age, gender, level of education, and any other relevant stresses. There were a total of 4,841 Ghanaians who participated in the study, with 44% of them living in Ghana, 62% of them being females, the mean age being 46 years, and 10% of them having type 2 diabetes. There was no link between the occurrence of psychosocial stress at the house or at office and type 2 diabetes or HbA1c levels. There was an inverse association between having a negative life experience in the previous year and developing type 2 diabetes (adjusted odds ratio = 0.93, 95% confidence interval [CI]: 0.87–0.99). It was shown that a higher level of perceived discrimination was related with a higher risk of developing type 2 diabetes (aOR = 1.01, 95% CI 1.004–1.03). Both of these correlations were found to be stronger in males. There was also a substantial

association between perceived discrimination and HbA1c levels, particularly among those who had type 2 diabetes (adjusted = 0.01, 95% CI 0.007–0.02) In line with the outcomes of the investigation, felt bias and unfavourable personal circumstances are related with higher rates of type 2 diabetes and worse glycemic control among Ghanaians, particularly in gentlemen.

It seems that most of the studies that endeavoured to ascertain the pervasiveness of stress of type 2 diabetics considered the general public without specifically concentrating on married type 2 diabetic individuals. This creates a wide gap in the extant literature that need to be addressed. Also, findings from the general population may not be applicable to married individuals who have been afflicted with type 2 diabetes. These thus, necessitate the conduct of the current inquiry to fill these gaps.

Anxiety among Married Individuals Living with Type 2 Diabetes

As observed in reviewed works (Franks, 2010) and interrogations conducted, mutual associations culminate into constructive results of T2DM as the patient's stress is minimised and the stable companion is a support of the patients. Simultaneously, the stable spouse is stressed by his or her shift in status as well as the emotional expenditures connected with T2DM's load.

When both of these symptoms are present, there is a greater likelihood of the patient experiencing discomfort, developing more difficulties, and incurring additional expenditures (Lin, 2010). There is a relation between diabetes and anxiety, which has been linked to an increased risk of sickness and mortality. When compared to the overall population, those who have diabetes are approximately twice as likely to experience feelings of nervousness and melancholy, but that frequently is ignorant and often

uncontrolled (Nichols, Barton, Glazner & McCollum, 2007). There is a cause for concern regarding the pervasiveness of unexpected anxiousness in married diabetic persons, as it prevents treatments for these conditions and causes patients distress, which causes clinical results to be poorly achieved.

Anxious people are less inclined to follow diabetes self-care recommendations and have a greater probability to live unhealthy lives, stay dormant, smoke, and take in high-fat diet, which can contribute to negative diabetes prevention and treatment consequence (Katon, 2010). Successful identification and management of cases, however, can help alleviate patient distress, improve metabolic regulations, reduce patient management costs, and improve clinical results (Labad & Price, 2010).

Similar studies in developed countries have been documented to have examined anxiety and depression as well as their underlying causes in diabetes victims or sufferers. Transversal research in the Inquiry conducted in the UK found that around one third of diabetic individuals experience anxiety. Diabetes complications and unregulated glycaemic rates were shown to trigger anxiety and depression separately (Katon, 2010).

Kaur et al. (2013) in the urbanised city of Malaysia's Klang Valley, determined the pervasiveness and indicators of depression, anxiety, and stress signs in type 2 diabetes victims accessing government primary treatment centers. Kaur et al. conducted the research in 12 haphazardly chosen primary treatment centers using a cross-sectional approach. The study included 2,508 qualified consenting individuals. The DASS, which consisted of 21 measures, was used to evaluate patients' levels of stress, nervousness, and melancholy signs. The gathered information were analysed using a number of statistical

tools, including averages, standard deviations, frequency, and percentages. Kaur et al. detected a high pervasiveness of anxiety symptoms among type 2 diabetics.

Rajput, Gehlawat, Gehlan, Gupta, and Rajput (2016) studied the occurrence and triggers of T2DM sufferers' depressive symptoms and anxiety in some health care establishment at Northern India. The survey comprised 410 T2DM victims and 410 healthy individuals who were paired for age and sex and attended the hospital's endocrine out-patient department (OPD). The Hamilton Depression Rating Scale (HDRS) and Hamilton Anxiety Rating Scale (HARS) were relied upon in assessing respondents' depressive symptoms and anxiousness, respectively. Means and standard deviations were adopted in analysing the obtained data. Rajput et al. detected that a substantial number of diabetics had profound magnitudes of anxiety as against their normal or healthy controls.

Mikaliūkštienė et al. (2014) evaluated the preponderance and factors that influence type 2 diabetics' anxiousness and depressive symptoms. The investigation took place between 2007 and 2010. The investigation enlisted the participation of 1500 diabetics in total. The Hospital Anxiety and Depression Scale, also known as the HADS, was used in the process of assessing melancholy signs and nervousness for the purpose of evaluating the condition of nervousness and sadness. Both descriptive and inductive statistical methods were used in the course of the statistical analysis that was done. For both background and diabetes-related factors, descriptive statistics helped in the analysis. The "extended Mantel-Haenszel test" was employed for trend analysis, while Pearson's Chi-square test was utilised in analysing the

grouped data. Anxiety was shown as very usual amongst type 2 diabetics, according to the investigation.

Khuwaja et al. (2010) assessed the pervasiveness of type 2 diabetics' anxiousness and melancholy signs, as well as their contributing elements, such as metabolic mechanisms. The research was conducted in four clinic's OPD in Karachi, Pakistan, in a cross-sectional, multi-center survey. This investigation included a total of 889 diabetics. The HADS was employed in measuring respondents' anxiousness and depressive symptoms. Means, standard deviations, frequency counts and percentages served as tools for data analysis. Khuwaja et al. realised that the type 2 diabetic adults experienced high anxiety episodes. Following the findings, the study suggested that every diabetic ought to be tested for anxiety so that it can be addressed to enhance medical outcomes.

Tan et al. (2015) studied the occurrence of depression, anxiety and stress in diabetics who had attained their 20th birthday or older at the health center. The study employed cross-sectional research design. Questionnaires were distributed across eight private and public-owned health centers in two cities in Malasia (i.e., Palau Pinang and Melaka). In testing for the indicators of depression, anxiety and stress, DASS-21 questionnaire which have been authenticated was utilised. In all, 320 diabetics were conveniently engaged. Means, standard deviations, percentages and frequencies helped as data analysis tools. Tan et al. discovered that the pervasiveness of anxiety was profound (40%) among diabetics as against the healthy individuals.

Tovilla-Zarate et al. (2012) investigated the occurrence of sadness and anxiety as experienced by type 2 diabetics visiting an OPD in Mexico and also

found out the factors that predispose them to being anxious and depressive. In all, 820 diabetics were used for the study. The pervasiveness of respondents' depressive symptoms and anxiousness was ascertained with HDRS and HARS, respectively. Frequencies and percentages helped as data analysis tools. Per the reports of Tovilla-Zarate and colleagues, a significant number of diabetes sufferers suffer from nervousness (55.1%).

Trento et al. (2012) investigated the prevalence of sadness among type 2 diabetes OPD patients and determined the nature of the condition's possible connections to other mental health issues, intellectual functioning, and medical characteristics. The "Zung Self-Rating Depression and Anxiety Scales" and the "Mini-Mental-State Examination" scale were provided to respond to by 249 insulin-treated and 249 non-insulin-treated diabetics whose ages varied from 40 to 80. The design of the study was a cross-sectional one. The incidence of anxiety among diabetics was found to be rather high, judging by the findings of averages and standard deviations.

Al-Mohaimeed (2017) assessed the pervasiveness of T2DM patients' anxiety symptoms and depression and factors that make them vulnerable to those conditions. The study was cross-sectional in nature. Three hundred T2DM patients were engaged at a facility called "The Diabetic Center of King Saud Hospital" in Qassim. The HADS was adopted in measuring respondents' anxiety and depression episodes. Descriptive analysis (i.e., frequencies and percentages) was computed for the derived data. Al-Mohaimeed observed that the pervasiveness of T2DM patients' anxiety episode was profound (43.6%). The study suggested that clinicians ought to recognise and provide

comprehensive treatment for anxiety as encompassing the composite treatment of diabetes.

Ahangari et al. (2016) determined the incidence of stress, sadness and nervousness of type 2 diabetics together with the link they have with their background attributes. Employing the descriptive cross-sectional design, 201 respondents were engaged conveniently from a health center in Tehran. The DASS served as the principal instrument for gathering data. Frequencies, percentages, means and standard deviation were employed in analysing data. Ahangari et al. detected a profound (96%) pervasiveness of anxiety among the study participants.

In Ghana, Obo, Kugbey and Atefoe (2021) also studied anxiety among diabetic patients. Using a cross-sectional survey methodology, this research looked at how co-morbid depression and anxiety affected the quality of life of 115 people who were living with type 2 diabetes. The researchers looked at both the direct and indirect effects of these conditions. In order to summarise the data, frequencies and percentages were computed, and the Pearson correlation was used so that the bivariate link between the research variables could be determined. When doing mediation analyses, we relied on SPSS's PROCESS Macro. The research revealed that both sadness and anxiety had considerable adverse effects on the quality of life of those who live with type 2 diabetes. Depression, on the other hand, was the only condition that exhibited a substantial inverse connection with social support. On the other hand, strong and favourable social correlations were found between social support and quality of life. After making adjustments for the participants' gender, the mediation analysis revealed that social support had a role in mediating just a

portion of the connection between melancholy and standard of living. However, when the gender of the participants was taken into account, the mediating impact of social support on the connection between anxiousness and life satisfaction was not found to be statistically significant. According to the findings of the research, having access to social support, particularly support from peers, has the potential to mitigate the adverse psychological effects of living with type 2 diabetes and improve the overall life satisfaction for those who are afflicted with this medical disease.

Clearly, there is limited literature on studies that employed married type 2 diabetic individuals to investigate the magnitude of anxiety experiences as a result of their conditions. Therefore, the present investigation seeks to fill this void in body of knowledge by specifically measuring the prevalence of married type 2 diabetics victims in Sekondi Takoradi Metropolis. This could help direct policies that are workable for diabetic married individuals in the Metropolis which could even be emulated by others.

Depression among Married Individuals Living with Type 2 Diabetes

According to Dorahy et al. (2000), depression prevalence differs across cultural setups, with research from emerging economies showing extraordinarily high magnitude of depression as against to the developed economies (Kessler & Bromet, 2013). Studies of depression pervasiveness in T2DM sufferers in different countries indicate that 77.6% in the UK (Tovilla, 2012), 48.27% in Mexican (Thour, 2016), 23% in North India (Bener, 2011), 13.6% in Qatar (Basdani, 2016), 8.7% to 21.4% in Leiden University (Rehman & Farhana, 2015), 52.1% in Allied Hospital, Faisalabad (Tovilla, 2015; Thour, 2016), 43.5% and 38.35% in Pakistan (Basdani, 2016) and 39.5% in Nigeria

(Tovilla, 2012). In addition, the hypothalamic-pituitary-adrenal axis is considered to be triggered by depression, sympathetic nervous system activation, enhanced responsiveness to inflammatory and platelet aggregation, and insulin sensitivity decreased, leading to impaired glycaemic regulation and raising the chances of complications (Bouwman 2010).

The European Institute for Diabetes Anxiety Study (EDID) (2010) has announced that the prevalence of depression in diabetics has been greater than that in non-diabetic groups in research. It is reported that, collectively, 43 million people with symptoms of depression are diabetic. In fact, symptoms of fear end in diabetes (Bouwman, 2010). A life stressor is a diagnosis of diabetes itself. It requires other services, both physical and emotional. Depression tends to control the pressure of diabetes. In fact, healthcare uses and expenses are rising as a consequence of diabetes and severe depression (Subramaniam & Sum, 2009).

Steptoe et al. (2014) conducted a study to see if type 2 diabetics have prolonged allostatic load, which displays as versatile disruptions in stress reactivity and recovery across numerous biological structures (e.g., circulatory, neuroendocrine, inflammatory, metabolic), as well as a high level of recurring stressful events. By way of data analysis, means were used to compute the average systolic BP, diastolic BP as well as HR. Steptoe et al.'s study was an experimental study which compared 140 male and female type 2 diabetics aged 50-75 years with 280 healthy individuals. The study revealed that diabetic patients testified having profound depression episodes and hostility in comparison to other folks with good healthy.

Kaur et al. (2013) carried out an investigation in the urbanised city of Malaysia's Klang Valley to ascertain the high prevalence of loneliness, nervousness, and stress signs in type 2 diabetes victims allowed to enter state main treatment facilities. They also ascertained the factors that contributed to these symptoms. Kaur et al. carried out their study utilising a cross-sectional methodology in a total of twelve primary treatment facilities that were selected at random. Participants who met the criteria for the research and gave informed permission numbered 2,508. The DASS, which consisted of 21 measures, was used to evaluate patients' levels of stress, anxiousness, and melancholy signs. The obtained data were analysed using a number of statistical tools, including averages, standard deviations, frequency, and percentages. Kaur et al. detected a high pervasiveness of depressive symptoms among the diabetics.

Chew et al. (2016) studied the pervasiveness of distress associated with diabetes and depression, as well as their accompanying factors among adult T2DM patients in Asia. The DDS and PHQ were used, respectively, to measure diabetes-related distress and depression over the course of the research, which was carried out at three health facilities that are owned and operated by the government. In all, 494 patients took part in the survey as participants. In the process of analysing the data on melancholy that was received via the survey, frequencies and percentages were used. Chew et al. detected extraordinarily high pervasiveness of depressive episodes among the T2DM patients.

Rajput et al. (2016) studied the occurrence and triggers of T2DM sufferers' depressive symptoms and anxiety in a healthcare facility in Northern

India. The survey comprised 410 T2DM victims and 410 healthy individuals who were paired for age and sex and attended the hospital's endocrine OPD. The HDRS and HARS were used in assessing respondents' depressive symptoms and anxiousness, respectively. Means and standard deviations were adopted in analysing the obtained data. Rajput et al. detected that a significant proportion of diabetic patients experienced high depression symptoms than their healthy peers.

Sweileh, Abu-Hadeed, Al-Jabi and Sa'ed (2014) investigated the occurrence of depression of type 2 diabetics and also examined the linkage among depressive episodes and background attributes, medical factors, and glycemic regulation. The investigation was cross-sectional in nature and was done in Nablus, Palestine at a hospital commonly known as "Al-Makhfiah hospital". Overall, 294 diabetics were conveniently chosen and answered the Beck Depression Inventory (BDI-II) scale to report their depressive episodes. Descriptive statistics (i.e., means and standard deviation) helped in analysing the data. Sweileh et al. detected enormous depression pervasiveness in the diabetic patients studied. Sweileh et al. suggested that that psychosocial assessment ought to be included in constant medical evaluation of the diabetics to enhance their wellbeing and reduce undesirable health consequences among them.

Mikaliūkštienė et al. (2014) also evaluated the preponderance and factors that influence type 2 diabetics' anxiousness and depressive symptoms. The investigation took place between 2007 and 2010. The investigation enlisted the participation of 1500 diabetics in total. Regarding the assessment of the anxiousness and the depressed state, the HADS was utilsed in

measuring depressive symptoms and anxiety. The statistical assessment was done using both descriptive and deductive statistical techniques. For both background and diabetes-related factors, descriptive statistics helped in the analysis. The "extended Mantel-Haenszel test" was employed for trend analysis, while Pearson's Chi-square test was utilised in analysing the grouped data. Depression was shown to be very evident amongst type 2 diabetics, according to the investigation.

Khuwaja et al. (2010) assessed the pervasiveness of type 2 diabetics' anxiousness and depressive signs, as well as their contributing elements, such as metabolic mechanisms. The research was conducted in four clinic's OPD in Karachi, Pakistan, in a cross-sectional, multi-center survey. This investigation included a total of 889 diabetics. The HADS was employed in measuring respondents' anxiousness and depressive symptoms. Means, standard deviations, frequency counts and percentages served as tools for data analysis. Khuwaja et al. realised that the type 2 diabetic adults experienced high depressive symptoms. Based on the study observation, Khuwaja et al. recommended that every diabetic ought to be tested for depressive symptoms so that it can be addressed to enhance medical consequences.

Relatedly, Bensbaa et al. (2014) assessed the occurrence T2DM victims' depression, and also identified the factors that predispose them to experiencing depressive episodes. Persons who were T2DM sufferers and have attained their 18th birthday or older were engaged. The study employed the cross-sectional study design. Individual and private 30-minute interrogations were conducted by the same diabetes specialist consultant, who had been certified to utilise the psychometric scales that were required, at the

conclusion of the diabetology session. The Beck diagnostic scale for depression was utilized in its Moroccan-Arabic translation. The data analysis was done using frequencies and percentages. Bensbaa et al. detected that the incidence of sadness was high (33.1%).

Tan et al. (2015) studied the occurrence of stress, sadness and nervousness in diabetics who had attained their 20th birthday or older at the health center. The study employed cross-sectional research design. Questionnaires were distributed across eight private and public-owned health centers in two cities in Malasia (i.e., Palau Pinang and Melaka). In testing for the indicators of depression, anxiety and stress, DASS-21 questionnaire which have been authenticated was utilised. In all, 320 diabetics were conveniently engaged. Means, standard deviations, percentages and frequencies helped as data analysis tools. Tan et al. discovered that the pervasiveness of depression was profound (26.6%) among diabetics as against the healthy individuals.

Salinero-Fort et al. (2018) investigated T2DM patients' depression pervasiveness, and also identified the background, medical and mental attributes that influence their depressive episodes. The study was carved from the "Madrid Diabetes Study" which conducted a large prospective cohort study of type 2 diabetics. Three thousand, four hundred and forty-three diabetics were enrolled in the initial recruitment campaign. Seven hundred and twenty-seven additional patients were enrolled in the next recruitment effort. Data were gathered annually during the follow-up period from 2007 through to 2008. In analysing the data, Salinero-Fort et al. utilised means, standard deviations and frequency and percentages. Salinero-Fort et al. observed that

the pervasiveness of depression was profound (20%) in the diabetic respondents.

Tovilla-Zarate et al. (2012) also investigated the occurrence of depression and anxiety as experienced by type 2 diabetics visiting an OPD in Mexico and also found out the factors that predispose them to being anxious and depressive. In all, 820 diabetics were used for the study. The pervasiveness of respondents' depressive symptoms and anxiousness was ascertained with HDRS and HARS, respectively. Frequencies and percentages helped as data analysis tools. Tovilla-Zarate et al. found that the pervasiveness of depression as experienced by diabetics was high (48.3%).

Niraula et al. (2013) also assessed the occurrence of diabetics' depression and also identified the predisposing factors. The type of the research was one that was cross-sectional. The study included 385 diabetic patients who sought treatment at hospitals in Kathmandu and was conducted in Nepal. Participants in the trial were required to have received a diabetes diagnosis no more than three months previous to the start of the research. The BDI was administered in Nepali and was found to be accurate. Frequencies and percentages were used in analysing data. The study observed a profound (40.3%) pervasiveness of depression among the studied diabetics.

In another study, Cols-Sagarra et al. (2016) looked at the occurrence of reported and undiscovered depression type 2 diabetics who were seen in a Spanish general hospital, as well as the factors linked to depression. The research involved a cross-sectional and multicenter investigation with randomised diabetics who visited 21 general hospitals. The Patient Health Questionnaire-9 (PHQ-9) was employed in assessing respondents' depression

states. The study consisted of 411 diabetics. The study employed means, standard deviations and percentages as data analysis tools. The pervasiveness of depression was high among the diabetics.

Islam, Rawal and Niessen (2015) investigated the pervasiveness of co-morbid depressive episodes and its predisposing factors among Bangladeshi type 2 diabetics. The design of the inquiry was cross-sectional. Five hundred and fifteen diabetics were contacted in a general health center in Dhaka from September, 2013 to July, 2014. Islam et al. measured respondents' depression with PHQ-9. Results from the descriptive analysis (i.e., averages, standard deviations and percentages) revealed that a chunk of the diabetics experienced high depressive symptoms.

Trento et al. (2012) also sought to investigate the occurrence of depression among type 2 diabetic OPD attendees and its likely relationship with anxiety, intellectual functioning, and medical attributes. With a cross-sectional design, 249 NIT and 249 IT diabetics whose ages ranged from 40 to 80, were given the "Zung Self-Rating Depression and Anxiety Scales" as well as the "Mini-Mental-State Examination" scale to answer. Means and standard deviation results revealed a high depressive prevalence among the type 2 diabetes patients.

Moreover, Al-Mohaimeed (2017) assessed the pervasiveness of T2DM patients' anxiety symptoms and depression and factors that make them vulnerable to those conditions. The study was cross-sectional in nature. Three hundred T2DM patients were engaged at a facility called "The Diabetic Center of King Saud Hospital" in Qassim. The HADS was adopted in measuring respondents' anxiety and depression episodes. Descriptive analysis (i.e.,

frequencies and percentages) was computed for the derived data. Al-Mohaimeed observed that the pervasiveness of T2DM patients' depressive episode was profound (34.8%). The study suggested that clinicians ought to recognise and provide comprehensive treatment for depression as encompassing the composite treatment of diabetes.

Ahangari et al. (2016) determined the occurrence of stress, anxiety and depression of type 2 diabetics together with the link they have with their background attributes. Employing the descriptive cross-sectional design, 201 respondents were engaged conveniently from a health center in Tehran. The DASS served as the principal instrument for gathering data. Frequencies, percentages, means and standard deviation were employed in analysing data. Ahangari et al. detected a profound (83.1%) pervasiveness of depression among the study participants.

In Ghana, Akpalu et al. (2018) also investigated into depression among type 2 diabetes. In patients with type 2 diabetes (T2DM) who were receiving treatment at a tertiary healthcare centre in Ghana, the researchers looked at whether or not there was a connection between glycemic control and depression. The Patient Health Questionnaire-9 (PHQ-9) was administered to 400 individuals with type 2 diabetes with ages ranging from 30 to 65 to determine their level of depressive symptoms. We examined anthropometric parameters as well as the patient's blood pressure. Blood was drawn from the veins so that the amounts of glycated haemoglobin could be determined (HbA1c). Patients diagnosed with type 2 diabetes had a prevalence of depression of 31.3%. Female sex, not being married, regular alcohol use, a history of smoking, and the use of insulin were all related with greater odds of

depression, but having an education above the elementary school level was connected with a lower odd of sadness. After correcting for age, sex, and other social characteristics, a multivariable logistic regression model found that being single and having poor glycaemic control were related with an increased likelihood of suffering from depression. When clinical characteristics were accounted for in the model, there was less of a correlation between depression and glycemic control. In line with the results of the investigation, melancholy is rather prevalent among Ghanaians who have type 2 diabetes, although it is not linked to inadequate glycemic control in a fully multivariable-adjusted model.

Considering the paucity of literature regarding the pervasiveness of depressive episodes of married type 2 diabetic individuals, this investigation steps in to fill this gap. This is critical since some of the activities of married individuals such as child upbringing, meeting household and workplace demands could increase the psychological and physiological states of married type 2 diabetic individuals.

Coping among Married Type 2 Diabetic Individuals

Melancholy, sadness, and disease-related discomfort are all recognised to be harmful for diabetics. Diabetes patients are more than twice susceptible to experience depression (Anderson, Freeland, Clouse & Lustman, 2001) which is significant given that diabetics and sufferers of depressive symptoms have been shown to cope worse than as against those with no known symptomatology of depression (Shah, Gupchup, Borrego, Raisch & Knapp, 2012). In comparison to those who do not have type 2 diabetes, diabetics have a more intense and widespread level of worry (Smith et al., 2013). Distress

connected to diabetes, often known as the mental anguish that comes along with having diabetes, is separate from anxiety but just as important to take into account (Burns, Deschenes, & Schmitz, 2016). Distress caused by diabetes arises from anxieties or fears linked with having the disease. Distressed people express undesirable emotional reactions to their diagnoses, including self-blame (Karlsen, Oftedal & Bru, 2012).

It is very essential to have an awareness of coping mechanisms in diabetes since it has been shown to play a major role in the adjustment to self-care. According to Gfvels and Wandell (2006), the primary objective of coping is to minimise or eliminate the anxiety that is brought on by a certain situation. When providing treatment for diabetes patients who also exhibit concurrent symptoms of depression, anxiety, or distress. It is essential to have an understanding of coping because, despite the fact that responses to coping might vary, it has been shown that they have a substantial influence on the physical and mental health of diabetics (Coelho, Amorim & Prata, 2003). Some studies have been conducted to examine the coping mechanisms that type 2 diabetics employ in coping with their situation. Subsequent paragraphs outline some of such studies.

McCoy and Theeke (2019) conducted a systematic review including a compilation of empirical results from twenty-two quantitative research on psychosocial aspects and adaptation in type 2 diabetics. In searching literature, the “Preferred Reporting Items for Systematic Reviews and Meta-Analyses” (PRISMA) procedures was adopted. The inquiry proved that effective coping strategy of “problem-focused” coping was connected to better mental and physical wellbeing. Depressive symptoms and anxiousness were linked to

emotional reactions to diagnosis. Negative coping methods such as resignation, protest, or isolation were also shown to be more prevalent in ladies and were very much linked with lower life quality. However, while avoidance was connected to greater diabetes-linked misery and melancholic episodes.

Tuncay, Musabak, Gok, and Kutlu (2008) also did a research on Turkish diabetics with type 1 and type 2 diabetes. The emphasis of this study was on anxiety levels, coping methods, and the linkages that exist between anxiety, coping methods, background, and medical characteristics. In all, there were 161 Turkish individuals who participated in the research and they all had at least one of the two types of diabetes. This investigation opted to use a technique of convenient sampling. The Spielberger State-Trait Anxiety Scale as well as the short COPE were used in the process of carrying out the research. The researchers Tuncay et al. analysed the data using statistical measures such as means and standard deviations. The predominantly used problem-focused by the respondents included “acceptance, religion, planning, positive reframing, using instrumental support, active coping, and using emotional support; the most used emotional coping strategies were self-distraction and venting” (p. 6). In both types1 and 2 diabetes, the most commonly employed “problem-focused” and “emotion-focused” coping techniques were observed to be alike. Type 2 diabetics, on the other hand, scored much higher on “problem-focused” techniques than type 1 diabetics.

In a comparable pattern, Duangdao and Roesch (2008) carried a meta-analysis to summarise the linkage between adapting elements (such as avoidance, approach, emotion-focused, and problem-focused) and adjustment

indices (such as overall, depression, anxiety, and glycemic regulation) in diabetics. Specifically, they were interested in the connection between avoidance, approach, emotion-focused, and problem-focused coping. Data, both methodological and numerical, pertaining to 3,381 diabetics were culled from 21 main studies that had been published. According to the findings of the research, a good level of adjustment was associated with the adoption of "approach" and "problem-focused" coping strategies. The overall adjustment was not significantly associated to either the coping strategy of "avoidance" or "emotion-focused." However, negative impact sizes ranging from medium to high were observed between "emotion-focused" coping and particular adjustment indices. These indices included: (i.e., anxiety, depression). Duangdao and Roesch came to the conclusion, based on their observations, that coping mechanisms that aim to alleviate both current unpleasant feelings and specific stresses are effective in improving mental wellbeing. These coping mechanisms include consulting with medical professionals and beginning an innovative treatment protocol. These correlations, on the other hand, are contingent not only on the specific coping method that is used, but also on the adjustment index that is evaluated.

In a related study, Moasheri, Ahangari, Norozi and Shayesteh (2017) explored how type 2 diabetics cope and the likely relationships they have with background attributes. The study was a descriptive-analytic study. Two hndred and one type 2 diabetics from the Dornian Care Clinic in Tehran were included in the investigation. The “Coping Inventory for Stressful Situations” (CISS) was utilised in evaluating coping strategies of the diabetic patients. The information was broken down and examined using statistical tools such as

averages, standard deviations, frequency counts, and percentages. Moasheri et al. found that the diabetics utilised avoidant, emotion-oriented, and problem-based coping strategies (p. 58). Moasheri et al. also observed that married folks used avoidant strategies more than singles (p. 59).

DeCoster and Cummings (2005) also assessed the coping strategies adopted by adult type 2 diabetics (i.e., Whites, Blacks and non-Latinos). DeCoster and Cummings employed the exploratory design with a mixed-method. Interviews (i.e., in-depth) were done to solicit for participants' views. In all, 34 interviewees were used for the investigation. The participants were nine black ladies, five black gentlemen, 15 white ladies, and five white gentlemen who lived in a large mid-South metropolis. Interviews were recorded, interpreted, and then combined and coded for analysis. DeCoster and Cummings observed that type 2 diabetic adults who were from a white descent employed greater proportion of problem-focused coping compared with their African-American peers. DeCoster and Cummings concluded that emotion-focused coping had a linkage with undesirable self-assessed diabetic management whereas problem-focused had a nexus with constructive diabetic management.

It can be realised that most of the studies used the general population in examining the coping strategies among type 2 diabetics, with specific studies on married individuals significantly missing in the literature. This study therefore looks specifically at married type 2 diabetic individual. This study is deemed imperative because the findings that were identified for the general population may vary from that of married type 2 diabetic.

In Ghana, Tabong et al. (2018) also investigated into coping styles among diabetic patients. The researchers used a descriptive phenomenology method to their qualitative inquiry and held eight focus group conversations (N = 73) with diabetes patients. Four of the discussions were held with male patients (N = 36), while the other four were held with female patients (N = 37). In addition to this, the researchers carried out in-depth interviews with a total of 15 patients, seven carers, and three medical professionals. According to the findings of the survey, respondents thought diabetes was a sickness that only affected the elderly and wealthy. Despite the fact that they were aware of the impact that lifestyle had in the development of diabetes, the majority of them continued to participate in diabetes-related high-risk behaviours such as not getting enough exercise, leading a sedentary lifestyle, and eating poorly. According to the findings of the research, patients considered that biological health institutions gave insufficient attention to psychosocial components of treatment, despite the vital role that these factors play in dealing with the disease.

Relationship between Stress and Anxiety

Only a few research have looked into the link among stress and anxiety among type 2 diabetics. Notably, Zhang et al. (2009) evaluated the association of coping mechanisms with psychological stress on the symptoms of sadness and anxiety in Chinese individuals who had type 2 diabetes. In all, 304 diabetics were asked in-person interviews by trained research assistants using a standardised questionnaire. The interviewees were asked questions on their medical history, mental stress, coping mechanisms, anxiety and depressive episodes, and other topics. Hierarchical multiple regression analyses were

used in order to evaluate the interaction between different coping strategies and the impact of psychological stress on depressive and anxious symptomatology. Zhang et al. observed that substantial relationships was detected among the four dimensions of psychological stress with anxiety.

Zhang, Chen and Chen (2008) also studied the association between psychosocial factors (i.e., psychological stress, social support and coping strategies) and anxiety in Chinese type 2 diabetics. This inquiry was descriptive in nature. Overall, 304 diabetics were included in the research work. Questionnaires served as means of soliciting information from respondents. In analysing the data, multiple stepwise regression was performed. Zhang et al. observed that psychological stress factors had substantial positive connection with anxiety symptoms.

Clearly, studies that examine the link between stress and anxiety among type 2 diabetic individuals is limited even among the general population. This inquiry therefore adds to literature by concentrating on married type 2 diabetic individuals in Sekondi Takoradi Metropolis.

Relationship between Stress and Depression

Chew et al. (2016) studied the spread of anguish linked to diabetes and feelings of hopelessness, as well as their accompanying factors among adult T2DM patients in Asia in order to investigate the link between stress and feelings of hopelessness among type 2 diabetic patients. Specifically, the researchers were interested in the link between stress and feelings of hopelessness among type 2 diabetic patients. In addition, the research attempted to determine whether or not there is a connection between diabetes-related discomfort and melancholy. The DDS and PHQ were used,

respectively, to measure diabetes-related anguish and melancholy over the course of the research, which was carried out at three health facilities that are owned and operated by the state. In all, 494 patients participated in the study as participants. When analysing the data on melancholy that was received via the survey, frequencies and percentages were both taken into consideration. Generalized linear models were used for the purpose of conducting research on the correlation between diabetes-related distress and sadness. In line with the outcomes of the investigation, there is a significant and positive connection between diabetes-related discomfort and melancholy.

Lloyd et al. (2018) also assessed the pervasiveness and ways of managing depression episodes in type 2 diabetics across various economies. Diabetics who have attained between18 and 65 years, and visited OPDs in 14 were utilised. Respondents answered the PHQ and the "Problem Areas in Diabetes scale". A total of 2783 diabetics participated in the research. Multivariate regression analysis helped exploring the links that existed among the variables of interest. Lloyd et al. found that the respondents who had moderate/profound depressive episodes had a greater likelihood of having PTSD.

Similarly, Zhang et al. (2009) also evaluated the relationship of coping mechanisms with mental trauma on the indicators of sadness and worry in Chinese people who had type 2 diabetes. In all, 304 diabetics were asked in-person interviews by trained research assistants using a standardised questionnaire. The interviewees were asked questions on their health information, psychological anguish, coping mechanisms, worry and melancholy episodes, and other topics. Hierarchical multiple regression

analyses were used in order to evaluate the interaction between different coping strategies and the impact of psychological stress on depressive and anxious symptomatology. Zhang et al. observed that substantial relationships was detected among the three dimensions of psychological stress (i.e., "worrying about being harmed by the disease", "social/family crisis caused by the disease", and "worrying about decline in body/physical function") with depressive symptoms, but not "reduced economic condition".

Zhang et al. (2008) also studied the association between psychosocial factors (i.e., psychological stress, social support and coping strategies) and depression in Chinese type 2 diabetics. Zhang et al.'s study was descriptive in nature. In all, 304 diabetics were included in the investigation. Questionnaires served as means of soliciting information from respondents. In analysing the data, multiple stepwise regression was performed. Zhang et al. observed that depression symptoms had substantial relationship with worrying about being hurt by the illness, fretting about falling in body/physical performance, social/family crises induced by the condition, deteriorating economic state, and negative coping strategies are all examples of concerns that may arise as a result of having the disease.

Considering the paucity of research evidence regarding the nexus between stress and depression of married type 2 diabetic individuals, this present investigation fills a significant gap in literature. This study's findings could help direct health policies that are specific to married entities suffering and dealing with type 2 diabetes.

Relationship between Anxiety and Depression

Studies that examine the linkage among anxiety and depression levels of type 2 diabetic patients are limited. The only available ones to the best of the researchers' knowledge are discussed. For instance, Trento et al. (2012) evaluated the occurrence of sadness amongst type 2 diabetic OPD attendees and its likely relationship with anxiety, intellectual functioning, and medical attributes. Trento et al.'s study also examined the relationship between nervousness and sadness among type 2 diabetics. With a cross-sectional design, 249 NIT and 249 IT diabetics whose ages ranged from 40 to 80, were given the "Zung Self-Rating Depression and Anxiety Scales" as well as the "Mini-Mental-State Examination" scale to answer. Results of the multivariate analysis revealed that depression was positively and significantly linked with anxiety among the diabetic outpatients.

Wu et al. (2011) also examined whether any substantial linkage existed among self-care attitude, diabetes education challenges, depression and anxiety of Taiwanese type 2 diabetics. The study was cross-sectional in nature making use of 3 hospitals located in the northern, middle and southern belts of Taiwan. In all, 312 type 2 diabetics were utilised for the research. Questionnaires were utilised in soliciting for respondents' information regarding their anxiety and depression and the other variables under study. In examining the relationship among the variables, correlation analyses were employed. Wu et al. observed that anxiety was positively correlated with depression.

Difference in Stress Levels Between Married Men and Women Type 2 Diabetics

Only a small number of researchers have tried to determine whether or not there are significant variations in the levels of stress experienced by men and women who have type 2 diabetes. For instance, Rehman and Kazmi (2015) investigated the incidence of depression, anxiety, and stress in type 2 diabetes and also made a comparison between the three conditions. Rehman and Kazmi adopted cross-sectional design for their investigation. In their research, 240 diabetics with complications and 120 diabetics without complications were recruited from Allied Hospital in Faisalabad. The DASS was utilised in soliciting information form the respondents. Means, standard deviations and unrelated samples t-test helped in analysing data. Rehman and Kazmi noticed a substantial difference in stress between gentlemen and ladies that are diabetic patients. The female diabetics' stress was profound as against their male colleagues.

Gillani, Sari, Sarriff, Amin and Baig (2011) also conducted a study to validate and provide a factorial analytic finding among Malaysian diabetic patients. Sex differences in stress levels of the diabetics was also examined by the authors. Gillani et al. adopted a cross-sectional design based on population. One thousand, nine hundred and twenty-four diabetic patients were recruited from the Penang community using a cluster random sampling technique. The respondents rated how often they had experienced stressful situations from options in a five-point Likert scale, ranging from "0 = never" to "4 = very often". The results of the t-test analysis indicated a significant difference in stress levels among the diabetic patients that were used for the study.

Specifically, high stress levels were identified among the female diabetic patients compared with the male diabetic patients.

Findings derived from the few available studies, may vary from the current study as a result of varying demographics. Moreover, married individuals were not used in the aforementioned studies, presenting as a gap in literature. This enquiry thus looks forward to close this gap.

Difference in Anxiety Levels Between Married Men and Women Type 2 Diabetics

In investigating the variations in levels of anxiety experiences among male and female type 2 diabetics, only a handful of studies have been done. For instance, Roupa et al. (2009) studied the pervasiveness of nervousness and depressive episodes in T2DM victims in terms of sex. Three hundred and ten type 2 diabetics were the study's participants. The HADS questionnaire was utilised as the tool for evaluating participants' anxiety and depressive patterns. The frequency distribution of two definite variables was examined using odds ratio and Pearson Chi-square and Fischer's exact tests. The study found substantial variations in anxiety levels among male and female diabetics. Specifically, As per the outcomes of the investigation, ladies' diabetics experience pervasive anxiety at a rate that is three times greater than that of gents' diabetics.

Rajput et al. (2016) also studied the occurrence and triggers of T2DM sufferers' depressive symptoms and anxiety in a health care establishment in Northern India. An additional purpose of the investigation was to investigate the disparities in levels of anxiety experienced by diabetes patients who were gents and ladies. The survey comprised 410 T2DM victims and 410 healthy

individuals who were paired for age and sex and attended the hospital's endocrine OPD. The HDRS and HARS were used in assessing respondents' depressive symptoms and anxiousness, respectively. Differences in anxiety levels among male and female diabetics was tested with independent t-test. Rajput et al. observed a substantial variation in anxiety level among male and female diabetics. Essentially, female diabetics experienced significantly higher anxiety symptoms compared to the male diabetic patients.

In the same manner, Mikaliūkštienė et al. (2014) evaluated the preponderance and factors that influence type 2 diabetics' anxiousness and depressive symptoms. Mikaliūkštienė et al. also examined the sex difference in anxiety experiences among diabetics. The investigation took place between 2007 and 2010. The investigation enlisted the participation of 1500 diabetics in total. In assessing sadness and nervousness, the HADS was utilsed in measuring depressive symptoms and nervousness. The statistical analysis was done with both descriptive and deductive statistical techniques. For both background and diabetes-related factors, descriptive statistics helped in the analysis. The "extended Mantel-Haenszel test" was employed for trend analysis, while Pearson's Chi-square test was utilised in analysing the grouped data. Mikaliūkštienė et al. observed a significant sex difference in anxiety experiences among type 2 diabetics. Specifically, anxiety was frequently experienced by female diabetic patients than male diabetic patients.

Palizgir, Bakhtiari and Esteghamati (2013) also examined the depression and anxiety pervasiveness of diabetics and the difference in their levels of anxiety based on sex. In all, 184 diabetics were employed in the research work. BDI and BAI questionnaires were employed in soliciting data

from the respondents. Statistical procedures such as independent samples t-test and binary logistic were utilised. The investigation revealed a significant sex difference in their anxiety levels. Females experienced profound anxiety pervasiveness as against their male peers.

Relatedly, Rehman and Kazmi (2015) evaluated the incidence and also compared sadness, nervousness and stress in type 2 diabetics. Rehman and Kazmi adopted cross-sectional design for their investigation. In their research, 240 diabetics with complications and 120 diabetics without complications were recruited from Allied Hospital in Faisalabad. The DASS was utilised in soliciting information form the respondents. Means, standard deviations and unrelated samples t-test helped in analysing data. Rehman and Kazmi noticed a substantial variation in anxiety among male and female diabetics. Female diabetics' anxiety was relatively profound as against that of males.

Lyrakos et al. (2013) also compared the self-evaluation of diabetes mellitus patients in terms of sex with the DASS. Two hundred and seventy-two patients suffering from diabetes mellitus were used in this study. Averages and standard deviations, and t-test analysis served as statistical tools. The study found substantial variations in the anxiety level of the male and female diabetic sufferers. Women had a significantly higher mean score in anxiety compared with men.

Among all the studies indicated above, none concentrated on married type 2 diabetics. Moreover, geographically, it seems no study has used married type 2 diabetic individuals in the Ghanaian jurisdiction. Hence, this research work addresses this gap by investigating the sexed difference in stress among married type 2 diabetics in Sekondi Takoradi Metropolis.

Difference in Depression Levels Between Married Men and Women Type 2 Diabetics

Studies that focus on investigating the sex difference in depression levels of type 2 diabetics exist. Among those that exist, Roupa et al. (2009) for example, studied the pervasiveness of nervousness and depressive episodes in T2DM victims in terms of sex. Three hundred and ten type 2 diabetics were the study's participants. The HADS questionnaire was utilised as the tool for evaluating participants' anxiety and depressive patterns. The frequency distribution of two definite variables was examined using odds ratio and Pearson Chi-square and Fischer's exact tests. The study found substantial variations in depression levels between male and female diabetics. Specifically, the study revealed that women presented a doubled percentage (41.4%) of depression symptoms compared with men who had just 17.8%.

In another study, Rajput et al. (2016) studied the occurrence and triggers of T2DM sufferers' depressive symptoms and anxiety in a healthcare establishment at Northern India. Rajput et al. also examined the differences in levels of depression among male and female diabetic patients. The survey comprised 410 T2DM victims and 410 healthy individuals who were paired for age and sex and attended the hospital's endocrine OPD. The HDRS and HARS were used in assessing respondents' depressive symptoms and anxiousness, respectively. Differences in depression levels of male and female diabetics was examined with independent t-test. Rajput et al. observed a marked variation in the experiences of depression among male and female diabetics. Rajput et al. noted that compared with male diabetics, female diabetics experienced higher depressive symptoms.

Similarly, Niraula et al. (2013) assessed the occurrence of diabetics' depression and also identified the predisposing factors. The study also assessed the sex differences in depression among study participants. The type of the investigation was one that was cross-sectional. The study included 385 diabetic patients who sought treatment at hospitals in Kathmandu and was conducted in Nepal. Participants were required to have received a diabetes diagnosis not earlier than three months before the beginning of the trial. It was determined that the BDI could be given in Nepali and that it retained its accuracy. A t-test study based on unrelated samples was carried out in order to evaluate the gender differences seen among diabetes. The investigation indicated that there were statistically significant gender variations in levels of melancholy among the diabetics who were evaluated. There was a statistically significant difference in the incidence of melancholy in diabetes women and diabetic men.

Additionally, Islam et al. (2015) investigated the prevalence of co-morbid depressive episodes and the characteristics that predispose type 2 diabetics in Bangladesh to have these episodes. The researchers Islam et al. also investigated the gender gap in the occurrence of depressive episodes among diabetics. The research design was known as cross-sectional. Five hundred and fifteen diabetics were contacted in a general health centre in Dhaka from September, 2013 to July, 2014. Islam et al. measured respondents' depression with PHQ-9. Results from the inferential analysis (i.e., unpaired samples t-test) showed a substantial sex variation among the diabetic patients. Females experienced significantly higher depressive symptoms compared with their male peers.

With a similar intention, Palizgir et al. (2013) examined sadness and nervousness pervasiveness of diabetics and the difference in their levels of depression based on sex. One hundred and eighty-four diabetics were employed in the research work. BAI and BDI questionnaires were employed in soliciting data from the respondents. Independent samples t-test and binary logistic were utilised as statistical procedures. The investigation revealed a significant sex difference in their depression levels. Females experienced significantly higher levels of depression as against their male peers.

Rehman and Kazmi (2015) also occurrence and also compared sadness, nervousness and stress in type 2 diabetics. Rehman and Kazmi adopted cross-sectional design for their investigation. In their research, 240 diabetics with complications and 120 diabetics without complications were recruited from Allied Hospital in Faisalabad. The DASS was utilised in soliciting information form the respondents. Averages, standard deviations and unrelated samples t-test helped in analysing data. Rehman and Kazmi noticed a substantial variation in depression levels between male and female diabetic patients. The depression in female diabetics was substantially profound as against the depression in male diabetics.

Lyrakos et al. (2013) also compared the self-evaluation of diabetes mellitus patients in terms of sex with the DASS. Two hundred and seventy-two patients suffering from diabetes mellitus were used in this study. Averages and standard deviations, and t-test analysis served as statistical tools. The study found substantial differences in the anxiety level of the male and female diabetic sufferers. Diabetic women had substantially profound depression than diabetic men.

Conceptual Framework

The links between stress, nervousness, and melancholy in married folks with type 2 diabetes, as well as the buffering techniques these couples use to handle the consequences of such incapacitating psychological conditions on their lives are depicted in Figure 1.

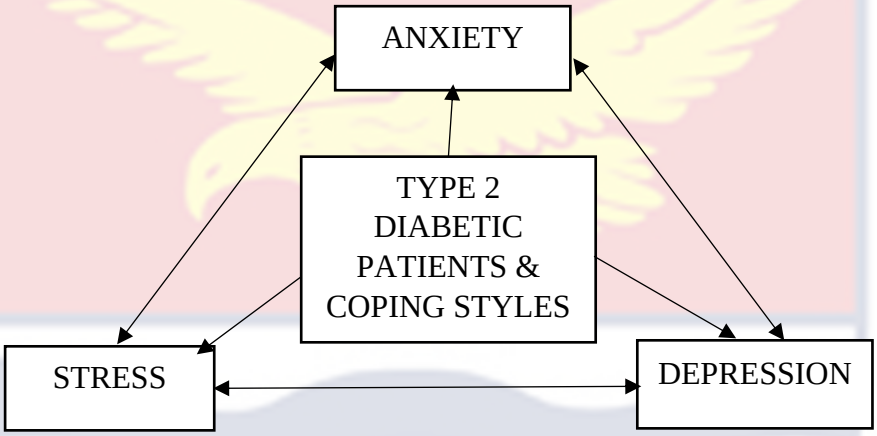

Figure 1: Conceptual Framework for the relationships among stress, anxiety, depression and coping strategies among married type 2 diabetics

The inquiry conceptualises that the stress, anxiety and depression levels of married individuals living with type 2 diabetes will be significantly related. Figure 1 indicates that there could be a relationship between stress and anxiety. Moreover, the study conceptualises that anxiety and depression will be related. Finally, it is hypothesised that stress and depression will be related. Figure 1 further stipulates that the stress, anxiety and depression levels of married individuals will jointly play significant roles in their type 2 diabetes status. According to literature, an association can be found among stress, anxiety and depression. This association could be a positive or negative one and it could be weak, moderate or strong too. In reducing the negative effects of these psychological variables, the employment of certain strategies will greatly help in coping with the condition.

CHAPTER THREE

RESEARCH METHODS

Introduction

In this section, the focus is placed on the strategies and procedures that were used by the primary investigator in the course of carrying out the research project. These techniques and strategies are labelled inside sub-sections, and this chapter devotes its attention to discussing them one at a time. The study design, demography, sampling process, sampling procedure, data collecting tool, data collection technique, pilot testing of tool, and data analysis are the sub-sections.

Research Design

The research design is an overarching strategy and execution plan for the study as a whole (Gravetter & Forzano, 2009). According to Ogah (2013), a research design is the overarching strategy that a primary investigator uses while addressing a research question or testing a hypothesis that has been established for the purpose of the research effort. During the course of this inquiry, the descriptive survey design was chosen to be used. This enabled the principal investigator in assessing the stress, anxiety, depression and coping among married type 2 diabetics in Sekondi Takoradi Metropolis. Since the researcher wanted to know from the married type 2 diabetic individuals their experience of stress, anxiety and depression coupled with how they coped with the conditions, it was deemed necessary to use the descriptive survey.

The descriptive survey methodology was used in order to characterise what was discovered to be the case in terms of circumstances or variables that were present in that specific circumstance. In this type of research, it is

concentrated on the description of some prevailing phenomena. It also has the capability of using direct observation, questionnaire and interview or standard attitude scale to collect data from the population (Gay, Mills & Airasian, 2012). The strength of this design is that, it is self-understandable to provide answers. In the descriptive approach the researcher cannot easily deduce factors that account for the cause of the phenomenon or predict what future phenomenon will be (Ogah, 2013). Despite the challenges and drawbacks of the survey inquiry design, it was determined to be the most relevant and practical approach for this investigation.

Study Area

The study area for this research was Sekondi-Takoradi Metropolis. Sekondi-Takoradi Metropolis is located at the south-eastern part of the Western Region. The Metropolis is bordered to the west by Ahanta West District and to the east by Shama District. At the south of the Metropolis is the Atlantic Ocean and at the northern part is Wassa East District. The Metropolis covers a land size of 191.7 km^2 and Sekondi-Takoradi is the regional administrative capital. Though the smallest district in terms of land size in the region, the Sekondi-Takoradi Metropolis is the most urbanised among the 22 districts in the region. The population of Sekondi-Takoradi Metropolis, according to the 2010 Population and Housing Census, was 559,548 representing 23.5% of the region's total population. Males constitute 48.9% and females represent 51.1%.

Population

Population relates to the big overall group of many instances. The whole set of people of concern to a scientist is a study population (Gravetter &

Forzano, 2009). It is also referred to as a mass or totality of all topics, items or members complying with a set of specifications. This study was conducted among all married type 2 diabetics in Sekondi Takoradi Metropolis. The target population for the study entailed all married type 2 diabetics in Sekondi Takoradi Metropolis. The accessible population for the study was made up of diagnosed married type 2 diabetics who visited the Efua Nkwanta Teaching Hospital. Essentially, individuals married for over two years and have been diagnosed of type 2 diabetes were considered for this study. Records from the hospital indicates a total of 180 of such persons. Married individuals who were both diagnosed as diabetics or a single partner who is known to be diabetic were considered in this investigation. Married folks were selected for this inquiry because it is perceived that the level of stress, anxiety and despair among them is higher than for single individual who are not married.

Sampling Procedure

A sample represents a tiny percentage of the population. A sample is a group of people chosen from a large group of people and is usually intended in a research study to represent the population (Gravetter & Forzano, 2009). An illustration of sample is a selection made from a larger population that is intended to be representative of the whole populace. A total number of 120 married type 2 diabetic individuals were selected as respondents. This figure was selected based on the assertion of Ogah (2013) that a population of 180 takes a sample of 120. This procedure of arriving at a sample is acceptable as literature purports that it is standardized.

Sampling refers to the process of choosing a portion of a populace to serve as a representative for the whole demography. The principal investigator

used the convenient sampling method for selecting the sample from the population. The researcher selected the diabetic married individuals as and when they walked into the hospital for review.

Data Collection Instrument

Questionnaires were utilised in gathering data. This is due to the fact that questionnaires tend to cover a larger area in a shorter amount of time. It is also favoured in studies that use a quantitative research design technique, which this one does. As per Cohen, Manion, and Morrison (2013), the questionnaire is extensively utilised helpful for amassing survey data because it can be undertaken even without meeting of the investigators, it provides structured, statistical data, and it can do all of these things without needing to be supervised by an expert. The questionnaire consisted of 5 sections. The questionnaire had 60 items in all (Appendix A). The following were the sections on the questionnaire.

Section "A" solicited information on the respondents' background data. This was made up of their sex, etc.

Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983)

Section "B" of the questionnaire was made up of the Perceived Stress Scale is a unidimensional scale which was adopted from Cohen et al. (1983). In this section of the questionnaire, the participants were asked to provide data regarding their emotions or ideas that occurred during the last month. Participants were prompted to describe how frequently they felt or thought in a given manner by choosing from options that were measured as 0 = "never", 1 = "almost never", 2 = "sometimes", 3 = "fairly often" and 4 = "very often". The whole range of possible points was from 0 to 40. Scoring between 0 and

13 was considered to have a low degree of stress, 14 to 26 was considered to have a moderate level of stress, and 27 to 40 was considered to have a high level of stress. In all, 10 statements were posed to respondents to elicit respondents' responses. Nordin and Nordin (2013) reported a Cronbach's alpha reliability of .84 for a Swedish sample, indicating that the instrument is highly reliable.

Beck's Anxiety Inventory (BAI) (Beck, Epstein, Brown, & Steer, 1988)

Section "C" of the questionnaire was made up of the Beck Anxiety Inventory (BAI). This was an adopted instrument from Beck et al. (1988). This unidimensional inventory measured respondents' level of anxiety using a scale of 0 = "not at all", 1 = "mildly", 2 = "moderately" and 3 = "severely". The scores ranged from 0 – 63. The scores were categorised as low, moderate, and high using 0 – 21, 22 – 35, and 36 – 63, respectively. Twenty statements were posed to seek information from respondents. Beck et al. reported a Cronbach's alpha reliability of .92, suggesting that the instrument is highly reliable.

Beck's Depression Inventory (Beck, Steer, & Brown, 1996)

Section "D" of the questionnaire comprised the Beck's Depression Inventory which was adopted from Beck et al. (1996). This unidimensional inventory was used in measuring respondents' level of depression using a scale of 0 = "not at all", 1 = "mildly", 2 = "moderately" and 3 = "severely". The scores ranged from 0 – 63. These scores were classified into four using 0 – 13, 14 – 19, 20 – 28, and 29 – 63 as "minimal", "mild", "moderate", and "severe", respectively. In all, 21 statements were posed for respondents to respond. Osman, Kopper, Barrios, Gutierrez and Bagge (2004) reported a

reliability ranging from .72 to .91 for a sample of adolescents, showing that the instrument was good enough.

Brief-COPE (Carver,1997).

Section "E" of the questionnaire was made up of the Coping items for stress, anxiety and depression (Brief Coping) by Carver (1997). The Brief-COPE is a 28-item scale which measures how folks handle tensed, anxious, or depressive circumstances. The self-report questionnaire was created to assess which coping strategies are beneficial and which are ineffective when dealing with a demanding life occurrence. The Brief-COPE items were on a 4-point scale rated as 1 = "I have not been doing this at all"; 2 = "a little bit"; 3 = "a medium amount"; and 4 = "I have been doing this a lot". The scale can determine an individual's basic coping strategy.

Additionally, its subscales were reported. The Brief Cope's average reliability has an Alpha coefficient of 0.75 (Meyer, 2001In healthcare institutions, the scale is widely used to measure how sufferers are responding to a devastating diagnosis. It is possible to use it to evaluate how someone is coping with a range of stresses, such as a diagnosis of illness, heart difficulties, disasters, aggression, natural disasters, and financial distress. The above use of the scale makes it a perfect scale to measure coping in married individuals leaving with type 2 diabetes.

Data Collection Procedure

Before collecting data, a letter of introduction was requested to be submitted to the Effia Nkwanta Regional Hospital in order to request authorization to carry out the study methodology (Appendix B). In addition, prior to the beginning of the data gathering process, approval from the

University of Cape Coast's committee on research ethics was obtained (Appendix C). The lead investigator went around the hospital and individually distributed the questionnaire to all of the married patients and staff members there. The duration of time that the researcher utilised to obtain the replies from the married person who was staying in the hospital was one month. After the study was over, the instruments were gathered up by the lead investigator with the assistance of qualified research assistants. Participants were assured that any information they provided as part of the research process would be handled in such a way that no part of the information would be disclosed. Participants were kept anonymous and the information obtained from them were not divulged. The study did not use names but pseudonyms. Prior to the study, the researcher indicated or described what the research is about to the participants and then sought for their consent (i.e., permission) as participants. By signing the consent form indicates that the participant had decided to agree to engage in the research. They were also directed that they could opt out of the inquiry at any moment they so like upon the condition that they felt that their rights are being denied or trampled upon.

Pre-test of instrument

The instrument was pilot tested among married type 2 diabetics at the Cape Coast Metropolis in the Central Region. Only 20 married type 2 diabetics were considered for the pilot testing. This is due to the fact that the married individuals selected for the pilot-testing had the same characteristics as the married individuals considered for the main study. The married individuals considered for the pilot-testing of instrument were not part of the main study. Table 1 shows internal consistency results performed on the items.

Table 1-*Internal Consistency*

Scale/Subscale	No. of items	Cronbach's Alpha	
		Pilot	Final
Stress	10	.93	.63
Anxiety	21	.82	.96
Depression	21	.89	.97
Brief Cope			
Problem-focused	8	.63	.69
Emotion-focused	12	.75	.80
Avoidant	8	.79	.91

As per Table 1, the internal consistencies of the scales were regarded trustworthy both during the pilot study and when the final data were gathered.

Data Processing and Analysis

Using the SPSS programme, the replies to the questionnaires were edited, cleaned, and coded in the beginning stages. The editing was done with the intention of ensuring that all questions had been responded to and that responders had followed the instructions to the letter.

For Research Questions 1, 2, and 3, the data were analysed using frequencies and percentages, but for Research Question 4, the data were analysed using means and standard deviations. Using Pearson's Product Moment Correlation, we tested and analysed hypotheses one through three. The link between the variables might then be more accurately determined as a result of this. The independent samples t-test was used in order to examine Hypotheses 4 through 6. Because of this, we were able to better understand the disparities that exist between men and females with regard to levels of stress, anxiety, and depression. In order to qualify for this study, the assumptions that were made about the data were also evaluated.

CHAPTER FOUR

RESULTS AND DISCUSSION

The goal of the investigation was to determine the level of psychological distress and ways in which married people living with type 2 diabetes in the Sekondi-Takoradi Metropolis cope with their condition. In this chapter, the findings of the analysis and interpretations of those results are presented. The section was broken up into two distinct sections. In the first section, the findings of the research are discussed, while in the second section, the discussion is presented.

The background attributes of respondents include sex and age category. Results on the demographic information are outlined in Table 2.

Table 2- *Demographic Characteristics of Respondents (N= 120)*

	Frequency	Percentage (%)
Sex		
Male	39	32.5
Female	81	67.5
Age		
37 – 46 years	17	14.2
47 – 56 years	42	35.0
57 – 66 years	35	29.2
67 – 76 years	18	15.0
77 – 87 years	8	6.7

Source: Field survey (2022)

From Table 2, females (n = 81, 67.5%) dominated the study with only few being males (n = 39, 32.5%). Moreover, a greater proportion (n = 42, 35.0%) of the participants were within the 47 – 56 years age range, followed by those in the 57 – 66 years age range (n = 35, 29.2%). The least represented age range was 77 – 87 years with only eight (6.7%) of the respondents.

Research Question 1

What is the stress level among married type 2 diabetic individuals in Sekondi Takoradi Metropolis?

Research Question 1 sought to examine the stress levels among married type 2 diabetics in Sekondi Takoradi Metropolis. Ten statements were posed to ascertain respondents' level of stress they have experienced during the last month. Frequency and percentages were used in analysing data on this research question. Table 3 presents the results of the level of stress experienced by respondents.

Table 3- *Level of Stress among Respondents*

Level	Score range	Frequency	Percentage (%)
Low	0 – 13	9	7.5
Moderate	14 – 26	105	87.5
High	27 – 40	6	5.0
Total		120	100.0

Source: Field survey (2022)

Table 3 highlights that majority (n = 105, 87.5%) of the respondents experienced moderate stress levels. Only few (n = 6, 5%) of the respondents experienced high levels of stress. This result indicated that most married type 2 diabetic individuals experienced moderate levels of stress.

Research Question 2

What is the anxiety level among married type 2 diabetics in Sekondi Takoradi Metropolis?

The second research question investigated the levels of anxiety experienced by married people living with type 2 diabetes in the Sekondi

Takoradi Metropolis. It was requested of the respondents that they state the degree to which each of the 21 anxiety symptoms has troubled them over the course of the last month. Frequency and percentages were employed in analysing this research question. Table 4 outlines details of respondents' anxiety level.

Table 4- *Level of Anxiety among Respondents*

Level	Score range	Frequency	Percentage (%)
Low	0 – 21	44	36.7
Moderate	22 – 35	34	28.3
High	36 – 63	42	35.0
Total		120	100.0

Source: Field survey (2022)

Table 4 indicates that out of the 120, 44 (36.7%) of the respondents experienced low levels of anxiety. Forty-two (35.0%) of them experienced high levels of anxiety whereas 34 (28.3%) experienced moderate anxiety levels. It can further be seen that most (n = 76, 63.3%) of the survey participants reported moderate to high levels of anxiousness. This implies that a greater proportion of married type 2 diabetic individual's experienced moderate to high levels of anxiety.

Research Question 3

What is the depression level among married type 2 diabetics in Sekondi Takoradi Metropolis?

Research Question 3 examined the levels of depression among married type 2 diabetics in Sekondi Takoradi Metropolis. In the survey, participants were asked to identify the degree to which they had been affected by each of

the 21 symptoms of depression during the course of the previous month. Frequency and percentages were utilised in analysing this research question. Table 5 shows the results on the level of depression of the participants.

Table 5- *Level of Depression among Respondents*

Level	Score range	Frequency	Percentage (%)
Minimal	0 – 13	20	16.7
Mild	14 – 19	18	15.0
Moderate	20 – 28	28	23.3
Severe	29 – 63	54	45.0
Total		120	100.0

Source: Field survey (2022)

As shown in Table 5, the respondents predominantly experienced severe depression (n = 54, 45%), followed by moderate (n = 28, 23.3%) and minimal (n = 20, 16.7%) levels of depression. Only few (n = 18, 15.0%) of the respondents experienced mild depression level. It can be further seen that most (n = 66, 55%) of the respondents experienced minimal to moderate levels of depression. This result indicates that most married type 2 diabetics in Sekondi Takoradi Metropolis experienced minimal to moderate levels of depression.

Research Question 4

What are the coping strategies for stress, anxiety and depression among married type 2 diabetic individuals in Sekondi Takoradi Metropolis?

Research Question 4 examined the coping strategies that were adopted for stress, depression and anxiety symptoms by married type 2 diabetics in Sekondi Takoradi Metropolis. Twenty-eight statements were used in soliciting for respondents' coping strategies. Averages and standard deviations were

relied upon in analysing data on this research question. Table 6 shows the result of the coping strategies among respondents.

Table 6- *Coping Strategies among Respondents*

Coping	Mean	*SD*
Problem-focused	3.07	0.52
Emotion-focused	2.90	0.53
Avoidant	2.31	0.91

Source: Field survey (2022)

Table 6 indicates that the most preferred coping strategy among the respondents was the "problem-focused" (*M* = 3.07; *SD* = 0.52), followed by "emotion-focused" (*M* = 2.90; *SD* = 0.53) and then "avoidant" (*M* = 2.31; *SD* = 0.91). This result implies that the married individuals living with type 2 diabetes in Sekondi Takoradi Metropolis coped with their psychological problems by taking direct actions against the problem.

Preliminary analyses to inferential tests

Prior to conducting inferential tests, the normality assumption was tested. The mean, the median, the 5% trimmed mean, the z-skewness plot, and the conventional Q-Q plot were used to accomplish this. The results of the normalcy test are shown in Table 7. From Table 7, the mean, 5% trimmed mean and median of stress, problem-focused, emotion-focused and avoidant were approximately the same with the exception of anxiety and depression which slightly diverged from the normal trend. Moreover, the $Z_{skewness}$ coefficients of all the variables with the exception of problem-focused fell in the range of -3.29 and +3.29 (Tabachnick & Fidell, 2007). This suggest that the variables were distributed normally.

Further, in order to verify that the data are normally distributed, more work was done to construct normal Q-Q plots for each of the variables (see Appendix D). The typical Q-Q plots for all of the variables, with the exception of the problem-focused variable, revealed that the distribution of all of the scores was quite near to a straight line. This provides significant support for the hypothesis that all of the variables, with the exception of the problem-focused variable, had normal distributions. However, given that the values for the problem-focused variable's mean, median, and 5% trimmed mean were all quite close to one another, it was also determined to be normally distributed. This was mentioned previously in the preceding paragraph. After the assumption that all of the variables are normally distributed was shown to be true, parametric tests were used in testing the hypotheses.

Table 7- *Test for Normality*

Parameters	Stress	Anxiety	Depression	Problem-focused	Emotion-focused	Avoidant
Mean	19.86	29.68	31.82	3.07	2.90	2.31
Standard deviation	4.72	15.35	17.47	.515	.53	.91
5% Trimmed mean	19.78	29.47	31.82	3.13	2.92	2.29
Median	20.00	25.00	25.50	3.25	2.86	2.19
Skewness	.193	.335	.116	-1.545	-.325	.239
Std. Error	.221	.221	.221	.221	.221	.221
$Z_{skewness}$	0.87	1.52	0.52	-6.99	-1.47	1.08

Source: Field survey (2021)

Research Question 5

What is the relationship between the use of the various coping strategies and anxiety, stress and depression?

To examine which of the coping strategies helped or otherwise in coping with the psychological condition of the respondents, correlation was conducted. Table 8 displays the outcome of the correlation between the coping styles (i.e., problem-focused, emotion-focused and avoidant) and their psychological states (stress, anxiety and depression).

Table 8- *Relationship between Coping Strategies and Psychological States*

	Variable	1	2	3	4	5	6
1	Problem-focused	1					
2	Emotion-focused	.732**	1				
3	Avoidant	.476**	.790**	1			
4	Stress	.335*	.436**	.375**	1		
5	Anxiety	.545**	.794**	.832**	.444**	1	
6	Depression	.562**	.833**	.876**	.508**	.875**	1

Source: Field survey (2022); **Significant at $p < .01$

Table 8 indicates that a weak positive relationship existed between problem-focused and stress, $r = .34$, $p < .01$. This implies that as stress increases the use of problem-focused strategy of coping also increases. Table 8 also shows that a weak positive relationship existed between emotion-focused and stress, $r = .45$, $p < .01$. This implies that high level of stress is associated with emotion-focused strategy. Also, there was a weak positive linkage between avoidant and stress, $r = .38$, $p < .01$. This implies that as a person experiences more stress, he/she is more likely to use avoidant strategy to

manage the stressful situation to a greater extent although this association was not a strong association.

Table 8 also shows that a weak relationship existed between problem-focused and anxiety, $r = .55$, $p < .01$. This implies that as a person experiences high levels of anxiety, he/she is likely to use more problem-focused strategy the more to cope with those anxiety situations, even though the linkage was not strong. Also, a strong linkage existed between emotion-focused and anxiety, $r = .79$, $p < .01$. This implies that as a person is more anxious, the more he/she is likely to use emotions to a greater extent to manage his/her situation and this association was strong. It was also found that a strong relationship existed between avoidant and anxiety, $r = .83$, $p < .01$. This implies that the more a person is anxious, the more he/she could adopt avoidant strategy to cope with the situation and this nexus was strong.

Table 8 further shows that a moderate relationship existed among problem-focused and depression, $r = .56$, $p < .01$. This implies that the more a person is depressed, the more he/she is likely to use a problem-focused strategy to a greater extent to cope with the situation. It was also found that a strong relationship existed between emotion-focused and depression, $r = .83$, $p < .01$. This implies that the more a person is depressed, the more likely he/she could adopt emotion-focused strategy to a greater extent to cope with the situation and this linkage was strong. The study also found that there was a strong relationship between avoidant and depression, $r = .88$, $p < .01$. This implies that as a person experiences more depressive symptoms, he/she could adopt the avoidant coping strategy to a greater extent to cope with the situation, and this association was strong.

Even though this investigation has established positive relationships between psychological states (i.e., anxiety, stress and depression) and coping styles (i.e., problem-focused, avoidant and emotion-focused) these associations are weak. Anxiety was shown to have a substantial positive correlation with both emotion-focused coping methods as well as avoidant coping strategies, according to the outcomes of this inquiry. Additionally, the outcome of this analysis demonstrated that substantial positive connections do exist between depressive symptoms and coping mechanisms that are emotion-focused or avoidant.

Hypothesis 1

H_o: There is no statistically significant relationship between stress and anxiety levels among married type 2 diabetics in Sekondi Takoradi Metropolis.

H_1: There is a statistically significant relationship between stress and anxiety levels among married type 2 diabetics in Sekondi Takoradi Metropolis.

The first goal of this investigation was to test the hypothesis that there is a correlation between the levels of stress and anxiety experienced by married people with type 2 diabetes living in the Sekondi Takoradi Metropolis. An analysis using Pearson's Product Moment Correlation was carried out in order to fulfil this objective. An interval scale was used for the measurement of each variable. Table 8 demonstrates that there was a marginally significant positive association between stress and anxiety, with a coefficient of.44 and a significance level of.01. This suggests that a person's degree of anxiety will grow in proportion to the amount of stress that they are exposed to, and vice versa: if a person is exposed to a low amount of stress, their level of anxiety will be lower. As a consequence of this, the "no

statistically significant link between stress and anxiety levels among married adults living with type 2 diabetes in the Sekondi Takoradi Metropolis" null hypothesis was shown to be false.

Hypothesis 2

H_o: There is no statistically significant relationship between stress and depression levels among married type 2 diabetics in Sekondi Takoradi Metropolis.

H_1: There is a statistically significant relationship between stress and depression levels among married type 2 diabetics in Sekondi Takoradi Metropolis.

The purpose of the second hypothesis was to investigate the connection between stress and depression in married people living with type 2 diabetes in the Sekondi Takoradi Metropolitan Area. An analysis using Pearson's Product Moment Correlation was carried out as a result of this consideration. According to Table 8, there was a correlation of r =.51 between stress and depression, and this value was statistically significant (p .01). This suggests that a person is more likely to develop depression as their stress levels increase; nevertheless, this association was neither low nor high but rather at a level that was considered to be reasonable. As a result, the hypothesis known as the "null hypothesis," which claimed that "There is no statistically significant association between stress and depression levels among married adults living with type 2 diabetes in the Sekondi Takoradi Metropolis," was shown to be false.

Hypothesis 3

H_o: There is no statistically significant relationship between anxiety and depression levels among married type 2 diabetic individuals in Sekondi Takoradi Metropolis.

H_1: There is a statistically significant relationship between anxiety and depression levels among married type 2 diabetic individuals in Sekondi Takoradi Metropolis.

In the third hypothesis, we investigated the connection between anxiety and depression in married people living with type 2 diabetes in the Sekondi Takoradi Metropolitan Area. An analysis using Pearson's Product Moment Correlation was carried out as a result of this consideration.

Table 8 demonstrates that there is a significant positive correlation between anxiety and depression, with a value of r equal to.88 and a significance level of p .01. This suggests that the individual is more likely to become depressed the more concerned they are, and the strength of this association was high in terms of the size it had. Therefore, the conclusion that the "There is no statistically significant link between anxiety and depression levels among married adults living with type 2 diabetes in the Sekondi Takoradi Metropolis" was incorrect led to the rejection of the null hypothesis.

Hypothesis 4

H_o: There is no statistically significant differences in stress level between married men and women type 2 diabetics in Sekondi Takoradi Metropolis.

H_1: There is statistically significant differences in stress level between married men and women type 2 diabetics in Sekondi Takoradi Metropolis.

The objective of the fourth hypothesis was to investigate whether or not there are significant variations in the levels of stress experienced by male and female type 2 diabetics living in the Sekondi Takoradi Metropolis. In order to verify the validity of this hypothesis, a t-test based on independent samples was carried out. The gender of the participants was an independent variable with two possible levels (i.e., male and female). The stress level, on the other hand, served as the dependent variable and was evaluated using an interval scale. Before beginning the study, we made sure that the stress variable followed the expected normal distribution (see Appendix D). Following that, the Levene's Test for Equality of Variance assumption was investigated further. Because the Sig. value was more than.05 (that is,.225), it may be deduced that the premise of equal variance was successfully validated. As a consequence, the findings that appeared in the first row of the table that included the independent samples were reported. Table 9 summarises the findings about the gender gap in respondents' reported levels of stress.

Table 9- *Sex Difference in Stress Levels*

Sex	N	Mean	*SD*	df	*t*	Sig.
Male	39	19.28	5.35	118	-.928	.356
Female	81	20.14	4.39			

Source: Field survey (2021); N = 120

Table 9 indicates that there was no statistically significant difference in stress levels between male (*M* = 19.28; *SD* = 5.35) and female (*M* = 20.14; *SD* = 4.39; *t*(118) = -.93, *p* = .36, married type 2 diabetic individuals. This implies that men and women type 2 diabetics in Sekondi Takoradi Metropolis experienced similar levels of stress. Hence, the null hypothesis which stated

that “There are no statistically significant differences in stress levels between men and women living with type 2 diabetes in the Sekondi Takoradi Metropolis” was not rejected.

Hypothesis 5

H_o: There is no statistically significant differences in anxiety level between married men and women type 2 diabetics in Sekondi Takoradi Metropolis.

H_1: There is statistically significant differences in anxiety level between married men and women type 2 diabetics in Sekondi Takoradi Metropolis.

The investigation described in Hypothesis 5 aimed to determine whether or not there was a significant gap in the levels of anxiety experienced by male and female type 2 diabetics living in the Sekondi Takoradi Metropolis. In order to verify the validity of this hypothesis, a t-test based on independent samples was carried out. The gender of the participants was an independent variable with two possible levels (i.e., male and female). On the other hand, anxiety, which was evaluated on an interval scale, was the dependent variable in this study. Before beginning the study, we made sure that the anxiety variable followed its normal distribution (see Appendix D). Following that, the Levene's Test for Equality of Variance assumption was investigated further. Because the Sig. value was more than.05 (that is,.607), it may be deduced that the premise of equal variance was successfully validated. As a consequence, the findings that appeared in the first row of the table that included the independent samples were reported. The findings on the gender gap in levels of anxiety reported by respondents are shown in Table 10.

Table 10- *Sex Difference in Anxiety Levels*

Sex	N	Mean	*SD*	df	*t*	Sig.
Male	39	27.59	15.38	118	-1.03	.304
Female	81	30.68	15.32			

Source: Field survey (2021); N = 120

Table 10 indicated that there was no statistically significant difference in anxiety levels between male (M = 27.59; SD = 15.38) and female (M = 30.68; SD = 15.32; $t(118)$ = -1.03, p = .304, married type 2 diabetic individuals. This implies that men and women living with type 2 diabetes in Sekondi Takoradi Metropolis experienced similar levels of anxiety. In this light, the null hypothesis that stated that "There are no statistically significant differences in anxiety levels between men and women living with type 2 diabetes in the Sekondi Takoradi Metropolis" was not rejected.

Hypothesis 6

H_o: There is no statistically significant differences in depression level between married men and women type 2 diabetics in Sekondi Takoradi Metropolis.

H_1: There is statistically significant differences in depression level between married men and women type 2 diabetics in Sekondi Takoradi Metropolis.

The purpose of this experiment was to determine whether or not there was a significant difference in the levels of depression experienced by male and female type 2 diabetics living in the Sekondi Takoradi Metropolis. In order to verify the validity of this hypothesis, a t-test based on independent samples was carried out. The gender of the participants was an independent variable with two possible levels (i.e., male and female). Depression, on the other hand, served as the dependent variable, and it was evaluated using an

interval scale. Before beginning the study, we made sure that the anxiety variable followed its normal distribution (see Appendix D). Following that, the Levene's Test for Equality of Variance assumption was investigated further. Because the Sig. value was more than.05 (that is,.869), it may be deduced that the premise of equal variance was successfully validated. As a consequence, the findings that appeared in the first row of the table that included the independent samples were reported. Table 11 summarises the findings about the gender gap in the prevalence of depression among the respondents.

Table 11- *Sex Difference in Depression Levels*

Sex	N	Mean	*SD*	df	*t*	Sig.
Male	39	30.64	17.83	118	-.510	.611
Female	81	32.38	17.39			

Source: Field survey (2021); N = 120

Table 11 shows that there was no statistically significant difference in depression levels between male (M = 30.64; SD = 17.83) and female (M = 32.38; SD = 17.39; $t(118)$ = -.510, p = .611, married type 2 diabetic individuals. This implies that men and women living with type 2 diabetes in Sekondi Takoradi Metropolis experienced similar levels of depression. Therefore, the null hypothesis that stated that "There are no statistically significant differences in depression levels between men and women living with type 2 diabetes in the Sekondi Takoradi" was not rejected.

Discussion of Findings

The first part of this chapter has already presented the results and their respective interpretations. This part presents a discussion of the findings in

relation with other previous studies as well as the inferences made from the present study.

Stress Levels of Married Type 2 diabetic Individuals

Per the findings of the survey, the vast majority of respondents reported experiencing moderate levels of stress. Only a small percentage of those who responded reported feeling stressed to extreme levels. Based on this finding, it seems that the vast majority of married people afflicted with type 2 diabetes reported moderate levels of stress. The results of this research are comparable but not exactly the same as those of previous investigations (Ahangari et al., 2016; Kaur et al., 2013; Bhandary & Rao, 2013; Chew et al., 2016; Sendhilkumar et al., 2017; Steptoe et al., 2014; Tan et al., 2015). For example, the research conducted by Steptoe and colleagues found that diabetes patients reported higher levels of stress in their lives.

Similarly, Kaur et al. (2013) in the urbanised city of Malaysia's Klang Valley, determined the pervasiveness and determinants of depression, anxiety, and stress symptoms in type 2 diabetes victims accessing government primary treatment centres. Kaur et al. detected that the pervasiveness of stress symptomatology of type 2 diabetics was high. The study concluded that, testing individuals who have a higher propensity of being type 2 diabetics of stress symptoms in the treatment centres should be done frequently. Bhandary and Rao (2013) also determined the contributions of “perceived stress” and “family functioning” on type 2 diabetics’ behaviours in Mangalore city in Karnataka state. The study found that stress was high among diabetics as against their non-diabetic peers.

With a similar objective, Chew et al. (2016) found that the pervasiveness of distress associated with diabetes of the studied individuals was high. Tan et al. (2015) also discovered that the pervasiveness of stress was profound (19.4%) among diabetics. In a related study, Ahangari et al. (2016) observed a profound (78.1%) stress occurrence among the study participants. Sendhilkumar et al. (2017) also found that the prevalence of profound or extremely profound stress stood at 35% among T2DM victims.

A possible reason that could have accounted for this finding could be as a result of the relatively smaller sample size. It could also be that the differences in methodological approaches and instruments used in previous studies in the available literature accounted for the differences in the findings. Moreover, it may be that respondents in this study underreported their experiences of stress which might have influenced the findings.

This finding was not expected as available studies have already indicated that type 2 diabetics mostly experience high levels of stress. Particularly, married individuals who are battling with type 2 diabetes combine work demands, marital responsibilities and the burden of managing their psychological problems as a result of their health condition. Hence, it was expected that their levels of stress would be high, however it did not turn out to be so.

Anxiety Levels of Married Type 2 Diabetic Individuals

The investigation unearthed that a greater proportion of married type 2 diabetic individuals experienced moderate to high levels of anxiety. The finding of this study corroborates with what is already known in literature (Kaur et al., 2013; Khuwaja et al., 2010; Mikaliūkštienė et al., 2014; Rajput et

al., 2016; Tan et al., 2015). For instance, Kaur et al. detected a high pervasiveness of anxiety symptoms among type 2 diabetics. In a related work, Rajput et al. also detected that a substantial number of diabetics had profound magnitudes of anxiety. Another study by Mikaliūkštienė et al. showed that anxiety was very common among type 2 diabetics.

An acceptable justification for this outcome could be that married individuals who have type 2 diabetes in the Sekondi Takoradi Metropolis are not been provided with effective and efficient management interventions that would help them in managing their anxiety levels. Another reason that could have accounted for this finding may be the use of similar methodological approaches which include the use of standardised instruments and statistical computations. It is possible that employing other research designs could have yielded a different outcome.

The finding of this inquiry is important to both married type 2 diabetic patients as well as clinical practitioners that patients suffering from the condition experience high anxiety symptoms which is detrimental to their health. Essentially, this may not happen provided effective and efficient interventions to deal with anxiety symptoms are put in place. Aside from facility-based interventions, the individuals themselves can make a conscious effort to minimise the negative effects of the conditions by adopting strategies that best work for them.

Depression Levels of Married Type 2 Diabetic Individuals

The inquiry revealed that the respondents predominantly experienced severe depression, followed by moderate and minimal levels of depression. Only few of the respondents experienced mild depression level. This finding

confirms what is already known in literature (Chew et al., 2016; Kaur et al., 2013; Steptoe et al., 2014; Rajput et al., 2016). For instance, Steptoe et al.'s study also revealed that diabetic patients testified having profound depression episodes and hostility. Similarly, Kaur et al. reported a high pervasiveness of depressive symptoms among the diabetics in Malaysia.

This observation was not surprising as some studies from diverse geographical areas such as Asia (Chew et al., 2016), India (Rajput et al., 2016), Mexico (Tovilla-Zarate et al., 2012), Bangladesh (Islam et al., 2015) and Spain (Cols-Sagarra et al., 2016) have found that type 2 diabetics usually experience high depressive symptoms. This could be as a result of the fact that people who are battling with type 2 diabetes constantly think about the condition and if this is not properly managed with effective psychological interventions, may lead to depression. Moreover, since type 2 diabetes can contribute or lead to death, patients who suffer from this condition may have the intuition that they could die at any point as a result of the condition, increasing their depression levels.

Another possible reason for the observed similarities between the current study's observation and what have been reported in available literature could be linked to the use of similar research designs as well as the condition of the disease. For instance, this study and some of the documented studies (Al-Mohaimeed, 2017; Tovilla-Zarate et al., 2012) were descriptive in nature and made use of self-report instruments (i.e., questionnaires) which might have influenced the respondents to respond the instruments in a certain desirable pattern.

Coping Strategies of Married Type 2 Diabetic Individuals

The investigation found that the most preferred coping strategy among the respondents was the problem-focused, followed by emotion-focused and then avoidant. This result implies that the married individuals living with type 2 diabetes in Sekondi Takoradi Metropolis coped with their psychological problems by taking direct actions against the problem. Corroborating the finding of this study, other previous works (DeCoster & Cummings, 2005; Duangdao & Roesch, 2008; McCoy & Theeke, 2019; Tuncay et al., 2008) also confirmed the predominant use of problem-focused strategy among type 2 diabetics.

For instance, Duangdao and Roesch's (2008) study revealed that a greater proportion of the diabetics employed "problem-focused" strategy. Tuncay et al. (2008) also found among Turkish type 1 and 2 diabetics that they had higher scores regarding the employment of "problem-focused" techniques in coping with their situation. The similarities between the findings of the present study and that of Duangdao and Roesch, and Tuncay et al. could be linked to the use of the adult population.

In opposition to the outcome of the current inquiry, Moasheri et al. (2017) observed in Tehran that married type 2 diabetics mostly preferred the avoidant strategy of coping. A possible reason for the noted variation between the present study and that of Moasheri et al. could be attributed to the differences in response patterns of people in the midst of stressful occurrences across geographical locations. For instance, the level of compatibility, presence of supportive coping resources along with personal experiences of the stressful event may not be the same for people living in Tehran and Ghana.

Another possible reason that might have accounted for the variations in the findings is the perception of the researcher that personal challenges including recurrent infections, issues of dieting and the probability of being hospitalised made the Tehranian diabetics avoid the problems rather than confronting the problem in a constructive fashion.

Relationship between the Use of the Various Coping Strategies and Anxiety, Stress and Depression

This investigation has also established a positive association between the coping strategies (i.e., problem-focused, emotion-focused and avoidant) and psychological states (i.e., stress, depression and anxiety). This finding suggests that all the coping strategies employed are associated with high psychological states. In other words, all the coping strategies were related to high level of stress, anxiety, and depression. This counterintuitive finding was surprising, as one would expect that high level of coping should be linked with reduced stress, anxiety, and depression. This finding was surprising, since some studies (DeCoster & Cummings, 2005; Duangdao & Roesch, 2008) have identified and documented the effectiveness of some of the coping strategies in dealing with stressful events. For example, Duangdao and Roesch confirmed that better adjustment to stressful events was related with both "avoidant" and "problem-focused" strategies of coping. Similarly, DeCoster and Cummings established that emotion-focused coping had a linkage with undesirable self-assessed diabetic management whereas problem-focused had a nexus with constructive diabetic management.

An acceptable reason for the variation in the finding of the current study and literature (DeCoster & Cummings, 2005; Duangdao & Roesch,

2008) could be that the coping strategies employed in this study have outlived their effectiveness on married type 2 diabetics. It is also possible that difficulties in interpreting the items by the respondents might have accounted for this finding.

This finding calls for the urgency of investigations of other possible strategies by clinical psychologists that could help married type 2 diabetics curb or alleviate the negative repercussions of stress, since it appears the already known strategies (i.e., problem-focused, emotion-focused and avoidant) have outlived their efficacy.

Relationship between Stress and Anxiety

A positive but weak linkage or association between stress and anxiety was observed in this study. The general implication is that as the person experiences more stress his/her level of anxiety also increases and if he/she has low stress, he/she has a reduced level of anxiety. The finding of this study corroborates that of some few available studies (Zhang et al., 2009; Zhang et al., 2008).

For example, Zhang et al. (2009) detected substantial relationships among the four dimensions of psychological stress (i.e., "worrying about being harmed by the disease", "social/family crisis caused by the disease", "worrying about decline in body/physical function" and "reduced economic conditions") and anxiety. Zhang et al. (2008) also observed that anxiety symptoms had substantial positive connection with psychological stress factors (i.e., "worrying about to be harmed by the disease", "social/family crisis caused by the disease", "worrying about declining in body/physical function", and "declined economic condition caused by the disease").

This finding was expected because, practically being stressed increases one's chances of experiencing anxiety. And in the case of married type 2 diabetics, their experiences of stress could trigger the experiences of anxiety symptoms. For instance, a type 2 diabetic patient who is subjected to high stress levels may fear that the worst situation could happen to them, they may feel dizzy, may be shaky, or may even lose their lives.

Relationship between Stress and Depression

The result showed a positive but weak relationship between stress and depression. The general implication of this finding is that married type 2 diabetics experience more stress, the more they become depressed. The study's observation aligns with that of other studies (Chew et al., 2016; Zhang et al., 2009; Zhang et al., 2008). Chew et al.'s (2016) research revealed a substantial positive linkage among diabetes related distress and depression. Similarly, Lloyd et al. (2018) also found that the respondents who had moderate/profound depressive episodes had a greater likelihood of having post-traumatic stress disorder. The current study has shown that as married individuals with type 2 diabetes experience more stress, they stand a higher chance of experiencing higher levels of depression. This finding is significant for nurses and other health care specialists to appreciate the positive linkage between stress and depression levels of type 2 diabetics who are also married. This awareness could help in developing strategies or interventions that are specific to married type 2 diabetics to help manage their stress and depression.

Relationship between anxiety and depression

The result showed a positive and strong relationship between anxiety and depression. The general implication of this finding is that the more

married individuals living with type 2 diabetes are anxious, the more they become depressed. Some few studies found similar results (Trento et al., 2012; Wu et al., 2011). For instance, Trento et al. observed that depression was positively and significantly linked with anxiety among the diabetic outpatients. Wu et al. also observed that anxiety was positively correlated with depression among a Taiwanese sample.

This study has shown that as married individuals with type 2 diabetes experience more anxiety, they stand a higher chance of experiencing higher levels of depression. This finding is significant for nurses and other health care professionals particularly, clinical health psychologists to appreciate the positive linkage between anxiety and depression levels of type 2 diabetics who are also married. This could help in developing strategies or interventions that are specific to married type 2 diabetics.

Sex Difference in Stress Levels among Type 2 Diabetics

Per the outcomes of the investigation, there was no statistically meaningful difference in the levels of stress experienced by married men and women who were diagnosed with type 2 diabetes. This suggests that the levels of stress experienced by male and female type 2 diabetes in the Sekondi Takaradi Metropolis were comparable. The result of this study differs from what previous research has shown, as seen by other academics (Gillani et al., 2011; Rehman & Kazmi, 2015). For example, Rehman and Kazmi discovered a significant disparity in the levels of stress experienced by male and female diabetes patients. The stress levels of the diabetic women were much higher than those of their male counterparts. Gillani et al. (2011) found a significant disparity in the levels of stress experienced by the diabetes patients who

participated in the research. In particular, it was shown that female diabetes patients experience much higher levels of stress than do male diabetic patients.

It is possible that variances in sample size and population are to blame for discrepancies between the results of this study and those found in the previous research. For instance, the findings may have been different if the research had employed a larger number of participants in the sample. The usage of married people, whose experiences may not be the same as those of the general population, is another factor that might have an impact on the outcomes. Another factor that possibly led to this observation is that some of the respondents may believe that experiencing stress is a normal feature of diabetes, hence, reducing their propensity to report their experiences.

It is worthy to understand that, married individuals living with type 2 diabetes in Sekondi Takoradi Metropolis have recorded similar stress levels across sex which sharply contradicts literature. This serves as a set of novel piece of knowledge for nurses and clinical health psychologist. This could also help in intervention plans for both male and female diabetics who are also married.

Sex Difference in Anxiety Levels among Type 2 Diabetics

The study revealed that there was no statistically significant difference in anxiety levels between male and female married type 2 diabetics. This implies that men and women type 2 diabetics in Sekondi Takoradi Metropolis experienced similar levels of anxiety. This finding disagrees with available literature (Lyrakos et al., 2013; Mikaliūkštienė et al. 2014; Roupa et al., 2009; Palizgir et al., 2013; Rehman & Kazmi, 2015).

Notably, Roupa et al. (2009) found significant differences in anxiety levels among male and female diabetics. Specifically, the study revealed that women diabetics had three-fold higher pervasiveness of anxiety than the males. Rajput et al. (2016) also observed a significant difference in anxiety level among male and female diabetics. Essentially, female diabetics experienced significantly higher anxiety symptoms compared to the male diabetic patients.

The differences in demographics might have accounted for the variations in the current finding and that of literature. For instance, the relatively smaller sample size used in this study could have altered the finding. Also, the use of married individuals whose experiences might not be the same as that of the general population could influence the finding.

It is worthy to understand that, married individuals living with type 2 diabetes in Sekondi Takoradi Metropolis have recorded similar anxiety levels across sex which sharply contradicts literature. This serves as a set of novel pieces of knowledge for nurses and clinical health psychologist. This could also help in intervention plans for both male and female diabetics who are also married.

Sex Difference in Depression Levels among Type 2 Diabetics

This investigation showed that no statistically significant difference existed in depression levels between male and female married type 2 diabetics. This implies that men and women type 2 diabetics in Sekondi Takoradi Metropolis experienced similar levels of depression. This finding disagrees with available scholarly works (Islam et al., 2015; Niraula et al., 2013; Palizgir et al., 2013; Rajput et al., 2016; Roupa et al., 2009).

Roupa et al. (2009) for instance, found substantial variations in depression levels between male and female diabetics. Specifically, the study revealed that women presented a doubled percentage (41.4%) of depression symptoms compared with men who had just 17.8%. In another study, Rajput et al. (2016) observed a marked variation in the experiences of depression among male and female diabetics. Rajput et al. noted that compared with male diabetics, female diabetics experienced higher depressive symptoms.

The differences in demographics might have accounted for the variations in the current finding and that of literature. For instance, the relatively smaller sample size used in this study could have altered the finding. Also, the use of married individuals whose experiences might not be the same as that of the general population could influence the finding. Another factor that possibly led to this observation is that some of the respondents may believe that experiencing depression is a normal feature of diabetes, hence, reducing their propensity to report their experiences.

It is worthy to understand that, married individuals living with type 2 diabetes in Sekondi Takoradi Metropolis have recorded similar depression levels across sex which sharply contradicts literature. This serves as a set of novel piece of knowledge for nurses and clinical health psychologist. This could also help in intervention plans for both male and female diabetics who are also married.

Chapter Summary

The goal of the research was to determine the level of psychological distress and ways in which married people living with type 2 diabetes in the Sekondi-Takoradi Metropolis cope with their condition. According to the

findings of the research, the majority of married people with type 2 diabetes report severe levels of sadness, moderate to high levels of anxiety, and moderate to high levels of stress. It was also discovered that the problem-focused approach was the most chosen method of coping among the respondents, followed by the emotion-focused method, and finally the avoidant method. This study suggests that the married persons living with type 2 diabetes in the Sekondi Takoradi Metropolis found a way to deal with the psychological challenges associated with their condition by taking active steps against the problem. Additionally, there was a positive correlation between the use of the different coping methods and the psychological states that indicated the ineffectiveness of the utilisation of those coping strategies. This was shown to be the case. According to the findings of the research, there is a link—albeit a tenuous one—between stress and both anxiety and depression. The implications of these results may be summed up as follows: the more stress that persons who are married and who live with type 2 diabetes face, the more likely they are to develop symptoms of depression and anxiety. The research also uncovered a favourable and significant link between the two mental states of anxiety and depression. The overall relevance of this research is that married people living with type 2 diabetes who experience higher levels of anxiety are also more likely to have higher levels of depression.

Additionally, there was no statistically significant difference in anxiety, depression and stress levels between male married type 2 diabetic individuals. This implies that men and women type 2 diabetics in Sekondi Takoradi Metropolis experienced similar levels of anxiety, depression and stress.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The goal of the investigation was to determine the level of psychological distress and ways in which married people living with type 2 diabetes in the Sekondi-Takoradi Metropolis cope with their condition. This section contains a summary of the research, as well as its results and the suggestions that were made based on those conclusions.

Summary

Overview of the study

The inquiry's intent was to look at psychological distress and coping among married type 2 diabetic individuals in Sekondi-Takoradi Metropolis. The descriptive survey design was adopted in conducting this investigation. The accessible population for the study was made up of married persons who were diagnosed of type 2 diabetes and visited the Efua Nkwanta Teaching Hospital. With the assistance of a convenient sampling technique, an overall number of 120 married type 2 diabetic individuals were selected for the study. Questionnaires (i.e., Perceived Stress Scale, Beck Anxiety Inventory, Beck's Depression Inventory and Brief-COPE) were used in soliciting for information from the respondents. Frequencies and percentages, Pearson's Product Moment Correlation and independent samples t-test were used as analysis tools.

Key findings

The results of the research are summarised in the following paragraphs:

1. Males were 39 in total whiles females were 81. Thus, there were more female patients than males.
2. Majority of the respondents experienced moderate stress levels.
3. Majority of the respondents experienced moderate to high levels of anxiety.
4. Respondents predominantly experienced severe depression, followed by moderate, and minimal levels of depression.
5. The most preferred coping strategy among the respondents was the problem-focused, followed by emotion-focused and then avoidant.
6. There were positive associations between the use of the various coping strategies and the psychological states.
7. Stress had a positive but weak relationship with anxiety.
8. Stress had a positive but weak relationship with depression.
9. Anxiety had a positive and strong relationship with depression.
10. There was no statistically significant difference in stress, anxiety, and depression levels between male and female married type 2 diabetics.

Conclusions

It is possible to draw the following conclusion from the data of the study: patients with type 2 diabetes who were married had moderate levels of stress, moderate to high levels of anxiety and severe depression. Thus, depression was really concern and a problem for diabetic patients. Also, the married individuals living with type 2 diabetes in Sekondi Takoradi

Metropolis coped with their psychological problems by taking direct actions against the problem. Increased psychological states were related to high adoption of all three coping strategies. It can also be concluded that as married individuals living with type 2 diabetes experience more stress, the more they become depressed and anxious. Thus, stress affects depression as well as anxiety and as such stress needs to managed among diabetic patients. It can further be inferred that as married individuals living with type 2 diabetes experience more anxiety, the more they become depressed. Thus, depression affects anxiety and as such depression needs to managed among diabetic patients. Again, it can be concluded that married men and women living with type 2 diabetes in Sekondi Takoradi Metropolis experienced similar levels of stress, anxiety and depression. Thus, equal attention should be given to both married males and females who have diabetes as they suffer on a similar level.

Recommendations for Practice

In light of the results, the following are some recommendations for further research and clinical practise:

1. Psychologists at the Efua-Nkwanta Hospital are encouraged to educate married type 2 diabetics to engage in other possible ways of self-managing their stress, in order to reduce the comorbid of other psychological conditions such depression and anxiety.
2. Psychologists at the Efua-Nkwanta Hospital are entreated to adopt other psychotherapies in the management of stress, anxiety, and depression among married type 2 diabetics.
3. Interventions by health professionals such as doctors, nurses etc. that seek to eliminate or reduce anxiety/depression symptoms of married

type 2 diabetics should focus on eliminating or reducing their stress levels based on the finding that stress had a positive relationship with anxiety and depression.

4. Policies should be put in place by Ghana Psychological Council to ensure that psychologists are embedded with novel and dynamic techniques to assist diabetic patients to manage stress, depression and anxiety.

Suggestions for Further Research

1. In further research, it should be taken into consideration to investigate gender variations in the usage of coping techniques in order to cope with psychological states. (i.e., stress, depression and anxiety).
2. Future studies should be conducted using other research designs such as the qualitative design and or mixed method. This will help in understanding the lived experiences of married individuals living with type 2 diabetes.
3. Moreover, future studies should examine which of the coping strategies are effective in dealing with stress, anxiety and depression among married type 2 diabetics.

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APPENDICES

APPENDIX A

QUESTIONNAIRE

This questionnaire is part of a study exploring PSYCHOLOGICAL DISTRESS AND COPING AMONG MARRIED INDIVIDUALS LIVING WITH TYPE 2 DIABETES IN THE SEKONDI TAKORADI METROPOLIS. This exercise is mainly for academic purpose and your anonymity and confidentiality is strictly assured. Thank you for your assistance.

SECTION A: DEMOGRAPHIC DATA

Please tick (√) the correct answer to the following questions as they apply to you.

1. Gender: Male [ ] Female [ ]

2. Age.

SECTION B: FEELING OF STRESS

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling *how often* you felt or thought a certain way.

0 = Never 1 = Almost Never 2 = Sometimes 3 = Fairly Often 4 = Very Often

STATEMENT	0	1	2	3	4
1. In the last month, how often have you been upset because of something that happened unexpectedly?					
2. In the last month, how often have you felt that you were unable to control the important things in your life?					
3. In the last month, how often have you felt nervous and "stressed"?					
4. In the last month, how often have you felt confident about your ability to handle your personal problems?					
5. In the last month, how often have you felt that things were going your way?					
6. In the last month, how often have you found that you could not cope with all the things that you had to do?					
7. In the last month, how often have you been able to control irritations in your life?					
8. In the last month, how often have you felt that you were on top of things?					

9. In the last month, how often have you been angered because of things that were outside of your control?					
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?					

SECTION C: FEELING OF ANXIETY

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom.

0 = Not at all 1 = Mildly 2 = Moderately 3 = Severely

statement	0	1	2	3
1. Numbness or tingling				
2. Feeling hot				
3. Wobbliness in legs				
4. Unable to relax				
5. Fear of worst happening				
6. Dizzy or lightheaded				
7. Heart pounding / racing				
8. Unsteady				
9. Terrified or afraid				
10. Nervous				
11. Feeling of choking				
12. Hands trembling				
13. Shaky / unsteady				
14. Fear of losing control				
15. Difficulty in breathing				
16. Fear of dying				
17. Scared				
18. Indigestion				
19. Faint / lightheaded				
20. Face flushed				
21. Hot / cold sweats				

SECTION D: FEELING OF DEPRESSION

Below is a list of common symptoms of depression. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom.

0 = Not at all 1 = Mildly 2 = Moderately 3 = Severely

STATEMENT	0	1	2	3
1. I feel sad				
2. I feel discouraged about the future.				
3. I feel I have failed more than the average person				
4. I don't enjoy things the way I used to				
5. I feel guilty a good part of the time.				
6. I feel I may be punished.				
7. I am disappointed in myself.				
8. I am critical of myself for my weaknesses or mistakes.				
9. I have thoughts of killing myself, but I would not carry them out.				
10. My appetite is not as good as it used to be.				
11. I am slightly more irritated now than usual.				
12. I am less interested in other people than I used to be.				
13. I put off making decisions more than I used to.				
14. I am worried that I am looking old or unattractive.				
15. It takes an extra effort to get started at doing something.				
16. I don't sleep as well as I used to.				
17. I get tired more easily than I used to.				
18. I have lost more than five pounds.				
19. I am worried about physical problems like aches, pains, upset stomach, or constipation.				
20. I am less interested in sex than I used to be.				
21. I cry more now than I used to.				

SECTION E: Brief-COPE (Brief-COPE)

The following questions ask how you have sought to cope with a hardship in your life. Read the statements and indicate how much you have been using each coping style.

1- I haven't been doing this at all 2- A little bit 3-A medium amount 4- I've been doing this a lot

STATEMENTS	1	2	3	4
1. I have been turning to work or other activities to take my mind off things.				
2. I have been concentrating my efforts on doing something about the situation I'm in.				
3. I 've been saying to myself "this isn't real".				
4. I have been using alcohol or other drugs to make myself feel better				
5. I have been getting emotional support from others.				
6. I have been giving up trying to deal with it.				
7. I have been taking action to try to make the situation better.				
8. I have been refusing to believe that It has happened.				
9. I have been saying things to let my unpleasant feelings escape.				
10. I have been getting help and advice from other people.				
11. I have been using alcohol or other drugs to help me get through it.				
12. I have been trying to see it in a different light, to make it seem more positive.				
13. I have been criticizing myself.				
14. I have been trying to come up with a strategy about what to do.				
15. I have been getting comfort and understanding from someone.				
16. I have been giving up the attempt to cope.				
17. I have been looking for something good in what is happening.				
18. I have been looking for something good in what is happening.				

19. I have been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.				
20. I have been accepting the reality of the fact that it has happened.				
21. I have been expressing my negative feelings.				
22. I have been trying to find comfort in my religion or spiritual beliefs.				
23. I have been trying to get advice or help from other people about what				
24. I have been learning to live with it.				
25. I have been thinking hard about what steps to take.				
26. I have been blaming myself for things that happened				
27. I have been praying or meditating				
28. I have been making fun of the situation.				

APPENDIX B

INTRODUCTORY LETTER

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

Telephone: 0332091697
Email:dep@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

10th March, 2021

Our Ref:

Your Ref:

Dear Sir/Madam,

THESIS WORK
LETTER OF INTRODUCTION
MR. GEORGE ARCHIE YAW AKUAMOAH BOATENG

We introduce to you Mr. George Archie Yaw Akuamoah Boateng, a student with registration number EF/CHP/19/0001 from the University of Cape Coast, Department of Education and Psychology. He is pursuing a Master of Philosophy degree in Clinical Health Psychology and he is currently at the thesis stage.

Mr. Boateng is researching on the topic: **"PSYCHOLOGICAL DISTRESS AND COPING AMONG MARRIED INDIVIDUALS LIVING WITH TYPE 2 DIABETES IN THE SECOND-TAKORADI METROPOLIS."**

He has opted to collect or gather data at your institution/establishment for his Thesis work. We would be most grateful if you could provide him 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,

Anna A. Ocran
Principal Administrative Assistant
For: **HEAD**

Clinical Psych. / HOA
Kindly grant the applicant access to our facility and clients for this study.

24/3/21

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

Telephone: 0332091697
Email:dep@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:

Your Ref:

8th February, 2021

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.....
.....
.....
.....

Dear Sir,

LETTER OF INTRODUCTION: MR. GEORGE ARCHIE YAW AKUAMOAH-BOATENG

Mr. George Archie Yaw Akuamoah is a second-year student of our department with registration number EF/CHP/19/0001. He needs data for pilot testing on the topic: "*PSYCHOLOGICAL DISTRESS AND COPING AMONG MARRIED INDIVIDUALS LIVING WITH TYPE TWO DIABETES IN THE SEKONDI-TAKORADI METROPOLIS*".

We would be grateful if you could give him the necessary assistance he requires. The department supports his application.

Thank you.

Yours faithfully,

Dr. Mark O. Amponsah
HEAD

APPENDIX C

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/05/21-21

Date: 10th March, 2021

Your Ref: .....

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

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

The bearer, George A-Boateng, Reg. No. ~~EF~~ EdPsy/19/20 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:

Psychological distress and coping among married individuals living with Type 2 Diabetes in the Sekondi Takoradi Metropolis

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)

APPENDIX D

NORMALITY TESTS