HEALTH SEEKING BEHAVIOUR OF THE MENOPAUSAL WOMEN IN URBAN SLUM OF DHAKA CITY

DR. SONIA ARIFA

MPhil in Epidemiology and Biostatistics (Thesis Part)
Faculty of Biological Sciences
University of Dhaka
Session: 2011-2012

BANGLADESH INSTITUTE OF HEALTH SCIENCES
DEPARTMENT OF EPIDEMIOLOGY AND BIOSTATISTICS
(DIVISION OF PUBLIC HEALTH)
DHAKA, BANGLADESH

2015

DECLARATION

I hereby humbly declare that the thesis work entitled "Health Seeking Behaviour of the Menopausal Women in Urban Slum of Dhaka City", a requirement for the degree of Master of Philosophy (MPhil) in Epidemiology and Biostatistics under the faculty of Biological Sciences, University of Dhaka, was carried out by me under the guidance of Professor A K M Fazlur Rahman, Professor, Department of Epidemiology and Biostatistics, Bangladesh Institute of Health Sciences.

This work has not been submitted elsewhere for any other purpose.

Dr. Sonia Arifa
Student of MPhil in Epidemiology and Biostatistics
Department of Epidemiology and Biostatistics
Bangladesh Institute of Health Sciences
Mirpur, Dhaka, 1216

CERTIFICATE

This is to certify that Dr. Sonia Arifa has completed her thesis work entitled "Health Seeking Behaviour of the Menopausal Women in Urban Slum of Dhaka City" in the Bangladesh Institute of Health Sciences (BIHS), Dhaka during the period of June 2014 to May 2015 under my supervision.

Supervisor

……

Professor A K M Fazlur Rahman

Professor

Department of Epidemiology and Biostatistics

Bangladesh Institute of Health Sciences

Faculty of Biological Sciences

University of Dhaka
Dhaka, Bangladesh

The undersigned certify that they have carefully read and examined the student on this thesis and being satisfied, recommended to the Faculty of Biological Sciences, University of Dhaka for acceptance of this thesis titled "Health Seeking Behaviour of the Menopausal Women in Urban Slum of Dhaka City" by Dr. Sonia Arifa in partial fulfillment of requirements for the degree of Master of Philosophy in Epidemiology and Biostatistics.

Board of Examiners

Chairman **Signature…….**

Member **Signature……...**

Member **Signature…….**

Member **Signature……**

Date of Approval:

Dedication

First and foremost, I would like to dedicate this research to our Almighty Allah, for the strength and knowledge that I have to this research. I also like to offer this thesis to my family particularly to my parents, husband and my son, who had guided me gave their love and support as I do this thesis.

I also like to dedicate this research to our teachers who gave me their support in making this research.

Last but not least, I dedicate this research paper to my institution Bangladesh Institute of Health Sciences (BIHS).

Acknowledgement

First of all, I would like to thank all the member of selection team and faculties of Bangladesh Institute of Health Sciences, for their kind approval of the topic of my thesis.
I would like to take opportunity to pay my respect and heartfelt gratitude to my guide, Professor A K M Fazlur Rahman, Professor, Department of Epidemiology and Biostatistics, Bangladesh Institute of Health Sciences for spending his valuable time, merit and skill behind me. For his sincere help and co-operation it was easy for me to understand the topic and strength to finalize and submit the report.
I would like to express my sincere thanks to Professor Liaquat Ali, Director, Bangladesh Institute of Health Sciences for his excellent guidance and directives to winding up of this study by wise suggestions, comments and perceptive ideas that always inspire me to take the challenges with full of confidence. I am also grateful to Prof. M A Hafez, Professor and Head, Department of Epidemiology and Biostatistics, Bangladesh Institute of Health Sciences for his support.
Although there is always a risk of omission in naming individuals, I want to thank Professor M.S.A Mansur Ahmed, Professor of Community Medicine, Professor Akhter Hussain, University of Oslo, Professor Khurshida Khanom, Head, Department of Health Education & Health Promotion, Dr. Md. Asirul Haque, Professor & Head, Department of Community Nutrition, Department of Health Informatics, Professor Dr. Akhtar Ahmed, Head, Department of Occupational and Environmental Health, Professor Dr. Rowshan Ara Begum, Professor and Head Department of Reproductive and Child Health(RCH), Dr. Pradip Sengupta, Associate Professor, Department of Community Medicine, Md. Humayan Kabir, Associate Professor, Department of Health Informatics, Dr. Md. Shahjahan, Assistant Professor, Department of Biostatistics, Dr. Shahanaz Chowdhury, Assistant Professor, Department of Community Medicine, Shirin Jahan Mumu, Assistant Professor of Department of Epidemiology, Kazi Rumana Haque, Assistant professor of Department of Health Education and Health Promotion, Afsana Afroz, Lecturer, Department of Biostatistics and all of my respected teachers of BIHS.

I am also grateful to Hasina Akhter Chowdhury, Lecturer, Dept. of Biostatistics, BIHS, for her constructive guidance.

I am grateful to the volunteers who helped me in every stage of the study and tried their level best to make the study success.

I find my word inadequate to express my heartfelt gratitude to my family for their continuous help, support and encouragement in each and every stage of this study.

Last but not the least, I am grateful to all of my participants of Vashantek slum without whom this study could never been a success.

Dr. Sonia Arifa

Dhaka, Bangladesh

Contents

List of tables

List of figures

List of abbreviations

FSH	Follicle Stimulating Hormone
LH	Luteinizing Hormone
WHO	World Health Organization
IMS	International Menopausal Society
UN	United Nations
BIHS	Bangladesh Institute of Health Sciences
HIV	Human Immunodeficiency Virus
FMP	Final Menstrual Period
USA	United States of America
GnRH	Gonadotropin Releasing Hormone
SHBG	Sec Hormone Binding Globulin
MRS	Menopause Rating Scale
HRT	Hormone Replacement Therapy

Abstract

A cross-sectional study was carried out among 384 postmenopausal women living in Vashantek slum of Dhaka city to assess their perception and attitude towards menopause, their experience with menopausal symptoms and the management of those along with their health seeking behaviour. The study was conducted in the slum at household level through face to face interviews and data was collected with a pre-tested questionnaire during June 2014 to May 2015. The median age of the postmenopausal women was found 57.5 years and a large percentage of them (42%) were widows. Around 90% of them had received no education in their lives and majority of them (62%) were housewives. The duration of menopausal symptoms increases along with age which was found to be statistically significant (P value 0.000).

Mean age of onset of menopause was found to be 45.3 years. Psychological and Somatomotor groups of symptoms of menopause were found to be very high whereas Urogential Symptoms were comparatively low. Commonest symptoms were tension and fear (97%), being mentally upset (97%), irritability and nervousness (96%), depression (92%), joint and muscle pain (94%) and hot flushes (95%). Around 44% of women went to nearby pharmacies to seek for remedies of symptoms and 11.2% took traditional care whereas only 15% went to a medical doctor. The main reason for not seeking medical support was found to be financial problem (45%). It was found that the menopausal women who had sought for support to manage menopausal symptoms had less Menopause rating scale (MRS) score compare to the others, who had not, this was statistically significant as well (P value 0.007).

Almost 45% of the women took menopause negatively and awareness on menopause was very little or no idea (82.8%), largely due to lack of availability of information. More than 85% of the women were concerned about how their husbands react to this change in life. Overall lack of awareness on menopause and low education and socioeconomic status in a slum were found to have negative impact on perception and attitude towards menopause and health seeking behaviour. Improved awareness and better access to health services can improve the situation.

Health Seeking Behaviour of the Menopausal Women in Urban Slum of Dhaka City

Chapter – 1
INTRODUCTION

1.1 Background

Menopause is the permanent cessation of menstruation resulting from the loss of follicular activity of the ovaries. The menopause is the time of a woman's life when reproductive capacity ceases. The ovaries stop functioning and their production of steroid and peptide hormones falls. A variety of physiological changes take place in the body; some of these are the results of cessation of ovarian function and related menopausal events, others are part of the ageing process. Many women experience symptoms around the time of menopause, most of which are self-limiting and not life-threatening, but are none the less unpleasant and sometimes disabling[1].

Cessation of ovarian function and monthly menstruation is a normal concomitant of ageing in all women and is associated with the end of reproductive capability. The biological basis for these events is well established, being dependent on changes in ovarian structure and function. During the menopause, there is a reciprocal relationship between ovarian hormone levels, which decline, and pituitary gonado-trophins, which increase. The ovarian hormones are divided into two classes: the steroids, primarily estradiol and progesterone, and the peptides, primarily inhibins and activins. Estradiol and the peptide hormones are secretory products of the ovarian granulosa cells, the major cell type of the ovarian follicle, whereas progesterone is a product of the corpus luteum. The primary biological properties of the peptide hormones are implied by their names; inhibin suppresses synthesis and secretion of pituitary follicle- stimulating hormone (FSH) whereas activin stimulates FSH secretion In addition to FSH, the other relevant pituitary hormone is luteinizing hormone (LH). Secretion of LH is controlled primarily

by the steroid hormones, whereas FSH is regulated by both the steroids and the peptide hormones[2].

All women go through menopause after a certain age and menopausal women suffer from different medical problems which need specific attention. It is a stage when the menstrual cycle stops for longer than 12 months and there is a drop in the levels of oestrogen and progesterone, the two most important hormones in the female body (World Health Organization, 1996). The onset of this physiological development not only marks the end of women's reproductive function but also introduces them to a new phase of life. Worldwide, the estimates for the median age at menopause range from 45 to 55 years[3]. More important than the immediate symptoms of the menopause are the effects of hormonal changes on many organ systems of the body. The most extensively studied of these are the cardiovascular and the skeletal systems. Both are adversely affected by the inevitable ageing process as well as by postmenopausal hormonal changes. The effects on the cardiovascular and skeletal systems have been documented[1].

Some of menopausal symptoms experienced by these women can be severe enough to affect their normal lifestyle. Unfortunately, majority of these women are not aware of the changes brought about by menopause[4,5,6]. The common climacteric symptoms experienced by them can be grouped into: vasomotor, physical, psychological or sexual complaints. Although menopause is a universal phenomenon, there is a considerable variation among women regarding the age of attaining menopause and the manifestation of menopausal signs and symptoms. It is well documented that menopausal symptoms experienced by women affect their quality of life[7]. Many women, however, wonder if these changes are normal and many get confused about how to treat the symptoms, yet it appears to be a matter of personal choice that depends on ones deposition. This disposition could be as a result of societal value or the social status assigned to aged women. In this millennium, women perceives menopause as an opportunity, to concentrate on new activities and bring out the best in them[8,9]. Consequently, treatment of this transitional phase has now gained more importance than ever before[10,11].

In 1990, the world population of postmenopausal women was reported to be 476 million, with 40% living in the industrialized world. It is estimated that this figure will increase to 1200 million with 76% of these women in the developing countries by the year 2030[12]. Currently, in the United States there are more than 44 million women between 45–54 years of age. More than half of the women in this age group report physiological or psychological symptoms often attributed to menopause, with 30% who indicate that symptoms are bothersome[13,14].

Postmenopausal women make up a relatively small proportion of the population in developing countries (ranging from 5% to 8%), whereas in industrialized countries they make up over 15% of the total population. By 2030, the proportion of postmenopausal women in the total population will have increased everywhere, most dramatic increases being from 8% to 17% in China, and from 15% to 23% in the industrialized world. An average annual growth rate of 2-3.5% in the number of women aged over 50 is projected for the developing regions between 1990 and 2030. A growth rate of 1.5% is predicted for the industrialized regions and is expected to fall below 1% by the 2020s. The primary factor determining this rate of growth is the relative size of the cohorts born 50 years earlier, rather than any large changes in mortality patterns. The average median age of postmenopausal women is around 62 years, varying from 60 years in sub-Saharan Africa to 65 years in the industrialized world. By 2030 it is predicted that these median ages will have increased to 64 years globally, and to 68 years in the industrialized world[1].

Depletion of steroid hormones at the menopause may influence cause- specific morbidity and mortality in later life. The groups of diseases most likely to be affected are cardiovascular disease and malignant neoplasms. In the Industrialized countries, women of all ages have lower age-specific cardiovascular mortality rates than men in the same age group. This advantage for women diminishes during middle age, so that by the age of 75, cardiovascular disease mortality rates for women are almost as high as for men. Data on disease-specific mortality rates in the developing world are generally poor, but the patterns observed in the industrialized world appear to be followed in the developing world as well. Age-standardized cancer mortality rates are lower for women than for men in most populations for which adequate data are available. On an age-specific basis,

however, the mortality rates increase rapidly for women in the early and mid-reproductive years, but the rate of Increase, decreases towards the end of the reproductive period and after menopause. In the industrialized world, cancer mortality rates are often higher for women than for men in the mid-reproductive years, after which the mortality rates for men rise much faster than those for women. For the few developing countries for which adequate data are available, the patterns appear to be similar, with perhaps even higher mortality rates for women than for men in the mid-reproductive years. Much of the higher mortality rate among women in the mid-reproductive years is accounted for by cancers of the breast and cervix that have no male counterpart but mortality rates from cancers of other sites are also often higher among women than among men in this age group[1].

The ratios of female to male mortality rates by age and broad cause show quite different patterns for malignant neoplasms and for circulatory diseases. For malignant neoplasms these ratios are high for the reproductive years and then fall through the menopausal transition and remain low. Thus, in terms of mortality from malignant neoplasms, the menopause may have a beneficial effect on women. In contrast, for circulatory diseases, the ratios are consistently less than unity and reach a minimum between the ages of 40 and 50. Hence, the overall mortality rates among women are lower than those among men throughout the reproductive years and then increase after the menopause. This increase could be interpreted as an adverse health impact of the menopause, though other interpretations are clearly possible[1].

To celebrate World Menopause Day on October 18th 2014, IMS (International Menopausal Society) has launched a new campaign with the theme "Prevention of diseases after menopause". After menopause, there is an increased risk developing chronic diseases and this campaign examines the rationale for prevention and opportunity to identify risks and initiate prevention strategies for chronic diseases which begin to occur about 10 years after onset of menopause. These diseases are a major source of morbidity, decreased quality of life, mortality and economic burden[15]. Lead author of the

White Paper, Professor Roger Lobo, commented; "At the menopause, women have a chance to take steps which will help determine whether they go on to live a healthy and active life. There are some conditions, for example osteoporosis and cardiovascular disease, which are clearly directly associated with the menopause, whereas others are more associated with increasing age. Menopause provides women with an opportunity to review their health and lifestyle and to make changes which will benefit their future wellbeing"[15].

Since the beginning of civilization, humans started to live in large numbers in close proximity to each other which were called cities. Those city dwellers, like now, needed water, food and other essential provisions for leading safe and secure life. They face more health challenges now due to density of population. This is more so in the urban slums which is our subject of study. As most of the urban slum dwellers live in tropical countries, their health is also threatened by a variety of tropical diseases influenced by social and environmental determinants[16]. UN-Habitat defines slum conditions as a living environment with non-durable structures, insecure tenure, lack of water, lack of sanitation, and overcrowding. One billion people (32 percent of the global urban population) live in urban slums. The UN predicts that, failing a major intervention, this total is set to double in a little over 30 years. Women, children, and widows are the most vulnerable groups among the urban poor[17]. In Bangladesh, with urban population growth, the number of slums and the people who dwell in them are rapidly increasing with an estimated 3.4 million people living in some 5000 slums in its capital city, Dhaka[18].

Health problems of older women have received little attention from health planners in developing countries[19]. By contrast, maternity care is a focus of attention because of the size and magnitude of the associated problems. In fact, the phrase "maternal-child health" is often used synonymously with women's health[20]. Concerns about access to antenatal and delivery care, family planning, and infant mortality dominate the forefront of women's health, but the health problems of older women specially the menopausal women are not homogeneous and cannot be addressed through maternal and child health services alone[19]. Women's health should include the entire range of health problem

affecting women both during and after their reproductive years. Despite the proliferation of studies on health-seeking behaviours of women during their reproductive age[21] we know little about the types of services used by menopausal women from poor families and how they gain access to them. Mohan (1989) and Pearson (1989) noted that although health risks and needs, accessibility and utilization of health care are certainly affected by gender, variations exist among women on the basis of age, race, ethnicity, religion, socioeconomic status, political and other factors. Acknowledging the existence of gender disparities in access to health services, the Beijing Platform for Action states: "Women have different and unequal access to and use of basic health resources, including primary health services for the prevention and treatment of childhood diseases, malnutrition, anaemia, diarrheal diseases, communicable diseases, malaria and other tropical diseases and tuberculosis, among others. Women's health is also affected by gender bias in the health system and by the provision of inadequate and inappropriate health services to women"[22].

It is clear that female slum dwellers have extremely limited opportunities for a decent lifestyle: they lack a foundation for healthy and fulfilling lives, and at the same time carry immense responsibilities for maintaining their homes and families. Global poverty is, in itself, a severe issue, and slum dwellers are undoubtedly particularly vulnerable to adverse social and medical outcomes. Yet at this time of year, when women's issues are central, it is worth being aware of how far the struggle has to go – particularly in the developing world[16].

Menopause is a natural transition all women experience as natural as adolescence. How a woman experiences menopause is determined by many factors: attitude, diet, overall health, genetics and cultural group. But the fact remains that menopause is a universal female midlife transition that remains poorly understood[23]. In the same vein, Huffman et al (2005) concedes that menopause is multidimensional influenced by biological, psychological and sociocultural factors and requires responses that are equally multidimensional.

According to Suzanne and Brenda (2000) attitude is feeling based on a person's impression on an event or object. Similarly, Morgan (2000) stated that attitude is a way of feeling, thinking and behaving toward an object or an event or idea. This response of an individual to the situation depends on how much he/she likes or dislikes the event or situation. Nevertheless, Dennerstein et al (1994) had observed that positive attitudes toward menopause are associated with positive experiences of menopause whereas negative attitudes are associated with both negative symptoms and negative experiences. In furtherance of this Bowles (1986) maintained that attitudes influence menopausal experience. This contention implies that the attitude of the woman towards menopause will invariably influence her experience of menopause. Therefore, women should be encouraged to develop positive attitude towards menopause. In addition, much of how a woman's life is affected by menopause depends to a great extent on how she views herself[24]. These attitudes can create positive or negative expectations and behaviours which facilitate or limit the successful management of menopause It is important to obtain an accurate picture of women's attitudes toward menopause as these attitudes are predictors of successful management of menopause of women of different ages, parity, educational qualification etc. [25].

Health seeking behaviour refers to the sequence of remedial actions that individuals undertake to rectify perceived ill health[26]. According to the schema developed by Christakis et al., the actions included in the process of "health-seeking behaviours" include 1) self-care e.g. changes in diet, home remedies, rest, changes in sexual behaviour, self-treatment; 2) lay referral (communication and. consultation with family, neighbours and friends); 3) seeking either traditional or biomedical care; and 4) treatment compliance. For all these actions, recognition and perception of illness is essential[27]. Like much of the developing world, medical pluralism, or the existence of several distinct therapeutic systems in a single cultural setting, is an important feature of health care in Bangladesh. Indeed, a wide range of therapeutic choices is available, ranging from self-care to folk and western medicine, although both illness incidence and treatment options are importantly determined by poverty and gender[28]. The type of symptoms experienced for the illness and the number of days of illness are major determinants of health seeking

behaviour and choice of care provider. In case of a mild single symptom such as fever, home remedies or folk prescriptions are used, whereas with multiple symptoms and longer periods of illness, biomedical health provider is more likely to be consulted[29].

Menopause is an important landmark in the life of a woman[30]. It is defined as a physiological event in which there is at least twelve consecutive months of amenorrhoea caused by depletion of ovarian function[31]. This results in various somatic, vasomotor, sexual and psychological symptoms that impair the overall quality of life of women[32]. Menopause can also result from hysterectomy with or without oophorectomy (surgical menopause) and treatment with the gonadotrophic releasing hormone agonist and cytotoxic chemo therapeutic agents[33]. Multiple factors including socioeconomic background, education, job and family environment, physical and mental health influence women's beliefs and knowledge about menopause and attitude towards it. Moreover, these factors may alter the experience of menopausal symptoms as well as health seeking behaviour[34]. Especially in societies where it is not viewed as negative rather a positive event, the symptoms are found less common[35].

Menopause has become an important subject of study because of the global increase in life expectancy resulting from better nutrition and improved health care delivery[36]. The introduction of governmental and other stakeholders' interventions targeted at achieving the Millennium Development Goals is also expected to increase the population of postmenopausal women. With the increasing average length of the postmenopausal life span, it has become imperative for healthcare providers to focus more attention on the health of this group of women to ensure that they enjoy this twilight years of their life optimally[36]. The loss of reproductive capability resulting from menopause is a critical issue that represents the end of fertility and the onset of the aging process.

Menopause is not a disease but the symptoms and their severities which are mainly subjective can be very challenging. Hot flashes, for example, are associated with a decreased quality of life[37]. Episodes of illnesses are reported to be higher for poor people due to their living conditions and nutritional status. The high incidence of morbidity cuts their household budget both ways i.e. not only they have to spend large amount of resources on medical care but are also unable to earn during this period. One possible consequences of this could be pushing these families into a zone of permanent poverty[38].

Irregular periods, hot flashes, night sweats, vaginal dryness and itching, urinary changes, mood swings – all these are typical symptoms of menopause[39,40]. Osteoporosis (thinning and weakening of bones), heart disease, and Alzheimer's disease (progressive loss of memory and concentration) are the long-term hazards of menopause[41,42]. With an increase in life expectancy, many years are spent in the postmenopausal phase[43,44]. The current study is an attempt to find out the occurrences of problems related to menopause and their health care seeking pattern.

1.2 Rationale of the study

There are few menopausal study data available in South East Asia especially in Bangladesh. Although menopause related symptoms have been extensively studied in the western countries, very few data are available in Asia especially in South East Asia[4] including Bangladesh.

With the increase of people living in Dhaka city, the impact of urban living on human health is now a growing concern. The rapid growth of slum populations in Bangladesh is an increasing challenge for local health authorities and deserves intensive investigations. Slums have often been conceptualized as areas of concentrated poverty, which comprise of a social cluster that engenders a distinct set of health problems. So, it is the utmost importance to ensure health services for these growing numbers of city dwellers, especially the poor. This neglected population of slum has become a major reservoir for a wide spectrum of health conditions that the formal health sector must deal with. The slum women are marginalized due to the difficulty of accessing healthcare services and information. They don't have access to public health services and private health care service is very expensive[16]. It is important to understand the changes, take medical help, whenever necessary, and adopt a healthy life style, proper nutrition and positive attitude. In fact, this is a period when women can contribute to the happiness of the family, friends and society in many ways[45].

This study will help us to understand health status of women living in slums of Dhaka city; health services provided in slums for women, treatment seeking behaviour for various health problems and discuss various remedies regarding these problems influenced by a large number of factors apart from knowledge and awareness[16].

Menopause is a largely neglected issue in public health of developing countries like Bangladesh. Women towards the end of reproductive years suffer from various physical and psychological problems. Menopause is associated with increased risk of cardiovascular diseases, osteoporosis and ovarian, breast and uterine cancer. Anxiety and depression are also associated with menopause. So it is an important life event that warrant special health care at that time[39]. It is important to understand the changes, take medical help, whenever necessary, and adopt a healthy lifestyle, proper nutrition and positive attitude.

To optimize the health care for menopausal women, there is need to understand the process by which women describe, explain and experience menopause and also to understand the factors that may shape their experiences. This study was carried out to determine the pattern, severity and health seeking behaviour of women with menopausal symptoms in urban slum. The findings in this study would form the basis for health promotional activities to make health care providers more sensitive to the peculiar needs of postmenopausal women and thereby, improve quality of care.

Most of the slum dweller menopausal women in Dhaka city found many problems about different aspects of end of reproductive years and they were living in silence[46].
In this country, there is very limited awareness of menopause and its consequences. Programmes should be undertaken in the community level involving women, men and health service providers. Health programme should pay adequate attention on the emergency of this issue. Information on various aspects of end of reproductive health should be disseminated to menopausal women. Education and awareness may help to make this neglected part of their life meaningful and worth living[46].

This is an existing gap in Women's Health Care Research. Menopausal women face discrimination because of their age, gender and the fact that they live in slum. However, little research has been done about the strategies utilized by menopausal women who do access care, how menopausal women cope with ill health, and how the power relations within the family affect their access to health care. Information on the existing disease pattern and health seeking behaviour is essential to provide need based health care delivery to any population. This information is rarely available. Mainly hospital data are available for disease patterns so far. Only community based study can reflect the true picture of disease patterns in a given community and preferences of the community members in seeking health care services.

In this regard, this study plays an important role in providing valuable information and understanding about the current health-seeking behaviour of menopausal women living in slums in Dhaka city for the development of a pro-poor and user-sensitive health care delivery system. This research should be viewed as a first step toward empowering menopausal women in Bangladesh by "giving voice" to one of the most vulnerable groups in this society.

1.3 Research Questions

1. What are the attitude of women of low socio-economic setting or slum towards the post-menopausal problems and management of those?
2. What are the health seeking behaviours of the menopausal women in urban slums?

1.4 Objectives

A. General objective

The general objective of the study is to understand the perception and attitude of women residing in an urban slum towards the menopausal phenomena. The study is also aimed to determine the health seeking behaviour of the menopausal women for the management of menopausal symptoms.

The ultimate goal is to equip policy maker with the information regarding the health and the service utilization of underprivileged menopausal women in Bangladesh for designing appropriate health services.

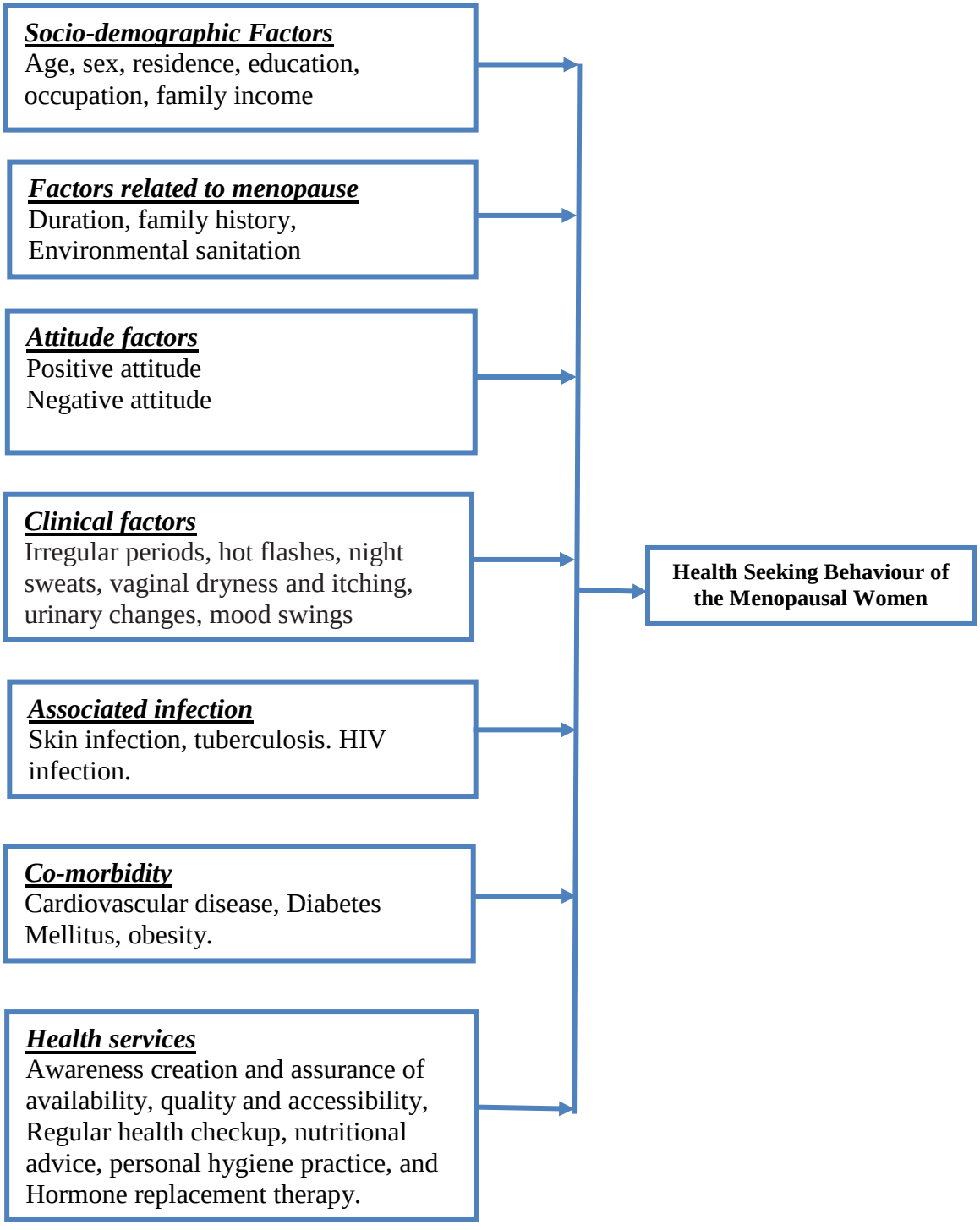
B. Specific objectives

1. To determine the frequency and severity of menopausal symptoms
2. To identify health seeking behaviour of women with menopausal symptoms
3. To identify four social determinants of health — the social, economic, religious/cultural and health system related factors — associated with barriers to utilization of health services among menopausal women in urban slums of Dhaka city.
4. To assess health awareness of post-menopausal women living in slums of Dhaka city.
5. To understand the perception and attitude of menopausal women towards the menopausal phenomena.

1.5 List of key variables

Independent Variables	**Dependent Variables**
Age Education Occupation Monthly Income Marital Status Religion Social factors Perception and Attitude towards Menopausal symptoms Co-morbidity (If any)	Health Seeking Behaviour of the Menopausal Women

1.6 Conceptual Framework



1.7 Operational definitions

Menopause – It is defined as a physiological event in which there is at least twelve consecutive months of amenorrhoea caused by depletion of ovarian function.

Attitude – According to Suzanne and Brenda (2000) attitude is feeling based on a person's impression on an event or object. Attitude is a way of feeling, thinking and behaving toward an object or an event or idea.

Perception – Perception is awareness, comprehension or an understanding of something.

Health seeking behaviour – Health seeking behaviour refers to the sequence of remedial actions that individuals undertake to rectify perceived ill health.

Slum – UN Habitat defines slum conditions as a living environment with non-durable structures, insecure tenure, lack of water, lack of sanitation, and overcrowding.

Chapter – 2

LITERATURE REVIEW

Definition of Menopause

The terms used to describe the various nodal points surrounding the menopause have not been consistently defined and applied, despite the recommendations made in 1980 by a WHO Scientific Group on Research on the Menopause[47]. Reports on the menopause published since then have continued to use a variety of definitions, which has made it difficult to compare their findings. The definitions proposed in 1980 have been further clarified as described below.

1. The term natural menopause is defined as the permanent cessation of menstruation resulting from the loss of ovarian follicular activity. Natural menopause is recognized to have occurred after 12 consecutive months of amenorrhea, for which there is no other obvious pathological or physiological cause. Menopause occurs with the Final Menstrual Period (FMP) which is known with certainty only in retrospect a year or more after the event. An adequate independent biological marker for the event does not exist.

2. The term perimenopause should include the period immediately prior to the menopause (when the endocrinological, biological and clinical features of approaching menopause commence) and the first year after menopause. The term "climacteric" can be abandoned to avoid confusion.

3. The term menopausal transition should be reserved for that period of time before the FMP when variability in the menstrual cycle is usually increased[48,49].

4. The term premenopause is often used ambiguously either to refer to the one or two years immediately before the menopause or to refer to the whole of the reproductive period prior to the menopause. The Group recommended that the term be used consistently in the latter sense to encompass the entire reproductive period up to the FMP.

5. The term induced menopause is defined as the cessation of menstruation which follows either surgical removal of both ovaries (with or without hysterectomy) or iatrogenic ablation of ovarian function (e.g. by chemotherapy or radiation).

6. Simple hysterectomy where at least one ovary is conserved, is used to define a distinct group of 'Women in whom ovarian function may persist for a variable period after surgery.
7. The term postmenopause is defined as dating from the FMP, regardless of whether the menopause was induced or spontaneous.
8. Ideally, premature menopause should be defined as menopause that occurs at an age less than two standard deviations below the mean estimated for the reference population. In practice, in the absence of reliable estimates of the distribution of age at natural menopause in populations in developing countries, the age of 40 years is frequently used as an arbitrary cut-off point, below which menopause is said to be premature.

Physiology of menopause

The number of ovarian follicles present in the ovary, and thus the number of ovarian granulosa cells available for hormone secretion, appear to be the critical determinants of age at the menopause, steroid hormone secretion and gonadotropin levels. Counts of ovarian follicles have shown the number to be greatest in the foetus at about 7 months of age with a subsequent decline to about 700,000 at birth[50,51]. The rate of decline in the number of ovarian follicles is approximately linear on a semi-logarithmic scale until about the age of 40[50,52]. The decline is then more rapid until after the menopause when essentially no follicles remain[53].

The regularity and length of the menstrual cycle vary throughout the reproductive life span. They also vary within and between individuals, and among cultural groups. Asian women, for example, have been reported to have menstrual cycle lengths averaging 32 days[54]. A unique prospective study, initiated in 1934, documented menstrual cycle patterns in over 2700 women aged over 13 until either 1961 or one year following their FMP, whichever was the earliest. The median length of the menstrual cycle fell from 28 days at age 20, to 26 days at age 40, resulting primarily from a shortening of the follicular phase of the cycle[54]. As women come closer to the menopause, menses frequently become irregular and are in general less frequent. Bleeding which recurs after 12 months of amenorrhea in the perimenopausal years may be due to renewed follicular activity, but

the possibility of pathological conditions requires diagnostic evaluation. A recent prospective study from Massachusetts, USA, in which 2570 women aged 44-55 were followed for 5 years clarified the concept of the menopausal transition. Its lower limit is the onset of menstrual cycle irregularity, occurring at an average age of 47.5 years, and the upper limit is the EMP. The average duration of the menopausal transition is 3.8 years[48].

Age at menopause

In industrialized societies the average age at menopause is about 51 years[55,56,57]. The age at menopause is lowered by smoking (the most significant factor), by nulliparity and possibly by low socioeconomic status[55,56]. A recent analysis of data[54] showed that women with an average cycle length of less than 26 days reached the menopause 1.4 years earlier than those with longer cycles[57]. The concept is also emerging that age at menopause may be a potent biological marker of ageing and a later menopausal age could be associated with greater longevity[58,59]. In most reports, women from developing countries are found to be older at menarche and younger at menopause than women in industrialized countries[56,60]. However, this difference was not observed in a cross- cultural survey of 400 women in each of seven Asian countries reported in 1991[61]. Little variation was observed between countries; the mean age at menopause was slightly over 51 years. This age is almost identical to that reported from industrialized countries[62,55,56,57]. Smaller studies, some restricted to isolated populations in Papua New Guinea[63] and the Philippines[64], or in various parts of Africa[65,66]. India and Pakistan[6768] and Thailand[69,70] have reported younger ages at menopause (late forties). However, it is not clear whether these reports reflect true menopausal ages or spuriously low estimates because of methodological problems[71].

Although many women continue to have regular menstrual cycles well after the age of 40, serum FSH levels rise throughout the fifth decade of life despite the apparent lack of variability in cycle pattern[72,73,74,75,76]. Luteinizing hormone levels have also been reported to increase, but only in women close to the age of 50[75]. Although both serum inhibin and estradiol levels have been shown to correlate negatively with FSH[76], the relationship between these two hormones and approaching menopause is not as consistent as that with

FSH[77]. During the menopausal transition when menstrual cycles become irregular in frequency and length, hormonal levels are unpredictable and variable. Periods during which levels of FSH and LH are high may occur; these may be followed by intervals when gonadotropin levels are characteristic of those in young women and urinary pregnanediol levels are consistent with ovulation[78,79]. Overall, the menopausal transition is a period of marked variability in hormonal levels and endocrine assessments of ovarian function are of little use in predicting potential fertility or timing of the menopause[80].

By 2-3 years after the last menstrual period, serum FSH levels have increased to values 10-15 times higher than follicular phase levels in young women, and LH levels are about three times higher[81,82]. The levels of both gonadotropins subsequently decrease with age and are negatively correlated with body mass index. This is in contrast to estrone and estradiol levels, which are positively correlated with body mass index[83]. LH pulse amplitudes and frequencies, and FSH pulse amplitudes are decreased in older postmenopausal women, as are the gonadotropin responses to gonadotropin-releasing hormone (GnRH) stimulation[84]. Serum immunoreactive inhibin levels are rarely detectable after the menopause[85].

A major chance in the source and nature of circulating oestrogens occurs after the menopause. Quantitatively, the most important circulating oestrogen is estrone, with serum levels averaging about 100 pmol/l. Most of the estrone is derived from the extraglandular conversion of adrenal androgen precursors, particularly androstenedione[86]. Serum estradiol levels after the menopause are generally less than 80 pmol/l compared with a late premenopausal mean value of approximately 550 pmol/l. The low estradiol after the menopause make its assay difficult. Cauley et al.[87] using radioimmunoassay following extraction and chromatography, noted that about 50% of samples from postmenopausal women had estradiol values below the sensitivity of the assay. To assess the reliability of the assay, short-term (4-week) and long-term (2-year) estimates of hormone levels were undertaken. A low intra-class correlation for both estradiol and androstenedione was found. Since estrone can be measured more reliably than estradiol, the authors suggested that estrone might be useful as an indicator of the total oestrogenic

status of postmenopausal women. Serum androgen levels also change after the menopause. Testosterone concentrations decline by about 20% and androstenedione by about 50%. Following oophorectomy, the decrease in serum levels of both steroids is about 50%[88]. After natural menopause, the ovaries of some women have been observed to undergo stromal hypertrophy and hyperplasia which gives them the capacity for production of up to 50% of postmenopausal androstenedione and testosterone[89,90]. In other women the ovaries become fibrotic and are then a poor source of steroids. The adrenal androgen, dehydroepiandrosterone sulphate (DHEAS), decreases linearly with age and is not specifically affected by the menopause[91].

The possible influence of diurnal variation on estimates of serum levels of testosterone and estradiol in postmenopausal women has been examined. Although testosterone and estradiol show some diurnal variation[92], the changes reported have been of only moderate magnitude. In a small study, serum levels of testosterone and estradiol showed a 29% coefficient of variation In samples taken between 08:00 and 24:00[93] Repeated measurements of serum androgens have shown relatively good stability[94]. Both serum testosterone and oestrogen are largely bound to sex hormone- binding globulin (SHBG)[95,96]; only 1-3% is unbound or flee. Levels of this protein are increased by endogenous and exogenous oestrogens and by thyroid hormone, and are decreased by androgens[97] and obesity. Levels of SHBG have been reported to be negatively correlated with bone mineral density in normal postmenopausal women[98]. They have been variously found to be decreased, unchanged or increased. After the menopause. One longitudinal study[99] reported a small decline in SHBG levels after the menopause. In a larger longitudinal study, SHBG levels were reported to increase during the perimenopause at the same time as endogenous estradiol levels fell[49]. Characterization of biologically active testosterone or estradiol requires direct measurement of their free levels or the derivation of a calculated value determined from the total serum hormone level and the concentration of SHBG. Fig. 5 shows the changes in serum estrone, estradiol, SHBG and FSH that occur in the 2 years before and the 6 years after the menopause[49]. These data were obtained from serum samples drawn periodically from a sample of women being followed prospectively in the Massachusetts Women's Health Study. Samples from women who still had menstrual periods were collected between the second and tenth day

of the cycle, Of particular note 's the dramatic decline in oestrogen levels that occurs before the FMP with a continuing more modest drop in the subsequent 2-4 years. The increase in FSH levels starts before the FMP and continues at a fairly constant rate for about 4 years afterwards. SHBG levels also increase after the FMP, but the amount of elevation is variable during the first 6 postmenopausal years[49].

Comparisons have been made of hormone levels between different ethnic groups. Mayan women have hormone levels similar to those of Caucasians, despite their lack of vasomotor symptoms[100], while Nigerians have hormone and symptom levels similar to those of Caucasians[101]. In contrast the levels of estradiol and testosterone found in pooled sera from 3250 rural Chinese women aged 35-64 were lower than those for 300 British women in the same age range[102]. Postmenopausal British women had significantly lower SHBG levels than their postmenopausal Chinese counterparts. Predictors of sex steroid hormone levels in blood have been examined in postmenopausal American women[103]. Neither age nor time since menopause was a significant predictor. There was a negative correlation between physical activity and levels of estrone. Estrone and estradiol levels were higher among obese women than among those who were lean. Androstenedione levels were higher in smokers than in non-smokers, but estrone and estradiol levels were not.

Menopausal symptoms

A multiplicity of symptoms have been attributed to the menopause. Little distinction has been made between symptoms that result from a loss of ovarian function, from the ageing process or from the socio-environmental stresses of the mid-life years. It is particularly difficult to distinguish the effects of ageing from those of the menopause. McKinlay[104] has proposed a model requiring prospective observations (a cohort study) on a large number of subjects followed during the pre-, peri- and postmenopausal periods to estimate the shape of the curve of data points on the variable of interest in order to distinguish better between the effects of ageing and those of the menopause. Another possibility is that cross-sectional studies include large numbers of women aged 45-55 in order to distinguish the differences in symptom frequency by menopausal status, while controlling for age.

Since 1985, several population-based studies of middle-aged women have been reported[48,105, 106,107,108]. Their protocols have included sound methodological features:

- probability sampling methods from community-based populations;

- standardized definitions of different menopausal groups;

- distinction between women who have a natural menopause and those in whom menopause is induced'.

- use of validated and reliable questionnaires which include questions pertaining to menopausal experiences within other health-related questions.

However, further assessment is needed of the reliability and validity of symptom-reporting in questionnaires and Interviews, and to ensure the elimination of social stereotyping of the responses to symptom checklists of complaints attributed to the menopause. The distinction between having experienced a symptom and being disturbed or functionally incapacitated by it is important both to the well-being of the respondent and for the interpretation of the data. This distinction is also important because of the different implications for health care utilization and potential management strategies.

The establishment of population-based cross-sectional studies has provided the initial step in developing cohorts of women who can be followed prospectively. Cohort studies are particularly suitable for investigating the menopausal transition and the sequence in which the symptoms occur.

Hot flushes and night sweats are thermoregulatory disturbances which are characteristic of the menopause[109,110,111,112,113]. Night sweats are the night-time manifestation of hot flushes experienced during the waking hours. Insomnia is often cited as a menopausal complaint, but usually occurs secondarily to the disruption caused by the night sweats. Erlik et al.[114] observed a significant correlation between hot flushes and waking episodes, both of which were reduced by oestrogen therapy. Hot flushes arise as a sudden feeling of heat in the face, neck and chest; this is associated with diffuse or patchy flushing of the

skin, profuse perspiration and frequently with palpitations. The feeling of heat, initially centred in the upper part of the body, spreads upwards and downwards throughout the body. The flush is associated with an acute feeling of physical discomfort and lasts about 3 minutes. Flushes may be induced by tension or nervousness and their frequency, duration and intensity can be reduced in some subjects with placebo interventions although oestrogen therapy is the mainstay of treatment[115].

Vasodilatation occurs with the onset of the hot flush and continues for at least 5 minutes after symptoms have subsided[116]. Vasodilatation and perspiration are heat-loss mechanisms, and shivering may be necessary after the flush to raise the core temperature back to normal. Vasodilatation is measured by an increase in peripheral blood flow and skin temperature and a decrease in skin resistance. Both the onset of the flush and vasodilatation precede the change in skin temperature and the pulsatile release of LH. LH release is not the triggering event. Although flushes occur during periods of oestrogen withdrawal, oestrogen levels do not correlate with the occurrence of flushes[117,118,119]. The prevalence of hot flushes associated with the menopause varies in different cultures. For example, the prevalence has been reported to be 0% in Mayan women, 10-22% in Hong Kong women, around 17% in Japanese women, 23% in Thai women, 45% in North American women and up to 80% in Dutch women[72,107,120,121,122]. Inconsistencies have been reported, e.g. one report from Thailand gives the prevalence of hot flushes as 69%[69]. The American study noted that the peak flush rate occurred during the menopausal transition[48], while the Dutch study reported that the highest prevalence of hot flushes occurred in the 6-12 months after the FMP[107]. A survey in south-east England noted that 15-25% of premenopausal women had flushes, rising to 54% at the time of the menopause[113]. In a cross-sectional study in Australia, 31% of perimenopausal women had been troubled by hot flushes in the 2 weeks preceding the survey, compared with 39% of those who were postmenopausal[123]. In general, flushes and sweats are more common in European and N011h American women than in other populations. Hot flushes may be more severe in women who undergo bilateral oophorectomy than in those who have a natural menopause[124]. Ethnic differences in the prevalence of hot flushes after surgical oophorectomy have been observed. In a prospective study in Hong Kong[125] only 24% of women who had undergone surgical oophorectomy reported hot flushes as compared

with 70% of similarly treated Caucasian women[126]. Hot flushes are not unique to menopausal women. A similar or equivalent phenomenon has been reported to occur in 10% of women before the menopausal transition[48] and in men[127]. Lack of symptoms as found in the Mayan women cannot be explained by a difference in endocrinology; these women had typical postmenopausal levels of FSH estrone and estradiol, and experienced age-related bone demineralization (but not a high incidence of osteoporotic fracture)[100].

Measures to relieve symptoms

A high intake of dietary phytoestrogens has been suggested as a possible explanation of the lower frequency of menopausal symptoms in Japanese as compared with Caucasian women. Urinary phytoestrogens are about 100-fold higher in Japanese than in Finnish postmenopausal women[128]. The addition of phytoestrogens to a Western diet can produce oestrogenic changes in the vaginal epithelium[129]. Factors associated with the frequency of vasomotor symptoms at menopause include prior occurrence of premenstrual or menstrual symptoms[113,111], and prior health status[108,130]. Ambient temperature affects the frequency of hot flushes; cool ambient temperatures alleviate flushes and warm temperatures exacerbate them[131,132].

Treatment with oestrogens and/or progestogens reduces the frequency and severity of hot flushes[133,134,135,136,137,138,139,140]. Oestrogens are effective whether administered orally, transdermally[141] or as implants and can be used with sequential progestogens, or both progestogens and oestrogens can be given continuously[142]. Hot flushes may be partially alleviated by a placebo, but in double-blind studies oestrogens are significantly more effective than placebos[135,136]. Oestrogens may be given orally or parenterally. The most widely used oral preparation is "conjugated equine oestrogen", a product prepared from the urine of pregnant mares and containing a number of biologically active components of which estrone sulphate predominates. A common dose is 0.625 mo daily, which is usually sufficient for symptomatic relief. Other compounds administered orally include piperazine estrone sulphate (1.25 mg daily) and estradiol valerate (2.0 mo dailv). The regimens currently favoured involve continuous daily administration, although cyclical patterns are also effective. Parenteral modes of oestrogen administration include transdermal preparations (e.g. gels 3 mg daily, patches 50 µg daily), subcutaneous

implants (25-50 mg every 4-6 months), vaginal rings and injectable preparations. For women with an intact uterus, progestogens are given in addition to oestrogens to prevent oestrogen-induced proliferation of the endometrium. The most widely used oral progestogens are 19-acetoxyprogestogens and 19-nortestosterone derivatives. Equivalent doses of two commonly used preparations are 10 mg of medroxyprogesterone acetate and 0.7-1.0 mg of norethisterone. Such preparations are used cyclically for 10-14 days per month with continuous oestrogen. If the progestogen is used continuously, a lower dose is adequate, e.g. 2.5 mg of medroxyprogesterone acetate or 0.35 mg of norethisterone.

Early reports on non-pharmacological therapies justify further investigation. In Sweden, a controlled study of over 1600 women aged 52-54 years found that moderate and severe hot flushes and night sweats were only half as common among the physically active postmenopausal women as in the control group[143]. Behavioural treatment including muscle relaxation, paced respiration and biofeedback (the technique of using the feedback of a normally automatic bodily response to a stimulus, in order to gain voluntary control of that response) was investigated, but only paced respiration produced significant reductions in the frequency of hot flushes[144]. Special diets, including those high in phytoestrogens could be of benefit, but controlled trials to assess their effectiveness have yet to be conducted[129].

After the menopause the vaginal mucosa becomes thinner. Basal and parabasal cells predominate over superficial oestrogenized cells. However, oestrogen effects can be identified even in old age. A study of vaginal cytology in 148 postmenopausal women aged from 40 to 78 years showed completely atrophic smears in only 20% of the women[145]. The frequency of postmenopausal dyspareunia associated with vaginal atrophy has not been well established from population-based studies. An estimate based on women attending menopause clinics is 10%[146]. Oestrogens administered by any route are effective in enhancing the thickness and secretions of the vaginal mucosa and thereby reducing dyspareunia[147]. A double-blind placebo-controlled trial of conjugated equine oestrogens showed a significant increase in the percentage of oestrogenized vaginal cells in women taking oestrogens as compared with women taking a placebo[135,148].

Alternatively, vaginal lubricants offer reasonably effective, non-hormonal treatment for dyspareunia[149] Continuing sexual activity may protect women against vaginal atrophy. This was demonstrated in a study of vaginal cytology which showed significantly less vaginal atrophy in a group of sexually active women than In a sexually inactive group[150].

Sexual Interest may decline after the menopause[108,151]. It is not clear, however, what component of that decline is attributable to the menopause, to ageing in general or to the declining sexual potency of the male partner. Most studies have found no improvement of libido in response to oestrogen administration. but testosterone may be beneficial[152,153,154]. A subcutaneous implant of 50 mg of testosterone every 6 months may be efficacious. Urinary problems are common in ageing women and may occur in the perimenopause. The relative contributions of the menopause, obstetric history and tissue ageing to these problems have yet to be assessed. Symptoms of urgency of micturition, dysuria, nocturia or stress incontinence are reported to affect 25-50% of postmenopausal women[155,156,157,158]. Oestrogen therapy may improve some symptoms[159,160], but it is not helpful in urodynamically proven stress incontinence[161]. Recurrent urinary tract infections may respond to intravaginal administration of estriol succinate which probably modifies the vaginal flora[162].

Changing menstrual patterns and irregular bleeding occur during the menopausal transition[72,78,79,163,164]. One study has estimated that 10% of women stop menstruating abruptly, but the majority experience months or years of irregular bleeding and variable cycle length before menses cease[48]. This transitional pattern should be distinguished from bleeding due to a potentially serious condition.

A variety of symptoms, occurring either singly or together, are frequently reported as being part of a menopausal syndrome. Those already mentioned in sections 5.2.1 5.2.3 have distinct manifestations, but the remainder are not specific to the menopause and are presumed to be psychological or sociocultural in origin. Some frequently mentioned symptoms are depression, nervous tension, palpitations, headaches, insomnia, lack of energy, fluid retention, backache, difficulty in concentrating and dizzy spells. In most

studies, occurrence of these symptoms is not highly correlated with menopausal status, but they are strongly correlated with each other [109,110,111,133,165,166]. They are also more common among women who experience severe flushing[48,165,166,167]. Most of the placebo-controlled trials that have used oestrogens to suppress individual symptoms (other than hot flushes) have demonstrated no statistically significant benefits of this treatment[148]. In a recent report from the Dutch National Survey of General Practice, health interviews were conducted on a random sample of the practice population including 8679 women and men aged 45-75 years. With the exception of vasomotor symptoms, none of the other complaints usually attributed to the menopause were more common among women than among men in the subjects aced between 45 and 54 years[127].

Depressive episodes are not disproportionally increased at the menopause[105,168]. The main predictors of depression in the menopause are the same as for other stages of life; these are prior depressive episodes and poor current or past health status[105]. Stressful life events frequently precipitate depressed moods and such events are numerous in the mid-life period[168]. Oestrogen therapy may be effective for mood elevation in women who have had bilateral oophorectomy[169,170]. Estradiol implants or combined estradiol and testosterone implants may have some effect in naturally perimenopausal women; however, such therapies do not appear to be effective in postmenopausal women[171]. Progestogens may have adverse effects on mood[172].

Most of the information on symptoms of the menopause has been obtained from populations in industrialized countries. The sparse data available from developing countries suggest that the symptoms reported to occur in Caucasian populations in developed countries are not universal, but rather that the intermixing of biology and culture produces different effects in different parts of the world. The data from Japanese studies show marked differences in the frequency and type of complaint and in the perception of menopause compared to those reported from Europe and North America[173].

Until there are adequate data on the magnitude and extent of a "menopause problem" in most parts of the world it is not possible to recommend appropriate interventions or

treatments. The few comments on treatment noted in this report apply only to specific indications and conditions. Data are needed that describe and explain the nature of the menopause in many parts of the world where such studies have not yet been done. Such information will clarify whether specific interventions, and of what types, might be useful.

Most of the information on the menopause comes from research done in the industrialized world. This research has been the model for the relatively few studies carried out in developing countries and therefore these studies have tended to use the same research methods and to ask the same research questions, such as the age at menopause and frequency of symptoms. Further inquiry has been made about the incidence of cardiovascular disease, malignant neoplasms and osteoporosis following the menopause. While there are advantages to testing familiar hypotheses in different populations. These may not be the only questions of concern or relevance to the health of menopausal women in other parts of the world. These questions also omit to take into account the very different factors which will have conditioned the health of women prior to their reaching the menopause and which will determine the implications of the menopause for their future well-being.

The lives of women outside Europe and North America are framed within a very different set of social economic and cultural parameters from those of the women who have been the usual subjects of menopause research. The implications of reaching the menopause vary from one society to another, depending on the political and economic structure of each society, and the conditions of life it provides for women of all ages, including their access to health care. A report on middle-aged women in the Caribbean and Latin America presented a generally bleak social and economic picture characterized by poverty, family break-up, responsibility for ageing parents, and lack of opportunities for paid employment[174]. The environment plays a significant role in the health of all women, but is particularly important in developing countries. By the time women in developing countries reach the menopause, their health may already have been undermined by the environmental conditions in which they live. Infectious diseases which are associated

with poor public health measures remain common. Pollution, chemical toxins and hazardous working conditions compromise the health of urban women working in the industrial sectors of these countries[175].

Women's health is also undermined by chronic malnourishment. According to one estimate, half of all African women, two-thirds of Asian women and one-sixth of Latin American women suffer from nutritional anaemia as a result of insufficient food[176]. The reasons are economic, social and cultural. When food is limited, the extent to which women are malnourished depends on their status within the family and society[174].

A woman's health at mid-life will have been affected not only by the number of children she has had, but also by the number of pregnancies, their spacing, her age at the last pregnancy, the number of unsafe abortions she has had and whether or not she has had access to contraception. Effective contraception can minimize the number of reproductive adversities, but contraceptive use varies greatly from country to country[177]. A report of the Pan American Health Organization provides estimates of the lifetime fertility of women in the Caribbean and Latin America when they have reached the age of 45-59; these range from a mean of 6.6 children for rural women to 2.6 for urban women[174].

Access to health care in developing countries is limited for both women and men. The primary focus of existing health care and expenditure of governmental resources is on maternal and child health. The use of scarce resources for the treatment of non-life-threatening conditions, such as the menopause, has low priority. In settings where private medical services exist, medical care for menopause-related complaints may be available, but at a cost which few women can afford.

The incidence of menopausal symptoms among women in developing countries has been reported to be far lower than among women in Europe and North America. However, the majority of studies in developing countries have used the same symptom checklists as studies in developed countries. Therefore, they could not determine whether women in developing countries experienced different symptoms at menopause nor how these symptoms were managed. A different methodological approach was used by Lock[178],

who asked Japanese women and their physicians what symptoms they associated with the menopause and which methods they used to deal with these symptoms.

Co-morbidities

There are few data available on the incidence of osteoporosis and hip fractures among women in developing countries, but they do suggest that these rates may be lower than in the industrialized countries. The conclusion that there are differences in the risk of hip fracture between different ethnic groups is supported by data showing that the risk of hip fracture among Mexican American women is only 35% of that among Caucasian American women[179] and that Caucasian American women experience twice the fracture rate of Japanese women living in Okmawa or Hawaii[180]. A study of Mayan women reported age-related bone demineralization, but a low incidence of osteoporotic fractures[100]. These data came from a project which combined clinical data (bone measurements), a nutritional survey and careful observation of the daily activities of Mayan women[120].

The rates of coronary heart disease and breast cancer also appear to be lower among postmenopausal women in developing countries and Japan than among those in Europe and North America. Statistics are well kept in Japan, but in many other countries mortality and morbidity data on middle-wed women are either unreliable or unavailable. Whereas researchers in North America tend to focus on the negative aspects of the menopause. Descriptions of the menopause in women in developing countries tend to emphasize the positive aspects, such as freeing women from the burdens of childbirth and from cultural restrictions imposed on the social and religious life of younger women who still menstruate[181]. In some societies women are said to relish the renewed freedom and influence in their families and communities that come with menopause and not to regret reduced sexual activity [182,183,184]. These reports suggest that the psychological reaction of women to the menopause reflects the values of the society and the social status assigned to the ageing woman.

A global demographic revolution, signalling unprecedented transition from a state of high birth and death rates to one characterized by low rates of fertility and mortality, has taken

place over the twentieth century. Starting in Europe and North America at the end of the past century, this demographic shift has now become a worldwide phenomenon. At the heart of the transition has been the growth in the number and proportion of the total population constituted by older adult people. The year 1999 was the Year of the Older Person and it was also the year the world population reached six billion. Now the world population has passed six billion and will continue to grow until the middle of the next century. With the growth of the world population, the number of the world's older adults is increasing rapidly. "One out of every 10 people is now 60 years or older. By the year 2050, one out of every five will be 60 years or older; and by 21 50, it will be one out of every three people"[185]. In less developed countries/rapid declines in fertility and mortality will lead to even faster population aging. Among developing regions, Asia has witnessed considerable declines in fertility and mortality in the last few decades. As a result, the percentage of those who are aged 65 and older is expected to increase from 5.1% in 1980 to 13.3% in 2025 in East Asia; from 3.5% to 8.3% in South East Asia; and from 3.8% to 8.2% in South Asia[186]. Though the aging population is a worldwide phenomenon and has extensive economic, social and health consequences, the developing countries are quite unaware of this burning problem. Bangladesh is one of those developing countries that are facing a tremendous population growth problem of older adult.

A decrease in fertility rates and an improvement in the average life expectancy have led to rapid increases in the number of older people in Bangladesh, with 80,000 new older women added to the over 60 age range each year. Today people who are 60 years and older constitute 6% of the population of Bangladesh. While this percentage is small relative to developed countries, due to the large size of the population it represents approximately 9 million people. Furthermore, projections indicate that the number of older people will increase by 173% by 2025[187]. As the proportion of aged people is gradually increasing the numbers of older women is also increasing in Bangladesh and everywhere in the world. According to IJN Projections, if present trends prevail, the sex ratio for older cohorts (that is, the number of men per 100 women) will continue to be imbalanced in the developed regions. For instance, this rate which in 1975 was 74/100 for the 60-69 age group, will be 78/100 in 2025, with a rise from 48/100 to 53/100 for the over 80 age group. In developing regions, this rate will be 94/100 in 2025 against 96/100

in 1975 for the 60-69 age group, and 73/100 in 2025 against 78/100 for the over 80 age group, signifying a slight decline in the number of women relative to men. Thus, women in most cases will constitute a larger majority of the older population[188].

The economic polarization within Bangladesh society and lack of a social security system make the poor more vulnerable in terms of affordability and choice of health care provider. Poverty not only excludes people from the benefits of the health care system but also restricts them from participating in decisions that affect their health, resulting in greater health inequalities. Even when treatment in a health centre is free, individuals may incur costs for transportation. Not only the consultation fee or the expenditure incurred on medicines count but also the fare spent to reach the facility and hence the total amount spent for treatment can turn out to be cumbersome. These costs are prohibitive for older women who are allocated fewer resources within the family.

Chapter – 3
MATERIALS AND METHODS

3.1 Study design

At the commencement of the study, the sample size was estimated at 384 post-menopausal women of above 40 years living in the Vashantek slum of Dhaka city, assuming the frequency of menopausal symptoms to be 50% and a total population of 200,000. After selecting the slum, the slum areas were visited and a list of the streets in the slum was prepared. First select a house to be visited in each street, and the targeted number of women from each area was reached by visiting each house.The study was conducted during a one-year period from June 2014 to May 2015.

3.2 Study location

Vashantek slum area, Dhaka.

3.3 Study period

Duration of the study was June 2014 to May 2015.

3.4 Study population

The study population was made up of menopausal women living in the Vashantek slum of Dhaka city with at least one year of amenorrhoea, not due to surgery or other obvious causes such as severe illness, extreme weight loss and endocrine disorders.

A total of 384 menopausal women with at least one year of amenorrhoea, were enrolled in the study. All enrolled women were visited at their homes for data collection through face to face interview.

3.4.1 Selection Criteria

1. Menopausal women (>40 years) with at least one year of amenorrhoea.
2. Menopausal women living in Vashantek slum of Dhaka.
3. Person who are willing to participate in this study
4. Person who are mentally sound

3.5 Sample Size

Using the simple statistical formula: $n = z^2pq/d^2$

$n = \{(1.96)^2 \times 0.5 \times (1-0.5)\} / (5\%)^2 = 384$

A sample size of 384 post-menopausal women was calculated with a margin of error of 5% and a confidence level of 95%. All eligible and consenting menopausal women who resided in the slum during the period of study were consecutively recruited until the sample size was attained.

3.6 Sampling Technique

The respondents for this study will be Menopausal (>40 years) women. This study used non random sampling to choose respondents. The method used was purposive sampling. Purposive sampling was to target a particular group of people, whereby for this research is Menopausal (>40 years) and living in Vashantek Slum of Dhaka. This sampling technique was chosen as the objective of the study is to investigate Health Seeking Behaviour of the Menopausal Women in Urban Slum of Dhaka City. All of the respondents are selected from all consecutive cases who are Menopausal (>40 years) and living in Vashantek Slum of Dhaka. The sample size for this study were 384 respondents.

3.7 Data Collection Tools

Data were collected using a two-part questionnaire. Part-1 dealt with background variables including sociodemographic, reproductive, and menopausal characteristics of the women. Women were also asked if they had any medically diagnosed chronic diseases, and they rated their own general health status. Part-2 consisted of the Menopause Rating Scale (MRS) and Attitude Towards Menopause (ATM) scale. The MRS is a health-related quality of life scale, developed in Germany (by The Berlin Centre for Epidemiology and Health Research) in the early 1990s[189].

Its intent was to measure the severity of aging-symptoms and their impact on the quality of women's lives. The MRS is well accepted internationally. For assessment of menopausal symptoms, the eleven-item English version of the MRS was used. Three dimensions were extracted from the menopausal symptoms: somatic, psychological, and urogenital symptom complexes. A five-point rating scale allowed the women to describe the perceived severity of symptoms for each item (severity: 0 = no complaints to 4 = very severe symptoms). This is a self-administered instrument which has been widely used and validated in many clinical and epidemiological studies, and in research on the aetiology of menopausal symptoms to assess the severity of menopausal symptoms. The questionnaire was first translated into Bengali language and then translated back to English to validate that the original meaning of the questionnaire was maintained in the translation. Moreover, a pilot study was done on 20 women to validate the translated questionnaires. The women were asked whether or not they had experienced the menopausal symptoms shown in the questioner. However, it was noted from the pilot study, these women had difficulties in rating the scale themselves, in order to minimize these difficulties, a face-to-face interviewed was done rather than using self-administered respond. Data were collected individually at house level and confidentiality is maintained very strictly. No outsider were allowed during the data collection.

All women were interviewed in Bengali language. Face to face interviews were done with all the women, this was important to make sure that the right responses were collected.

The ATM scale invented by Neugarten et al[190] which contains nineteen attitudes towards menopause status, and used by Jassim et al in an Islamic country, Bahrain. Each item had five-point Likert's scale ranging from 1 to 5 (1: strongly negative attitude to 5: strongly positive) and the total score was calculated for each subject through summing up the points of the responses to each question and the mean attitude scale for each person was calculated as well.

3.7 Data analysis and interpretation

After data collection at the slum level, questionnaires were checked each day and again those were carefully checked after completion of all data collection. To minimize the errors, the data set was entered into computer and then checked again to correct any remaining error. Statistical Package for the Social Sciences (SPSS) version 16 was used in data entry, cleaning and analysis of variance. Data were analysed in terms of frequency distribution, percentages, cross tabulation including bivariate and multivariate analyses. Chi square (χ^2) test was done to find out the relationship between variables. Microsoft Office package was used for report writing.

3.9 Ethical Consideration

It was a cross-sectional study to find out the health seeking behaviour of the menopausal women in Vashantek slum of Dhaka city. Data was collected through face to face interview using pre-tested questionnaire. The participants (study subjects) were required to give informed consent after clearly explaining the purpose of the study and use of the study results for the benefit the suffering humanity with the disease concerned. They were explained that they were not obliged to take part in the study and they were free to express their unwillingness for the study. There were no threat of violation of their privacy. So the study did not have any appreciable ethical implication.

Chapter – 4
RESULTS

This descriptive cross-sectional study was carried out among 384 post-menopausal women. After data collection, data were analysed by computer and presented in this chapter under a few headings.

4.1 Socio-demographic characteristics of the menopausal women

4.1.1 Age distribution of menopausal women

Among the total menopausal women 34.9% were aged between 41-50 years, 28.1% were aged between 51-60 years, 24.7% between 61-70 years and 12.2% were aged 71 years and above. Mean age was 59.1 years with an Standard Deviation (SD) of 11.8.

4.1.2 Respondent's religion

97.1% of the respondents were found to be Muslims and only 2.9% were Hindus.

4.1.3 Respondent's marital status

Among the total menopausal women in the study, 54.9% were married, 3.4% were separated and 41.7% were widows.

4.1.4 Respondent's Occupation

62.2% menopausal women were housewives and 37.8% were working.

4.1.5 Respondent's Family income per month

Monthly family income of the respondents were ranged between 1,000-25,000 taka. 13.8% respondents didn't know their family income. Maximum respondents were in income group of Taka 5,001-10,000.

4.1.6 Respondent's Education

89.8% respondents were found with no education, 8.9% had received primary education and only 1.3% had reached to secondary education.

Table 4.1: Socio-demographic characteristics

n=384

Characteristics	Frequency	Percent
Age		
41-50 years	134	34.9
51-60 years	108	28.1
61-70 years	95	24.7
71 years and above	47	12.2
Religion		
Islam	373	97.1
Hindu	11	2.9
Marital status		
Married	211	54.9
Separated	13	3.4
Widow	160	41.7
Educational level		
Uneducated	345	89.8
Primary education	34	8.9
Secondary education	5	1.3

Characteristics	Frequency	Percent
Occupation		
Housewife	239	62.2
Domestic help	47	12.2
Labourer	33	8.6
Business	34	8.9
Service	25	6.5
Others (including beggars)	5	1.3
Family Income per month in Taka		
Unknown	53	13.8
1,000-5,000 Taka	85	22.1
5,001-10,000 Taka	192	50.0
More than 10,000 Taka	54	14.1

4.2 Onset of menopause

In case of 71.6% respondents, menopause started between the age of 41-45 years and for 28.4% between 46-50 years. Mean age of menopause onset was 45.3 years and SD 2.3.

Table 4.2: Onset of menopause

n=384

Menopause start age	Frequency	Percent
41-45 years	275	71.6
46-50 years	109	28.4

4.3 Use of family planning methods before menopause

61.2 % women did not use any family planning method in their whole life.

Table 4.3: Use of family planning methods before menopause

n=384

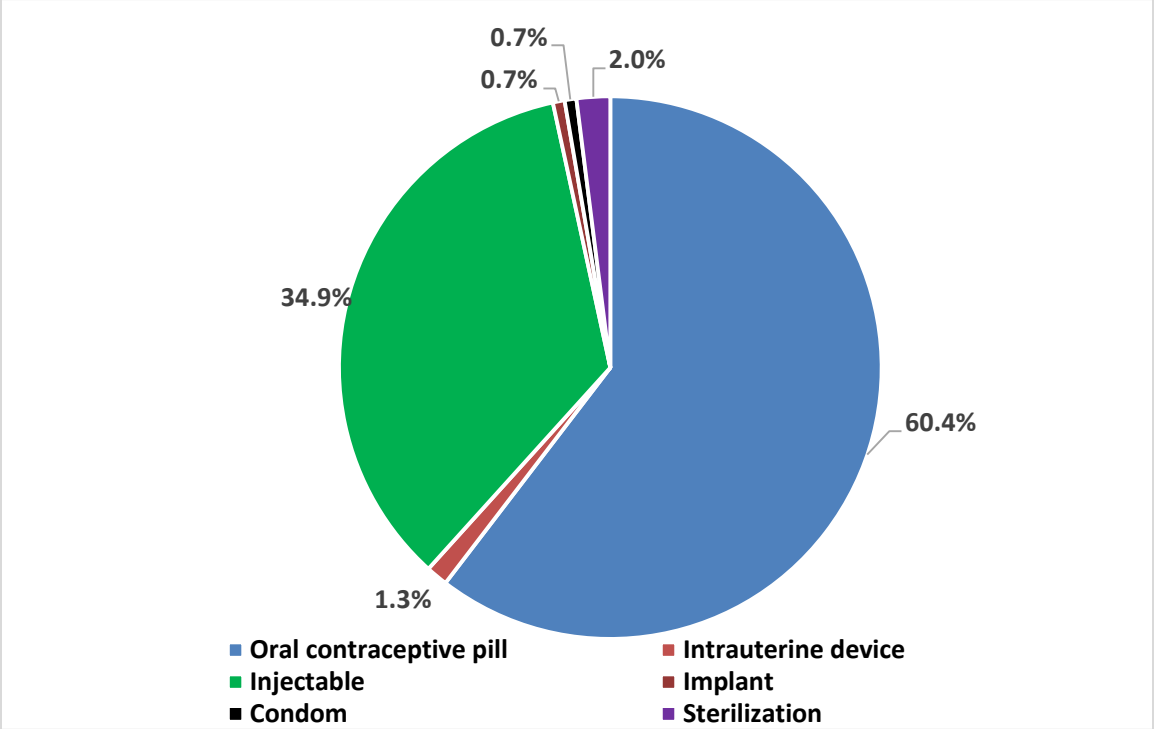
Use family planning methods before menopause	Frequency	Percent
Yes	149	38.8
No	235	61.2

4.4 Type of family planning methods use

Out of the respondents who used any kind of contraceptive methods for family planning, 60.4% used oral contraceptive pills followed by 34.9% who used injectable methods. User of other methods were very low.

Figure 4.1: Type of family planning methods use

n=149



4.5 Pregnancy history

Out of the respondents, 59.1% had 5 or less number of pregnancies in their lives and the rest of them had from 6 up to 12 pregnancies. 15.6% of them reported that they suffered from pregnancy complications at least once in their lives.

Table 4.4: Pregnancy history

n=384

Number of pregnancy	**Frequency**	**Percent**
0-5	227	59.1
6-12	157	40.9
Pregnancy complication		
Yes	60	15.6
No	324	83.9

4.6 Total number of alive children

43.2% of the respondents had 3-4 alive children and 31.8% had 5 or more children. Around 25% had 2 children or less.

Table 4.5: Total number of alive children

n=384

Number of alive children	**Frequency**	**Percent**
0-2	96	25.0
3-4	166	43.2
5 or more	122	31.8

4.7 Total number of family members

60.7% respondents had 0-5 family members and the rest 39.3% had 6 or more family members.

Table 4.6: Total number of family members

n=384

Number of family member	Frequency	Percent
0-5	233	60.7
6 or more	151	39.3

4.8 Family status

74% respondents are dependent and 26% are independent in their families.

Table 4.7: Family status

n=384

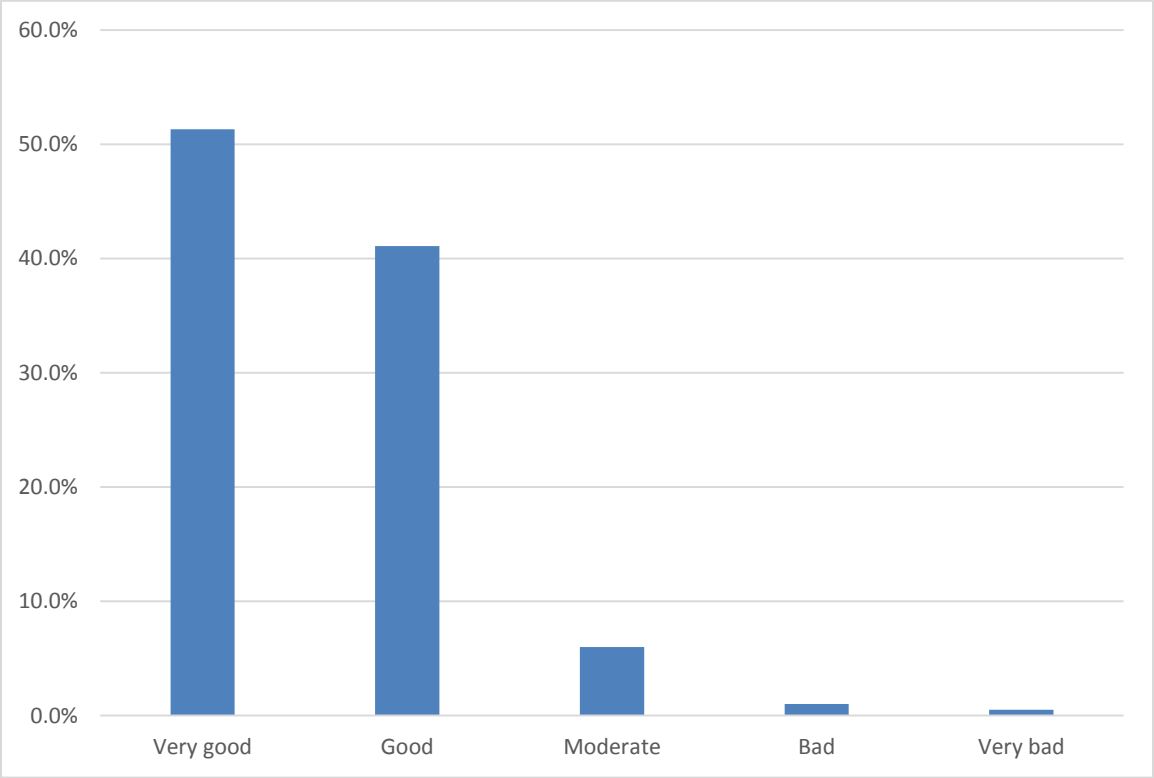
Family status	Frequency	Percent
Independent	100	26.0
Dependent	284	74.0

4.9 Family relation

Most of the respondents had very good (51.3%) or good (41.1%) relation with other members of the family.

Figure 4.2: Family relation

n=384



4.10 Personal habits

Most of the respondents (90.6%) mentioned that they wash hands before eating and after using toilet. Habit of chewing betel leaf (77.6%) and taking tea/coffee (59.6%) was found to be high. Habits like chewing tobacco use (15.6%) and smoking (2.6%) were also found in some postmenopausal women.

Table 4.8: Personal habits

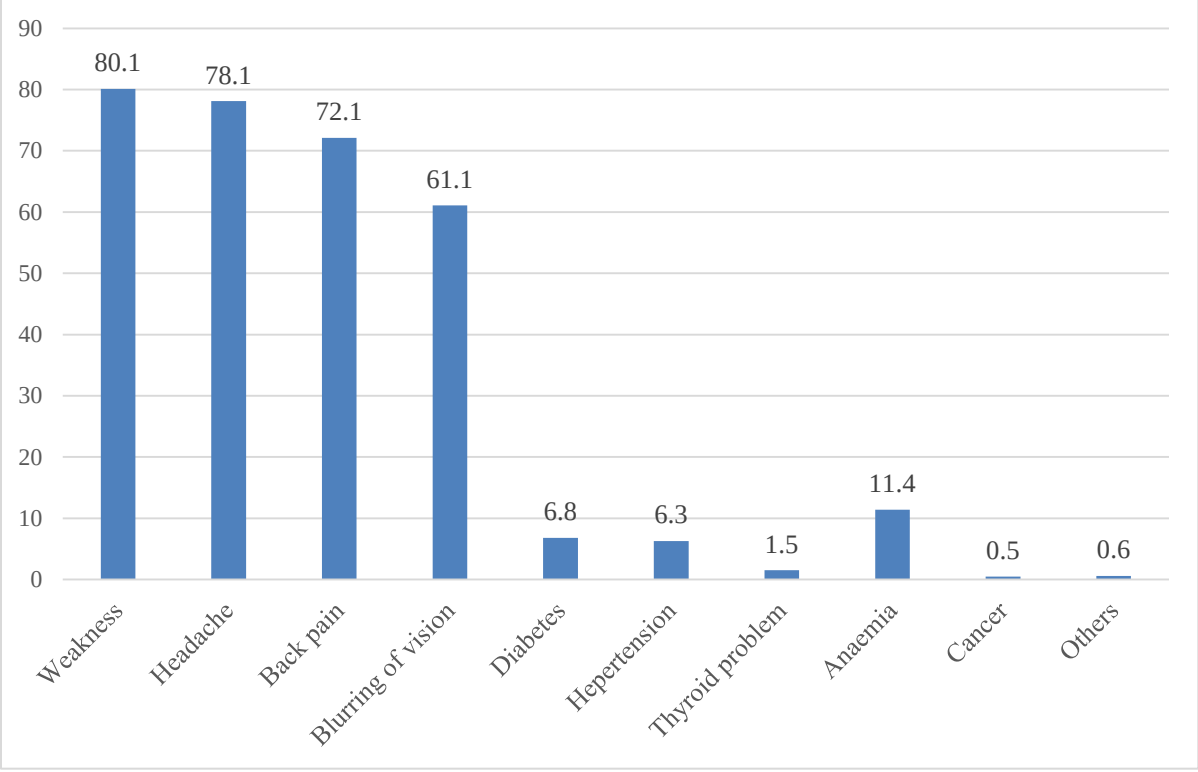
n=384

Personal Habits	Frequency	Percent
Hand washing before eating and after using toilet	348	90.6
Betel leaf	298	77.6
Tea/coffee	229	59.6
Chewing Tobacco use	60	15.6
Smoking	10	2.6

4.11 Health problems of postmenopausal women

Around 80.1% of the women said that they were feeling weaker after menopause. The other health problems included headache (78.1%), back pain (72.1%) and blurring of vision (61.1%). There were some percentage of diabetes (6.8%), hypertension (6.3%) and anaemia (11.4%).

Figure 4.3: Health problems of postmenopausal women



4.12 Age status with respect to Disease Association

The duration of menopausal symptoms increases along with age which was found to be statistically significant (P value 0.000).

Table 4.9: Age status with respect to Disease Association
n=384

	Duration of menopausal symptoms sufferings				Test statistics	
Age of the respondents	1-36 months	37-60 months	61-84 months	85 months and above	Chi square test	P Value
41-50years	110 82.1%	16 11.9%	5 3.7%	3 2.2%	55.776	.000
51-60 years	56 51.9%	22 20.4%	16 14.8%	14 13.0%		
61-70years	47 49.5%	13 13.7%	16 16.8%	19 20.0%		
71 years and above	17 36.2%	11 23.4%	7 14.9%	12 25.5%		

4.13 Marital status with respect to measures to solve menopausal problem

Out of married, separated and widowed women, comparatively more (15.2%) married women consulted a doctor to solve menopausal problem than separated and widow. 44.5% married women bought medicine from pharmacy without consulting doctor.

Table 4.10: Marital status with respect to measures to solve menopausal problem

Marital status	measures to solve menopausal problem						Test Statistics	
	self-care	consult with relatives or neighbour's	traditional care	homeopathy treatment	buy medicine from pharmacy without consulting doctor	consult a doctor	Chi square test	P Value
married	32 15.2%	17 8.1%	21 10.0%	15 7.1%	94 44.5%	32 15.2%	11.569	.315
separated	0 0%	2 15.4%	0 .0%	3 23.1%	5 38.5%	3 23.1%		
widowed	20 12.5%	9 5.6%	22 13.8%	16 10.0%	70 43.8%	23 14.4%		

4.14 Symptoms of menopause

Out of the three groups of symptoms of menopause, women suffered comparatively less from Urogenital symptoms (overall 37.2%) and only 18.2% of them had any kind of sexual problem including dyspareunia. Almost all the women suffered from Psychological and Somatomotor problems. Out of all individual symptoms, all psychological problems were reported by almost all of the women. Hot flush (95.3%) and joint or muscle pain (93.8%) from Somatomotor group were the commonest ones as well.

Figure 4.4.1: Symptoms of menopause

n=384

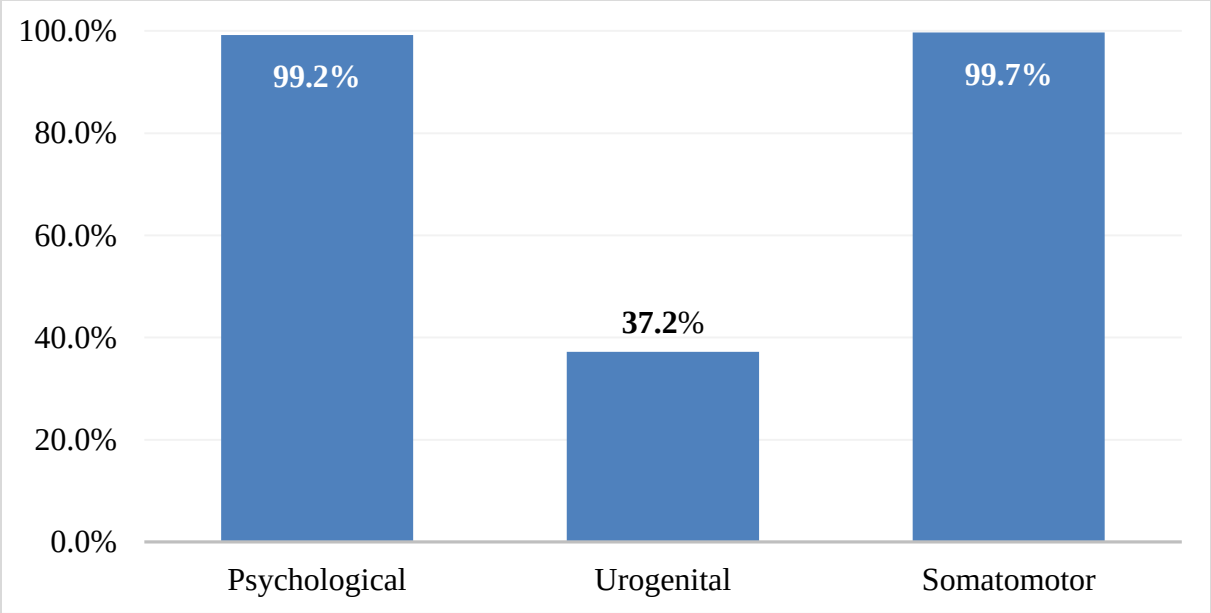
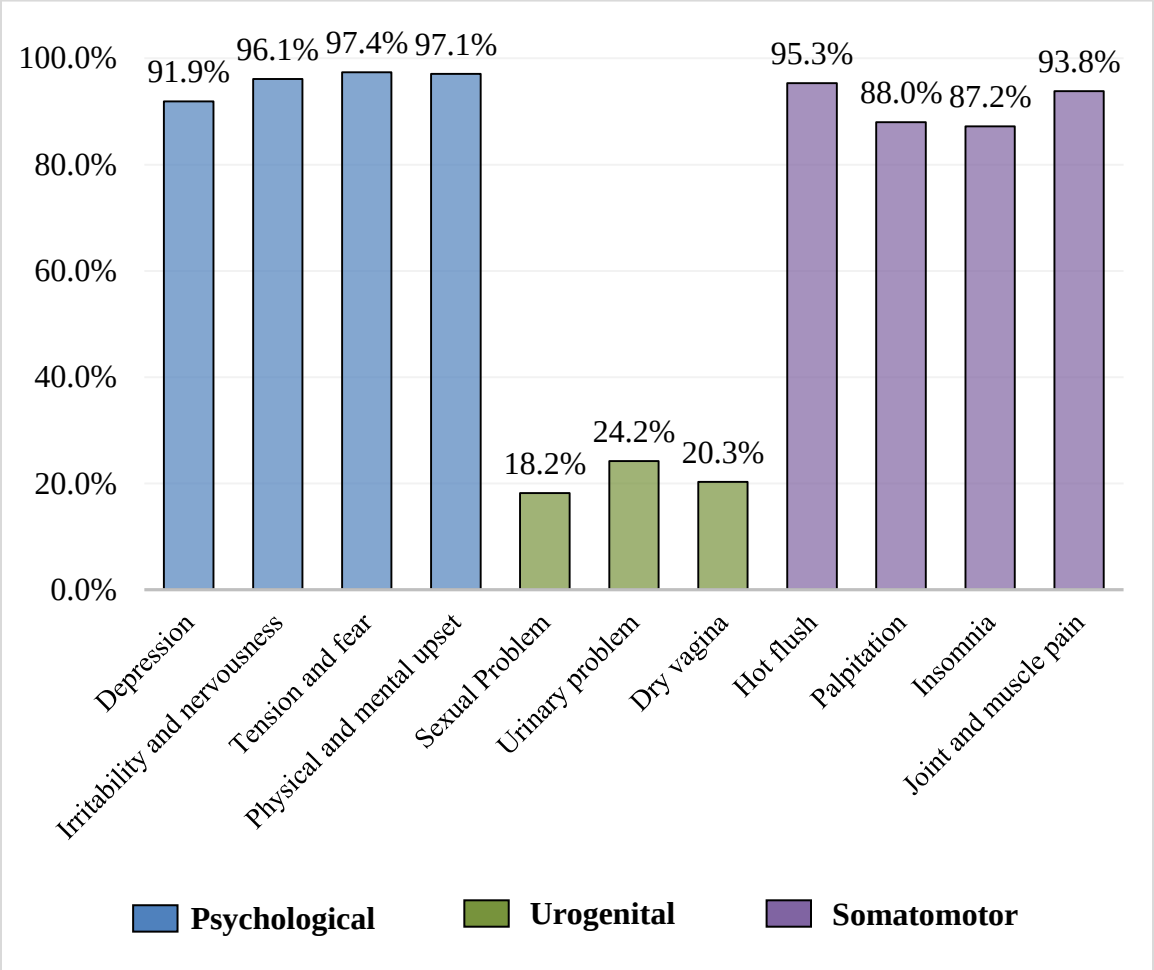


Figure 4.4.2: Symptoms of menopause



4.15 Age status with respect to Menopause rating scale symptoms

MRS somatomotor symptom was present almost 100% among all age group respondents. MRS psychological symptoms was also present (98%-99%) in all age group respondents. MRS urogenital symptom was more (45.3%) in 61-70 years respondents than other age group.

Table 4.11: Age status with respect to Menopause rating scale symptoms

Age of the respondents	MRS psychological		Chi sq. (P-value)	MRS somato motor		Chi sq. (P-value)	MRS urogenital		Chi sq. (P-value)
	Absent	Present		Absent	Present		Absent	Present	
41-50 years	1 .7%	133 99.3%		0 .0%	134 100.0%		90 67.2%	44 32.8%	
51-60 years	1 .9%	107 99.1%	.492 (.921)	1 .9%	107 99.1%	2.562 (.464)	72 66.7%	36 33.3%	5.002 (.172)
61-70 years	1 1.1%	94 98.9%		0 .0%	95 100.0%		52 54.7%	43 45.3%	
71 years and above	0 0%	47 100.0%		0 .0%	47 100.0%		27 57.4%	20 42.6%	

4.16 Educational status with respect to Menopause rating scale symptoms

Respondents who had more educational level (Secondary level education) had less Menopause rating scale symptoms and respondents who are uneducated had more Menopause rating scale symptoms.

Table 4.12: Educational status with respect to Menopause rating scale symptoms

Education level	MRS Psychological		Chi Sq (p-value)	MRS Somatomotor		Chi Sq (p-value)	MRS Urogenital		Chi Sq(p-value)
	Absent	Present		Absent	Present		Absent	Present	
Uneducated	3 .9%	342 99.1%	.342	1 .3%	344 99.7%	.269	218 63.2%	127 36.8%	0.113
Primary education	0 0%	34 100.0%	(.843)	0 .0%	34 100.0%	(.874)	20 58.8%	14 41.2%	(.945)
Secondary education	0 .0%	5 100.0%		0 .0%	5 100.0%		3 60.0%	2 40.0%	

4.17 Income status with respect to Menopause rating scale symptoms

Respondents who had more monthly income (10001 taka and above) had less Menopause Rating Scale symptoms, whereas respondents with less income had more symptoms.

Table 4.13: Income status with respect to Menopause rating scale symptoms

Income	MRS psychological		Chi sq. (P-value)	MRS somato motor		Chi sq. (P-value)	MRS urogenital		Chi sq. (P-value)
	Absent	Present		Absent	Present		Absent	Present	
unknown	0 .0%	53 100.0%		0 .0%	53 100.0%		1 1.9%	52 98.1%	
1000-5000 Taka	0 .0%	85 100.0%		0 .0%	85 100.0%		0 .0%	85 100.0%	
5001-10000 Taka	1 .5%	191 99.5%	2.098	1 .5%	191 99.5%	.113	2 1.0%	190 99.0%	5.002
10001 Taka and above	0 .0%	54 100.0%	(.552)	0 .0%	54 100.0%	(.945)	0 .0%	54 100.0%	(.172)

4.18 Menopause Rating Scale (MRS)

A rating scale was used to collect responses from the postmenopausal women on the symptoms of menopause and intensity of those. It was found that most of the women suffer from multiple symptoms of menopause. Psychological problems like depression,

irritability, tension and being upset were more prevalent symptoms along with joint and muscle pain whereas urogenital symptoms were comparatively less.

Table 4.14: Menopause Rating Scale (MRS)

n=384

Symptoms	None	Mild	Moderate	Severe	Very severe
Hot flush	18 (4.7%)	148 (38.5%)	69 (18.0%)	140 (36.5%)	9 (2.3%)
Palpitation	46 (12.0%)	90 (23.4%)	147 (38.3%)	95 (24.7%)	6 (1.6%)
Insomnia	49 (12.8%)	103 (26.8%)	70 (18.2%)	143 (37.2%)	19 (4.9%)
Depression	31 (8.1%)	94 (24.5%)	55 (14.3%)	193 (50.3%)	11 (2.9%)
Irritability, nervous	15 (3.9%)	36 (9.4%)	48 (12.5%)	249 (64.8%)	36 (9.4%)
Tension, Fear	10 (2.6%)	34 (8.9%)	50 (13.0%)	266 (69.3%)	24 (6.2%)
Physical and mental upset	11 (2.9%)	38 (9.9%)	150 (39.1)	171 (44.5%)	14 (3.6%)
Sexual problem	314 (81.8%)	25 (6.5%)	15 (3.9%)	25 (6.5%)	5 (1.3%)
Urinary problem	291 (75.8%)	25 (6.5%)	16 (4.2%)	47 (12.2%)	5 (1.3%)
Dry Vagina	306 (79.7%)	34 (8.9%)	6 (1.6%)	31 (8.1%)	7 (1.8%)
Joint and Muscle pain	24 (6.2%)	29 (7.6%)	141 (36.7%)	123 (32.0%)	67 (17.4%)

4.19 Menopause Rating Scale (MRS) score

65.6 % respondents had less intensive score (1-22) and rest of them had more intensive score (23-44).

Table 4.15: Menopause Rating Scale (MRS) score

MRS score	Frequency	Percent (%)
Less intensive (1-22)	252	65.6
More intensive (23-44)	132	34.4

4.20 Interference of symptoms of menopause in daily life

Menopausal symptoms had more impact on family responsibility and bonding compared to work capacity. It also had interfered with their social life.

Table 4.16: Interference of symptoms of menopause in daily life

n=384

Symptoms of Menopause interferes with	**Not at all**	**Mild**	**Moderate**	**Severe**
Work capacity	90 (23.4%)	267 (69.5%)	22 (5.7%)	5 (1.3%)
Family responsibility	79 (20.6%)	123 (32.0%)	39 (10.2%)	143 (37.2%)
Family bonding	50 (13.0%)	159 (41.4%)	47 (12.2%)	128 (33.3%)
Social life	58 (15.1%)	134 (34.9%)	161 (41.9%)	31 (8.1%)

4.21 Health seeking behaviour

For management of menopausal symptoms, almost (44%) of the women in the study bought medicine from local pharmacies without consulting with a doctor. 15.1% of them went to a doctor, 13.5% of them took self-care and 11.2% managed with traditional care.

Table 4.17: Health seeking behaviour

n=384

Health seeking behaviour	Frequency	Percent
Buy medicine from pharmacy without consulting with a doctor	169	44.0
Consult a doctor	58	15.1
Self-care	52	13.5
Traditional care	43	11.2
Homeopathy treatment	34	8.9
Consult with relatives or neighbours	28	7.3

4.22 Intensity of Menopause rating scale score with respect to Health Seeking Behavior of the post-menopausal women

It was found that the menopausal women who had sought for support to manage menopausal symptoms had less Menopause rating scale (MRS) score compare to the others, who had not, this was statistically significant as well. (P value 0.007).

Table 4.18 : Intensity of Menopause rating scale score with respect to Health Seeking Behavior of the post-menopausal women

n=384

Menopause rating scale score	Health Seeking Behavior of the post-menopausal women						
	Self-care	consult with relatives or neighbours	traditional care	homeopathy treatment	buy medicine from pharmacy without consulting doctor	consult a doctor	Chi sq. (P-value)
Less intensive (0-22)	26 6.8%	14 3.6%	24 6.2%	26 6.8%	119 31.0%	43 11.2%	15.847a (.007)
More intensive (23-44)	26 6.8%	14 3.6%	19 4.9%	8 2.1%	50 13.0%	15 3.9%	

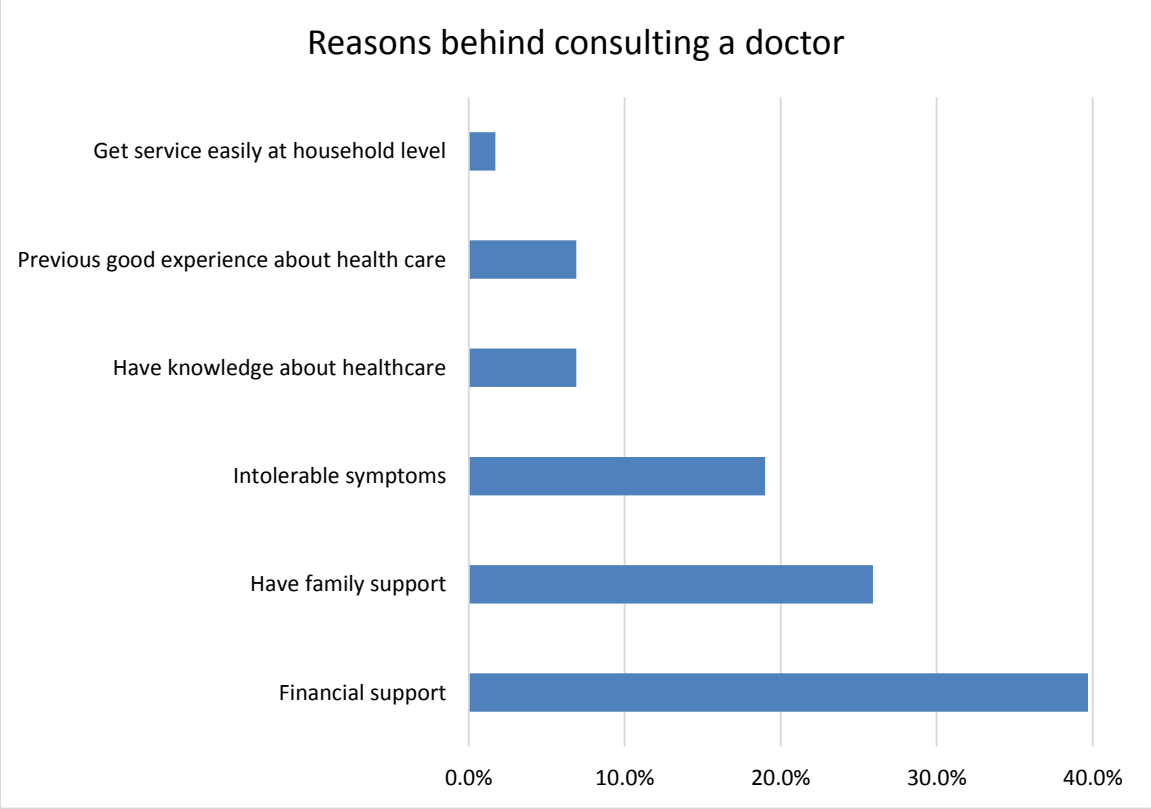
4.23 Reasons supporting or preventing from receiving advice of a medical doctor

4.5.1: Reasons behind consulting a doctor

Out of the women who reported consulting a medical doctor for management of their menopausal symptoms, 39.7% said that they went to a doctor because they had financial support for doing so, 25.9% mentioned about having family support followed by intolerable symptoms as the reason with 19% of them visiting a doctor as they couldn't tolerate the intensity of the symptoms. Very less percentage of them (6.9%) had prior knowledge (6.9%) about seeking advice for these symptoms or had previous good experience (6.9%) from health care facilities. It was also found that easy access to health services near their households was not a reason for seeking advice.

Figure 4.5.1: Reasons behind consulting a doctor

n=58

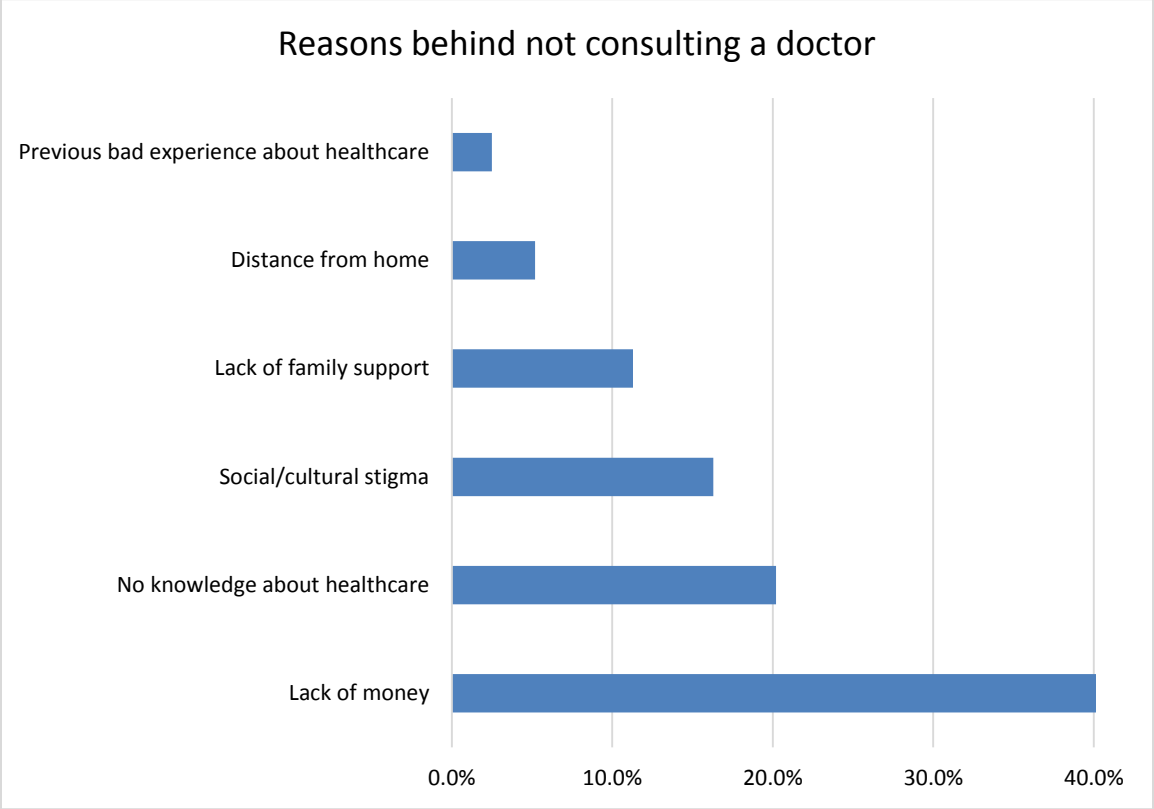


4.5.2: Reasons behind not consulting a doctor

It was found that lack of financial capacity was the main factor behind not seeking advice from a medical doctor for menopausal symptoms as 44.5% of the women identified that as the reason. Other major factors include lack of knowledge about health care services (20.2%), social and cultural stigma (16.3%) and lack of family support (11.3%)

Figure 4.5.2: Reasons behind not consulting a doctor

n=326



4.24 Perception towards menopause

More than half of the women (55.2%) took menopause positively and almost all of them knew that this a natural event in life. Majority of them (71.9%) were not aware of the usual age of menopause. Though most of the women knew about the natural event, most of them responded that that they didn't have adequate knowledge of it as 41.9% had no idea and 40.9% had very little knowledge about menopause. Availability of information about menopause was mainly from elderly people in the family (84.6%) and almost all of them (99.2%) had no information on Hormone Replacement Therapy (HRT).

Table 4.19: Perception towards menopause

n=384

View towards menopause	Frequency	Percent
Positive	212	55.2
Negative	172	44.8
Thinking of menopause		
Disease	8	2.1
Natural	376	97.9
Knowledge on age of menopause		
Yes	108	28.1
No	276	71.9
Knowledge level about menopause		
Very good	1	0.3
Good	13	3.4
Moderate	52	13.5
Very little	157	40.9
No idea	161	41.9
Source of information on menopause		
Elderly in family	325	84.6
Received no information	53	13.8
Friends	5	1.3
TV	1	0.3
Idea about HRT		
Yes	3	0.8
No	381	99.2

4.25 Attitude towards menopause

Attitude of postmenopausal women towards menopause was captured using a set of questionnaires including both positive and negative statements regarding menopause to see if the women agree with the statements. It was found that the responses varied widely for different statements reflecting their different attitudes towards menopause. It was also observed that in case of some statements, there were more agreements among the women. Most of them (85.4%) thought that cessation of menstruation was the only difference after menopause and women feel free to do things (83.3%). Around 85.2% of them were worried about what their husbands will think about this change and 89.3% of them felt that this was the biggest change in their lives.

Table 4.20: Attitude towards menopause

n=384

Attitude towards menopause	Agree Frequency & percentage (%)	Disagree Frequency & percentage (%)
Positive attitudes		
Menstruation cease is the only difference between menopausal and non-menopausal women	328 (85.4)	56 (14.6)
No important change occurs in women's life after menopause	202 (52.6)	182 (47.4)
Women gets more confidence in herself after menopause	220 (57.3)	164 (42.7)
Life becomes more attractive	285 (74.2)	99 (25.8)
A women's body may change, otherwise she doesn't change much	253 (65.9)	131 (34.1)
Women becomes calmer and happier	270 (70.3)	114 (29.7)
Feel better after menopause	250 (65.1)	134 (34.9)
Feels free to do things	320 (83.3)	64 (16.7)
Negative attitudes		
Worried about husband's concern	327 (85.2)	57 (14.8)
Should see a doctor	136 (35.4)	248 (64.6)
Biggest change that happens in life	343 (89.3)	41 (10.7)
Unpleasant experience	192	192

	(50.0)	(50.0)
Think menopause as the beginning of the end	182 (47.4)	202 (52.6)
Suffers in depression	203 (52.9)	181 (47.1)
Women naturally dread	212 (55.2)	172 (44.8)
Expect some trouble during menopause	207 (53.9)	177 (46.1)
Women feel sad	214 (55.7)	170 (44.3)
Women don’t consider themselves as real women	273 (71.1)	111 (28.9)
Women can’t control physical changes, which suffers more	224 (58.3)	160 (41.7

Chapter – 5

5.1 DISCUSSION

In Bangladesh, menopause is not a topic much talked about except among a few educated and affluent urban people. Considered to be a biological phenomenon, it is accepted without much complaint among the majority of the elderly rural population. The social custom of respect and care for the old does not cause much problem in general. The global increase in women's life span with the added problems of old age has impacted on Bangladeshi women. There are 28–30 million women (49% of the total population) and elderly women are increasing in number (3–5% aged ≥ 46). The average age of menopause is 51 years and the average life span of women is now 62 years[191].

Slum population living in different parts of Dhaka suffer from many different problems. Extremely high population density along with poverty translates into unhealthy living conditions. Unavailability and high sharing rates of basic services is a major problem. Inadequate access to health services and lack of health awareness among the slum dwellers are common. Within this situation, older postmenopausal women suffer even more as they have even less support compared to others in the community. Women, especially widows are the most vulnerable among urban poor[17] and most of the postmenopausal belonging to these groups suffer significantly with health problems and in seeking support and care for those.

Postmenopausal women in socio-demographic perspective

Socio-demographic background has enormous effect on menopause and can alter the way the symptoms are experienced[34]. The mean age of menopause onset is 45.3 years. Slightly higher to the findings of 48.3 years made in a study done in Kannur and 48.7 years made in a study done in Manipal[192]. But higher findings of menopause onset was 51.14 years found in a study done by Shahedur in Kushtia, Bangladesh. The mean age at menopause differs from country to country. Factors associated with earlier menopause include lower body weight, menstrual length, nulliparity, smoking, never-use of oral contraceptives, lower socioeconomic status, and race or ethnicity. Higher body weight is

associated with later onset of menopause[191]. Median age of postmenopausal women were found to be 57.5 years. There is a prediction median age will have increased to 64 years globally by the year 2030[1]. While 54.9% of the postmenopausal women were married, a large percentage of them (41.7%) were widows. In a male dominated community, this clearly shows that a large percentage of postmenopausal women do not have the support of their husbands and depend on others in the family or community.

Education and economic condition

In a slum, almost all the families were actually migrants from different parts of the country in search for livelihood and income. The reason behind the migration is usually always poverty and lack of work opportunities in the rural area. High poverty is expected in these communities. Education level is quite low among the postmenopausal women and 89.8% of them received no education. This is expected as female education was quite neglected when these women were of school age and as most of them come from rural areas where education facilities were not so available then. Educational qualification is an important factor in attitude towards menopause among women[25]. Lower level of education in women might lead to psychological changes, which would be foundation for menopausal symptoms (Blumel et al., 2002). Previous studies investigating factors influencing the prevalence, type, and severity of menopausal symptoms have found that lower educational level, lack of employment outside the home, and lower socioeconomic status are associated with increased prevalence and severity of menopausal symptoms (Dennerstein, Dudley, Hopper, Guthrie, & Burger, 2000; Polit & LaRocco, 1980). It is noteworthy that increased severity of menopausal symptoms is also associated with absence of a partner among other factors specifically in Korean postmenopausal women (Aso, 1998). Findings in this study are consistent with the prior studies. Majority of the postmenopausal women (62.2%) in the slum were found to be housewives and stay at home. Rest of them have different types of occupations including working as domestic help (12.2%), day labourer (8.6%), running small business (8.9%) etc. Some of them were found to be even beggars which clearly shows the level of poverty. Interestingly, the family income was unknown to many of the postmenopausal women as 13.8% of them said that they are not aware of the total monthly income of her family. Monthly income

of the rest of the women's families varied a lot from 1,000 Taka to 25,000 Taka, this is to be noted that for many of the families in slums, income is not stable and varies greatly with time. Highest percentage of families (50%) were found to earn between 5,001-10,000 Taka per month on average. Income and socioeconomic factors including job have impact on menopause and health seeking behaviour for it[34]. Poor socioeconomic status is also associated with higher chances of getting early menopause11. Knowledge about menopause has been commonly learnt from the older family members (84.6%) and friends (1.3%), little from reading material or TV. It signifies that health education and mass media communication are still inadequate.

Reproductive life and onset of menopause

The usual age of menopause for women living in slums in Dhaka was found to be 41-45 years as highest number of postmenopausal women (71.6%) reported their menopause started during this age bracket. Mean age of menopause was found to be 45.3 years. In developed countries, this can be as high as 51 years and it was found that a number of factors can lower the age of menopause including low socioeconomic status[55,56,57].

Use of family planning methods before menopause was found to be less in the postmenopausal women living in slums as only 38.8% of them reported use of any kind of family planning method during their reproductive age. The oral contraceptive pills were found to be the most popular contraceptive method as 60.4% of all women who used contraceptives during their reproductive age, took these pills. This low use of family planning methods translated into higher number of pregnancies as 40.9% of the women reported that they had 6 or more pregnancies in their lives where 15.6% of them suffered from pregnancy complications as well.

Status of postmenopausal women in their families

Though most of the women had higher numbers of children alive, the average family size was not very large as 60.7% families were found to be limited to 5 members. This is largely due to fragmentation and formation of independent smaller family units and also

migration. Around 74% of the women said that they're dependent on their families and the rest were independent. Relation with other family members was mostly very good (51.3%). Family environment has important effect on menopause and health seeking behaviour for postmenopausal symptoms[34].

Personal habits and health problems of postmenopausal women

During the study, the postmenopausal women were found to have several habits that may have an impact on their health and wellbeing. Most of them (90.6%) reported that they wash their hands before eating and after using toilet. The usual practices like chewing betel leaf (77.6%) or taking tea (59.6%) were also there. Practices that can bring negative health consequences were also found to be prevalent as 15.6% reported use of chewing tobacco and 2.6% were smokers. It was found in the past that smoking significantly decreases the age of menopause[55,56].

The women were asked about any health problem that they were suffering from and the results showed that most of the women were suffering from weakness (80.1%), headache (78.1%), back pain (72.1%) and blurring of vision (61.1%). It was also found that some of them were suffering from different types of non-communicable diseases, Diabetes (6.8%), Hypertension (6.3%), Thyroid diseases (1.5%) and Cancer (0.5%) but the numbers were relatively less. Most of the menopausal women specially in the slum area remain undiagnosed from the exact disease condition as majority of them do not visit a doctor in their lifetime.

Symptoms of menopause

The assessment tool that we used in our study was based on Menopause Rating Scale (MRS) questionnaire. These questionnaire has been widely used in many epidemiological and clinical research when investigating the menopausal symptoms. Women are much less embarrassed about reporting the non-genital and non-sexual complaints such

as hot flushes, crawling sensation, insomnia, irritability and depression, hence the apparent higher prevalence of these non-genital and non-sexual symptoms.

During menopause, women start to suffer from a variety of symptoms. In many of the cases, the women are not aware that menopause brings these symptoms[5]. The type and intensity of these symptoms vary from women to women and can decrease the quality of life[37]. Almost all of the women in this study were found to have suffered from Psychological problems (99.2%) and the rate was quite high for all individual symptoms under this category. Somatomotor problems were also very high as 99.7% women suffered from at least symptom under this category but it was found that hot flush (95.3%) and joint and muscle pain (93.8%) were comparatively higher than the other symptoms under this category which is quite similar when compare to other study. Hot flashes, night sweats, and vaginal dryness are clearly tied to the menopausal transition, and there is some positive evidence of a menopausal link for sleep disturbance[191].

Women suffered comparatively less from Urogenital symptoms and around 37.2% of them had any symptom under this category.

When the postmenopausal women were asked if the symptoms of menopause interfere with their daily personal life, they responses varied widely. It was found that it has less impact on their work capacity (69.5% mild interference) compared family responsibilities and bonding (37.2% and 33.3% severe interference) while it had mild (34.9%) to moderate (41.9%) interference in their social life. In some previous studies, it was found that around 30% of the women considered menopausal symptoms as bothersome[13,14].

In the current study, 95.3% postmenopausal women complained of hot flushes. This finding is comparable to finding in the studies carried out by Madhukumar et al. (2012, Bengaluru), Nusrat et al. (2008, Pakistan), Sharma et al. (2004-05, Jammu) and Dutta et al. (2012, Tamil Nadu), in which the prevalence of hot flushes were found to be 55.9%, 59.4%, 53.86% and 60.9%, respectively.

Sleep disturbances was reported by 87.2% postmenopausal women in the current study. This is comparable to the results in the studies conducted by Dasgupta and Ray (2007,

West Bengal), Aaron et al. (2002, Tamil Nadu) and Rahman et al. (2010, Bangladesh), in which the prevalence of sleep disturbances were found to be 70.0%, 52.0% and 54.4%, respectively.

In this study, 93.8 % postmenopausal women complained of muscle or joint pain. Similar findings were observed in the studies conducted by Sagdeo and Arora (2007-09, Nagpur), Nusrat et al. (2008, Pakistan) and Sharma et al. (2004-05, Jammu), in which the prevalence of muscle or joint pain were found to be 60.4%, 66.74% and 53.86%, respectively.

Irritability was reported by 96.1 % of postmenopausal women in the present study. This finding was consistent with results of Kaulagekar (2011, Pune), Rahman et al. (2010, Bangladesh) and Sharma et al. (2004-05, Jammu).

Similar to the prevalence of palpitation (88.0%) observed by Kaulagekar (2011, Pune), in the current study, 38.1% postmenopausal women complained of palpitations. This finding was similar to the findings of the study carried out by Monterrosa et al. (2006-07, Colombia), in which the prevalence of palpitation was observed to be 26.8% among Non-Afro-Colombian women and 38.8% among Afro-Colombian women.

In the current study, 24.2 % postmenopausal women had urinary complaints. This is comparable with results of the studies conducted by Rahman et al. (2010, Bangladesh) (12.8%) and Khan and Hallad (2004, Karnataka) (9.9%). Monterrosa et al. (2006-07, Colombia) found urinary complaints in 14.9% of Afro-Colombian women.

Sexual problem was reported by 18.2% of postmenopausal women in the present study. Rahman et al. (2010, Bangladesh) (31.2%) and Gollschewski et al. (2004, Queensland) (34.5%) observed similar results.

Most of postmenopausal women suffered from depression, which is a matter of concern. Rahman et al. (2010, Bangladesh) found the prevalence of depressive mood to be 37.3%.

Poomalar and Arounassalame (2012, Puducherry) reported the prevalence of depressed mood to be 57.2%.

Thus almost 90% postmenopausal women in the study area suffered from one or more menopausal symptom(s), which is a matter of concern and cannot be ignored.

Age status with respect to Disease Association

The duration of menopausal symptoms increases along with age which was found to be statistically significant (P value 0.000). Compared with women of other racial/ethnic groups, African American women reported the longest total vasomotor symptoms duration (median, 10.1 years). Additional factors related to longer duration of symptoms were younger age, lower educational level, greater perceived stress and symptom sensitivity, and higher depressive symptoms and anxiety at first report of vasomotor symptoms[193].

Lumbago or low back pain was the most frequent menopausal symptom in Taiwan, and hand joints pains in Korea (WHO, 1981). These contradictory results may be explained by cultural, social, economic, psychic or physiological differences in patients in the different study locations (Punyahotra & Dennerstein, 1997).

Health seeking behaviour

Earlier studies have shown that women of developing countries are still lagging behind in health matters like menopause[194]. Our study has also revealed the same. Women learn to respond to the menopausal symptoms in an individual and culturally dependent way[195].
It was found that most of the women (44%) in this study went to nearby pharmacies and bought medicines to manage various menopausal symptoms they suffered from, without any advice from a doctor. However, 15.1% of them went to a medical doctor for advice to manage their symptoms. Around 13.5% and 11.2% of the women tried to manage the

symptoms with self-care or traditional care respectively. Some of them (8.9%) even received homeopathy management and some (7.3%) consulted with the relatives and neighbours for management. Treatment seeking attitude found in only few highly educated and elite women who could manage the costs of hormone replacement therapy (HRT). Most of the participants actually came to the physician for associated diseases. Earlier studies have revealed the fact that even who have some ideas or knowledge about menopause, do not put into practice in their behaviour yet[196]. Similar views have been found in the present study.

Though treatment of the symptoms during the transitional phase has now gained more importance than ever before[10,11]. The main reason behind seeking or not seeking advice from a medical doctor was found to be financial situation of the women as 39.7% who went to a health centre to seek advice from a medical doctor mentioned that they were able to do that because of availability of financial support. On the other hand the women who couldn't go to a doctor, 44.5% of them couldn't go due lack financial capacity pay the required cost for it. Family support and severity of symptoms were among the main factors behind seeking health advice from a medical doctor. Some of the other major factors preventing the women from seeking health care services lack of knowledge, social stigma and lack of family support. The high prevalence of Buy medicine from pharmacy without consulting with a doctor in this study is similar to findings by Ige and Nwachukwu (2009) in South-Western Nigeria and Uzochukwu and Onwujekwe (2004) in South-Eastern Nigeria. Although their services are cheap and close to the people, this finding is a source of concern as they are often untrained and help to perpetrate the vicious circle of counterfeit drugs and death (Ige et al., 2009). The unfriendly attitude of health workers, perceived high cost of hospital services, lack of drugs and basic laboratory services, non-availability of a regular physician on site at the facility and delays in service in hospitals could have accounted for this (Sule et al., 2008). The women that did nothing about their symptoms could have done so because of the mild nature of the symptoms, financial constrain or poor attitude towards health related issues.

Intensity of Menopause rating scale score with respect to Health Seeking Behavior of the post-menopausal women

It was found that the menopausal women who had sought for support to manage menopausal symptoms had less Menopause rating scale (MRS) score compare to the others, who had not, this was statistically significant as well (P value 0.007). A low prevalence of menopausal symptoms and its medical attention has been reported by those studies of south and eastern Asian, African and Latin American countries (Baig LA, Karim SA.).

Perception towards menopause

A perception of the menopause as a positive event also varies in different countries between 40-90%[197]. Ours low positive perception may be the result of thinking of the menopause as the end of fertility, feminity and sexuality. This parameter also has been influenced by the age, parity, education and socioeconomic status. Several factors have been found in the present study influencing women's perception and attitude towards menopause e.g. age, parity, education, socioeconomic condition, employment etc. Positive attitude was found in highly educated women with better knowledge, attitude and experience of menopause in a n urban based study of middle class and elite women by Tanira S et al.

Though more than half (55.2%) of the women's view towards menopause was found to be positive, around 44.85% of them took it negatively which shows their level of understanding of menopause to some extent. In societies where it is viewed as a positive event, the symptoms are found less common[35]. Almost all of the women were aware about menopause and knew it as a natural event in life but few of them (28.1%) knew about usual age of menopause and around 82.85% of them had no or very little idea about menopause. The reason behind this was found to be insufficient availability of information, as for most of the women (84.6%), elderly members of the families were the only source of information on menopause. As expected, almost none of them were aware of hormone replacement therapy though relief of symptoms is possible with it[135,136].

Attitude towards menopause

Researchers over the years have concluded that women attitudes are one of the crucial variables in the success of management of menopause[198]. Dodd and colleagues have conceptualized symptom experience as an interface between perception and evaluation that can be positive and result in a healthy healing response, or can be problematic and require a tailored intervention from a health care provider[199]. Attitude of postmenopausal women towards menopause varied widely which has a clear linkage with lack of understanding and information on menopause. Though women had all different opinions regarding menopause, their support clustered around some common attitude towards menopause. If we look into the positive attitudes, most of them (85.4%) thought that cessation of menstruation was the only difference after menopause and women feel free to do things (83.3%). It was found in studies that some women consider menopause as an opportunity to concentrate on new activities[8,9]. On the negative side, around 85.2% of them were worried about how their husbands will feel about this change and 89.3% of them felt that this was the biggest change in their lives.

Clinical implications

In 1992, the maximum number of women seeking consultation for menopausal symptoms in the United States was 15%. In Australia, 86% of the 45-55 year-old women in a 9-year study by Guthrie et al. consulted a physician about menopausal symptoms. We believe that the number of professional healthcare consultations in Bangladesh may also be increasing in women during the menopause transition, and this will put a burden on the health care delivery system.

This study has implications for research, practice and education. Healthcare providers especially at the primary care level need to play a more discernible and pragmatic role in constantly assessing the health needs of menopausal women as well as to implement appropriate health educational and promotional programs essential for improving the quality of life of menopausal women in Bangladesh. Most of the menopause-associated symptoms studied were nonspecific and could be attributed to other medical and/or mental conditions or medications. Primary care providers must consider other

factors/problems as well as menopause in their differential diagnosis. For example, night sweats in the environment of this study may be confused with the sensations of heat and sweating caused by hot weather. It has also been reported that night sweats experienced by primary care patients were associated with panic attacks, greater body mass index, chronic infection, sleep disturbances, antihistamines, and antidepressants, in addition to menopause (Mold, Mathew, Belgorem, & DeHaven, 2002). Greater cooperation in the multidisciplinary care of women's mental health could help menopausal women and the health care delivery system reduce unnecessary medical costs. With the global increase in life expectancy, it is imperative to shift the focus of public health to address the emerging health issues of middle aged women. Strong emphasis needs to be laid to improve medical facilities to impart better services in accordance with changing need of women.

Policy implications

It was evident that education improves knowledge, awareness and attitude towards menopause. Improvement of overall coverage of education alongside economic growth will possibly have positive impact on attitude towards menopause.

Availability of health services along with access is key to improve health seeking behaviour for symptoms related to menopause other than knowledge. Capacity building of primary health care facilities to provide services to menopausal women is key.

Unless corrective measures are taken now, global economy will be seriously affected due to ever growing number of elderly women suffering from symptoms and morbidity.

5.2 Limitations of the study

There are some limitations of this study.

1. As this was a cross sectional study, it does not exclude other confounding effects of the natural aging process that may influence experience of symptoms.
2. This study used modified MRS questionnaire, translated to Bengali, so there is a question of accuracy in translation, though this was done very carefully.
3. Although MRS is a self-reporting questionnaire and substantial number of women studied do not have formal education, in order to include the illiterate women, interviews were used instead. As there were some personal questions, some women felt shy or discomfort and did not answer properly.
4. Moreover, some subjects could have been misclassified into the incorrect menopause status group.
5. Some budget and time limitation is also noted.
6. Furthermore, retrospective information was collected from the postmenopausal women, which could have led to recall bias.

5.3 Conclusion

1. Low socioeconomic status and education level was found to be prevalent with early menopause and low median age of postmenopausal women.
2. Most of the women suffered from psychological and somatomotor symptoms whereas urogenital symptoms were comparatively less.
3. Duration of menopausal symptoms had statistically significant relationship with age of the women.
4. Tendency of health care seeking for menopausal symptoms was found to be very low for various obstacles that include lack of financial capacity, awareness and family support.
5. Women who sought support services for management of menopausal symptoms suffered less from the symptoms, compared to others who did not seek support.
6. Almost half of the women took menopause negatively and overall awareness of menopause was low.
7. Attitude towards menopause was mixed which cannot be identified as strong positive or negative attitude.

5.4 Recommendations

Considering the results, discussion and conclusion, the following measures may be recommended to improve overall perception, attitude and health seeking behaviour of postmenopausal women of Dhaka slums.

1. Increase awareness on menopause among women near the age of menopause so that they are better informed about menopause, its symptoms and management of those through behaviour change communication.
2. Work on menopausal women in urban slums including elderly women to empower them to decrease their dependency on others for health care seeking.
3. Improve availability and access to health services for postmenopausal and elderly women in slums.
4. There is an urgent need to intensify health education particularly about menopausal changes and encouraging women to have a more active lifestyle. They should be educated on the dangers of self-medication.
5. Health-care providers need to consider treating these health issues from a lifestyle management perspective and precaution should be taken not to pathologize menopause.
6. Further studies on the impact of hormonal changes, diet, lifestyle and socio-cultural characteristics are also necessary to better understand menopausal experience.

The government could concentrate on providing health services to women in post reproductive age group also besides women in the reproductive age. This can be achieved by incorporating components related to specific health needs of postmenopausal women in the national health programs.

6. References

1 Research on the menopause in the 1990s. Report of a WHO scientific group.

2 Burger HG. The endocrinology of the menopause. Maturitas, 1996, 23:129-136.

3 Biri, Bakar, Maral, Karabacak, & Bumin, 2005; Kaufert & Syrotuik, 1981; Kaw, Khunnu, & Vasishta, 1994; Ku et al., 2004; Meschia et al., 2000; Mohammadm, Sadat Hashemi, & Farahani, 2004; Sidhu & Sidhu, 1987; Syamala & Sivakami, 2005

4 Dhillon HK, Singh HJ, Rashidah S, Abdul Manaf H, Nik Mohd Zaki NM. Prevalence of menopausal symptoms in women in Kelantan, Malaysia.Maturitas. 2006; 54:213–221. doi: 10.1016/j.maturitas.2005.11.001. [PubMed][Cross Ref]

5 Changa MH, Wangb SJ, Wanga PH, Fuhd JL. Attitudes towards Menopause among Middle-Aged Women: A Community Survey In an Island Of Taiwan.Maturitas. 2005; 52:348–355. doi: 10.1016/j.maturitas.2005.06.001.[PubMed] [Cross Ref]

6 Wang SJ, Lue SR, Juang KD, Chiu LM. The Kinmen women-health investigation (kiwi): a menopausal study of & population aged 40-54.Maturitas. 2001; 39:117–120. doi: 10.1016/S0378-5122(01)00193-1. [PubMed][Cross Ref]

7 Rahman SASA, Zainudin SR, Kar Mun VL. Assessment of menopausal symptoms using modified Menopause Rating Scale (MRS) among middle age women in Kuching, Sarawak, Malaysia. Asia Pacific Family Medicine.2010;9:5. doi: 10.1186/1447-056X-9-5. [PMC free article] [PubMed][Cross Ref]

8 Colombel A,Charbonnel B. Weight gain and cardiovascular risk factors and the post-menopausal women. HumReprod.1997 Oct;12 Suppl 1:134-45.

9 Blumel JE, Castelo- Branco C, Rocongliolo ME, Bifa L, Tacla X, Mamani L. Changes in body mass index around menopause: a population study of Chilean women. Menopause.2001 Jul-Aug;8(4):239-44.

10 Castelo-Branco C,Blumel JE,Roncagliolo ME, Heya J, Bolf D, Binfa L, Tacla X, Colodron M. Age, menopause and hormone replacement therapy influences on cardiovascular risk factors in a cohort of middle- aged Chilean women. Maturitas. 2003 Jul 25;45 (3):205-12

11 Bosworth HB, Bastain LA, Kuchibhatla MN, Steffens DC, McBride CM, Skinner Cs, Rimer BK, Siegler LC. Depressive symptoms,menopausal status, and climacteric symptoms in women at midlife. Psychosom Med. 2001Jul-Aug; 63(4):603-8

12 Aso, T. (1998). Demography of the Menopause and Pattern of Climacteric Symptoms in the East Asian region.
In: Proceedings of the first consensus meeting on menopause in the East Asian Region, Geneva, 2–30 May 1997. Zeist, Netherlands, Medical Forum International BV, 24-32.

13 Dennerstein L, Dudley E, Hopper J, Guthrie J, Burger H. A prospective population-based study of menopausal symptoms. Obstet Gynecol. 2000;96:351–358. [PubMed]

14 Brown J, Gallichio L, Flaws J, Tracy K. Relations among menopausal symptoms, sleep disturbances, and depressive symptoms in midlife women. Maturitas. 2008 In press, doi:10.1016/j.maturitas.2008.11.019. [PMC free article] [PubMed]

15 (http://www.imsociety.org/world_menopause_month.php)

16 Utzinger J, Keiser J. Urbanization and tropical health—then and now. Ann Trop Med Parasitol.2006;100:517–533. [PubMed]

17 Democracywatch, Health Problems of Women Living in Slums: A Situation Analysis of Three Selected Slums in Dhaka City, June-September 2010.

18 Islam N. Slums of Bangladesh Mapping and Census Center for Urban Studies, 2005.

19 Young, M. E. (1994). Health problems andpoliciesfor older Women: An Emerging Issue in developing countries. HRO working paper, Online at http://www.worldbank.org/html/extdr/hnt/hddflash/hewp/hrw010.html.

20 Weisman, C. S. (1998). Women 's health care: Activist traditions and institutional change. Baltimore, MD: Johns Hopkins University Press.

21 Bhatia & Cleland, 2001; Ha, Berman & Larsen, 2002; Hunte & Sultana, 1992; Jenkins, Mcphee, Stewart & Ha, 1996; Paul & Rumsey, 2002; Tipping & Segal, 1996

22 United Nations [UN]. (1995). Fourth World conference on Women Action and Equality, Development and Peace 4-15 September, Beijing, China, Division for the Advancement of Women, Department of Economic and Social Affairs.

23 Huffman, S. B. & Myers, J. E. (1999). Counselling women in midlife: An integrative approach to menopause. Journal of Counselling Development, 77, 258 – 266.

24 Lippert, L. (1997). Women at midlife: Implications for theories of women's adult development. Journal of Counselling and Development, 76, 16 – 22.

25 Fadday (2008). Ovarian aging and menopause current theories hypothesis and research models. http://www.ebimonline.org/egi/content/full/230/11/818

26 Christman N. The health seeking process. Cult. Med. Psychiat. 1977;1(4):1357-68.

27 Christakis, N. A., Ware, N. C, & Kleinman, A. (1994). Illness behaviour and the health transition in the developing world. In L. C. Chen, A. Kleinman & N. C. Ware (Eds.), Health and social change in International Perspective (pp. 275-302). Boston, MA: Harvard University Press.

28 Ahmed SM, Adams AM, Chowdhury M, Bhuiya A. Gender, socioeconomic development and health-seeking behaviour in Bangladesh. Social Science & Medicine 2000;51:361-71.

29 Sadiq H, Muynck AD. Health care seeking behavior of pulmonary tuberculosis patients visiting Rawalpindi. J Pak Med Assoc 2002; 51:10-16.

30 Malik, H. S. (2008). Knowledge and attitude towards menopause and Hormone Replacement Therapy (HRT) among postmenopausal women. JPMA, 58, 164.

31 Nisar, N., & Sohoo, N. A. (2010). Severity of Menopausal symptoms and the quality of life at different status of Menopause: a community based survey from rural Sindh, Pakistan. International Journal of Collaborative Research on Internal Medicine & Public Health (IJCRIMPH), 2(5), 118-130.

32 Nisar et al., 2010; Dennerstein, Dudly, Hopper, Guthrie, & Burger, 2000; Deeks & McCabe, 2004

33 Smoot, L. C., & Rice, C. (2004). Hormone Replacement Therapy: Where do we stand now? Drug Topics. 148(19), 84-93.

34 Avis NE, McKinlay SM. A longitudinal analysis of women's attitudes towards the menopause: results from the Massachusetts Women's Health Study. Maturitas. 1991; 13(1): 65-79

35 Pan Ha, Wu MH, Hsu CC, Yao BL, Huang KE. The perception of menopause among women in Taiwan. Maturitas. 2002; 41(4): 269-74

36 Lee, M., Kim, J., Park, M. S., Yang, J., Ko, Y., Ko, S., & Joe, S. (2010). Factors Influencing the Severity of Menopause Symptoms in Korean Post-menopausal Women. J Korean Med Sci, 25(5), 758-765. http://dx.doi.org/10.3346/jkms.2010.25.5.758

37 Groeneveld, F. P., Bareman, F. P., Barentsen, R., Dokter, H. J., Drogendijk, A. C., & Hoes, A. W. (1996). Vasomotor symptoms and well-being in the climacteric years. Maturitas, 23, 293-9. http://dx.doi.org/10.1016/0378-5122(95)00989-2

38 Begum S. Health Dimension of Poverty in Rural Bangladesh: Some Evidence. In H.Z. Rahman, M. Hossain, and B. Sen (eds.), 1987-1994: Dynamics of Rural Poverty in Bangladesh, Bangladesh Institute of Development Studies, Dhaka; 1997.

39 http://www.menopause.org/default.htm

40 http://www.mayoclinic.com/health/menopause/DS00119

41 http://www.niapublications.org/agepages/menopause.asp

42 http://womenshealth.gov/faq/menopaus.htm

43 en.wikipedia.org/wiki/Menopause.

44 Pavon de Pazl,Alameda Hernando C,Olivar RoldanJ.Obesity and menopause. Nutr Hosp.2006 Nov0Dec; 21(6):633-7.

45 Sharma VK, Saxena MS. Climacteric symptoms: a study in the Indian context. Maturitus. 1981; 3(1):11-20.).

46 http:// archive.thedailystar.net/newDesign/news-details.php?nid=217261

47 Research on the menopause. Report of a WHO Scientific Group. Geneva, World Health Organization, 1981 (WHO Technical Report Series, No. 670).

48 McKinlay SM, Brambilla DJ, Posner JG. The normal menopause transition. American journal of human biology, 1 992, 4:37-46.

49 McKinlay SM. The normal menopause transition: an overview. Maturitas, 1996, 23:137-145.

50 Block E. A quantitative morphological investigation of the follicular system in newborn female infants. Acta anatomica, 1953, 17:201 206.

51 Baker TG. A quant tative and cytological study of germ cells in human ovaries. Proceed/ngs of the Royal Soc,ety of London, Series B: Bioiogica/ Sciences, 1963, 158:417-433.

52 Gougeon A. Caractére qualitatif et quantitatif de la population foll culaire dans i'ovaire humain adulte. IOualitative and quantitative characteristics of the follicular cell population 'n the adult human ovary.) Contraception — fertilité — sexuailté, 1984, 12:527-535.

53 Richardson SJ, Senikas V, Nelson JE Follicular depletion during he menopausal transition: evidence for accelerated loss and ultimate exhaustion. Journal of clinical endocrinology and metabolism, 987, 65: 1231-1237.

54 Treloar AE et al. Variation of the human menstrual cycle through reproductive life. International journal of fertility, 1967, 12:77-126.

55 Brambilla DJ, McKinlay SM. A prospective study of factors affecting age at menopause. Journal of clinical epidemiology 1989, 42: 031-1039.

56 Richardson SJ- The biological basis of the menopause. Bailliére's clinical endocrinology and metabolism, 1993, 7: 1 -16.

57 Stanford JL et al. Factors influencing the age at natural menopause. Journal of chronic diseases, 1987, 40:995-1002.

58 Snowdon DA et al. Is early natural menopause a biological marker of health and ageing? American journal of public health 1989, 79:709-7 4.

59 Snowdon DA. Early natural menopause and the duration of postmenopausal life. Journal of the American Geriatrics Society, 38:402-408.

60 Beall CM. Ages at menopause and menarche in a nigh-altitude Himalayan population. Annals of human biology, 1983: 10.365-370.

61 Payer L Menopause in various cultures. In: Burger H. Boulet M, eds. A portrait of the menopause. Carnforth, Parhenon Publishing Group, 1991:3-22.

62 Holte A. Influences of natural menopause on health complaints: a prospective study of healthy Norwegian women. Maturitasas, 1992. 14:127-141.

63 Johnson PL, Wood JW, Weinstein M. Female fecundity in highland Papua New Guinea. Social biology, 1990, 37:26-43.

64 Goodman MJ et al. Menarche, pregnancy, birth spacing and menopause among the Agta women foragers of Cagayan Province, Luzon, the Philippines. Annals of human biology, 1i985. 12:169-177.

65 Okonofua FE, Lawal A, Bamgbose J. Features of menopause and menopausal age in Nigerian women, International journal of gynecology and obstetrics, 1990, 31:341-345.
66 Kwawukume EY, Ghosh TS, Wilson JB. Menopausal age of Ghanaian women. International Journal of gynecology and obstetrics, 1993, 40:151-155.
67 Randhawa l, Premi HK, Gupta T. The age at menopause in the women of Himachal Pradesh, and the factors affecting menopause- Indian journal of public health, 1987,
68 Wasti S et al. Characteristics of menopause in three socioeconomic urban groups h Karachi, Pakistan, Maturitas, 1993, 16:61-69
69 Sukwatana P et al. Menopausal symptoms among Thai women in Bangkok. Maturitas, 1991, 17:63-71.
70 Chompootweep S et al. The menopausal age and climacteric complaints in Thai women in Bangkok. Maturitas, 1993, 17:63 71.
71 McKiniay SM. Issues in design; measurement, and analysis for menopause research, Experimental gerontology, 1994. 29:479-493.
72 Sherman BM, Korenman SG. Hormonal characteristics of the human menstrual cycle throughout reproductive life. Journal of clinical investigation. 1975. 55:699-706.
73 Reyes Fl, Winter JSD, Faiman C. Pituitary ovarian relationships preceding the menopause. American journal of obstetrics and gynecology, 977, 129:557-564.
74 Lee SJ et al. The effect of age on the cyclical patterns of plasma LH, FSH, oestradiol and progesterone in women with regular menstrua/ cycles. Human reproduction, 1988. 3:851-855.
75 Lenton EA et al. Progressive changes in LH and FSH and LH:FSH ratio in women throughout life. Maturitus, 1988, 10:35-43.
76 MacNaughton J et al. Age-related changes in follicle stimulating hormone, luteinizing hormone, oestradiol and immunoreactive inhibin in women of reproductive age. Clinical endocrinology, 1992, 36:339-345.
77 Lenton EA et al. Inhibin concentrations throughout the menstrual cycles of normal, infertile and older women compared with those during spontaneous conception cycles. Journal of clinical endocrinology and metabolism, 1991 , 73:1180-1190.

78 Metcalf MG, Donald RA. Fluctuating ovarian function in a perimenopausal woman. New Zealand medical journal, 1979, 89:45-47.

79 Metcalf MG, Donald RA, Livesey JH. Pituitary-ovarian function in normal women during the menopausal transition. Clinical endocrinology, 1981 , 14:245-255.

80 Burger HG. Diagnostic role of follicle-stimulating hormone (FSH) measurements during the menopausal transition — an analysis of FSH oestradiol and inhibin. European journal of endocrinology, 1994, 130:38-42.

81 Chakravarti S et al. Hormonal profiles after the menopause. British medical journal, 1976, 2:784-787.

82 Wide L et al. Radioimmunosorbent assay of follicle-stimulating hormone and lutein zing hormone in serum and urine from men and women. Acta endocrinologica, 1973, 174:3-58.

83 Kwekkeboom DJ et al. Serum gonadotropins and alpha-subunit decline in aging normal postmenopausal women. Journal of clinical endocrinology and metabolism, 1990, 70-944-950.

84 Rossmanith WG, Scherbaum WA, Lauritzen C. Gonadotropin secretion during aging in postmenopausal women. Neuroendocrinoiogy, 1991 , 54:211-2 B.

85 Healy DL et al. Eevated serum inhibin concentrations in postmenopausal women with ovarian tumors. New England journal of medicine, 1993 329:1539-1542.

86 Sitteri PK, MacDonald PC. Role of extraglandular oestrogen in human endocrinology. In: Greep FRO, Astwood EB, eds. Handbook of physiology, Vol. 2, Part 1. Baltimore, MD, Williams & Wilkins 1973:615-629.

87 Cauley JA et al. Reliability and interrelations among serum sex hormones in postmenopausal women. American journal of epidemiology 1991 , 133:50-57.

88 Hughes CL, Jr, Wall LL, Creasman WT. Reproductive hormone levels in gynecologic oncology patients undergoing surgical castration after spontaneous menopause. Gynecologic oncology, 1991 40-42-45.

89 Procope B. Studies on the urinary excretion, biological effects and origin of oestrogens in postmenopausal women. Acta endocrinological, 969, 135:5-10.

90 Utian WH. Circulating oestrogens and their sources at the perimenopause. In: Genazzani AR, Petraglia F, eds. Hormones in gynecological endocrinology. New Jersey, Parthenon Publishing Group, 1992:505-512.

91 Meldrum DR et al. Changes in circulating steroids with ageing in postmenopausal women. Obstetrics and gynecology, 1981 , 57:624-628.

92 Panico S et al. Diurnal variation of testosterone and estradiol; a source of bias in comparative studies on breast cancer. Journal of endocrinological investigation, 1990, 13:423-426.

93 Lonning PE et a'. Lack of diurnal variation in plasma levels of androstenedione, testosterone, estrone and estradiol in postmenopausal women. Journal of steroid biochemistry 1939, 34:551-553.

94 Micheli A at al. Repeated serum and urinary androgen measurements in premenopausal and postmenopausal women. Journal of clinical epidemiology, 44:1055-1061.

95 Anderson DC. Sex hormone-binding Clinical endocrinology 1974, 3:69-96.

96 Rosner W. The functions of corticosteroid-binding globulin and sex hormone-binding globulin: recent advances. Endocrine reviews: 11 :80-91

97 Carlstrom K et al. Relationship between serum testosterone and sex hormone-binding globulin in menstruating and postmenopausal women. Gynecological endocrinology 1991, 5:95-130.

98 Reid R et al. Determinants of total body end regional bone mineral density in normal postmenopausal — a key role for fat mass. Journal of clinical endocrinology and metabolism, 1992. 79:45-51

99 Gershagen S et al. Decreasing serum levels of sex hormone-binding globulin around the menopause and temporary relation changing levels of ovarian steroids, as demonstrated in a longitudinal study. and sterility 1989,
51:616-621

100 Martin MC et al. Menopause without symptoms: the endocrinology of menopause among rural Mayan Indians. American journal of obstetrics and gynecology, 1993, 168:1839-1845.

101 Akingbade OA, Bolarinwa AF, Subbarao W. Symptomatology and hormone profile of menopausal Nigerians. African journal of medicine and medical sciences 1990, 19:133-137.

102 Wang DY et al. Serum hormone levels in British and rural Chinese females. Breast cancer research and treatment: 199. 18 (suppl):S41-S45.

103 Cauley JA et al. The epidemiology of serum sex hormones in postmenopausal women, American journal of epidemiology. 1989, 129: 1120-1131

104 McKinlay SM. Issues in design: measurement, and analysts for menopause research, Experimental gerontology "1994. 29:479-493

105 Kaufert PA. Women and their health in middle years: a Manitoba project. Social science and medicine, 1984, 18:279-281

106 Holte A. Prevalence of climacteric complaints in a representative sample of middle-aged women in Oslo, Norway. Journal of psychosomatic obstetrics and gynaecology; 1991, 12:303-317.

107 Oldenhave A. Jaszmann LJB. The climacteric: absence or presence of hot flushes and their relation to other complaints. in: Schonbaum E, ed. The climacteric hot flush, Basel. Karger, 1991 (Progress in Basic Clinical Pharmacology,
vol. 6): 6-39

108 Dennerstein L et al. Sexuality and the menopause. Journal of psychosomatic obstetrics and gynaecology, 1993, 15:59-66.

109 Matthews KA et al. Influences natural menopause on psychological characteristics and symptoms of middle-aged healthy women. Journal of consulting and clinical psychology 1990, 1 58:345-351.

110 Greene JG, Cooke DJ. Life stress and symptoms at the climacterium. British journal of psychiatry, 1980, 136:486-491.

111 Holte A, Mikkelsen A. A factor-analytic study of climacteric symptoms. Psychiatry and social science, 1982, 2:35-39.

112 Ballinger CB. Psychiatric aspects of the menopause. British journal of psychiatry, 1990, 156:773-787.

113 Hunter MS. Emotional well-being, sexual behaviour and hormone replacement therapy, Maturitas, 1990, 12:299-314

114 Erlik Y et al. Association of waking episodes with menopausal hot flushes. Journal of the American Medical Association, 1981 , 245: 1 741-1744.

115 Wentz AC. Management of the menopause. In: Jones HW, Wentz AC, Burnett LS, eds. Novak's textbook of gynecology, 11th ed. Baltimore, MD, Williams & Wilkins, 1988:394-442.

116 Ginsburg J, Swinhoe J, O'Reilly B. Cardiovascular responses during the menopausal hot flush, British journal of obstetrics and gynaecology, 1981 88:925-930.

117 Meldrum DR et al. Objectively recorded hot flushes in patients with pituitary insufficiency. Journal of clinical endocrinology and metabolism, 1981, 52:6B4-688

118 Casper RF, Yen SS, Wilkes MM. Menopausa flushes: a neuroendocrine link with pulsatile luteinizing hormone secretion. Science, 979, 205:823 825

119 Tataryn IV et al. LH, FSH and skin temperature during the menopausal hot flush Journal of clinical endocrinology and metabolism, 1979, 49:152-154.

120 Beyenne Y. From menarche to menopause: reproductive lives of peasant women in two cultures. Albany, NY, State University of New York Press, 1986,

121 Avis NE et al. The evolution of menopausal symptoms. Bailliére's clinical endocrinology and metabolism, 1993, 7:17-32.

122 Tang GWK. Menopausal symptoms. Journal of the Hong Kong Medical Association, 1993, 45.249-254.

123 Dennerstein L et al. Menopausal symptoms in Australian women. Medical journal of Australia, 1993, 159:232-236

124 Sturdee D, Brincat M. The hot flush. In: Studd JWW Whitehead MI, eds. The menopause. London, Blackwe Scientific, 1988:24-54

125 Haines CJ, Chung TKH, Leung DHY. A prospective study of the frequency of acute menopausal symptoms in Hong Kong Chinese women. Maturitas, 1 994, 18:175-181

126 Hagstad A, Janson PO. IYe epidemiology of climacteric symptoms. Acta obstetricia et gynecologica Scandinavica, 1986, 134(SuppI.):59-65

127 van Hall EV, Verdel M, van der Velden J. Perimenopausal complaints in women and men: a comparative study. Journal of women's health, 1994, 3:45 49.

128 Adlercreutz H et al. Dietary phyto-oestrogens and the menopause in Japan. Lancet, 1992, 339:1233.

129 Wilcox G et al. Oestrogenic effects of plant foods in postmenopausal women. British medical journal, 1990, 301:905-906

130 McKinlay JB, McKinlay SM, Brambilla D. The relative contributions of endocrine changes and social circumstances to depression in mid-aged women. Journal of health and social behavior, 1 987, 28:345 363.

131 Coope J, Williams S, Patterson JS. A studv of the effectiveness of propanolol in menopausal hot flushes. British journal of obstetrics and gynaecology, 1978, 85:472-475

132 Kronenberg F, Barnard RM. Modulation at menopausal hot flushes by ambient temperature. Journal of thermal biology 1992, 17:43-49,

133 Utian WH. The true clinical features of postmenopause and oophorectomy and their response to oestrogen therapy South African medical journal, 1972, 46:732-737

134 Bullock JL et al. Use of medroxy-progesterone acetate to prevent menopausal symptoms Obstetrics and gynecology, 1975. 46:165-168.

135 Coope J: Thomson J. Effects of "natural cestrccens" on menopausal symptoms and blood dotting, British medical journal, 1975, 4:130-143.

136 Campbell S. Doubie-blind psychometric studies on the effects of natural oestrogens on the postmenopausal woman. In: Campbell S, ed. The management of the menopause and postmenopausal years. Lancaster, MTP
Press, 1976:149-158

137 Campbell S et al. Oestrogens for menopausal flushing. British medical journal, 1977, 2:1218-1219.

138 Cagnacci A et al. Neuroendocrino and clinical effects of transdermal 17beta-estradio in postmenopausal women. Maturitas, 1991. 13:283-296.

139 Dupont A et al. Efficacy of percutaneous estradiol and oral oestrogens as replacement therapy in postmenopausal women. In: Dusitsin N, Notelovitz M, eds.

Physiological hormone replacement therapy. Carnforth. Parthenon Publishing Group, 1991:37-49

140 Keller PJ. Hotz E, Imthurn B. A transdermal regimen for continuous combined hormone replacement therapy in the menopause. Maturitas. 1992, 15:195-198.

141 Steingold KA et al. Treatment of hot flushes transdermal estradiol administration. Journal endocrinology and metabolism, 1985, 61:627-632.

142 Høvik P et al. Comparison of continuous and sequential oestrogen progestogen treatment in women with climacteric symptoms. Maturitas, 1989, 11 :75-82

143 Hammar M, Berg C, Lindgren R. Does physical exercise influence the frequency of postmenopause hot flushes? Acta obstetricia et gynecologica Scandinavica. 1990.

144 Freedman BR, Woodward S. Behavioral treatment of menopausal hot flushes: evaluation by ambulatory monitoring. American journal of obstetrics and gynaecology, 1992, 167:436-439

145 Gordon H. The correlation of menopausal symptoms with cytohormonal status. In: Campbell S, ed. The management of the menopause and postmenopausal years. Lancaster, MTP Press, 1976:263-270.

146 Coope J. Hormonal and non-hormonal interventions for menopausal symptoms. Maturitas, 1996, 23:159-168.

147 Marsh MS, Whitehead MI. Management of the menopause. In: Khaw KT, ed. Hormone replacement therapy Edinburgh, Churchill Livingstone, 1992: 426-457.

148 Coope J. The effect of oestrogen therapy in menopausal patients [dissertation], Manchester, UK, University of Manchester Medical School, 1980.

149 Ellerington M, Whitcroft S, Whitehead Ml. A double-blind, randomized, cross-over comparison of a bioadhesive vaginal moisturizing gel and KY jelly in postmenopausal women with vaginal dryness despite HRT. Sixth congress on the menopause, Bangkok. Carnforth, Parthenon Pub ishing Group, 1990, Abstract 335.

150 Bachmann GA et al. Sexual expression and its determinants in the postmenopausal woman. Maturitas, 1 984, 6:19-29

151 Pfeiffer E, Verwoendt A, Davis GC. Sexual behaviour n middle life. American journal of psychiatry, 972, 128:1262-1267.

152 Carney A, Bancroft J, Matthews A. Combination of hormonal and psychological treatment for female sexual unresponsiveness: a comparative study. British journal of psychiatry, 1978, 133:339-346.

153 Leiblum S et al. Vaginal atrophy in the postmenopausal woman. Journal of the American Medical Association, 1983, 249:2195-2198.

154 Burger H et al. Effect of combined implants of oestradiol and testosterone on libido in postmenopausal women. British medical journal, 1987, 294:936-937.

155 Jolleys JV. Repeated prevalence of urinary Incontinence in women in a general practice. British medical journal, 1988, 296:1600-1302

156 Yarnell JW et al. The prevalence and severity of urinary incontinence in women. Journal of epidemiology and community health, 1981 , 35:71-74.

157 Diokno AC et al. Preva ence of urinary incontinence and other urological symptoms in the non-institutionalized elderly. Journal of urology, 1986, 136:1022-1025.

158 Rekers H et al. The menopause, urinary incontinence and other symptoms of the genito-urinary tract. Maturitas, 1992, 15: 101-111

159 Smith P et al. Oestradiol-releasing vaginal ring for treatment of postmenopausal urogenital atrophy. Maturitas, 1993, 16:145-154.

160 Bacho C, Winandy A. etude préliminaire de l'influence hormonale sur les différents paramötres du plancher pelvien chez la femme en activité génitale sans hormonothérapie et chez la femme ménopausée. (Preliminary study of the hormonal effect on various parameters of the pelvic floor in genitally active women without hormone therapy and in menopausal women.) Acta urologica belgique, 1992, 60:45-60.

161 Wilson PD et al. Treatment with oral piperazine oestrone sulphate for genuine stress incontinence in postmenopausal women. British journal of obstetrics and gynaecology, 1987, 94:568-574.

162 Raz R, Stamm WE. A controlled trial of intra-vagina estriol in postmenopausal women with recurrent urinary tract infections. New England journal of medicine, 1993. 329753-756.

163 Metcalf MG. The approach of menopause: a New Zealand study. New Zealand medical journal, 1988, 101:103-106.

164 Hee J et al. Perimenopausal patterns of gonadctrophins, immunoreactive inhibin, oestradiol and progesterone. Maturitas. 18:9-20.
165 Thompson B, Hart SA, Durno D. Menopausal ace and symptomatology in a general practice. Journal of biosocial science, 973, 5:71-82.
166 McKinlay SM, Jefferys M. The menopausal syndrome. British Journal of preventive and social medicine, 1974 28:108-115.
167 Avis NE, McKinlay SM. A longitudinal analysis of women's attitudes towards the menopause: results from the Massachusetts Women's Health Study. Maturitas, 19g1. 13-65 79.
168 Hunter MS, Battersby R, Whitehead M. Relationships between psychological symptoms, somatic complaints and menopause; status, Maturitas, 1986, 8:217-228.
169 Dennerstein L et al. Hormone therapy and affect. 1979: 1:247-269.
170 Sherwin BB, Geifand MM, Brender W. Androgen enhances sexual motivation in females: a prospective, cross-over study of sex steroid administration in the surgical menopause. Psychosomatic medicine, 1985, 47:339 351
171 Montgomery JC et al. Effect of oestrogen and testosterone implants on psychological disorders in the climacteric. Lancet. 1987, i:297-299.
172 Dennerstein L, Burrows GD. Psychological effects of progestogens in the postmenopausal years. Maturitas, 1986. 8:101-106
173 Lock M. Contested meanings of the menopause. Lancet, -1991. 337:1270-1272.
174 Midlife and older women in Latin America and the Caribbean. Washington, DC, Pan American Health Organization, 1989.
175 Kaufert PA. The social and cultural context of menopause. Maturitas. 23:169-180.
176 Rutter M. Women's health in developing countries. Nursing, 1988, 25:935-936
177 Sadik N. The state of the world's population 1991. New York, United Nations Population Fund, 1991.
178 Lock M. Encounters With aging: mythologies of menopause in Japan and North America. Berkeley, CA, University of California Press, 1993.
179 Bauer RL et al. Risk of postmenopausal hip fracture in Mexican American women. American journal of public health, 1986. 76:1020-1029

180 Ross PD et al. A comparison of hip fracture incidence among native Japanese, Japanese Americans and American Caucas ans- American journal of epidemiology 1991. -809.

181 Sergent C. Maternity, medicine and power: reproductive deciisions in urban Benin. Berkeley, CA, University of California Press, 1989.

182 Lee FRB. Work, sexuality, and ageing among Kung women. In: Kerns V, Brown JK, eds. In her prime, 2nd ed. Chicago, IL, University Illinois Press, 1992:35-48

183 Solway JS. Middle-aged women in Bakgalagadi society (Botswana). In: Kerns V, Brown UK, eds. In her prime, 2nd ed. Chicago, IL, University of Illinois Press, 199249-60.

184 Kerns V. Female control of sexuality: Garifuna women at middle age. In: Kerns V, Brown JK, eds. In her prime, 2nd ed. Chicago, IL, University of Illinois Press, 199295-112.

185 United Nations Population Fund - UNFPA, 1996

186 United Nations, 1986

187 Economic and Social Commission for Asia and the Pacific (ESCAP) Population Data Sheet, 2008

188 Howlader AA, Bhuiyan MU. Mothers' health-seeking behaviour and infant and child mortality in Bangladesh.1999.

189 (Ref. ZEG Berlin. MRS - Menopause Rating Scale. (Online) no date. Available: http://www.menopause-rating-scale.info/ (Accessed 12 July 2008).

190 (Neugarten BL, Wood V, Kraines RJ. Women's attitudes toward the menopause. Vita Hum Int Z Lebensalterforsch 1963;6:140-151)

191 Khatun S. Menopause perspectives around the world. International menopause society.
http://www.imsociety.org/menopause_perspectives_around_the_world.php?SESSID=f2nh0hogclsq6hmam tkjvgjo07

192 Assessment of menopausal symptoms among women attending various outreach clinics in South Canara District of India

(http://www.jmidlifehealth.org/article.asp?issn=0976-7800;year=2014;volume=5;issue=2;spage=84;epage=90;aulast=Joseph#ref9)

193 Duration of Menopausal Vasomotor Symptoms Over the Menopause Transition Nancy E. Avis et al.

194 (Adekunle AO, Fawole AO, Okunlola MA. Perceptions and attitudes of Nigerian women about the menopause. J Obstet Gynaecol. 2000; 20(5): 525-9.

195 David M, Borde T, Kentenich H. Female menopause – comparison of knowledge and opinion in German and Turkish-born women. [Abstract]. Zentralbl Gynakol. 2001; 123(1): 3-9.

196 Nusrat N, Nishat Z, Gulfareen H, Aftab M, Asia N. Knowledge, attitude and experience of menopause. J Ayub Med Coll. 2008; 20(1): 56-9

197 David M, Borde T, Kentenich H. Female menopause – comparison of knowledge and opinion in German and Turkish-born women. [Abstract]. Zentralbl Gynakol. 2001; 123(1): 3-9.

198 Chow& Wineer, 1992, Hayes & Gunn, 1998: William & Algozine, 1977

199 Dodd M, Janson S, Facione N, Faucett J, Froelicher E, Humphreys J. Advancing the science of symptom management. J Adv Nurs. 2000;33:668–676. [PubMed]

Annex 1 – Questionnaire

English Questionnaire

Consent Form

Dear Participant

Purposive selection
You have been selected to be part of the project and this is why we would like to interview you. This project is being conducted by Dr. Sonia Arifa, a student of M.Phil in Epidemiology and Biostatistics at Bangladesh Institute of Health Sciences (BIHS) under Dhaka University (DU). This type of research work is currently taking place in several countries around the world.

Title of the Project
The title of this thesis is "Health Seeking Behaviour of the Menopausal Women in Urban Slum of Dhaka City"

Aim of the Project
To find out the women's perception and attitude towards menopause and management of menopausal Symptoms in a Slum of Dhaka City"

Data collection Methods
Face to face interview

Timeframe
It is estimated that this study will take approximately 30-40 minutes..

Confidentiality
The information you provide is totally confidential and will not be disclosed to anyone. It will only be used for research purpose. Your name, address, and other personal information will be removed from the instrument, and only a code will be used to connect your name and your answers without identifying you.

Results
The results of the project work will be used to help policy makers to design an effective strategies in improving the health of menopausal women of disadvantaged group through providing information on the barriers to seek appropriate services.

The results will be published in research publications, media briefings and reports.

Voluntary Participation
Your participation is voluntary and you can withdraw from the study after having agreed to participate. You are free to refuse to answer any question that is asked in the questionnaire. If you have any questions about this study you may ask me or contact to the researcher (Dr. Sonia Arifa, cell:0191176426)

Consent to Participate
Signing this consent indicates that you understand what will be expected of you and are willing to participate in this survey.

Read by participant		Interviewer	
Agreed		Refused	

I hereby provide INFORMED CONSENT to take part in this research work.

Name of the participant Witness

Signs or fingerprint Sign or fingerprint

Questionnaire on

Health Seeking Behaviour of the Menopausal Women in Urban Slum of Dhaka City

Bangladesh Institute of Health Sciences

Name of Interviewer:

Date of interview: Time of interview:

Respondent Identification

Name of Respondent: ID no: ☐☐☐

Address:

Contact number where possible:

Demographic Information

Sl no	Questions	Response		Code
1	How old are you? (in full years) (Help participant to estimate their age)	Years:		☐☐
2	What is your religion?	Islam Hindu Christians Buddhist	1 2 3 4	☐
3	In total, how many years have you spent at school or in full-time study (excluding pre-school)? (Record total number of years of education excluding pre-school and kindergarten).	Years: Refused Illiterate	 77 00	☐☐
4	What is your marital status?	Married Separated/divorced Widowed Others	1 2 3 99	☐☐

5	Is your husband alive?	Yes 1 No 2	☐

Socioeconomic information

Sl.no	Questions	Response	Code
6	What's your profession?	Service holder 1 Business 2 Laborer 3 Housewife 4 Domestic help 5 Others (specify) 99	☐☐
	If 'other' please specify……..		
7	What is your monthly family income?	In BDT: Refused 77	☐☐
8	What is your monthly family expenditure?	In BDT: Refused 77	☐☐
9	You belong to which Type of Family?	Nuclear 1 Joint 2	☐
10	How many family members do you have?	Number	☐☐
11	How many alive children do you have?	Number	☐☐
12	What is your status in the family?	Not Dependent 1 Dependent 2	☐
13	How is the relationship between you and other family members?	Very poor 1 Poor 2 Fair 3 Good 4 Excellent 5	☐

Health Status

Sl.no	Questions	Response		Code
14	Do you have any of these Chronic Disease?	No chronic disease Hypertension Diabetes mellitus Carcinoma Thyroid disease Back pain Other	2 3 4 5 6 7 99	☐ ☐ ☐ ☐☐
	If 'other' please specify……..			
15	Have you lost body weight recently?	Yes :1 No :2		☐
16	Have you ever undergone any surgery?	Yes :1(if yes, then specify) No :2		☐

Gynecological History

Sl.no	Questions	Response		Code
17	Age at first menstrual period:	Before 12 years After 12 years	1 2	☐
18	Were your periods usually regular?	Yes No	1 2	☐
19	Were your periods painful?	Yes No	1 2	☐
20	What age did your menstrual cycles first become irregular?	Before 40 years After 40 years	1 2	☐
21	When did your menstruation seize?	In full years		☐☐
22	Is it more than one year since your menstruation stopped? (post-menopausal)	Yes No	1 2	☐
23	What was the cause of your menopause?	Spontaneous Surgical Other	1 2 99	☐☐
	If 'other' please specify……..			

Obstetrical History

Sl.no	Questions	Response		Code
24	Did you use any family planning methods in your life?	Yes No	1 2	☐
If yes then question no. 27 is applicable				
25	If yes, Please indicate the method of birth control, if any, that you have used previously. *(up to 3 methods can be recorded)*	Oral birth control pill IUD Injectable hormone Implant Condoms Sterilization Other	1 2 3 4 5 6 99	☐ ☐ ☐☐
If 'other' please specify……..				
26	How many times have you been pregnant?			
27	How old were you when you first child was born?	Before 18 years After 18 years No child	1 2 7	☐
28	How old were you when your last child was born?	Before 18 years After 18 years No child	1 2 7	☐
29	Did you suffer from Any kind of complications during pregnancy, delivery, or postpartum?	Yes No	1 2	☐
If yes please specify……..				
30	Do you have concerns about your sex life?	Yes No	1 2	☐
31	Do you have a loss of interest in sexual activities (libido, desire)?	Yes No	1 2	☐
32	Do you have any pain with intercourse	Yes No	1 2	☐

Personal Habits

Sl.no	Questions	Response		Code
33	Are the following habits are practiced by you regularly?	Hand washing Bathing Sanitary latrine use	1 2 3	☐ ☐ ☐

34	Do you chew betel leaf?	Yes No	1 2	☐
35	Do you currently smoke cigarettes?	Yes No	1 2	☐
36	Do you use any other type of tobacco?	Yes No	1 2	☐
37	Do you consume drinks with caffeine (coffee, tea)?	Yes No	1 2	☐

38. Menopause Rating Scale (MRS)

Which of the following symptoms apply to you at this time?

Symptoms:	none	mild	moderate	severe	very severe
	0	1	2	3	4
1. Hot flushes, sweating (episodes of sweating)					
2. Heart discomfort (unusual awareness of heart beat, heart skipping, heart racing, tightness).....					
3. Sleep problems (difficulty in falling asleep, difficulty in sleeping through, waking up early)					
4. Depressive mood (feeling down, sad, on the verge of tears, lack of drive, mood swings					
5. Irritability (feeling nervous, inner tension, feeling aggressive)					
6. Anxiety (inner restlessness, feeling panicky)					
7. Physical and mental exhaustion (general decrease in performance, impaired memory, decrease in concentration, forgetfulness)					
8. Sexual problems (change in sexual desire, in sexual activity and satisfaction)					
9. Bladder problems (difficulty in urinating, increased need to urinate, bladder incontinence)					
10. Dryness of vagina (sensation of dryness or burning in the vagina, difficulty with sexual intercourse)					
11. Joint and muscular discomfort (pain in the joints, rheumatoid complaints).					

39. Are you suffering from any other symptoms other than menopausal symptom mentioned above?

Symptoms	Yes =1	No=2
1.headache	☐	☐
2.vertigo	☐	☐
3.weakness	☐	☐
4.Anorexia	☐	☐
5.Blurring of vision	☐	☐
6.Anaemia	☐	☐

40. Did your symptoms, as listed above, interfere with:

	Not at all 0	Mild 1	Moderate 2	Severe 3
A. Your work efficiency				
B. Your home responsibilities				
C. Your relationships with your family				
D. Your social life activities				

Health seeking behavior

Sl.no	Questions	Response	Code
41	For how long are you suffering with the symptoms?	In full months	☐☐
42	How have you dealt with these symptoms?	Self care 1 Consult with relatives or Neighbors 2 Traditional car or herbal care 3 Homeopathic care 4 Hospital or clinic care 5 Others 99	☐☐
If answer is one, Q43 is applicable. If answer is 5, Q44(A) is applicable. If answer is not 5, Q44(B) is applicable.			

43	Which type of self-care do you have with the symptoms?	changes in diet 1 home remedies 2 rest 3 changes in sexual behavior 4 self-treatment 5	☐ ☐ ☐
44(a)	Why have you seek support form a health care provider?	Intolerable symptoms 1 Have knowledge on health 2 services 3 Have family support 4 Service at community level 5 Financial capacity 6 Previous good experience	☐ ☐ ☐
44(b)	Why haven't you seek support from a health care provider?	Lack of 1 knowledge/awareness 2 Lack of family support 3 Lack of money 4 Social/cultural stigma 5 Distance from home 6 Previous bad experience	☐ ☐ ☐
45	What are your goals in taking or seeking health Services?	Reduce menopausal 1 symptoms 2 Improve mood 3 Improve libido or sexual 4 function 5 Reduce joint pain or stiffness Improve energy level	☐

Perception towards menopause

Sl.no	Questions	Response	Code
46	How do you view menopause?	Positively 1 Negatively 2	☐
47	How do you consider menopause?	medical 1 condition 2 normal transition	☐
48	Do you know about the right age of menopause?	Yes 1 No 2	☐
49	How do you get your information about menopause?	Books 1 Elders in Family 2 Friends 3 TV 4 Healthcare 5 providers	☐
50	How would you rate your knowledge about menopause?	Very good 1 Good 2 Fair 3 Some knowledge 4 No knowledge 5	☐

51	Do you any knowledge about HRT?	Yes 1 No 2	☐
52	Is there any health service available for post-menopausal symptoms at your slum level?	Yes 1 No 2	☐

55. Attitude towards menopause checklist

Attitude towards menopause	Strongly Agree	Agree	Disagree	Strongly Disagree
1. A woman is concerned about how her husband will feel about her after menopause.				
2. A woman should see a doctor at menopause.				
3. Menopause is one of the biggest changes that happens in a woman's life.				
4. Menopause is an unpleasant experience.				
5. After menopause a woman feels freer to do things for Herself				
6. Women think of menopause as the beginning of the end.				
7. Women generally feel better after menopause.				
8. Frankly speaking, just about every woman is depressed about menopause.				
9. Women are generally calmer and happier after menopause.				
10. Menopause is a disturbing thing that women generally dread.				
11. Women should expect some troubles during menopause				
12. A woman's body may change in menopause but otherwise she doesn't change much.				
13. Women usually feel "down in the dumps" at the time of menopause				
14. Life is more interesting for a woman after menopause				
15. After menopause, women do not consider themselves "real women"				
16. Changes inside the body that women cannot control cause all the trouble at menopause				
17. The only difference between a woman who has been through menopause and one who has not is that one menstruates and the other doesn't				
18. Going through menopause really does not change a woman in any important way.				
19. A woman gets more confidence in herself after menopause.				

Thank you! Please note that the information you have provided will be held in the strictest confidence.

Bangla Questionnaire
সম্মতি পত্র

প্রিয় উত্তরদাতা

লটারীর মাধ্যমে বাছাই

আপনাকে লটারীর মাধ্যমে এই গবেষণার জন্য উত্তরদাতা হিসাবে বাছাই করা হয়েছে। এই গবেষণাটি পরিচালনা করছেন ডাঃ সোনিয়া আরিফা, যিনি ঢাকা বিশ্ববিদ্যালয়ের অধীনে বাংলাদেশ ইন্সটিটিউট অব হেল্থ সাইন্সেস (বিআইএইচএস) এর এপিডেমিওলজি এবং বায়োস্টাটিসটিকস এর এমফিলের ছাত্রী। বর্তমানে এই ধরনের গবেষণা পৃথিবীর বিভিন্ন দেশে পরিচালিত হচ্ছে।

গবেষণার শিরোনাম

এই গবেষণার শিরোনাম Health Seeking Behaviour of the Menopausal Women in Urban Slum of Dhaka City.

গবেষণার লক্ষ্য

ঢাকার বস্তি এলাকার মহিলাদের মেনোপজ এবং এর উপসর্গ মোকাবিলার প্রতি মনোভাব এবং আচরণ সম্পর্কে জানা।

তথ্য সংগ্রহের পদ্ধতি

সরাসরি সাক্ষাৎকার।

সময় সীমা

প্রতিটি সাক্ষাৎকারের জন্য প্রায় ৩০- ৪০ মিনিট লাগবে।

গোপনীয়তা

আপনার দেয়া তথ্যের গোপনীয়তা রক্ষা করা হবে এবং তা কারো কাছে প্রকাশ করা হবে না। এই তথ্যাদি শুধুমাত্র গবেষণার কাজে ব্যবহৃত হবে। আপনার নাম, ঠিকানা এবং ব্যক্তিগত তথ্যাদি গোপন করে একটি কোডের মাধ্যমে সনাক্ত করা হবে।

ফলাফল

এই গবেষণালব্ধ ফলাফল নীতিনির্ধারকধের সহায়তা করতে ব্যবহার করা হবে যাতে করে, সুবিধাবঞ্চিত জনগোষ্ঠীর মহিলাদের সুবিধার্থে মেনোপজ সংক্রান্ত তথ্য এবং স্বাস্থ্যসেবা বৃদ্ধি করার জন্য কর্মকৌশল প্রণয়ন করতে পারেন।

এই ফলাফল বিভিন্ন গবেষণাপত্র, প্রচার মাধ্যম এবং রিপোর্টে প্রকাশিত হবে। এছাড়াও স্থানীয় স্বাস্থ্যকর্মীরা আপনাদের স্বাস্থ্য সেবায় তা ব্যবহার করবে।

সপ্রণোদিত অংশগ্রহন

এই গবেষণায় আপনি স্বেচ্ছায় অংশগ্রহন করবেন এবং যেকোন সময় আপনি এ থেকে নিজেকে সরিয়ে নিতে পারবেন। আপনি এই প্রশ্নপত্রের যেকোন প্রশ্নের উত্তর দান থেকে বিরত থাকতে পারবেন। এই গবেষণা সম্পর্কে কোন কিছু জানতে চাইলে আমার সাথে যোগাযোগ করতে পারেন(ডাঃ সোনিয়া আরিফা :০১৯১১৭৪৬২৬) ।

অংশগ্রহনে সম্মতি

এই সম্মতির মাধ্যমে বোঝাবে যে আপনি স্বেচ্ছায় এই গবেষণায় অংশগ্রহন করেছেন।

উত্তরদাতা পড়েছেন		সাক্ষাতকার গ্রহনকারী	
সম্মত		সম্মত হননি	

স্বাক্ষর

আমি গবেষণা সম্পর্কে ভালো করে জেনে ১ম ও ২য় ধাপের উত্তর দানে সম্মতি জ্ঞাপন করছি

উত্তরদাতার নাম সাক্ষী:

স্বাক্ষর / টিপসই স্বাক্ষর / টিপসই

প্রশ্নমালা

Health Seeking Behaviour of the Menopausal Women in Urban Slum of Dhaka City

Bangladesh Institute of Health Sciences

প্রশ্নকারীর নামঃ

সাক্ষাৎকার গ্রহণের তারিখঃ সাক্ষাৎকারের সময়ঃ

উত্তরদাতার পরিচিতি

উত্তরদাতার নামঃ আই ডিঃ ☐☐☐

ঠিকানাঃ

টেলিফোন নম্বর (যদি থাকে)-

জনতাত্ত্বিক তথ্য

ক্রমিক	প্রশ্ন	উত্তর	কোড
১	আপনার বয়স কত? (সম্পূর্ণ বছরে((বয়স অনুমানে সাহায্য করুন)	বছরঃ	☐☐
২	আপনার ধর্ম কি?	ইসলাম ১ হিন্দু ২ খ্রিস্টান ৩ বৌদ্ধ ৪	☐
৩	সর্বমোট, কত বছর আপনি স্কুলে (প্রাক স্কুল বাদে) বা পুরো সময় লেখাপড়ায় ব্যয় করেছেন? (শিক্ষা বছরের মোট সংখ্যা লিপিবদ্ধ করুন, প্রাক স্কুল ও কিন্ডারগার্টেন ব্যতীত)	বছরঃ প্রত্যাখ্যান ৭৭ অশিক্ষিত ০০	☐☐

৪	আপনার বৈবাহিক অবস্থা কি?	বিবাহিত ১ বিবাহ বিচ্ছেদ ২ বিধবা ৩ অন্যান্য ৯৯	☐☐
৫	আপনার স্বামী জীবিত আছেন?	হ্যাঁ ১ না ২	☐

আর্থ- সামাজিক তথ্য

ক্রমিক	প্রশ্ন	উত্তর	কোড
৬	আপনার পেশা কি?	চাকুরী ১ ব্যবসা ২ শ্রমিক ৩ গৃহিনী ৪ গৃহকর্মী ৫ অন্যান্য (উল্লেখ করুন) ৯৯	☐☐
		অন্যান্য হলে উল্লেখ করুন.....	
৭	আপনার পরিবারের মাসিক আয় কত?	টাকাঃ প্রত্যাখ্যান ৭৭	☐☐
৮	আপনার পরিবারের মাসিক ব্যয় কত?	টাকাঃ প্রত্যাখ্যান ৭৭	☐☐
৯	আপনি কি ধরনের পরিবারের অংশ?	একক ১ যৌথ ২	☐
১০	আপনার পরিবারে কতজন সদস্য আছে?	সংখ্যা ১ ২	☐☐
১১	আপনার কতজন জীবিত সন্তান আছে?	সংখ্যা ১ ২	☐☐
১২	পরিবারে আপনার অবস্থান কি?	নির্ভরশীল নয় ১ নির্ভরশীল ২	☐
১৩	আপনার সাথে পরিবারের অন্যান্য সদস্যদের মধ্যে সম্পর্ক কেমন?	খুব খারাপ ১ খারাপ ২	☐

		মোটামুটি ৩ ভালো ৪ খুব ভালো ৫	

স্বাস্থ্য বিষয়ক তথ্য

ক্রমিক	প্রশ্ন	উত্তর	কোড
১৪	আপনার কি এই সকল রোগ আছে কিনা?	উচ্চ রক্তচাপ ৩ ডায়েবেটিস ৪ ক্যান্সার ৫ থাইরয়েড সমস্যা ৬ কোমড় ব্যাথা ৭ অন্যান্য ৯৯ কোন রোগ নাই ২	☐ ☐ ☐ ☐☐
১৫	আপনার কি সম্প্রতি শরীরের ওজন কমেছে?	হ্যাঁ ১ না ২	☐
১৬	আপনার কি কখনও কোন অস্ত্রোপচারের আছে?	হ্যাঁ ১ না ২	☐
হ্যাঁ হলে উল্লেখ করুন			

স্ত্রীরোগ- সংক্রান্ত তথ্য

ক্রমিক	প্রশ্ন	উত্তর	কোড
১৭	প্রথমবার মাসিক হওয়ার বয়স	১২ বছরের আগে ১ ১২ বছরের পরে ২	☐
১৮	আপনার মাসিক কি নিয়মিত ছিল?	হ্যাঁ ১ না ২	☐
১৯	মাসিকের সময় কি ব্যাথা হতো?	হ্যাঁ ১ না ২	☐
২০	কত বছর বয়সে মাসিক অনিয়মিত হতে শুরু করে?	৪০ বছরের আগে ১ ৪০ বছরের পরে ২	☐
২১	কখন আপনার মাসিক সম্পুর্ণ বন্ধ হয়ে যায়?	বয়স (পূর্ণ বছর)	☐☐

২২	আপনার মাসিক বন্ধ হওয়ার পর এক বছর পার হয়েছে কিনা? (post menopausal)	হ্যাঁ না	১ ২	☐
২৩	আপনার মেনোপজের কারণ কি ছিল?	স্বাভাবিক/প্রাকৃতিক অপারেশন অন্যান্য	1 2 99	☐☐
			অন্যান্য হলে উল্লেখ করুন.....	

ধাত্রীবিদ্যা- সংক্রান্ত তথ্য

ক্রমিক	প্রশ্ন	উত্তর		কোড
২৪	আপনি আপনার জীবনের কোন পরিবার পরিকল্পনা পদ্ধতি ব্যবহার করেছেন?	হ্যাঁ না	১ ২	☐
হ্যাঁ হলে ২৭ নং প্রশ্ন প্রযোজ্য হবে...				
২৫	কোন ধরনের পরিবার পরিকল্পনা পদ্ধতি ব্যবহার করেছেন? *(সর্বোচ্চ ৩ টি পদ্ধতি লিপিবদ্ধ করা যাবে)*	জন্মনিয়ন্ত্রণ বড়ি আই ইউ ডি (কপার টি) ইনজেকশন ইমপ্ল্যান্ট (নরপ্ল্যান্ট) কনডম বন্ধ্যাকরন অন্যান্য	১ ২ ৩ ৪ ৫ ৬ ৯৯	☐ ☐ ☐☐
২৬	আপনি জীবনে কতবার গর্ভবতী হয়েছেন?	সংখ্যা		☐☐
২৭	আপনার প্রথম সন্তান জন্মগ্রহনের সময় আপনার বয়স কত ছিল?	১৮ বছরের কম ১৮ বছরের বেশী সন্তান নাই	১ ২ ৭	☐
২৮	আপনার শেষ সন্তান জন্মগ্রহনের সময় আপনার বয়স কত ছিল?	৩৮ বছরের কম ৩৮ বছরের বেশী সন্তান নাই	১ ২ ৭	☐
২৯	গর্ভাবস্থায়, সন্তান প্রসব বা প্রসব- পরবর্তী সময়ে কোন জটিলতা হয়েছিল কিনা?	হ্যাঁ না	১ ২	☐
		হ্যাঁ হলে উল্লেখ করুন		
৩০	আপনার যৌন জীবনে কোন সমস্যা আছে কিনা?	হ্যাঁ না	১ ২	☐

৩১	আপনার যৌনকর্মের ইচ্ছা বা তাড়না কি কমে গিয়েছে?	হ্যাঁ ১ না ২	☐
৩২	যৌনসংগমের সময় আপনার ব্যথা অনুভূত হয় কিনা?	হ্যাঁ ১ না ২	☐

ব্যক্তিগত অভ্যাস

ক্রমিক	প্রশ্ন	উত্তর	কোড
৩৩	এই অভ্যাসগুলো কি নিয়মিত চর্চা করেন?	হাত ধোয়া ১ গোসল করা ২ স্যানিটারী পায়খানা ৩ ব্যবহার	☐ ☐ ☐
৩৪	আপনি কি পান খান?	হ্যাঁ ১ না ২	☐
৩৫	আপনি কি ধূমপান করেন?	হ্যাঁ ১ না ২	☐
৩৬	আপনি কি অন্য কোন ধরনের তামাক ব্যবহার করেন?	হ্যাঁ ১ না ২	☐
৩৭	আপনি কি আ বা কফি পান করেন?	হ্যাঁ ১ না ২	☐

৩৮. মেনোপজ রেটিং স্কেল / **Menopause Rating Scale (MRS)**

নীচের কোন উপসর্গগুলো এখন আপনার আছে?

উপসর্গ	নাই	অল্প	মাঝারী	বেশী	তীব্র
	০	১	২	৩	৪
১. হঠাৎ অতিরিক্ত গরম অনুভব করা, ঘাম দেয়া (কিছুক্ষণ পরপর ঘাম দেয়া)					
২. বুকে অস্বস্তি লাগা, হার্টবিট অনুভূত হওয়া, বুক ধড়ফড় করা অথবা বুকে চাপ অনুভব হওয়া					
৩. ঘুমের সমস্যা (ঘুম আসতে দেরী হওয়া, টানা ঘুম না হওয়া, তাড়াতাড়ি ঘুম ভেঙ্গে যাওয়া)					
৪. বিষণ্নতা (মন খারাপ থাকা, দুঃখভাব, কান্না আসা, কোন কাজ করতে ইচ্ছা না করা, মানসিক অবস্থা দ্রুত পরিবর্তন)					
৫. বিরক্ত লাগা, নার্ভাস লাগা, টেনশন হওয়া অথবা আক্রমণাত্মক মানসিকতা					

৬. উদ্বেগ, দুশ্চিন্তা, আতংক, অস্থিরতা					
৭. শারীরিক ও মানসিক অবসাদ (কর্মক্ষমতা হ্রাস, স্মৃতি হ্রাস, মনোযোগে সমস্যা অথবা ভুলে যাওয়ার প্রবণতা)					
৮. যৌন সমস্যা (যৌন তাড়না, কার্যকলাপ এবং সন্তুষ্টিতে পরিবর্তন আসা)					
৯. প্রস্রাবে সমস্যা, বারবার প্রস্রাব হওয়া বা প্রস্রাবের বেগ অনুভূত হওয়া					
১০. শুষ্ক যোনিপথ (যোনিপথের শুষ্কতা, জ্বালাযন্ত্রণা, যৌনমিলনে সমস্যা)					
১১. হাড়ের সন্ধিতে / জোড়ে এবং মাংসপেশির ব্যাথা					

৩৯. আপনার কি উপরোক্ত সমস্যা ছাড়া আর কোন সমস্যা আছে?

উপসর্গ	হ্যাঁ – ১	না - ২
১. মাথাব্যাথা	☐	☐
২. মাথা ঘোরা	☐	☐
৩. দুর্বলতা	☐	☐
৪. অরুচি	☐	☐
৫. চোখে ঝাপসা দেখা	☐	☐
৬. রক্তস্বল্পতা	☐	☐

৪০. উপরে উল্লিখিত সমস্যাগুলো কি নিচের কোন ক্ষেত্রে সমস্যা সৃষ্টি করে?

	একদম না ০	অল্প ১	মাঝারী ২	বেশী ৩
ক. আপনার কর্মদক্ষতা				
খ. আপনার পারিবারিক দায়িত্ব পালনে				
গ. পরিবারে সদস্যদের সাথে আপনার সম্পর্ক				
ঘ. আপনার সামাজিক জীবন				

স্বাস্থ্যসেবা নেয়ার আচরণ

ক্রমিক	প্রশ্ন	উত্তর	কোড

৪১	আপনি কতদিন যাবত এই উপসর্গগুলোতে ভুগছেন?	পুর্ণ মাসে লিখুন	☐☐
৪২	আপনি এই উপসর্গগুলোকে কিভাবে মোকাবেলা করেছেন?	স্ব- যত্ন / নিজের যত্ন ১ আত্মীয় বা প্রতিবেশীর সাথে পরামর্শ করেছেন ২ গতানুগতিক বা ভেষজ যত্ন ৩ হোমিওপ্যাথী ৪ হাসপাতাল বা ক্লিনিক ৫ অন্যান্য ৯৯	☐☐
উত্তর ১ হলে, ৪৩ নং প্রশ্ন প্রযোজ্য হবে। উত্তর ৫ হলে, ৪৪(ক) নং প্রশ্ন প্রযোজ্য। উত্তর ৫ না হলে, ৪৪(খ) নং প্রশ্ন প্রযোজ্য।			
৪৩	কি ধরনের স্ব- যত্ন / নিজের যত্ন আপনি এই উপসর্গ মোকাবেলার জন্য নিয়েছিলেন?	খাবারে পরিবর্তন ১ বাড়িতে সহজলভ্য প্রতিকার ২ বিশ্রাম ৩ যৌনকর্মে পরিবর্তন ৪ স্ব- চিকিৎসা ৫	☐
৪৪(ক)	আপনি কেন একজন স্বাস্থ্যসেবা প্রদানকারীর সহায়তা নিয়েছেন?	অসহনীয় উপসর্গ ১ স্বাস্থ্যসেবা সম্পর্কে জানা ছিল ২ পরিবারের সমর্থন ছিল ৩ বাড়ির কাছে সেবাপ্রাপ্তি ৪ আর্থিক সামর্থ্য ৫ স্বাস্থ্যসেবা সম্পর্কে ভাল অভিজ্ঞতা ৬	☐
৪৪(খ)	আপনি কেন একজন স্বাস্থ্যসেবা প্রদানকারীর সহায়তা নেন নাই?	স্বাস্থ্যসেবা সম্পর্কে জানা ছিল না ১ পরিবারের সমর্থন ছিল না ২ আর্থিক সামর্থ্য ছিল না ৩ সামাজিক কুসংস্কার ৪ বাসা থেকে দূরত্ব ৫ স্বাস্থ্যসেবা সম্পর্কে খারাপ অভিজ্ঞতা ৬	☐
৪৫	স্বাস্থ্যসেবা নেয়ার ক্ষেত্রে আপনার লক্ষ্য কি?	মেনোপজের উপসর্গ কমানো ১ মানসিক অবস্থার উন্নতি ২ যৌনক্ষমতার উন্নতি ৩ হাড় জোড়ের ব্যথা কমানো ৪ শারীরিক শক্তির উন্নতি ৫	☐

মেনোপজের প্রতি ধারণা

ক্রমিক	প্রশ্ন	উত্তর	কোড
৪৬	মেনোপজকে আপনি কিভাবে দেখেন?	ভালভাবে ১ খারাপভাবে ২	☐
৪৭	মেনোপজকে আপনি কি হিসাবে দেখেন?	শারীরিক সমস্যা ১ স্বভাবিক প্রক্রিয়া ২	☐
৪৮	আপনি কি মেনোপজের সঠিক বয়স জানেন?	হ্যাঁ ১ না ২	☐
৪৯	মেনোপজ সম্পর্কে আপনি কোথা থেকে তথ্য পান?	বই ১ পরিবারের মুরুব্বী ২ বন্ধুবান্ধব ৩ টিভি ৪ স্বাস্থ্যসেবা প্রদানকারী ৫	☐
৫০	মেনোপজ সম্পর্কে আপনার জ্ঞ্যান বা ধারণা কি মানের বলে আপনার ধারনা?	খুব ভালো ১ ভালো ২ মোটামুটি ৩ কিছু ধারণা আছে ৪ কোন ধারণা নেই ৫	☐
৫১	আপনার কি হরমোন থেরাপি সম্পর্কে কোন ধারণা আছে?	হ্যাঁ ১ না ২	☐
৫২	মেনোপজের উপসর্গগুলোর জন্য বস্তিতে কি কোন স্বাস্থ্যসেবা পাওয়া যায়?	হ্যাঁ ১ না ২	☐

৫৩. মেনোপজের ব্যাপারে আপনার মনোভাব কি?

মেনোপজের ব্যাপারে মনোভাব	সম্পুর্ন একমত	একমত	একমত নই	একদমই একমত নই
১. তার মেনোপজের পর তার স্বামী তার সম্পর্কে কি ভাববে সে বিষয়ে একজন মহিলা উদ্বিগ্ন থাকে				
২. মেনোপজ হলে একজন মহিলার ডাক্তার দেখানো উচিত				
৩. একজন মহিলার জীবনে সবচেয়ে বড় যে পরিবর্তনগুলি আসে তার মধ্যে মেনোপজ একটি				
৪. মেনোপজ একটি বিরক্তিকর অভিজ্ঞতা				
৫. মেনোপজের পর একজন মহিলা নিজে সব কাজ করার ক্ষেত্রে আরো স্বাধীন বোধ করে				
৬. মহিলারা মনে করে মেনোপজ তাদের জীবন শেষ হয়ে যাওয়ার প্রক্রিয়ার শুরু				
৭. মহিলারা মেনোপজের পর সাধারনত ভালো অনুভব করে				

৮. প্রায় সব মহিলাই মেনোপজের পর বিষণ্নতায় ভোগে				
৯. মেনোপজের পোষ মহিলারা চুপচাপ এবং আনন্দিত থাকে				
১০. মেনোপজে একটি বিরক্তিকর জিনিস যা মহিলারা ভয় পায়				
১১. মেনোপজের সময় মহিলাদের কিছু সমস্যা হতেই পারে				
১২. একজন মহিলার শরীর মেনোপজের সময় কিছুটা পরিবর্তিত হয়, তাছাড়া আর তেমন কোন পরিবর্তন নাই				
১৩. মেনোপজের সময় মহিলারা শোকার্ত থাকে				
১৪. মেনোপজের পর একজন মহিলার কাছে জীবন আরো আকর্ষনীয় হয়ে ওঠে				
১৫. মেনোপজের পোষর মহিলারা নিজেদেরকে আর সত্যিকারে মহিলা হিসাবে ভাবে না				
১৬. মেনোপজের সময় শরীরে যেসব পরিবর্তন আসে যা মহিলারা নিয়ন্ত্রণ করতে পারেনা, সেগুলোই সবচাইতে বেশী ভোগায়				
১৭. মেনোপজ হয়নি এমন একজন মহিলার সাথে যার মেনোপজ হয়েছে তার পার্থক্য হচ্ছে যে, মেনোপজের পর তার শুধুমাত্র মাসিক বন্ধ হয়েছে				
১৮. মেনোপজ হওয়ার কারনে একজন মহিলার জীবনে এমন কোন গুরুত্বপূর্ন পরিবর্তন আসেনা				
১৯. মেনোপজের পর একজন মহিলার আত্মবিশ্বাস বেড়ে যায়				

ধন্যবাদ! আপনার দেয়া তথ্য সম্পূর্ন গোপন রাখা হবে।

Annex 2: Work plan and Timeframe

Sl .No.	Activity detail	1-2 months	3-4 months	5-6 months	7-8 months	9-10 months	11-12 months
1	Title selection and approval						
2	Introduction and Rationale						
3	Literature review						
4	Questionnaire Development, Training of the Data collector and Pilot study						
5	Data collection						
6	Data processing and data analysis						
7	Report writing and submission						