UNIVERSITY FOR DEVELOPMENT STUDIES

DEPRESSION AMONG WOMEN DURING THE MENOPAUSE TRANSITION, A CASE STUDY IN THE NAVRONGO MUNICIPALITY IN THE UPPER EAST REGION OF GHANA

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A THESIS SUBMITTED TO THE DEPARTMENT OF PUBLIC HEALTH, SCHOOL OF ALLIED HEALTH SCIENCES, UNIVERSITY FOR DEVELOPMENT STUDIES IN THE PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF PHILOSOPHY IN COMMUNITY HEALTH AND DEVELOPMENT

2018

DECLARATION

I, Eric Nubanoe Padmore, hereby declare that this is the result of my own work and that no previous submission for a Master of Philosophy has been made in this University or elsewhere. Literature and similar works carried out by other authors, which served as sources of information and knowledge seeking have been duly acknowledged by referencing all the authors accordingly.

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ABSTRACT

The purpose of this study was to assess the prevalence of depression among women during the menopause transition in the Kasena–Nankana East Municipality. The study design was cross-sectional descriptive one, 390 women were randomly sampled from 26 communities, and 26 primary care providers. The target population were all women living within the Municipality and were 40 years and above. The data collection instruments; for the quantitative data-structured questionnaire were used for the women and for the qualitative data in-depth interviews were used for the health officials as the key informants, the quantitative data was analyzed using SPSS version 16 and qualitative data was analyzed based on the themes that emanated from the key informants. The analyzed data were presented into frequency counts, percentages, and Chi Square test for the associations. On the personal characteristics of respondents, majority (34%) felt within the age group of 60-69 years, the Kasenas formed the major ethnic group (43.3%), Christians were the majority (74.9%),most of them possessed low level of education representing (72%), the Self-employed group was 30.7 % forming the majority, majority were also married (47.9%). The prevalence of depression from the study revealed that 65% experience mood swings ,40% experience the feeling of elation and high self-confident, 49% reported feeling anxious, with the experience of recurrent ideas were 45% , 52% indicated little interest in doing things, with regards to hopelessness 40% was recorded, insomnia was 46% ,anorexia was 51% and 6% experienced suicidal ideations. A significant relationship was observed to have existed between the marital status of the respondents and depression (p = 0.005The results indicated high prevalence of depression in the study area among menopausal women. That is, 65% suffered mild to severe mood swings, 49% suffered mild to severe anxiety and 94% all others (sadness, insomnia and anorexia nervosa). The Health professionals recommended medication, counseling and psychotherapy as part of the intervention strategies. The Government, Ministry of health and

all related partners should ensure that drug and other non- drug consumables are always available in the various health facilities.

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DEDICATION

I wish to dedicate this research work to my family especially my spouse and children for the care, moral support and understanding demonstrated to me during my study period. Furthermore, to my thesis supervisor for devoting his time and energy not only accessing and reading my scripts but also encouraged me to go the extra mile to learn computer software especially, using the appropriate reference manager for my work, not forgetting my student colleagues for their knowledge sharing, co-operation and motivation and also to the entire heads and staffs of the various health facilities and the Municipal Health Director of Navrongo for their acceptance and willingness to share with me the pieces of information, I needed and not forgetting the participants who willingly agreed to participate in the study.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND

Depression is defined as a common mental disorder; characterized by persistent sadness, loss of interest or pleasure, feeling of guilt or low self-worth, disturbed sleep, anorexia nervosa (loss of appetite), feeling of tiredness and poor concentration for at least two weeks or more (WHO, 2004; Pinkerton et al. 2010).

Discourses of depression during menopausal transition are varied and complex just as the lives of women themselves are diverse and multifaceted. For the vast majority of women, depression is not anxiety, bout of sadness, low or mood swings but a mental disorder (Pinkerton et al., 2010). Depression is more common in women during the time of menopause, but the transition to menopause may be a high risk factor (Kelly et al., 2008; Pinkerton et al., 2010; Albert, 2015). As a matter of fact and concern, during the transition to menopause estrogen levels decreases, which are associated with somatic, psychological and vasomotor symptoms, some women feel constant state of premenstrual syndrome (PMS) during perimenopause (Arounassalame, 2013) with its associated psychological symptoms and/or mental disorders such as insomnia (sleep disorder) and anxiety with mood disturbance, which are most common during the menopause transition (Clayton & Ninan, 2010; Makara-Studzińska et al., 2014).

Albert (2015), stated that the prevalence of depression in 2010 was found to be higher in women than in men; with global annual prevalence of 5.5% and 3.2% respectively. In Canada, the prevalence was 5% in women and 2.9% in men in 2002. However, in 2012, the figure increased to 5.8% in women and 3.6% in men. The female and male prevalence ratios in developed countries and globally suggests that the differential risk may primarily stem from sex differences

and depends less on culture, diet, education, and confounding social and economic factors (Albert,2015).

Clayton & Ninan, (2010) reported that, midlife depressive risk is related to personal or family factors. Also, during perimenopause, estrogen levels decline gradually; moreover, a greater prevalence of depression can also be reflected in women in the number of prescriptions for antidepressant medications. In Canada, between 2007 and 2011, antidepressants were prescribed more than twice to women than men (9.3% versus 4.2%) in patients aged 45-65 years (Clayton & Ninan, 2010; Pinkerton, et al., 2010). Meanwhile, the female menopausal body is the site of controversy in connection with both its representation and the medical practices that manage it (Pinkerton, et al., 2010).

The transition to menopause is marked by progressively expanding variability in menstrual bleeding which results from increase frequencies (Pinkerton ,et al., 2010; Bromberger, et al., 2011). The process of menopause does not occur overnight, but rather is a gradual process. This so called perimenopause transitional period is a different experience for each woman. The age at which a woman starts having menstrual periods is not related to the age of menopausal onset (Miraj, et al., 2016).

However, early onset of menopause can increase a woman's risk for major depressive disorder or depressive symptoms; some of the symptoms can make it hard for women to go about their daily activities such as, sleep disturbances, mood swings, sexual dysfunction and poor relaxation activities (Singh, et al., 2002).

Clinical effects during the menopausal transition include physiologic changes in responsiveness to gonadotropins secretions which occur with wide variations in hormone levels. Women often

experience a range of physiological symptoms such as, mastodynia, loss of interest, poor personal relationships and migraine. Therefore, clinical depression is a serious but treatable mental illness. It is a medical condition but not a personal weakness (Elavsky & McAuley,2009; Miraj, et al., 2016). It is also now common with the issue of major depression which is a clinical syndrome that affects about 6.7% of the United States of American's population over aged 18 (Whiteford, et al.,2013).However, it is estimated globally that, major depression may be as high as 15%. Everybody at one point or the other will feel sad as a minor reaction to loss, grief or injured self-esteem (Maclennan, et al., 2009; Makara-Studzińska ,et al., 2014). However, in West African the prevalence of depression correlates with similar studies conducted in the United State of America; with a figure of 6.7% in Ghana,7% in Botswana and 7.1% Nigeria among older persons (Martinez & Clausen, 2014; Thapa, et al., 2015). But clinical depression called "minor depressive disorder or minor depression by doctors" is a serious medical illness that needs professional diagnosis and treatment (Frey, et al., 2008; Whiteford, et al., 2013).

Studies conducted by Clayton & Ninan ,(2010) revealed that the symptoms and episodes of depression during the menopause transition are more severe during perimenopause, where estrogen level is declining and women are experiencing irregular menstrual flow for a period of 12 months and the symptoms are more severe with sleep disturbance and vasomotor symptoms. Developing symptoms of stressed and Depressed Mindfulness Based Cognitive Therapy (DMBCT) should be utilized to help in overcoming the symptoms of depression (Hunter & Mann, 2010; Hall ,et al., 2015).

The Quality of Life (QOL) of midlife women can be impacted by adverse physical and mental health changes during the period of the menopause transition. This has a negative consequence and influence on the quality of life of women during perimenopause and early post menopause

periods. As women age increase their health status become multidimensional problem influenced by factors such as career, changes in domestic life, social and physical changes and marital problems. These factors together with the natural process of ageing and hormonal fluctuations affect the health and well-being of women (Jacobsen, et al., 2002; Arounassalame, 2013). One of the reasons why women during menopause are more likely to suffer from depression is due to hormonal imbalance, which is the underlying cause of depression (Arounassalame, 2013). A woman's experience during menopause can also be influenced by other life changes such as, children leaving home, loneliness, changes in body image, retirement, increased worry about illness and widowhood (Pinkerton ,et al., 2010; Arounassalame, 2013).

Responses pertaining to depression around menopause have changed over the years. In 2005, Clayton & Ninan ,(2010) issued a statement on science review, the reports were from world Health Organization which suggested that findings from some studies conducted indicated that women with a history of depression have an increased risk of depressive symptoms and an increased risk of depressive illness around menopause than women with no history of depression. Additionally, other risk factors for developing depressive mood in menopausal women include poor sleep, hot flashes, stressful or negative life events, employment status and age (Clayton & Ninan, 2010; Soares, 2010; Mitchell & Woods, 2017).

There are regional and ethnic differences in depression among menopausal women; thus Asia, Latin America and Sub–Sahara Africa which are of poorer socio-economic statuses have a significantly earlier onset of menopause whereas, in developed nations with good socio-economic statuses experiences late onset of menopause (Avis, et al., 2004). Age at menopause is influenced by a number of factors which includes genetics as well as, behavioural factors such as

smoking, alcohol consumption and obesity (Beaton & Schemitsch, 2003; Thompson, et al., 2011; Kendall-Tackett & Ruglass, 2017).

The onset of menopause is associated with the induction of physical health and psychological health related problems among women. Early menopause is associated with earlier infertility, which is problematic because there had been a shift in a woman ending child bearing earlier instead of later in years in her life. Again, early menopause is associated with greater general morbidity and mortality (Bauld & Brown, 2009; Ambler ,et al., 2012).

Reports from a large-scale community survey, conducted by stages of Reproductive Ageing Workshop (SWAN) in 2001, suggested that cultural factors determine the incidence of menopausal symptoms, complaints and reporting. Others however, have blamed the negative media descriptions of menopausal discomfort leading to increase in women perceptions of negative menopausal symptomatology (Soules, et al., 2001).

Social construction of menopause take place within individual's cultural, social, personal, carrier, family and friends context. Menopause transition characteristically begins years before menopause, along with an increase in the number of middle-aged and older individuals. There is a combatant and a continuing rise in the number of women who live most of their lives in a hypo-estrogenic state (Clayton & Ninan, 2010). Many women can expect to live approximately 79 years and can experience the consequence of gonadal and steroid hormone loss (WHO, 2004).

The menopausal transition (MT) is a biological event and it is inevitable for all ageing women; that can be associated with changes in mood, including depressive symptoms. There is tandem evidence that woman who develops depression during the menopausal transition have a greater risk of subsequent depressive episodes as well as increased morbidity and mortality (Freeman,

2015). Symptoms typically associated with the menopausal transition include irregular menstrual cycles, and vasomotor symptoms, (such as, hot flushes and night sweats, sleep disturbances, vaginal dryness, dyspareunia, decrease libido, urinary symptoms, muscle and joint pains, and mood disturbance).Therefore, the symptoms are amenable to change by means of biological or behavioural interventions because every woman experience menopause differently (Singh, et al., 2002; Schwarz, et al., 2007).

The Stages of Reproductive Aging Workshop (SRAW) in 2001 and 2011 classified menopause as the beginning of irregular menses, through the first 12 months of amenorrhea as perimenopause, premature menopause when women go through menopause before age 40 and the period from the last menses to death as post menopause. The first five, post-menopausal years are defined as early post menopause, which is followed by late post menopause (Kendall-Tackett & Ruglass, 2017).

However, studies conducted by Kendall-Tackett & Ruglass, (2017), indicated that during menopause, approximately 85% of menopausal women report at least one of the symptoms of menopause usually suggesting the presence of depressive disorders such as vasomotor symptoms or sleep disorder. As a matter of fact, a characteristic sleep disorder is insomnia, which is the most common symptom of depressive disorders and which includes sleep impairment such as, disorders of continuity or the shortening of slow wave sleep. Menopause can be diagnosed after Twelve (12) months of amenorrhea and is characterized by a myriad of symptoms that include depression, mood swings, urogenital symptoms and dyspareunia (Sit & Wisner, 2009; Mitchell & Woods, 2017).

With regards to age and depression, women have an earlier age at onset of depression, more frequent depressive episodes, more depressive symptoms and much higher rate of a typical

depressive features, whereas men report fewer symptoms than women. However, men reach the diagnostic threshold less often (Kelly, et al., 2008; WHO, 2004; WHO, 2008). Moreover, women are expected to live a quarter to a third of their lives in menopause; which makes the quality of life during this period a great concern for women and their treating physicians (Schwarz, et al., 2007; Agyapong ., et al., 2015).

The age of onset of natural menopause therefore, also varies worldwide with the international range being 44.6 to 52 years. In the United States, the median age at menopause is 51 years while across Europe the age of onset of natural menopause is higher with a mean age of 50.7 years and a median age of 51.7 years. Younger ages are observed in Africa, for instance, in Morocco a median age of 48.4 years, in South Asia 49, the mean age of onset of natural menopause in Pakistan is 49.3 years. However, in Ghana the mean age and the median age of natural menopause are 48 and 49 years respectively (Schwarz, et al., 2007; Agyapong, et al., 2015).

The prevalence of menopausal symptoms among African women is disconcertingly high. The highest prevalence of sleep disorders, very high prevalence of depressive disorders, and high prevalence of sexual dysfunction were noted. Dangerously, the percentage of women reporting vasomotor symptoms increased from 39% in 2009 to 77% in 2012. Also, women suffering from ailments of the bone-joint system increased from 59% in 2009 to 84% in 2011.On the basis of these results one can state that the worrying situation of women in Africa is caused by the low availability of special health care, lack of implementation of prevention programs and the difficult socio-economic situation of the African Countries. There is an urgent need to focus attention and resources to take care of African women (Palacios, et al.,2010; Whiteford, et al., 2013).

Women in South America complain about depressive disorders, sexual dysfunction, menopausal symptoms and discomfort in muscles and joints but there is a significant reduction in the percentage of women suffering from hot flashes; with 70% of women reporting ailments in 2003 reducing to 18% in 2015. In most literature, there are reports indicating that vasomotor as a menopausal symptom is significant predictor of a full-blown depression (Albert, 2015).

Many experts believe that depressive disorders in women during menopause are most often associated with psychological factors which in this stage of life can cause many problems. Also symptoms can be aggravated in respect of the impact of socio-economic factors whereas, the risk of depressive disorders are affected by people living in urban areas with lower monthly income and education (Pinkerton, et al., 2010; Albert, 2015).

As a matter of fact, decrease in estrogen levels may increase the risk for depression and the risk factors that can lower the age of physiologic menopause include smoking, hysterectomy, oophorectomy, auto immune disorders, infections, non-communicable diseases, living at high attitude, history of receiving certain chemotherapy medications and undergoing radiotherapy (Elavsky & McAuley, 2009; Joffe, et al., 2011). Women's experience of menopause is heterogeneous, influenced by hormonal changes and physical symptoms. The most common and bothersome of which are hot flushes and night sweats (HFNS) and psychological factors such as menopausal beliefs and the perceived degree to which symptoms interfere with daily life (Afolayan & Okpemuza, 2011).

Though social supportive relationships have contributed to buffering the demands of depressive symptoms and episodes of midlife women in their menopause transition, unfortunately, one of the least talked about effects of menopause is depression. The association between depressive

disorders and menopausal status is an important public health problem that requires attention (Kim, et al., 2014; WHO, 2014).

The greatest vulnerability to new-onset of depression in middle-aged women is the transition to menopause, not the postmenopausal period (Soares, 2010; Soares & Frey, 2010). Meanwhile, mental distress and depression among women needs prompt attention in Ghana, most especially in the study area. As a matter of fact and concern evaluating the prevalence, the risk factors of depression, identify the coping strategies adopted and providing the appropriate treatment regiments will assist the affected women to overcome their challenges in the study area.

1.2 Problem Statement

Depression and anxiety disorders are common mental disorders that have an impact on individual's ability to work productively. Depression in older people may be difficult to recognize because they may show less obvious symptoms. Sometimes older people who are depressed appear to feel tired, have trouble sleeping or seem grumpy and irritable. Confusion or attention problems caused by depression can sometimes look like Alzheimer's disease or other brain disorders. Older adults also may have more medical conditions such as; heart disease, stroke or cancer which may cause depressive symptoms or they may be taking medications with side effects that contribute to depression. Older adults who had depression when they were younger are more at risk for developing depression late in life than, those who did not have the illness earlier in life (Sit & Wisner, 2009; Kendall-Tackett & Ruglass, 2017). Furthermore, Kim, et al., (2014) reported that menopausal transition is a 'window of vulnerability' for some women and is framed by the changing hormonal milieu of ovarian ageing.

Makara-Studzińska, et al., (2014) and WHO, (2016) mentioned that depression is the leading cause of ill health and disability worldwide, with the latest global estimates being more than 300

million people suffering from depression, an increase of more than 18% between 2005 and 2016. WHO stated further that lack of support for people especially family members for fear of social stigma, unfortunately prevents many family members and their patients from accessing the treatment, the mental patients need to live a healthy and productive lives (Whiteford , et al., 2013).

The number of studies carried out in Africa is still insufficient. However, Limited medical treatment options, resources, trained health care providers, possible side effects of medications, cost of medical treatment and social stigma associated with mental disorders are common problems among Africans (Fountoulakis & Möller, 2011; Maisel, et al., 2012). Again, other barriers to effective care for the depressed women are inaccurate assessment and diagnosis. As a matter of fact, in countries of all income levels women who are depressed are not correctly diagnosed while others who might have the disorder are prescribed antidepressants wrongly. All these make depression during the menopause transition a significant challenge and issue for women and their significant others (Cameron & Moss-Morris, 2004; Fountoulakis & Möller, 2011).

In Ghana, It is estimated that out of the 21.6 million total population, 650,000 of them are suffering from severe mental disorder and a further 2,166,000 are suffering from moderate to mild mental disorders (Agyapong, et al., 2015). However, the prevalence of depressive symptoms and episodes which is 6.7% in Ghana correlates with similar studies conducted in some African countries like; Botswana and Nigeria among older persons with reported rate of 7% of depressive symptoms and 7.1% of depressive episodes respectively (Martinez, & Clausen, 2014; Thapa, et al., 2015). Unfortunately , on the issue of mental health services in Ghana, the World Health Organization in 2007 conducted studies on mental disorders and the kind of psychiatric care

patients receive from primary care providers; it was revealed that only 1% of the patient population with mental disorders receive any form of psychiatric care (Thapa, et al., 2015).

Reports on the number of out- patient department visits by women aged 40 years and beyond revealed that 108 of women within a three year trend reported to all the health institutions within the Navrongo Municipality with the following debilitating effects of depressive symptoms such as insomnia, loss of interest in doing things, suicidal tendencies, low self-worth, loss of appetite, anxiety, tension, feel tired or hopelessness, sadness, worries, poor relation with one family and social isolation. These symptoms are common among menopausal women in the Navrongo Municipality who are receiving pharmacological and non-pharmacological treatment as a result of the depression (Navrongo Municipal Health Directorate Annual Report, 2017; Municipal Data Management Information System, 2018). These depressive symptoms create negative consequences in most of the menopausal women and it can go a long way to affect their daily activities for many days. The causes associated with the depressive symptoms and episodes include; changing hormonal milieu, poor sleep, stressful life events, unemployment status, poor personal and marital relationships, socio-cultural factors and genetics (Freeman, 2015; Thapa, et al., 2015).

Despite the potential gains the treatment modalities have in controlling and treating the depressive symptoms and episodes. There remain multiple gaps and challenges in terms of medication and service affordability, accessibility and availability in most health facilities in Ghana particularly the Northern sector. Again, there are gaps in the National health insurance policy where, the National health insurance premium does not capture and settle the bills of patients with mental conditions in the country. This is hindering many people especially, the poor and the vulnerable to afford and access health care but resort to herbal and spiritual methods to seek remedy against their condition. As a matter of fact, only two to three out of a hundred of

people in the country requiring mental health care receive it (Osei, 2017).

Furthermore, there are only twelve psychiatric doctors Nationwide, unfortunately the psychiatry sector receives inadequate medical and non medical consumables from the Ministry of Health every two years, which can only last six months. The neglected mental health situation in the country results in at least, the loss of seven percent of the National Gross Domestic Product (NGDP) (Agyapong, et al., 2015; Osei, 2017).

Even though mental health services in Ghana are available at most levels of care; however, majority of the care is provided through specialized psychiatric hospitals (close to the Capital and serving only a small proportion of the Ghanaian population);with relatively less government provision and funding for general hospitals and Primary Health Care based services. However, the few community based services available are purely private and not readily affordable particularly for the poor especially in the Northern sector of the country .The treatment gap is 98% of the total population who are to be suffering from various mental disorders (Thapa, et al., 2014; Agyapong, et al., 2015).

Currently, much is not known on the extent of depressive prevalence among menopausal women and the contribution of various therapists in reducing the depressive symptoms and episodes in the Navrongo Municipality of the Upper East Region. Considering the grave consequence of depression among women during the transition to menopause and the lack of accessible, affordable and available psychiatric services, trained personnel and medical consumables such as drugs particularly in the Northern parts of the Country. Again, it is important to investigate this group of people (the menopausal women) to determine the impact of the depressive symptoms and episodes among them. This will help in the intervention program which will contribute significantly in the reduction of the depressive symptoms and episodes among the menopausal women.

Mental distress and depression among menopausal women need prompt attention in Ghana, most especially in the study area. As a matter of fact and concern, evaluating the prevalence, the risk factors of depression, identifying the coping strategies adopted and providing appropriate treatment regiments will help in this study as there are limited studies in the Navrongo Municipality.

1.3 Research Questions

1. What is the prevalence of depression among women in the menopausal state in the Navrongo Municipality?
2. What is/are the risk factors of depressive onset among menopausal women?
3. What is the quality of life among women with depression in their transition to menopause?
4. What are the coping and intervention strategies to improve the quality of life of women with depressive symptoms during the transition to menopause?

1.4 General Objective

To assess the prevalence of depression among women during the menopausal transition in the Navrongo Municipality.

1.5 Specific Objectives

1. To determine the prevalence of depression among women during the menopause transition in the Navrongo Municipality.
2. To examine the risk factors of depressive onset among menopausal women.
3. To determine the quality of life of women above 40 years with depressive symptoms and episodes.

4. To identify the coping and intervention strategies to improve the quality of life of menopausal women with depressive symptoms and episodes.

1.6 Justification of the Study

This study seeks to determine depressive symptoms among women above 40 years during their transition to menopause. It will offer up to date baseline data on the prevalence of depressive symptoms among the menopausal, the risk factors predisposing women to the depressive symptoms and positively improve their quality of life.

The coping strategies to be adopted through self-efficacy that is maintaining daily physical activities, intake of balance diet and avoiding alcohol and smoking excessively as well as, seeking health care for the appropriate medical and psychological treatment would improve women health and well-being.

It is also anticipated that the results of this research will bring critical focus relating to women perception, attitude, behaviour and thoughts in dealing with menopause and seeking the appropriate remedy in order to gain the requisite knowledge and understanding of menopause as a natural phenomenon which every woman must go through.

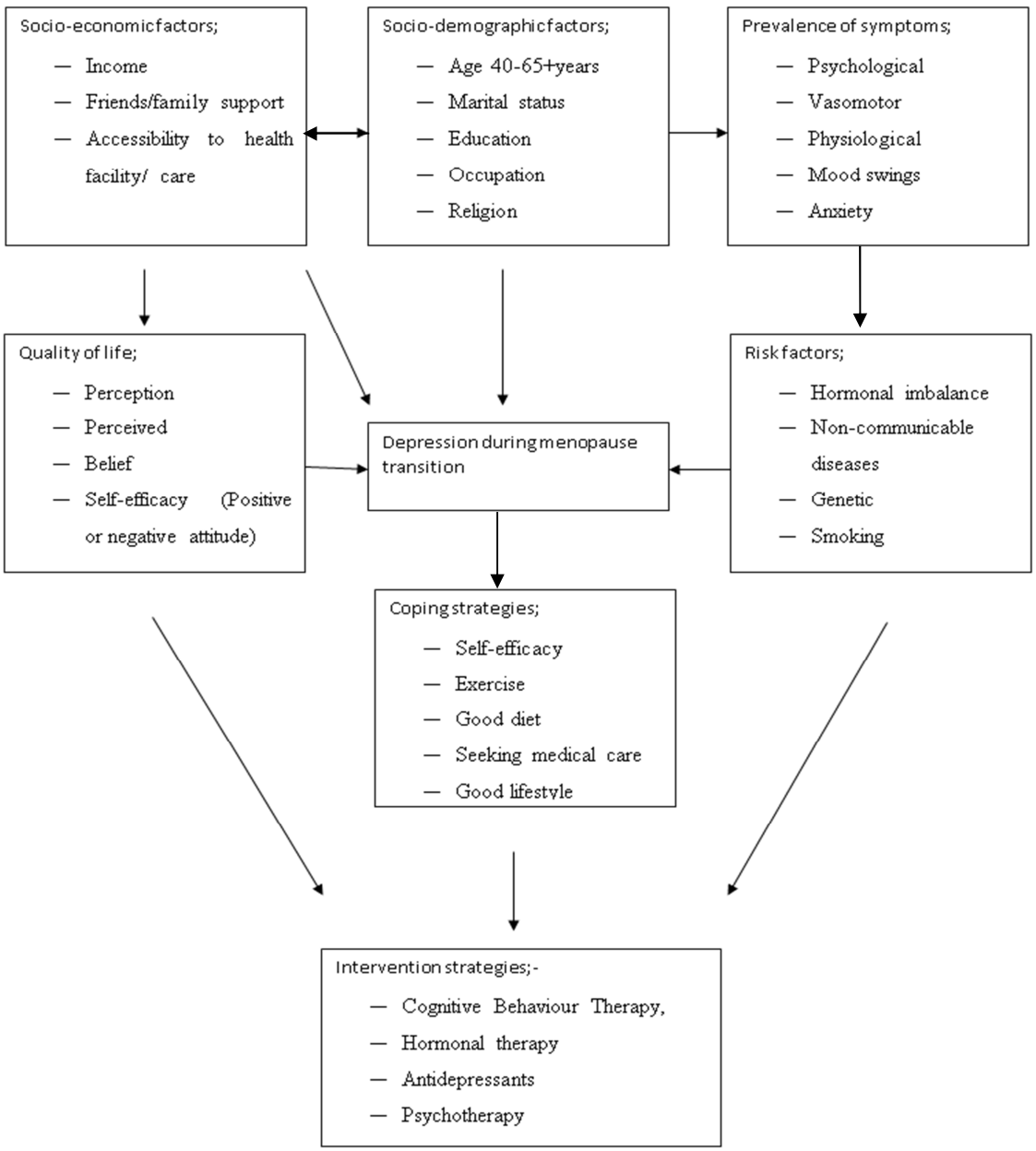
This study will also add to the stock of knowledge in differentiating depression and anxiety as prototype mental health disorders as these are the two most common neuro-psychiatric illness; leading to days of work loss, unemployment and years of life lived with disability (Thapa ,et al., 2014; Freeman, 2015).

Secondly, another significance of this study has to do with the need to determine the awareness of depression during the menopause transition the symptoms women experience appropriate intervention and coping strategies to manage the symptoms.

Education through awareness creation needs to be instituted among women as well as self-care management for menopausal and mental health related problems to maintain total quality of life (Thapa, et al., 2014).

Finally, for any relevant interventions to take place effectively relevant and justifiable data are needed. It is against this background that this research is conducted on the prevalence of depression among women during the menopausal transition in the Navrongo Municipality, where a lot of women above forty years seem to be facing the problem is necessitated.

1.7 Conceptual Framework



Source: Authors Construct, 2018

Fig.1.1: Conceptual Framework

A conceptual framework which describes the relationships between the independent variables such as; prevalence of depressive symptoms and episodes, socio-demographic characteristics,

socio-economic factors, risk factors, coping strategies (notable among them is self –efficacy), quality of life and intervention strategies in line with the dependent variables such as depression during the transition to menopause.

Depression is more common among women. Biological, lifecycle, hormonal and psychosocial factors that are unique to women may be linked to their higher depression rate. For example, women are especially vulnerable to developing post partum depression after giving birth, when hormonal and physical changes and the responsibility of caring for a newborn can be overwhelming (Soares, 2010; Janssen, et al., 2011).

Depression unlike a normal emotional experience is a leading conceptualization, serious depression, however, should never be viewed as a "normal" event and women who suffer from it at any time in life should receive the same attention as for any other medical illness (Soares, 2010).

1.8 Prevalence of Depression

Depression is a leading cause of disability and health related cost in Australia and worldwide. This affects between 4-14% of the population at any point in time. The prevalence of depression is consistently higher in women than in men across the reproductive lifespan, with an increase in the prevalence of clinically significant depressive symptoms noted during the years that overlap with the menopausal transition (Almeida, et al., 2016). However, in Ghana to address the lack of cross cultural data on depression in the early 1980s, the World Health Organization sponsored a study utilizing the Standard Assessment for Depressive Disorder (SADD). Fifty patients were assessed using the SADD. Three-three (33) were females, anxiety, sadness and tension were the core symptoms expressed with 35% reporting feeling of guilt and self-reproach, feeling of

sadness and loss of interest and enjoyment were commonly reported and these affected the quality and productive life of the females (Majodina & Johnson, 1983).

1.9 Risk Factors

A recent study indicates that the likelihood of depressed mood in the menopausal transition is approximately 33% (Freeman, 2015). A number of biological and environmental factors are independent predictors for depression in the menopausal population such as poor sleep, hot flushes, and stressful or negative life events for instance; problems in family relationships, poor personal relationships, unemployment status socio cultural factors and race (Freedman & Roehrs, 2006; Soares, 2010).

1.10 Quality of Life

The quality of life of midlife women may be impacted by adverse physical and mental health changes during the menopausal transition (Elavsky & McAuley, 2009). Especially it has been found to have the most negative influence on the quality of life during the menopausal periods (Utian, et al., 2002).

Mental well-being is a multifaceted construct that involves the absence of distressing psychological symptoms, together with feeling good and functioning optimally in the world. Traditionally, these aspects have been considered in isolation. For example, clinical psychology has typically emphasized symptom reduction as the cornerstone of well-being (Utian, et al ., 2002; Thapa ,et al., 2015).

1.11 Coping and Intervention Strategies Adopted to Overcome the Condition

Coping with stress involves just getting through the day or participating in leisure-time with activities to achieve a balance life. On the other hand, taking cognitive, behavioural or social diversion-based activities and assertive actions by seeking solution from a health care provider or

talking to someone are possible ways to reducing the effects of stress in women with depressive symptoms (Clayton & Ninan, 2010).

Exercise can boost one mood and overall well-being by doing 30 minutes of exercise each day; waking up and getting through the day can be overwhelming if one is suffering from depression. Try to take everything one step at a time However, transdermal estradiol and serotonergic and noradrenergic antidepressants are efficacious in the treatment of depression and vasomotor symptoms in symptomatic midlife women. The identification of women as individuals who might be at higher risk for depression during menopausal transition could guide with preventive strategies for most populations (Frey, et al., 2008).

Finally, the theories and/or models of the health belief approach; few psychological/behavior theories have been applied to or have specially been adapted to determine specific pathways for menopausal experiences (Bandura, et al., 2011). Self-efficacy model has been studied in research on adaptation to new situations, such as perimenopausal health.

According to this concept personal efficacy depends on an individual's belief about their ability to control their own behavior symptoms and environment. People with high self-efficacy will feel more able to withstand the change than those with low self-efficacy. Women with high self-efficacy experience depressive symptoms and episodes during their menopause as a positive event (Bandura, et al., 2011).

Hunter & Mann, (2010); Fountoulakis & Möller, (2011) proposed; a Cognitive Behavioural Therapy (CBT) model which may be useful for interventions for menopausal hot flushes and depressive symptoms. In this model cognitions mediate between the environment, subjective reactions and behavioural responses. However, the self-regulatory model focuses on cognitive appraisals determinants, how behavioural responses are applied.

1.12 Organization of Chapters

The research will be organized into six (6) chapters. Chapter one will be introductory chapter, which will comprise background information, the problem statement, the research questions, the objectives of the study, significance of the study, conceptual framework, and organization of the work. Chapter two will contain, the literature review section of the research in which all articles, journals, books, websites and other sources of information that are relevant to the study will be reviewed. The chapter will start with an introduction, which highlights the themes to be discussed, in the review and goes on further to discuss thoroughly these themes. Chapter three, will examine the study area and population and I will deal excessively with the methods, tools, statistical techniques, study units, sample size determination, data source, study variables, instruments for data collection, data collection procedure, data analysis and presentation of results, training and pre-testing, quality control, ethical consideration of the study results and limitation of the study.

Chapter four will deal with the presentation of the study results, chapter five will be the discussions of the results and chapter six which will be the last chapter, will contain the conclusion and recommendations.

1.13 Definition of Key Concepts /Keywords/Terms

The transition to menopause begins with the premenopausal stage which signifies the time before menopause begins.

The perimenopause, where the menstrual cycles become irregular after 12 months of amenorrhea. The post-menopause stage- refers to a woman's time of life after menopause has occurred. Women going through the menopause transition report physiological symptoms.

Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community (WHO, 2015).

Mood is an emotional state of feelings, or affects, moods are less specific, less intense and less likely to be provoked by a particular stimulus or event. Mood is an internal, subjective state but it often can be inferred from posture or other behaviours (Collins English Dictionary, 1979; NIMH, 2015).

Risk factor is something that increases one chances of developing a certain illness or condition; it is not a guarantee or a life sentence.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Depression is a common and major complaint, among some midlife women. It adversely affects an individual social relationship capacity to work and learn and is an indicator for the risk of self-harm and suicide. Depression is also potentially harmful to physical health in addition to negatively impacting on women's psychosocial well-being (Zang ,et al., 2016).

However, human being goes through various stages of life. Each stage of life is influenced by specific aspect such as infancy, childhood, adolescent, adulthood, middle age, and old age. Women during the menopausal transition and especially the perimenopause and the postmenopausal period are very important since it influences psychological, social, and emotional aspects due to physiological changes. The psychological problems however, affect women's physical well-being resulting in chronic fatigue, sleep problems, and changes in appetite (Soares & Cohen, 2001; Zang ,et al., 2016).

There are however, different forms of depression most common among women which include; major depression, postpartum depression, persistent depressive disorder and premenstrual dysphoric disorder (Janssen, et al., 2011; Makara-Studzińska, et al., 2014; Freeman, 2015).

Major depression is a severe form of depression where a woman loses her ability to find pleasure in activities once considered enjoyable. In addition, it affects a woman's ability to work, sleep, and eat. This negatively affects, interpersonal and social relationships (Clayton & Ninan, 2010; Northrup, 2014). Also, postpartum depression is a form of depression that occurs after the birth of a baby often referred to as the "baby blues". Typical symptoms of this type of depression

begin immediately after the month following birth while in some women they can occur while still pregnant. However, persistent depressive disorder is a mild form of depression, it is an extended depressed mood that lasts for two years or more (Clayton & Ninan, 2010; Northrup , 2014).

Finally, premenstrual dysphoric disorder depression is the final type of depression that is tied to a woman's menstrual cycle. In this form of depression, severe mood swings, anxiety, and negative thoughts that present themselves in the week prior to the start of menstruation and dissipate once the menstrual period begins. Depressive symptoms are severe enough to negatively impact interpersonal relationships and interfere with daily activities (Freeman, 2015; Northrup, 2014).

Therefore, the purpose of this literature review was to plan each work area in the context of its contribution to the understanding of the research problem being studied. Also it assisted me in identifying new ways to interpret prior research. Again it provided me with insight into theoretical and /or conceptual background of the study. This literature review assisted in describing the relationship of my work with other people works under consideration, these were not different from what was stated by Ridley in 2012. The chapter two , that is the literature review presents information on the occurrence of depression in which other people have researched into which corresponds to the study in which I am researching into to determine the prevalence of depression among women during the menopause transition in the Kasena-Nakana East Municipality in the Upper East Region of Ghana. Other areas to be looked at included; the risk factors associated with the onset of depression, the quality of life of the women during their menopause transitions in the Navrongo Municipality, the coping and intervention strategies instituted to overcoming the depression during menopause transition among women.

2.1 Prevalence of Depression during the Menopause Transitions

Menopause has been considered a major transition point in women's reproductive and emotional life. While its reproductive significance is clear, its emotional implications have been confused. The transition to menopause begins with the premenopausal stage which signifies the time before menopause begins. This is followed by the perimenopause, where the menstrual cycles become irregular after 12 months of amenorrhea. The post-menopause stage refers to a woman's time of life after menopause has occurred (Freeman, 2015).Women going through the menopause transition report physiological symptoms. Such as hot flashes and night sweats, depressed mood, mood swings, forgetfulness, sleep disturbances, sexual concerns, cognitive symptoms, vaginal dryness, urinary incontinence and somatic disorders (Mitchell & Woods, 2017). Hot flashes in particular are associated with the menopausal transition and are experienced by almost two thirds of postmenopausal women. The hot flashes cause considerable distress and impairment in quality of life (Sturdee, 2008; Freeman, 2015). The symptoms of depression and menopause are similar. The menopausal symptomatic reaction can be taken to be the sum of the impact of the three components of the amount of estrogen depletion and the rate at which estrogen is withdrawn. The inherited and acquired propensities to succumb the imposition of the overall aging process and the psychological impact of aging and the individual`s reaction to the emotional implications of a change of life (Sturdee, 2008; Northrup, 2014)

Some studies reported that depression in midlife women may be more strongly associated with common menopausal symptoms for instance, vasomotor symptoms and poor sleep than menopause status per se (Clayton & Ninan, 2010). Depression is the most common of all the psychiatric disorders and its incidence is increasing (Chan, et al., 2014).

Globally, at the beginning of the 21st century the prevalence of depression was 5.8% for men and 9.5% for women, with variations according to the studied population and the diagnostic criteria and self-rating instrument were used. Studies in Europe, revealed that the lifetime prevalence of major depression are estimated at 12.8% but with a substantial gender difference at 9.2% for men and 18.2% for women (Chan, et al., 2014; Makara-Studzińska, et al., 2014).

Women have an earlier age at onset of depression more frequent depressive episodes, more depressive symptoms and much higher rates of a typical depressive features. It can similarly be said that men report fewer symptoms than women and that men reach the diagnostic threshold less often. Thus women are more vulnerable to depressive disorders than men (Palacios, et al., 2010; Soares, 2010; Chan, et al., 2014).

Differences in coping styles and response to stress may contribute to this gender difference, because depressive disorders seem to be almost twice as common in women as in men. Endocrine influences on the prevalence and clinical characteristics of depression have been postulated. Furthermore, many women experience mood disorders in association with the low-estrogen phase of the menstrual cycle, after childbirth and during menopause. Since depressive symptoms are especially common among middle-aged women (Kelly, et al., 2008; García-Alberca,et al., 2012).

Some of the distinguishing factors in how depression differs between women versus men include; women feel anxious and scared whiles men feel guarded. Women turn to food and friends to self-medicate whiles men turn to alcohol, television, sex or sports to self-medicate. Women commonly feel sad, worthless, and apathetic when depressed and men tend to feel irritable and angry. Also, women feel lethargic and nervous while, men feel agitated and restless. Women easily talk about their feelings of self-doubt and despair whereas; men hide feelings of self-doubt and despair-considering it a sign of weakness. Depressive symptoms are related to progression of

coronary calcium midlife women (Janssen, et al., 2011; García-Alberca, et al., 2012).The Study of Women's Health Across the Nation (SWHAN) in 2010 organized a workshop on major depression and dysthymia among menopausal women and the results revealed that; the prevalence rate of current major depression in women varies between 1% and 11%. In the premenopause period, the reported prevalence ranges from 5.8% to 11% (Bromberger, et al., 2011).

However, in the perimenopause stage, the prevalence ranges from less than 1% to 9.8%. The prevalence rate for dysthymia was reported to be 4.5%, in premenopausal women follow up for 10 years over the menopausal transition. The National co -morbidity study reported 30 days estimates of major depression for women aged 45-54 to be 5.0% and lifetime estimates of 21.8% (Kelly, et al., 2008; Bromberger, et al., 2010).

Bromberger, et al., (2011) indicated that depression tends to wax and wane with repeated episodes which persist in chronic state and occurs in up to 35% of depressive patients. However, a prior depression is the strongest predictor of a subsequent depression which may coincide with the perimenopause years, contributing to reports of increased prevalence of depression around menopause (Freeman, 2015).

Depression affects up to 25% of women at some point in their lives, representing a far higher proportion than among men. Depression can be a debilitating disease limiting daily activity as much as, severe arthritis or heart disease. Large-scale research studies have shown that most problems with depression begin when women are in their 20's or younger (Kelly, et al., 2008; Freeman, 2015). It is actually unusual for depression to appear for the first time after menopause, when all menstruation has ceased. However, there is a transitional time in mid-life known as perimenopause, when women become somewhat more vulnerable to depression. This is the time

when menstrual periods gradually lighten and become less frequent. The transition to complete menopause may last anywhere from a few months to a few years (Frey, et al., 2008; Soares, 2010).

The World Health Organization in 2008 had ranked depression as the fourth leading cause of mortality and disability worldwide. It had further projected that by 2020 depression will be the second leading cause of disease burden worldwide. However, investigations conducted by World Health Organization in the 1990s on a survey initiative revealed that; a study of cross-national differences on a true prevalence was done by carrying out coordinated community epidemiological surveys, using common protocols and instruments. The World Health Organization Composite International Diagnostic Interview (CIDI), version 3.0. A set of diagnostic and statistical manual of mental disorder in countries from every continent (Freedman & Roehrs, 2006).

The twelve-month prevalence estimate of Diagnostic and Statistical Manual World Mental Diagnostic Epidemiology (DSM-W MDE) in eighteen (18) World Mental Health Manual Countries ranged from 2.2% for Japan to 10.4% for that of Brazil. The mid-point across all Countries was 5% (Chan, et al., 2014; Makara-Studzińska, et al., 2014). As a matter of fact, Studies conducted by Ambler, et al., (2012) on sexual health among women in their menopause transition, reveals that sexuality remains an important component of emotional and physical intimacy that most men and women desire to experience throughout their lives. The prevalence of sexual dysfunction among, all women is estimated to be between 25% and 63%. However, the prevalence in postmenopausal women is even higher with rates between 68% and 87%.

2.2 Risk Factors

Menopause can be a difficult time in a woman's life and this is not just due to menopause symptoms, but due to changes in events and stressors such as stressful life events including, the loss of a loved one. These can happen to a woman that can make her feel depressed (Lindh-Åstrand, et al., 2007; Kendall-Tackett & Ruglass, 2017).

The psychological or psychosomatic symptoms such as insomnia, depression, irritability, dizziness and nervousness are sometimes grouped together as the menopausal syndrome. However, their causal relation with estrogen is uncertain. It is also known that many postmenopausal women obtain inadequate sleep and that the sleep problems are common during the menopausal transition (Freedman & Roehrs, 2006).

Some observational studies conducted by Bromberger, et al., (2010) had suggested that the transition to menopause is a period of increased risk for depression in women, which is linked to increase in susceptibility to depression. As women have many life roles such as, mother, wife, employee, friend, healer and caregiver, the complexity of all these roles can cause ups and downs throughout life. Some of these mood changes may be due to life events for example getting into an argument with a friend or may be due to hormones such as pregnancy, and menstrual cycle. In general, after a few days women emotions tend to level out and they do not feel down in the dumps anymore. But, if they are suffering from depression their "downs" do not go away after a few days and may interfere with their daily life activities and relationships (NIMH, 2015). This can be a debilitating cycle and symptoms can last weeks, months or years and can be intermittent or a one-time occurrence (Hunter & Mann, 2010).

Again, psychological problems further affect the mood of most women with feeling of sadness, emptiness, hopelessness and dysphoria. It further affects the way women think interfering with

concentration and decision making. Again, it affects their behaviour with increased irritability and loss of temper, social withdrawal and a reduction in women's desire to engage in pleasurable activities, menopausal transition in woman is mainly affected by hormonal factors (Frey, et al., 2008; Soares, 2010).

It is believed that a cause of depression is a change in estrogen levels, which occur during menopause. Depression is also associated with reduced quality of life (Joffe, et al., 2011). In addition to personal costs, depression has great socioeconomic costs, for instance, loss of productivity and lots of tax receipts represents a strong risk factor of disability during pension (Soares, 2010; Joffe, et al., 2011).

Depression tends to have different contributing causes in women than it does in men. Contributing factors include reproductive hormones, a differing female response to stress and social pressures that are unique to a woman's life experience. There are a multitude of genetic, hormonal, psychological and social factors that come into play when citing the cause of depression in women (Northrup, 2014; Mitchell & Woods, 2017).

Biologically, depression runs in families with scientific evidence that some genetic make ups are more prone to depression, whereas, some genetic make ups are more resistant to it. As a matter of fact, environmental factors are thought to interact with genetic predisposition. That is just because women may be more prone to depression because of their genes, healthy family and social relationships can increase resilience. Other biological and hormonal factors are also, likely to increase women chances of suffering from depression. Such as, issues with pregnancy, fertility, perimenopause, menopause, and menstrual cycles; can increase women's risk factors for developing depression (Cameron & Moss-Morris, 2004; Afolayan & Okpemuza, 2011; Freeman, 2015).

Most of these are due to hormonal imbalances and rapid fluctuations in reproductive hormones. Health problems in general especially those of chronic illness or disability can prompt depression in women, as can medical life changes such as frequent dieting and cessation of smoking. The role of psychological stress in the onset and course of disease has been highlighted as particularly pertinent for women. Women are more prone to psychological causes of depression than men. With a tendency to be more emotional, women are more likely to rehash negative thoughts during bouts of depression, while it is a normal response to cry, talk with friends, and rehash (Kelly, et al., 2008; Almeida, et al., 2016; Miraj, et al., 2016).

Research has shown that ruminating about depression can cause it to last longer and even make it worse. In contrast, men tend to distract themselves from their depressive state; which has been shown to reduce the duration of symptoms. Additionally, psychological factors that tend to affect women over men are negative body images and stress which can also induce depression (Moak, 2016).Women are more prone to stress than men because their increased levels of progesterone have been shown to prevent, stress hormones from leveling out. Negative body image, issues usually begin in adolescence and seem to be correlated with the onset of puberty in women (Alencar ,et al., 2009; Moak, 2016).

Social causes, coping skills, choice of relationships, and lifestyle choices affect women differently than men. As a woman you are more likely to develop depression from marital or relationship problems, work-life, how to balance issues, financial troubles, and stressful life events including, the loss of a loved one (García-Alberca, et al., 2012; Moak, 2016). In addition to the biological, psychological, and social causes of depression mentioned above. Some socio-cultural and environmental factors can also increase risk factors of depression in women. These include death of a parent before age ten (10), job loss, relationship problems, divorce, physical or

sexual abuse during childhood, history of mood disorder as well as the use of certain medications and substances such as drugs, excessive smoking and excessive alcohol consumption (Singh, et al., 2002; Afolayan & Okpemuza, 2011).

According to Kelly, et al., (2008) and Soares, (2010) a higher rate of depression in women is connected to hormonal changes. Therefore, a woman's risk of depression may increase before and during menstruation, after child birth, when juggling with work, home and family life, as well as during perimenopause and menopause. Women are most likely to experience persistent "bluesy" feelings that can make them feel less confident and less worthy. These feelings can drastically change women over-all sex life (Soares,2010).

As expected and revealed in many studies not different from my findings on signs and symptoms exhibition. The peri- and postmenopausal women reported more vaso motor symptoms than pre-menopausal women. However, vaso motor symptoms are commonly found to be associated with depression only in the premenopausal period where menstruation becomes irregular due to hormonal fluctuations (not in the peri- and postmenopausal periods where menses finally ceased to flow) in the study conducted by (Clayton,et al.,2008; Gallicchio,et al.,2007) which was not different from my findings . One plausible explanation for the difference in the symptoms were that, the premenopausal women with vaso motor symptoms may be that , the premenopausal are usually under more stress due to the irregular menstrual flow as a result of the hormonal imbalances than, the peri- and postmenopausal women. Premenopausal women would feel despondent or stressful when they experience vaso motor symptoms which never or seldom occurred to them before while peri- and postmenopausal women might have already got accustomed to vaso motor symptoms. Another plausible explanation may be the difference in terms of age, education level, income, and chronic diseases between the three menopausal stages.

Naturally as women age, physiological factors can make sex less enjoyable and sometimes even painful; changes in the vaginal wall can make sexual activity unpleasant. Also, lower levels of estrogen can disrupt natural lubrication; such factors can be frustrating for women. Women having troubles with sexual health can worsen feelings of worthlessness and other depression symptoms. This in turn can cause a vicious cycle of both worsening depression and sexual dysfunction (Singh ,et al., 2002; Ambler, et al., 2012; Ingleby, et al., 2012).

The more severe the depression, the more problems women are likely to have with sexual health and experiences. Sexual desire is cultivated in the brain and sex organs rely on chemicals in the brain to promote libido as well as the sexual act. When depression disrupts these brain chemicals, it can make sexual activity more difficult. This may be worse in older adults, who already have occasional problems with sexual dysfunction (Ambler, et al., 2012; Moak, 2016).

According to Fountoulakis & Möller, (2011) and Moak, (2016) it is not just the depression itself alone that may interfere with sexual health. As a matter of fact, antidepressants; which are the most common form of medical treatment for depression often have unwanted sexual side effects. The most common “culprits” are mono amine oxidase inhibitors (MAOIS) tetracyclic and tricyclic medications. Treating depression is just one way you can overcome sexual dysfunction.

In fact, about 70% of adult facing depression without treatment had problems with libido. Feeling good again may help you get back to a normal sex life. Moreover similar studies conducted by McCall-Hosenfeld, et al., (2008) in a carefully selected post-menopausal women with low sexual desire that causes them personal distress show that testosterone treatment can boost sexual interest and activity. There is no definitive consensus on whether depression is associated with menopausal symptoms and the menopause status. Moreover, most studies reporting association of depression with menopause status and menopause symptoms have been conducted in Western

developed countries whereas, the situation remains unclear in non-white populations including Asian women. Only recently, a population-based study found lower prevalence of depression in Taiwanese women than previous studies and suggested the disparity might be explained by racial and cultural differences (Lin, et al., 2012). Data from the Study of Women's Health across the Nation (SWAN) have also showed that the risk of depression is higher in African Americans but lower in Asian populations (Bromberger, et al., 2007).

2.3 Quality of Life

The psychological or psychosomatic symptoms such as insomnia, depression, irritability, dizziness and nervousness are sometimes grouped together as the menopausal syndrome. However, their causal relation with estrogen is uncertain. It is also known that many postmenopausal women obtain inadequate sleep and that the sleep problems are common during the menopausal transition (Freedman & Roehrs, 2006). It can be argued that sleep quality is an important determinant of health status and quality of life for women during and beyond menopause. A postmenopausal woman may experience many psychological problems. Such as depressive disorders, anxiety, fatigue due to insomnia and reduction in self-confidence. However, to overcome such psychological problems; self-coping strategies are adopted by menopausal women (Freedman & Roehrs, 2006; Makara-Studzińska, et al., 2014; Mitchell & Woods, 2017)

Therefore, quality of life (QOL) is the general well-being of individuals and societies outlining negative and positive features of life. It observes life satisfaction including everything from physical health, family, education, employment, wealth, religious beliefs, finance and the environment. The health related quality of life is defined as, the value assigned to duration of life as modified by impairments, functional states, perception and social opportunities that are influenced by disease, injury, treatment or policy (Bandura, et al., 2011; Shin & Shin, 2012).

Studies on menopause have operationalized health related quality of life (HRQOL) as the frequency and severity of symptoms (Freeman, 2015).Anxiety and depressive disorders and episodes significantly impair functioning in a number of areas including; work functioning, social functioning and health (García-Alberca, et al., 2012). Whereas, Shin and Shin,2012 according to them depressive disorders and experiences in women do not impaired in their normal daily activities but affects their personal relationships with love ones.

In fact, quality of life among depressed adults is impaired than that of adults with diabetes, hypertension and chronic lung disease (Arounassalame, 2013). Depressive mood is the main factor influencing Quality of life. However, within the field of health care, quality of life is often regarded in terms of how a certain ailment affects a patient on an individual level. This may be a debilitating weakness that is not life-threatening or life-threatening illness that is not terminal, however, terminal illness is the predictable natural decline in the health of an elder. An unforeseen mental or physical decline of a loved one and chronic end stage disease processes. Experience sampling studies show substantial difference between person variability and within person associations and that of somatic symptoms and quality of life (Utian, et al., 2002; Arounassalame, 2013).

Hammond, (2005) measured Quality of Life as the patient's ability to normal life activities since life quality is strongly related to well-being without suffering from sickness and treatments. Quality of life of midlife women may be impacted by adverse physical and mental health during the period of menopausal transition. Especially it has been found to have the most negative influence on quality of life during the perimenopausal and early menopausal period. Symptoms experienced at menopause are quite variable and the cause of the symptoms is multifactorial. However, menopausal symptoms can affect women's health and well-being as women's age

increases, their health become multidimensional problem influenced by factors; like changes in domestic economy, physical activity, career, society and the environment. These changes together with the natural process of ageing and hormonal imbalances affects the health and well-being of women (Daley, et al., 2007).The health care of women during this stage requires special attention to the identification of their health and needs in order to provide competent care (García-Alberca, et al., 2012).

Even though not every woman suffers from the symptoms of depression during the menopause transition however, the cessation of the menstruation is a stage of emotional worry for majority of women because of the physiological changes in their body image (Frey ,et al., 2008; Thapa, et al., 2014).Those who experience the menopausal symptoms may be an important issue for midlife women because depressive disorders during the transition to menopause has been associated with impaired quality of life, impact on quality health especially poor physical, mental and social well-being of most women (Pearson, 2011).

As a matter of fact and concern, most women incur a significantly more health costs during their years of menopause than men do in the same age group (Soares & Frey, 2010). Depressive disorder during the menopausal transition on health demand priority requires in the world of mental health and the worlds scenario as a result of the increasing life expectancy and growing population of menopausal women (WHO, 2016).

Quality of life and postmenopausal symptoms among women in a rural district of the capital city of Turkey proved that quality of life is worse in postmenopausal Women than premenopausal women and in older than younger women in the postmenopausal period. Thus rural populations are primarily in need of public health care in the postmenopausal period (Utian et al., 2002; Kruk, 2007).

Women during the postmenopausal period are very important since, it influences psychological, social, and emotional aspects due to the physiological changes. Psychological problems affect women's physical well-being, resulting in chronic fatigue, sleep problems and changes in appetite. It again affects mood, with feelings of sadness, emptiness, hopelessness and dysphoria as well as hindering the way women think, thus interfering with concentration and decision making (Kruk, 2007).

However, it affects their behaviour with increased irritability and loss of temper, social withdrawal and a reduction in desire to engage in pleasurable activities. Postmenopausal woman is mainly affected by the hormonal factors. It is believed that a cause of depression is a change in estrogen levels, which occur during menopause (Kruk, 2007; Prathikanti et al, 2017). Menopause has been considered a major transition point in women's reproductive and emotional life. While its reproductive significance is clear, its emotional implications have been confused. Menopause refers to the end stage of natural transition in a woman's reproductive life, when ovaries stop producing eggs and a woman is no longer able to get pregnant naturally. Post-menopause refers to a woman's time of life after menopause has occurred (Freedman & Roehrs, 2006; Frey et al., 2008).

2.4 The Coping and Intervention Strategies Instituted for Women to Overcome Depression during the Menopause Transition

2.4.1 The Coping Strategies

Coping with stress is all activities undertaken by a human in a stressful situation. Many women usually report coping with life stress through either cognitive, help seeking, attitudinal or faith-based practices (spiritual, meditations and reflections), appraisal focused, problem focused, and emotional focused (Goldstein, et al., 2010; Medical science monitor, 2011). Coping responses particularly during times of intense stress and depression are often, a result of unconscious mechanisms that emerged early in life. Most women often indicate that the ability to cope was either an intrinsic quality (that is being born like that) is as a result of a 'survival' of the fittest mechanism or the influence of parents-driven coping characteristics taken on at an early age (Bauld & Brown, 2009; Hall ,et al., 2015).

Exercise can boost one's mood and overall well-being through 30 minutes of exercise daily. Waking up and getting through the day can be overwhelming, if one is suffering from depression. In order to deal with this, it is important to give one's self a manageable task to do and break down bigger tasks into smaller ones to make them more doable (Kim, et al., 2014). Also breathing exercises can stimulate the release of mood enhancing hormone referred to as endorphins. When one exercise, the endorphins released can help reduce pain and trigger a positive reaction in one's brain. However, the next time a woman feels overwhelmed; she stops and takes a deep breath. Since deep breath can help the muscles to relax. Standing up and stretching can help loosen up one's tension (Dargan, 2015).

Women should open up to family and friends about what they are experiencing. It can also be good to try to meet friends and spend time doing activities with them that you enjoy. This can be

for example grabbing a coffee or watching a movie. While it can be important to allow people interact with one, it is equally important to give one space that one need. It can be okay if one need to be alone for a while and one do not need to force herself to be constantly happy (Khan & Brown, 2008).

Again, while it is important to allow time to be sad, it is important that you do not let the depression take over one's life. Women should make sure they leave the house every day, even if it is to go for a walk. Seeing a doctor can help one get the condition properly diagnosed. A doctor after identifying the condition can prescribe medication that may help treat the problem, Again the doctor can recommend a therapist that can help counsel one on the condition one is suffering from (Maclennan, et al., 2009; Dargan, 2015).

Unfortunately, some women may struggle to find the right information and may find themselves confused and feeling anxious as they go through the menopause transition. Dealing with depression requires action, just thinking about the things one can do to feel better, like spending time with friends can seem exhausting or impossible to put into action thus picking up a phone to call a love one, arrange to meet an old friend. Getting support plays an essential role in overcoming depression. Staying connected to people and taking part in social activities can make a world of difference in one's mood. Supporting their health; women should aim at eight hours of sleep to support and improve their health. Since depression typically involves sleeping problems whether one is sleeping too much or too little, one's mood suffers. Getting a better sleep schedule by learning healthy sleep habits will help improve the depressive episodes (Soares & Frey, 2010; Almeida, et al., 2016).

Goldstein, et al., (2010) stated that women with depression appeared to repeatedly choose coping mechanisms developed in childhood, across a life course and which modeled their very strong

sort of character on a significant care giver. The ability to withstand stress was described as an admirable and necessary quality that most women modeled from their mothers. Thus, coping with early experience had long term implications by shaping the way in which, the women approached not only future stressful life experience but their view of life in general. Accepting the process of life and being grateful for the positive experiences are key factors in facilitating personal growth.

However, education and counseling allow women create meaning from the depressive symptoms to come in terms with their experiences to accept them as a part of life and get along with them. The way in which individuals perceive stress, coupled with the coping impact of stress have been found to be more important than the exposure to a stressor. Studies have constantly demonstrated that coping strategies employed by an individual in response to a stressful event have a significant impact on psychological and physical outcomes. In terms of coping with depression; passive or emotional focused coping has been found to be associated with increased depressive symptoms and disability in comparison with who employ active problem-based coping strategies (Clayton & Ninan, 2010; Miraj, et al., 2016).

Coping with stress, involves just getting through the day or participating in leisure-time activities in order to achieve “enjoyment” or “a balance”. On the other hand taking identified cognitive, behavioural or social diversion-based activities and assertive actions for instance, directly addressing the problem by seeking solution from a health care provider or talking to someone are possible ways to reducing the effects of stress in women with depressive symptoms who are going through the menopause transition (Miraj, et al., 2016).

According to Miraj ,et al.,(2016), coping with depression is viewed as a dynamic day to day process involving, a constant struggle between grieving over physical losses and increasing

dependence and symptoms management. However, women who are feeling depressed should seek treatment. It is important to see a doctor, if they feel depressed in order to get the diagnosis and treatment. They must be in a position to know and recognize the problem; as a matter of fact, reading about depression, hearing pieces of information and asking colleagues, family members and health care providers what it is, and how it can be treated is a good way to understand what one is feeling and to remind oneself that one is not alone. Reading or learning about the experiences of other people who have suffered from depression can help one feel less isolated and create a support net. Talking to a therapist or visiting the therapist, who has been specially trained to help people work through their problems in order to overcome their depression may be a good idea (Khan & Brown, 2008; Dargan, 2015; Miraj, et al., 2016).

Various coping strategies are adopted by post-menopausal women. Yoga is instead an adaptive discipline that can support the body through the myriad of biological changes it is making. Importantly it can also support one's mind and emotions and allow one to come to a perspective on the inner processes that are happening. Many perimenopausal women have found both the physical and less tangible benefits of yoga helpful at this time. There are some general points about 'asana' (pose) however, back bends can be great for improving one's mood and lifting energy levels and forward bends are good for anxiety and stress (Trivedi, et al., 2006; Ingleby, et al., 2012; Prathikanti et al., 2017). Ultimately, it depends on what is going on for each woman, and this can vary over time anyway. If one is feeling really tired all the time, restorative poses may be best for that period (Prathikanti, et al., 2017).

Maintaining a healthy diet is another way for post-menopausal women to remain problem free. They may want to think about supplements such as, vitamin D and calcium to guard against osteoporosis. Not smoking may not only put off the menopause by a couple of years, it will also

reduce the risk of heart disease and osteoporosis. Using progesterone creams may keep the vagina and bladder area healthier, and make intercourse more comfortable and therefore more appealing (Trivedi, et al., 2006; Soares & Frey, 2010).

2.4.2 Intervention

The treatment recommendations for major depression that occurs in association with menopause depend on how severe the woman's symptoms are and whether she has had previous episodes of depression. Whenever, symptoms are severe the experts recommend treatment with antidepressant medication, generally in combination with hormone replacement therapy (usually estrogen plus progesterone or occasionally estrogen alone). The combination of an antidepressant and hormones is advised whether or not the woman has had depression in the past (Soares & Cohen, 2001; Trivedi, et al., 2006; Panel, 2017). If a woman's symptoms are relatively mild and she has never been depressed before experts agree on a single best strategy that is by trying hormones or antidepressants one at a time (Hamoda, 2017).

Hormone replacement therapy by itself will usually relieve physical symptoms such as, hot flashes which will improve mood swings significantly. On the other hand, some women prefer to avoid hormones especially, if they have few physical symptoms and may do better with an antidepressant (NIMH, 2015; North American Menopause Society, 2018).

However, various categories of antidepressants are available with different chemical mechanisms of action and potential side effects. For women with depression associated with menopause, the experts prefer a type of antidepressant that affects the brain chemical called serotonin (Clayton &Ninan, 2010; North American Menopause Society, 2018).These medications are called selective serotonin reuptake inhibitors (SSRIs). Among these the expert panel prefers fluoxetine (Prozac), sertraline (Zoloft), and paroxetine (Paxil) as first choices, with citalopram

(Celexa) and tricyclics (amitriptyline) as alternatives. Selective serotonin reuptake inhibitors (SSRIs) can have the following side effects nervousness, insomnia, restlessness, nausea, diarrhea, and sexual problems. These side effects differ from one person to another. Also what may be a side effect for one person (for example, drowsiness) may benefit someone else (for instance, a woman with insomnia) (WHO, 2016; Panel, 2017). Although the early antidepressant trials which included severely ill and hospitalized patients showed substantial drug-placebo differences, these robust differences have not held up in the trials of the past couple of decades, whether sponsored by pharmaceutical companies or non-profit agencies. This narrowing of the drug-placebo difference has been attributed to a number of changes in the conduct of clinical trials. First, the advent of Diagnostic Standard Manual-Three (DSM-III) and the broadening of the definition of major depression have led to the inclusion of mildly to moderately ill patients into antidepressant trials. These patients may experience a smaller magnitude of antidepressant-placebo differences. Second, drug development regulators, such as the United State Food and Drug Administration and the European Medicines Agency, have had a significant, albeit underappreciated, role in determining how modern antidepressant clinical trials are designed and conducted. Their concerns about possible false positive results have led to trial designs that are poor, difficult to conduct, and complicated to analyze. Attempts at better design and patient selection for antidepressant trials have not yielded the expected results. As at now, antidepressant clinical trials have an effect size of 0.30, which, although similar to the effects of treatments for many other chronic illnesses, such as hypertension, asthma and diabetes, is less than impressive, antidepressants versus placebo in major depression (Khan & Brown, 2008).

Fortunately, most women with depression do not have many problems with side effects from the SSRIs. Trying to reduce the risk of side effects many doctors start with a low dose and increase it slowly. If women are having problems with side effects they can tell their care givers right away.

If the side effects persist the care givers may lower the dose or suggest trying different selective serotonin reuptake inhibitors (SSRI) (WHO, 2016; North American Menopause Society, 2018).

Women who are clearly in menopause rather than the menopause transition, the experts believe that antidepressant medication is more likely to relieve depression than, hormone replacement therapy. However, many women should consider hormone replacement, for its other health benefits. While, antidepressants are the most appropriate treatment for severe major depression in perimenopausal women; estrogen may also be appropriate for mild to moderate symptoms particularly, if the woman has never been depressed before. Estrogen can be given either as a pill (for example, Premarin, Estrace, and Estratab) or through the skin as a patch. The woman should discuss the benefits and risks of each formulation with her doctor (Freeman, 2015; Almeida, et al., 2016).

There is no doubt that estrogen controls the physical symptoms of menopause, especially hot flashes. There is controversy over how long it should be taken and whether it has other general health benefits such as, keeping bones strong and possibly preventing memory problems and heart disease, may be outweighed by risks of breast cancer and stroke (Almeida, et al., 2016). Progesterone on the other hand is a major female hormone that does not treat or prevent perimenopausal depression or physical symptoms. However, it is often combined with estrogen (except in women who have had a hysterectomy) to ensure that, excessive buildup of the uterus does not occur which may lead to a risk of cancer (Bromberger, et al., 2010; Prathikanti, et al., 2017). The major disadvantage of progesterone can be bloating, headaches and even mood changes. However, should side effects occur, different forms and dose schedules of progesterone may help c). Despite the success gained in the medication modalities in reducing the severe depressive symptoms among the menopausal women Ingleby, et al., 2012 , in their study had a

contrarily views to the medications due to the numerous side effects such as, cancer formations , severe drowsiness and obesity. They however, recommend non medicinal usage to curbing the symptoms of depression to the menopausal women since old age is a risk factor for women developing breast cancers and other chronic diseases, the hormone replacement therapy medications is a high risk factor and should not be encouraged but recommend psychological counseling and psychotherapy.

In addition to the hormone and antidepressant treatment; experts also recommend, the use of psychotherapy along with whatever, medication is chosen. Two types of psychotherapy are highly recommended for depression related to menopause. Interpersonal therapy focuses on understanding how changing human relationships may contribute to or relieve depression. Cognitive-behavioral therapy on the other hand focuses on identifying and changing the pessimistic thoughts and beliefs that accompany depression (Almeida, et al., 2016; Soares & Frey, 2010). However, when psychotherapy is used alone it usually works more gradually, than medication, thus the psychotherapy takes two (2) months or more to show its full effects. The benefits may be long-lasting. Taking psychotherapy or counseling may be needed, in order to help women understand their bodies and for them to become better acquainted with the changes going on in themselves. Finally, women should learn to say no, If they spend their time to please everyone else, they would not have any time and energy left for them (Pearson, 2011;Dargan, 2015).Psychotherapy is usually combined with medication in major depression. It is unlikely to help severe depression if used by it. Just working with psychotherapist however, is unlikely to help severe depression unless medication is use alongside (Pearson, 2011 and Dargan, 2015).

Antidepressant medication is very useful and appropriate in situations where the first line of treatment is not helping. It is important to give each treatment strategy enough time to work

before considering another. If hormones are tried first, a response should be seen within 2-4 weeks. If the response is not satisfactory, the experts strongly suggest adding, an antidepressant. If the antidepressant is used first, it must be adjusted to a high dose and then given for at least 1–2 months to assess the condition, if it will assist and improve the condition. However, if an SSRI antidepressant does not work in this time frame but produces intolerable side effects and has to be stopped sooner, the experts strongly recommend switching to a second SSRI. The doctor may also suggest combining the SSRI with a second medication which could be either another kind of antidepressant, or hormone replacement therapy if not already in use (Fountoulakis & Möller, 2011; Dargan, 2015; Almeida, et al., 2016).

As depression and poor lifestyle practices in midlife have been associated with, poor health outcomes in older age, developing health promotion intervention that are relevant to women in the menopause transition seem not only desirable, but a necessity. The preventive strategies in overcoming depressive symptoms include client education, reassurances, lifestyle changes for instance consuming well balance diet, daily exercises, avoidance of smoking and alcohol consumption, optimization of general health and social support for the minimization of vasomotor symptoms and problem solving strategies (Frey, et al., 2008; Chan ,et al., 2014).

However, if depression is prominent (that is major depressive episode or dysthymia), antidepressants treatment and/or psychotherapy as well as estrogen containing hormone therapy is recommended for women with moderate to severe vasomotor symptoms. Other contraindications and preliminary evidence suggests that, it may also improve mood (Pearson, 2011; Miraj, et al., 2016). As the origin of depression during the menopausal transition is most likely a multi-factorial incident, its optimal management and prevention should target multiple

factors, which are consistent with the results of successful interventions designed to decrease the prevalence of depression and suicide ideation later in life (Clayton & Ninan, 2010).

Non-pharmacological management of depression among women in their menopausal can also include nutritious diet, a balanced diet with calcium and protein is helpful. However, supplementary calcium- daily intake of 1-1.5 grams can reduce osteoporosis and fracture (Thapa, et al., 2015; Almeida, et al., 2016).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter concentrates on the methods employed to carry out the research study. It contains the study area/setting, study design, study population, study unit, sample size determination, sampling techniques, data source, study variables, instruments for data collection, data collection procedure, data analysis and presentation of results, training and pre-testing, quality control, ethical considerations, and limitations of the study.

3.1 Location and Size of the Municipality

The Kassena-Nankana Municipality is among the Fifteen (15) Districts and Municipalities in the Upper East Region. The Municipality shares boundaries to the North with Kassena-Nankana West and Burkina Faso, to the East with Kassena-Nankana West and Bolgatanga Municipality, to the West with the Builsa North District and to the South with West Mamprusi District in the Northern Region.

The Municipal has a population density of 92 persons per square kilometer. It has 110 communities, majority of which are rural and only 13 per cent of the population live in town. Navrongo can be classified as the only urban settlement (Municipal Health Directorate Annual Report, 2017).

Moreover, the settlement pattern of the population is generally dispersed. This settlement pattern has effect on the distribution of facilities especially water and sanitation. However, the predominant ethnic groups in the Municipality are Kasenas, Nankams and Builsas all co-existing peacefully. However, there are few migrant Workers and Traders from the Southern part of the

Country and Nigeria. The Population of the Kasena-Nankana Municipality is estimated to be 118,101 (Population and Housing Census, 2010).

3.2 Health Facilities in Kasena-Nankana Municipality

The Municipal is made up of seven Sub Municipalities with various Government Health Facilities and one Government Hospital. These include the War Memorial hospital, two Health Centers at Navrongo (the Navrongo Central Health Centre and Kologo Health Centre), twenty (20) Community Health Planning and Service compounds (CHPS) and two other Health Facilities; one Christian Health Association of Ghana (CHAG) and the University for Development Studies Hospital, making a total figure of Twenty- Six (26) Health Institutions, providing various forms of Health Care Service to citizens within and beyond the Municipality particularly Burkina Faso (Municipal Health Directorate Annual Report, 2017).

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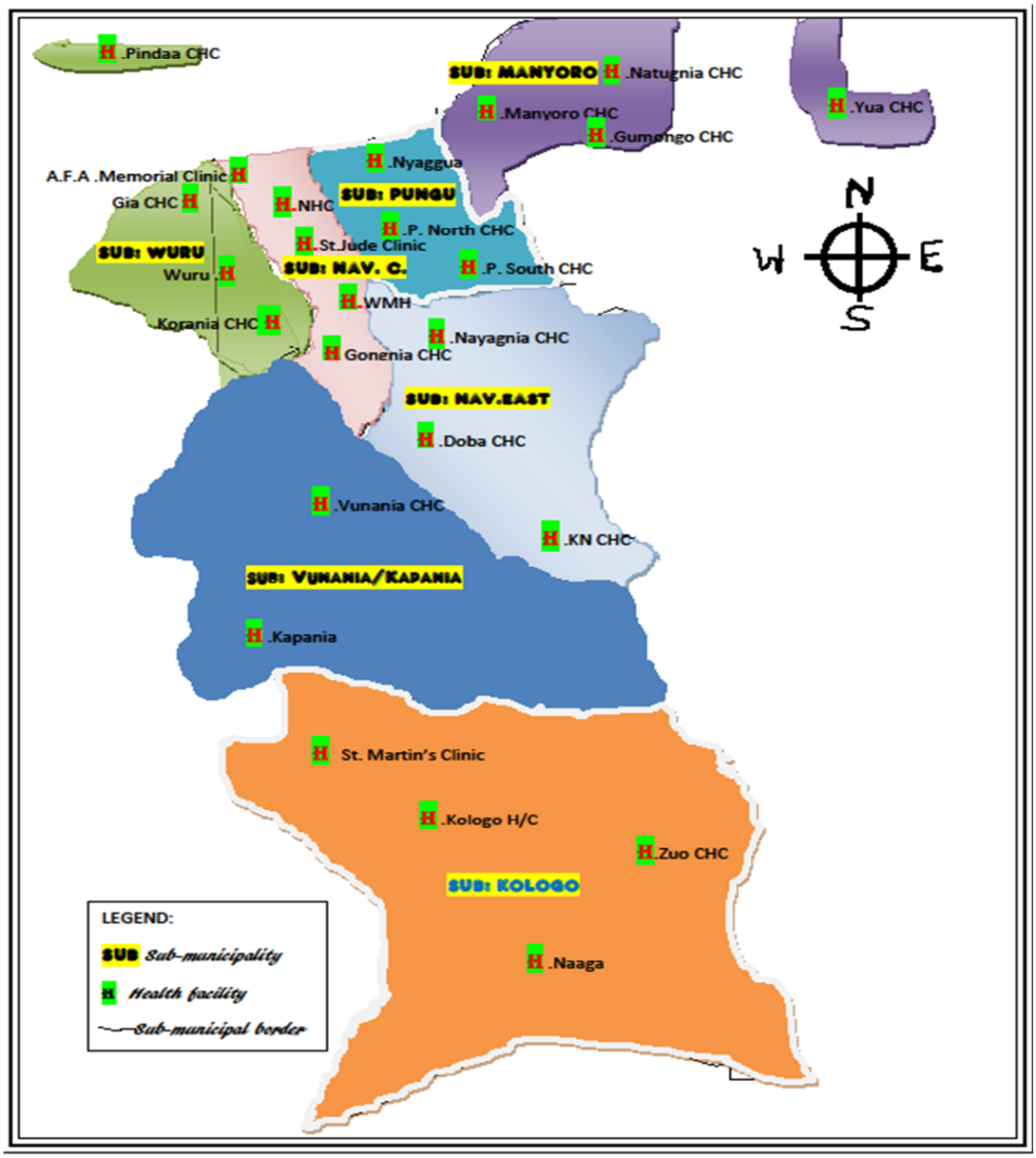

Fig.3.1: Map Indicating the Sub-Municipalities and Health Facilities in the Municipality (Municipal Health Directorate Annual Report, 2017).

3.3 Study Design

A descriptive cross-sectional study design was employed to collect the data as it allows the collection of large amount of quick and cheap data that can be generalized, and it was also possible to compare and assess the relationships of variable (Yu, 2009).

The study used a mixed method approach which involved both qualitative and quantitative approaches in collecting and analyzing the data. The two approaches were used in a complimentary manner. Thus the mixed method provided a better understanding of research challenges than one approach alone**.** That is, some amount of numerical data have been collected and analyzed using mathematically based methods (Yu, 2009) to establish a cause-effect relationship of the situation, while at the same time get an in-depth understanding of the problem by gathering rich qualitative data.

The quantitative data were collected from the women who were in their menopause using questionnaire, while the qualitative data were collected from the officials of the health facilities using in-depth interviews. Finally, descriptive research design allows for greater degree of accuracy, reliability, validity, standardization of measurement, quality and uniqueness of the study.

3.4 Sample Size Determination

The sample size was estimated using Cochran mathematical expression as shown in the equation one below.

$N = \frac{Z^2 \times PQ}{d^2}$,(“Cochran’s sample size formula,” 1963)

Where: N is the desired sample size.

Z is the confidence level at 95% (1.96).

P is the mean prevalence which is unknown and therefore set at 50% (0.5) of depression among women during the transition to menopause in the Navrongo Municipality.

Q is a constant calculated as 1uP (1u0.5).

D (5% = 0.05) the figure of margin of error.

Therefore, the mathematical calculation was as follows:

Where,

$$N = \frac{(1.96)^2 \times (0.5) \times (0.50))}{0.05^2}$$

$$= \frac{3.842)(0.5)(0.5)}{0.0025}$$

$$= \frac{3.8425\ (0.25)}{0.0025}$$

$$= \frac{0.96}{0.0025}$$

$$= \mathbf{384}$$

3.5 Sampled Size Selection

The objective of selecting a sample is to achieve maximum accuracy in the estimation within a given sample size and to avoid bias in the selection of the sample. This is important as bias can attack the integrity of facts and jeopardize the research outcome.

From the above mathematical calculation, the study used a sample size of 384 women aged above forty years. However, in this study it was anticipated that not all the respondents will be willing to participate. As a result of that, a 1.5% of non-respondents was added giving a figure of six (that is the 1.5% multiple by the 384 gives a figure of 5.76 which was rounded up to six), therefore, giving a total sample size of 390.

For the qualitative data 26 health workers were interviewed; this was achieved through purposive selection of one health care worker each from all the twenty-six health facilities within the Municipality.

3.6 Target Population for the Study

The target population was all women who were in their menopause transition.

3.7 Study Population

This study was carried out among women residing within the Kasena-Nankana East Municipality of the Upper East Region. More specifically the study population was women aged 40 years believed to be in their menopause. The population in this age category is believed to be going through menopause as the natural age of onset of menopause is between 40-55 years worldwide, with the average being 50 years in developed countries and 49.3 years in developing countries (Makara-Studzińska, et al., 2014; Pinkerton, et al., 2010). Therefore, the target population was all women in their menopause transition and residing in the Kasena-Nankana Municipality.

Table 3.1 below represents the number of participants interviewed per health facility in the various communities. In all 390 respondents were used.

Table 3.1: Number of Participants Interviewed per Health Facility and Communities

Name	Community	Number of participants	Percentage %
Navrongo Health Centre	Navrongo	15	4
War Memorial Hospital	Navrongo	15	4
St Martin's Clinic	Biu	15	4
Vunania CHPS	Vunania	15	4
Doba CHPS	Doba	15	4
Nyagnia CHPS	Nyagnia	15	4
Wuru CHPS	Wuru	15	4
Gognia CHPS	Gognia	15	4
Pungu Central CHPS	Pungu	15	4
Pungu South CHPS	Pungu	15	4
Pungu Dimbasinia CHPS	Dimbasinia	15	4
Punyoro CHPS	Punyoro	15	4
Korania CHPS	Korania	15	4

Nangalikinia CHPS	Nangalikania	15	4
Manyoro CHPS	Manyoro	15	4
Kologo Health Centre	Kologo	15	4
U.D.S Hospital	Navrongo campus	15	4
Natugnia CHPS	Natugnia	15	4
Yua CHPS	Yua	15	4
Kassena-Nankana CHPS	Kandiga	15	4
Natugnia CHPS	Natugnia	15	4
Zuo CHPS	Zuo	15	4
Zongo CHPS	Zongo	15	4
Gumongo CHPS	Gumongo	15	4
Pindaa CHPS	Pindaa	15	4
Biu CHPS	Biu	15	4

3.8 Sampling Techniques

3.9 Sampling method

The rationale for sampling is to make generalization or to draw inferences based on samples about the parameters of population from which the samples are taken. Sampling can save cost and human resources during the process of the research work (Easton & McColl, 2007).

In this study, simple random sampling (probability sampling) which gives every item in the universe an equal chance of inclusion in the sample and purposive sampling (non-probability sampling) methods were used in all the health facilities in the Municipality and the communities in which these Health Institutions were located were sampled using purposive sampling because the data were expected to target all women believed to be above forty years and were in their menopause transition visiting any of the health facility with gynecological and non-gynecological reasons and the communities where these health facilities were situated required a few distance travelling.

3.10 Study Variables

These study variables comprised of dependent and independent variables respectively. The dependent variables were the prevalence of depression and the transition to menopause. Whereas, the independent variables were age, educational status, ethnicity, occupation, marital status, income level, menopausal status, physiological symptoms, psychological symptoms, risk factors, quality of life, coping and intervention modalities.

3.11 Quality Control

3.11.1 Training of Research Assistants

This study used two research assistants, who were selected and adequately trained for proper data gathering. These were health staff within the locality and fluent in the local languages spoken (Kasem, Builli and Nankam).

The training was done on the study tools and procedures in data collection. They were taught how to establish rapport and how to interpret, translate technical terminologies from the English language into the Local language and how to receive verbal response from the respondents. The principal investigator supervised the data collection.

3.11.2 Pre-Testing of the Research Instruments

The instruments for the study (the questionnaire and in-depth interview guide) were pre-administered in Paga Hospital in the Kasena-Nankana West District of the Upper East Region. To women who were aged 40 years and above and were believed to be in their menopause that is, were no longer menstruating and who were visiting the health facility. They were ten (10) participants, this took a period of two weeks that was the first two weeks in April,2018.Whereas, the in-depth interview guide was pre- administered to three health care workers within the same facility they included one registered psychiatric nurse, one registered general nurse and one physician assistant.

The questionnaire assessment revealed that the research assistants could not complete all the responses from the questionnaire template which was a challenged and I rectified it before the real data collections. However, when the data was analyzed it revealed that 5 out of the 10 respondents reported to the Hospital with sadness, anorexia nervosa, mood swings, suicidal ideations, insomnia and anxiety as the main symptoms associated with depression in their age.

From the interview guide all the three health care providers stated that, the risk factors leading women to developing early menopause; hence, the associated exhibition of depressive symptoms and episodes among. The three primary care providers stated that women undergoing hysterectomy earlier in life can result in them developing early menopause hence it associated signs and symptoms of depression. Also high consumptions of substances such as alcohol and cigarette can lead women to develop early depressive symptoms during their menopause transitions. On the coping and intervention modalities the three care providers suggested that seeking help from health providers, instituting daily exercises and the consumption of

medications were the surest ways for overcoming the symptoms of the depression during the menopause transitional period.

The research assistants used this opportunity to get familiar with the questionnaires and the in-depth interview guide this enabled them to become used to the interview processes and improved their skills. It again created the opportunity for me to cross examine whether the tools were able to generate the desired data.

The mistakes identified above where, the research assistants were not completing the forms were corrected and they were again taken through thoroughly before the actual data collection was carried out between April, 2018 and June, 2018.

3.12 Data Collection Procedure

Data collection is a process of collecting information from all the relevant sources to find answers to the research problem, test the hypothesis and evaluate the outcomes (Dudovskiy, 2018).

Both Primary and Secondary data were collected. The primary source included the use of interviews and questionnaires. In all, the data were collected from 390 respondents within the Kasena-Nankana East Municipality.

Secondary data were also obtained from books, journals, magazines, internets, District Health Management Information System and other earlier researches on the subject matter. The following instruments were used to collect the data:

a) Questionnaire
b) In-depth interview guide

3.13 In-Depth Interview Guide

In –depth interview guide primarily done in qualitative research and occur when researchers ask one or more participants general, open-ended questions and record their answers often audiotapes are utilized to allow for more consistent transcription (Creswell, 2012 and Palinkas, et al.,2015). Interviews are particularly useful for uncovering the story behind a participant's experiences and pursuing in-depth information around a topic. Interviews may be useful to follow-up with individual respondents after questionnaires, for example, to further investigate their responses (McNamara, 2009).

In qualitative research specifically, interviews are used to pursue the meanings of central themes in the world of their subjects. The main task in interviewing is to understand the meaning of what the interviewees say (McNamara, 2009). Usually open-ended questions are asked during interviews with the hope of obtaining impartial answers, while closed ended questions may force participants to answer in a particular way (McNamara, 1999; & Creswell, 2012).

In-depth interview guide was used to collect information from the Twenty -six Health professionals comprising 10 Community Psychiatry Officers, 4 Registered General Nurses, 4 Midwives, 3 Community Health Nurses ,3 Physician Assistant and 2 Pharmacy Assistants as the key informants. The period was April.2018 and June, 2018, English was the main language used during the interviewed session, the data collection was categorized into two sections. Section one focused on their professional background and their years of working experiences, while section two concentrated on the prevalence of the depression (that is number of women visiting each health facility with complains of depressive symptoms and episodes), the risk factors in their opinion that might lead to the incidence of depression and the type of counseling that was given to the victims to overcome the challenge.

3.14 Questionnaire

Section one socio-demographic characteristics covering age, marital status, ethnicity, religion, educational level, occupation, Section two: global study of women health questionnaire on the prevalence of perception related to mood changes with the responses; not at all, mild, moderate and severe. The patient health questionnaire – nine questions; these questionnaires are to measure the prevalence of depression among menopausal women. Thus over the past two weeks, how often have you been bothered by any of the following problems. Little interest in doing things, Feeling down, depressed or hopeless, Changes in sleeping pattern, Feeling tired or having little energy, Feeling bad about yourself that you are a failure or have let yourself or your family down (Guilty feeling), Trouble concentrating on things (such as reaching the newspaper or watching Television),Suicidal thoughts, Feeling of sad, blue and unhappy? With the responses not at all, more than half the days, nearly every day and several days.

Menopause questionnaires developed by Berlin centre of epidemiology and health, and the global study on women health questionnaire on the symptoms experience by women during their transition to menopause, with the response not at all, mild, moderate and severe.

Global study on women health questionnaires and behavioral risk factor surveillance system questionnaires in assessing the risk factors associated with depression during the menopause transition with the responses; not at all, mild, moderate and severe.

In assessing the health quality of life among menopausal women, behavioural risk factor surveillance system questionnaires and global study of women health questionnaire were used, with the responses, not at all, mild, moderate and severe.

In evaluating the coping strategies to overcoming the symptoms of depression during the menopause transition; global study of women health questions and coping inventory responses was considered with the responses; not at all, mild, moderate and severe . Risk factors surveillance system questionnaires, the centre for epidemiological studies depression scale and menopause rating questionnaires were considered.

In assessing the treatment modalities to overcoming the symptoms of depression during the menopause transition with the responses; not at all, mild, moderate and severe.

The 390 respondents therefore read the questions, interpret what is expected and then write down the answers. However, interviewer-administered questionnaire was conducted on the non-literate menopausal women and the answers were recorded by the researcher or the assistant.

3.15 Data Analysis and Presentation Methods

3.15.1 Quantitative Phase

Data collected was examined thoroughly to ensure that the responses were accurately filled and completed. The final data was analyzed using the Statistical Package for Social Sciences (SPSS) version 16. Data coding was done in various categories. Descriptive analyses were done such as frequencies, percentages, cross tabulations, proportions, correlation and charts.

However, to establish any correlation between the dependent variable and independent variables, Pearson's Chi-square was used. The Chi-square analysis was performed on women depressive symptoms with marital status, level of education and occupation. The Odds Ratio was estimated at 95% confidence interval and the level of significance p-value less than 0.05.

All the independent variables that were shown in association with the covariate stage at p-value less than 0.05 and the adjusted effects on the dependent variables at 95% confidence interval. In some cases pie charts, histograms, frequency and percentage tables were used.

3.15.2 Qualitative Phase

The qualitative data was analyzed base on the themes that emanated from the participants responses. In the analysis, scrutiny was done to assess how individual participants or groups responded to each question within the schedule. Transcription was carefully read and double cross examined for accuracy; manually coding of the themes from the data was also done systematically to make sure that, all the themes were properly coded. After the coding was completed, the data with similar themes coding were arranged orderly and collated together in a final write up and described accordingly. It was a descriptive presentation of data and the most fundamental of qualitative analysis. Thematic Analysis allows a researcher to peruse and group the entire textural data into a list of common themes that gives a voice or true representation of the entire data set (Delph et al., 2007).

3. 16 Ethical Consideration and Consenting Process

The study protocol was approved by the School of Allied Health Sciences University for Development Studies and an introductory letter was given to me by the Municipal Health Director which acted as a source document permitting me to visit the various Health Facilities within the Sub-Municipalities without much hindrance.

The process of the study was explained in the local language for the participants to have a better understanding of what the study was about. Participation was voluntary, and participants were made to sign an informed consent form or thumbprint where they were unable to read or write.

They were made aware that they had the option to withdraw from the study if they were not comfortable and also had the choice of declining to respond to any question.

The participants were reassured that all the pieces of information that were provided were to be treated as private and confidential.

3. 17 Limitation

This was a cross-sectional study and hence the causality of association could not be clarified.

Secondly, mood swings and anxiety were assessed by self-reported questionnaires rather than detailed and objective measurements and possible reporting bias should be considered.

Thirdly, the patient health scale and menopause rating questionnaires alone were not adequate procedure for diagnosing depression. A clear diagnosis should have ideally been obtained by a clinical psychiatrist on the basis of professional judgment and using structured assessment tools.

Fourthly, menopausal status was assessed by menstrual history rather than by testing hormonal levels.

Finally, this was a self-sponsored academic study and as a matter of fact financial constraint was a hindrance.

CHAPTER FOUR

PRESENTATION OF RESULTS

4.0 Introduction

This section of the study presents information on the occurrence of depression among women during menopause transition in the Kasena- Nakana East Municipality in the Upper East Region of Ghana. Data was gathered on the socio-demographic characteristics of the respondents, the prevalence of depressive symptoms and episodes, the risk factors associated with the onset of depression, the quality of life of the women during their menopause transitions, the coping and intervention strategies instituted to overcoming the depression during menopause transition among women aged forty years and above in the Kasena-Nakana East Municipality.

4.1 Socio-Demographic Characteristics

This section presents results and discussions on the influence of personal characteristics of the respondents on the prevalence of depression among menopausal women, taken into account their age, level of education, ethnicity, occupation, marital status and religion. The information was collected using questionnaires as a tool.

4.1.1 Age of Respondents

Many women begin to experience menopause at the age of 40 years, hence data was collected mainly from women aged between forty (40) to ninety (90) years as shown in the bar chart below (Fig.4.1).

Out of the three hundred and ninety (390) respondents, majority of them representing 34.1% were in their early post-menopausal age and they fell within the age group of 60-69 years, Thirty-two percent (32%) of the respondents were in the age bracket 40-49 years, the third highest age group

were those within the ages of 50-59 representing 23.1%. Those within 70-79 years were 10.8% and the least age group were those from 80-89 years representing 0.5%.

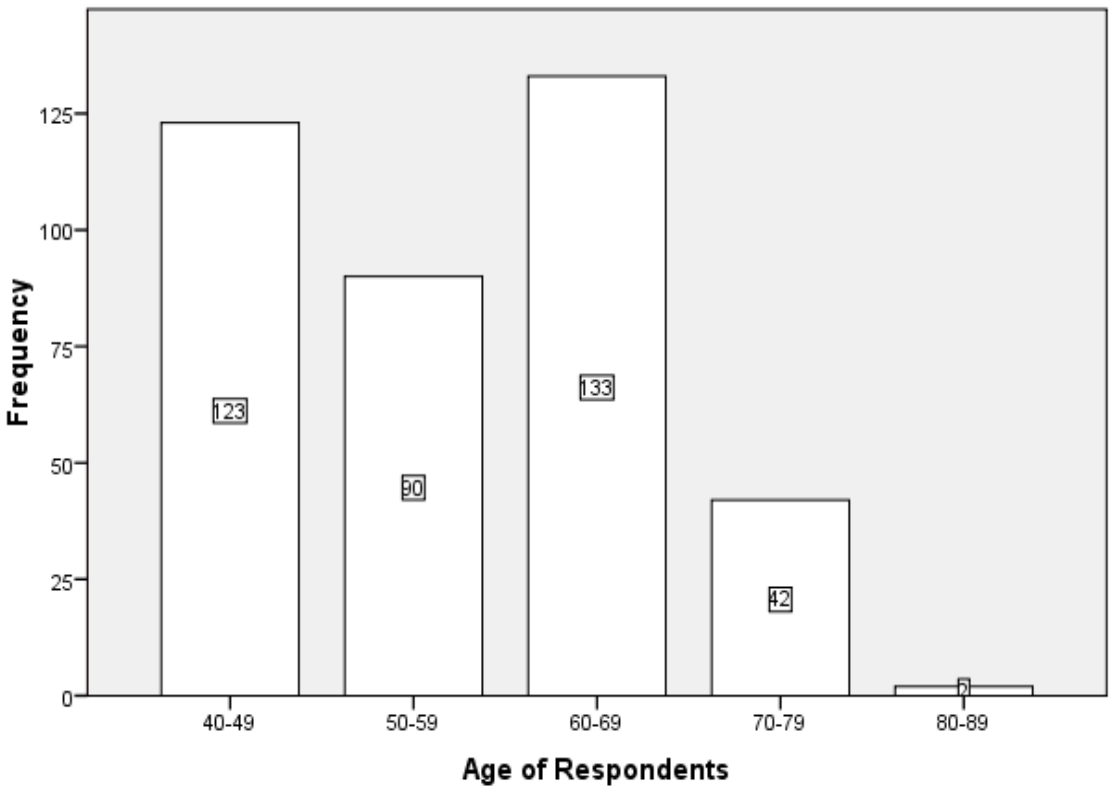

Fig.4.1: Age Distribution of the Respondents

The results in Table 4.1 below shows the socio demographic characteristics of the respondents: With respect to the ethnic groupings, the results indicated that the Kasenas formed the major ethnic group of 43.3%. This is obvious because the study was carried out in a Kasena dominated communities. The Nankanas were the second highest ethnic group of 34.9%. The Builsas formed the third ethnic group within the area (15.6%) and the other ethnic groups comprising the Ashantis and Dagaabas among others were the minority (6.2%).

Furthermore, with regards to the religious background of the respondents, Christians formed the majority with a percentage of 74.9, Traditional believers were 17.7%, Muslims were 6.2% and all others were 1.3%.

With regards to the level of education of the respondents: Most of the respondents had Middle/Junior High School education representing 28.5%, followed by those who had non-formal education were 24.9%, Also, 17.2% had tertiary education, 13% had no education at all and 11.3% of them had Senior High School qualification. Those who had just primary education were the least (5.4%).

With regards to the occupation of the respondents, the self-employed group of the respondents were 30.7 % forming the majority, the second highest group was the housewives with 27.7 %, the third highest group was civil servants with 25.6%, all others were 11.3% and those who were on retirement formed 1.3%.

The marital status of the respondents was also assessed and the results showed that out of the 390 participants' majority were married that is 47.9%. Those who lost their husbands (widows) were 30.8%, however, those respondents who were separated from their partners, divorced or were living a single life formed 21.3%. With regards to the type of marriage constructed, 286 representing 73.3% had customary marriages, Christian marriage was the second highest 20.8%, Islamic marriage was 3.8%, Ordinance marriage was 1.5% and all others were 0.5%.

Table 4.1: Socio-Demographic Characteristics

Variable	Responses	Frequency	Percentage (%)
Ethnicity	Kasenas	169	43.3
	Nankanas	136	34.9
	Builsas	61	15.6
	Others	24	6.2
	Total	390	100.0
Level of education	No education	50	12.8
	Non-formal	97	24.9
	Primary	21	5.4
	Middle/JHS	111	28.5
	SHS	44	11.3
	Tertiary	67	17.2
	Total	390	100.0
Religion of respondents	Islamic	24	6.2
	Christianity	292	74.9
	Traditional	69	17.7
	Others	5	1.3

	Total	390	100.0
Occupation of respondents	Farmer	38	9.7
	Trader	82	21.0
	House wife	108	27.7
	Civil servant	100	25.6
	Others	44	11.3
	Retired	5	1.3
	Public servant	13	3.3
	Total	390	100.0
Marriage status	Married	187	47.9
	Separated	31	7.9
	Widow	120	30.8
	Single	17	4.4
	Divorce	35	9.0
	Total	390	100.0
Type of marriage	Islamic	12	3.1
	Christianity	61	15.6

	Customary	236	60.5
	Ordinance	1	0.3
	Others	1	0.3
	Do not answer	79	20.3
	Total	390	100.0

4.2 Background Characteristics of the Qualitative Interview Respondents

In trying to find out the kind of health care that is usually extended to women with menopausal challenges who visited the health facilities in all the Seven Sub-Municipalities and the main hospital in the Navrongo Municipality, the background of the health care providers was assessed. In all, twenty-six staffs were interviewed and it was revealed that three were Community Health Nurses, ten (10) Community Psychiatric Officers, three Physician Assistants, four Mid-wives, four Registered General Nurses and two Pharmacy Assistants.

Also, with respect to their years of work experience, ten (10) of them worked between 1 to 4 years, nine (9) of them worked between 5 to 9 years and seven (7) worked for 10 years and above.

4.3 Measuring the Level of Mood Swings to the Determine the Respondents Level of Depression Rate.

From Fig. 4.2 below on measuring the level of mood swings; 35.4% of the respondent did not experience the symptoms of mood swings, whilst, 30.0% of them encounter the mood changes in

its mild form, those who experienced mood swings in moderation formed 21.5% and respondents who suffered from severe mood changes were 13.1%.

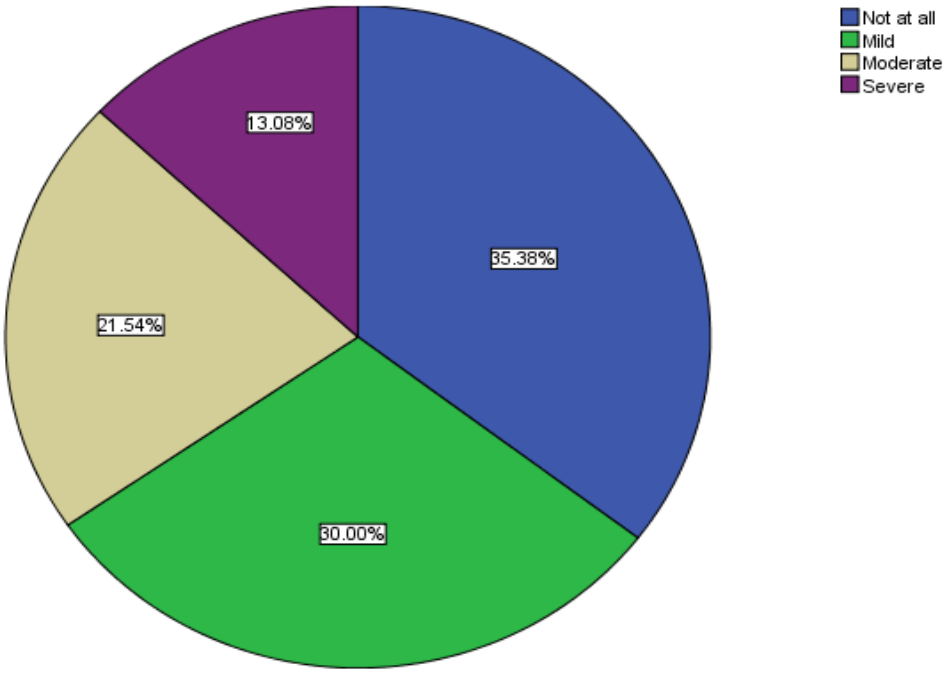

Fig. 4.2 Increased Mood Swings

4.4 Measuring the Level of Feeling of Elation and High Self –Confident to the Determine the Respondents Level of Depression Rate.

Results from Fig. 4.3 below in connection with the feeling of elation and high self-confident indicated that those who did not experience elation and self-confident were in the majority with a value of 234 representing 60.0%, respondents with mild feeling of elation and self-confident were 20.8%, moderate feeling of elation and high self-confident were 13.8% and those with severe feeling of happiness and self-confident were the least with a value of 21 representing 5.4%.

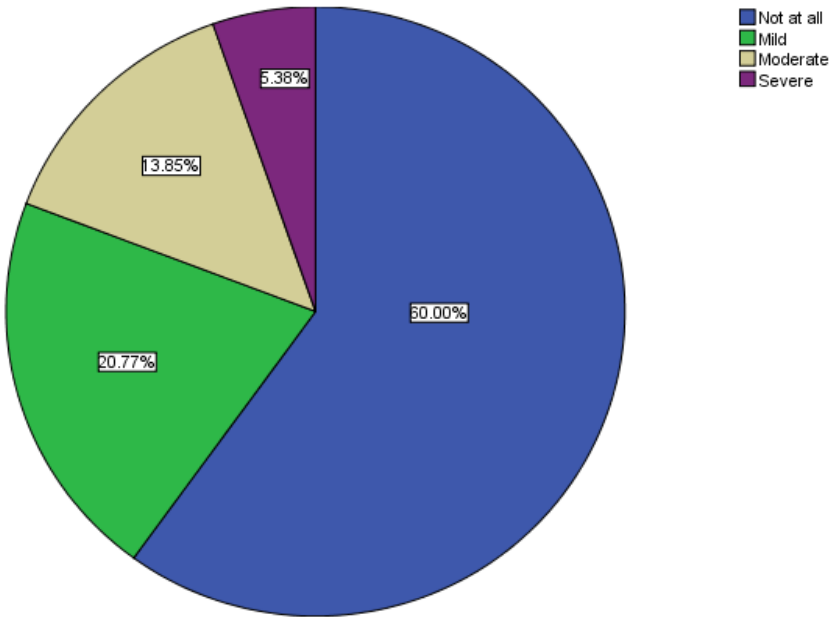

Fig. 4.3: Above Shows Feeling of Elation and High Self-Confident

4.5 The Prevalence of Depression among Women during the Menopause Transition

Since one of the objectives of the study was to assess the prevalence of depression among menopausal women within the Kasena-Nankana Municipality. Therefore, this section discussed the occurrence of depression pertaining to feeling very anxious, loss of interest in things, feeling

depressed and hopeless, and changes in appetite, poor sleep pattern, suicidal ideations, recurrent ideas that appear horrible and trouble concentrating on things.

Table 4.2 below shows prevalence of depression among women. On feeling of anxiety, majority of the respondents (51%) did not exhibit that, whereas 24.1% of them had the feeling of anxiety for a day (mild), whilst 15.4% experienced anxiety and its related symptoms every day but in a moderate manner and those respondents who encountered the symptoms of anxiety in several days that is in severe manner were 9.2%.

With the experience of recurrent ideas that seems horrible among the respondents; 216 representing 55.4% do not experience that, 14.6% experienced it, whilst, 24.1% said they go through that almost every day and those who experienced horrible recurrent ideas for several days were 5.9%.

When it comes to respondents having little interest in doing things, majority of the respondents (187) representing 47.9% were not experiencing that, 108 representing 27.7% stated they did experience it, 14.9% mentioned that their experiences were nearly daily and 9.5% of the respondents stated encountering that for several days.

With regards to depressive feelings or hopelessness, those who never experienced that were 60.0%, those who usually go through that for more than half the day were 25.4%, those who had nearly every day experiences were 5.4% and those who had several days of feeling depressed were 9.2%.

On their pattern of sleep, 54.6% of the respondents never had any sleeping problems, whereas, 23.6% of them had sleeping problems for a day, those who faced the problem nearly every day were 6.7% and those who had the poor sleeping pattern for several days were 14.9%.

Results on respondents who feel tired easily indicated that 232 representing 59.5% never experienced any situation of that sort, 64 representing 16.4% experienced the tiredness for more than half the day, 43 representing 11.0% said they experienced the problem almost every day and those who said they experienced the problem for several days were 13.1%. Change in appetite was one of the conditions also looked at in table 4.2, because some menopausal women sometimes experienced this condition. Hence, the results obtained indicated that 92 representing 49.2% of the respondents did not experience change in appetite (31.3%), 42 respondents representing 10.8% said they experienced the change in appetite for a day and those who had the problem for several days were 8.7%.

Also, looking at how respondents felt during the transition, 66.4% said they never felt bad or any way during the period, those who felt bad for a day were 18.7%, those who felt bad for more than a day formed 9.0% and those who said they felt bad for several days were 5.6%.

On suicidal tendencies, majority of them (94.4%) never had suicidal thoughts, while 3.3% of them stated they experienced that more than half the day, 1.3% mentioned that they exhibit the tendencies nearly every day and they required psychological counseling.

Trouble concentrating on things such as watching television or reading the newspaper; majority that is 58.7% do not experience concentration problems whereas, 21.8 % experience it more than half the day, 8.7% stated that they exhibit it nearly every day and 0.8% mentioned that they experienced it on several days.

From the in-depth interview guide assessment on the number of mid -life women visiting each health facility with the history of depressive symptoms, 108 cases were recorded in all the health facilities within the Municipality from 2016 to half year of 2018.

It can be concluded that the respondents experienced the following sign and symptoms ;increased mood swings, feeling of elation, anxiety, little interest in doing things, change in appetite, sleep difficulties ,sadness, suicidal tendencies, recurrent ideas that seem horrible and feeling of exhaustion during the survey suggesting high prevalence of depression in the study area.

Table 4.2: Prevalence of Depression among Women

Variable	Responses	Frequency	Percentage (%)
Feeling very anxious	Not at all	200	51.3
	Mild	94	24.1
	Moderate	60	15.4
	Severe	36	9.2
	Total	390	100.0
Little interest in doing things	Not at all	187	47.9
	More than half the day	108	27.7
	Nearly everyday	58	14.9
	Several days	37	9.5
	Total	390	100.0
Recurrent ideas that seems horrible	Not at all	216	55.4
	More than half the day	56	14.6
	Nearly everyday	94	24.1
	Several days	23	5.9
	Total	390	100.0

Feel depressed or hopeless	Not at all	234	60.0
	More than half the day	99	25.4
	Nearly everyday	21	5.4
	Several days	36	9.2
	Total	390	100.0
Changes in sleeping pattern	Not at all	213	54.6
	More than half the day	92	23.6
	Nearly everyday	26	6.7
	Several days	58	14.9
	Total	390	100.0
Always feeling tired	Not at all	232	59.5
	More than half the day	64	16.4
	Nearly everyday	43	11.0
	Several days	51	13.1
	Total	390	100.0
Changes in appetite	Not at all	192	49.2
	More than half the day	122	31.3

	Nearly everyday	42	10.8
	Several days	34	8.7
	Total	390	100.0
Always feel bad about self	Not at all	259	66.4
	More than half the day	73	18.7
	Nearly everyday	35	9.0
	Several days	23	5.9
	Total	390	100.0
Suicidal thoughts	Not at all	368	94.4
	More than half the day	13	3.3
	Nearly everyday	5	1.3
	Several days	4	1.0
	Total	390	100.0
Always feel sad and unhappy	Not at all	123	31.5
	More than half the day	121	31.0
	Nearly everyday	58	14.9
	Several days	88	22.0

	Total	390	100.0
Trouble concentrating when watching television	Not at all	229	58.7
	More than half the day	85	21.8
	Nearly everyday	34	8.7
	Several days	38	9.7
	Do not answer	4	1.1
	Total	390	100.0

4.6 Menopausal Status Assessments

The signs and symptoms as indicated by the respondents are presented in the table 4.3 below. The signs and symptoms were categorized into two, single and multiple signs and symptoms. For those who exhibited only one sign or symptom, 92 of the respondents representing 23.6% stated that they feel normal, 34 representing 8.7% experience hot flushes, 26 representing 6.7 % stated they experienced sleep difficulty, 19 of them representing 4.9% encountered mood swings. For memory problems, they were 3.9%, loss of sexual interest were 3.2%, irritability 2.9%, irregular periods 2.6%, Vaginal dryness 2.6%, Weight gain 2.1% and decreased concentration were 1.3%.

With regards to multiple signs and symptoms, hot flushes, loss of sex interest and memory problems formed the majority with a percentage of 12.6, this was followed by mood swings, decrease concentration, sleeping problem that is 7.8%, irritability, irregular menstrual cycles and hot flushes was the third highest with a percentage of 6.7, hot flushes, vaginal dryness and loss of

sex interest was 5.2%, irregular periods, weight gain and mood swings was 4.6% and that of hot flushes, irregular periods and vaginal dryness was the least with a percentage of 1.3.

Table 4.3: Menopausal Status Assessment

Variable	Responses	Frequency	Percentage (%)
Menopause sign and symptoms (single response)	Hot flushes	34	8.7
	Sleeping difficulty	26	6.7
	Mood Swings	19	4.9
	Memory problems	15	3.9
	Loss of sexual interest	12	3.2
	Irritability	11	2.9
	Irregular periods	10	2.6
	Vaginal dryness	10	2.6
	Weight gain	7	2.1
	Decreased concentration	5	1.3
	Feel it is normal	92	23.6
	Sub Total	241	62.0

Menopause signs and symptoms (those who had multiple signs and symptoms)	Hot flushes, loss of sex interest and memory problems.	49	12.6
	Mood swings, decrease concentration, and sleeping problem.	30	7.8
	Irritability, irregular menstrual cycles and hot flashes.	26	6.7
	Hot flushes, vaginal dryness and loss of sex interest.	20	5.2
	Irregular periods, weight gain and mood swings.	18	6.7
	Hot flushes, irregular periods and vaginal dryness	6	1.5
	Sub Total	149	38.0
	Grand Total	390	100.0

4.7 Women Visiting Health Facilities with Depressive Conditions in the Municipality

On the number of women aged 40 years and above visiting the various health institutions with the history of mood disorders; for that matter anxiety and depressive disorders for the past two years (2016-2017) including the first two quarters of 2018, the table below summarizes the number of women visiting each health facility Out-Patient Departments (OPD).

In all, 108 of the women aged 40 years and beyond reported to the various health facilities with the symptoms of depression. However, Table 4.4 below shows the values break down with regards to the various years 2016 – 2018.

Table 4.4: Number of Out-Patient Department Depressive Cases for a Three-Year Trend

Institution	Year			Total number	Common symptoms recorded
	2016	2017	2018		
War Memorial Hospital	10	8	4	22	Sadness, anxiety, poor interest in doing things and insomnia.
Kologo Sub-Municipality	5	6	4	15	Poor sleep pattern, feel hopeless, sadness, mood swings and hallucinations.

Wuru-Gia Sub-Municipality	5	5	2	12	Little interest, feel bad, insomnia, trouble concentrating, and depressed
Vunania/KapaniSub-Municipality	5	6	5	16	Little interest, sad, insomnia, poor appetite.
Pungu Central Sub-Municipality	4	3	3	10	Loneliness, moody, sad and quarrelsome.
Manyoro Sub-Municipality	2	3	4	9	Feel sad, anxious, poor appetite and tearfulness.
Navrongo Central					Poor pleasure, insomnia, suicidal

Sub-Municipality	6	7	4	17	thoughts.
Navrongo East Sub-Municipality	1	3	3	7	Poor appetite, insomnia, poor concentration.
Grand Total	38	41	27	108	

With respect to the 2018 values the depressive symptoms can be suggested that one in every hundred patients visiting each health facility reports with depressive symptoms such as feeling of sadness, worry, mood swings, loss of interest, insomnia, poor appetite, headaches and bodily pain among others. this was not different from the statement that depression is a mental health condition which is prevalent in Ghana, with four to five out of ten persons suffering from the condition, that is 41% of people in Ghana are depressed (Whiteford et al., 2013; Osei, 2017).

4.8 Risk Factors of Depression

The results in Table 4.5 below indicated that 100 (25.6%) of the respondents ever suffered from depression in one way or the other. Whereas, majority (74.6%) said they never suffered depression. However, respondents who attributed the causes to multiple causes of their depression were 13.5% of the respondents. That is, post-partum and premenstrual syndrome (4.9%), poverty and poor relationships (3.1%), poor relationships and substance abuse (2.6%)

and finally infection and poor relationships (1.5%). Those with single responses were 14%. But 73.1% of the respondents did not respond to the question.

It was also revealed that some respondents (25.9%) in their depressive situation could not access medical services due to financial constraints, but 237 (60.8%) respondents said they could access medical services. A total of 23 (7.4%) stated that they had no knowledge in what was asked.

With regards to smoking, majority of the respondents were non-smokers (90.5%) whereas, 23 (5.9%) were engaged in smoking however, 13 (3.3%) of them declined to answer the question. Regarding those who said they smoke, they were asked to indicate whether they were still smoking or not. Hence, 19 representing 4.9% of the respondents said they smoked in the past, four (4) representing 1.0% said they smoked occasionally. Also, 1.1% said they were still engaged in the smoking.

Fifty-nine percent (59%) of the respondents consumed alcohol, while 132 representing 33.8% mentioned that they never took alcoholic beverages, 6.7% of them decline answering the question. Findings on the category of drinking revealed that 19.5% said they drink occasionally, those who drink regularly were 16.9%, those who used to take alcohol in the past were 4.1% and finally those who were still involved in alcohol consumption were 8.7%.

Medical treatment that caused menopause was also assessed. In that regard, 92.6% said they never received any medical treatment that resulted in them developing menopause, whereas, 5.1% stated that they had the menopause due to medical treatment they received.

Table 4.5: Causes/Risk Factors for Developing Depression

Variable	Responses	Frequency	Percentage (%)
Ever suffered depression	Yes	100	25.6
	No	289	74.1
	Do not respond	1	0.3
	Total	390	100.0
Cause of depression	Do not respond	287	74.1
(Single response)	Post-partum	14	3.6
	Poor relationship	13	3.4
	Bereavement	12	3.1
	Substance abuse	5	1.7
	Poverty	4	1.4
	Premenstrual syndrome	3	0.8
	Total	51	14.0
Causes of depression	Post-partum and Premenstrual syndrome.	19	4.9
(Multiple responses)	Poverty and Poor relation.	12	3.1
	Poor relation and substance abuse.	10	2.6

	Infection and Poor Relationship.	7	1.8
	Bereavement and Poor Relationship.	4	1.1
	Total	52	13.5
Was there time you could not visit medical facility because of cost?	Yes	101	25.9
	No	237	60.8
	Do not know	23	5.9
	Failure to answer	29	7.41
	Total	290	100.0
Smoking	Yes	23	5.9
	No	353	90.5
	Do not know	14	3.6
	Total	390	100.0
Category	Current	3	0.8
	Past	19	4.9
	Occasional	4	1.0
	Regular	1	0.3

	Do not smoke	363	93.1
	Total	390	100.0
Drinking alcohol	Yes	231	59.2
	No	132	33.8
	Do not know	26	6.7
	Total	390	100.0
Category	Current	34	8.7
	Past	55	14.1
	Occasional	76	19.5
	Regular	66	16.9
	Do not answer	159	40.8
	Total	390	100.0
Medical treatment that caused menopause	Yes	20	5.1
	No	361	92.6
	Do not answer	9	2.3
	Total	390	100.0
Hysterectomy	Yes	20	5.1

	No	370	95.9
	Total	390	100.0

4.8 The Correlation between Depression and Socio-Demographic Characteristics

The Chi-square test was used to compare scores obtained from Global study on women health and behavioural risk factor with regards to ever suffered depression in the respondents with particular reference to their socio-demographic characteristics. Analysis of the Chi-square on the marital status of the respondents and depression indicated that there was a significant relationship ($p = 0.005$).

The respondents' educational level and the prevalence of depressions, the Chi-square test showed that there was also a significance relationship ($p = 0.001$). Again, for Religion and prevalence of depression during the Menopause transition the Chi-square test showed a high significant difference ($p = 0.005$) indicating there is association between Religion and prevalence of depression during Menopause.

The Chi-square test on ethnicity and prevalence of depression during menopause transition also indicated highly significant difference ($p = 0.05$). Also, Chi-square test on occupation of the respondents and prevalence of depression during Menopause transition was highly significant ($p = 0.001$).

Table 4.6: Association of History of Depression and Socio-Demographic Characteristics

Characteristics	Ever suffered depression	Never suffered depression	X^2 association *P value <0.05*
Age			
63+	30	93	$X^2 = 1.59,$
40-49	22	68	$P < 0.08$
50-59	35	97	
60-69	13	29	
70-79	0	3	
80-89	0	0	
Total	**100**	**290**	
Marital status			
Married	12	26	$X^2 = 11.26,$
Separated	13	69	$P < 0.05$
Widow	23	86	
Single	42	57	
Divorced	10	34	
Total	**100**	**290**	
Educational level			
No education	9	41	$X^2 = 34.79,$
Non-formal education	24	73	$P < 0.001$
Primary	4	17	
Middle/JHS	25	87	
SHS	27	17	

Tertiary	11	55	
Total	**100**	**290**	
Religion			
Islamic	1	23	$X^2 = 13.59,$
Christian	88	204	$P < 0.005$
Traditional	10	59	
Others	1	4	
Total	**100**	**290**	
Ethnicity			
Kasena	42	127	$X^2 = 15.80,$
Nankana	47	89	$P < 0.05$
Builsa	11	50	
Others	0	24	
Total	**100**	**290**	
Occupation			
Farmer	12	26	$X^2 = 26.87,$
Trader	13	69	$P < 0.05$
House wife	23	86	
Civil servant	42	57	
Retired	10	34	
Public servant	0	5	
Other	0	13	

Total	**100**	**290**

4.8 Evaluating the Quality of Life of the Respondents during Menopause

Table 4.7 below examined the symptoms interference with the respondents' daily activities that affect their quality of life. Findings with respect to depression interference with one's work efficiency indicated that 38.0% of them did not encounter it, 39.7% of the respondents stated that they experienced mild interference, whilst 15.4% mentioned moderate interference with work efficiency and 5.15% said the interference was severe. Analysis on depression interference with one's relationship with family members showed that majority of the respondents indicated that, they had the experience in a mild form. Those who had it in moderately formed 24.5% and those who went through severe interference were 6.7%. However, those who did not experience the problem were 33.8% Also, with regards to how depression affects home responsibilities, 32.3% said depression has never affected their responsibility at home, whilst 28.5% said they experienced it mildly, 22.8% exhibit it moderately and 15.6% stated that they experience severe interference of home responsibility from the symptoms.

On depression interference with their social life, 26.2% of them stated that it never affected them, whilst, the rest indicated mild (38.2%), moderate (22.1%) and severe (13.1%) effects respectively. Analysis on the general health of the individual respondents revealed that 249 (63.8%) stated that their health was good, followed by those who said they had very good health (that is, without much physical and psychological problems) were (19.2%) and those who said their health status was fair (that is, they experienced physical and psychological abnormalities) were (16.4%).

Table 4.7: Daily Activities that Impact on the Quality of Life of the Respondents

Variable	Response	Frequency	Percentage
Work efficiency	Not at all	152	39.0
	Mild	155	39.7
	Moderate	60	15.4
	Severe	20	5.1
	Failed to answer	3	0.8
	Total	**390**	**100.0**
Relationship with family	Not at all	132	33.8
	Mild	135	34.6
	Moderate	95	24.4
	Severe	2	6.7
	Do not respond	2	0.5
	Total	**390**	**100.0**
Home responsibilities	Not at all	126	32.3
	Mild	111	28.5
	Moderate	89	22.8
	Severe	61	15.6
	Do not answer	2	0.5
	Total	**390**	**100**
Social relationship	Not at all	102	26.2
	Mild	149	38.2
	Moderate	86	22.1

	Severe	51	13.1
	Do not answer	2	0.4
	Total	**390**	**100.0**
General	Very good	75	19.4
Health Status	Good	249	63.8
	Fair	64	16.4
	Do not know	2	0.4
	Total	**390**	**100**

Analysis from the table 4.8 below on sexual experiences indicated that 36.2% of them stated that they no longer engage in the sexual act, whereas, 18.5% of them at their age still enjoy sex to their fullest because sex was a physiological need according to them, whilst 14.1% complained of vaginal dryness, a major symptom associated to menopause, 4.4% complained of pain during sexual intercourse for that matter, they do not practice sex any longer, 1.5% stated bleeding during sex.

However, multiple responses associated to their sexual life and experiences 9.7% of the respondents stated experiencing pain and dryness of the vagina at the same time, 5.1% of them stated encountering bleeding and dryness of the vagina concurrently, 4.6% of them complained of pain, bleeding and dryness of the vagina during sexual encounter with their partners concurrently, those who complained of pain and bleeding at the same time were 1.8%. Unfortunately, 3.6% did not respond to the question and was treated as missing values.

Table 4.8: Feelings during Sex

	Sexual Feelings	Frequency	Percent
	Pain	17	4.4
	Bleeding	6	1.5
	Dryness of the vagina	55	14.1
	Enjoyable	72	18.5
	Nothing	141	36.2
	Pain and dryness of vagina	38	9.7
	Pain, bleeding and dryness of vagina	18	4.6
	Pain and bleeding	7	1.8
	Bleeding and dryness of vagina	20	5.1
	Total	376	96.4
	Missing Values	14	3.6
	Total	**390**	**100.0**

4.8 Coping and Intervention Strategies

This section analyzed and discussed the requisite coping and treatment strategies instituted by the respondents to overcome the situation of the depressive symptoms and episode occurrence; this

was adopted as a way to improve their quality of life. This part is analyzed and explained using quantitative and qualitative approaches.

Analysis from table 4.9 on the coping strategies instituted by the respondents revealed that 25.1% of the respondents do not experience any abnormality as far as the symptoms associated with depression was concerned, this was followed by those who seek help from people, friends, family members and health professionals which formed 9.5%, those who resorted to prayer or meditation were 8.7%, those who avoided the problem were 6.7%, those who resorted to exercise such as daily walking was 1.8%, those respondents who visited the hospital also comprised 1.8%, those who wanted to be alone (loneliness) was 1.3%, those who engaged in singing was 0.3% and those who preferred talking or discussing their problem with colleagues was 0.3%.

With regards to double response from the participants, 60 representing 15.4% stated that they resorted to prayers and loneliness in a quiet environment without disturbances. 32 representing 8.2% of the respondents stated spiritual (meditations and reflections) and exercises (that is, daily walking and minor physical activities to overcome depression), 24 representing 6.2% mentioned that they resorted to prayer and singing as a way of coping with their problem and overcoming the symptoms of depression at their age, 23 representing 5.9% mentioned that they engaged themselves in watching television and praying, whilst 11 representing 2.8% stated that they engaged in physical activity such as walking and sometimes sitting to watch television in a quiet environment as a way of overcoming the depressive situation at their age, meanwhile 5 representing 1.3% stated engaging in prayers, reaching out for newspapers and other novels, listening to the radio, watching television and exercising as ways of coping with stressful situations related to the depressive symptoms, 3 representing 0.8% of the respondents mentioned

ways to overcome the problem of depression during their age was walking and singing. However, 3.3% of them declined to answer and they were considered missing values.

It was revealed that 315 (80.3%) of the respondents mentioned that they had registered with the national health insurance which formed the majority as against 60 (15.4%) who stated they did not register with the insurance. Findings from the table revealed that majority of them mentioned that they were always satisfied with the care rendered to them representing 72.9% and 26.4% of them were not satisfied with the kind of health care services they received from the primary care providers.

Results on the kind of pharmacological therapy currently consumed; 14.4% of the respondents were currently place on one or combination of the pharmacological regiment whereas, majority (81.5%) stated that they were not on any medication against the depression. However, 3.8% of the respondents failed to answer the question asked and they were considered missing values.

Analysis from the table further indicated that respondents who mentioned multiple drugs to treat their condition ; 9 representing 2.3% of the respondents choose amitriptyline and venlafaxine a combined antidepressant in the management of their depressive symptoms and episodes; whiles 7 representing 1.8% of them indicated mirtazapine as the antidepressant drug prescribed for them in the treatment of their conditions meanwhile 5 representing 1.3% of them stated that flouxetine was the antidepressant ordered for them to manage their situation. 3 indicating 0.8% of them stated mirtazapine and amitriptyline as the combined antidepressant for management of their condition. However, 5 representing 1.3% stated that they were kept on estrogen therapy a hormone replacement therapy to improve on their hormonal level and 7 representing 1.8% of them stated the combination of estrogen and mirtazapine both were hormonal and antidepressant drugs used in managing the symptoms and episodes of the depression exhibited by them.

Results on the mode of the prescriptions revealed that, majority of who stated that they seek the assistants of health care professionals were 30 representing 8.10%, whereas, 6 representing 1.6% of them stated pharmacy shop sellers, traditional healers 9 representing 1.9%. However, those who stated multiple channel of accessing their prescribed medications included health care professionals and traditional healers were 11 representing 2.8%, self-medication and health care professionals were 2 representing 0.5%.As a matter of fact 332 representing 85.1% do not answer the question asked so they were considered missing.

Table 4.9: Coping and Intervention Strategies

Variable	Responses	Frequency	Percentage (%)
Coping with depression	Prayer and loneliness.	60	15.4
Multiple responses	Prayer and exercise.	32	8.2
	Singing and prayer.	24	6.2
	Watching TV and praying.	23	5.9
	Exercise and watching TV.	11	2.8
	Walking and singing.	8	2.1
	Talking to people and seek support.	5	1.3
	Subtotal	163	41.9
Coping with depression	Feel normal	98	25.1

Single response	Prayers	37	9,5
	Always seek help	34	8.7
	Avoidance	13	3.3
	Singing	7	1.8
	Visit hospital	5	1.3
	Do not respondent	33	8.4
	Subtotal	194	49.7
	Grand total	390	100
Do you have health insurance	Yes	315	80.8
	No	65	16.6
	Do not respond	10	2.6
	Total	390	100
Access to health care	Yes	312	80.0
	No	63	16.2
	Do not respond	15	3.8
	Total	390	100.0
Satisfaction with health care	Yes	280	71.4
	No	103	26.4

	Do not respond	7	1.7
	Total	390	100
Pharmacological treatment	Yes	56	14.4
	No	318	81.5
	Do not respond	16	4.1
	Total	390	100
Type of drugs prescribed	Amitriptyline	26	6.7
	Mirtazapine	7	1.8
	Flouxetine	5	1.3
	Estrogen	5	1.3
	Amitriptyline and Venlafaxine	9	2.3
	Mirtazapine and Venlafaxine	3	0.8
	Do not respond	335	85.8
	Total	390	100

Single response mode of accessing the medications when prescribed.	Health care providers	30	8.1
	Traditional healers	9	1.9
	Pharmacy shop sellers	6	1.6
Multiple responses on mode of accessing the medication when prescribed	Health care providers and Traditional healers	11	2.8
	Health care providers and Self-medications	2	0.5
	Do not respond	332	85.1
	Total	390	100

Analysis from the figure on the respondents access to medical care indicated that those who received and accessed care from the herbalists were the majority with a value of 40 representing 10.3%, those who sort help from health facilities were 16 representing 4.1%, those who accessed care from chemical or pharmacy shops were 12 representing 3.1%. However, those who sometimes accessed their care from more than one primary provider included health facility and herbalist were 23 representing 5.9%, those from pharmacy shops and herbalists were 13

representing 3.3% and those who stated health facility and chemical/pharmacy shops were only 2 representing 0.5%.

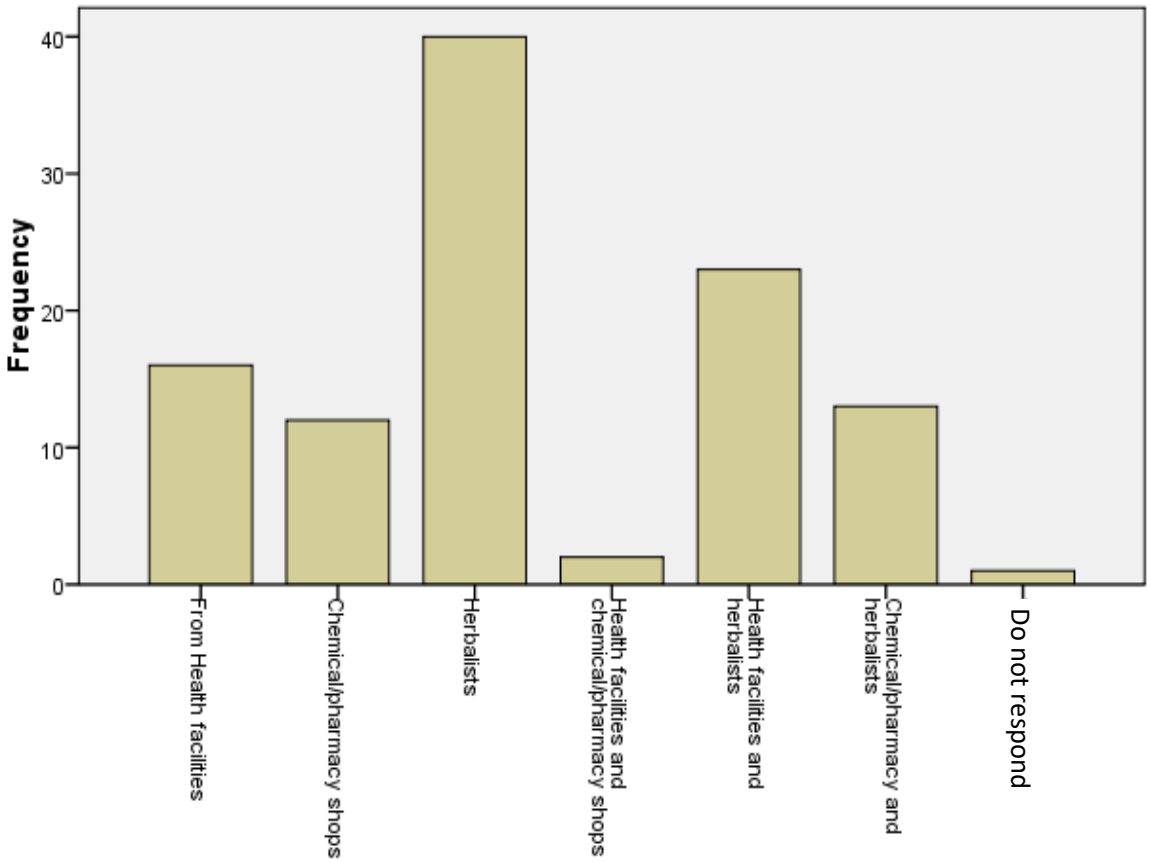

Fig.4.4: Accessing Medical Care

Analysis from figure 4.5 below shows the duration of the respondents been kept on the drugs shows that (12.3%) which was the highest figured stated that they consumed their medication as long as the condition arises and persists, this was followed immediately by those who indicated one to six months duration been kept on the medication, whereas, 2.3% of them stated 7-12 months duration been kept on the medication and 0.5% of them mentioned 1-3 weeks duration they were put on the drugs to assist them overcome the depressive symptoms and episodes.

However, from the interview guide; three community health nurses, three midwives, four community psychiatric officers, three general nurses, two health assistants and one pharmacy assistant; sixteen (16) of the health workers who were the keys informants revealed that counseling and encouraging most women with depression to seek help from health professional, exercising regular, visiting friends, gaining family support, taking enough rest and sleep, consuming well-balanced diet high in fiber and light foods is helpful, taking cold baths in a very hot day will help menopausal women and taking warm baths in a very cold day is also good to manage the body temperature of most women in their mid-lives.

They again attested to the fact that, most clients with depressive symptoms are mostly prescribed hormonal drugs such as estrogen and antidepressant drugs include amitriptyline. Moreover, they further stated that a patient can be kept on the drug as long as the episodes and symptoms of the depression persist.

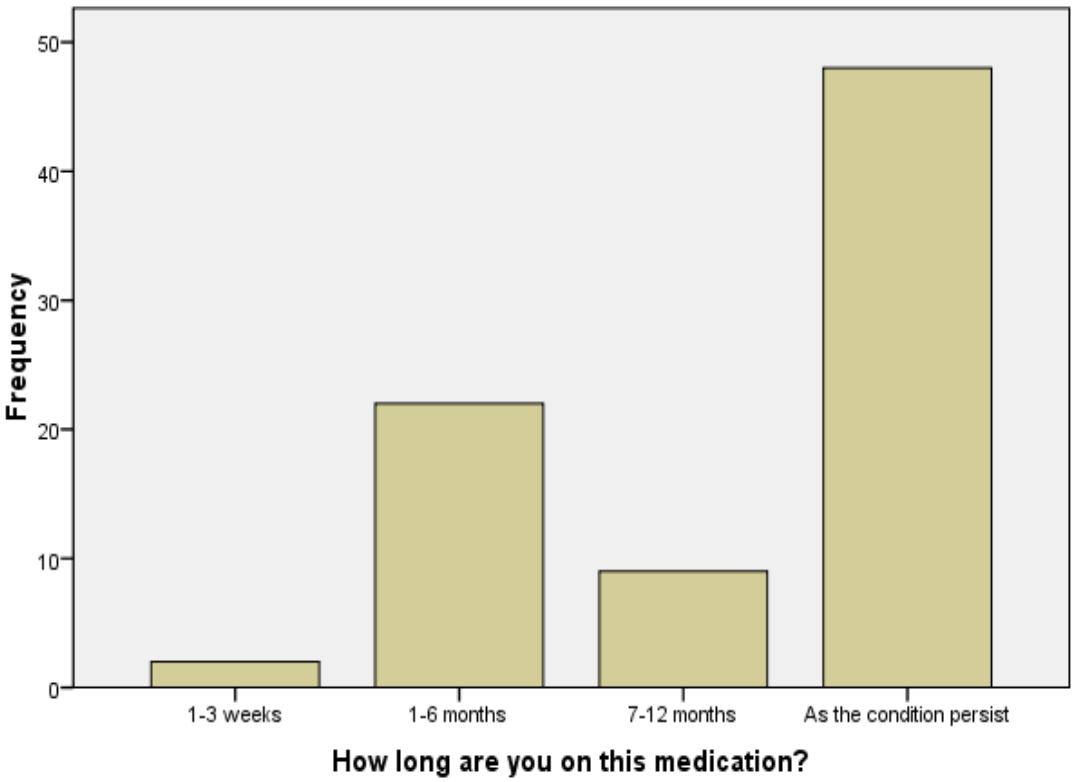

Fig. 4.5 Length of Medication

CHAPTER FIVE

DISCUSSION OF RESULTS

5.0 Introduction

This chapter discusses the key findings of the study with reference to existing literature. This section attempts to establish the length to which the results either confirm or oppose the literature.

5.1 Socio-Demographic Characteristics

The period of menopause is a time of many changes in the psychophysical and social functioning of women; with reduced ovarian hormonal activity and estrogen levels. The most common troublesome symptoms of menopause include depressive disorders, mood swings, and sleep disorders (Marta, et al., 2014). Findings from the study revealed that 32% of the respondents fell between the ages of 40 - 49 and they were believed to be in their premenopause and perimenopause with the associated experience of depressive symptoms. The mean age was 48. This was consistent with an epidemiological survey in Beijing which found that the average age of women with natural menopause in the perimenopausal period was 48 years. The study further suggested that depressive symptoms and episodes significantly increased with age (Deng & Zhang, 2002) which confirmed the results of this study. However, among some of the respondents whose ages range from 40 to 49 also exhibited symptoms and episode of depression. This is also similar to what was stated by Thapa, et al., (2014) that in developing countries especially in Sub-Sahara Africa, menopausal age arises early among women with a mean age of 49. Those who were in the age category of 50-59 years formed 23% and thirty-four percent (34 %) were in the age category of 60-69 who were in the majority and they were believed to be in their early postmenopausal age. As age increases, female climacteric syndrome becomes more

obvious and physical and psychological disorders become more serious, these factors increase the depressive occurrence among women in the menopause transition (Deng & Zhang, 2002; Ciu & Chen, 2008). The results suggested that age is a vital indicator for the development of depressive symptoms and episodes, especially during the perimenopause and early postmenopausal as revealed from the study. This falls in line with what was stated by Bromerger, et al., (2010) that advancing in age among women leads to a lot of hormonal fluctuations.

With regards to level of education, it was revealed that 71.6% of the respondents were having low level of education, which was made up of non -formal education 24.9%, no education 12.8%, primary education 5.4% and middle /Junior High School 28.5%. Since education help individuals to read and write and be able to take decisions related to health and educational programmes. As a matter of fact, majority of the respondents were illiterates (non-formal education and no education) and as such they could not read nor understand their condition. They however relied on self-knowledge and imagination to device their own creative powers in tackling the depressive symptoms and episodes. Also, they most of the times relied on health professionals to help them solve their problems as against their counter parts who completed Senior High School (11.3%) and tertiary education (17.2%) were believed to possess higher level of education with the requisite level of knowledge and could read and this perhaps assisted them to adopt modern coping strategies to overcome the situation. This was consistent with the view of Nehir, et al .,(2009) that women's educational level plays a significant role in the reduction of menopausal complaints. It is believed that reduction in menopausal complains due to the increased levels of education might be related to the fact that women's level of knowledge in relation to menopause might be high, and that they might be more willing to learn and be able to use coping methods more effectively.

Respondents, who were married (47.9%), were found to have a lower rate of depression, probably due to positive attitude and behaviour encountered from their partners as compared to those who were not married (52.1%); widows, divorcees, separated and single. This was consistent with Ciu & Chen, (2008) investigation on women aged 45-55, which found that women who were married with healthy spouses had a low occurrence rate of climacteric syndrome and involutional melancholia (depression), while widows, divorcees, separated and single had a high rate of depressive symptoms occurrence. This was supported by Yue & Yang, (2010), that good marital status can give women higher quality of sexual and conjugal relations and promote physical and psychological health. Also intact marriage can also provide social support for women in perimenopause and help them deal with stressful events which result in depressive symptoms and episodes whereas, widows, single, divorcées and separated are serious stressors and risk factors making depression more likely to develop among women (Bromberger, et al., 2010; Yue & Yang, 2010). This might explain why from the survey majority of the respondents who were not married exhibited the mood disorders in severity in their transition to menopause.

From the data gathered, 76% of the respondents were self-employed; which were made up of housewives, unemployed and petty traders. However, 24% were employed with the formal sector. It was important to note that many of the women depended on self-support for their financial, physiological and psychological needs to be achieved. It was clear that financial constraints hindered their ability to access adequate social amenities such as health care and nutrition among others. Since they were believed to be facing financial problems in life, this could result in a lot of thinking, anxiety, tension and insomnia, leading to an increase in the physiological and psychological symptoms associated with depressive symptoms and episodes among women in their menopausal transition (Bawar ,et al., 2013; National Institute of Mental

Health (NIMH), 2015). Also Yue & Yang , (2010) found that retired or laid – off menopausal women suffer more serious depressive symptoms than employed women. For women who are working have economic guarantees; so they have higher sense of security and can experience self-value in their work. However, it is worth noting that the influence of economic and working status on depression during premenopause and perimenopause does not depend simply on having work, but work pressure and job satisfaction. Some studies have found that the depression occurrence in women employed during premenopause and perimenopause is also high (NIMH, 2015). Feng & Chen, (2009) also found that the involutional melancholia occurrence rates in working women and nonworking women were 73.37% and 91.05% respectively. This was consistent with what was revealed from the study where majority (76%) was self employed.

5.2 The Prevalence of Mood Disorder among Menopausal Women

A mood is an emotional state in contrast to emotions; moods are typically described as having either a positive or negative valence**.** include sleep deprivation, inadequate nutrition, poor economic status, lack of exercise, excessive smoking and alcohol consumption and increase in body mass index (Afolayan & Okpemuza, 2011); similar risk factors were revealed in the study.

The study measured depressive symptoms such as mood swings, feeling of elation and high self-confidence as well as feeling of anxiety disorders using Likert scale (not at all, mild, moderate and severe) to determine the extent of psychological feeling of the respondents in their menopause transition within the Navrongo Municipality. In all the symptoms measured, it was realized that out of the 390 eligible subjects screened for the study, 65% suffered mild to severe mood swings and 48% suffered mild to severe anxiety. The severity of the increased mood swings and anxiety according to the women was affecting them psychologically impairing their sleep, concentration and causing sadness and depression, indicating that they needed remedy to

their situation. This confirms the fact that high incidences of mood swings and anxiety situation in women affects their personal relationships significantly with others and work efficiency (Whiteford, et al., 2013).

With respect to depression, the study measured the occurrence of depressive symptoms such as little interest in doing things, feeling depressed or hopeless, changes in sleep pattern, changes in appetite, feel tired, feel bad about self, trouble concentrating on things, suicidal thoughts, experiencing sadness and unhappiness using the Likert scores not at all, more than half a day, nearly every day and several days**.** Therefore, out of the 390 participants it was revealed that 82.7% of the respondents suffered depression nearly every day (moderate). Whereas, 94.3% of the respondents suffered the depressive symptoms on several days (severe) a similar proportion of 94% depressive symptoms was reported by Li, et al., (2010) **.** Also, similar research conducted by Placido- Lianezaa, et al., (2012) shows that depression is common among midlife women especially during their menopause transition, with a prevalence range between 1% to 11% globally, confirming the results obtained in this study.

5.3 Risk Factors and Causes of Depression among Menopausal Women

This part of the study focuses on the risk factors associated with the development of depressive symptoms and episodes among the respondents. A history of depression is one of the strongest predictors of depressive symptoms and depressive disorders in the menopause transition (Wood, et al., 2008; Freeman, et al., 2011). This confirmed the results of the study which revealed that 25.5% of the respondents ever suffered depression. In a longitudinal study of the pattern of depressive symptoms around menopause, the Centre for Epidemiological Studies-Depression (CES-D) indicated that approximately 50% to 65% of women with a history of depression had

high scores in the years before the final menstrual period (FMP) compared to 10% to 30% of women with no history of depression (Freeman, et al., 2011).

This was consistent with what was also revealed from the survey that those who suffered depression complained of physiological and psychological symptoms confirming what has been said by Albert, et al., (2015) that increased in women vulnerability to depressive symptoms and episodes during the menopausal transition could result in women with past history of suffering from depression; that is women with past history of depression are nearly five times more likely to experience the recurrence of depressive illness and episodes during the menopause transition as compared with similar women with no past history of depression, they are likely to report two to four times of depressed mood.

with regards to the causes that can result in one developing depression, the findings indicated multiple response such as poor relationships and substance abuse to be the highest value representing 3.6% and poor sleep pattern and bereavement formed 2.6% whilst ,substance abuse, poverty and infection were made up of 2.9% .This corresponds with numerous studies conducted by Dennerstein, et al., in 2009; they identified significant health problems, psychosocial and significant demographic variables (marital and unemployment problems) to be associated with depressed mood around menopause.

Another important area was those who stated single response leading to one developing depressive symptoms during the menopause transition includes bereavement 3.6%, poor relationship 3.1%, and poor sleep pattern 2.8%. These were agreed by Woods, et al., in 2008 and Schmidt, et al., in 2003 that stress and negative life events, physical activity, marital relationship issues are likely causal factors associated to the development of mood disorders among women in the menopause transition.

Another area of concern was the respondent behaviour and attitude on substance consumption, it was revealed that some of the respondents resorted to taking alcohol which conforms to general behavioural factors such as smoking, alcoholism and obesity (Woods , et al., 2008). Also marital problems, low education and unemployment that was a challenge to some of the respondents fell in line with what was stated by Bromberger, et al., (2010) that financial problems and demographic variables including race/ethnicity, marital challenges and education could affect the physical and mental health state of many women during the menopause transition.

Overall, a lot of data support the possibility that depressed mood during menopause transition is multifactorial and not simply due to menopausal status alone. This is possible that psychosocial and lifestyle factors, together with health experience have more effects on depressed symptoms and episodes than the endocrine changes, though endocrine changes may be a trigger but the causal pathway is unclear (Gracia , et al., 2004; Dennerstein, et al., 2009).

However, from this study eighteen of the primary care providers stated that hormonal imbalances, poor sleep pattern, stress and vasomotor symptoms can be the cause of depression due to one's old age, mostly starts as early age 40 years and beyond. Various contagious infections such as enteric fever and sexually transmitted infections and chronic diseases like the cancers, surgical removal of the uterus can cause early onset of menopause. With its associated depressive symptoms occurrence such as, stress, poor sleep pattern, problems from homes (home conflict and domestic violence), marital problems, bereavement, separation, divorce, excessive intake of d alcohol and smoking, confirms the view of Freeman, (2015) that the contributions of the changing endocrine milieu to the development of depressive symptoms are risk factors. She mentioned further that only a minority of women experience debilitating depressive symptoms during this part of their lifespan and that hormonal change is not the only factor to consider in

disentangling the complex pathways to depression but perceived stress, history of sexual abuse, being with a difficult partner, amount of exercise, and sleep symptoms (early awakening, problem getting to sleep), were associated with severity of the depressed mood (Freeman, 2015;

Tacherben, et al., 2012).

Tacherben, et al., (2012) stated that low level of socio- economic status of women and the cost of medical treatment, can all contribute to depression among women during their menopause transition. As a matter of fact, 25.9% of the respondents said they were faced with financial constraints and could not afford to pay for mental health services, hence their inability to visit the health facility for medical and psychiatric health services. Those who said the socio-economic cost of mental health service was not a hindrance in their ability to access mental health services were the majority (60.8%), whilst those who had no knowledge on the need to visit a doctor for health care were 5.9%. In addition, 18 out of the 26 health professionals interviewed indicated that unemployment and for that matter high levels of poverty could prevent most women from seeking health care and this can be a risk factor to developing depressive disorders among mid-life women. This was in conformity with the views of Palacious, et al., (2010) and Thapa, et al., (2014) that the incidence of depression among women in developing countries is as a result of low socio-economic situation of the African countries.

The study revealed that excessive intake of cigarette and other related substances can induce depression among women during their transition to menopause similar to the view of Thapa, et al., (2014) that harmful use of cigarette and other substances were noted to be the causes or risk factors associated with depression among women in Africa, particularly Ghana and South Africa. Furthermore, since smoking increase the risk of one developing depression, smokers with major depression and anxiety, smoke more and higher rates of nicotine dependence prolonged nicotine

withdrawal symptoms and lower abstinence rates than smokers without anxiety and depression. Therefore, with regards to smoking as a behavioral risk factor to mental illness 7.0% alluded to the fact that they smoke cigarette. However, with regards to those who smoke, 4.9% ever smoked in the past, 1.0% smoke occasionally, 0.8% was still smoking and 0.3% was smoking regularly. From the survey it could be concluded that those respondents who ever smoked could be in a high-risk situation of developing depression. This has been collaborated by Bromberger ,et al., (2011); National Institute of Mental Health (2015) that the consumption of substances such as cigarette and other related substances can be a high risk factor for one developing mental illness especially depression. The health professionals interviewed stated that smoking excessively might expose individuals to mental related illnesses particularly, mood disorders such as depression. Mood and anxiety disorders have consistently been linked with substance use disorders such as alcohol dependence (Freeman, 2011 & Thapa, et al., 2014).

Alcohol consumption is also one of the behavioural risk factors that lead to the development of depression. It was noted from the data that 59.2% of the respondents were into the consumption of alcoholic beverages; interesting to note that 8.7% were consuming alcohol currently in order to forget of their worries and problems they were facing with family members and colleagues. In that regard, the health care providers were also of the view that excessive consumption of alcohol can result into one developing mental disorders especially depressive disorders among adults. This was consistent with the view of Thapa, et al., (2014) that the frequent consumption of alcohol was identified to be associated with depression among women in African continent especially, Ghana and South Africa.

Out of the 390 eligible subjects screened in this study, 5.1% ever received medical treatment that is hysterectomy, total surgical removal of the uterus. This affirmed the views of Bromberger, et

al., (2011) and Thapa, et al., (2014) that surgical removal of the uterus can trigger the early development of menopause hence its associated physiological and psychological symptoms commonly noticed among midlife women. Again, decrease in estrogen may increase the risk for depression. The risk factors that can lower the age of physiologic menopause include smoking, hysterectomy, oophorectomy, auto immune disorders, infections, non-communicable diseases, living at high attitude, history of receiving certain chemotherapy medications and undergoing radiotherapy (Elavsky & McAuley, 2009; Joffe, et al., 2011).

5.4 Depression and its Impact on Productivity and Quality of Life

According to Harle,et al.,(2010) depression disrupts all aspects of mid-life women lives, including work environment, work performance and their relations with co-workers. Therefore, this study sought to ascertain the impact of depression on the quality of lives of menopausal women. Depressed women often report fatigue and loss of energy, which prevent them from giving their best at work. Moreover, poor concentration, low motivation, difficulty in making decisions are very common in depressed and affected women's work performance and their relations with co-workers (Steger, et al., 2009; American Psychiatric Association, 2017). The data collected indicated that 39.0% of respondents never experienced any depressive symptoms that interfere with their individuals work efficiency, but 55.1% indicated that they experienced mild to moderate symptoms that impact on their work efficiency, whereas, 5.1% said they experienced severe symptoms which, affects their work efficiency and relationship with colleagues.

With regards to respondent's relationship with family members 65.7% suffered mild to severe family relationship problems. This is in congruent with literature that depression disrupts all aspects of mid-life women lives, including family, friends, social life and health (NIMH, 2015).

With regards to home responsibilities and social life events depression makes women more withdrawn from family, live less pleasurable and they might engage in everyday malfunctioning. Children often feel rejected, whereas, the intimacy with the spouse is frequently neglected as they loss interest and need for physical contact. This disruption in family dynamics is a source of stress and conflicts and can lead to separation or divorce (Harle, et al., 2010; National Institute of Mental Health, 2015).

Since depression can be caused by several factors including interpersonal relationships, such as within family, among the children and the social environment, sixty nine percent (69%) suffered mild to severe social life and relationships problems which confirms the statement that depression can cause many patients sad feeling, loss of interest in their environment, reduction in work efficiency, social withdrawal and poor relationship with family members and others (George, et al., 2006 & Harle, et al., 2010). With respect to depression interfering with home responsibilities, 66.5% experienced mild to severe home responsibility challenges and inability to cope with domestic activities during the symptoms appearance. This confirmed what was stated by Habib, et al., (2006) and the National Institute of Mental Health, (2015) that women with multiple roles may suffer from elevated stress and strain as a result of an excess of responsibilities and a lack of leisure time. From the key informants perspective depression frequently causes women to lose interest in the activities that used to be enjoyable and pleasurable, poor social activities and poor work efficiency. The victims gradually start to isolate themselves from friends and avoid interactions with them. Studies conducted by Knekt, et al., (2011) indicated that 85% of patients with depression report with cognitive impairment, fatigue and day time sleeplessness. Also, work productivity loss, impairment in social and domestic activities, reduced quality of life, social life and home responsibilities (Krystal, et al., 2007; Bolge, et al., 2009). Also, significant low socioeconomic status, difficulty relationship among

family members, insomnia and social burden are caused by depression (Ciu & Chen, 2008; Melissa, et al.,2010; Global Burden of Disease Study, 2013; Kadotani, et al., 2014).

In accessing the health status of women, 35.7% complained that their health and well-being was fair because they experience physiological and psychological sickness ever before in their life. Clearly impairment in health, function and quality of life are central features of depressive symptoms (Insomnia) which can lead to long time significant economic burden (Kessler, et al., 2011).

According to Frederick ,(2010), depression can affect every part of women daily life including sex, experience of depressive symptoms and episodes can curb sex drive. However, under normal circumstances sex can boost one's mood and it helps maintain peaceful relationships (Freeman, 2015). Depression and for that matter some antidepressant medications can decrease one's libido; that is a loss of sexual desire, one takes longer to orgasm and victims find sex less enjoyable (NIMH, 2015).

With regards to sexual experience among the respondent, 36.2% still enjoy sex to their fullest because sex was a physiological need according to them, whilst 60.2% complained of vaginal dryness, pain and bleeding during sexual intercourse for that matter, they do not practice sex any longer. This falls in line with Frederick, (2010) assertion that depression can curb a woman sex drive.

5.5 Identifying Coping and Intervention Strategies to Improve the Quality of Life of Menopausal Women with Depressive Symptoms and Episodes

The coping and intervention strategies with regards to medications and coping strategies, majority (14.4%) of the respondents who suffered depressive symptoms and episodes in

moderation and in severe manner were prescribed with amitriptyline a tricyclic antidepressant. However, 75% coped with the situation through praying, loneliness, watching television, exercising, seeking support from friends, family members and health professional, this is in congruent with what is reported by Frey in 2008 that the preventive and coping strategies in overcoming depressive symptoms include client education, reassurances, lifestyle changes for instance consuming well balance diet, daily exercises, avoidance of smoking and alcohol consumption, optimization of general health and social support for the minimization of vasomotor symptoms and problem solving strategies from primary care providers. Also, studies conducted by Trivedi et al., (2006) and Panel, (2017) recommend treatment of symptoms and episodes of depression with the combination of antidepressant and hormones replacement therapy (estrogen plus progesterone or occasionally estrogen alone) not forgetting psychotherapy.

5.5 .1 Coping Strategies Instituted by the Depressed Women

With respect to the coping strategies as a non medical intervention instituted by the women to overcome the depressive symptoms and episodes during the menopause transition; out of the 390 respondents 25.1% do not experience the symptoms associated with depression for that matter they did not need to cope with the situation in any way, as a matter of fact , they were not having many challenges as far as depressive symptoms were concerned and they could live a positive life, this is not different from what is stated by Ciu & Chen, (2008) that, women with depressive symptoms who turn to accept the situation positively will assist them overcome the condition and this will enable them live a positive life. Whilst, 27% relied on Prayer (meditation), loneliness, singing or listening to music, discussing problems with colleagues and seeking help from people, friends, family members and health professionals. These fell in line with the literature review that coping with depression among the menopausal women included taking identified cognitive, behavioral or social diversion-based activities and assertive actions for instance directly,

addressing the problem by seeking solution from a health care provider or talking to someone (Melissa, et al., 2010).

With regards to multiple responses from the participants, 39.5% stated prayers and loneliness in a quiet environment without much disturbances, spiritually (meditations and reflections) and exercises; daily walking, prayer and singing, watching television and praying, daily exercises such as, walking and certain times sitting to watch television and walking and singing, seeking help from primary care providers and family support were noticed among the respondents. This is not different from what have been mentioned by Ciu & Chen, (2008) and Melissa, et al., (2010) that seeking assistance from physicians, colleagues, accepting the condition positively, discussing the problem with friends and family members as well as searching for pieces of information about the condition through the internet and media are possible ways to reducing the effects of stress in women with depressive symptoms.

Another important issue was the acquisition, possession and access to health insurance or any health policy that ensures respondents access to health care services. Findings from the data revealed that 80.3% registered with the National Health Insurance that qualified them to receive available, accessible and affordable health care service free in Ghana. But most of the clients complained that despite having the health insurance cards and were able to gain access to the health care service free of charge, unfortunately, most of the hormonal drugs and antidepressants were not covered by the National Health Insurance, hence they were compelled to pay for them at high cost. Purchasing the drugs out of their pockets according to them was causing financial constraints which leads to serious psychological consequences that could aggravate their physiological and psychological symptoms associated with menopause.

As a matter of fact, psychological problems such as worries about success in life could create much tension, anxiety and stressed leading to depression. These psychological worries tend to aggravate the symptoms associated to depression during the menopause transition. This confirmed what was stated by National Institute of Mental Health (2015) and Thapa, et al., (2014) that psychological problems such as worries, anxiety, stress, tension and insomnia were problems experienced by most depressed women during their menopause transition.

With respect to respondent attitude and behaviors towards health services rendered to them, 71.9% were satisfied. This response was from some of the respondents who were gainfully employed and did not encounter financial problems as they could afford to pay for all services rendered to them and they could purchase medications prescribed for them by the health care professionals. Whereas 26.4% said they were not satisfied with the health care rendered to them, therefore those who were not satisfied with the health delivery system were those who were believed to be in lower socio-economic levels because they did not have enough funds to pay for the health services and not able to buy the drugs ordered for them by doctors, this falls in line with what is stated by Thapa, et al., (2014) that people in developing countries are faced with socio-economic constraints that is preventing them from gaining access to effective and efficient health care as compared to their counterparts in developed world with well-equipped health care systems and its citizens are able to access and purchase the requisite medical services.

It was sad to note that even though, 80.8% of the respondents were registered with the National Health Insurance and hold their identification cards, they could not get the requisite medication from the health facilities. Since the Health Insurance premiums do not cover most of the hormonal and antidepressants drugs. Also, due to delays by the Health Insurance scheme to reimburse claims submitted as a result of poor funding, most of the public and private health

institutions lacked the requisite funds to purchase the required medical and non-medical consumables to meet the health demands and needs of the citizens (Agyepong and Adjei, 2008).

5. 5.2 The Intervention Strategies to Solve the Problem of Depression among Women

Depression does not only affect the quality of life of women, but it also affects their physical health and psychological well being. Fortunately, depression can be successfully treated with medication and psychotherapy (Ministry of Health, 2017). Assessment of the hormone replacement therapy and antidepressant medications indicated that 14.4% of the respondents were place on one or combination of the pharmacological regiment whereas, majority of the respondents, that is 81.5% stated that they were not on any medication against the depression. With regards to the kind of medicines usually prescribed for the respondents who suffered the symptoms and episodes of the depression to manage the condition; majority of the respondents representing 6.7% stated amitriptyline which is a tricyclic antidepressant ordered for the treatment and management of depression and it is affordable, accessible and available, whereas, 2.3% of the respondents choose amitriptyline and venlafaxine a combined antidepressants in the management of their depressive symptoms and episodes. However, 0.3% stated that they were kept on estrogen drug, a hormone replacement therapy to improve their hormonal level and 1.8% stated the combination of estrogen and mirtazapine both were hormonal and antidepressant drugs used in managing the symptoms and episodes of the depression among the menopausal women. This confirms the fact that most adults with depression receive care exclusively from a primary care physicians (National Institute of Mental Health (NIMH), 2015; Ministry of Health (M.O,H), 2017). However, less than 20% of those who received medication and counseling are consistent with the standard treatment protocols (M.O.H, 2017). Additionally, patients with depression who are referred for psychotherapy from a primary care physician only 20% of them ever received the treatment (NIMH,2015).

Sixteen (18) out of the 26 key informants from the in-depth interview revealed that educating, counseling and encouraging women with depression to seek help from health professional, exercising regular, visiting friends, gaining family support, taking enough rest and sleep, consuming well-balanced diet high in fiber and light foods is helpful. Also taking cold baths in a very hot day will help menopausal women and taking warm baths in a very cold day is also good to manage the body temperature of most women in their mid-lives. With respect to the intervention for the depression, all the twenty-six (26) health professionals stated that tricyclic antidepressants were the preferred choice of medications. Examples include amitriptyline and flouxitine as the available, accessible and affordable drug for the management of depression among clients in the study area and the common hormone replacement therapy was estrogen which was the only available, accessible and affordable drugs in most of the health facilities in the study area. However, others like progesterone alone or combine estrogen and progesterone can equally be used in the management of menopausal symptoms especially, among the premenopausal, who experience irregular menstrual flows with its associated physiological challenges. This confirms the fact that most adults with depression receive care exclusively from a primary care physician and which were to be counseled, and were usually prescribed with antidepressants and hormone replacement therapy (NIMH, 2015; M.O. H, 2017).

On the mode of drug prescription; 10.0% stated that health-care providers prescribed their medications for them which was the majority, 1.6% indicated that they gained their drugs through pharmacy shops, traditional healers and self-medication respectively. This was consistent with the statement that 5% of the world population in developed countries seek mental health services from specialist care givers are able to access the services as against 1% of their counterparts in developing countries where mental health services are available in short supply and the service is faced with several challenges. Factors which affect its delivery include finance and lack of

specialists to manage persons with mental health disorders (Sylan, 2009; National Institute of Mental Health, 2015).

On access to medical care and service delivery, majority (10.3%) stated that they sought the attention of herbalist, those who sort help from health care providers by attending health facilities were 4.1%, whereas, 3.1% stated that they sought the advice and services of chemical/pharmacy shops to solve their problem. This is in congruent with what was stated by the (National Institute of Mental Health, 2015) that persons living with mental illness are encouraged to seek their health care from trained primary care providers instead of unqualified persons.

From the in-depth interviews all the 26 health care professionals alluded to the fact that, during their routine public health activities and programmes, they educate the public and encouraged them to visit primary care providers for professional care and advice. This is similar to what was stated by Foundtoulakis, et al., (2011); NIMH, (2015) that seeking help from primary health care providers is the surest rout of overcoming mental health illness among women in their mid-lives.

The study measured duration of medication, 12.3% of the respondents which was the highest figure stated that they consumed their medication as long as the condition arises and persists. However, from the key informant perspective, they affirmed that the duration patients are kept on hormone replacement therapy and/or the antidepressants could last as long as the signs and symptoms exhibited by the patients persist. Moreover, only on few occasions some women can take the medication as long as 6 months. This was not different from what was stated by Frey, et al., (2008); NIMH, (2015); Hammonda, (2017) that clients can be put on hormonal and antidepressants agents as long as the signs and symptoms of the depression persist among the menopausal women.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATION

This section of the study gives a summary of the results discussed in the chapter five. Conclusions are also drawn on the various variables and recommendations are made based on the findings that were revealed.

6.0 Summary

This research was conducted to assess the prevalence of depression among women during the menopause transition.

A sample size of 390 women, aged between 40 to 90 years was used for the study. It was a cross sectional descriptive studies and the result were analyzed using SPSS 16version. It was a mixed method study with questionnaires administered to the participants and that of the in-depth interview guide was administered to the health care professionals. Analysis of the data revealed that majority of them was in the age group 60-69 years with a figure of 34% who were in their post-menopausal. Those who ended their education at the upper elementary level were the majority with a figure of 25.5%, Kasenas were the major ethnic group with a figure of 43.3%, Christians formed 74.9% which were the majority, self-employed were the majority with a figure of 58.4% and 47.7% were married.

The occurrence of depression in this study was obtained by collecting data from the respondent pertaining to the following; suffering from mild to severe increased mood swings(65%) , suffering from mild to severe feeling of anxiety(49%), and 94 % suffers from severe feeling of elation and high self-confident, feeling very anxious, loss of interest, recurrent ideas that seems

horrible, feeling depressed or hopeless, changes in sleeping pattern, feeling tired and having little energy ,changes in appetite, suicidal thoughts and feeling sad and unhappy.

With respect to risk factors associated with the development of depression; 25.6% of the respondents ever suffered depression, 4.9% which was the majority stated postpartum and premenstrual syndrome to the cause that led to them developing depression. Also 25.9% of the respondents indicated that financial constraints prevented them from accessing health care, 5.9% engaged in smoking cigarette and majority (59.2%) of them consumed alcoholic beverages and 5.1% underwent hysterectomy as the leading cause of their menopause.

On the quality of life of the respondent and interference with domestic responsibilities; 5.1% stated that the depression interfered with their work efficiency, where as 6.7% experience relationship problem in severity, 67.0% stated that the depression interferes with their home responsibilities. On sexual experience 60.2% do not enjoy sex therefore, they donot practice it at their age, they experience pain and dryness of the vagina, these experiences were affecting their relationship with love ones and it hindered their quality of life.

On the issue of coping and intervention strategies, majority of the respondents given a figure of 74.9% mentioned that they coped with the situation through prayers, exercise and listening to music among others, seeking support from friends and health professionals, and 14.4% stated that they were kept on pharmacological treatment to overcome the situation of their depression.

6.1 Conclusion

- Menopausal women who faced the depressive symptoms and episode were as a result of poor marital relationship, unemployment, low level of education and loss of a life partner. The results indicated high prevalence of depression in the study area among menopausal women. That is, 65% suffered mild to severe mood swings, 49% suffered mild to severe anxiety and 94% suffers severe insomnia, suicidal ideations, sadness, and little interest in doing things, poor concentration and poor relationship.

- Also it could be concluded that 25.5% ever suffered depression and the cause that led to the development of depression were poor relationship, substance abuse and hysterectomy.

- On the impact of depression on productivity and quality of life it was realized that 60% suffered work productivity loss, 66% suffered relationship problems, 69.3% suffered home responsibilities and 66.5% suffered social life challenges making them withdraw from their normal routine activities. However, 60.2% no longer practice sex at their age due to pain, bleeding and dryness of the vagina leading to marital problems especially, those who were married.

- The coping and intervention strategies used by respondents. Some of the coping strategies adopted by the respondents; that is 75% of them stated that, they coped with the situation by instituting daily prayer, avoiding problems, daily exercising, being lonely, watching television and seeking support from friends and health care providers. Also, others said they were placed on antidepressants and hormonal replacement therapy. Besides, the pharmacological remedies, counseling and psychotherapy were recommended to some of the clients as coping and intervention strategies by the primary care providers.

- The Health professionals recommended medication, counseling and psychotherapy as part of the intervention strategies.

6.2 Recommendations

Based on the findings it is recommended that;

1. There is the need for the Ministry of Health, Ghana Health Services, Ministry of Education (educational institutions) and nongovernmental organizations to intensify information, education and communication on depression during the menopause transition to the general public.
2. Health care workers should intensify health education and promotion with respect to avoidance of smoking and excessive alcoholic consumption should be emphasized among menopausal women in Kasena-Nankana East Municipality of the Upper East Region of Ghana.
3. Tertiary educational institutions should carry out longitudinal studies that clearly define menopausal stages, quality of life, domestic efficiency, work productivity and hormone measurements will be adequate for the general public.
4. Health education and promotion programmes should be organized by the primary care providers periodically to the general public on the risk factors leading to the development of depression and the appropriate coping and intervention strategies.
5. The Government, Ministry of health and all related partners should ensure that drug and other non- drug consumables are always available.
6. The Government in collaboration with the National Health Insurance authority should ensure that there is regular reimbursement of claims through payment of all monies to enable the public and private sector procures the necessary medical and non-medical consumables to improve the health sector.

7. Women should be regularly followed before and after the menopause, that is nurses and midwives should organize education programs for women to help them meet their menopause requirements and this will enable them have a quality life during the menopause period. Also, during these educational programs, women should not only be given medical treatment but also be offered alternative treatment options.

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APPENDIX I

QUESTIONNAIRE FOR ASSESSING THE PREVALENCE OF DEPRESSION AMONG WOMEN DURING THE MENOPAUSE TRANSITION IN THE KASSENA-NANKANA MUNICIPALITY

SERIAL NO……

SCHOOL OF PUBLIC HEALTH, UNIVERSITY FOR DEVELOPMENT STUDIES, TAMALE

MPHIL COMMUNITY AND DEVELOPMENT

Dear Sir/Madam,

I am Eric Nubanoe Padmore, a student of the University for Development Studies pursuing Master of Philosophy in Community Health and Development in the Department of Public Health. I am conducting a survey on assessing the prevalence of depression among women during the menopause transition in the Kasena-Nankana Municipal-Navrongo. The purpose of this survey is to assist me complete the research component of my academic programme and it will also help me gather important pieces of information for the Kasena-Nankana East Municipality. It will be used to improve upon female health and therefore address the risk factors associated with depression among women during menopause. This information you will provide will assist the stakeholders in the Municipality to plan and improve health care services for that matter women's health in general. This questionnaire will take about 15 to 20 minutes to finish.

I would be very grateful if you will agree to participate in this study. The information will be collected in a way that your information remains confidential. All data collected will be used for

the purpose of this study and will not be shared with anyone. You will not be identified in any publication or dissemination of the findings of this study.

Your participation in this study is completely voluntary. You can ask questions on anything you do not understand. You can choose not to answer any individual question or all of the questions. You have the right to withdraw from the study at any time, or to decline to answer any question. You will not be asked any reason for stopping the interview or not answering any question. If you decide not to part-take in this study, your decision will not affect your relationship with the interviewer. However, I hope that you will participate in this survey since your views are necessary.

At this juncture, do you agree to participate in the study? Yes [ ] No [ ]

If no tick as a refusal [ ]

Date…….

Interviewer…….

Please fill in the blank space and mark (√) unless otherwise indicated.

SECTION ONE: SOCIO-DEMOGRAPHIC DATA

1) Age (as at last birthday) ☐

2) Level of Education(s) a. No education [ ] b. Adult education/Non-formal [ ] c. Primary [ ]

   d. Middle school/ J.H.S [ ] e. S.H.S [ ] f. Tertiary [ ]

3) Ethnicity: a. Nankana[ ] b.Kasena [ ] c. Builsa [ ]d. Others (specify)…….

4) Religion: a. Islam [ ] b. Christianity [ ] c. Traditional [ ] d. Others (specify)…….

5) Occupation: a. Farmer [ ] b. Trader [ ] c. Housewife [ ] d. Civil servant [ ] d. Others (specify)…….

6) Marital status: a. Married [ ] b. Separated [ ] c. Widowed [ ] d. Single e. Divorce [ ] f. Others (specify)…….

7) If married, type of marriage: a. Islamic [ ] b. Christianity [ ] c. Customary [ ] d. Ordinance [ ] e. Others (specify)……

SECTION TWO: GLOBAL STUDY OF WOMEN HEALTH QUESTIONNAIRE ON THE PREVALENCE OF PERCEPTION RELATED TO MOOD CHANGES

8) Please fill out the following chart. It lists some mood descriptions.

PLEASE INDICATE THE EXTENT TO WHICH YOU FE DURING THE MENOPAUSE TRANSI WITH THESE MOOD DESCRIPTIONS				
Symptom	Not at all	Mild	Moderate	Severe
a. Increased mood swings.				
b. Feelings of elation or agitation associated with symptoms like an exaggerated self-confidence.				
c. Feeling very anxious, more so than what you would consider normal				

d. Recurrent, unwanted, intrusive ideas, images that seem horrible

PLEASE ANSWER THIS QUESTIONNAIRE FROM THE PATIENT HEALTH QUESTIONNAIRE – NINE QUESTIONS. THESE QUESTIONNAIRES ARE TO DETERMINE THE PREVALENCE OF DEPRESSION AMONG MENOPAUSALWOMEN. THUS OVER THE PAST TWO WEEKS, HOW OFTEN HAVE YOU BEEN BOTHERED BY ANY OF THE FOLLOWING PROBLEMS.

9) Little interest in doing things?

a. Not at all [ ]

b. More than half the days [ ]

d. Nearly every day [ ]

d. Several days [ ]

10) Feeling down, depressed or hopeless?

a. Not at all [ ]

b. More than half the days [ ]

c. Nearly every day [ ]

d. Several days [ ]

11) Changes in sleeping pattern?

a. Not at all [ ]

b. More than half the days [ ]

c. Nearly every day [ ]

d. Several days [ ]

12) Feeling tired or having little energy?

a. Not at all [ ]

b. More than half the days [ ]

c. Nearly every day [ ]

d. Several days [ ]

13) Changes in appetite?

a. Not at all [ ]

b. More than half the days [ ]

c. Nearly every day [ ]

d. Several days [ ]

14) Feeling bad about yourself that you are a failure or have let yourself or your family down (Guilty feeling)?

a. Not at all [ ]

b. More than half the days [ ]

c.Nearly every day []

d. Several days [ ]

15) Trouble concentrating on things (such as reaching the newspaper or watching Television)?

a. Not at all [ ]

b. More than half the days [ ]

c. Nearly every day [ ]

d. Several days [ ]

16) Suicidal thoughts?

a. Not at all [ ]

b. More than half the days [ ]

c. Nearly every day [ ]

d. Several days [ ]

17) Feeling of sad, blue and unhappy?

a. Not at all [ ]

b. More than half the days [ ]

c. Nearly every day [ ]

d. Several days [ ]

MENOPAUSE QUESTIONNAIRE DEVELOPED BY BERLIN CENTER OF EPIDEMIOLOGY AND HEALTH, AND GLOBAL STUDY ON WOMEN HEALTH QUESTIONNAIRE ON THE SYMPTOMS EXPERIENCE BY WOMEN DURING THEIR TRANSITION TO MENOPAUSE

18) What happen that, make you think you are in the menopausal transition? (Please Tick (√) all that apply)

( ) Hot flashes	( ) Vaginal dryness
( ) Weight gain	( ) Changes in hair growth
( ) Irregular periods	( ) Mood swings
( ) Shorter cycles	( ) Low mood or depression
( ) Loss of interest in sex	( ) Easy tearfulness
( ) Difficulty Sleeping	( ) Memory problems
( ) Decreased ability to concentration	( ) Irritability
( ) I felt I was just at that age	( ) Incontinence

GLOBAL STUDY ON WOMEN HEALTH QUESTIONNAIRE AND BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM QUESTIONNAIRE IN ASSESSING THE RISK FACTORS ASSOCIATED WITH DEPRESSION DURING THE MENOPAUSE TRANSITION

19) Have you ever suffered from depression? a. Yes [ ] b. No [ ]

20) If yes what was the cause of your depression? (Tick (√) as many as possible)

a. Post-partum; [ ] b. Premenstrual syndrome; [ ],c. Infection (Enteric fever); [ ]

d. Bereavement; [ ] ,

e. Poverty (unemployment); [ ], f. Poor relationships; [ ] ,g. Substance abuse; [ ] .

21 Was there a time in the past 12 months, when you needed to see a doctor but, could not, because of cost?

a. Yes [ ] b. No [ ], c. Do not know; [ ].

22) Do you smoke cigarette? a. Yes [ ] b. No [ ]

23) If yes, which category do you belong?

1. Current [ ] , 2. Past [ ], 3. Occasional [ ], 4. Regular [ ].

24) Do you drink alcohol? a. Yes [ ] b. No [ ]

25) If yes, which category do you belong?

1. Current; [ ],2. Past; [ ], 3. Occasional; [ ], 4. Regular

26) Have you received any medical treatment, such as a hysterectomy, radiotherapy or chemotherapy that caused or Precipitated your menopause? a. Yes [ ] b. No [ ]

27) If yes, what treatment did you receive?.....

IN ASSESSINGTHE HEALTH QUALITY OF LIFE AMONG MENOPAUSAL WOMEN, BEHAVIOURAL RISK FACTOR SURVEILLANCE SYSTEM QUESTIONNAIRE AND GLOBAL STUDY OF WOMEN HEALTH QUESTIONNAIRE WILL BE USED 28)

Do The Symptoms of Depression interfere with the following	Not at all	Mild	Moderate	Severe
a) Your work efficient				
b) Your relationship with co-workers				
c) Your relationship with family				
d) Your social life activities				
e) Your home responsibilities				

29) Would you say that in general your health is?

a) Excellent [ ] ,b)Very good[ ],c) Good [ ],d) Fair [ ], e) Poor [ ]

30) Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? [ ].

31) Now thinking about your mental health, which includes stress, sleep disturbance, sadness and emotional problems; for how many days during the past 30days was your mental health not good? [ ].

32)Do you experience the following during sex? (Tick (√) as many as possible)

1. Pain; [ ]

2. Bleeding; [ ]

3. Dryness of the vagina; [ ]

4. Not at all; [ ]

5. Enjoyable; [ ]

IN EVALUATING THE COPING STRATEGIES TO OVERCOMING THE SYMPTOMS OF DEPRESSION DURINGTHE MENOPAUSE TRANSITION GLOBAL STUDY OF WOMEN HEALTH QUESTIONS AND COPING INVENTORY RESPONSES WILL BE CONSIDERED.

33) Please can you explain how you cope with the situation of depression at this your age?…….....

.....

34) Do you have any kind of health care coverage, including health insurance? a. Yes [ ] b. No [ ].

35) Do you have access to Health Care (Medicare) a. Yes [ ] b. No [ ]

36) A routine checkup is a general physical examination, not an examination for specific injury; illness or condition. About how long has it been since you last visited a doctor for routine checkup?

a) within the past year (anytime less than 12months ago) [ ]
b) Within the past 2years (1year but less than 2years ago) [ ]
c) Within the past 5years (2years but less than 5years ago) [ ]
d) Do not know [ ]

37) In general how satisfied are you, with the kind of health care service you received?

a) Very satisfied [ ] b)Somewhat satisfied [ ] c)Not at all satisfied [ ] d)Do not know [ ]

RISK FACTORS SURVEILLANCE SYSTEM QUESTIONNAIRE THE CENTRE FOR EPIDEMIOLOGICAL STUDIES DEPRESSION SCALE AND MENOPAUSE QUESTIONNAIRE WILL BE CONSIDERED; IN ASSESSING THE TREATMENT MODALITIES TO OVERCOMING THE SYMPTOMS OF DEPRESSION DURING THE MENOPAUSE TRANSITION

38) Did you or do you currently take hormone replacement therapy (HRT)and /or Antidepressants?

a. Yes, I am currently on HRT and Antidepressants [ ]

b. Yes, I have taken HRT and/or Antidepressants but do not currently [ ]

c. No, I do not and have never taken HRT or Antidepressant [ ]

39) Are these among the various groups of medicines usually prescribed for you to manage your symptoms? (Tick (√) as many as possible)

a. Estrogen; [ ]

b. Mirtazapine; [ ]

c. Amitriptyline; [ ]

d. Flouxetine ; [ ]

e. Venlafaxine; [ ]

f. Progesterone; [ ]

40) If yes, what is the mode of prescription of these medications? (Tick (√) as many as applicable)

a. Self- medication; [ ]

b. Health care professional; [ ]

c. Pharmacy shop seller; [ ]

d. Traditional healer; []]

41) How do you get access to your medication? (Tick (√) as many as possible)

a. From Health facility; [ ]

b. From Chemical /Pharmacy shop; [ ]

c. From Herbalist; [ ]

42) How long have you been kept on this medication?

a. Two weeks; [ ] ,b. Three weeks [ ] , c. One month [ ] ,d. Two months [ ] ,e. Three months [ ] ,f. six months [ ] ,

g. Twelve months [ ] ,h. As long as the condition persists [ ]

THANK YOU

APPENDIX II

IN-DEPTH INTERVIEW GUIDE FOR HEALTH WORKERS

SERIAL NO

SCHOOL OF PUBLIC HEALTH

UNIVERSITY FOR DEVELOPMENT STUDIES

RESEARCH ON THE PREVALENCE OF DEPRESSION AMONG WOMEN (40-65+ YEARS) DURING THE MENOPAUSAL TRANSITION, IN THE NAVRONGO MUNICIPALITY

Dear Sir/Madam,

I am Eric NubanoePadmore, a student of the University for Development Studies pursuing Master of Philosophy in Community Health and Development in the Department of Public Health. I am conducting a survey on assessing the prevalence of depression among women during the menopause transition in the Kasena-Nankana Municipal-Navrongo. The purpose of this survey is to assist me complete the research component of my academic programme. This questionnaire will take about 15 to 20 minutes to finish.

I would be very grateful if you will agree to participate in this study. The information will be collected in a way that your information remains confidential. All data collected will be used for the purpose of this study and will not be shared with anyone. You will not be identified in any publication or dissemination of the findings of this study.

Your participation in this study is completely voluntary. You can ask questions on anything you do not understand. You can choose not to answer any individual question or all of the questions. You have the right to withdraw from the study at any time, or to decline to answer any question.

If you decide not to part-take in this study, your decision will not affect your relationship with the interviewer. However, I hope that you will participate in this survey since your views are necessary.

At this juncture, do you agree to participate in the study? Yes [ ] No [ ]

Date……

Interviewer…….

SECTION ONE: HEALTH STAFF BACKGROUND

1) What is your professional category? .....

2) What is/are your years of experience as a health worker?

……

SECTION TWO: HEALTH STAFF KNOWLEDGE ON MENOPAUSAL DEPRESSION

3) At your facility; how many women aged 40 and above for the past two year (2016 and 2017) reported to your facility with depressive symptoms?

4) What are the risk factors associated with depression among menopausal women?

5) What counseling will you give to menopausal women to cope with the problem of depression?

6) What health education will you give to depressive women in the menopause transition to improve their quality of life?

7) Do you know of any treatment or management protocols for depression among menopausal women?

THANK YOU