

METHODIST UNIVERSITY COLLEGE GHANA

DEPARTMENT OF PSYCHOLOGY

INCIDENCE OF MENOPAUSAL SYMPTOMS AMONG WOMEN IN ST. ANDREW
ANGLICAN CHURCH, ABOSSEY OKAI AND THEIR COPING STRATEGIES

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This thesis is submitted to the University of Ghana, Legon in partial fulfillment of the
requirement for the award of MPhil Guidance and Counseling



August, 2016

Declaration

I, Constance Ansah, do hereby declare that I produced this thesis from original research undertaken as a student of the Department of Psychology, Methodist University College Ghana and that this work has never been submitted in whole or in part for award of a degree in this University.

The thesis was written and produced under the Supervision of Dr. Samuel Atindanbilla and Mr. Gladstone Agbakpe both of the Methodist University College, Ghana. All references to works of other people or organization(s) have been duly acknowledged.

With the approval of my supervisors, I present this thesis to the University Of Ghana Legon.

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Acknowledgement

“To God be the glory, great things he has done” Considering my advanced age, I never dreamt I could eventually earn a master’s degree. I can only continue to give thanks to God for His Continuous protection and guidance throughout this course of study to a successful end.

I would like to take this opportunity to extend my sincere gratitude and appreciation to my lecturers and supervisors, Dr. Samuel Atindanbilla and Mr. Gladstone Akpakpe of the Methodist University College, Ghana through whose constructive criticisms, corrections and suggestions I have been able to produce this work.

Sir, your patience, time, and support are immeasurable. God richly bless you.

I am also greatly indebted to all my lecturers for their invaluable contributions and encouragement throughout my course of study. These wonderful lecturers really influenced, encouraged and helped to make my stay at the Methodist University College a successful one.

I wish to thank all my colleagues at the Methodist University College, for their invaluable contributions to my success story. Indeed you are a great team!

My sincere appreciation and thanks also go to my wonderful husband, Mr. David Ansah and our lovely children for their patience, support, prayers and for being instrumental in my quest to acquire a master’s degree. Their invaluable assistance and love in diverse ways made this dream a reality.

Finally, to all my counselees, I say thank you ever so much. Honestly speaking their problems they shared with me, challenged me to pursue further studies to acquire more knowledge and gain better insight into my current field of study so that I can confidently and selflessly serve them much better in various aspects of their endeavours. It is my hope and prayer that he who has begun his good works in me will continue to perfect me to the end. God bless you all.



DEDICATION

“Dedicated to the Lord Almighty “.....for His mercies endure forever” Amen!

I also dedicate this thesis to my wonderful husband, David Ansah, my mentor, our children and all my counselees, for their invaluable support and encouragement in diverse ways cannot be overemphasized.

To God be the glory!



CERTIFICATION

The undersigned do hereby certify that he has read and recommended to the University of
Ghana, Legon, this thesis entitled:

Incidence of Menopausal Symptoms among women of St. Andrews Anglican
Church, Abossey Okai and their coping strategies.

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Abstract

This study examined the prevalence of menopausal symptoms and coping strategies among a total of 140 women selected from ST Andrew Anglican church Abossey Okai in Accra. The effects of the average age of the participants and number of children on women's experience of menopausal symptoms and coping were also examined. The study employed a cross-sectional survey design and a set of questionnaires measuring signs and symptoms of menopause and coping strategies were administered to the respondents. Data analyses were done with descriptive statistics and One-Way ANOVA. Results from the study showed that the most reported menopausal symptoms were Gestagen Deficiency Symptoms followed by Psychovegetative Symptoms and Atrophic Symptoms respectively. In terms of coping, the women used more spiritual coping followed by Social coping, Medical and Physical coping respectively. Further analysis revealed that age of the women in the study had significant effects on all the three major menopausal symptoms (Gestagen Deficiency, Psychovegetative and Atrophic). Similarly, age of the women had a statistically significant effect on their use of Physical Coping and Medical Coping but not the use of Spiritual coping and Social coping. Number of children of the respondents in the study had significant effects on their Psychovegetative Symptoms and Atrophic Symptoms but not Gestagen Deficiency Symptoms. However, number of children of the respondents in the study had no significant effects on their coping strategies. The implications of these findings to counselling practice and research are discussed.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Human life goes through several transitions, some of which come with developmental changes and growth; example of such transitions are adolescence, parenthood and menopause. Some of these transitions (especially, menopause) are usually not only biological but also involve psychological and social changes (Hunter & Rendall, 2007), the individual involved in the transitional phase would have to find ways of coping with and managing the changes that come with the transition.

Menopause can be defined as the permanent cessation of menstruation which normally occurs when there has been at least a year period without a menstrual period, although endocrinological changes occur over a number of years (Dennerstein & Alexander, 2006). The World Health Organization (1996) also defined menopause as the permanent cessation of menstruation resulting from loss of ovarian follicular activity.

The transition into menopause can be divided into overlapping stages ranging from premenopausal stage, perimenopause stage to postmenopausal stage based on menstrual patterns (Hunter & Rendall, 2007). Premenopausal stage is the period of regular menstruation. Perimenopause is the stage immediately preceding the menopause and the first year after menopause which is defined by changes in the consistency of menstruation during the previous 12 months. Women who have not menstruated during the past 12 months are said to be at the

postmenopausal stage (WHO, 1996). Each of these stages come with its unique symptoms and experiences.

Menopause usually occurs on average between the ages of 50 and 51 and literally refers to a woman's last menstrual period, however age 40 is used as an arbitrary cut-off point for natural menopause (WHO, 1996). When menopause occurs earlier than age 40, it is referred to as premature menopause. There is also induced menopause where the ovaries are removed surgically (WHO, 1996).

The function of the ovaries and hormone secretion is regulated by the hypothalamo-pituitary-ovarian axis (Hunter & Rendall, 2007). The difference in the number of ovarian follicles seem to be the primary factor which influence the transition from regular menstruation to the perimenopause phase. There are approximately 700,000 follicles in a woman's ovaries at birth, the numbers reduce considerably in the decade preceding menopause and at the time of the last menstrual period only few follicles are present. Follicle stimulating hormone (FSH) concentrations gradually increase and serum inhibin concentrations reduce in the years leading up to the perimenopause phase, and these are now regarded as useful indices of the number and/or quality of follicles remaining in the ovary (Richardson, 1993).

There is increasing evidence to suggest that it is the decrease in the ovarian secretion of inhibin (particularly inhibin B) that may determine the increases in FSH and reduction in oestradiol in middle-aged women (Burger, Dudley, Hopper et al., 1999). During the reproductive years oestradiol is the main type of oestrogen that is produced, but after the menopause oestrogen production does not stop because another oestrogen, oestrone, is produced from three main sources: the adrenal cortex, indirectly from the body's fat cells which convert androstenedione to

oestrone, and from the ovaries which continue to produce small quantities of androgens which are converted to oestrogens. Testosterone levels stay at approximately the same level after the menopause, being produced by the adrenal glands and by conversion of other hormones (Hunter & Rendall, 2007). These biological mechanisms among others account for most of the symptoms that accompany menopause.

Aside the biological mechanisms, psychosocial mechanisms are also involved in the menopausal transition. Though some qualitative studies report that many women perceive the menopause transition as a positive or neutral event (Dennerstein, Lehert, Burger et al., 1999), there is also a proportion of women who may be at a higher risk of mood changes during the transition to menopause (Dennerstein & Alexander, 2006).

The symptoms of menopause are enormous, mostly universal with varied degrees of severity. These symptoms are as a result of physiological and developmental changes coupled with psychosocial contextual factors (Hunter & Rendall, 2007). ‘Climacteric syndrome’ and ‘menopause syndrome’ are some of the other terms used to describe the wide array of symptoms associated with menopause (Hunter & Rendall, 2007). Symptoms include vasomotor experiences such as hot flushes and sweats, vaginal dryness, loss of libido, sleep disruption, bleeding, somatic symptoms such as aching limbs, loss of energy and dry skin, cognitive changes such as poor memory and loss of concentration, irritability, mood swings, depression and anxiety (Hunter & Rendall, 2007; Wood & Mitchell, 2005).

These symptoms are not just mere sensations, perception and evaluation of symptoms usually precede how individuals respond to the symptoms. Symptom perception refers to noticing symptoms, such as their frequency and intensity. Symptom evaluation on the other hand refers to

judgments people make about their symptoms, such as seriousness, treatability, causes, and consequences of symptoms in their lives (Mechanic, 1962; cited in Wood & Mitchell, 2005). Responses to menopause-related symptoms may include feelings, thoughts, or behaviours, such as self-care efforts (changing dietary intake, using herbal or over-the-counter medications), seeking help or advice from one's social network, seeking help from a health professional that may include a prescribed medication, or choosing to do nothing about the symptoms (Woods & Mitchell, 2005). These responses depending on their effectiveness may carry along with them several ramifications that the individual needs to cope with.

In addition, several other factors have been associated with symptoms of menopause such as economic strain; health behaviours, such as smoking; comorbid conditions; prior episodes of depression or premenstrual symptoms; stressful life circumstances, such as abuse; and physical indicators, such as body mass index (Avis, Crawford & McKinlay, 1990; Gold, Sternfeld, Kelsey et al., 2000).

Moreover, there is an indication that severe vasomotor symptoms which affect sleep and mood may have negative consequences on the well-being of women as well as general quality of life of these women (Avis, Stellato, Crawford et al., 2001). Climacteric symptoms have also been linked with osteoporosis, cardiovascular disease, obesity and type 2 diabetes mellitus (Chedraui, Pérez-López, Aguirre, Calle, Hidalgo et al., 2010). Further, hot flushes which is the most frequently reported symptom in the menopausal phase is usually found to produce psychological discomfort, tachycardia, sleep interruption, daytime sleepiness and nervousness (Chedraui et al., 2010).

There is also research evidence suggesting that the menopausal transition trigger certain psychological vulnerabilities (Avis, Colvin, Bromberger et al., 2009; Elavsky & McAuley, 2009). The severity of menopausal symptoms have also been found to be moderated by psychosocial factors such as beliefs, negative attitudes, low self-esteem, family dysfunction, social support, and stressful life events (Taffe, Garamszegi, Dudley & Dennerstein, 1997).

It has thus become pertinent to investigate the prevalence of these symptoms, their consequences on the women as well as the coping strategies employed by these women in coping with their experiences.

1.2 Problem Statement

Perimenopause, menopause, and postmenopause phase of life comprise about a half or a third of a woman's life, particularly in developing countries (Perez-Lopez, 2004) since the life expectancy of women in developed countries is approximately 84.3 and the average age for menopause is 50-52 (Abdollahi, Qorbani, Asayesh, Rezapour, Noroozi, Mansourian et al., 2013). The enormous physiological and psychosocial changes that occur in about 50 to 85% of women during menopause can cause great distress and disability (Rotem, Kushnir, Levine & Ehrenfeld, 2005; Vaz, Pinto-Neto, Conde, Costa-Paiva, Morais, Pedro et al., 2011). Women in the menopause stage therefore need more information about their physical and psychosocial needs during this period in order to come to terms with the changes they experience during this period. Providing sufficient information on menopause would go a long way to empower women

during the menopause period which can contribute to improving the perception about this stage and the importance of self-care (Bruce & Rymer, 2009; Yazdkhasti, Simbar & Abdi, 2015).

Menopause is accompanied by decreased bone mass, increased risk of cardiovascular diseases, sleep disturbances, and reduced concentration and sexual desire (Rotem et al., 2005). With the beginning of the 3rd millennium, menopause attracted the attention of medical and health communities, as a major health problem in several countries. Today, postmenopausal women's inability to adapt to the symptoms of menopause is the most common reason for them to attend health care centres (Tetteh, 2008).

Sometimes, menopause symptoms can be so severe that they interfere with the daily life of menopausal women and negatively affect their quality of life [QOL] (Yazdkhasti et al., 2015). However, hormone therapy which used to be the treatment of choice for most women have been found to have several side effects such as increased risk of breast cancer, and increased vulnerability to cardiovascular diseases. This coupled with the indirect relation between the drop in ovarian hormones and menopause symptoms, the effects of sociocultural and psychological factors on menopausal signs and menopausal body image issues may increase women's willingness to use alternative coping strategies to deal with their symptoms (Perez-Lopez, 2004; Yazdkhasti, Keshavarz, Khoei, Hosseini, Esmaeilzadeh, Pebdani, 2012).

However, very little information is available on menopause, its experiences and management in developing countries and Ghana is no exception. It is important to investigate the prevalence, experiences that accompany menopause and the effective coping strategies employed by these women to manage their symptoms.

1.3 Purpose of the Study

As demonstrated earlier, the menopause transition is accompanied by physiological and psychological difficulties, and women require sufficient information about their experiences as well as alternative coping strategies beside hormone therapy to deal with these difficulties. Nonetheless, very little is known about menopause and its complications in our part of the world.

The main purpose of this study is, therefore, to investigate the prevalence of menopause, its accompanying symptoms and experiences as well as the coping strategies used to deal with the stress associated with menopause using women in the Anglican Church in Ghana as a reference group.

1.4 Objectives of the Study

The specific objectives of the study are as follows:

1. To explore the prevalence of menopause and common symptoms among women in the Anglican Church
2. To explore distress associated with menopause among these women
3. To investigate the relationship between socio-demographic characteristics and menopause related distress

4. To explore the coping strategies used by these women to manage the experiences associated with menopause
5. To determine whether demographic characteristics influence the type of coping strategies used by these women.

1.5 Relevance of the Study

This study will fill in the gap on how much is known about menopause in Ghana. Currently, most of what is known about menopause among the Ghanaian populace are mere perceptions, speculations and sometimes stereotypes. This sometimes leads to several misconceptions; for instance we hear things like women in their menopause “talk too much” and sometimes some women in their middle age are labelled as “witches” simply because of the misconceptions about the symptoms of menopause. These may go a long way to compound the distress associated with menopause transition. The study will, therefore, provide evidence about the real prevalence and experiences of menopause among Ghanaian women.

The findings may also clear or change some of the stereotypes and misconceptions people have about menopause and menopausal women. The findings will also help reduce some of the distress experienced by these women as a result of unrealistic beliefs and perceptions about symptoms of menopause (Chedraui et al., 2010) since the findings will help them have

realistic perceptions about menopause and its symptoms. Women will, therefore, be equipped to easily identify which of their daily experiences are normal symptoms of menopause and which of them are not.

In addition, findings on coping strategies will help find effective alternative methods in helping women in their menopause phase to deal with distress accompanying the phase as well as manage the symptoms of menopause.

1.6 Organization of the Study

The study is organized into five chapters and each chapter is described below;

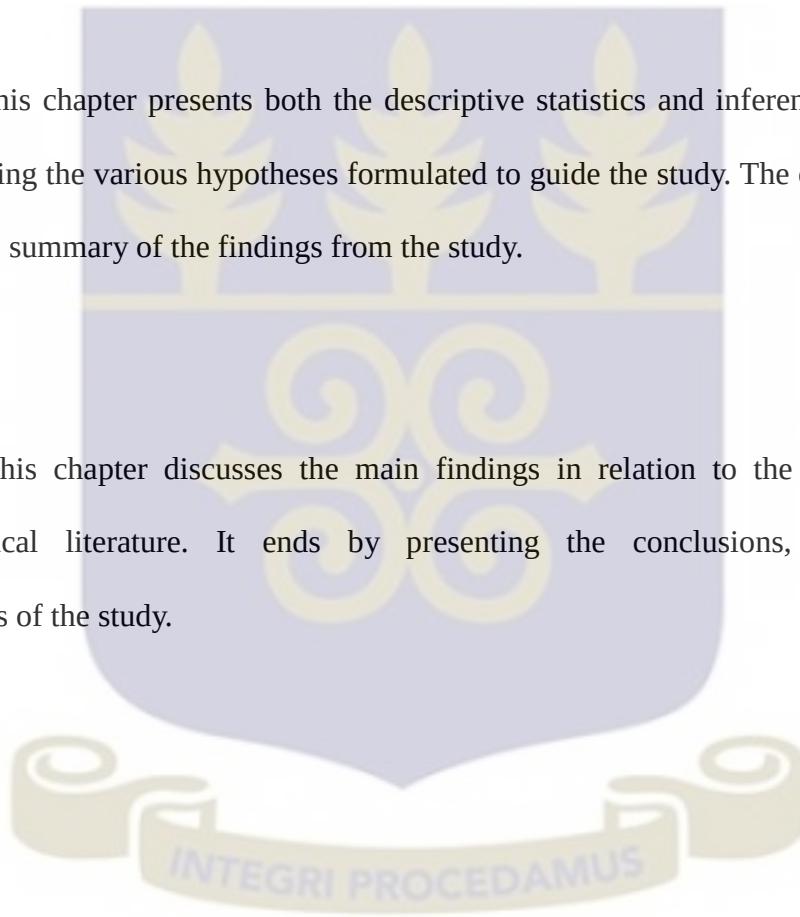
Chapter One: The chapter one consists of the background of the study followed by the statement of the problem. The study background and problem statement were followed by purpose of the study and the objectives of the study. The relevance of the study and the organization of the entire dissertation are also under the chapter one of this study.

Chapter Two: This chapter consists of literature review by presenting both the theoretical and empirical literature on experience of menopause among the women selected for the study. The chapter discusses the theories that underline the study and the review of related studies prevalence of menopausal symptoms, coping strategies and the socio-demographic correlates. These were followed by the rationale for the study, statement of hypotheses and the operational definitions of terms.

Chapter Three: The chapter three consists of the methodology used in this dissertation and it includes the research setting, the research design, population, sample size/sampling techniques, research instruments, pilot study, data collection procedures and the data analysis techniques.

Chapter Four: This chapter presents both the descriptive statistics and inferential statistics that were used in testing the various hypotheses formulated to guide the study. The chapter concludes by presenting the summary of the findings from the study.

Chapter Five: This chapter discusses the main findings in relation to the theories and the previous empirical literature. It ends by presenting the conclusions, limitations and recommendations of the study.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The main aim of this study is to investigate the prevalence of menopause among women in the Anglican Church and the coping strategies used to deal with the symptoms and distress associated with menopause. This chapter contains the theoretical framework on which the study is being conducted, review of related study, hypotheses statement, operational definition of terms and rationale for the study.

2.2 Theoretical Framework

The present study is underpinned by two main theories that seek to explain menopause related distress and coping. These theories are the Cognitive behavioural model/Self-regulatory model and the transactional model of stress and coping.

2.2.1 Cognitive behavioural Model/Self-regulatory Model (Beck, 1976; Leventhal, Nerenz & Steel, 1984)

The cognitive behavioural model is based on the belief that emotions arise as a result of the way events are interpreted (Beck, 1976), which implies that cognitions (thoughts, beliefs and attitudes) mediate environmental events, subjective reactions and behavioural responses. This assumption formed the basis for the self-regulatory model proposed by Leventhal, et al., (1984).

According to them, individuals construct their own representations of health problems as a way of making sense of them, and these cognitive representations determine an individual's emotional and behavioural responses.

Applying this to understanding menopause, it can be postulated that thoughts, beliefs and attitudes about menopause and its symptoms will determine the outcome of the transition, thus whether an individual going through menopausal phase will experience distress or not as well as the severity of the symptoms will depend on their thoughts, beliefs and attitudes. This also implies that the experiences of menopausal symptoms and distress may differ from person to person.

For instance, Hunter and O'Dea (2001) in their study found that women had developed clear cognitive representations, even in the early stages of menopause. These cognitive representations according to the cognitive behavioural model will determine the outcome of the transition. Even though some women experienced the menopause transition as a positive event, others express concern over having little control over the menopause symptoms (Hunter & Rendall, 2007).

Perceived personal control can also affect the experience of symptoms of menopause (Chedraui et al., 2010). Women with lower perceived personal control of symptoms have been reported to have more negative experiences and more coping difficulties, especially among women who do not receive hormone treatment (Hanisch, Hantsoo, Freeman, Sullivan & Coyne, 2008; Hunter & Liao, 1995; Reynolds, 2002).

2.2.2 Transactional Model of Stress and Coping (Lazarus & Folkman, 1984)

The transactional model of stress and coping posits that coping with stress is influenced by numerous psychosocial factors. According to the model, how stressful situations are appraised and the coping resources available are key to the possible health or psychological outcomes of the stressful event. Appraisal according to the transactional model of stress and coping is the cognitive evaluation which leads to the perception of the situation as stressful or not. The appraisal also determines the coping strategy the individual uses in dealing with the stressor (Lazarus & Folkman, 1984). When faced with a stressor, an individual responds in three stages: the person first determines if the event is a threat or not (primary appraisal), followed by an evaluation of the coping resources available (secondary appraisal) and a continuous re-evaluation and changing of primary and secondary appraisals (reappraisal). This means that stress only occurs when the person first appraises the situation as harmful and/or perceives an unavailability of adequate coping resources which then can lead to negative physiological or health problems (Lakey & Cohen, 2000).

Following from the tenets of the transactional model of stress and coping, the menopause transition with its accompanying symptoms can be viewed as a stressor. However, whether the individual would experience stress/distress depends on how the individual cognitively appraises the situation and the available coping strategies used in dealing with it and how effective these strategies are in dealing with the symptoms and accompanying distress.

2.3 Review of Related Studies

The review of related studies is further divided into several sub-themes that reflect the aim and objectives of the study. These include; prevalence of menopause symptoms, menopause and related problems, menopause and coping strategies, and socio-demographic variables and menopause symptoms.

2.3.1 Prevalence of Menopause Symptoms

A number of studies have investigated and reported the prevalence of menopause symptoms among different populations.

In a study to report the prevalence of menopausal symptoms by severity among the Finnish female population and the association of their symptoms with lifestyle (thus; smoking, use of alcohol, physical activity) and body mass index (BMI), Moilanen, Aalto, Hemminki, Aro, Raitanen and Luoto (2010) sampled 1427 women aged 45–64 years and found out that almost all women (99%) reported having experienced at least one symptom. Moreover, more than a third of the premenopausal and almost half of the perimenopausal women had suffered from at least one bothersome symptom (such as headaches, dizziness, back pain, swollen feet, sleep disturbances, hot flushes, numbness among others). Among postmenopausal women and women with a history of hysterectomy, the proportions who experienced bothersome symptoms were even larger (53.6% and 53.7%). Premenopausal women suffered from back pain, muscle pain, numbness and hot flushes significantly less often than the other women, after controlling for age. The difference between pre- and perimenopausal women was the largest and most significant in back pain and

hot flushes. This indicates that the prevalence of symptoms vary with every stage of the menopause transition.

Similarly, Gjelsvik, Rosvold, Straand, Dalen and Hunskaar (2011) undertook a research to describe symptoms during the menopausal transition and age at menopause in a representative Norwegian female cohort over a ten year period, 2229 women aged 40–44 years at inclusion, were randomly selected from a national health survey in Hordaland County, Norway, and followed with seven postal questionnaires from 1997 through to 2009. Results showed that as the women went through the midlife age, the prevalence of hot flushes showed a gradual increase both in terms of frequency and symptom severity. The proportion of women who experienced daily hot flushes increased from 2% in the 41–42 years age group, to 22% in the 53–54 years age group, with a slight decrease to 20% in age group 55–57 years. The prevalence of cold sweats/night sweats followed a similar pattern, whereas the proportion of women who reported daily vaginal dryness/soreness was considerably lower – from 1% to 8% during the time span. The degree of experiencing these symptoms as bothersome showed a rise similar to the frequencies. For hot flushes, the proportion of women who were much or considerably bothered, increased from 3% to 21% during the time wave.

In a 10 year longitudinal analysis, it was revealed that the proportion of women reporting daily hot flushes in one or more questionnaire was 36%, while 29% never or almost never experienced hot flushes. Among the 708 women reporting daily hot flushes in one or more questionnaire, 391 (19.8% of the Cohort) reported this only once, while 147 (8% of the Cohort) answered in two consecutive questionnaire that they had daily hot flushes. Twenty-eight women (1% of the

Cohort) reported daily hot flushes in 6 or 7 questionnaire. The mean and median age for those reporting daily hot flushes for the first time was 50.8 (SD 3.48 years) and 51 years, respectively, the youngest woman started at age 41, and the oldest one started at an age of 57 years. This longitudinal analysis goes to further confirm the suggestion from cross-sectional studies that menopause symptoms differ in prevalence and severity across the different stages of the menopause transition.

In another study conducted by Abedzadeh-Kalahroudi, Taebi, Sadat and Saberi (2012) to determine the prevalence and severity of menopausal symptoms and related factors among women, 40-60 years in Kashan, Iran using 700 women in a cross-sectional survey, it was discovered that the most common symptoms in; vasomotor, psychosocial, physical and sexual domains were; night sweats (86.1%), reduced accomplishment (90.1%), feeling a lack of energy (92.7%) and change in sexual desire (83.8%) respectively. Moreover, the most severe symptoms in these domains were; night sweats, feeling anxious or nervous, aching muscles or joints, and avoiding intimacy.

In a related study, Dutta, Dcruze, Anuradha, Rao and Rashmi (2012) sought to estimate the prevalence of the following menopausal symptoms in a population based sample in a rural area in India. The study population included all the women who had attained natural menopause and those who had their last menstrual bleeding at least one year prior to the data collection. In all 780 postmenopausal women were sampled for the study. The results revealed that the mean age at menopause was 44.49 years and median age was 44 years.

The overall prevalence of any one symptom during the post-menopausal period among the study participants was 88.1%. Among the post-menopausal symptoms, the most frequently reported ones were vasomotor symptoms (60.9%); [hot flushes and sweating], followed by sleep related symptoms (40.1%) and anxiety (35.4%). Only 46% of the post-menopausal women who had any one symptom had taken treatment. The reasons for not taking treatment for the menopausal symptoms among the study participants were mainly their financial constraints (56.1%) and family problems (35.2%); indicating that majority of the women would have to look for alternative ways to cope with symptoms.

Again, Sussman, Trocio, Best, Mirkin, Bushmakina and others (2015) also in their investigation to assess the prevalence of menopausal symptoms among women prescribed hormone therapy (HT) using electronic medical record data from a regional healthcare organization among 102 randomly selected women aged 45 to 65 years found out that the most common menopausal symptoms were: hot flushes (40 %), night sweats (17 %), insomnia (16 %), vaginal dryness (13%), mood disorders (12 %), and weight gain (12 %). Among the sample used, 163 individual visits to a health facility listing menopausal symptoms were identified, of which hot flushes (71 visits) were the most common symptom identified.

Further, Rahman, Zainudin and Mun (2010) assessed menopausal symptoms in order to determine the commonly reported menopausal symptoms among Sarawakian women aged 40 to 65. 356 women were interviewed to document of 11 symptoms (divided into somatic, psychological and urogenital domain) commonly associated with menopause but only 350 were able to complete the study. Findings revealed that the mean age of menopause was 51.3 years.

The most prevalent symptoms reported were joint and muscular discomfort (80.1%); physical and mental exhaustion (67.1%); and sleeping problems (52.2%). Followed by symptoms of hot flushes and sweating (41.6%); irritability (37.9%); dryness of vagina (37.9%); anxiety (36.5%); depressive mood (32.6%). Other complaints noted were sexual problem (30.9%); bladder problem (13.8%) and heart discomfort or palpitations (18.3%). Perimenopausal women (n= 41) experienced higher prevalence of somatic and psychological symptoms compared to premenopausal (n=82) and postmenopausal (n=133) women. However urogenital symptoms mostly occur in the postmenopausal group of women.

Pal, Hande and Khatri (2013) also assessed menopausal symptoms in perimenopause and postmenopausal women above 40 years in a rural area. In all, 30 participants aged between 40 and 70 years were assessed. It was found out that the most prevalent symptoms reported include from somatic/vasomotor (44.66%) symptoms which was followed by Psychological symptoms (34.44%). Urogenital symptoms were noted less (20.66%). Mean age of menopause was 48.9 ± 3.2 years ranging from 45-55 years. After onset of menopause as age increases gradually there is increase in the symptoms. Among the somatic symptoms the most prevalent symptom was joint and muscle discomfort (76.6%), followed by sleep disorders (56.6%) and among the psychological symptoms, the most prevalent was exhaustion; both physical and mental (86.6%), followed by depression (40.2%).

Additionally, Poomalar and Arounassalame (2013) conducted a study to assess the quality of life and the impact of hormonal changes in perimenopausal and postmenopausal women and to correlate the prevalence of the symptoms with their duration since menopause. Five hundred women aged 40 to 65 years of which 135 were in menopause transition, 133 were in early post

menopause and 232 were in late post menopause were used in a cross-sectional study. It was found out that mean age for menopause among the study group was 45 years and the most common symptoms were low back ache (79%) and muscle-joint pain (77.2%). The least frequent symptoms were increase in facial hair (15%) and feeling of vaginal dryness during intimacy (10.8%). Scores of vasomotor domain were significantly more in menopause transition group. Scores of physical domain were significantly more in late postmenopausal group. The breakdown of symptoms include; vasomotor symptoms were found in 80% of the study group, psychosocial symptoms were found in 93.2%, physical symptoms were found in 99% and sexual symptoms were found in 82%.

2.3.2 Menopause and Related Problems

Menopause seem to result in several health and psychological problems among midlife women. It is for instance reported that a large group of women who experience psychological distress coincides with the hormonal fluctuation of the climacteric, which is confirmed by the large proportion of women (up to 50%) reporting psychological complaints at menopause clinics (Byrne, 1984; Hay, Bancroft & Johnstone, 1994).

In a research to assess perceived stress, insomnia and related factors among Spanish women around the menopause, Cuadros, Fernández-Alonso, Cuadros-Celorrio, Fernández-Luzón, Guadix-Peinado et al., (2012) sampled 235 women aged between 40-65 in a cross-sectional survey. Results revealed that, 36.6% of the women in the study experienced insomnia and 18.7% had severe impaired menopause-related quality of life. In addition to that higher perceived stress

were significantly related to menopausal status. This indicates that being in the menopausal phase puts one at risk for insomnia and higher perceived stress. Quality of life of such women may also be impaired in relation to the menopause. The study also found out that 9.8% were on hormone therapy and another 12.3% were on psychotropic drugs. This implies that many of the women may be employing other methods in coping with the problem associated with the menopause considering the small number that use hormone therapy.

In a qualitative study conducted by Nosek, Kennedy and Gudmundsdottir (2012) in which they tried to examine the experiences of distress in women during the menopause transition, they interviewed 15 midlife women aged between 40 and 60, recorded and transcribed verbatim their narratives. It was shown in the analysis of the narratives that most of the distress experienced by the women were related to menstrual changes, emotional instability, vaginal dryness, and decreased libido which in turn is affected by their relationships with self, partners, work, and family. According to many of the women, they experienced unpredictable, painful, and heavy menstrual cycles which is sometimes compounded by work demands. In addition, emotional changes that also seemed to be unpredictable with rapid onsets concerned many of the women, and reports of their partners, family members, and they themselves not recognizing who they have become demonstrated the accompanied anguish it caused them. These experiences also have negative consequences for the quality of life of the women as many of them were concerned that their symptoms would occur in the middle of a social situation and that they would be unable to manage their discomfort and consequently would avoid socializing, or some would totally change lifestyles to compensate which would ultimately lead to a decrease in quality of life.

Wang, Booth-LaForce, Tang, Wu and Chen (2013) investigated depressive symptoms in Taiwanese women during the peri- and post-menopause years using a purposive sample of 566 women between 45 and 60 years of age from a medical centre and residential community in Southern Taiwan in a cross-sectional study. Results showed that the prevalence of depressive symptoms was 38.7% in peri- and postmenopausal Taiwanese women. It was also revealed from the analysis that higher depressive scores were associated with lower family income, younger age, smoking for a greater number of years, consuming more alcohol, having multiple chronic diseases, not exercising regularly, consulting with a specialist for stress management, having more severe menopausal symptoms, and more negative attitudes toward menopause and aging. A stepwise multiple regression analysis indicated that the crucial predictors of depression among the sample were menopausal symptoms, attitudes toward menopause and aging, family income, and chronic disease status. This implies that menopausal symptoms may be severe enough in some women to put them at for depression.

Similarly, a systematic search was carried out of electronic databases for original research using population-based studies examining the relationship between menopause and depression by Judd, Hickey and Bryant (2012) with the aim of exploring key studies undertaken over the past 30 years in order to examine the evidence which exists to support the proposals that depression in midlife women occurs as a biological response to hormonal change and that it is so common that all middle aged women should be routinely screened for depression. The review revealed that longitudinal change in menopausal status over time is associated with an increased risk of elevated depressive symptoms, regardless of relevant demographic, psychosocial, behavioural

and health factors. However, there is no clear evidence that depressive disorders occur more commonly in association with the menopause. Rather, it appears that the true rate of disorder is similar to that at other times in a woman's reproductive life.

This means that though menopausal women may experience greater menopausal symptoms than others, the symptoms even if severe may not necessarily qualify for a diagnosis of depressive disorder. It, nonetheless, does not rule out the fact that depressive symptoms are higher during the transition to menopause.

Sleep problems, especially night-time awakenings, are a major complaint in the transition to menopause, present in 40—60% of women (Polo-Kantola, 2011). Baker, Willoughby, Sassoon, Colrain and de Zambottia (2015) aimed to quantify sleep disturbance and the underlying contribution of objective hot flashes in 72 women aged 43 to 57 years who had developed clinical insomnia in association with the menopausal transition compared to those who had not. Sleep quality was assessed with two weeks of sleep diaries and one laboratory Polysomnographic (PSG) recording. Results indicate that compared with controls, women with insomnia reported more severe psychological, somatic, and vasomotor symptoms, and had higher scores on depression scale. Insomniacs were more likely to have physiological hot flashes, and the presence of hot flashes predicted the number of PSG-awakenings per hour of sleep. Women who developed insomnia in the approach to menopause have a measurable sleep deficit, with almost 50% of the sample having less than 6 h of sleep. One important inference that can be made from this particular finding is that some of the symptoms of menopause such as hot flushes

can cause enough distress to deprive women of quality sleep, this could in turn lead to other health problems.

Another aspect of women's life that seems to be affected during the menopause is their general psychological well-being. In a study conducted by Gartoulla, Bell, Worsley and Davis (2015), they investigated the association between moderate-severely bothersome vasomotor symptoms (VMS) and general psychological wellbeing in women, aged 40–65 years, taking into account socio-demographic and lifestyle factors. A large community sample of 2020 were recruited for the study. Findings indicate that moderate to severely bothersome vasomotor symptoms had a strong significant negative association with general psychological wellbeing. This shows that the experience of moderate to severe menopause symptoms may compromise the general psychological well-being of menopausal women.

In a related study, Potdar and Shinde (2014) explored the presence of psychological problems among post-menopausal women and coping strategies they adopt. One hundred postmenopausal women, selected by convenient sampling method were used for the study, using structured questionnaire. Findings revealed that 57% of the women had mild psychological problems and 78% of them were adopting coping strategies to overcome these problems. Association between the psychological problems and coping strategies was strong and significant.

Women in their menopause also suffer significantly from sexual problems due to some biological symptoms that come with the menopause (Lo & Kok, 2013). In Lo and Kok's (2013) study to examine the sexual activities and prevalence of sexual dysfunctions in midlife Chinese women

and their correlations with demographic factors, sexual dissatisfaction and interpersonal difficulty, it was revealed that of the 371 eligible participants, 22.4% and 39.6% women had low intimacy and coitus frequency respectively. Overall, 77.2% women had at least one type of sexual dysfunction and the proportion was highest in the surgically menopausal subgroup (88.9%) followed by the naturally menopausal subgroup (79.3%), the perimenopausal subgroup (78.2%) and the premenopausal subgroup (72.2%) and the difference was statistically significant. No lubrication (42.9%) was the commonest sexual dysfunction and predominantly affected naturally and surgically menopausal women. Sexual dysfunction was the major contributor to sexual dissatisfaction, followed by interpersonal difficulty. Arousal disorder was the pivot of interaction between sexual dissatisfaction, menopausal status and low coital frequency.

Menopause symptoms also interfere with work or occupational health among some women. For instance, Griffiths, MacLennan and Hassard (2013) explored women's experiences of working through menopausal transition in the UK with the aim of identifying the perceived effects of menopausal symptoms on working life, to outline the perceived effects of work on menopausal symptoms, and to provide recommendations for women, healthcare practitioners and employers. An electronic questionnaire was distributed to about 896 women aged 45–55 years, who were in professional, managerial and administrative (non-manual) occupations in 10 organisations. It was discovered that menopausal transition caused difficulties for some women at work. The most problematic symptoms were: poor concentration, tiredness, poor memory, feeling low/depressed and lowered confidence and among these symptoms, lowered confidence, poor concentration and poor memory were particularly problematic. Hot flushes were particularly difficult to cope with when working in hot or unventilated workspaces or in formal meetings (71.3% and 62.8%

respectively). Some women also felt that generally, work performance had been negatively affected.

In a similar vein, Hammam, Abbas and Hunter (2012) investigated the relationship between experience of the menopause transition and work. Using a cross-sectional study, 131 middle-aged female medical teaching staff completed questionnaire and semi-structured interviews. Results showed that the women in the study, particularly those who were postmenopausal, reported high average scores on depressed mood, memory/concentration, sleep problems, vasomotor symptoms, and sexual behaviour. Women reported that poor working environment and work policies and conditions, functioned as sources of work stress and in turn aggravated their menopausal symptoms. Majority of the participants pointed out that tiredness/lack of energy (83.2%) and changes in sleep pattern (64.1%) were the major symptoms affecting their work capacity and performance. Other symptoms such as somatic, psychological, memory and concentration were reported by less than half of the participants. Menstrual and vasomotor symptoms were viewed as affecting work performance by fewer participants.

In determining the prevalence and severity of menopausal symptoms, NusratNisar and Nisar (2015) sought to investigate the correlation of socio-demographic and reproductive characteristics with menopausal symptoms in rural women. A cross-sectional study was conducted between 2007 to 2008 in rural Sindh, Pakistan. Multistage random sampling was used to select women between the ages 40-70 years. A predesigned proforma; Menopause Rating Scale was used to collect information regarding the prevalence and severity of menopausal symptoms. Multivariate logistic regression was used to adjust prevalence odds ratio for

demographic and reproductive characteristics. Findings revealed that prevalence of menopausal symptoms was mostly higher except bladder problems 1138(37.7%) and dryness of vagina 1008(34%). The frequency of symptoms which were all mild in nature were hot flushes 1287(42%), sleep problems 1251(40.9%), depressive mode 1169(38.2%), physical and mental exertion 1169(38.2%), and muscle and joint pain 861(28.1%). There was also a significant association of the symptoms with age, education and menopausal status.

Dutta, Dcruze, Anuradha, Shivani, and Rashmi (2012) also investigated the prevalence of the following menopausal symptoms vasomotor symptoms, psychological symptoms, urinary symptoms and joint pain and to assess the extent of the treatment which was availed to treat the menopausal symptoms. Using a cross-sectional design, the rural population in the Poonamallee block of the Tiruvallur district of Tamilnadu. The study population included all the women who had attained natural menopause and those who had their last menstrual bleeding at least one year prior to the data collection. The cluster sampling method was adopted and 30 clusters were randomly selected and a total of 780 post-menopausal women were enrolled in the study. A structured questionnaire was also used to collect the information regarding the background characteristics, the obstetrical history, the menopausal history and the menopausal symptoms of the women. In examining the findings, the overall prevalence of any one symptom during the post-menopausal period among the study participants was 88.1%. Their results also showed that among the post-menopausal symptoms, the most frequently reported ones were vasomotor symptoms (60.9%), followed by sleep related symptoms (40.1%) and anxiety (35.4%). Only 46% of the post-menopausal women who had any one symptom had taken treatment.

Batool, Saggu, and Ghani (2014) did a cross sectional comparative study in a well-populated city named Rawalpindi, located in the Northern part of Pakistan. Their aim was to document the comparison of menopausal-related symptoms among educated and non-educated women of Rawalpindi, Pakistan. A total number of 100 educated and 100 uneducated women were selected for study purpose. Results showed that the intensity of symptoms reported by Educated women were sleeping problems (93.0%), heart discomfort (80.0%), hot flushes and sweating (70.0%), joint and muscular pain (52.0), depressive mood (63.0%), irritability (42%), anxiety (60.0%), physical and mental exhaustion (48.0%), sexual problem (61.0%), dryness of vagina (57.0%), and bladder problem (65.0%). The results varied for the uneducated women including sleeping problems (77.0%), heart discomfort (73.0%), hot flushes (69.0%), joint and muscular pain (66.0), depressive mood (71.0%), irritability (58%), anxiety (80.0%), physical and mental exhaustion (70.0%), sexual problem (66.0%), dryness of vagina (70.0%) and bladder problem (83.0%). It can therefore be concluded that the prevalence of psychological and urogenital symptoms were high in uneducated women as compare to educated women.

In a recent study, Dasgupta, Karar, Ray and Ganguly (2015) compared the incidence of menopausal problems and concomitants between tribe and caste population. This was conducted in five villages of West Bengal, a state in the eastern part of India. This study was conducted between two different ethnic groups. A total number of 313 participants were recruited for this study. Inclusion criteria included study participants to be married, had at least one child, had no major gynecological problems, and had stopped menstrual bleeding spontaneously for at least 1 year. Additionally, they took data on sociodemographic status and menstrual and reproductive history were collected using a pretested questionnaire/schedule. Bivariate analyses revealed that

significantly more number of caste participants suffered from urinary problems than their tribe counterpart. Multivariate analyses showed that socio-demographic variables and menstrual and reproductive history of the present study participants seem to be the concomitants of menopausal symptoms. Tribe and caste study population significantly differed with respect to the estrogen deficient menopausal problems and the concomitants to these problems.

To find out the health problems among rural post-menopausal women and to compare the results with few of the studies in the past with different settings, a cross-sectional study with 147 post-menopausal women residing in Piparia village of Vadodara district were involved in the study. It was found out that most of them suffered from physical symptoms of tiredness (88.4%) and headache (74.8%). This was followed by vasomotor symptoms like hot flushes (40.1%), night sweats (40.8%) and palpitations (37.4%) as well as psychological symptoms like insomnia (57.1%), anxiety (38.1%) and lack of concentration in the work (33.3%). It can, therefore, be implied that the rural post-menopausal women suffer from variety of health problems (Christian, Kathad & Bhavsar, 2012).

Freitas, Lima, Costa de Moraes, Benevides Dias, de Souza Aquino, and Pinheiro (2009) aimed at identifying the Blatt-Kupperman Menopausal Index (BKMI) and verifying the post-menopausal symptoms which are more prevalent in aged women who live in homes for old people. The results showed that the elderly were illiterate, unmarried, and had reached their menarche as they were 15 years of age. Seventeen women (63.0%), and 16 older women (59.3%) had reached menopause between 40 and 55 years of age. Also 24 women (88.9%) had presented light BKMI, with the absence of various symptoms, which may be the consequence of hormonal stability, as

result of a considerable time of menopause. It is also noted that the most prevalent symptoms were depression, nervousness, dizziness, arthralgia/myalgia and headache. This study is critical because the BKMI represents a valuable tool in the identification of post-menopausal symptoms and that its application in older institutionalized women allows the detection of factors often not approached in nursing consultation.

Madhukumar, Gaikwad and Sudeepa (2012) studied the age at onset of menopause and the prevalence of menopausal symptoms and to analyze the menopausal symptoms and the treatment seeking behaviour for it. The research design was a cross sectional study carried out in the field practice area of Urban Health training centre of the Department of Community Medicine, M V J Medical College and Research Hospital. The study was carried out from January 2012 to March 2012 and the study population comprised of all the menopausal women of that area with a sample of 189 postmenopausal women. An almost average of 56.92% of the menopausal women felt firmly that they were affected by menopause in negative manner. The most frequent menopausal symptoms were aching in muscle and joints, feeling tired, poor memory, lower backache and difficulty in sleeping. The vasomotor and sexual domains were less frequently complained when compared to physical and psychological domains.

Nayak, Kamath, Kumar and Rao (2012) also studied the menopause related symptoms affecting the quality of life (QOL) of perimenopausal women in order to understand the prevalence and plan for the interventions. Using a sample of 209 women, they were evaluated for perimenopausal symptoms using a 29 item MENQOL questionnaire. The physical and

psychosocial symptoms were found to be more prevalent than the vasomotor and sexual symptoms.

AlDughaiter, AlMutairy and AlAteeq (2015) determined the prevalence and severity of menopausal symptoms and their impact on the quality of life among Saudi women visiting primary care centers in Riyadh, Saudi Arabia using a cross-sectional study October to November 2010. In total, 119 women aged 45–60 years were randomly interviewed using a questionnaire and they were divided into three categories: premenopausal (n=31), perimenopausal (n=49), and postmenopausal (n=39). The Menopause Rating Scale (MRS) assessed the prevalence and severity of eleven menopausal symptoms. From their study, the symptoms reported to be most prevalent were joint and muscle pain (80.7%), physical and mental exhaustion (64.7%), and hot flushes and sweating (47.1%). Somatic and psychological symptoms were highly prevalent in perimenopausal women compared to other groups. The mean overall quality-of-life score was higher in perimenopausal women, while the total MRS score indicated that the symptoms were mild in severity MRS <9).

Chen et al (2013) tested the hypothesis that menopausal symptoms have been suggested to be an indicator of better prognosis among patients treated for breast cancer, this is because women who experience these symptoms usually have a lower level of estrogen. Four thousand, eight hundred and forty two (4,842) women with stage 0 to III primary breast cancer who were enrolled in the Shanghai Breast Cancer Survival Study between March 2002 and April 2006. Cox regression analysis was used to evaluate the association of menopausal symptoms at baseline with breast cancer recurrence, and it was found that approximately 56% of patients experienced at least one menopausal symptom, including hot flashes, night sweats, and/or vaginal dryness at baseline.

During a median follow-up period of 5.3 years, 720 women had a recurrence. Experiencing hot flashes or having ≥ 2 menopausal symptoms was associated with lower risk of recurrence among premenopausal women. Lower recurrence risk in relation to hot flashes was also observed among women who were not overweight/obese. Consistently experiencing multiple menopausal symptoms was associated with lower recurrence.

The study conducted by Rahman, et al (2010) to determine the commonly reported menopausal symptoms among Sarawakian women using a modified Menopause Rating Scale (MRS) revealed that the most prevalent menopausal symptoms reported were joint and muscular discomfort (80.1%) and dryness of vagina (37.9%) which is almost similar to the present study.

Sagdeo and Arora (2011) conducted an observational cross sectional study at Nagpur, Maharashtra on menopausal symptoms which suggested that commonly observed menopausal symptoms are hot flushes, joint & muscular discomfort and physical & mental exhaustion. It was revealed that the symptoms are at peak during 45-55 years and after 55 years severity decreases. The somatic and psychomotor symptoms were more common.

A study conducted by Kuruvila (2012) among 30 women between the age group of 45-55 years at Bangalore on the effects of walking exercise in coping with menopausal symptoms revealed that after practicing the walking exercise the majority 26 women had only very minimum symptoms and 4 women revealed mild menopausal symptoms. It also revealed that by walking exercise, majority of women 21 had relief from joint pain. In the present study (6.98%) adopted walking to prevent sleep problems.

In Madhukumar, et al (2012) study on perceptions about menopausal symptoms and quality of life of postmenopausal women conducted at Bangalore suggests that, out of the study population only (21.7%) took treatment for menopausal symptoms. Some women took calcium or some Ayurvedic treatment or over the counter drugs to treat menopausal symptoms. Whiles majority of females took treatment without doctors' advice, some were not aware that treatment is available. About one-third of them just took some pain killers over the counter. Some women did not seek medical help due to family or financial problems. About 9% of them felt they do not like to take any tablets.

Pachman, et al (2010) in a study on management of menopause associated vasomotor symptoms suggested that one key lifestyle modification to prevent hot flushes is to keep the core body temperature cool using techniques such as loose clothing, sipping cold drinks, avoiding spicy food, and keeping a lower room temperature.

Geetha and Parida (2013) did a cross-sectional descriptive survey design to assess prevalence of menopausal problems and the strategies adopted by women to prevent them. Participants included women attendants who were present in the tertiary care hospital from Sep-Oct 2013 were included in study. A total of 100 samples were, therefore, studied. Structured interview schedule was used for data collection. It was found that out of 100 menopausal women majority (61%) were in the age group of 45 - 50 years and (39 %) were in the age group of 51 - 55 years. Majority of menopausal women experienced joint and muscular discomfort (86%) and physical and mental exhaustion (81%).

Kritz-Silverstein, Von Mühlen and Barrett-Connor (2000) also examined the association of hysterectomy and oophorectomy with the prevalence and clustering of menopausal symptoms in a large population-based sample of older women. Subjects were 1121 women aged 50–89, however information on menopause, hysterectomy, oophorectomy, estrogen use, and other covariates was obtained in 1984–1987. 22.1% reported hysterectomy with bilateral oophorectomy, and 25.3% reported hysterectomy with ovarian conservation. Mean time since hysterectomy was 26 (6–12) years. Overall, 37% reported current estrogen use, and 40% reported past use. The duration of estrogen use was longer for women who had a hysterectomy. Age-adjusted comparisons also indicated that more women who had a hysterectomy, with or without bilateral oophorectomy, reported greater energy after menopause, and more women with bilateral oophorectomy reported greater interest in sex and reported that life was getting better than women with natural menopause. Principal components factor analysis of the symptom data for all women yielded four factors: psychological, vasomotor, positive feelings, and self-image. Analyses performed within each group of women yielded similar factors and loadings. Adjusted comparisons of factor scores indicated that positive feelings were significantly higher in women who had a hysterectomy, with or without bilateral oophorectomy than in women with natural menopause. This difference was limited to current estrogen users. Vasomotor symptoms, psychological symptoms, and negative self-image did not differ by hysterectomy or oophorectomy status before or after stratification for estrogen use.

In identifying the self-reported age at natural menopause, prevalence of menopausal symptoms, and to identify sociodemographic and reproductive factors that may influence the onset of menopause, Nisar, Sohoo, and Sikandar (2012) surveyed women aged 40–70. A multistage

random sampling technique was used to retrieve 1,355 women with natural menopause from 10 union councils of district Matari and these women were further categorized into 3 groups, I, II, and III having menopause for 1–5, 6–10, >10 years respectively. Findings showed that the prevalence of menopausal symptoms ranges from 26 % to 83%. Frequency of somatic, psychological and urogenital symptoms was also high in group II. No significant association was found between parity, socioeconomic status and age at natural menopause.

Mohamed, Lamadah, and Zamil (2014) assessed the menopausal related symptoms and their impact on the women's quality of life. A descriptive design was used with a research question being how menopausal symptoms impacts on the women's quality of life. In doing that, a convenient sample composed of 90 women at range of age between 40-60 years was recruited from gynecological department. Results showed that the most severe symptoms of vasomotor, psychosocial, physical and sexual domains were, hot flushes (29%), experiencing poor memory (48.3%), being dissatisfied with their personal life (44.8%), Low backache (41.9%), and change in sexual desire (36.8%). From their study, it therefore can be concluded that the most severe symptoms of vasomotor, psychosocial, physical and sexual domains were, hot flushes, poor memory, and dissatisfaction with personal life, low backache, and change in sexual desire.

In a comparative study, Sagdeo, and Arora (2011) sampled 500 females in the age group of 40-60yrs to find out average age of menopause in rural and urban women and associated menopausal symptoms & its awareness & prevalence by a predesigned questionnaire. It was found out that, the percentage of all menopausal symptoms is more in urban women as compared to rural cases. Commonly observed symptoms' are hot flushes, joint and muscular discomfort and

physical & mental exhaustion and the symptoms are at peak during 45-55 years and after 55years severity decreases. However the urinary symptoms and heart discomfort are more in > 55 years in urban women.

Makara-Studzińska, Kryś-Noszczyk, and Jakiel (2014) compared the rate of menopausal symptoms among women living in continents of both Americas, Africa, Australia and Eurasia. They carried out a meta-analysis obtained in 2014 on the basis of the data from a review of the 64 most important studies using the PubMed database. Research published in the period 2000-2014, from Africa, both Americas, Australia and Eurasia, were taken into account. It was revealed that the prevalence of menopausal symptoms in African women is disconcertingly high. Women from South America complain about occurrence of depressive, sexual dysfunctions and discomfort associated with muscle pain and joint aches. Symptoms most reported by women in the United States are pains associated with muscles and joints. Women in Australia suffer mainly due to vasomotor symptoms and sexual dysfunction, while in the group of women surveyed in Asia there is observed an alarming increase in in the proportion of women reporting depressive disorders. In Europe there was a much greater incidence of sleep disorders and depressive disorders.

Bindhu, Bhaskar and Joseph (2014) investigated the prevalence of menopausal symptoms among women (menopausal for < 5 years) in the age group of 43-55 years in a rural area in Kottayamdistrict in Kerala. They used a pre-tested structured closed ended questionnaire was used for data collection. Findings showed that mean age of 320 women participated in the study was 48.96 and the frequently occurring symptoms were “Feeling of Fatigue/Lack Of Energy”

49.7% “easily get irritated” 41.1% , hot flashes 40.9%, muscle or joint pain 35.9 % , Night sweats is 32.8 % . Among psychological symptoms, 56.9% among postmenopausal women and 42.5% among pre-menopausal women complained of “Feeling of Fatigue/Lack Of Energy”. The most frequent somatic symptoms are muscle or joint pain, 40% among postmenopausal women and 31.9% among pre-menopausal women.

Asadi, Jouyandeh and Nayebyzadeh (2012) conducted a study to determine the symptoms associated with menopause among women referred to menopause clinic of Tehran Women General Hospital. 134 women participated in the study. From their results, the mean age of natural menopause onset was 47.35 year. The symptoms associated with menopause like other review done were hot flushes (59.5%), mood swing (42.6%), vaginal dryness (41.1%) sleep problems (40.4%), night sweats (38.2%), memory loss (32.3%), urinary symptoms (18.3%), palpitation (6.6%), anxiety (5.8%), Joint and muscle pain (59.9%), depression (4.4%), Irritability (3.6%).

Dienye, Judah, and Ndukwu (2013) conducted a study to determine the frequency and severity of menopausal symptoms and health seeking behaviour of women with menopausal symptoms attending the General Outpatient Department of the University of Port Harcourt Teaching Hospital. a cross-sectional, descriptive study in which data was collected from menopausal women using a three-part, pre-tested questionnaire for a period of three months (July–September 2010). It was found that the most prevalent menopausal symptoms were loss of libido (92.47%), muscle pain (87.53%), joint pain (85.45%) and tiredness (80.26%). Urinary symptoms had the least prevalence (7.79%). Results also on the severity of menopausal symptoms showed that

28.25%, 49.84% and 21.9% were experiencing severe, moderate and mild menopausal symptoms, respectively. Loss of libido (79.21 %) was the most severe symptom followed by urinary symptoms (40%). The patent drug dealers were the most consulted (51.4%) followed by health workers (44.7%). The traditional healers were consulted by a small percentage (3.8%). It therefore can be concluded that the most common menopausal symptom among the patients in this study was loss of libido and the least common was urinary symptoms.

Xu, Bartoces, Neale, Dailey, Northrup, and Schwartz (2005) researched into the prevalence and the natural history of menopause symptoms among primary care patients approaching, or at menopause and to also find out the relationship between self-reported symptoms and menopausal status and to check for differences between African American and white women. It was realized that among 251 women without surgical menopause, 133 (53.0%) were premenopausal, 72 (28.7%) were peri-menopausal, and 46 (18.3%) were postmenopausal. The most commonly reported symptoms were joint/muscle pain and headache, which did not vary by menopausal status. As many as 28.6% of the women with regular menstruation reported hot flashes, and 18.8% had night sweats; although both symptoms were strongly associated with changes in menopausal status ($P < .01$). It was noted that during the natural menopausal transition, white women had increasing trends of nervousness, memory loss, vaginal dryness, loss of sexual interest, hot flashes, and night sweats while African American women only had increasing trend of painful sex and hot flashes. It can be concluded that African American and white women may present different symptoms through menopause transition.

Yamei et al, (2014) investigated climacteric symptoms and the health status of perimenopausal women in Hospital. The questionnaire survey was carried out on menopausal women. It was found that the five most frequent symptoms in menopausal women were fatigue (79.38%), insomnia (76.80%), irritability (74.23%), depression (67.01%), palpitation (67.01%), while in postmenopausal women were knee pain (100%), vaginal dryness (100%), urinary incontinence (100%), fatigue (77.68%), insomnia (75.89%). Higher follicle stimulating hormone (FSH), aging and poor education were related to climacteric syndrome.

Al-Sejari (2005) examined the ways in which biological, sociodemographic, and cultural factors determine age at natural menopause and the prevalence of menopausal symptoms. The primary objectives of the research included assessing the mean and median age at menopause, detecting factors that might contribute significantly to a more rapid decline in ovarian function, determining the factors that significantly affect the prevalence of menopausal symptoms that Saudi women's experience and to assess the relationship between women's perceptions and attitudes toward menopause and the menopausal symptoms that women experience.

The findings of the study indicated that while age at natural menopause varied within and among the menopausal factors (anthropometric measures, sociodemographic status, reproductive history, and lifestyle), the only factors that were significantly associated with age at menopause were women's weight, marital status, and employment status. The findings also indicated that the respondents' marital status and number of children were significantly associated with the prevalence of menopausal symptoms among the Saudi women.

Vijayalakshmi, Chandrababu and Victoria (2013) assessed the menopausal transition among women residing at selected rural community, Punjab. Their study was conducted from July 2012 to December 2012. The sample from the selected rural community and the research design used for this study was non experimental design – descriptive survey method. The sample size selected for this study consists of 30 rural women 40-55 years of age from selected rural community at Amritsar. The results reported that more prevalent symptoms were feeling tired (92.90%), headache (88.80%), joint and muscular discomfort (76.20%), physical and mental exhaustion (60.09%), sleeplessness (54.40%), depressive mood (37.30%), irritability (36%), dryness of vagina (36%), hot flushes and sweating (35.80%) and anxiety (34.50%).

Alizadeh, Sayyah-Melli, Ebrahimi, Shishavan, and Rahmani (2015) examined the relationship between the personal, demographic, social and reproductive factors with symptoms of menopause and the frequency of the mental and physical symptoms of menopause among women in Tabriz, Northwest of Iran. A cross-sectional study was conducted in the clinics and health centers of Tabriz, East Azerbaijan and Iran with a total of 300 women aged 40-60 years. From their results, muscle and joint pain was 68.7% and increased facial hair was 20.5%. These were the most and the least common ones respectively. It was also found that as age increased, the symptoms worsened. Also the frequency of the symptoms of the employed women was less than those of retired ones and housewives. The physical and mental symptoms had negative relation with educational status and an increase in the number of the children, the history of the oral contraceptive use and dysmenorrhea had positive relation with the frequency of the symptoms. The implication is that the quality of life of the women during menopause worsens

with an increase in age and number of children, whereas it improves with higher educational levels and employment.

In a study conducted in Ghana by Setorglo, Keddey, Agbemaflle, Kumordzie and Steiner-Asiedu (2012), they evaluated the perception, knowledge and beliefs about menopause and the prevalence of climacteric symptoms among a total 280 menopausal women aged 45 years and older in the Accra Metropolis of the Greater Accra Region. Using a cross-sectional survey design, the researchers gathered data on the respondents' on socio-demographic characteristics, knowledge, beliefs and experience of menopausal symptoms. Data respondents' weight, height, % body fat and MUAC were also examined by the researchers. Results from the data analyses revealed that the mean age of onset of menopause was (48 ± 2.9) years with 98.2% having some knowledge of the signs and symptoms of menopause. Further analysis showed that the most frequently reported menopausal symptoms by the women in the study were night sweats, hot flashes, mood swings and vaginal dryness of vagina respectively.

Logistics regression analysis showed that age at onset of menstruation, age of start of menopause, body weight and % body fat were the main predictors of the occurrence of the most common menopausal symptoms reported by the respondents in this study. The results also showed that as the age of menopause increased, there were concomitant decreases in the risk of experiencing symptoms such as night sweats, mood swings and vaginal dryness. The study outcomes shed light on the most common menopausal symptoms experienced by Ghanaian women in this study. However, the study failed to examine how some personal demographics of

the respondents such as age, number of children could affect menopausal symptoms among the respondents.

Relatedly, Shakila, Sridharan, and Thiyagarajan (2014) in their study among Sri Lankan academic women between the ages of 25 and 60 years examined the symptoms and awareness associated with menopause. The researchers employed the modified MRS (Menopause Rating Scale) questionnaire and a total of 50 Sri Lankan women were interviewed. Results from the analysis showed that the women in the study had a mean age of menopause of 52 years. Further analysis of the symptoms presentation by the representations showed that the most extensive symptoms reported were joint and muscular pains, physical and mental exhaustion and concentration and sleeping problems, followed by symptoms of hot flushes and night sweating, irritability, itching in private parts, anxiety and depressive mood.

This study has identified the common physical and psychosocial factors that are associated with menopause. The findings from this study agree with previous findings by Setorglo, Keddey, Agbemaflé, Kumordzie and Steiner-Asiedu (2012) which found similar symptoms to be more prevalent among women in the Ghanaian context. However, the mean menopausal age differed slightly with the Ghanaian sample reporting menopausal symptoms at a younger age than the Sri Lankan counterparts. The study is however limited by the relatively small sample size of 50 participants which limits the external validity of the findings from this study.

In another study Rahman, Salehin and Iqbal (2011) investigated the menopausal-related symptoms among middle age women of Kushtia region of Bangladesh by using modified MRS (Menopause Rating Scale) questionnaire. The researchers sampled a total of 509 women who were between the ages of 40-70years. The participants were interviewed using the modified MRS and the common symptoms of menopause were identified. The findings from this study showed that the mean age of the participants' menopausal symptoms was 51.14years. Further analysis of the data revealed that the most prevalent symptoms reported by the respondents in this study were feeling tired, headache, joint and muscular discomfort, physical and mental exhaustion and sleeplessness followed by depressive mood, irritability, dryness of vagina, hot flushes and sweating, anxiety (34.20%). The researchers further observed from their analysis that the respondents reported some less frequent symptoms of menopause and these include sexual problem, cardiac discomfort and bladder problem.

Further, Alizadeh, Sayyah-Melli, Ebrahimi, Shishavan and Rahmani (2015) examined the relationship between the personal, demographic, social and reproductive factors with symptoms of menopause and the frequency of the mental and physical symptoms of menopause among women in Tabriz, Northwest of Iran. The researcher used a cross-sectional study and a total of 300 women between the ages of 40 and 60 years were administered instruments measuring their socio demographic variables, reproductive history and symptoms checklist. The findings from the study showed that muscle and joint pain and increased facial hair were the most and the least common menopausal symptoms reported by the women respectively.

Further analysis of the demographics showed that increasing age of the respondents is associated with worsening menopausal symptoms among women. Significant differences exist between employed and unemployed women on their symptoms with employed women reporting less menopausal symptoms than respondents who are retired and respondents who are housewives. It was also observed that higher educational status was associated with decreased physical and mental symptoms. Finally, it was observed that increasing number of children, history of oral contraceptive use and dysmenorrhea were significantly and positively associated with the frequency of respondents' menopausal symptoms.

In a prevalence study, Rahman, Zainudin and Mun (2010) examined the commonly reported menopausal symptoms among Sarawakian women using a modified Menopause Rating Scale (MRS). A total of 356 Sarawakian women aged between 40 and 65 years were interviewed to document 11 symptoms (divided into somatic, psychological and urogenital domain) commonly associated with menopause. Findings from the analysis showed the respondents' mean age of menopause was 51.3 years. Further analysis showed that the most prevalent symptoms reported were joint and muscular discomfort physical and mental exhaustion and sleeping problems. These symptoms were followed by symptoms of hot flushes and sweating, irritability, dryness of vagina, anxiety, depressive mood. Other complaints noted by the respondents were sexual problem, bladder problem and heart discomfort. Comparison of the women groups showed that Perimenopausal women experienced higher prevalence of somatic and psychological symptoms compared to premenopausal and postmenopausal women. However urogenital symptoms mostly occur in the postmenopausal group of women. The findings of this

study showed that menopausal symptoms differ according to their age which has been reported by previous studies (Alizadeh, Sayyah-Melli, Ebrahimi, Shishavan & Rahmani, 2015).

Abedzadeh-Kalahroudi, Taebi, Sadat, Saberi and Karimian (2012) in a study to determine the prevalence and severity of menopausal symptoms and related factors among women between the ages of 40-60 years in Kashan, Iran found that the vasomotor, psychosocial, physical and sexual domains were; 'the commonly reported menopausal symptoms among the women. This study used a cross-sectional survey design and a total of 700 menopausal women in Kashan City were selected using cluster sampling. Further analysis of the data comparing the effects of the respondents' socio-demographic factors on their symptom severity showed that respondents' educational levels, exercise activity, exercise frequency, duration of menopause and working status significantly predicted the severity of menopausal symptoms significantly.

Al-Sejari (2005) examined the effects of biological, sociodemographic, and cultural factors on the age at natural menopause. Specifically, the researcher sought to assess the average age at natural menopause, the factors that might contribute significantly to a more rapid decline in ovarian function experienced among Saudi Arabian women, determine the factors that significantly affect the prevalence of menopausal symptoms that Saudi Arabian women experience and finally to assess the relationship between women's perceptions and attitudes toward the menopausal event and the menopausal symptoms that women in the study experience. The cross-sectional study design was employed by the researcher and questionnaires measuring the study variables were administered to a total of 200 Bedouin and Hadar Saudi Arabian women. Data analysis was done with the use of SPSS and the results are presented below.

Results from the analysis showed that the mean age at natural menopause among these Saudi Arabian women in the study was 48.06 years and the median age was 49 years. Results also indicate factors that were significantly associated with age at natural menopause were women's weight, marital status, and employment status. The findings also indicated that the respondents' marital status and number of children were significantly associated with the prevalence of menopausal symptoms among the Saudi women. Women's attitudes toward menopause varied based on their menstrual status and ethnicity. Premenopausal women tended to have more negative attitudes toward menopause than perimenopausal and postmenopausal women. Hadar women in general tended to be more optimistic and possessed more positive attitudes toward menopause than did Bedouin women. Moreover, there was a significant association between the respondents' total menopausal symptoms reported and their attitudes toward the menopausal event and the women's educational level. This study revealed that age at natural menopause and menopausal symptoms are determined by the interactions among ecological, cultural, and biological factors.

Jagun, Oladapo, and Olatunji, (2012) assessed the frequency of postmenopausal symptoms encountered in the Gynecologist practice and their preferred management options for them. The researcher employed a cross-sectional survey and a total of 84 Gynecologist practicing in Nigeria were sampled for the study. Findings from the study showed that half of the respondents attended to an average of 11-30 patients in a week. Further analysis showed that on a scale of 1 to 9, infertility was ranked first while menopausal complaints was ranked seventh among common gynecological problems encountered in respondents' practice. It was also observed that 90.2% respondents reported that <10% of their patients present with menopausal complaints.

Thus, the most common complaint among women presenting with menopausal problems was hot flushes (81.0%) while menopause-related fracture was the least (4.8%). The treatment modality employed in most cases is counselling and reassurance (53.0%) while hormone replacement therapy is prescribed for less than a third of affected women. As a result from these observations by the practitioners in Nigeria, the researchers concluded that the frequency of menopausal complaints in gynaecological practice in Nigeria is low. This finding contradicts some of the recent findings that documented several menopausal symptoms among women (Yamei et al, 2014).

In a study to establish the age at onset of menopause and the prevalence of menopause and menopausal symptoms in South Indian women BairyAdiga, Bhat, and Bhat (2009) sampled a total three hundred and fifty-two (352) postmenopausal women attending the outpatient clinics of obstetrics and gynecology department of Dr TMA Pai Hospital, a tertiary care Hospital in South India. The Menopause-Specific Quality of Life (MENQOL) questionnaire was used in the study. Results from the analysis showed that the mean age at menopause was 48.7 years. It was further noticed from the study that the most frequent menopausal symptoms were aching in muscle and joints, feeling tired, poor memory, lower backache and difficulty in sleeping.

The vasomotor and sexual domains were less frequently complained when compared to physical and psychological domains. The age at onset of menopause in southern Karnataka (India) is 48.7 years which is four years more than the mean menopause age for Indian women. This could be attributed to better socioeconomic and health-care facility in this region. The results from this showed that cultural differences could exert a great influence on experience of menopausal symptoms.

Moilanen, Aalto, Hemminki, Aro, Raitanen, and Luoto (2010) reported the prevalence of menopausal symptoms by severity among the Finnish female population and the association of their symptoms with lifestyle (smoking, use of alcohol, physical activity) and body mass index (BMI). The Health 2000 which is a nationally representative population-based study of Finnish adults was used and data were collected by home interview, three self-administered questionnaires and a clinical examination by a physician. Results from this study showed that over one-third (38%) of the premenopausal, half of the peri-menopausal, and 54% of both postmenopausal and hysterectomized women reported bothersome symptoms. The difference between pre and peri-menopausal women was largest and statistically most significant in the case of back pain and hot flushes. Physically active women reported fewer somatic symptoms than did women with a sedentary lifestyle. Smoking was not related to vasomotor symptoms. The researchers therefore concluded that the bothersome symptoms of menopause are common in midlife, regardless of menopausal status. Further analysis showed an inverse association between physical activity and menopausal symptoms. However, since this study is a cross-sectional one, the fluctuations in the menopausal symptoms are not well accounted for unless a longitudinal study was conducted.

Gjelsvik, Rosvold, Straand, Dalen, and Hunskaar (2011) investigated the symptoms during the menopausal transition and age at menopause in a representative Norwegian female cohort over a ten year period, to analyze factors associated with frequency and burden of symptoms and influence on self-rated health. Study design: 2229 women aged 40–44 years at inclusion, randomly selected from a national health survey in Hordaland County, Norway, and followed

with seven postal questionnaires from 1997 throughout 2009. Data for 2002 women (90%) were eligible for analyses. Results: In a longitudinal analysis, 36% of the women reported daily hot flushes in one or more questionnaires, whereas 29% did not experience hot flushes at all. The prevalence of daily hot flushes increased from 2% at age 41–42 to 22% at age 53–54, decreasing to 20% at age 55–57. The odds ratio for reporting daily hot flushes vs. never/seldom for daily smokers was 1.6 (1.24–2.10). Women in the lowest education group had an OR = 1.8 (1.21–2.56) for reporting daily hot flushes compared to women with a university degree. There was no relation between the symptom burden and degree of physical exercise, overall feeling of health, BMI, family income, parity or menarche age as recorded at baseline. The mean age for final menstruation period (FMP) in the cohort was 51.1 (50.9–51.3) years. Smokers had a mean age of FMP 0.9 years earlier compared to the non-smokers.

Pérez, Garcia, Palacios and Pérez (2009) assessed the prevalence of risk factors for osteoporosis and cardiovascular disease and the prevalence and severity of the appearance of menopausal symptoms among Spanish menopausal women. The researchers used a cross-sectional descriptive study encompassing women aged 45–65 years in the whole Spanish territory. A total of 10,514 women were selected using the random sampling technique. The socio-demographic, medical history and lifestyle data were assessed by means of a survey. The Kupperman scale was used to assess the severity of menopausal symptoms. The findings from the study showed that the prevalence of risk factors for osteoporosis and cardiovascular disease were 67.6% and 74.8%, respectively. The most common risk factors were physical inactivity (53.6%), obesity (44.3%), arterial hypertension (36.6%), hypercholesterolemia (31.4%), low calcium intake (30.1%) and smoking (28.7%). The predominant symptoms experienced by menopausal women were hot

flushes (51.4%), insomnia (45.7%) and irritability (42.2%). These were severe in 3.3% of the sample, moderate in 27.3%, mild in 24.6% while 44.8% had no symptoms. The prevalence of joint pain (40.1%) and depressive mood (40%) was higher in perimenopausal than in postmenopausal women.

Further analysis of the data using the Logistic regression analysis showed that there were differences for age, BMI, smoking, social class and poor consumption of dairy products in the severity of menopausal symptoms. It was concluded from the study by the researchers that there is a high prevalence of risk factors for osteoporosis and cardiovascular disease and the main factors contributing to more severe menopausal symptoms were age, BMI, smoking social class and poor consumption of dairy products. In general, postmenopausal women presented significantly higher rates of menopausal symptoms when compared to perimenopausal women.

Pimenta, Leal, Maroco, and Ramos (2011) developed a model to predict the perceived severity of hot flashes (HF) and night sweats (NS) in symptomatic middle-aged women using a cross-sectional study of a community-based sample of 243 women with vasomotor symptoms. The researchers ascertained menopausal status using the 'Stages of Reproductive Aging Workshop' criteria. Women's 'perceived control' over their symptoms was measured by a validated Portuguese version of the Perceived Control over Hot Flushes Index. Data analysis was done using the Structural equation modelling to construct a causal model of self-reported severity of both HF and NS, using a set of 20 variables: age, marital status, parity, professional status, educational level, family annual income, recent diseases and psychological problems, medical help-seeking behaviour to manage menopausal symptoms, use of hormone therapy and

herbal/soy products, menopause status, intake of alcohol, coffee and hot beverages, smoking, physical exercise, body mass index and perceived control.

Findings from the SEM showed that the significant predictors of perceived severity of menopausal symptoms were the use of hormone therapy for both HF and NS, coffee intake for both HF and NS and perceived control for both HF and NS. The variables explained respectively 67% and 72% of the variability in the perceived severity of HF and NS. Women with high perceived control had a significantly lower and intensity of HF, similarly, participants with high perceived control presented a lower frequency and intensity of NS.

El Shafie, Al Farsi, Al Zadjali, Al Adawi, Zakiya, and Al Shafae (2011) investigated the prevalence and severity of climacteric symptoms and associated risk factors among a cohort of healthy, middle-aged Omani women. A cross-sectional study design was used and a total of 472 healthy Omani women between 40 and 60 years old from the representative regions of Omani society were surveyed using the Menopause Rating Scale. The scores obtained were plotted against their demographic data and menopausal stage.

Findings from the study showed that overall, 39.6% of the participants were premenopausal, 15.2% were perimenopausal, and 43.6% were postmenopausal. The Menopause Rating Scale scoring showed that somatic and psychological symptoms occurred more frequently than did urogenital symptoms in all three stages. Muscle and joint pain was the most common symptom (73.3%), followed by mental and physical exhaustion (47.2%) and anxiety (46.6%). An increase in the mean scores for both somatic and psychological symptoms and their severity was observed

when the following factors were present: progression of menopausal stage (mean $\pm$ SD, 22.5 $\pm$ 2.6, 3.6 $\pm$ 2.9, 4.5 $\pm$ 3.2), old age (4.2 $\pm$ 3.2) versus young age (2.9 $\pm$ 2.6), single (4.3 $\pm$ 3.3) versus married (3.3 $\pm$ 2.9), illiterate (3.9 $\pm$ 3.1) versus educated (2.7 $\pm$ 2.6), and sexually inactive (4.4 $\pm$ 3.4) versus sexually active (3.1 $\pm$ 2.7).

2.3.3 Menopause and Coping Strategies

Women in their menopause do not only have to cope with symptoms of menopause and their consequences, they also need to cope with other stressful life events. Various studies have reported different coping strategies used by these women.

In Griffith et al. (2013) study, they discovered that women reported a wide range of coping strategies to be helpful in trying to manage menopausal symptoms and working life. These included; psychological strategies (such as distraction, making light of matters), social strategies (such as, talking with other women who had gone through the menopause); informational strategies (such as increasing knowledge about menopause); practical strategies (Such as, double checking work, making notes/lists); organisational strategies (such as changing working hours, flexible approach to tasks); and changing health behaviours (such as exercise, sleep, diet). Others also used hormone replace therapy (HRT) which some found to be effective in coping (25%) while others thought it did not help them cope better (9.1%), even those who thought it helped in coping better complained about problematic side effects and others had stopped HRT due to these side effects (46.9%).

Also, in a research by Simpson and Thompson (2009) to investigate what life events postmenopausal women attending a menopause clinic, report as stressful and how psychological appraisal of these events, menopausal symptoms and general stress mediate coping style, it was found out that the common stressful life events these women had to cope with were family problems, menopause symptoms, work problems, daily hassles and other health problems, and the most commonly reported coping styles were catharsis (68%), direct action (66%), and seeking social support (63%). Other coping mechanisms included relaxation (58%), redefined the situation (55%), acceptance of the problem (48%) and religion (36%). Specific aspects of psychological appraisal were found to be predictive of distraction, direct action, catharsis and seeking social support coping styles.

Mushtaq and Ashai (2014) in their study to investigate coping strategies used by postmenopausal women in Srinagar District of Kashmir Valley, selected 100 healthy postmenopausal women in and around Srinagar city using simple random sampling technique. They found out that majority of the postmenopausal women used in the study had no knowledge of Hormone Replacement Therapy or Follicle Stimulating Hormone and they did not make use of any alternative coping strategy to avoid postmenopausal distress. They also did not consult anyone to seek relief from postmenopausal distress. In addition, postmenopausal women were not making use of any stress reduction techniques like yoga, acupuncture and meditation while only few of them relied on prayers to reduce the stress related to menopause. This indicates that many women in their menopause period may be ignorant of the various coping strategies available and therefore not make use of any to manage the distresses associated with their symptoms. This should hence be a great cause for worry among professionals and researchers.

In another study conducted by Depypere, Pintiaux, Desreux, Hendrickx, Neven et al. (2015) to explore the actual use of medication, hormonal replacement and over the counter products to cope with menopausal symptoms, in Belgium using an internet survey, it was revealed that 69% had ever used some type of treatment and 53% was currently using a treatment. 40% of women with more than 3 symptoms were currently untreated. The alternatives to hormonal therapy had a high satisfaction rate amongst users. Alternative coping mechanisms such as, relaxation techniques, regular physical activity, acupuncture, avoiding stress gave the same satisfaction as hormonal replacement. This shows that apart from hormonal treatment other coping mechanisms are employed by women to deal with symptoms of menopause which are equally satisfactorily effective.

Kafanelis, Kostanski, Komesaroff and Stojanovska (2009) also explored the complexities of coping with both menopause and aging among 30 women between the ages of 43 and 61 years living in Melbourne, Australia using a qualitative research approach. Analysis of interviews revealed that three main categories of coping mechanisms were used by the sample. One of which is the inventive coping method; which involves responding to novel circumstances of menopause and aging in a harmonious and effective manner. Women who used this method of coping found opportunities within their menopausal experiences, saw the menopause experience as one of several life events they had to deal with and so, were able to work through these experiences effectively.

The second category of coping strategy reported is troubled coping; this involved responding to new and challenging circumstances with an increased sense of internal conflict and heightened levels of anxiety. Previous experiences of women who used this kind of coping included poor and destructive relationships with themselves, others, partners, and external circumstances; the adoption of passive roles; physical, emotional, and spiritual disconnection; the propensity to be reactive; and a despondent outlook and attitude to life. Menopause was viewed as an illness, a disease with which they had been afflicted.

The third category of coping is the reactive coping, which involves fluctuating between coping inventively or with trouble. With women who used this coping style, their experiences of menopause required a lot of effort, physically and emotionally. They reported being explorative, reflective, determined, active, well-informed, and optimistic about their experience of menopause. Their journey through menopause were both terrifying and exciting. They sought counselling from doctors, dieticians, personal trainers, friends, and peers for many of their challenges; they attempted to explore and examine their own socialization processes, their feelings about aging, any current life events and stressors, and their attitudes toward transitions. They often engaged in extensive dietary and physical regimes in an attempt to control and eliminate perceived potential negative effects of aging and menopause. From these findings, it is clear women in their menopause cope with the transition in different ways and each coping style may have its own effects on the outcomes of menopause.

Also, Yazdkhasti et al. (2015) in their study to review the empowerment and coping strategies in menopause women, performed a comprehensive search of the literature and found that most interventions for menopause women have focused on educational intervention, physical

activity/exercise, healthy diet, stress management, healthy behaviours, preventing certain diseases and osteoporosis. Moreover, it was revealed by findings that health education intervention strategy is one of the alternative strategies for improving women's attitudes and coping with menopause symptoms.

In a related study, Mansikkamäki, Raitanen, Malila, Sarkeala, Männistö et al. (2015) sought to study the association between engagement in the recommended level of physical activity and menopause-related quality of life among middle-aged women. A total of 2606 Finnish women aged 49 years responded to a postal questionnaire on lifestyle, quality of life, and health. The results revealed that physically inactive women had an increased probability of experiencing anxiety/depressed mood, decreased well-being, somatic symptoms, memory/concentration problems and vasomotor symptoms as compared to physically active women. This finding suggests that physical activity could be used as one of the coping strategies in managing menopause-related symptoms.

2.3.4 Socio-demographic Variables and Menopause Symptoms

Although menopause is a natural biological occurrence, its symptoms can be influenced or moderated by certain socio-demographic factors. For instance, in Abedzadeh-Kalahroudi and colleagues' (2012) study, findings revealed that employed women, women with a higher educational level, those who participated in exercise activity with a frequency of more than three times per week, and women with duration of menopause of more than five years, experienced less severe menopausal symptoms. However, there were no significant differences between;

severity of menopausal symptoms and current age, marital status and exercise activity duration. This shows that certain socio-demographic factors moderate the severity of menopause symptoms while others do not.

In a similar vein, Li, Wu, Pu, Zhao, Wan, Sun *et al.* (2012) in their study to investigate the factors associated with the age of natural menopause and menopausal symptoms in a large population of Chinese middle-aged women in which a cross-sectional survey consisting of 20,275 women who were 40 to 65 years were used, found that lower educational level, poor economic status, lower body mass index (BMI), age at menarche less than 14 years, nulliparity and smoking were associated with earlier onset of natural menopause. Women with higher level of education had their menopause at a later age, similarly women with higher income levels began menopause later while women who started menarche early also has menopause at an early age. Also, low BMI index was associated with early menopause, women who have never had children had an earlier menopause age than those with parity. With severity of menopause symptoms, the study revealed that women who were separated or divorced had scored higher on severity of symptoms, well-educated women scored lower, particular in terms of somatic and urogenital symptoms, women who earned higher salaries also scored lower on total severity index as well as urogenital subscale. In addition, women obtained higher total and subscales (somatic and urogenital) scores when they have 2 or more children.

Delavar and Hajiahmadi (2011) also evaluated the distribution of age at normal menopause, the frequency of menopausal symptoms and the associated factors in Babol, Northern Iran using a community sample of 1,397 women around 45-63 years old. Results showed that the five most

prevalent symptoms were irritabilities (72.1%), joint pains (70.6%), backache (61.2%), hot flushes (49.3%) and headache (49.2%) during the previous two weeks. More than 60% of women experienced hot flushes. Factors such as low educational level, early age at menarche and use of oral contraceptives were significantly associated with hot flushes with women using oral contraceptives experiencing less hot flushes. Nulliparous women had menopause earlier than those who had at least one child.

In another study, Capistrano, Dombek, da Costa and Marinheiro (2015) investigated factors associated with the severity of menopausal symptoms in postmenopausal Brazilian women. A cross-sectional study with 201 postmenopausal women attended in a Gynaecology Outpatient Department was employed in this study. It was found out that women with moderate to severe symptoms corresponded to 57.7% (116) of the total sample. Moreover, severe to moderate symptoms were negatively associated with age thus younger women experienced higher prevalence of these symptoms, women within 6–10 years of menopause presented nearly 1.4 times higher prevalence of moderate to severe symptoms compared with those with more than 10 years of menopause. Unemployed women and housewives also presented higher prevalence of menopausal symptoms compared to working women. Smoking was also associated with higher prevalence of moderate to severe symptoms.

In a related study, Lee, Kim, Park, Yang, Ko, Ko and Joe (2010) tried to determine the factors associated with experiencing menopausal symptoms by Korean postmenopausal women using 657 women who had gone through natural menopause. They discovered that, decreased severity of menopausal symptoms was associated with more time spent in education, an employed status,

a history of pregnancy, longer postmenopausal duration, positive attitudes towards menopause, higher state anxiety, heightened self-esteem, and higher dyadic consensus. Increased severity of menopausal symptoms was also associated with absence of a partner, alcohol consumption, a history of hormone replacement therapy, a history of probable premenstrual dysphoric disorder, and increased severity of depressive symptoms. Thus spending a longer time in school and being employed are some of the demographic factors that could protect a person from experiencing severe menopausal symptoms.

In addition to the above, Alizadeh, Sayyah-Melli, Ebrahimi, Shishavan and Rahmani (2014) conducted a cross-sectional study among 300 women aged 40 to 60 years to determine the relationship between the personal, demographic, social and reproductive factors with symptoms of menopause and the frequency of the mental and physical symptoms of menopause among women in Tabriz, Northwest of Iran. They found out that as age increases, the symptoms of menopause worsen. In addition, the frequency of the symptoms of employed women was less than those of retired ones and housewives. The physical and mental symptoms had negative relation with educational status. An increase in the number of the children, the history of the oral contraceptive use and dysmenorrhea had positive relation with the frequency of the symptoms.

Gjelsvik and others (2011) in their findings also reported that women with the lowest educational level within the sample had higher probability of reporting hot flushes than women who attained university level of education. This in addition to other findings stress the important role of education in predicting prevalence and severity of menopause symptoms. However, Tsehay, Mulatie and Sellakumar (2014) in their study to examine middle-aged women's menopausal

symptoms experience and their attitude towards menopause in relation to some demographic factors among an Ethiopian sample, found no significant relationship between educational background and age at menopause, but rather, educational background was significantly related to attitudes to towards menopause with uneducated women having a more positive attitude towards menopause than educated women. This indicates that the role of education in menopause is not consistent.

In Bouzari, Kotenaie, Darzi and Hajian's (2013) cross-sectional study among seven hundred postmenopausal women living in north of Iran, aged 40–60 years, analysis of data revealed that age, household income, duration of menopause and education were associated with all domains of menopausal quality of life. Married women had significantly lower scores on psychosocial, physical and sexual domains indicating better quality of life. Abortion, smoking and age at menarche were associated with psychosocial and sexual domains. Also, household income and education were an appropriate predictor of psychosocial, physical and sexual domains of menopausal quality of life. Age less than 50 years and duration of menopause less than 5 years were risk factors for vasomotor symptoms.

To further demonstrate the role of socio-demographic factors in the menopause experience, Kakkar, Kaur, Chopra, Kaur and Kaur (2007) studied the variation of the menopause rating scale (MRS) scores in relation to age, working or non-working status and education status in a cohort of north-Indian subpopulation. 208 women aged 35 to 65 years were randomly sampled from a menopause clinic. Results in terms of socio-demographic factors showed that working women seem to suffer more from psychological symptoms whereas nonworking women showed a

greater incidence of somatic symptoms. Educated women showed a lower incidence of psychological and somatic symptoms. This implies that employment or working status and education influences the type and frequency of symptoms prevalent in the women.

2.4 Summary of Literature Review

From theories reviewed in this study, it can be concluded that the menopause transition is a stressful phase of life which comes with several challenges; biological, psychological and social. The individual also plays a major role in how the events surrounding the menopause unfolds, especially through appraisal of the transition as well as coping. The review of related studies also revealed that several symptoms are present during menopause ranging from physical, psychological, vasomotor and urogenital and the most frequently reported symptoms from any of these categories differ from population to population as well as from individual to individual, that is to say prevalence of menopause symptoms is not universal.

Secondly, many problems are faced by women in their menopause as a consequent of the menopause symptoms. Some of these problems revealed from the review of previous studies include; sleep problems, psychological distress (particularly depressive symptoms), sexual dysfunctions/problems and even problems with work performance. Women in their menopause also fall on several coping strategies apart from hormone therapy to deal with their symptoms. It was seen in the various studies reviewed that no universal coping strategies exist and women from different populations use different strategies, some of which are effective and some not so much effective. Related studies also revealed that some socio-demographic factors such as age,

educational status, parity/number of children, income, and employment status among others influence both the age at onset of menopause, prevalence of symptoms and severity of symptoms.

2.5 Rationale for the Study

As has been clearly demonstrated so far, menopause can be a difficult time, hence requires all the needed attention. However, no up-to-date data is available on the prevalence of menopause among the Ghanaian populace. There is also no clear evidence on the most frequently reported symptoms. This deprives women and even health professionals of knowledge about typical menopause symptoms among Ghanaian midlife women experiencing the menopause. Mostly inferences are made based on what is known from research done on other populations which obviously may lack ecological validity, because as demonstrated from the review of studies, menopausal symptoms are not experienced in a universal fashion. Due to this lack of knowledge, many menopausal women may not get the kind of help they may require.

In addition, previous research has demonstrated that most women in other parts of the world are opting for alternative coping mechanisms besides hormone therapy as it has been reported to have many undesirable side effects and it is also more expensive (Depypere et al., 2015). Some users even report that it is not effective in dealing with symptoms (Griffith et al., 2013). Knowledge on available coping mechanisms among Ghanaian menopausal women is unavailable. No one knows how these women are coping with their symptoms, meanwhile it has been shown that sometimes symptoms can be very severe to the point of disrupting the quality of

life and general well-being of women (Bakker et al., 2015; Gartoulla et al., 2015). It is therefore important for research into coping mechanisms that are used by these women so that others who do not use any could be empowered with knowledge to choose the most effective.

The present study will therefore bridge the research gap in Ghana by providing some evidence on the prevalence of menopause, common symptoms as well as frequently used coping strategies employed by a section of women in the menopause transition in Ghana.

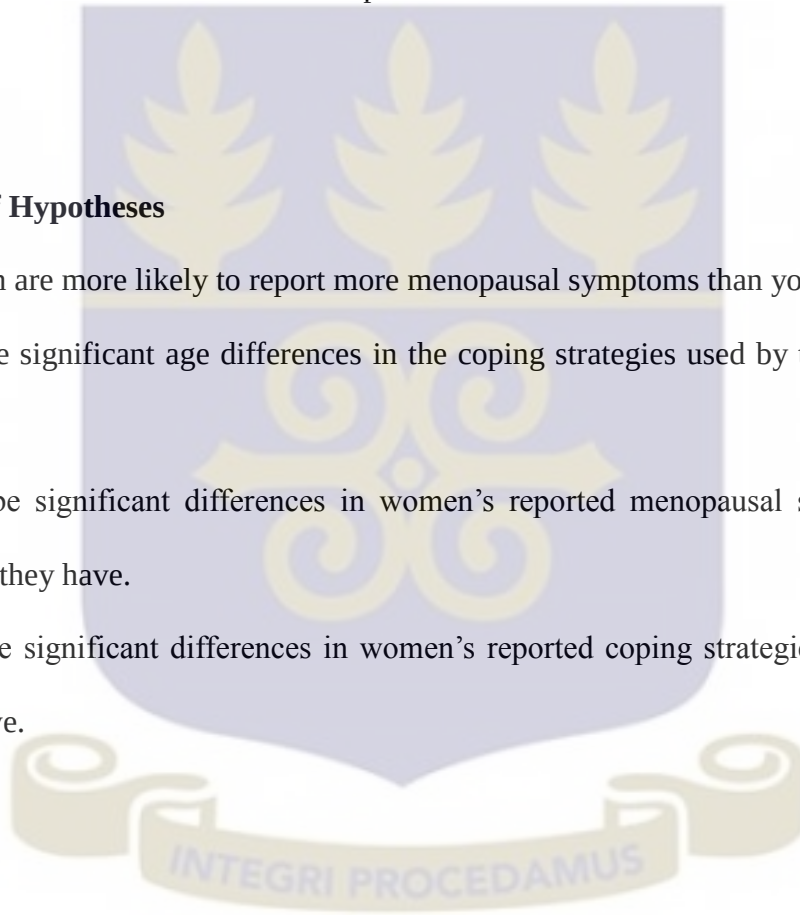
2.6 Statement of Hypotheses

H₁: Older women are more likely to report more menopausal symptoms than younger women.

H₂: There will be significant age differences in the coping strategies used by the women in the study.

H₃: There will be significant differences in women's reported menopausal symptoms due to number children they have.

H₄: There will be significant differences in women's reported coping strategies due to number children they have.



CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter consists of the systematic methods that were followed in carrying out this study. The chapter has eight sections and these include the introduction to the chapter, the population, sampling, research design, research instruments/measures, pilot study, data collection procedure and finally the data analysis techniques.

3.2 Population

The population for this study consisted of all the women at the Anglican Church (Abossey Okai). This population was chosen because of the multi-ethnic nature of the congregation as well as a somewhat balanced socio-economic representation with women with high, medium and low socioeconomic statuses represented in the church. This population was also chosen because of the convenience in the face of limited financial resources involved in selecting respondents from elsewhere.

3.3 Sample Size and Sampling Technique

A total of one hundred and forty (140) women between the ages of 20 and 70 years. Out of the 140 respondents, 15.7% of the respondents were less than 35 years, 20.7% of the respondents were between the ages of 35 and 40 years, 30% of the respondents were between the ages 41 and 45 years and 33.6% of the respondents were above the age of 45 years. In terms of respondents' education, 6.4% had no formal education, 19.3% had Primary education, 17.9% had Junior

Secondary school education, 39.3% of the respondents had senior secondary school education and 17.1% of the total sample had Tertiary education. Further, 35% of the total sample were single, 47.9% of the total sample were married and 17.1% of the total sample were divorced. For the respondents' number of children, it was observed that 9.3% of the total sample had no child, 4.3% had one child, 41.4% had two children, 24.3% had three children and 10.7% had four children.

The sample selection was done using both the purposive and convenient sampling techniques. The purposive sampling technique was used because the purpose or focus of the study is on women and issues related to menopause which is not general to the entire population of males and females. The convenient sampling technique was used in selecting the women to participate in the study due to their availability and willingness to take part in the study. The convenient sampling technique also allowed for sampling a relatively large sample size within the shortest possible time.

3.4 Research design

The nature of information gathered in this study yielded itself to the cross-sectional survey design. This design involves the administration of research questionnaires or inventories to participants at only one point in time. This design was also used because of its cost effectiveness and less time consuming.

3.5 Research Instruments/Measures

The main instruments use in this study were questionnaires. These questionnaire were in three parts.

Part One: Demographic Characteristics

This section gathered information on respondents' age, marital status, number of children and the highest level of education.

Part Two: Signs and Symptoms of Menopause

This part of the questionnaire was self-developed and consists of 20 items that measure three domains of symptoms. These include Psychovegetative symptoms, Atrophic symptoms and Gestagen Deficiency symptoms. The Psychovegetative symptoms consist of 11 items and some of the items of this domain include “hot flushes (with sweating stages)”, “sleeping disorder”, depression, psychological alteration, anxiety” and “forgetfulness and lack of concentration”. This scale has a reliability value of .93. The Atrophic symptoms consist of 6 items and some of the examples of this domain include dryness of vagina, burning, pruritus”, “joint problems”, “muscle pain” and “dryness of skin”. The scale has a reliability value of .86. The Gestagen Deficiency symptoms consist of 3 items and some of the examples of items within this domain include “breast tenderness”, “migraine” and “oedematous tendency”. This scale has a reliability value of .72. All the items on the signs and symptoms questionnaire were scored on a 4-point Likert scale (1 = never, 2 = sometimes, 3 = frequently, 4 = always).

Part Three: Coping Strategies

This is a 23 item questionnaire developed by the researcher which measure four coping styles, namely; Physical, Social, Spiritual and Medical. The physical coping domain consists of 5 items and some examples of items on the scale include “physical exercising such as walking, jogging, skipping, and gardening”, “relaxation techniques such as deep breathing, imagery”, “balanced diet” and “8 or more hours of sleep”. This domain has a reliability value of .79. The social coping domain consists of 5 items and some examples of the items in this domain include “Family/social support”, “spending more time on recreation”, “sharing ideas with colleagues” and “expressing feelings openly”. The social domain has a reliability value of .75.

The spiritual domain consists of 8 items and some examples of the items within this domain include “seeking spiritual help from pastors and spiritual leaders”, “having daily prayers and meditations”, “attending a place of worship regularly” and “doing acts of charity”. This coping domain has a reliability value of .81. The medical coping domain has 5 items and some examples of the items within this domain include “using over-the-counter drugs”, “seeking professional counselling”, “using prescription drugs”, and “taking alcohol/tea”. This domain has a reliability value of .71. All the items on the coping questionnaire were scored on a 4-point Likert scale (1 = never, 2 = sometimes, 3 = frequently, 4 = always).

3.6 Pilot Study

To determine whether the developed questionnaire were reliable for the current study, a pilot study was conducted on a random sample of 20 women sampled from the Methodist Church at

Mamprobi in the Greater Accra region. The results from the reliability analysis using the cronbach alpha are summarised in Table 1 below.

Table 1. Summary of the Reliability Values of the Questionnaire from a Pilot Study

QUESTIONNAIRE	RELIABILITY VALUES (α)
<u>SIGNS AND SYMPTOMS</u>	
Psycho-vegetative Symptoms	.90
Atrophic Symptoms	.79
Gestagen Deficiency Symptoms	.82
<u>COPING STRATEGIES</u>	
Physical	.81
Social	.78
Spiritual	.92
Medical	.76

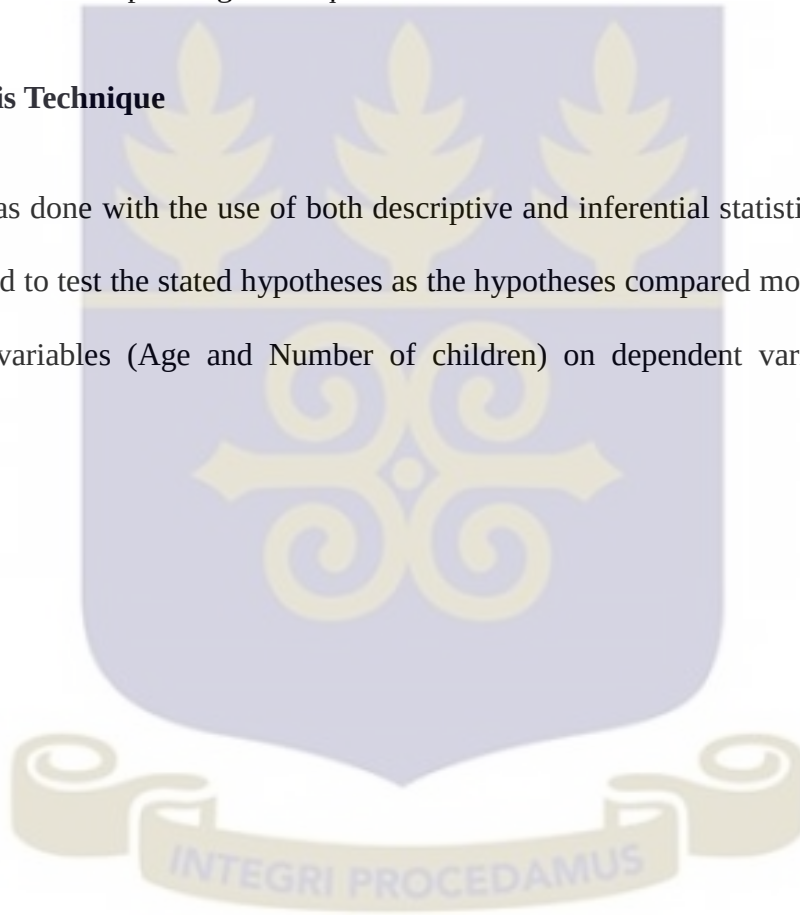
3.7 Data Collection

An introduction letter was sent to the head pastor of the Anglican Church to seek permission to use the women in the church as the participants for the study. After the permission was granted, four Sundays were used to collect the data. After each Sunday service, the objectives of the study were clearly spelt out to the women and those who had questions were made to ask and answers were provided accordingly. The questionnaire were administered to the women who agreed to

take part in the study. The respondents were instructed to use pen or pencil to select the appropriate responses that much their feelings. Some of the respondents were allowed to send their questionnaires home and duly returned them on the subsequent Sundays. All ethical guidelines guiding the conduct of psychological research were strictly adhered to in the data collection. The completed questionnaires were retrieved and the respondents were thanked for their time and efforts in responding to the questionnaire.

3.8 Data Analysis Technique

Data Analysis was done with the use of both descriptive and inferential statistics. The One-Way ANOVA was used to test the stated hypotheses as the hypotheses compared more than two levels of independent variables (Age and Number of children) on dependent variables (signs and coping).



CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the results from the data analysis. The chapter consist of four section and these include the introduction, descriptive statistics, hypotheses testing and summary of the findings in the study. The questionnaire data was analysed using the SPSS 22.00. Descriptive statistics such as the frequencies, means, standard deviations, skewness and kurtosis were used to summarise the data. Inferential statistics such as One-Way ANOVA was used to test the stated hypotheses. The results are presented in the Tables below.

4.2 Descriptive Statistics

Table 2

Summary of the Descriptive Statistics of the Variables in the Study

VARIABLES	N	Mean	SD	Skewness	Kurtosis
MENOPAUSE SYMPTOMS					
Psycho-vegetative Symptoms	140	2.58	.78	-.02	-1.29
Atrophic Symptoms	140	2.41	.84	.06	-1.30
Gestagen Deficiency Symptoms	140	2.78	.73	.06	-.94
COPING STRATEGIES					
Physical	140	1.87	.37	.53	.58
Social	140	2.19	.52	.51	1.65
Spiritual	140	2.60	.39	.20	-.39
Medical	140	1.96	.32	.79	.64

4.2.1 Experiences of Menopausal Symptoms among the women in the Study

To determine which of the menopausal symptoms are commonly reported by the women in the study, the mean scores on the three groups of the symptoms were computed and the results are summarized in Table 3 below.

Table 3

Summary of the Perceived Menopausal Symptoms among Women in the Study

Variables	N	Mean	SD	Ranks
Gestagen Deficiency Symptoms	140	2.78	.73	1 st
Psychovegetative Symptoms	140	2.58	.78	2 nd
Atrophic Symptoms	140	2.41	.84	3 rd

Results from Table 3 shows that the respondents in the study reported more average Gestagen Deficiency Symptoms (Mean = 2.78) followed by Psychovegetative Symptoms (Mean = 2.58) and the least reported symptoms among the women in the study was the Atrophic Symptoms (Mean = 2.41).

4.2.2 Coping strategies used by the women in the study

To determine which of the coping strategies that are commonly used by the women in this study in coping with their menopausal symptoms, the mean scores of the four main coping strategies were computed and arranged in a descending order. The results are summarised in Table 4 below.

Table 4

Summary of the reported coping strategies used by the women in the study

COPING STRATEGY	N	Mean	SD	Rank
Spiritual	140	2.60	.39	1 st
Social	140	2.19	.52	2 nd
Medical	140	1.96	.32	3 rd
Physical	140	1.87	.37	4 th

An examination of the results in Table 4 shows that the women in this study used more spiritual coping (Mean = 2.60) followed by Social coping (Mean = 2.19), Medical (Mean = 1.96) and the least used coping strategy by the women in coping with their menopausal symptoms was

Physical coping (Mean = 1.87). These results showed on the average, women sampled for this study were more likely to used spiritual coping in dealing with their menopausal symptoms.

4.3 Hypotheses Testing

Hypothesis One: *Older women are more likely to report more menopausal symptoms than younger women.*

To determine whether significant age differences exist between the four age categories in their reported menopausal symptoms, the One-Way ANOVA the Post-Hoc comparison were used and the results are summarised in Table 5 below.

Table 5

Summary of One-Way ANOVA of Age differences in the menopausal symptoms presented by the women in the study

Symptoms	<35yrs-A	35-40yrs-B	41-45yrs-C	>45yrs-D	F (3,136)	ρ	Post-hoc
Psychovegetative	1.59 (SD=.21)	1.97 (SD=.42)	2.72 (SD=.58)	3.31 (SD=.37)	101.34	.001	A<B<C<D
Atrophic	1.38 (SD=.25)	1.78 (SD=.50)	2.44 (SD=.60)	3.25 (SD=.38)	102.91	.001	A<B<C<D
Gestagen	2.24 (SD=.64)	2.90 (SD=.85)	2.95 (SD=.64)	2.80 (SD=.66)	5.05	.001	A<B, A<C A<D

Results from Table 5 show that age of the women in the study had a statistically significant effect on their reported menopausal symptoms at the .05 level of significance, Psychovegetative Symptoms [$F(3, 136) = 101.34, \rho = .001$], Atrophic Symptoms [$F(3, 136) = 102.91, \rho = .001$], and Gestagen Defective Symptoms [$F(3, 136) = 101.34, \rho = .001$].

Comparisons of the mean scores of the respondents' Psychovegetative Symptoms score revealed that higher age was associated with more reported psychovegetative symptoms [$<35\text{yrs} = 1.59$, $35\text{-}40\text{years} = 1.97$, $41\text{-}45\text{years} = 2.72$ and $\text{above } 45\text{years} = 3.31$]. Comparisons of the mean scores of the respondents' Atrophic Symptoms score revealed that higher age was associated with more reported Atrophic symptoms [$<35\text{yrs} = 1.38$, $35\text{-}40\text{years} = 1.78$, $41\text{-}45\text{years} = 2.95$ and $\text{above } 45\text{years} = 2.80$]. Comparisons of the mean scores of the respondents' Gestagen Deficiency Symptoms score revealed that all the respondents above the age of 35years reported significantly higher mean Gestagen Deficiency Symptoms scores than respondents below 35years as shown in Table 5. Therefore, the first hypothesis that older women are more likely to report more menopausal symptoms than younger women is supported.

Hypothesis Two: *There will be significant Age differences in the coping strategies used by the women in the study.*

To determine whether significant age differences exist between the four age categories in their coping strategies, the One-Way ANOVA and the Post-Hoc comparison were used and the results are summarised in Table 6 below.

Table 6

Summary of One-Way ANOVA of Age differences in the Coping Strategies used by the women in the study

SYMPTOMS	<35yrs-A	35-40yrs-B	41-45yrs-C	>45yrs-D	F (3,136)	ρ	Post-hoc
Physical	1.98 (SD=.2)	1.99 (SD=.45)	1.89 (SD=.36)	1.72 (SD=.3)	4.70	.004	D<A,D<B
Social	2.03 (SD=.6)	2.21 (SD=.51)	2.16 (SD=.52)	2.29 (SD=.4)	1.39	.25	-
Spiritual	2.57 (SD=.4)	2.60 (SD=.37)	2.62 (SD=.35)	2.59 (SD=.4)	.09	.97	-
Medical	1.99 (SD=.3)	2.05 (SD=.33)	2.02 (SD=.30)	1.83 (SD=.3)	4.10	.01	B>D,C>D

Results from Table 6 above shows that age of the respondents had a statistically significant effect on two coping strategies at the .05 level of significance, Physical Coping [$F(3,136) = 4.70, \rho = .004$] and Medical Coping [$F(3,136) = 4.10, \rho = .01$]. Post-hoc analysis showed that respondents who are above 45years used less physical coping (Mean = 1.72) than respondents who are below 35years (Mean = 1.98) and respondents between the ages of 35 and 40years (Mean = 1.99). Comparisons of the mean medical coping scores showed that women above the age of 45years used less medical coping (Mean = 1.83) than respondents between the ages of 35 and 40years (Mean = 2.05) and respondents between the ages of 41 and 45years (Mean = 2.02).

However, the results showed that age of the respondents in the study did not have any statistically significant effect on their use of social coping [$F(3,136) = 1.39, \rho = .25$] and Spiritual coping [$F(3,136) = .09, \rho = .97$]. Therefore, the second hypothesis that there will be significant Age differences in the coping strategies used by the women in the study is partly supported.

Hypothesis Three: *There will be significant differences in women's reported menopausal symptoms due to number children they have.*

To test this third hypothesis, the One-Way ANOVA test was used as five groups of children status were compared on menopausal symptoms. The results from the analysis are summarized in Table 7 below.

Table 7

Summary of One-Way ANOVA of Number of Children and the Menopausal Symptoms presented by the women in the study

Symptoms	NIL- A	ONE- B	TWO- C	THREE-D	FOUR- E	F (4,135)	ρ	Post-hoc
Psycho-vegetative	2.37 (SD=.91)	2.20 (SD=.67)	2.32 (SD=.72)	3.04 (SD=.55)	3.26 (SD=.61)	11.57	.01	D>A,B,C E>A,B,C
Atrophic	2.01 (SD=.91)	1.89 (SD=.60)	2.23 (SD=.80)	2.79 (SD=.70)	3.24 (SD=.54)	11.39	.01	D>A,B,C E>A,B,C
Gestagen	2.69 (SD=.80)	2.52 (SD=.89)	2.83 (SD=.70)	2.87 (SD=.64)	2.78 (SD=.75)	.91	.46	-

Results from the One-Way ANOVA Table 7 show that number of children had statistically significant effects on respondents' reported Psychovegetative symptoms [$F(4,135) = 11.57, \rho = .01$] and Atrophic symptoms [$F(4,135) = 11.39, \rho = .01$] at the .05 level of significance. Post-hoc analysis of the groups showed that women with three children reported significantly more psychovegetative symptoms (Mean = 3.04) than women with no child (Mean = 2.37), women with one child (Mean = 2.20), women with two children (Mean = 2.32). It was also found that women with four children reported significantly more psychovegetative symptoms (Mean = 3.26) than women with no child (Mean = 2.37), women with one child (Mean = 2.20), women with two children (Mean = 2.32).

Comparisons of the mean Atrophic symptoms scores showed that women with three children reported significantly more Atrophic symptoms (Mean = 2.79) than women with no child (Mean = 2.01), women with one child (Mean = 1.89), women with two children (Mean = 2.23). It was also found that women with four children reported significantly more Atrophic symptoms (Mean = 3.24) than women with no child (Mean = 2.01), women with one child (Mean = 1.89), women with two children (Mean = 2.23).

However, number of children of the respondents did not have any significant effect on their reported Gestagen Deficiency symptoms at the .05 level of significance, [$F(4,135) = .91, \rho = .46$]. Therefore, the hypothesis three that there will be significant differences in women's reported menopausal symptoms due to number children they have is partly supported.

Hypothesis Four: *There will be significant differences in women's reported coping strategies due to number children they have.*

To test the fourth hypothesis, the One-Way ANOVA test was used as five groups of children status were compared on coping strategies. The results from the analysis are summarized in Table 8 below.

Table 8

Summary of One-Way ANOVA of Number of Children and the Coping Strategies used by the women in the study

Symptoms	NIL- A	ONE- B	TWO- C	THREE-D	FOUR-E	F (4,135)	ρ	Post-hoc
Physical	1.96 (SD=.34)	1.98 (SD=.39)	1.87 (SD=.36)	1.85 (SD=.36)	1.67 (SD=.33)	1.80	.13	-
Social	1.83 (SD=.39)	2.18 (SD=.49)	2.18 (SD=.52)	2.28 (SD=.48)	2.37 (SD=.64)	2.35	.06	-
Spiritual	2.72 (SD=.51)	2.62 (SD=.42)	2.59 (SD=.40)	2.53 (SD=.37)	2.66 (SD=.33)	.68	.61	-
Medical	2.15 (SD=.43)	2.07 (SD=.33)	1.92 (SD=.28)	1.92 (SD=.34)	1.88 (SD=.29)	2.34	.06	-

From Table 8 above, the number of children did not have any statistically significant effects on the use of Physical coping strategy [$F(4,135) = 1.80, \rho = .13$], Social coping [$F(4,135) = 2.35, \rho$

= .06], Spiritual coping [$F(4,135) = .68, p = .61$] and Medical coping [$F(4,135) = 2.34, p = .06$]. These results showed that the number of children the women have does not affect their use of the various coping strategies. Therefore, the fourth hypothesis that there will be significant differences in women's reported coping strategies due to number children they have is not supported.

4.4 Summary of Findings

- The most reported menopausal symptoms were Gestagen Deficiency Symptoms followed by Psychovegetative Symptoms and Atrophic Symptoms respectively.
- Respondents in the study used more spiritual coping followed by Social coping Medical and Physical coping respectively.
- Age of the women in the study had significant effects on all the three major menopausal symptoms (Gestagen Deficiency, Psychovegetative and Atrophic).
- Age of the women had a statistically significant effect on their use of Physical Coping and Medical Coping but not the use of Spiritual coping and Social coping.
- Number of children of the respondents in the study had significant effects on their Psychovegetative Symptoms and Atrophic Symptoms but not Gestagen Deficiency Symptoms.
- Number of children of the respondents in the study had no significant effects on their coping strategies.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter presents the discussion of the key findings from the results by relating the findings with previous related studies and the implications of the findings are highlighted. The conclusions drawn from the study, the limitations of the findings and recommendations for practice and research are presented. This study sought to examine menopausal symptoms among women and explore their coping strategies.

5.2 Discussion of the Key Findings

5.2.1 Prevalence of menopausal symptoms among the Women in the study

The experience of menopause among women is a natural transition as one ages. However, the symptoms that are displayed vary due to several individual differences. This study, therefore, sought to examine the most common signs and symptoms reported by the women selected for this study. The results from this study looking at the average scores showed that the respondents present more Gestagen Deficiency Symptoms followed by Psychovegetative Symptoms and Atrophic Symptoms respectively. This finding means that the gestagen deficiency symptoms seems to be experienced by most of the women in the study and these symptoms include breast tenderness, migraine and oedematous tendency. These symptoms were closely followed by

psychovegetative symptoms including depression, sleep disturbances and hot flushes (with sweating stages).

These findings are consistent with previous results obtained by Moilanen, et al. (2010) who found among a sample of 1427 women aged 45–64 years that almost all women (99%) reported having experienced at least one symptom. The researchers further observed that more than a third of the premenopausal and almost half of the perimenopausal women had suffered from at least one bothersome symptom (such as headaches, dizziness, back pain, swollen feet, sleep disturbances, hot flushes, numbness among others). These previous results showed that the experience of gestagen and psychovegetative symptoms is relatively common among the women.

Additionally, other earlier research findings also pointed to the fact that women who are reaching their menopausal age experience a lot of symptoms of which psychovegetative symptoms are dominant. For instance, Abedzadeh-Kalahroudi, Taebi, Sadat and Saberi (2012) discovered from their study that the most common symptoms in vasomotor, psychosocial, physical and sexual domains were night sweats, reduced accomplishment, feeling a lack of energy and change in sexual desire respectively. Moreover, the most severe symptoms in these domains were; night sweats, feeling anxious or nervous, aching muscles or joints, and avoiding intimacy. These findings suggest that women within their menopausal age experience severe symptoms that can interfere with their daily activities.

The findings from this study are also consistent with previous works by AlDughaiter, AlMutairy and AlAteeq (2015) who examined the prevalence and severity of menopausal symptoms and

their impact on the quality of life among Saudi women visiting primary care centers in Riyadh, Saudi Arabia using a cross-sectional study October to November 2010. In total, 119 women aged 45–60 years were randomly interviewed using a questionnaire and they were divided into three categories: premenopausal (n=31), perimenopausal (n=49), and postmenopausal (n=39). The Menopause Rating Scale (MRS) assessed the prevalence and severity of eleven menopausal symptoms. From their study, the symptoms reported to be most prevalent were joint and muscle pain (80.7%), physical and mental exhaustion (64.7%), and hot flushes and sweating (47.1%). Somatic and psychological symptoms were highly prevalent in perimenopausal women compared to other groups. The mean overall quality-of-life score was higher in perimenopausal women, while the total MRS score indicated that the symptoms were mild in severity MRS <9).

Relatedly, Potdar and Shinde (2014) explored the presence of psychological problems among post-menopausal women and coping strategies they adopt. 100 postmenopausal women, selected by convenient sampling method were used for the study, using structured questionnaire. Findings revealed that 57% of the women had mild psychological problems and 78% of them were adopting coping strategies to overcome these problems. Association between the psychological problems and coping strategies was strong and significant.

Women in their menopause also suffer significantly from sexual problems due to some biological symptoms that come with the menopause (Lo & Kok, 2013). In Lo and Kok's (2013) study to examine the sexual activities and prevalence of sexual dysfunctions in midlife Chinese women and their correlations with demographic factors, sexual dissatisfaction and interpersonal difficulty, it was revealed that of the 371 eligible participants, 22.4% and 39.6% women had low

intimacy and coitus frequency respectively. Overall, 77.2% women had at least one type of sexual dysfunction and the proportion was highest in the surgically menopausal subgroup (88.9%) followed by the naturally menopausal subgroup (79.3%), the perimenopausal subgroup (78.2%) and the premenopausal subgroup (72.2%) and the difference was statistically significant. No lubrication (42.9%) was the commonest sexual dysfunction and predominantly affected naturally and surgically menopausal women. Sexual dysfunction was the major contributor to sexual dissatisfaction, followed by interpersonal difficulty. Arousal disorder was the pivot of interaction between sexual dissatisfaction, menopausal status and low coital frequency.

5.2.2 Coping Strategies Used by Women in the Study

The type of coping strategies that individuals adopt in dealing with their problems goes a long way to determine their wellbeing and therefore, this study sought to investigate the common coping strategies that are employed by women in dealing with their menopausal symptoms. The results from the analysis showed that the respondents in this study used more spiritual coping followed by Social coping, Medical and Physical coping respectively. This means that the respondents relied more on spirituality as a coping mechanism which is not unexpected as all the participants were all Christians. This is because the appearance of some of the menopausal symptoms could lead to severe distress that baffle the women who may not be aware of the symptoms of menopause and might attribute supernatural reasons to them and therefore rely on spiritual activities such as prayers, fasting, attendance of religious places and reading of spiritual devotional books such as the bible.

These findings are similar to the earlier works by Griffith et al. (2013) who observed from their research among women that a wide range of coping strategies were reported to be helpful in trying to manage menopausal symptoms and working life. These included psychological strategies (such as distraction, making light of matters), social strategies (such as, talking with other women who had gone through the menopause), informational strategies (such as increasing knowledge about menopause), practical strategies (Such as, double checking work, making notes/lists), organisational strategies (such as changing working hours, flexible approach to tasks), and changing health behaviours (such as exercise, sleep, diet).

Similarly, Simpson and Thompson (2009) in a study investigated what life events postmenopausal women attending a menopause clinic, report as stressful and how psychological appraisal of these events, menopausal symptoms and general stress mediate coping style showed that the most commonly reported coping styles were catharsis (68%), direct action (66%), and seeking social support (63%). The authors further observed that the women in the study used other coping mechanisms including relaxation (58%), redefined the situation (55%), acceptance of the problem (48%) and religion (36%). These findings show that women who are faced with symptoms of menopause require attention with regards to the experience and coping with their menopausal symptoms. The earlier studies did not specially mention the use of spirituality as compared to the women in the current study which underscores the importance of cultural considerations in counselling the women.

5.2.3 Age Differences in Women's Menopausal Symptoms

The study further sought to determine whether significant age differences exist among the various age categories in their experience of menopausal symptoms. Results from the study showed that age of the women in the study had significant effects on all the three major menopausal symptoms (Gestagen Deficiency, Psychovegetative and Atrophic). The result revealed that women who were older reported significantly higher menopausal mean scores on all the three symptom groups compared to younger women. These differences could be due to the fact that menopausal symptoms increase with increasing age although personal health and other factors also contribute to the severity of the symptoms. Thus, older women tend to experience more discomfort and distress associated with these menopausal symptoms.

Consistent with this finding of significant age differences in the experience of menopausal symptoms is the findings reported by Gjelsvik, Rosvold, Straand, Dalen and Hunskaar (2011) among Norwegian women that as the women went through the midlife age, the prevalence of hot flushes showed a gradual increase both in terms of frequency and symptom severity. It further observed that the proportion of women who experienced daily hot flushes increased from 2% in the 41- 42 years age group, to 22% in the 53-54 years age group, with a slight decrease to 20% in age group 55-57 years. The prevalence of cold sweats/night sweats followed a similar pattern, whereas the proportion of women who reported daily vaginal dryness/soreness was considerably lower – from 1% to 8% during the time span. The degree of experiencing these symptoms as bothersome showed a rise similar to the frequencies. For hot flushes, the proportion of women who were much or considerably bothered, increased from 3% to 21% during the time wave. The

findings demonstrate that increasing age predisposes women to experience higher menopausal symptoms.

The implication of these findings is that the older women are more likely to suffer the negative consequences of menopause than younger women as some previous studies have suggested that symptoms of menopause is associated with other negative complications. For instance, Cuadros, et al. (2012) observed from their study that 36.6% of the women in the study experienced insomnia and 18.7% had severe impaired menopause-related quality of life. It was also found that the women in the study experienced higher perceived stress which was significantly related to menopausal status.

5.2.4 Age Differences in Women's Coping Strategies

To determine whether significant differences exist among the various age categories in their use of the different coping strategies, the study hypothesised that there will be significant age differences in the coping strategies used by the women in the study. The results from the analysis showed that the hypothesis was partly supported as age of the women had a statistically significant effect on their use of Physical Coping and Medical Coping but not the use of Spiritual coping and Social coping. It was found from the study results that younger women used more physical coping compared to the older women and this could be due to the gradual depletion of the organ reserve of the older women compared to the younger ones who have the needed strength. The use of more physical coping by the younger women could also be due to the severity of their menopausal symptoms as it was found in this study that older patients experienced more severe Atrophic Symptoms which include joint and muscle pain than the younger ones.

Further, the results revealed that women between the ages of 35years and 45years reported the use of more medical coping than women above 45years. These include the use of over-the-counter drugs, prescribed medications and taking alcohol among others. These could be due to the fact women below the age of 45years may think that they too young to be experiencing some of the symptoms of menopause and therefore, think that there is something medically wrong with them resulting in their use of medical coping than the older women. Unfortunately, the review of the literature did not revealed any previous studies that compared age differences in coping with menopausal symptoms and therefore, this result serve to provide the basis for future studies among women and how they cope with their menopausal symptoms.

5.2.5 Number of Children, Women's Menopausal Symptoms and Coping Strategies

Several demographic characteristics of women have been found to be significantly associated with the experience of menopausal symptoms. Therefore, this study sought to determine whether the number of children the women have has any significant effect on their experience of menopausal symptoms. It was hypothesised, therefore, that there will be significant differences in women's reported menopausal symptoms due to number children they have. The results showed that number of children of the respondents in the study had significant effects on their Psychovegetative Symptoms and Atrophic Symptoms but not GestagenDefiiency Symptoms and thus, the hypothesis is partially supported. Analysis of the number of children showed that women who have three or more children experience significantly more Psychovegetative and Atrophic Symptoms.

These findings can be attributed to both social and biological explanation such that raising three or more children could be very stressful thereby predisposing the women to experience psychovegetative symptoms such as depression and sleep problems. From the perspectives of biology which is a bit speculative, it is possible that the hormonal changes that associated with giving birth too more child might be playing a significant role in the experience of more Atrophic symptoms as menopause is associated hormonal changes. However, the findings contradict the results by Delavar and Hajiahmadi (2011) who observed that nulliparous women had menopause earlier than those who had at least one child.

Some previous studies have demonstrated that women's demographic characteristics such as their age, educational level and employment status affect their experience of menopause significantly. For instance, Abedzadeh-Kalahroudi et al. (2012) in a study revealed that employed women, women with a higher educational level, those who participated in exercise activity with a frequency of more than three times per week, and women with duration of menopause of more than five years, experienced less severe menopausal symptoms. Similarly, Delavar and Hajiahmadi (2011) also evaluated the distribution of age at normal menopause, the frequency of menopausal symptoms and the associated factors in Babol, Northern Iran using a community sample of 1,397 women around 45-63 years old and found that factors such as low educational level, early age at menarche and use of oral contraceptives were significantly associated with hot flushes with women using oral contraceptives experiencing less hot flushes.

Additionally, the effect of the number of children on coping strategies were also examined and it was hypothesised that there will be significant differences in women's reported coping strategies due to number children they have. However, the results from the analysis showed that number of children did not have any statistically significant effect on the coping strategies adopted by the respondents in the study and therefore, the hypothesis was not supported. These findings means that whether the women have children or not does not significantly affect the type of coping they use and this could be due to nature of symptoms of menopause which are manifested in similar patters among women who are aging. Unfortunately, I did not come across any studies comparing coping strategies among women taking into consideration the availability of children.

5.3 Conclusions

The main aim of this study was to examine the prevalence of menopausal symptoms and coping strategies among Anglican women in the Greater Accra region of Ghana as well as compare the effects of their socio-demographic characteristics on their experience of symptoms and coping strategies. Findings from the study revealed that Gestagen Deficiency Symptoms were the most commonly reported symptoms followed by Psychovegetative Symptoms and Atrophic Symptoms. In terms of the coping strategies, it was observed that the women in the study used more spiritual coping strategies followed by Social coping, Medical coping and Physical coping strategies respectively.

Further examination of the demographic characteristics showed that age of the women in the study had significant effects on all the three major menopausal symptoms (Gestagen Deficiency, Psychovegetative and Atrophic) but only two of the coping strategies (Physical Coping and Medical Coping). Additionally, it was found that the number of children of the respondents in the study had significant effects on their Psychovegetative Symptoms and Atrophic Symptoms but not GestagenDeficiency Symptoms. However, the number of children of the respondents in the study had no significant effects on their coping strategies.

The study, therefore, concludes that the Anglican women sampled for this study experience significant menopausal symptoms and the severity of these symptoms are associated with increasing age and number of children. The women in the study do not rely on only one coping strategy in dealing with their menopausal symptoms and any efforts aimed at helping women overcome their experiences with menopause should take into account all the possible coping strategies.

5.4 Limitations

The study has some limitations that are worth mentioning in the discussion of the results of this research. Firstly, the cross-sectional study nature of the study did not take into account some transient factors that could account for the differences in the experience of the menopausal symptoms among the women in the study. Despite this limitation, the study has provided some insight to the prevalence of menopausal symptoms among women which can be very useful in

counselling practice and research on menopause. Secondly, the sample used only Christians and specifically Anglican which might not reflect the experiences of other religions and denominations when it comes to coping strategies as an individual's coping strategy is shaped by her belief systems as well. However, the information provided by this study can serve as a spring board for further studies on menopause across several groups of women.

5.5 Recommendations

Based on the findings from this study, the researcher put forward the following recommendations:

- There should be a psycho-education of women on the issues of menopause especially the causes, symptoms and possible managements as misconceptions about menopause could lead people to engage in negative coping practices.
- The clergy should be enlightened about the symptoms of menopause so that they can offer appropriate counsel in terms of help-seeking among the women.
- Women who are 45years and above should be encouraged to exercise as it was found that they engage in less physical activity compared to their younger counterparts.
- Future studies should compare the experience of menopausal symptoms across several religious denominations to determine whether this affect the coping practices of the women.
- Future studies should use longitudinal research designs that can account for any changes in the symptoms and coping over the passage of time.

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APPENDIX

1. QUESTIONNAIRE

STRESS QUESTIONNAIRE ON MENOPAUSE

Dear Respondent,

This research is designed to find out the incidence of menopause among women in Anglican Church and the coping strategies that they use. This is a partial fulfillment of my M.A programme. I, therefore, solicit your cooperation and consent to participate in this study. The confidentiality of your responses is guaranteed. All enquiries about this research should be directed to:

Constance Ansah
Dept. Of Psychology
MUCG
027-7532705

SECTION A DEMOGRAPHIC DATA

Please respond to the following questions with the appropriate answer

SECTION A DEMOGRAPHIC DATA

AGE

<35 years
35-40 years
41-45 years
46 years and over

EDUCATION

Nil
Primary
Junior Secondary
Senior Secondary School
Tertiary

NUMBER OF CHILDREN

Nil
One
Two
Three
Four or more

MARITAL STATUS

Single
Married
Divorced/deceased

No.	SYMPTOMS	1	2	3	4
	PSYCHOVEGETATIVE SYMPTOMS				
5	Hot flushes [with sweating stages]				
6	Sleeping disorders				
7	Nervousness, irritability				
8	Weakness ,fatigue				
9	Depression, psychological alteration, anxiety				
10	Reduction of libido				
11	Palpitations, tachycardia, heart trouble				
12	paresthesia				
13	dizziness				
14	Forgetfulness, lack of concentration				
15	headache				
	ATROPHIC SYMPTOMS				
16	Dryness of vagina, burning, pruritus				
17	Urinary incontinence				
18	Joint problems[Arthropathia claim]				
19	Muscle pain				
20	Dryness of skin				
21	Eye problems				
	GESTAGEN DEFICIENCY SYMPTOMS				

SECTION B SIGNS

The following are a list of signs that menopausal women sometimes have. Put a check in the space to the right that best describes how much you encounter each sign in your present position. Use the following

guide:

1=NEVER 2= SOMETIMES 3= FREQUENTLY 4= ALWAYS



SECTION C COPING STRATEGIES

The following are a list of coping strategies that menopausal women sometimes use. Put a check in the space to the right that best describes how much you use the following methods. Use the following guide: 1=NEVER 2= SOMETIMES 3= FREQUENTLY 4= ALWAYS

	PHYSICAL METHODS	1	2	3	4
25	Physical exercises(walking, jogging, skipping, gardening)				
26	8 or more hours of sleep				
27	Balanced diet				
28	Relaxation techniques(Breathing exercises, imagery, meditation)				
29	Bodily massage				
	SOCIAL METHODS	1	2	3	4
30	Friends to confide in				
31	Family/Social support				
32	Spending more time on recreation				
33	Sharing ideas with colleagues				
34	Expressing feelings openly				
	SPIRITUAL METHODS	1	2	3	4
35	Seeking spiritual help from pastors and/ or spiritual leaders				
36	Having daily prayers and meditations				
37	Listening to religious music				
38	Having daily readings of religious materials				
39	Attending a place of worship regularly				
40	Attending religious Retreats				
41	Forgiving others who wrong you				
42	Doing acts of charity				
	MEDICAL METHODS	1	2	3	4
43	Using over-the –counter drugs				
44	Using prescription drugs				
45	Taking coffee/tea				
46	Taking alcohol/tea				
47	Seeking professional counseling				

