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KNOWLEDGE, ATTITUDE AND ASSOCIATED FACTORS OF WOMEN AGED 30-49 YEARS TOWARDS MENOPAUSE IN GULELE SUB-CITY OF ADDIS ABABA, ETHIOPIA

BY:

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LIST OF ACRONYMS AND ABBREVIATIONS USED

AAHB	Addis Ababa Health bureau
ANM	Age at natural menopause
BMI	Body mass index
CHD	Coronary heart disease
EDHS	Ethiopian demographic health survey
EPI-INFO	Epidemiological Information (Statistical Software)
FSH	Follicle stimulating hormone
FMOH	Federal Ministry of health
LH	Lutenizing hormone
MRS	Menopause Rating Scale
OR	Odds Ratio
WHO	World Health Organization
USA	United States of America

ABSTRACT

Background: Menopause is a process which typically occurs during the ages of 45 and 55 and is marked by a reduction in estrogen and progesterone levels and eventual cessation of menstruation. Appropriate understanding of the menopausal phenomenon among women regarding physical, mental, social and psychological changes that occur during menopause will help women to cope with menopausal changes with greater readiness. Knowledge and attitude of menopausal phenomenon are greatly influenced by social, cultural and economic settings and may influence the method of treatment for menopausal symptoms. In Ethiopia, health policies and programs give much emphasis on women's health promotion but given less emphasis for menopause phenomena and few studies have been conducted in the field of investigating women's knowledge and attitude towards menopause and its associated factors.

Objective: The objective of this study was to assess level of knowledge and attitude of women aged 30-49 years towards menopause in Gulele sub-city of Addis Ababa, Ethiopia from April 26 to May 10, 2015.

Methods: A cross-sectional community based study was conducted on a sample of 586 mothers aged 30-49 years in Gulele sub-city of Addis Ababa Ethiopia using multi-stage sampling method. Data on knowledge status of mothers regrinding menopause, attitude of mothers towards menopause and other pertinent variables were collected using interviewer-administered questionnaires. The gathered data analysis was done by the software SPSS version 20. The association between knowledge, and attitude towards menopause and the independent variables was investigated using binary logistic regression model.

Results: The results of this study showed that the prevalence of natural menopause is 8.9 %. Out of 568 respondents 63.3% knew about the age of menopause and 72.2% knew menopause occurs due to decrease in sexual hormones. Respondents, 68.3%, believed that menopause is a usual and natural phenomenon in women’s life and 55.1% perceived menopause as the beginning of the period of women’s disablement. Regarding the level of knowledge, 15.7% had poor knowledge, 61.8% had moderate knowledge and 22.5% had good knowledge. On the other hand, 84% of the women had a positive attitude towards

menopause. The study showed that there is a significant association between knowledge about menopause and having information about menopause [Adjusted OR = 0.143 (95%CI: 0.073, 0.281)] and economic status [Adjusted OR = 0.369 (95%CI: 0.192, 0.710)]. There is also a significant association between attitude and economic status (lower economic status [Adjusted OR = 0.11 (95%CI: 0.044, 0.275)], and medium economic status [Adjusted OR = 0.217 (95%CI: 0.085, 0.55)]), having information about menopause [Adjusted OR = 0.143 (95%CI: 0.196, 0.566)] and age (30-34) group [Adjusted OR = 0.203 (95%CI: 0.089, 0.463)].

Conclusions and recommendations: knowledge and attitude of women's towards menopause was found low and positive in this study respectively. The relationship between knowledge and economic status; and the source of information was found to be significant. There was also a significant association between attitude and economic status; the source of information; and age. Federal Ministry of health, Addis Ababa Health bureau and the mass media should disseminate appropriate information concerning menopause to raise the knowledge of women. Health professional should manage menopause as one-phenomenon rather than treating it as an individual symptoms.

1. INTRODUCTION

1.1.Background

The word 'Menopause' (*menespausie*) was used for the first time in 1816 by a French Physician de Gardanne (1). Menopause is an expected phenomenon in the reproductive life of women. It is the reduction of ovarian function followed by cessation of menstruation which is diagnosed when women do not have menstrual period for 12 consecutive months without any other biological or physiological causes and it is considered as a period of reduced estrogen level followed by cessation of menstruation (2).

Menopause has been classified into 4 types depending on the parameter or criteria used (3). These include natural menopause, premature menopause, artificial menopause and radiation menopause. Natural menopause is the type of menopause which is not induced by externalized means, but occurs as a result of natural changes in the organs responsible for oestrogen production. Premature menopause occurs before the age of 40 years and the cause is usually hormonal imbalance or surgical intervention or even natural occurrence. Artificial menopause is the type of menopause which is caused by deliberate removal of any organ that directly affects the menstrual process, while radiation menopause is caused by the use of radium, which circulates in the uterus (3).

As a woman approaches menopause, the number of ovarian follicles declines producing less estrogen (4). Due to decreased estrogen level, the woman develop different urogenital and psychological symptoms such as hot flushes, excessive sweating, mucosal dryness, emotional instabilities, psychoses, decreased strength and calcification of bones throughout the body during menopause (5).

The mean age of menopause in the world today is 50 years but it occurs usually between the ages of 45 and 52 years (6). The average age of menopause in western countries has risen by 5 years in the last century, a change which probably reflects a general improvement in health and a determination of women to stay young (7).

1.2. Statement of the problem

Menopause is a process which typically occurs during the ages of 45 and 55 and is marked by a reduction in estrogen and progesterone levels and eventual cessation of menstruation (8). The process is deemed complete after one year without menstruating. It estimated that, in the years 2030, 1.2 billion will be perimenopausal or postmenopausal and will be increased by 4.7 million a year (9).

Study done by S. B. Huffman and J. E. Myers, in Botswana has shown that factors such as attitude, diet, overall health, genetics and cultural beliefs affect women's experiences with menopause. Although it is a universal midlife transition for women, many aspects of menopause remain poorly understood (10). Menopause is multidimensional and is influenced by biological, psychological and sociocultural factors and that the process requires responses that are equally multidimensional (11).

Palank writes: "knowledge is a basic condition for the use of health services and attitude is an effective organizing principle in performing an action and can start a health behavior due to the effect it has on the person." He believes that creating knowledge and a positive attitude is a useful and logical issue for making continuous changes in behavior (9).

Understanding the cause of menopausal change and familiarity with these changes are essential in the life of all women, and helps them enter this stage of their life with adequate knowledge and a positive attitude (12, 13).

Menopause can have a significant effect on a women's quality of life. Their health needs change significantly and it is important that women become aware of the new health risks they face and that there are options for preventing those risks. Studies revealed that women may avoid and reduce many adverse emotional and psychological symptoms of menopause by educating themselves about menopause to better equip themselves when approaching this stage of life cycle (3, 4). Knowing more about menopause might empower women to cope better with menopausal changes (5,6).

It has been suggested that lack of knowledge regarding menopause makes women more frightened when it is time to deal with menopause and this has negative effects on their emotional state (7). Changing women's perceptions on menopause by increasing their knowledge on menopause may cause less emotional disturbance (8).

Studies performed in Iran in the field of investigating the level of women's knowledge and attitude toward menopause indicate inadequate knowledge and negative attitude toward this phenomenon among Iranian women (13). Also a study conducted in Nigeria indicated poor menopausal knowledge among the study group while more than half of the respondents had negative attitude towards menopause phenomenon among Nigerian women (14). A study conducted in Dangila town Northwest Ethiopia indicated that illiterate women displayed better positive attitude than educated ones (15).

Knowledge and attitude about the menopause and its transitional period, may differ from one woman to another. These differences have been association to quality of life, perceived self-efficacy, education level, marital status (17), age, menopausal status (stage), health status, menopause-related changes experienced (18),ethnicity, income level, emotional health, ease with discussing menopause, number of family members respondent could talk to about menopause, health insurance, severity of menopausal symptoms and employment status (19).

Good knowledge and positive attitude towards menopause among women is an essential element and help in promoting continuous changes in behavior which can be achieved through health education. Health education is one of the most important ways of women's empowerment and the first step in any training is recognition and analysis of the knowledge, attitude and behavior of the subjects, based on which to be able to perform the next steps for designing and implementing programs (6).

According EDHS 2011 the prevalence of menopause is 18% among women aged 30-49 years (20). In Ethiopia, health policies and programs give much emphasis on women's health promotion but few studies have been conducted in the field of investigating women's knowledge and attitude towards menopause and its associated factors. Therefore, this study aimed at assessing the knowledge and attitude toward menopause phenomenon among 30-49-year-old women (menopausal transition period) in in Gulele Sub-city, Addis Ababa, Ethiopia and information obtained from this study will help alert authorities in order to plan for proper measures that will be taken to improve knowledge, attitude and quality of life of the women of all ages in general and women in reproductive age group in particular.

1.3. Significance of the study

This study will be important for different stakeholders addressing the issues related to women's health. Firstly, the study will be designed with the specific focus of assessing the knowledge and attitude of women aged 30-49 years towards menopause in Gulele sub-city of Addis Ababa, Ethiopia. Findings from the study will provide information for the policy makers to develop strategies and guidelines or standards for scaling up the good knowledge and attitude of women regarding menopause as an important measure to promote women's health. Secondly, this study will provide information to health professionals regarding women's knowledge and attitude towards menopause which will help them in providing quality care and promoting health of women's during perimopauseal period. Thirdly, the findings of this study will be important to those with closely related research interests regarding menopause and women's health. Researchers may also use the information that will be generated from this study for further study regarding menopause.

In summary, these three levels of stakeholders – government, health professionals and researchers - will potentially have great use of this study's findings.

2. LITERATURE REVIEW

From 1980 up to 1998, the worldwide average life expectancy increased from 61 to 67 years. This change is not equally distributed. For example, in sub-Saharan Africa due to high rates of (HIV) virus infection life expectancy fall to 47 years on average. As life expectancy increases, more women are living to the age of menopause, Even in sub-Saharan Africa countries with low average life expectancy because majority of women not infected by HIV. So, these women spend a great number of years in menopause with acute menopausal symptoms, associated adverse health problem and psychological effects due to increased life expectancy (21). Menopause is naturally occurring process which all women throughout the world experience in their midlife. Menopause refers as the depletion of ovarian function which leads to cessation of menstruation and indicates the end of fertility (22).

2.1. Physiology of Human Menstrual Cycle and Mechanism Initiating Menopause

There are four (4) events involving in the hypothalamic pituitary ovarian axis that control the human menstrual cycle: First, the secretion of follicle stimulating hormone (FSH), responsible for the development of ovarian follicles and production of estradiol. Throughout the menstrual cycle, estrogen maintains low gonadotrophin levels via its negative feedback effect on hypothalamic gonadotrophin releasing hormones and consequently lutenizing hormone (LH) and FSH secretion. Second, the FSH-induced increase in ovarian estrogen secretion to trigger an LH surge that is called positive feedback. Third, is the LH surge, a hypothalamic pituitary response to the estrogen stimulus? This positive feedback response of estrogen on LH secretion has been used as a test of hypothalamic pituitary function. Final event is ovulation and leutinization of the follicles, triggered by LH surge, forming a corpus luteum. This is an ovarian response that results in progesterone secretion necessary for the establishment of a pregnancy (23).

The study of women's health across the nation was conducted to determine if the modification of hypothalamic pituitary response to estrogen feedback mechanism occur in older reproductive age women as a mechanism of onset of menopause. Three groups of

women were studied who had estrogen increased and on LH surge, estrogen increased without on LH surge and neither estrogen increases on LH surge. An ovulatory cycles with high estrogen were frequent in older reproductive age women and there was an evidence of failure of the estrogen positive feedback on LH Secretion to initiate and stimulate ovulation. In an ovulatory cycles follicular estrogen levels did not lower LH secretion as it was in younger reproductive age, there was decreased estrogen negative feedback on LH secretion. It was concluded that there was hypothalamic Pituitary insensitivity to estrogen, in aging perimenopausal women (23).

2.2.Concepts or Meanings of Menopause

Menopause is a complex and significant phase of life that affects women's life in different ways globally. It is a life event that leads to physical as well as emotional challenges (22). All women experience menopause between the ages of 48 and 55 years (24), but it is difficult to determine how it is perceived by women. There is a dilemma attached to it whether it is consider as medical problem or as a life transition (22). There are four main meanings or notions about menopause. First, is the biological or biomedical? Second, is the developmental and natural event? Third feminist notion, as natural female process and fourth, postmodern which is related to physiological, social and cultural dimensions. (25).
A biologic definition of menopause refers to permanent cessations of menstruation resulting from loss of ovarian follicular activities and indicates the end of fertility. (25). the last menstrual flow is the biologic marker that refers to a woman transition from a productive to nonproductive phase. Changes in physiology seem to be experienced as symptoms that may require medical treatment.
Menopause as a developmental and natural event considers as a part of women's life and taken to be normal. Menopause is often stressful but it doesn't mean that it is a disease. It should be perceived as a part of the normal developmental cycle.
Menopause as a feminist notion that emphasizes that it is a natural female process. It can be taken as a change. If a woman understands this period as a change in her life pattern and she would try to adjust and cope with it (22).

Menopause as postmodern notion believes that it is related to physiological, social and cultural dimensions. The meaning of menopause may be positive or negative it depends on the woman's culture, the status of the women in the society as well as the physiological change that occurred as a result of menopause. Introduced another meaning and that is "confusing" and it is between the natural and disease construction. A woman has uncertainty about the menopause and it is the result of lack of knowledge and understanding. If menopause as taken "confusing" it produces anxiety and uncertainty which further complicate the complexity of menopause (22). Surgical meaning of menopause refers to the menopause as a result of surgical intervention (oophractomy and or hysterectomy) but the symptoms are same as natural menopause, however, the onset is abrupt and symptoms are more severe as compared to natural menopause moreover, physical and psychological symptoms are due to sudden hormonal change (24).

The menopausal status was classified according to STRAW (Stages of Reproductive Aging Workshop) classification which divided menopause staging into:

Menopause: This is when women have had their final menstrual period. Women will not be able to pinpoint their final period until they've been completely free from periods for 1 year. Hot flashes, vaginal dryness, sleep problems, and other symptoms are common in this stage (26). Menopause symptom is defined when menstrual bleeding was not been observed for a full 12 months without a specific cause such as pregnancy or breast-feeding according to the standards of the world health organization (8)

Perimenopause or the menopausal transition is the time includes 4 to 5 years surrounding menopause, decrease estrogen production and the menses permanently cease due to loss of ovarian function. In this stage, menstrual cycles are irregular but have not stopped. On average, women are about 47 when they reach perimenopause. About half of all women in the earlier stages to most women in the later stages of perimenopause have symptoms like hot flashes. Women can still get pregnant in perimenopause (27).

Postmenopause:-this stage happens after women have had no periods for at least 1 year and divided into an early and a late phase. The early postmenopause is defined as up to 5 years since last menstrual period and the late phase has a definite beginning 5 years after last menstrual period up to lifelong (26).

2.3.Menopausal Symptoms

As a woman approaches menopause, the number of estrogen producing ovarian follicles declines this change lid to decrease estrogen production (13). Due to decrease estrogen level, a women develop variety of symptoms such as vasomotor symptoms (hot flashes and night sweats), Reproductive symptoms (changes in sexual behavior, dry vagina, vaginal infection and painful intercourse), Psychological symptoms (anxiety, depression, mood changes, forgetfulness, Poor concentration and sleep disturbances), physiological changes (headaches, heart palpitations, weight gain, hair thinning or loss) (13, 28).

2.3.1. Vasomotor symptoms

Vasomotor symptoms are the most common complaint of perimenopausal women. Hot flash can be defined as a warm sensation that begins at the top of the head and progresses toward the feet, commonly followed by chills. This may take several minutes and may occur frequently as several times per week (13). Hot flashes have been reported in up to 70% of women experiencing natural menopause and in almost all women who have undergone surgical menopause and the presence of hot flashes has also been considered a possible risk factor for cardiovascular disease or coronary heart disease (CHD).The prevalence of hot flashes and night sweats varies widely between populations around the world. In developed canters 20 to 80 % of the women during the time approaches menopause develop vasomotor symptoms but in South East Asia the prevalence lower (26).

2.3.2. Reproductive symptoms

Vaginal dryness and recurrent urinary tract infections are reported by women in the postmenopause. These symptoms are caused by the low estrogen production by ovarian follicles, which affects the mucosa in the vagina and usually appear a few years after menopause. The prevalence of vaginal dryness increases with age and it has on effect decreased sexual enjoyment (13).

2.3.3. Psychological symptoms

Sleep disturbances

In observational studies from total study participant perimenopausal and postmenopausal women 40-60 % of reported sleep disturbances. Hot flush frequency and severity are associated with disturbances in the sleeping pattern and the prevalence of sleep disturbances seems to increase through the time woman approaches menopause (26).

Mood changes

Results from several longitudinal and cross-sectional studies perimenopausal women report between 10 - 50 % of mood changes, however, could not establish factor associated with Mood changes at this time. Other factors such as general health, prior depression, socioeconomic factors, and negative life events probably play an important role in development of mood changes in menopausal women (26).

Cognition

Cognition includes several mental abilities such as concentration, memory, learning, judgment, and language, all of which have a tendency to failure as we grow older. A relationship between the menopausal and cognitive disturbances has been suggested but the evidence is insufficient (13).

Study conduct in America on Seventy-four 36-60 year old English-speaking Caribbean women living in the New York metropolitan area reported on Presenting symptoms Caribbean Women included hot flashes, weight gain, difficulties or discomfort during intercourse, mood swings, heart palpitations and memory loss (29).

cross-sectional study conduct in Chinese on 20,275 women (40–65 years) indicate the most frequently presenting symptoms of the three menopausal stages are fatigue (33.54%), insomnia (28.99%), and muscle/joint pain (28.01%).in premenopausal women, fatigue (46.84%), insomnia (44.67%), and muscle/joint pain (43.80%) in perimenopausal women, problems (57.05%), muscle/joint pain (53.29%), and insomnia (51.02%) in postmenopausal women. In general, an increasing trend of presenting symptoms was observed to correspond to the progression in the stage of menopause (5).

cross-sectional descriptive study done in Bangladesh on postmenopausal women indicate the most common physical symptoms are backache (82.77%), bodyache (65.25%),

insomnia (45.27%), vasomotor symptoms like hot flushes (36.84%) and night sweats (32.39%) and frequent mental symptoms were mood changes (34.85%), loss of memory (19.70%) and depression (19.51%). 32.47% were bothered by those symptoms but only 18.23% consult the physician(28).

study in Qatari on 1,500 women aged 40-60 years show the most frequent reported symptom was aches in the back and neck at 49.2%, night sweat (37.2%), low backache (35.7%), feeling nervous (35.4%) followed by aches in the muscles/joints at 34.6%, hot flashes (33.3%), decreased social activities (28.3%) and leisure activities (47.6%), difficulty sleeping (28.9%), mood swings (25.4%), and decreased concentration (28.3%), sexual activity (24.1%) and total energy level (26.7%). The lowest reported symptoms were facial hair at 16.1% followed by dissatisfied with my personal life at 18.1% (30).

In Africa a study done in Namibian to assess the Knowledge and Understanding of Menopause and Menopausal Symptoms showed that, Hot flashes (52%) and less interest in sex and change in sexual responses (58%) were the only menopausal symptoms with higher knowledge levels (13).

2.4.Sources of Information

Study conduct in Malaysia with the aim to examine the knowledge and perception of menopause among young to middle aged women (15 to 49 years old) showed that the main sources of information about menopause were magazines (85.3%), families (77.2%), books (58.7%), newspapers (58.0%), radio and television (56.2%), friends (53.4%). Medical and health personnel (40.8%) and only 36.5% received information from the Internet and 36.2% from pamphlet. Main sources of menopause information for young adult respondents were families (76.7%), magazines (76.0%) and books (54.0%) and also main sources of information for middle-aged respondents were magazines (91.0%), families (77.6%;) and newspapers (67.8%). middle-aged respondents (25 years old and above) acquired menopause information from magazines, newspapers and pamphlets than young adults respondents (15 to 24 years old) (31).

A Study done in Bangladesh indicate most of the women learnt about menopause from the older family members (60.61%) and friends (37.12%), little from reading material or TV (28).

Cross-sectional study was conducted on 400 healthy and non-menopaused women aged 40-45 years in Iran showed that from the total 73.2% of the subjects had previously acquired information about menopause, and the main sources of information in this field were friends (37%) (32).

In a study done Namibian, (92%) were reported that they had heard of menopause before this investigation was done but fewer than 9% of the respondents reported that they had not heard of the term menopause.(13)

Cross sectional survey on 432 women aged 45-60 in in Benin City, Nigeria, (66.8%) women have heard of the word menopause and correctly described it as permanent cessation of menstrual bleeding the main source of information was from books (24.4%) and through discussion with friends and coworkers (21.4%) (33). Another study done in Enugu, South East, Nigeria show, (41.7%) the source of information was more from friends/mothers and from (22.2%)churches(34). Study conduct in Dangila town, northwest Ethiopia on three hundred middle-aged women with the age range of 35 and 70 show, (70.83%) friends were the major source for menopausal related information, (68.75%) health care providers and (66.66%) reading materials (15).

2.5. Menopausal age

Menopause is a process that takes place over several years, and varies in onset, length, and expression through symptoms (7).

A cross sectional study done in Silivri district of Istanbul, Turkey on 845 women between the ages of 30–60 years, showed median age for menopause was 47 years and the prevalence of menopause was estimated as 8.6% for females younger than 40 years, 31.8% for females between the ages 40–45 years and 80.9% among females older than 45 years (35).

A population based cross sectional study in Shiraz, Islamic Republic of Iran showed the median age of natural menopause was 48.3 years (36).

The age at natural menopause (ANM) depends on various factors like genetic, environmental, socioeconomic, reproductive, dietary, and lifestyle of which some like null parity, vegetarian diet, smoking, high fat intake, cholesterol, and caffeine accelerates; while others like parity, prior use of oral contraceptive pills, and Japanese ethnicity delays the

ANM. Delayed menopause is associated with increased risk of endometrial and breast cancer, while early ANM enhances the risk for cardiovascular diseases and osteoporosis. The lifestyle factors like current smoking and vigorous exercise have been significantly associated with early menopause, while moderate alcohol consumption delays the ANM. The knowledge of modifiable determinants of ANM can help in setting up menopausal clinics and initiating health programs especially in developing countries (37).

A Study conduct in Chinese to assess the factors associated with the age of natural menopause and menopausal Symptoms in a large population of Chinese middle-aged women. Showed that, educational level, income, parity, BMI, age at menarche and smoking were significantly associated with the onset of natural menopause (5).

A cross-sectional study conduct in America to investigate the factors Associated with Age at Natural Menopause in a Multiethnic Sample of Midlife Women indicate use of oral contraceptives, and ethnicity were associated with later age at natural menopause (38).

2.6. Knowledge on menopause

Menopause can have effect on a women's quality of life. Women approaching this stage the health needs change significantly and important to know new health risks they face and how to preventing those risks. Studies revealed that women may avoid and reduce many emotional and psychological symptoms of menopause by educating themselves about menopause (31).

Menopause knowledge indicates the degree of understanding changes in the body as a transition from a reproductive stat to a non-reproductive state and is an assessment scale that measures knowledge toward child-bearing potential, menopause symptoms, changes in menstrual cycle, menstrual irregularity, menopausal age, ovarian hormone levels, estrogen treatment effect and others using menopause knowledge (39).

Knowledge about the menopause and its transitional period, may differ from one woman to another. These differences have been related to female age, parity and hormonal status as well as to social, economic, cultural, educational and geographical factors (40).

Women hove good Knowledge about the menopause might help to cope better with menopausal changes. In case of lack of knowledge about menopause makes women more

afraid when the time approached to menopause and this has negative effects on their emotional state. Changing women's perceptions on menopause by increasing their knowledge on menopause may cause less emotional disturbance. Study also indicate that negative perceptions about menopause begins early in life due to little accurate information among young women. Also, culture and societal influence were consider factor that affect how individuals think about menopause (31).

A Study conduct in Iran on 400 healthy and non-menopauses women aged 40-45 years ,the results showed that the average knowledge score of subjects was 63.57 ± 10.79, and. In this, 8% of the study partspant had poor knowledge, 68% had moderate knowledge and 38.5% had good knowledge. Also the correlation test showed that knowledge and attitude are meaningfully related to economic status and education level but the relationship between knowledge and attitudes of women under study was not significant (32).

A descriptive study on 231 middle-aged women in Norte Korean showed that the score of knowledge towards menopause was relatively low at 17.28/30 and the relationship between knowledge and attitude towards menopause revealed a negative significant correlation (41).

A Study conduct in Nigeria, women in this study reveals the poor menopausal knowledge among the study group (42).

2.6.1. Knowledge on definition of menopause

Study conduct in Malaysia showed that 89.0% agreed that menopause refers to permanent cessation of menstruation, 72.2% noted menopause happens when ovaries stop estrogen production, 62.8% believed menopause begins after age 50 years, 57.9% defined menopause as a condition in which the ovaries stop functioning and Only 24.8% described menopause as any women above 35 years without having any menstrual period for one year. Generally Respondents had good knowledge of the definition of menopause, and definitions given varied widely. There were no association among respondents from all ethnic groups in the knowledge of the definition of menopause. The results also did not indicate that tertiary educated respondents were more knowledgeable than secondary school educated women (31).

In Africa A study done in Namibian to assess the Knowledge and Understanding of Menopause and Menopausal Symptoms showed that, defined menopause as a condition (75.5%) when menstruation stops, (82.8%) when the body stops making estrogen, (80.4%) when hot flashes begin, (78.8%) when the ovaries stop functioning, (87.8%) when the women reach age 35 and (60.2%) the women miss periods for 1 year (13).

2.6.2. Knowledge on Menopausal Symptoms

In Malaysia study indicate 86.5% identified depression as a symptom of menopause, 85.6% reported irritability as symptom of menopause, whereas 80.5% noted vaginal dryness, 77.5% forgetfulness and 74.9% lethargy. Generally, all respondents have reasonably good knowledge on symptoms attributed to menopause (31).

In Pakistan, a descriptive cross sectional study was conducted at outpatient services of Jinnah Medical College Hospital Karachi showed that (29.4%) respondents had some knowledge of menopausal symptoms (12).

Study in Iran people's knowledge about symptoms of menopause, such as hot flashes (90%) or abnormal menstrual bleeding (85%), was high. On the other hand, knowledge about other menopausal symptoms such as vaginal dryness and painful intercourse, urinary frequency and dysuria was low (32).

A study in Assiut University Hospital, Egypt showed that, 66.5% of the women hove knowledge on menopausal symptoms (43).

In Africa A study done in Nigeria to determine the features and perceptions of natural menopause among menopausal women in Benin-City, Edo State, Nigeria showed that, (53.8%)Joint pains, (51%) hot flushes and(42%) night sweats were the most common symptoms believed to be related to menopause(2).

2.6.3. Knowledge on long term implications of menopause

Study in Bangladesh showed that, (65.80%) hypertension and (43.66%) Diabetes mellitus know as long term implications of menopause (28).

In a study done in Malaysia to assess the knowledge and perceptions of menopause among young to middle-aged women in federal territory, Kuala lumpur showed that, (76.2%) respondents were much more likely to know that osteoporosis risk increased with

menopause than to know that heart disease risk increased (36.5%) despite the much higher prevalence and severity of heart disease as a health problem of menopausal women. Findings also indicated that, (32.2%) respondents associated breast cancer, (37.0%) diabetes, (28.6%) colon cancer, (40.0%) stroke, (43.8%) elevated blood pressure and (48.4%) cervical cancer as health risks associated to menopause. Young adult respondents were more knowledgeable than middle-aged respondents on health risks associated to menopause. Young adults were significantly more aware that heart disease, diabetes, colon cancer, high blood pressure, stroke, and cervical cancer are health risks associated with menopause than middle-aged respondents. For osteoporosis and breast cancer, more middle-aged respondents cited them as risks associated with menopause compared to young adult respondents. There were no ethnic differences for knowledge on health risks of menopause (30). A study in Pakistan conduct showed that only (3.92%) respondents were aware of long term implications of menopause (12).

2.7. Menopause attitude

Attitudes is part of the psychosocial phenomenon surrounding menopause (12).The attitudes of women to the menopause are strongly influenced by social, cultural and economic settings in which they live and may also reflect the differences in modes of treatment for or perception of its symptoms (37). Menopausal symptoms are found to be less common in societies where menopause is viewed as a positive rather than negative event (12).

Menopause attitude means evaluative feelings, communication, and mental changes about menopause, and includes expressed feelings and thoughts about certain matters (39).

In study Jinnah Medical College Hospital Karachi indicate that, (47%) of women considered menopause as a positive or (39.2%) neutral change and indicated that, (94%) women did not perceive menopause to be a medical condition but a natural transition (12). A Study in Malaysia indicate that, (76.5%) of the respondents disagreed that menopause means no longer being real women, (76.7%) feeling not wanted by others, (71.4%) feeling old and useless and (77.2%) sign of partial death. Also (76.2%) of the women disagreed that menopause is a disease. Many held a positive attitude towards menopause and regarded menopause as a normal transition in the ageing process (78.2%) and it is just a

sign of ageing (76.7%). Majority (77.5%) also do not feel menopause would result in loss of drive to perform their daily chores. Relatively low percentages of respondents (42.5%) express regrets if their menstrual period ceases approaching menopause. Although more than half of the respondents (59.0%) believed that menopause would not change women in any important way, the majority agreed that menopause means a loss of their youth (52.4%) and fertility (69.1%) (31).

A study done in USA to assess Predictors of Women's aged 35-55 year Attitudes Toward Menopause indicate that women's attitudes toward menopause and women's age were positively correlated; older women held more affirmative attitudes about menopause than did younger women A positive relationship between women's attitudes toward menopause and ratings of their physical health also emerged, suggesting that those women reporting better physical health also reported feeling more positively toward menopause than did those women who indicated experiencing physical health problems. Similarly, those women who rated themselves higher in emotional health held more positive attitudes toward menopause than did those women reporting lower emotional health. Women's attitudes toward menopause and the number of menopausal changes they reported experiencing were negatively related, indicating that those women who were experiencing more life changes held more negative attitudes toward menopause. A positive correlation was found between women's attitudes toward menopause and the number of family members with whom women talked in a very comfortable way about menopause; the relationship with the number of friends was weaker. In addition, the positive correlation between the ease that women reported discussing midlife changes and women's attitudes toward menopause suggested that those women who more easily talked about menopause also felt more positively about menopausal experiences than did women who reported being less comfortable in discussing menopause(44).

In a study done 2011 in Iran showed that the quality of life in postmenopausal women had an association with their attitude toward the menopause, (45) another study conduct 2012 in Iran showed that Mean of attitude score was 14.4±3.3. 14.5% of women have Negative attitude and 85.5% had a positive attitude toward menopause and also there was a relationship between attitude score and income and education level (46) and also another

Study conduct 2013 in Iran results indicate that, 81.5% the attitude of was positive and only 18.5% had a negative attitude toward this menopause phenomenon (32).

In Africa A study done in Nigeria 2000 indicate that the majority of the women had a positive attitude to the menopause and the attitudes of women to the menopause are strongly influenced by social, cultural and economic settings in which they live and may also reflect the differences in modes of treatment for or perception of its symptoms. Menopause was considered a normal physiological manifestation of the ageing process by 95.56% of the respondents while 2.66% believed it was a disease condition (47) and another study conduct 2010 in Nigeria showed that the mine score of attitude towards menopause was neutral at 2.3/4.The relationship between knowledge and attitude towards menopause revealed a negative significant correlation (41). In one study in Assiut University Hospital, Egypt showed that, Attitude of the majority toward menopause was negative (43).

A Study in Dangila town, north west Ethiopia show that There are significant differences in menopausal attitude because of educational background, suggesting that illiterate women displayed better positive attitude than educated ones. Similarly, there are significant differences in menopausal symptoms and attitude across menopausal status. Pre-menopausal women experienced the highest menopausal symptoms than the pre and postmenopausal ones and postmenopausal women displayed positive attitude than pre and perimenopaused ones (15)

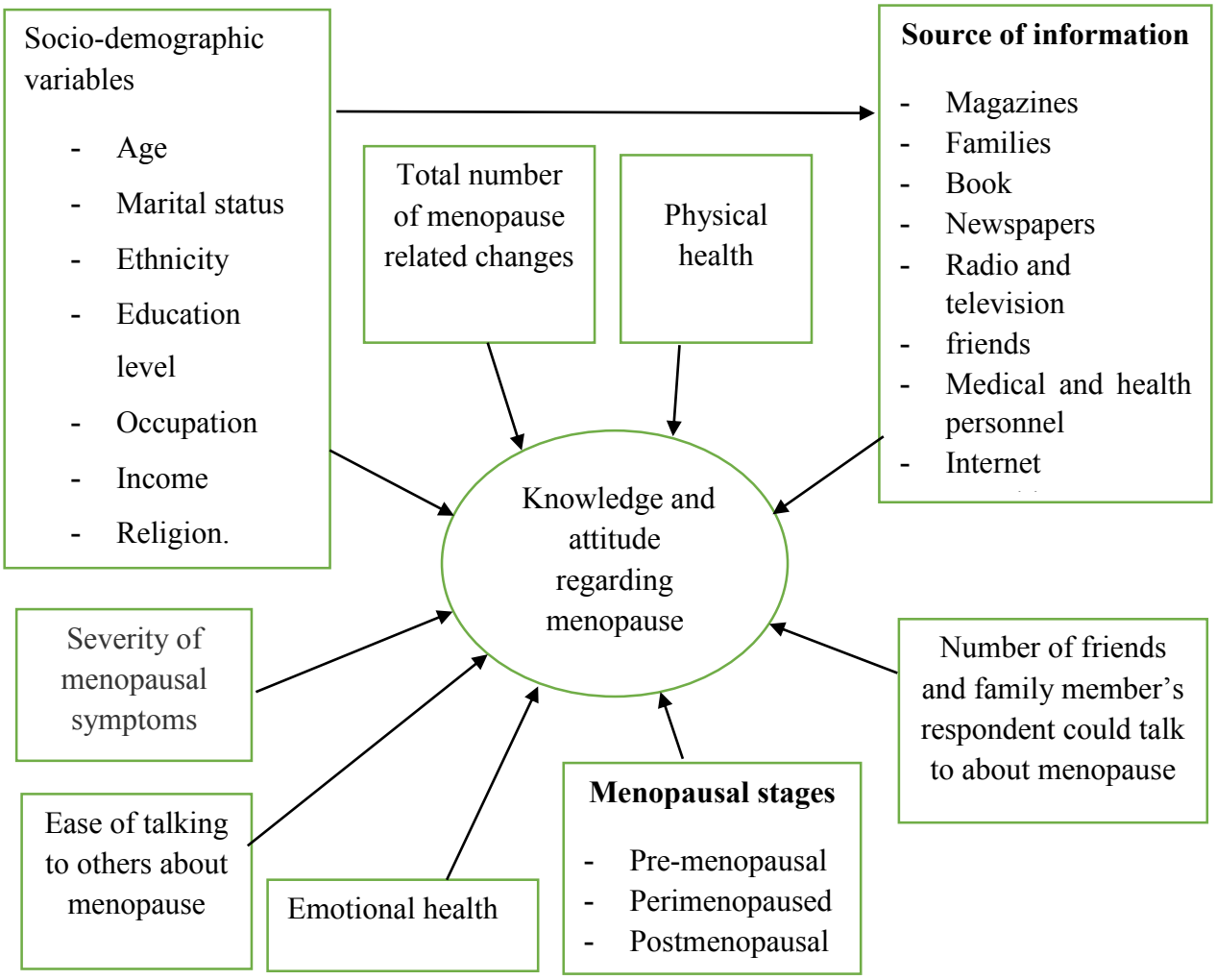

Figure 1: Conceptual frame work of knowledge and attitude of women aged 30-49 years towards menopause.

Source: Developed by principal investigator after reviewing literatures.

3. OBJECTIVES

3.1.General objective

To assess knowledge, attitude and associated factors of women aged 30-49 years towards menopause in Gulele sub-city of Addis Ababa, Ethiopia from April 26 to May 10, 2015.

3.2. Specific objectives

1. To assess level of knowledge of women aged 30-49 years regarding menopause in Gulele sub-city
2. To determine attitude of women towards menopause in Gulele sub-city
3. To determine factors affecting knowledge and attitude of women aged 30-49 years towards menopause in Gulele sub-city

4. METHODS AND MATERIALS

4.1. Study area

This study was conducted in Gulele sub-city which is one of the 10 sub- cities in Addis Ababa City Administration. The total population size of Gulele sub-city is 267,381 which accounted 10 % of Addis Ababa population, which 48.34% were males and 51.66% were females (Gulele Sub City atlas, 2014). It is located at the Northern part of Addis Ababa and the total land area is about 3119 hectare (Gulele Sub City atlas). The sub-city borders with Oromiya region in the north, Kolfe Keranio sub city in the west, Yeka sub-city in the East, Addis Ketema and Arada sub cities in the South. The sub-city has 10 woredas and 73 ketenas. The data in the Sub city shows that out of the total women between ages 15 to 49 are 97,896 (Gulele Sub City atlas). Regarding the health facilities, the sub city has 3 government hospitals, 12 health centers and 33 private clinics.

4.2. Study Period the study was conducted from April 26 to May 10, 2015

4.3. Study design

A community based cross-sectional study was employed to assess knowledge and attitude of women aged 30-49 years towards menopause in Gulele sub-city of Addis Ababa, Ethiopia form April 26 to May 10, 2015.

4.4. Study population

The study population was all women aged 30-49 years who were dwellers in Gulele sub-city during the study period

4.5. Study subjects

The study subjects were comprised of all selected women aged 30-49 years in the selected woredas and households of Gulele sub-city of Addis Ababa Ethiopia.

4.6. Inclusion and exclusion criteria

This study included all sampled women aged 30-49 years who were permanent residents and who gave their consent to participate in the study. The study excluded those women who were severely ill during data collection, unable to communicate.

4.7. Sample size Determination

The sample size in this cross-sectional survey was determined using a single population proportion formula as follows.

$$n = \frac{Z^2_{(\alpha/2)} p(1-p)}{d^2}$$

Where: -

- n = The required minimum sample size
- z= is the standard normal deviate set at 1.96 (for 95% confidence leveled = is the desired degree of accuracy (taken as 0.05)
- P = Proportion of women aged 30-49 years who can have knowledge (assumed to be 38.5% for knowledge and 18.5% for attitude of women towards menopause as obtained from a study done in Iran (32).
- Estimated non-response rate = 10%
- Design effect (D)= 1.5 (Due to multistage nature of the study design or to control the effect of sampling that could happen due to using sampling method other than simple random sampling)

The sample size calculations was conducted for both of the objectives of the study and the calculation that yielded larger sample size was taken as the final sample size.

$$n = \frac{Z^2_{(\alpha/2)} p(1-p)}{d^2}$$

$$n = \frac{(1.96)^2\ 0.385(1-0.385)}{0.05^2}$$

$$n = 363$$

The minimum sample size for this study was 599 women aged 30-49 years based on the above assumptions.

4.8. Sampling method

Multistage sampling method used to select the study participants from Gulele sub-city. The sub-city composed of 10 woredas (districts) and divided in to 73 ketenas.

In current study, the following four-stage sampling procedure was performed;

1. We selected 3 woredas out of 10 by simple random sampling (30% of the total).
2. From the selected woredas about 50% of the ketenas we selected using simple random sampling technique (a total of 14 Ketenas)
3. For each Ketena, we selected Households by systematic random sampling method (599 Households in total). Here the total sample size was proportionally allocated to each Ketena based on total number of Households in each Ketena.
4. All women aged 30-49 years in each household were interviewed.

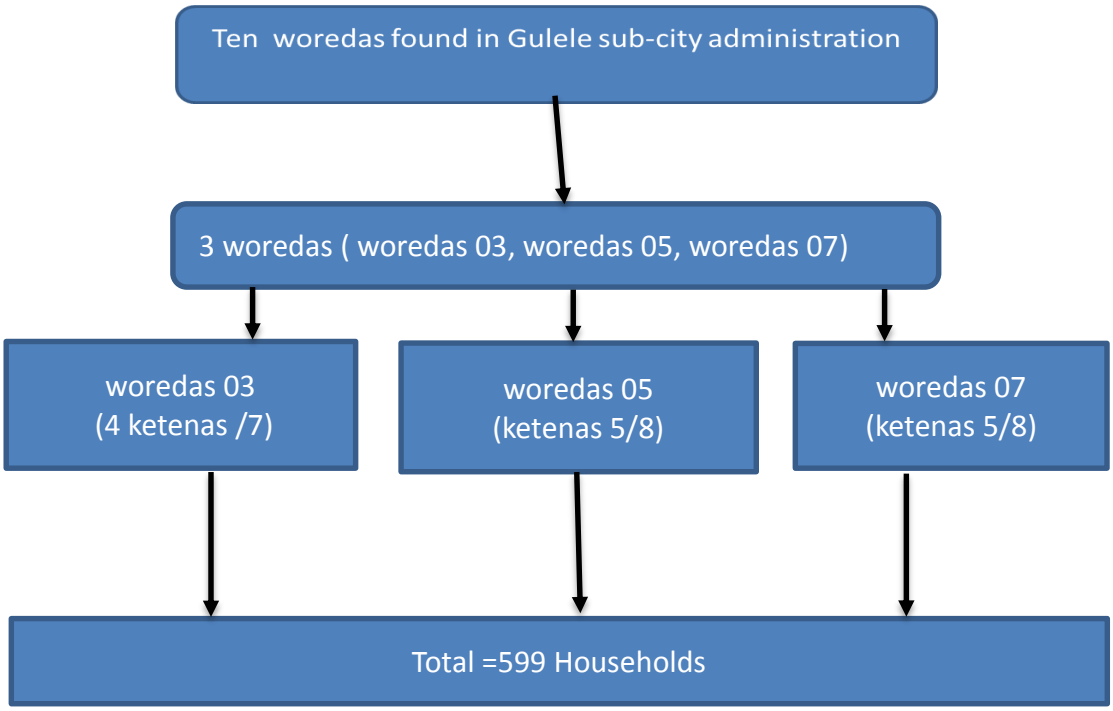

Figure 2: Schematic presentation of sampling procedures

4.9. Variables

4.9.1. Dependent variable: - Knowledge and attitude about menopause

4.9.2. Independent variables:-

Age, marital status, ethnicity, educational background, Occupation, Income level, Religion, parity, menopausal status (stage), Number of friends and family member's respondent could talk to about menopause, Physical health, emotional health, Source of information, number of menopause-related changes, Ease of talking to others about menopause and severity of menopausal symptoms.

4.10. Operational definition

Menopause: is defined when menstrual bleeding was not been observed for a full 12 (8) and classified into 4 types (3):

- **Natural menopause** (which is occurs as a result of natural changes in the organs responsible for oestrogen production)
- **Premature menopause** (which is occurs before the age of 40 years and the cause is usually hormonal imbalance or surgical intervention or even natural occurrence)
- **Artificial menopause (**which is caused by deliberate removal of any organ that directly affects the menstrual process**)**
- **Radiation menopause** (caused by the use of radium)

Menopause Knowledge: - classified into three categories: weak (with a score of 0-33% of knowledge related questions), moderate (with a score of 33-66%) and good (with a score of 66-100%) knowledge (32).

Menopause attitude: - classified into two groups with negative attitude (with a score below 50%) and positive attitude (with a score of 50% and above) (32).

Severity of menopausal symptoms: - classified into four categories: none/minimal (with a score of 0-4), mild (with a score of 5-8), moderate (with a score of 9-15) and sever (with a score of 16-44) (48).

Permanent residence: - women who have been residing in the study area, at least six month prior

4.11. Data collection instrument and methods

4.11.1. Instrument

A structured interviewer administered questionnaire was used. The questionnaire was adapted from a previous study (32) and reviewing of relevant literatures to the problem under study to include all the possible variables that address the objective of the study regarding knowledge and attitude of women towards menopause. The questionnaire included socio-demographic information such as age, sex and other characteristics.

In order to produce a more objective assessment of knowledge and attitude of women towards menopause, a scoring method was adapted from a previous study and a 'knowledge score' and 'attitude score' for each of the women aged 30-49 years were obtained by adding up the scores for correct answers given to selected questions in the questionnaire (32).The knowledge of Menopause phenomena assessed using a 26 questions that carried a total of 26 correct responses. Each correct response was given a score of 1 and a wrong response a score of 0. Total points to be scored are 26 and the minimum is 0, according to which people's knowledge was classified into three categories: weak (with a score of 0-33%), moderate (with a score of 33-66%) and good (with a score of 66-100%) knowledge (32).

Attitude was assessed by 10 questions put on Likert's scale. The questions on Likert's scale have positive and negative responses that ranged from completely agree, agree, disagree and completely disagree. Each positive attitude was given a score of 1 and a negative attitude score of 0. Total points to be scored are 10 and the minimum is 0, according to which people's attitude was classified into two groups with negative attitude (with a score below 50%) and positive attitude (with a score of 50% and above) (32).

Menopause Rating Scale (MRS) questionnaire were used as a basis for assessing menopausal symptoms in this study, this is a self-administered instrument which has been widely used and validated and have been used in many clinical and epidemiological studies, and in research on the etiology of menopausal symptoms to assess the severity of menopausal symptoms (49).

The MRS is composed of 11 items and was divided into three subscales:
(a) somatic-hot flushes, heart discomfort/palpitation, sleeping problems and muscle and joint problems; (b) psychological-depressive mood, irritability, anxiety and physical and mental exhaustion and (c) urogenital-sexual problems, bladder problems and dryness of the vagina. Each of the eleven symptoms contained a scoring scale from "0" (no complaints) to "4" (very severe symptoms). The women were asked whether or not they had experienced the 11 menopausal symptoms shown in the MRS in the previous one month (30 days) by using a face-to-face interview. The total score possible ranges from 0 to 44.scores ranging from 0-4, 5-8, 9-15, and 16+ were used to rate the perceived menopausal symptoms as none/minimal, mild, moderate and severe respectively (48).

4.11.2. Data quality control

The quality of the data was assured through careful design standard data collection tool, translation and retranslation and pretesting of the questionnaire was done 7 days before the actual data collection days on similar setting on aged 30-49 years women having similar socio-demographic characteristics by considering 5 % of the total sample size and based on the finding of the pre-test necessary adjustment was done to data collection, proper training of the interviewers and supervisors, close supervision of the data collectors and proper handling of the data. It was monitored frequently both in the field and during data entry that is all completed questionnaire was examined for its completeness and consistency during interview and at the end of each day. Data entry was also done carefully by the principal investigator.

4.11.3. Data processing and analysis

Data was entered using Epi info 7 and analyzed using the SPSS database program version 20. After cleaning the data, frequencies and percentages was calculated to all variables which were related to the objectives of the study. We analyzed the data to identify factors associated with level of knowledge and attitude towards menopause using standard binary logistic regression analysis. Odds ratio with 95 % confidence interval was computed to assess the presence and degree of association between dependent and independent

variables. Observed differences between samples were considered statistically significant where the confidence limits did not embrace unity or $p < 0.05$.

4.12. Ethical considerations

The study was conducted after getting ethical clearance from Institutional Review Board committee (IRB) of the Addis Ababa University. Letters of support was also received from Addis Ababa Health Bureau and Gulele sub-city health office. Informed verbal and written consent was obtained from each study participant after telling the objective of the study. Confidentiality and privacy were insured for collected information from the study participants.

4.13. Plan for dissemination

A hard and soft copy of the final report of this study will be submitted to Department of Nursing and Midwifery, College of Health Sciences, Addis Ababa University and for all concerned bodies. The output of this study will also be made publically accessible through publications in reputable journals. Doing all efforts to make available forums, workshops and conferences to present the study results.

5. RESULTS

5.1.Socio-demographic characteristics of the study participants

Out of the 599 interviewer administered questionnaires that were run, 586 questionnaires were correctly completed making a response rate of 97.8%. The socio-demographic characteristic of the respondents is described in **Table 1**. More than one third (35.8%) the respondents were in the age group 30-34 years and the mean age was 37 years (SD ± 5.0 years). About 71% of the respondents were married. Regarding educational status of the respondents, 502 (85.0%) of the respondents had attended formal school of which 105 (17.9%) of the respondents were college and university students. Of the total mothers interviewed, the majority 352 (60.1%) of them were Orthodox Christians by religion while 133 (22.7%), 61 (10.4%) and 37 (6.3%) were followers of Muslim, protestant and Catholic religion respectively. Nearly half of the study subjects were Amhara 270 (46.1%), followed by Oromo 162 (27.6%), Tigre 80(13.7%) and Gurage 61 (10.4%) by ethnicity. Regarding the occupational status of the respondents, most of them were Civil servant 169 (28.8%), House wife 167 (28.5%) and private sector employee 101 (17.2%). The mean household monthly income of the respondents was 1502.68 ETB and ranges from 100 to 5100 ETB (**table 1).**

Table 1: Socio-demographics characteristics of the respondents, Gulele sub-city of Addis Ababa, Ethiopia April 26 to May 10, 2015

Variables	**Number [N=586]**	**Percent**
Age		
30-34	210	35.8
35-39	187	31.9
40-44	98	16.7
45-49	91	15.5
Mean (±Std. Deviation)	37.19(±5.365)	-

Educational status		
11-12 grade	129	22.0
9-10 grade	113	19.3
5-8 grade	93	15.9
College/university student	92	15.7
1-4 grade	62	10.6
Able to read and write	48	8.2
Unable to read and write	36	6.1
Post graduate degree	13	2.2
Ethnicity		
Amhara	270	46.1
Oromo	162	27.6
Tigre	80	13.7
Gurage	61	10.4
Gamo	8	1.4
Refused	5	1.3
Marital status		
Married	416	71.0
Single	77	13.1
Widowed	55	9.4
Divorced	37	6.3
Refused	1	0.2
Religion		
Orthodox	352	60.1
Muslim	133	22.7
Protestant	61	10.4
Catholic	37	6.3
Other	3	0.5
Occupation		
Civil servant	169	28.8
House wife	167	28.5
Employed in private sector	101	17.2
Merchant	68	11.6
NGO employee	46	7.8
Daily laborer	16	2.7
Unemployed	14	2.4
Student	5	0.9
Monthly Income		
Lowest	212	36.2
Medium	179	30.5
Highest	195	33.3

5.2. Obstetrics and reproductive health related variables

Of the total women, 52 (8.9 %) were found to be in natural menopause. The mean age of natural menopause was found to be 43.15(±3.962) years, where median age was found as 44 years, the lowest age of onset of menopause was 32 years and the highest age was 47 years. The majority of the respondents 456 (78.8%) knew the age at which their first menstrual period started. Of those women who reminded their age during the first menstruation, 72(12.3%) of then reported as they started menstruating at the age of under 13 years old while 225 (38.4%) and 159(27.1%) of them started menstruation at 13 years and older than 13 years of age respectively. About 433 (73.9%) of the women gave birth to 1-4 live children in their life time, 93(15.9%) were nullipara and 60 (10.2%) grand-multipara mothers. Regarding the history of miscarriages, 111 (17.1%) of the women have history of 1-2 miscarriages in their life time, while 3(2.7%) have ≥3 history of miscarriages. During the study period, 131(22.4%) of the women were using contraceptive, from these most of them 67(11.4%) used injectable type of contraceptive method. Of 586 women who were eligible for the study, 9 (1.5%) were pregnant, 13 (2.2%) were lactating mothers, 8 (1.4%) had operation to avoid any more children and 4 (0.7%) were currently performing strenuous exercise. Regarding the time of last menstrual period, the majority 513 (87.5%) of women had their last menstrual period months ago and below and 63(10.8%) of them had lastly seen their menses 12 months ago. The mean age at their last menstrual period of the women was 43 years (SD=4.092) and ranges from 32 to 47 years. Eleven (1.9%) of the women hove reasons for stoppage of menstrual period, from this 5(0.85%) of the women reported that cervical cancer as reason for stoppage of their menstrual period (see Table 2).

Table 2: Obstetric and reproductive Health related Information of women, Gulele sub-city of Addis Ababa, Ethiopia April 26 to May 10, 2015

Variables	Number [N=586]	Percent
Age at Menarche		
13 years old	225	38.4
Older than 13 years old	159	27.1
I didn't know	130	22.2
Under 13 years old	72	12.3
Number of children		
0	93	15.9
1-4	433	73.9
≥5	60	10.2
Number of miscarriages, abortions or stillbirths		
0	472	80.5
1-3	113	19.5
≥ 4	1	0.2
Use of contraceptive and Contraceptive types		
No	455	77.6
Injectable	67	11.4
Implant	26	4.4
Oral pills	16	2.7
Standard days method	11	1.9
Intra-uterine device	6	1.0
Female Sterilization	5	0.9
Currently pregnant		
No	577	98.5
Yes	9	1.5
Currently breastfeeding [577]		
No	564	96.2
Yes	13	2.2
Operation performed to avoid having any more children[577]		
No	569	97.1
Yes	8	1.4
Currently performing strenuous exercise		
No	582	99.3
Yes	4	0.7

Time of last menstrual period		
Days ago	129	22.0
Weeks ago	214	36.5
Months ago	170	29.0
Before last birth	9	1.5
12 months ago	55	9.4
Has had hysterectomy	8	1.4
Never menstruated	1	0.2
Age at last menstrual period of women in natural menopause [N=52]		
30-34	3	5.8
35-39	6	11.5
40-44	17	32.7
45-49	26	50.0
Mean(±SD)	43.15(±3.962)	-
Range	32 to 47	-

From total of interviewed women, 360 (61.4%) of them reported having had regular menstrual periods for the last three months (Pre-menopausal) while about 150(25.6%) reported that they had irregular menstrual periods in the last 12 months (Perimenopaused). However, 76 (13%) of them reported no menstrual period in the last 12 months or longer (postmenopausal) (see Figure 2)

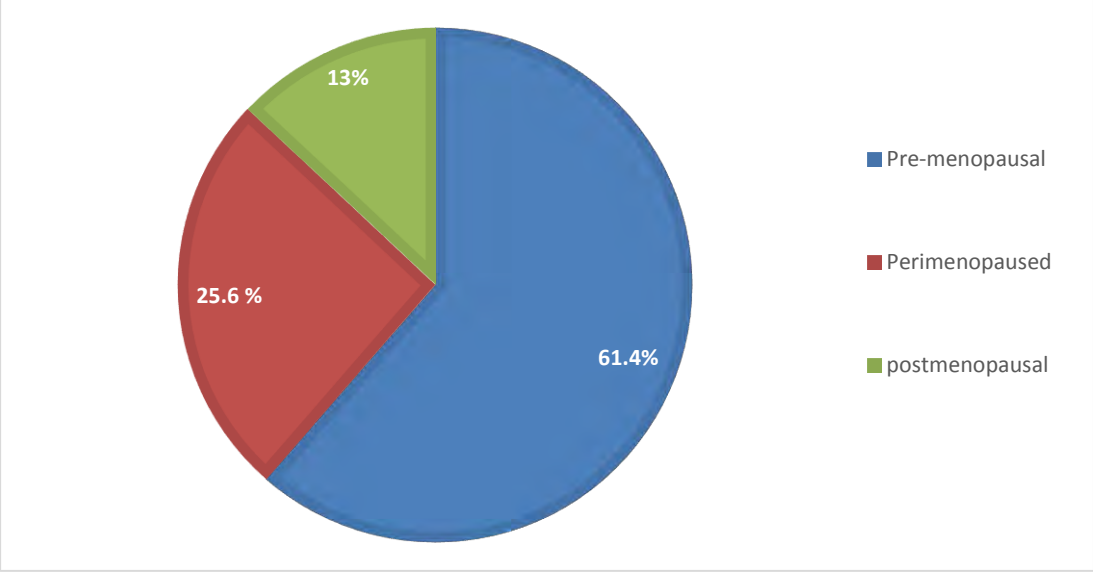

Figure 2: Current menopausal status of women, Gulele sub-city of Addis Ababa, Ethiopia April 26 to May 10, 2015

5.3.Symptoms of menopause

Menopausal symptoms experienced by women were also investigated (see Table 3). Among 226 perimenopausal women, most reported vasomotor symptoms were hot flushes 149 (65.9%), heart discomfort 50 (20.1%), physical symptoms like sleep problems 112 (49.6%) and joint and muscular discomfort 73 (32.3%) , and frequent mental symptoms were depressive mood 104 (46%), Irritability 102 (45.1%) and Anxiety 90 (39.8%).

The data showed that the number of menopausal symptoms experienced by the women varied from one individual to the other. The average number of menopausal symptoms experienced by the interviewed women were 4 and the minimum was one. The majority (51.3%) of the respondents experienced more than six of the symptoms while 48.7% of them experienced less than six.

Table 3: Frequency of menopausal symptoms among women aged 30-49, Gulele sub-city of Addis Ababa, Ethiopia April 26 to May 10, 2015

Variables	Number [N=226]	Percent
Hot flushes	179	65.9
Sleep problems	112	49.6
Depressive mood	104	46.0
Irritability	102	45.1
Anxiety	90	39.8
Physical and mental exhaustion	79	35.0
Joint and muscular discomfort	73	32.3
Dryness of vagina	69	30.5
Sexual problems	61	27.0
Bladder problems	59	26.1
Heart discomfort	50	22.1

The degree of severity of the menopausal symptoms in women was investigated based on an index, which measured the number symptom (indicator) occurred and rating severity of symptoms. All the indicators were then added together to form the index. The index scores ranged between 0 indicating that there were no menopausal symptoms to 44 indicating that

the symptoms were very high or at the maximum severity. The mean number of symptoms experienced by women was 5.88 with a standard deviation of 6.901 and a mode of 0 and a median of 3.

The majority (21.2%) of the women had medium level of severity of the symptoms while 13.7 % of them had mild level of severity, and 8.8 % had sever levels of severity of the symptoms, and 56.2 % had none/minimal levels of severity of the symptoms (see Figure 3).

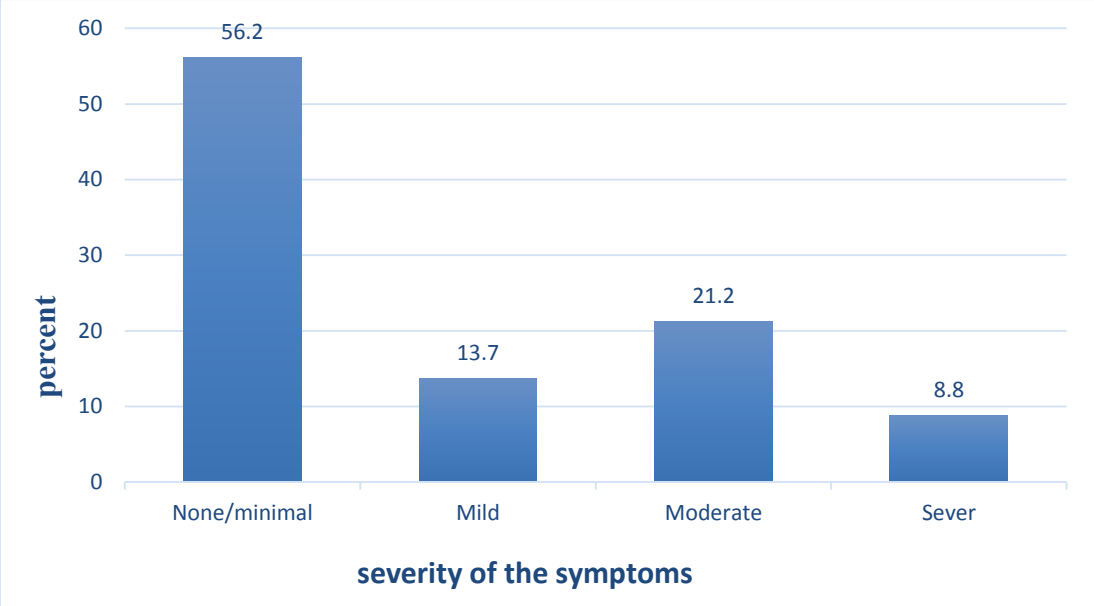

Figure 3: Severity of menopausal symptoms experienced by women, Gulele sub-city of Addis Ababa, Ethiopia April 26 to May 10, 2015

5.4.Sources of information

The sources of information of the women about menopause were also investigated (Table 4). Respondents were asked to indicate if they had ever heard of menopause, 375 (64%) of all the respondents reported that they had heard of menopause before this investigation was brought to them. The main sources of information about menopause were friends (37.7%) and relatives (31.7%).

Table 4: Source of information of the women about menopause, Gulele sub-city of Addis Ababa, Ethiopia April 26 to May 10, 2015

Variables	Number [N=586]	Percent
Friend	221	37.7
Relatives	186	31.7
Medical care providers	122	20.8
Books, Magazines, Journals	87	14.8
Mass media (Radio, TV)	86	14.7
Educational sessions	41	7.0
Community Elder	8	1.4

5.5.Perceptions of women towards menopause

Respondents were also asked what they feel talking to others about menopause, and 231(39.4%) responded that they feel easy (see Figure 4).

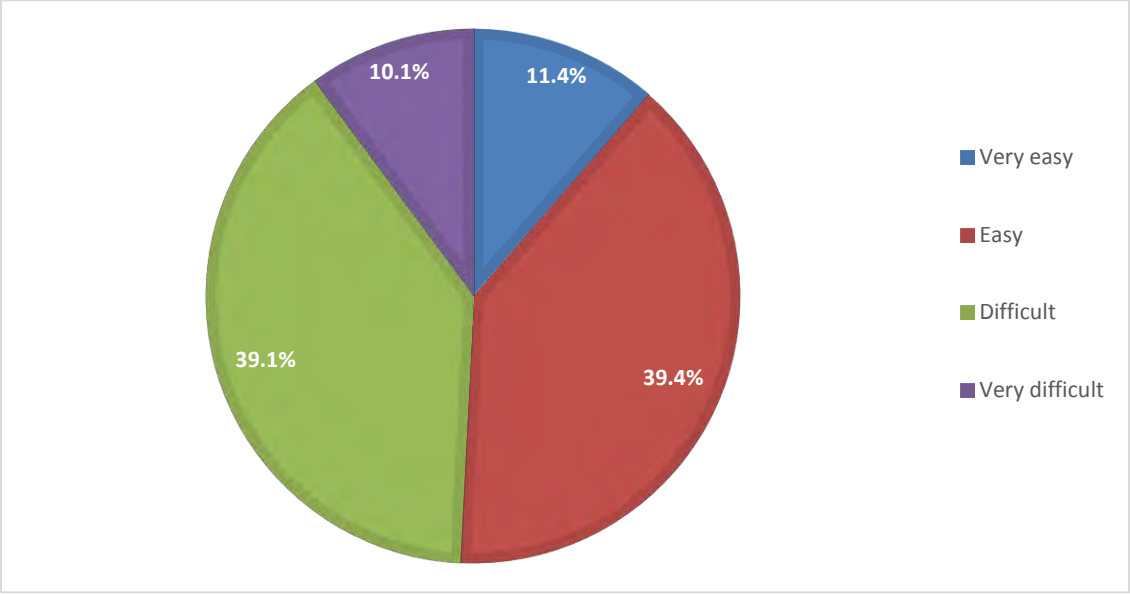

Figure 4: Feelings of women while talking to others about menopause, Gulele sub-city of Addis Ababa, Ethiopia April 26 to May 10, 2015

The mean number of friends that the respondents talk to in a very comfortable way about menopause was 2 (±1.598) and ranges from 0 to 8. The mean number of people in the women's family that she talk to in a very comfortable way about menopause was 1 (±1.508) and ranges from 0 to 6.The respondents were also asked for their perception towards the

current emotional health and current physical health. Regarding the perception of current emotional and physical health, the women reported to have good emotional 543 (92.7%) and physical 528k (90.1%) health (Table 5).

Table 5: Perception of women towards current emotional and physical health, Gulele sub-city of Addis Ababa, Ethiopia April 26 to May 10, 2015

Variables	Number [N=586]	Percent
Number of friends of the women can talk in a very comfortable way about menopause		
Mean(±SD)	2 (±1.598)	
Range	0 to 8	
Number of people in women family can talk about menopause in a very comfortable way		
Mean(±SD)	1 (±1.508)	
Range	0 to 6	
Perception towards the current emotional health		
Very Poor	3	0.5
Poor	40	6.8
Good	219	37.4
Very Good	243	41.5
Excellent	81	13.8
Perception towards the current physical health		
Very Poor	6	1.0
Poor	52	8.9
Good	161	27.5
Very Good	263	44.9
Excellent	104	17.7

5.6. Knowledge on menopause

Regarding the status of the study subjects' knowledge, the results showed that the majority (362 (61.8%)) of people had moderate knowledge while 132 (22.5%) and 92 (15.7%) of them had good and weak knowledge respectively.

The result depicted in Table 6 illustrated that the proportion of women who correctly responded to the knowledge question regarding the menopausal phenomenon. More than 38.9% of the women knew that menopausal bleeding disorder is one of the main symptoms of menopause while more than 33.6% of them reported hot flashes as one of the obvious symptoms of menopause.

Table 6: Proportion of women aged 30-49 years who correctly responded to the knowledge questions regarding menopause, Gulele sub-city of Addis Ababa, Ethiopia April 26 to May 10, 2015

Variables	Number [N=586]	Percent
At the time of menopause, menstruation stops suddenly	311	53.1
women become menopausal at the age of 48-55 years	371	63.3
hereditary background affects the time of menopause occurrence	215	36.7
menopause occurs in women due to increasing sexual hormones	423	72.2
thin people become menopause sooner	169	28.8
most of the women experience menstruation disorder before menopause occurrence	228	38.9
most of the women experience hot flashes in the menopause period	197	33.6
menopause in women decreases genital infection	431	73.5
menopause in women increases weight and obesity	407	69.5
menopause symptoms are preventable and curable	439	74.9
menopause decreases Cardiovascular diseases in women	438	74.7
menopause increases osteomalacia in women	183	31.2
menopause causes dryness and skin shrivel in women	207	35.3
menopause causes different types of cancer in women	443	75.6
sexualities change in menopaused women	210	35.8
Smoking affects the time of menopause occurrence	195	33.3
Smoking does not affect the severity of symptoms and complications of menopause	195	33.3
menopause increases extra hair on women's face	432	73.7
menopause causes vaginal dryness and painful sexual intercourse	188	32.1
menopause causes urinary frequency and dysuria	185	31.6
Smoking and using alcohol are factor of increasing osteomalacia in women	209	35.7
Regular physical activity is effective in preventing osteomalacia in menopausal women	192	32.8
Menopause affects the power of concentration and memory of women	232	39.6
Frequency and severity of hot flashes in menopaused women increase by time	153	26.1
Level of stress and depression feeling increase in menopaused women	198	33.8
During 1 year after complete stop of menstruation, pregnancy prevention is necessary	477	81.4

Bivariate and multivariate logistic regression analysis of factors associated with knowledge of women about Menopause

Table 8 below shows the association of some variables with level of knowledge about menopause. On crude logistic regression analysis, women who had highest monthly income had a good level of knowledge compared to those who have lowest monthly income [Adjusted OR = 0.259 (95% CI: 0.148, 0.451)] and also on multivariate logistic regression analysis, the association was significant [Adjusted OR = 0.369 (95% CI: 0.192, 0.710)]. Similarly, received information on menopause showed significant association with the level of knowledge about menopause. Those who ever had received information on menopause had a good level of knowledge compared to those who never had information on menopause [Adjusted OR = 0.143 (95% CI: 0.073, 0.281)].
Other variables such as menopausal status of the woman and educational status showed no significant association with the level of knowledge.

Table 7: Bivariate and multivariate logistic regression analysis of knowledge on Menopause

Characteristics	Overall knowledge			
	Poor n(%)	**Good n(%)**	**Crude OR (95% CI)**	**Adjusted OR (95% CI)**
Current menopausal status				
Pre-menopausal	272(75.6)	88(24.4)	1.123(0.622,2.027)	0.841(0.421,1.678)
Perimenopaused	123(82)	27(18.0)	0.762(0.385,1.506)	0.554(0.256,1.199)
postmenopausal	59 (77.6)	17(22.4)	1	1
Monthly income				
Lowest	192(90.6)	20(9.4)	**0.259(0.148,0.451)***	**0.369(0.192,0.710)***
Medium	123(68.7)	56(31.3)	1.130(0.726,1.760)	1.298(0.815,2.070)
Highest	139(71.3)	56(28.7)	1	1
Educational status				
Illiterate	30(83.3)	6(16.7)	0.673(0.274, 1.653)	2.652(0.860,8.174)
Literate	424(77.1)	126(22.9)	1	1
Received information on Menopause				
No	200(94.8)	11(5.2)	**0.115(0.061,0.22) ***	**0.143(0.073,0.281)***
Yes	254(67.7)	121(32.3)	1	**1**

Note: * statistically significant at 95% CI, P < 0.05; 1 = reference.

5.7. Respondents' attitude towards menopause

Overall, 84% of the respondents had positive attitude towards menopause whereas 16 % of them had negative attitude towards menopause. When the participants were asked their opinion regarding specific questions that assess attitude, more than 70.9 % of the women agreed with the fact that woman's life in the menopause period delightful than before menopause (see Table 8).

Table 8: Attitude of respondents towards the menopause, Gulele sub-city of Addis Ababa, Ethiopia April 26 to May 10, 2015

Variables	Number [N=586]	Percent
Menopause is the period of woman's loneliness		
Completely Agree	93	15.9
Agree	159	27.1
Disagree	269	45.9
Completely disagree	65	11.1
Menopause is the period of eradicating the problems of menstruation and preventing pregnancy		
Completely Agree	71	12.1
Agree	158	27.0
Disagree	265	45.2
Completely disagree	92	15.7
Woman's menopause decreases husbands sexuality		
Completely Agree	46	7.8
Agree	144	24.6
Disagree	294	50.2
Completely disagree	102	17.4
Every woman can care for herself through training and necessary tendency		
Completely Agree	83	14.2
Agree	289	49.3
Disagree	173	29.5
Completely disagree	41	7.0
In the menopause period, interest and attention of woman to her husband decreases		
Completely Agree	51	8.7
Agree	190	32.4
Disagree	242	41.3
Completely disagree	103	17.6

Menopause is the beginning of the period of women's disablement		
Completely Agree	85	14.5
Agree	238	40.6
Disagree	199	34.0
Completely disagree	64	10.9
Woman's life in the menopause period is more delightful than before menopause		
Completely Agree	38	6.5
Agree	118	20.1
Disagree	266	45.4
Completely disagree	164	28.0
Menopause decreases the grace of woman's appearance		
Completely Agree	288	49.1
Agree	128	21.8
Disagree	127	21.7
Completely disagree	43	7.3
Menopause is a usual and natural phenomenon in women's life		
Completely Agree	150	25.6
Agree	250	42.7
Disagree	121	20.6
Completely disagree	65	11.1
Menopause is the beginning of another life and second maturity of women		
Completely Agree	20	3.4
Agree	97	16.6
Disagree	306	52.2
Completely disagree	163	27.8

Bivariate and multivariate logistic regression analysis of factors associated with attitude of women about Menopause

Multivariate logistic regression analysis showed that there is no significant statistical relation between attitude scores and women educational status. However, there was a significant association between attitude scores of women and variable of age group, monthly income and received information on menopause. In other words, the attitude score of women who have information and higher income displayed more positive attitude than lower [Adjusted OR = 0.11 (95% CI: 0.044, 0.275)] and medium [Adjusted OR = 0.217 (95% CI: 0.196, 0.566)] income earners and less informed ones [Adjusted OR = 0.333 (95% CI: 0.085, 0.55)].

Women's age group also showed significant association with attitude scores about menopause. Those who were elder (45-49 years) had a positive attitude compared to younger ones (30-34 years) [Adjusted OR = 0.203 (95% CI: 0.089, 0.463)].

Table 9: Bivariate and multivariate logistic regression analysis of attitude on Menopause

Characteristics	Overall attitude			
	Poor n(%)	**Good n(%)**	**Crude OR (95% CI)**	**Adjusted OR (95% CI)**
Educational status				
Illiterate	11(30.6)	25(69.4)	**0.601(0.382,0.946)***	0.631(0.261,1.523)
Literate	83(15.1)	467(84.9)	**1**	1
Age				
30-34	54(25.7)	156(74.3)	**0.357(0.173,0.737)***	**0.203(0.089,0.463)***
35-39	22(11.8)	165(88.2)	0.926(0.419,2.047)	0.589(0.246,1.408)
40-44	8(8.2)	90(91.8)	1.389(0.523,3.689)	0.873(0.309,2.466)
45-49	10(11)	81(89)	**1**	**1**
Monthly income				
Lowest	62(29.2)	150(70.8)	**0.077(0.32, 0.182) ***	**0.11(0.044,0.275)***
Medium	26(14.5)	153(85.5)	**0.187(0.075,0.465) ***	**0.217(0.085,0.55)***
Highest	6(3.1)	189(96.9)	**1**	**1**
Received information on Menopause				
No	64(30.3)	147(69.7)	**0.2(0.124,0.321) ***	**0.333(0.196,0.566)***
Yes	30(8)	345(92)	**1**	**1**

Note: * statistically significant at 95% CI, $P < 0.05$; 1 = reference.

6. DISCUSSION

This study was designed to assess the level of knowledge and attitude of women about menopause in Gulele sub-city of Addis Ababa, Ethiopia, specifically, women aged 30-49 years. Knowledge and attitude of women towards menopause are strongly influenced by social, cultural and economic settings in which they live and may also reflect the differences in modes of treatment for or perceptions of its symptoms (40). Therefore this study identified some socio-demographic and reproductive health factors that affect the level of knowledge and attitude of women about menopause.

The study showed that the prevalence of the natural menopause among women aged 30-49 years was (8.9 %) and the mean (±SD) age of natural menopause was 43.15(±3.962) years. The lowest age of onset of natural menopause was 32 years, whereas the highest was 47 years in the study. This indicates that the prevalence of natural menopausal phenomena is high. According EDHS 2011, the prevalence of menopause is 18 % among women aged 30-49 years (20). This is inconsistent with the results of the present study. This difference in percentage of prevalence of natural menopaused women might be due to the EDHS data which may attributes to the predominant rural community of the country; and the data in the present study probably reflects a general improvement in health and a determination of women to self-care in urban areas (7).

The study showed that 64% of the women claimed to know about menopause and 362 (61.8%) of them had moderate (fair) level of knowledge while 132 (22.5%) had a good level of knowledge and 15.7% had poor level of knowledge. This result implies that knowledge of women on menopause may be inadequate to better cope with menopausal changes. When compared to the same study done in Iran (32) 68% of the women had moderate level of knowledge and 38.5% had good knowledge. The finding in this study shows that there is a difference in the prevalence of knowledge which might be the result of the difference in economic status and source of information.

With regard to the sources of knowledge about menopause, friends and relatives were reported as the primary source of knowledge by the majority (69.4%), which is consistent with a study finding that is reported in Iran (32). This indicates that informal sources of

information are major sources of knowledge on menopause in both studies and this might be due to lack of access to information distributed by health professionals.

Knowledge of the obvious symptoms of menopause, such as hot flashes or abnormal menstrual bleeding, was poor. Only 228 (38.9%) of the respondents knew abnormal menstrual bleeding as symptom of menopause while 197 (33.6%) of the respondents knew hot flashes is a symptom of menopause. Whereas a study done in Iran (32) where (85%) of the respondents knew abnormal menstrual bleeding as a symptom of menopause and 90% of the respondents know hot flashes is a symptom of menopause. These differences in the knowledge of obvious symptoms between the two studies might be due to difference in economic status and source of information. The poor knowledge of obvious symptoms in the present study may attribute to the majority of the respondents who are living in lower and medium economic status and 36% of the respondents had not received information about obvious symptoms of menopause.

This study showed that there is a significant relation between women's knowledge and economic status. Those who had higher monthly income had a good level of knowledge compared to those who have lowest monthly income [Adjusted OR = 0.369 (95% CI: 0.192, 0.710)]. This finding is consistent with a study done in Iran (32). This may be due to increased concern for individual safety, capacity to get better health care services and ability to access to various sources of information.

In this study, the knowledge of women about menopause was significantly associated with source of information. Women who had ever received information on menopause had good level of knowledge compared to who never had information on menopause [Adjusted OR = 0.143 (95% CI: 0.073, 0.281)]. This association might be due to the fact that those who had more source of information get more knowledge than who has not received any or little.

There was no significant relationship between women's knowledge about menopause and menopausal status. This finding indicates that the women regardless of their menopausal status had no sufficient knowledge which implies that there is a need to disseminate information about menopause. Particularly, those who are in perimenapausal and postmenopausal status, who were expected to have good knowledge due to their concern and menopausal status, should be given more attention and information.

The results of different studies in women's attitude toward menopause mostly indicate positive attitude. The present study showed that 84% of the respondents had a positive attitude towards menopause. The study results is consistent with the study in Iran (32), Nigeria (47), and Dangila town (15).

The study done in Iran showed that more than two third of the respondents had positive attitude. Of the women 70% agreed with the fact that women's life in the menopause period is more delightful than before; more than 67% of them knew menopause as a comfortable period of menstruation problems and pregnancy prevention (32).Similarly the study done in Nigeria indicate that the majority of the women had a positive attitude and menopause was considered a normal physiological manifestation (95.56%) of the ageing process whereas, 2.66% believed it was a disease condition (47). But in one study done in Egypt showed that, attitude of the majority of the women toward menopause was negative (43). This difference in attitude might be due to source of information and the research area where in Egypt the study had been conducted in remote area while this study is in the urban area.

This study shows that there is a significant relation between women's attitude toward menopause and their age [Adjusted OR = 0.140 (95% CI: 0.055, 0.360)]; elder women displayed better positive attitude than younger ones. This is similar with the study done in USA (44). This may be due to the fact that most of the elders have better life experience, increased concern for health and good level of knowledge.

This study showed that there is a significant relation between women's attitude and their economic status. Those who had higher economic status had positive attitude. This finding is consistent with a study done in Iran (32) and Nigeria (47). This may be due to increased self-care, access to information and increased knowledge of the women. Therefore, women who had higher economic status get more information, health care and knowledge.

There was no significant relationship between women's knowledge and attitude about menopause and their educational status. This finding indicates that the education system needs to include lessons which can help them to increase access and source of information related to menopause.

7. STRENGTH AND LIMITATIONS OF THE STUDY

7.1.Strength of the study

- The findings of the study can be used as a base line information for other researchers.
- Utilization of appropriate data collection procedures and statistical methods played a role in minimizing bias.
- The use of logistic regression helped to control possible confounding factors and also helped to assess the relative effect of independent variables.

7.2.limitations of the study

- However, this study has limitations in such a way that there could be a possibility of social desirability biases in responding personal sensitive issues.
- There could also be a possibility of recall biases during determination of age of menarche and age of last menstrual period.
- Finally, this study is based on cross-sectional data, which implies that the direction of causal relationships cannot always be determined.

8. CONCLUSIONS

Prevalence of the natural menopause in this study was higher, 8.9%. Among the respondents, majority of the women have ever heard about menopause. Most of the respondents had fair knowledge about menopause. With regard to the knowledge of the common symptoms of menopause such as hot flashes or abnormal menstrual bleeding the women had poor knowledge.

The received information about menopause and economic status are predictors of the level of knowledge of women about menopause. But, there is no significant association between educational status and menopausal status of the women with the level of knowledge.

More than half of the women had positive attitude towards menopause. Economic status, source of information about menopause and age were predictors of attitude of the women towards menopause. But, there is no significant association between educational status with attitude of women towards menopause.

9. RECOMMENDATIONS

Based on the findings of this study, the following recommendations are given.

The FMOH, AAHB and the mass media should disseminate appropriate information concerning menopause to raise the knowledge of women.

Health professional should manage menopause as one-phenomenon rather than treating it as a specific symptoms.

The health professionals should give more attention to elaborate the proper information regarding physical and vasomotor change and psychosocial impact of menopause.

The health professionals should work on the local community to accustom discussions about menopause and related issues with their family members so as to increase women's knowledge and attitude.

Future studies are essential to identify the cause of premature menopause and assess the prevalence of natural menopause.

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ANNEXES

Annex I: English Version information sheet

Introduction: Hello! My Name is _____. I am a member of the research team from Addis Ababa University, College of Health Science, School of Allied Health Science and Department of Nursing and Midwifery. Addressing/ ensuring maternal health problems and related issues are important; you are warmly invited to participate in the study entitled: Assessment knowledge and attitude of women aged 30-49 years towards menopause in Gulele sub-city of Addis Ababa. The study will attempt to assess knowledge and attitude of menopause affected by factors such as menopausal status (stage), Number of friends and family member's respondent could talk to about menopause, Physical health, emotional health, Source of information, number of menopause-related changes, Ease of talking to others about menopauseand severity of menopausal symptoms., etc. the study will help us to understand the magnitude of associated factors.

Objective of the study: the main aim of the research project is to assess knowledge and attitude of women aged 30-49 years towards menopause in Gulele sub-city of Addis Ababa. The information you provide will be used to scaling up the good knowledge and attitude of women regarding menopause as an important measure to promote women's health in Gulele sub-city.

Participation Procedure and Guideline:

The information you provide will be kept completely anonymous. That is, your name will not be indicated on any of the forms.

It will take about 20 minutes to complete the questionnaire. Nevertheless if you do not want to participate in the study it is your right and has no influence on the care being provided in this health institution or other areas.

Since the questions are prepared in Amharic, the discussion will be in Amharic and the interviewers will ask you in the language you are familiar with.

Participation Benefits and Risk:

Risk: - Your participation in this study does not involve risks to you than those you experience in your daily life. You might feel some mild discomfort in responding question and the time you spent.

Benefits:- You may experience some benefits from participating in the project. These benefits might be positive feelings from helping with important research project and your response will assist in improving health care system for women in Gulele sub-city.

Incentives/payment for participation:-No payment will be given in this study.

Confidentiality: - the information gathered from you will be confidential and will not be exposed to anybody. The name of the participant will not be written and will never be used in connection of any information.

Right to refuse or withdraw: - your participation is voluntary, and there is no penalty for you not wanting to participate. These means that you are free to stop fully or choose not to answer any particular question or all questions.

Right as a participant: - you have a right to have any questions about this research project answered. Please direct any question to Natnael Eshetu, call phone +251 910102876.

E-mail: natnaelesetu87@gmail.com.

Ethical clearance will be obtained from IRB of Addis Ababa University Health Science College Allied Health Sciences School of Nursing and Midwifery Department

Annex II: English version consent form

Hello! My Name is _____. I am a member of the research team from Addis Ababa University, College of Health Science, School of Allied Health Science and Department of Nursing and Midwifery. I would like to inform you that you and I would have a short discussion concerning this study. Before we go to our discussion, I will request you to listen carefully to what I am going to read to you about the purpose and general condition of the study and tell me whether you agree or disagree to participate in this study.

Read the following paragraph for the selected respondent.

The purpose of conducting a study is to assess the level Knowledge and attitude toward menopause phenomenon among women aged 30-49 years in Gulele Sub-city, Addis Ababa. We are kindly requesting you for a little of your time, about 20 minutes, to be involved in this study. In the end, it is hoped that the information you give us could help to design appropriate reproductive health services for menopause women. We would like to assure you that your name will not be used and your responses, to any of the questions, will not be given to anyone else and no reports of the study will ever identify you. If a report of results is published, only information about the total group will appear. The interview is voluntary. Your participation, non-participation or refusal to respond to the questions will have no effect now or in the future on services that you or any member of your family may receive from any service providers. Only volunteers will participate in this study.

Are you willing to participate in this study?

[ ] Yes [ ] No Signature_____

Annex III: English version Questionnaire

Part one: Sociodemographic Information

CORE: Sociodemographic Information			
Question		Response	Code
1.	Questionnaire Code	----------	C0
2.	Woreda	----------	C1
3.	ketena	----------	C2
4.	House Number	----------	C3
5.	Age	---------- (in year)	C5
6.	Educational status	1. Unable to read and write 2. Able to read and write 3. 1-4 grade 4. 5-8 grade 5. 9-10 grade 6. 11-12 grade 7. College/university student 8. Post graduate degree 88. Refused	C6
7.	Ethnicity	1. Amhara 2. Oromo 3. Tigre 4. Gurage 5. Other (specify) ---------- 88. Refused	C7
8.	Marital status	1. Single 2. Married 3. Divorced 4. Widowed 88. Refused	C8
9.	Religion	1. Muslim 2. Orthodox 3. Protestant 4. Catholic 5. Other (specify)---------- 88. Refused	C9
10.	Occupation	1. House wife 2. Merchant 3. Civil servant 4. Daily laborer 5. Unemployed 6. NGO employee	C10

		7. Unpaid employee 8. Employed in private sector 9. Student 10. Other (specify):---------- 88. Refused	
11.	Taking the past year, can you tell me what the average earnings of the household have been within a month?	---------- ETB/month 88. Refused	C12

Part two: Reproductive Health History Information

CORE: Reproductive Health History			
Question		Response	Code
1.	When your first menstrual period started?	1. Under 13 years old 2. 13 years old **3.** Older than 13 years old **4.** I didn't know	T0
2.	Do you have children?	1. Yes **2.** No If No, go to T3	T1
3.	If yes, what is the number of your children? (Enter number)	No ⌊_⌋⌊_⌋	T2
4.	Did you have any miscarriages, abortions or stillbirths?	1. Yes **2.** No If No, go to T5	T3
5.	If yes, how many miscarriages, abortions or stillbirths you had experienced?	No ⌊_⌋⌊_⌋	T4
6.	Do you use contraceptive?	1. Yes **2.** No If No, go to T7	T5
7.	If Yes, Which Method Are You Using?	1. Female Sterilization 2. Injectable 3. Male Condom 4. Female Condom 5. Diaphragm/Foam/Jelly 6. Standard Days Method 7. Oral pills 8. Intra-uterine device 9. Other (specify) ---------- 88. Refused	T6
8.	Are you pregnant now?	1. Yes If yes , go to T10 2. No 3. Unsure	T7
9.	Are you breastfeeding now?	1. Yes 2. No	T8
10.	Do you have an operation to avoid having any more children?	1. Yes 2. No	T9

11.	Do you currently perform strenuous exercise?	1. Yes 2. No	T10
12.	When was your last menstrual period?	1. Days Ago-----If yes , go to T15 2. Weeks Ago---If yes , go to T15 3. Months Ago--If yes , go to T15 4. Before Last Birth 5. 12 months ago 6. Has Had Hysterectomy **7.** Never Menstruated	T11
13.	How old were you at your last menstrual period? (ask this question for woman in menopause)	----------(age in years)	T12
14.	Do you medical reasons for stoppage of your menstrual period?	1. Yes 2. No If No, go to T15	T13
15.	Mention your medical condition	----------	T14
16.	How would you describe your current menstrual status?	1. Regular menstrual periods in the last 3 Months. If yes, go to A0 2. Irregular menstrual periods in the last 12 months 3. No menstrual periods in the last 12 months or longer	T15

17. Which of the following symptoms apply to you at this time? Please, mark the appropriate box for each symptom. For symptoms that do not apply, please mark 'none'.

Symptoms	Score =	Response **None-mild-moderate-severe-very severe** I --------I---------- I ---------- I ----------I 0 1 2 3 4	
Hot flushes, sweating		O O O O O	T16a
Heart discomfort		O O O O O	T16b
Sleep problems		O O O O O	T16c
Depressive mood		O O O O O	T16d
Irritability		O O O O O	T16e
Anxiety		O O O O O	T16f
Physical and mental exhaustion		O O O O O	T16g
Sexual problems		O O O O O	T16h
Bladder problems		O O O O O	T16i
Dryness of vagina		O O O O O	T16j
Joint and muscular discomfort		O O O O O	T16k

18.	Total Number symptoms apply to you at this time?	No └__┘__┘	T17

Part there: Knowledge on some important concepts of menopause

CORE: Knowledge on menopause			
Now I am going to ask you some questions about various concepts of menopause phenomenon.			
Question		Response	Code
1.	Do you think that at the time of menopause, menstruation stops suddenly?	1. Yes 2. No	A0
2.	Do you know that women become menopausal at the age of 48-55 years?	1. Yes 2. No	A1
3.	Do you know that hereditary background affects the time of menopause occurrence?	1. Yes 2. No	A2
4.	Do you know that menopause occurs in women due to increasing sexual hormones?	1. Yes 2. No	A3
5.	Do you know that thin people become menopause sooner?	1. Yes 2. No	A4
6.	Do you know that most of the women experience menstruation disorder before menopause occurrence?	1. Yes 2. No	A5
7.	Do you know that most of the women experience hot flashes in the menopause period?	1. Yes 2. No	A6
8.	Do you think that menopause in women decreases genital infection?	1. Yes 2. No	A7
9.	Do you believe that menopause in women increases weight and obesity?	1. Yes 2. No	A8
10.	Do you feel that menopause symptoms are preventable and curable?	1. Yes 2. No	A9
11.	Do you think that menopause decreases Cardiovascular diseases in women?	1. Yes 2. No	A10
12.	Do you know that menopause increases osteomalacia in women?	1. Yes 2. No	A11
13.	Do you know that menopause causes dryness and skin shrivel in women?	1. Yes 2. No	A12
14.	Do you think that menopause causes different types of cancer in women?	1. Yes 2. No	A13

15.	Do you know that sexualities change in menopaused women?	1. Yes 2. No	A14
16.	Do you know that smoking affects the time of menopause occurrence?	1. Yes 2. No	A15
17.	Do you know that smoking does not affect the severity of symptoms and complications of menopause?	1. Yes 2. No	A16
18.	Do you think that menopause increases extra hair on women's face?	1. Yes 2. No	A17
19.	Do you know that menopause causes vaginal dryness and painful sexual intercourse?	1. Yes 2. No	A18
20.	Do you know that menopause causes urinary frequency and dysuria?	1. Yes 2. No	A19
21.	Do you know that smoking and using alcohol are factor of increasing osteomalacia in women?	1. Yes 2. No	A20
22.	Do you know that regular physical activity is effective in preventing osteomalacia in menopausal women?	1. Yes 2. No	A21
23.	Do you know that menopause affects the power of concentration and memory of women?	1. Yes 2. No	A22
24.	Do you think that the frequency and severity of hot flashes in menopaused women increase by time?	1. Yes 2. No	A23
25.	Do you know that the level of stress and depression feeling increase in menopaused women?	1. Yes 2. No	A24
26.	Do you believe that during 1 year after complete stop of menstruation, pregnancy prevention is necessary?	1. Yes 2. No	A25

Part four: Attitude on menopause phenomenon

CORE: Attitude on menopause			
Now I am going to ask you some questions about your Attitude on menopause phenomenon.			
Question		Response	Code
1.	Menopause is the period of woman's loneliness	1. Completely agree 2. Agree 3. Disagree 4. completely disagree	P0

2.	Menopause is the period of eradicating the problems of menstruation and preventing pregnancy	1. Completely agree 2. Agree 3. Disagree 4. completely disagree	P1
3.	Woman's menopause decreases husbands sexuality	1. Completely agree 2. Agree 3. Disagree 4. completely disagree	P2
4.	Every woman can care for herself through training and necessary tend	1. Completely agree 2. Agree 3. Disagree 4. completely disagree	P3
5.	In the menopause period, interest and attention of woman to her husband decreases	1. Completely agree 2. Agree 3. Disagree 4. completely disagree	P4
6.	Menopause is the beginning of the period of women's disablement	1. Completely agree, 2. Agree 3. Disagree 4. completely disagree	P5
7.	Woman's life in the menopause period is more delightful than before menopause	1. Completely agree, 2. Agree 3. Disagree 4. completely disagree	P6
8.	Menopause decreases the grace of woman's appearance	1. Completely agree, 2. Agree 3. Disagree 4. completely disagree	P7
9.	Menopause is a usual and natural phenomenon in women's life	1. Completely agree, 2. Agree 3. Disagree 4. completely disagree	P8
10.	Menopause is the beginning of another life and second maturity of women	1. Completely agree, 2. Agree 3. Disagree 4. completely disagree	P9

Part five: Factors That Affect Knowledge and Attitude of the women toward Menopause

CORE: Factors That Affect Knowledge and Attitude			
Now I am going to ask you some questions about various factors that affect knowledge and attitude of the women toward menopause. This includes ease of talking to others about menopause, physical health, emotional health, source of information, number of friends and family member's respondent could talk to about menopause and menopausal status. Let's start with source of information.			
Question		Response	Code
1.	Have you ever received information on Menopause?	1. Yes 2. No If No, go to Q3	Q0
2.	If yes, from where did you get the information on Menopause?	1. Friend	Q1a
		2. Medical care providers	Q1b
		3. Books, Magazines, Journals	Q1c
		4. Mass media (Radio, TV)	Q1d
		5. Relatives	Q1e
		6. Educational sessions	Q1f
		7. Community Elder	Q1g
		8. Other, (specify) ----------	Q1h
3.	Do you feel that talking to other about menopause is	1. very easy 2. easy 3. difficult 4. Very difficult.	Q2
4.	How many friends you can talk in a very comfortable way about menopause.	Number of friends ⌊__⌋⌊__⌋	Q3
5.	How many people in your family you can talk in a very comfortable way about menopause	Number of family ⌊__⌋⌊__⌋	Q4

6.	How do you perceive/feel your current emotional health	1. Very poor 2. Poor 3. good 4. very good 5. excellent	Q5
7.	How do you perceive/feel your current physical health	1. Very poor 2. Poor 3. good 4. very good 5. excellent	Q6

Thank you!

Annex IV: Amharic version information sheet

ስለ አጥኚውና ጥናቱ ማስገንዘቢያ ቅፅ (information sheet)

1. **መግቢያ፡-** ሲቶች ስለ ማረጥ ያላቸውን እውቀትና አመለካከት መዳሰስ እጅግ አስፈላጊ ነው፡፡ በአዲስ አበባ ከተማ ጉለሌ ክፍለ ከተማ የሚገኙ እድሜያቸዉ ከ30-49 የሆኑ ሴቶች ስለማረጥ ያላቸዉን የእዉቀትና አመለካከት ደረጃ እና ተፅእኖ የሚያሳድሩ ሁኔታዎችን ለማጥናት በተዘጋጀው የምርምር ስራ እንዲሳተፉ በአክብሮት እንጋብዝዎታለን፡፡ ጥናቱ ሴቶች ስለማረጥ ያላቸዉን የእዉቀትና አመለካከት ደረጃ እንዲአጨምርና ወይም እንዳይጨምር ምክንያት የሚሆኑ ጉዳዮችን ለምሳሌ ፡ የማህበራዊና ኢኮኖሚያዊ ሁኔታዎች፡ ስለማረጥ ከሌሎች ሰዎች ጋር ያለፍርሀት ማዉራት፣ አካላዊ ጤንነት፣ የስሜት ደህንነት፣ የመረጃ ምንጮች፣ ስለማረጥ ያለፍርሀት የሚያዋዩዋቸዉ የጓደኞችና የቤተሰብ አባላት ብዛትና ሌሎችንም ይመረምራል፡፡
2. **የጥናቱ ዓላማ፡-** የዚህ ጥናት አላማ በአዲስ አበባ ከተማ ጉለሌ ክፍለ ከተማ የሚገኙ እድሜያቸዉ ከ30-49 የሆኑ ሴቶች ስለማረጥ ያላቸዉን የእዉቀትና አመለካከት ደረጃ መገምገም ሲሆን እርሰዎ የሚሰጡን አስተያየት ለጥናቱ ጥሩ ግብአት ይሆናል፡፡
3. **የተሳታፊው የጥናቱ ሂደትና መመሪያ፡-** ስምዎ በጥናቱ ላይ ስለማይጻፍ የሚሰጡን መረጃ ሚስጥራዊነቱ የተጠበቀ ነው፡፡ ያዘጋጀነው መጠይቅ ሀያ ደቂቃ ብቻ የሚፈጅ ይሆናል፡፡ በጥናቱ የመሳተፍም ይሁን ያለመሳተፍ መብትዎ የተጠበቀ ነው፡፡ በጥናቱ ባይሳተፉ በዚህ ጤና ድርጅት የሚያገኙት ማናኛውም አገልግሎት አይደናቀፍም፡፡ የውይይታችን መጠይቅ የተዘጋጀው በአማርኛ ነው ጠያቂውም እርሰዎ በሚያውቁት ቋንቋ ይጠይቅዎታል፡፡

4.የተሳታፊው ጥቅሞችና አሉታዊ ጎኖች፡

ሀ. አሉታዊ ጎኖች፡- በዚህ ጥናት በመሳተፍዎ በእርስዎ የእለት ከእለት እንቅስቃሴ ላይ የሚያሳድረው ተፅእኖ የለም፤ ነገር ግን የተወሰነ ሰዓት ከእኛ ጋር ስለሚያሳልፉ ምቾት ላይሰማዎት ይችል ይሆናል፤ ይሁን እንጂ ለቀጠሮዎ ከሚያሳልፉት ሰዓት አይበልጥም ::

ለ. ጥቅም፡- በዚህ ጥናት በመሳተፍዎና መረጃ ሊሰጡን ትብብር በማድረግዎ ለጥናቱ ጉልህ አስተዋጽኦ ያደረጉ ሲሆን የእርስዎ ተሳትፎ ለአገልግሎቱ መሻሻል የራሱን ሚና እንደሚጫወት ተስፋ እናደርጋለን፡፡

ሐ. ክፍያ፡- ለዚህ ጥናት ተሳታፊ በመሆንዎ ምንም አይነት ክፍያ አይኖረውም፡፡

5. ሚስጥራዊነት፡-በመረጃ ስብሰባ ወቅት ስምዎ አይፃፍም፤ የሚሰጡን መረጃም ሚስጥራዊነቱ የተጠበቀ ነው፡፡

6.በጥናቱ ያለመሳተፍ ወይንም የማቋረጥ መብት፡- በጥናቱ የሚሳተፉት በፍቃደኛነት ነው፡ በጣም ተረጋግተው የሚፈልጉትን ጥያቄ የመመለስና ያልፈለጉትን ያለመመለስ መብት አለዎት፡፡

7.በጥናቱ በመሳተፍዎ ያለዎት መብት፡- በዚህ ጥናት ዙሪያ እንዲመለስልዎ የሚፈልጉት ማንኛውም ያልገባዎት ነገር ካለ በስልክ ቁጥር+251 910102876 ወይንም በኢሜል አድራሻ natnaelesetu87@gmail.com. ናትናኤል እሸቱ ብለው መጠየቅ ይችላሉ፡፡.

ጥናቱን ለማካሄድ ከነርሶችና አዋላጅ ነርሶች የትምህርት ክፍል የጥናትና ምርምር አጣሪ ቦርድ የፍቃደኝነት ማረጋገጫ ይገኛል ተብሎ ይታመናል፡፡

Annex V: Amharic version consent form

ቃለ መጠይቁ ከመጀመሩ በፊት የኢ-መደበኛ የቃል ስምምነት መጠየቂያ ቅጽ

ጤና ይስጥልኝ ስሜ---------- ይባላል፡፡ የመጣሁት በአዲስ አበባ ዩኒቨርሲቲ የጤና ሳይንስ ኮሌጅ አላይድ የጤና ሳይንስ ትምህርት ቤት የሚድዋይፍና ነርሲንግ ትምህርት ክፍል የተማራማሪዎች ቡድን አባል ነኝ፡፡ በቅድሚያ ስለምሰራዉ ጥናት ትንሽ ላስተዋዉቅዎትና ከዛ በኋላ ለጥናቴ የሚረዳኝ መረጃ ለማግኘት አጭር የዉይይት ጊዜ ይኖረናል፡፡ ዉይይታችንን ከመጀመራችን በፊት ግን አሁን የማነብልሽን፣ ስለጥናቴ አላማና አጠቃላይ ሁኔታ የሚገልጸዉን ጽሁፍ ሳነብልሽ በጥሞና በማዳመጥ በሃሳቡ በጥናቱ ዉስጥ ለመሳተፍ እንደምትስማሚ ወይም እንደማትስማሚ ትገልጭልኛለሽ፡፡

ቀጣዩን ጽሁፍ ለተመረጠች መላሽ ይነበብ፡፡

የዚህ ጥናት አላማ በአዲስ አበባ ከተማ ጉለሌ ክፍለ ከተማ የሚገኙ እድሜያቸዉ ከ30-49 የሆኑ ሴቶች ስለማረጥ ያላቸዉን የእዉቀትና አመለካከት ደረጃ መገምገም ነዉ፡፡

ስለሆነም ካለሽ ጊዜ ላይ በዚህ ጥናት ለመሳተፍ፣ ሀያ ደቂቃ ቆይታ እንዲኖረን ፈቃድሽ እንዲሆን በትህትና እጠይቃለሁ፡፡ ለጥናቱ የምትሰጪዉ መረጃ በአጠቃላይ ስለ የሚያርጡ ሴቶችን በተመለከተ በስነተዋልዶ ጤና ዘርፍ በሚደረገዉ እቅድ ስለሚጠቅም በቅድሚያ እናመሰግናለን፡፡ በዚህ ጥናት ላይ የምትሰጭዉ መረጃ እንዲሁም ስምሽ በሚስጥር የሚጠበቅ ሲሆን በሌላ ሰዉ እጅም ተላልፎ አይሰጥም ከዚህ ጥናት ዉጭም አገልግሎት ላይ አይዉልም፡፡ የዚህ ጥናት ዉጤት ለህትመት ቢበቃ እንኳን በአጠቃላይ ምርምር ስለተደረገበት ቡድን እንጂ የግለሰቦች ስምና መረጃ በፍጹም አይጠቀስም፡፡ ቃለመጠይቁ በፈቃደኝነት ላይ የተመሰረተ ነዉ፡፡ በዚህ ጥናት ላይ መሳተፍሽ፣ለመሳተፍ አለመፍቀድሽ፣ ወይም መቃወምሽ ወደፊት አንቺ ወይም ከቤተሰቦችሽ አንዱ ከአገልግሎት ሰጪ ተቋማት የሚያገኘዉ ወይም የሚያጣዉ ምንም ነገር የለም፡፡ በዚህ ጥናት የሚሳተፉት በፍላጎት ብቻ ነዉ፡፡

በዚህ ጥናት ለመሳተፍ ፈቃደኛ ነሽ?

[ ] ፈቃደኛ ነኝ [ ] ፈቃደኛ አይደለሁም ፊርማ----------

Annex VI: Amharic version Questionnaire

ክፍል 1 ፡ የጥናቱ ተሳታፊዎች አጠቃላይ ማህበራዊ መረጃዎች

ዋና፡ ማህበራዊ መረጃዎች			
ጥያቄ		**መልስ**	**መለያ**
1.	የመጠይቅ መለያ ቁጥር	----------	C0
2.	ወረዳ	----------	C1
3.	ቀጠና	----------	C2
4.	የቤት ቁ.	----------	C3
5.	ዕድሜ	---------- በዓመት	C5
6.	የትምህርት ደረጃ	1. ማንበብና መጻፍ የማይችል 2. ማንበብና መጻፍ የሚችል 3. ከ1-4ኛ ክፍል 4. ከ5-8ኛ ክፍል 5. ከ9-10 ኛ ክፍል 6. ከ11-12 ክፍል 7. የኮሌጅ/ዩኒቨርሲቲ ተማሪ 8. ማስተርስ (ድህረ መሩቅ) 88. መናገር አልፈልግም	C6
7.	ብሔር	1. አማራ 2. ኦሮሞ 3. ትግሬ 4. ጉራጌ 5. ሌላ ካለ (ይጠቀስ)---------- 88. መናገር አልፈልግም	C7
8.	የጋብቻ ሁኔታ	1. ያላገባ/ች 2. ያገባ/ች 3. የፈታ/ች 4. የሞተችበት/ባት 88. መናገር አልፈልግም	C8
9.	ሀይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3. ካቶሊክ 4. ፕሮቴስታንት 5. ሌላ ካለ (ይጠቀስ)---------- 88. መናገር አልፈለገችም	C9
10.	ባለፉት **12** ወራት ዉስጥ ከሚከተሉት የትኛዉ የስራ ሁኔታዎን ይገልፃል?	1. የቤት እመቤት 2. ነጋዴ 3. የመንግስት ሰራተኛ 4. የቀን ሰራተኛ 5. ስራ ፈላጊ 6. መንግስታዊ ያልሆነ ድርጅት/ NGO / ሰራተኛ	C10

		7. ሳይከፈለዉ/ላት የሚሰራ/ምትሰራ ሰራተኛ 8. በግል ስራ የተሰማራች 9. ተማሪ 10. ሌላ ካለ (ይጠቀስ)---------- 88. መናገር አልፈለገችም	
11.	በአማካይ ከባለፈዉ ዓመት ተነስተዉ የቤታችሁ ገቢ በወር ስንት እንደሆነ ሊነግሩኝ ይችላሉ?	---------- ብር/ወር 88. መናገር አልፈለገችም	C12

ክፍል 2 : ስለ ስነተዋልዶ ጤና መረጃ

ዋና፡ የስነተዋልዶ ጤና መረጃ			
ጥያቄ		**መልስ**	**መለያ**
1.	ወር አበባ መጀመሪያ ያየሽዉ መቼ ነዉ?	1. ከ 13 አመት በታች 2. በ 13 አመትሽ **3.** ከ 13 አመትሽ በኋላ 4. አላስታውስም	T0
2.	ልጆች አሉሽ?	3. አዎ **4.** የለኝም ---------- **ወደ T3 እለፊ**	T1
3.	አዎ ከሆነ መልስሽ ስንት ልጆችአሉሽ?	በቁጥር ┴┴┴	T2
4.	ከዚህ ቀደም በርግዝና ወቅት ችግር ደርሶብሽ ያዉቃል(ሞቶ የተወለደ፣ማስወረድ)?	1. አዎ **2.** አይ---------- **ወደ T5 እለፊ**	T3
5.	አዎ ከሆነ ስንት ጊዜ ደርሶ ያዉቃል(ሞቶ የተወለደ፣ማስወረድ)?	በቁጥር ┴┴┴	T4
6.	የወሊድ መቆጣጠሪያ ትጠቀሚያለሽ?	1. አዎ **2.** አይ---------- **ወደ T7 እለፊ**	T5
7.	አዎ ከሆነ ምን አይነት?	1. ዘላቂ/ቆሚ የወሊድ መቆጣጠሪያ 2. የሚወጋ 3. የወንድ ኮንዶመ 4. የሴት ኮንዶም 5. ዲያፍራም /ፎም / ጄል 6. በከንድ የሚቀበሩ 7. በአፍ የሚወሰድ እንክብል 8. ማህጸን ዉስጥ የሚቀመጥ 9. ሌላ ካለ (ይጠቀስ)---------- 10. 88. መናገር አልፈለገችም	T6
8.	በአሁን ሰአት ነፍሰጡር ነሽ?	1. አዎ---------- **ወደ T10 እለፊ** 2. አይ 3. እርግጠኛ አደለሁም	T7
9.	በአሁን ሰአት ጡት ታጠቢያለሽ?	1. አዎ 2. አይ	T8
10.	አሁን ካለሽ በላይ ልጅ እንዳይኖርሽ ብለሽ ኦፐራሲዮን አድርገሽ ታዉቂያለሽ?	1. አዎ 2. አይ	T9

11.	በአሁን ሰአት ከፍተኛ የአካል እንቅስቃሴ ታደርጊያለሽ?	1. አዎ 2. አይ	T10
12.	ለመጨረሻ ጊዜ የወርአበባ ያየሽዉ መቼ ነዉ?	1. ከቀናት በፊት----------**ወደ T15 እለፊ** 2. ከሳምንታት በፊት-------**ወደ T15 እለፊ** 3. ከወራት በፊት---------- **ወደ T15 እለፊ** 4. ከ12 ወር በፊተረ 5. ማጎጸኔን ካስወጣው በዋላ 6. ከመጨረሻዉ ወሊድ በፊት **7.** መጥቶብኝ አያዉቅም	T11
13.	ላረጠች ሴት የሚቀርብ ጥያቄ) ለመጨረሻ ጊዜ የወርአበባ ያየሽዉ በስንት አመትሽ ነዉ?	----------(እድሜ በቁጥር ይገለጽ)	T12
14.	ለወር አበባሽ መቆም የህክምና/ከጤና ጋር የጠያያዘ ምክንያት አለሽ?	1. አዎ 2. አይ ---------- **ወደ T15 እለፊ**	T13
15.	የህክምና/ከጤና ምክንያቱን ይጠቀስ	----------	T14
16.	አሁን ያለሽበትን የወር አበባ ሁኔታ እንዴት ትገልጪዋለሽ?	1. ላለፉት ሶስት ወራት ሳይዛባ የወር አበባዬ መጥቷል---------- **ወደ A0 እለፊ** 2. ላለፉት አስራሁለት ወራት በተዛባ ሁኔታ የወር አበባዬ መጥቷል 3. ላለፉት አስራሁለት ወራት የወር አበባዬ አልመጣም	T15
17.	ከሚከተሉት ምልክቶች ዉስጥ የትኞቹ በአንቺ ላይ ታይቷል . ከተሰጡት ሳጥኖች ዉስጥ ምልክት አድርጊ		

	ምልክቶች	ምላሽ					
		ውጪት =	የለም- 0	ትንሽ- 1	መካከለኛ -2	ከባድ - 3	በጣም ከባድ 4	
			I------I	I---------I	--------I	----------I		
	ትኩሳትና ማላብ		O	O	O	O	O	T16a
	የልብ አለመርጋት		O	O	O	O	O	T16b
	የእንቅልፍ ችግር		O	O	O	O	O	T16c
	የመደበር ስሜት		O	O	O	O	O	T16d
	መነጫነጭ		O	O	O	O	O	T16e
	ዉጥረት/ጭንቀት		O	O	O	O	O	T16f
	አካላዊና/አእምሮአዊ መድከም/መዛል		O	O	O	O	O	T16g
	የወሲብ ችግር		O	O	O	O	O	T16h
	የፊኛ ችግር		O	O	O	O	O	T16i
	የብልት መድረቅ		O	O	O	O	O	T16j
	የመገጣጠሚያና የጡንቻ ህመም		O	O	O	O	O	T16k
18.	በአንቺ ላይ የታዩት ምልክቶች ጠቅላላ ድምር?	በቁጥር └─┴─┘						T17

ክፍል 3 ፡ ስለ ማረጥ ያለ እውቀት

ዋና፡ ስለ ማረጥ ያለ እውቀት			
አሁን ስለማረጥ ክስተት የተለያዩ ጽንሰ ሀሳቦችን የተመለከቱ ጥያቄዎችን እጠይቅሻለሁ			
ጥያቄ		**መልስ**	**መለያ**
1.	በማረጥ ወቅት የወርአበባ በድንገት ይቆማል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A0
2.	ሴቶች በ48-55 አመታቸዉ ያርጣሉ ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A1
3.	ከቤተሰብ የሚወረስ የዘር ሁኔታ የማረጥ ሁኔታ ላይ ተፅእኖ ይኖረዋል ብለሽ ታምኛለሽ?	1. አዎ 2. አይ	A2
4.	ማረጥ በወሲብ ሆርሞን መጨመር ምክንያት ይከሰታል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A3
5.	ቀጭን ሰዎች ቶሎ ያርጣሉ ብለሽ ታምኛለሽ?	1. አዎ 2. አይ	A4
6.	ብዙ ሴቶች ከማረጣቸዉ በፊት የወርአበባ መዛባት ያጋጥማቸዋል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A5
7.	በማረጥ ወቅት በአብዛኛዉ ሴቶች ትኩሳት እንደሚኖራቸዉ ታዉቂያለሽ?	1. አዎ 2. አይ	A6
8.	ማረጥ የብልት ኢንፌክሽን ይቀንሳል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A7
9.	ማረጥ ክብደትን ይጨምራል ብለሽ ታምኛለሽ?	1. አዎ 2. አይ	A8
10.	የማረጥ ምልክቶችን ማዳንና መቆጣጠር ይቻላል የሚል ስሜት አለሽ?	1. አዎ 2. አይ	A9
11.	ማረጥ የልብ ችግሮችን ይቀንሳል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A10
12.	ማረጥ የሴቶችን አጥንት መሳሳት እንደሚጨምር ታዉቂያለሽ?	1. አዎ 2. አይ	A11
13.	ማረጥ በሴቶች የቆዳ መድረቅና መሚሸሽ ያስከትላል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A12
14.	ማረጥ በሴቶች ላይ የተለያዩ የካንሰር አይነቶች እንዲከሰቱ ምክንያት ይሆናል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A13
15.	ወሲባዊ ልማዶችና ሁኔታዎች በማረጥ ወቅት ይቀየራሉ ብለሽ ታምኛለሽ?	1. አዎ 2. አይ	A14
16.	ማጨስ የማረጫ ጊዜ ላይ ተጽእኖ ያሳድራል ብለሽ ታምኛለሽ?	1. አዎ 2. አይ	A15
17.	ማጨስ የማረጥ ምልክቶችን በማወሳሰብና በማክበድ ለተጓዳኝ ህመሞች እንደሚያጋልጥ ታዉቂያለሽ?	1. አዎ 2. አይ	A16
18.	ማረጥ በሴቶች ፊት ላይ ያለዉን የፀጉር መጠን የጨምራል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A17

19.	ማረጥን የመራቢያ አካል መድረቅንና በወሲብ ጊዜ የህመም ስሜትን እንደሚፈጥር ታዉቂያለሽ?	1. አዎ 2. አይ	A18
20.	ማረጥ የሴቶችን የሽንት መሸናት ድግግሞሽ መጨመርና በመሸናት ጊዜ የህመም ስሜት እንደሚፈጥር ታዉቂያለሽ?	1. አዎ 2. አይ	A19
21.	ማጨስና አልኮል መጠጦችን መጠጣት የአጥንት መሳሳትን በሴቶች ላይ ያስከትላል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A20
22.	ቋሚ የአካል ብቃት እንቅስቃሴ ማድረግ በማረጥ ወቅት የሚመጣን የአጥንት መሳሳት ይከላከላል ብለሽ ታምኛለሽ?	1. አዎ 2. አይ	A21
23.	ማረጥ የሴቶችን የትኩረትና የማስታወስ አቅም ተጽእኖ እንደሚያደርግ ታዉቂያለሽ?	1. አዎ 2. አይ	A22
24.	የሚያርጡ ሴቶች ከወትሮዉ በተለየ ሁኔታ እየጨመረ የሚመጣ ሰዉነትን የማላብና ሙቀት መጨመር ይከሰታል ብለሽ ታስቢያለሽ?	1. አዎ 2. አይ	A23
25.	ባረጠች ሴት ላይ የድብርትና የጭንቀት መጠን ከወትሮዉ ይጨምራል ብለሽ ታምኛለሽ?	1. አዎ 2. አይ	A24
26.	የወርአበባ በቆመ ከእንድ አመት በኋላ እርግዝና መከላከያ መንገዶችን መጠቀም ያስፈልጋል ብለሽ ታምኛለሽ?	1. አዎ 2. አይ	A25

ክፍል 4 ፡ ስለ ማረጥ ያለአመለካከት

ዋና፡ ስለ ማረጥ ያለአመለካከት			
አሁን ስለማረጥ ክስተት ያለሽን አመለካከት የተመለከቱ ጥያቄዎችን እጠይቅሻለሁ			
ጥያቄ		**መልስ**	**መለያ**
1.	ማረጥ ለሴቶች የብቸኝነት ወቅት ነዉ	1. ሙሉበሙሉ እስማማለሁ 2. እስማማለሁ 3. አልስማማም 4. ሙሉበሙሉ አልስማማም	P0
2.	ማረጥ ለሴቶች የወርአበባ ጭንቀትንና እርግዝናን የሚከላከሉበት ወቅት ነዉ	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልስማማም 4. በጣም አልስማማም	P1
3.	ማረጥ የባሎችን ወሲባዊ ፍላጎት ይቀንሳል	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልስማማም 4. በጣም አልስማማም	P2
4.	ሁሉም ሴቶች አካላዊ እንቅስቃሴ በማድረግ ለእራሳቸዉ አስፈላጊዉን እንክብካቤ ማድረግ ይችላሉ	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልስማማም 4. በጣም አልስማማም	P3

5.	በማረጥ ወቅት ለባሎች ያለዉ ፍላጎትና የሚደረገዉ ትኩረት ይቀንሳል	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልስማማም 4. በጣም አልስማማም	P4
6.	ማረጥ የሴቶች አቅምና ጉልበት መድከም የሚጀምርበት ወቅት ነዉ	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልስማማም 4. በጣም አልስማማም	P5
7.	ሴቶች ካረጡ በኋላ ህይወታቸዉ ከማረጣቸዉ በፊት ከነበረዉ የበለጠ ደስተኛ ይሆናል	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልስማማም 4. በጣም አልስማማም	P6
8.	ማረጥ የአንድን ሴት አካላዊ ዉበት ይቀንሰዋል	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልስማማም 4. በጣም አልስማማም	P7
9.	ማረጥ በሴቶች ህይወት ዉስጥ የሚከሰት ተፈጥሮአዊ ሁኔታ ነዉ	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልስማማም 4. በጣም አልስማማም	P8
10.	ማረጥ አዲስ ህይወት የመጀመሪያና የሴቶች ሌላ የህይወት ምእራፍ ነዉ	1. በጣም እስማማለሁ 2. እስማማለሁ 3. አልስማማም 4. በጣም አልስማማም	P9

ክፍል 5 ፡ ስለ ማረጥ ያለ እውቀት እና አመለካከትን ተጽእኖ የሚያደርጉ

ዋና፡ አውቀት እና አመለካከትን ተጽእኖ የሚያደርጉ			
አሁን የሴቶችን በማረጥ ላይ ያላቸዉን እዉቀትና አመለካከት ተጽእኖ አድራጊዎችን በተመለከተ የተወሰኑ ጥያቄዎችን እጠይቅሻለሁ፡፡ እነሱም ስለማረጥ ከሌሎች ሰዎች ጋር ያለፍርሀት ማዉራት፣ አካላዊ ጤንነት፣ የስሜት ደህንነት፣ የመረጃ ምንጮች፣ ስለማረጥ ያለፍርሀት የሚያዋዩዋቸዉ የጓደኞችና የቤተሰብ አባላት ብዛት፡፡			
ጥያቄ		**መልስ**	**መለያ**
1.	ስለ ማረጥ መረጃዎችን ሰምተሽ/ወይም አንብበሽ ታዉቂያለሽ	1. አዎ 2. አይ----------**ወደ Q2 እለፊ**	Q0
2.	መልስሽ አዎ ከሆነ መረጃዎችን ያገኘሽዉ ምንጩ ከየት ነዉ?	1. ከጓደኛ	Q1a
		2. ከህክምና አገልግሎት ሰጪዎች	Q1b
		3. መጻህፍት፣መጽሔቶች፣ጆርናሎች	Q1c
		4. መገናኛ ብዙሀን(ራድዮ፣ቴሌቪዥን)	Q1d
		5. ከዘመዶች	Q1e
		6. ከትምህርታዊ ፕሮግራሞች	Q1f
		7. ከጓደኛ	Q1g

		8. ከህክምና አገልግሎት ሰጪዎች	Q1h
3.	ከሌሎች ሰዎች ጋር ስለ ማረጥ ማውራት ?	1. በጣም ቀላል ነው 2. ቀላል ነው 3. ከባድ ነው 4. በጣም ከባድ ነው	Q2
4.	ስለ ማረጥ ያለፍርሀት የምታወሪያቸው ምን ያህል ጓደኖች አሉሽ?	በቁጥር ⌊__⌋⌊__⌋	Q3
5.	ስለ ማረጥ ያለፍርሀት የምታወሪያቸው ምን ያህል ቤተሰቦች አሉሽ?	በቁጥር ⌊__⌋⌊__⌋	Q4
6.	በአሁን ሰአት ያለሽበትን የሥሜት ሁኔታ እንዴት ትገልጪዋለሽ	1. በጣም ደስ የማይል 2. ደስ የማይል 3. በጣም ጥሩ 4. እጅግ በጣም ጥሩ	Q5
7.	አውን ያለሽበትን አካላዊ ጤና እንዴት ትገልጪዋለሽ	1. በጣም ህመምተኛ 2. ህመምተኛ 3. ደህና 4. በጣም ጤነኛ 5. እጅግ በጣም ጤነኛ	Q6

አመሠግናለው!

Annex VII: Declaration

I, the undersigned declare that this thesis is my original work and has not been presented for a degree in this or any other university and that all sources of materials used for this thesis have been duly acknowledged.

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This thesis work has been submitted for examination with my approval as University advisors

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