Age at Menopause and Menopausal Transition: Perspectives of Indian Rural Women

C.G. Hussain Khan[1] and Jyoti S. Hallad[2]

Introduction

After the International Conference on Population and Development (ICPD) held in Cairo in 1994, the concept of reproductive health has occupied the central place in the field of health, illness and medicine. 'Reproductive health' is defined as "the ability of women to pass through the reproductive years and **beyond** with dignity and successful childbearing and to be free of gynaecological disease and risk" (Zurayck 1994/ Emphasis added). United Nations defines reproductive health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity in **all matters relating to the reproductive system and its processes** (UNO 1994/ Emphasis added**)**. Many researchers and policy makers have emphasized that the real reproductive health framework should go **beyond the narrow confines of family planning** to encompass all aspects of human sexuality and reproductive health needs during the various stages of women's lives (Sai and Nassim, 1989/ Emphasis added) and directs care to men and women throughout their changing needs in the life cycle (Fathalla, 1994). All the above definitions emphasis the importance given to all the concepts of reproductive health from menarche to menopause. Problems related to menopause were given scant attention till the 1980's. The concept of menopause got its importance only in 1981 when a report of the World Health Organization, Scientific Group, based on its meeting on Research on the Menopause held in Geneva during December 1980 says there are virtually no data on the age distribution of the menopause and no information on its socio-cultural significance in the developing countries. Further the Scientific Group made some specific recommendations as WHO sponsored research should be undertaken to determine the impact on health service needs of the rapidly increasing numbers of postmenopausal women in developing countries; uniform terminology should be adopted by health care workers with regard to the menopause; uniform endocrine standards should be developed which can be applied to the description of peri and postmenopausal conditions and diseases; and descriptive epidemiological studies of the age at menopause should be performed in a variety of settings.

---

[1] Coordinator, International Diploma in Reproductive Health Education and Management and Professor of Anthropology, Karnataka University, Dharwad, India
[2] Research Investigator, Population Research Centre, Dharwad, India

Though Maoz et al (1977) underlined the need of a multi-factorial, biological, sociological, psychological, and anthropological approach to problems of menopause, there are hardly any studies done in rural areas to understand the socio-cultural dimensions of menopause at micro level. Here is an attempt to understand the concept of transition into menopause from the Indian women's point of view in a rural setting.

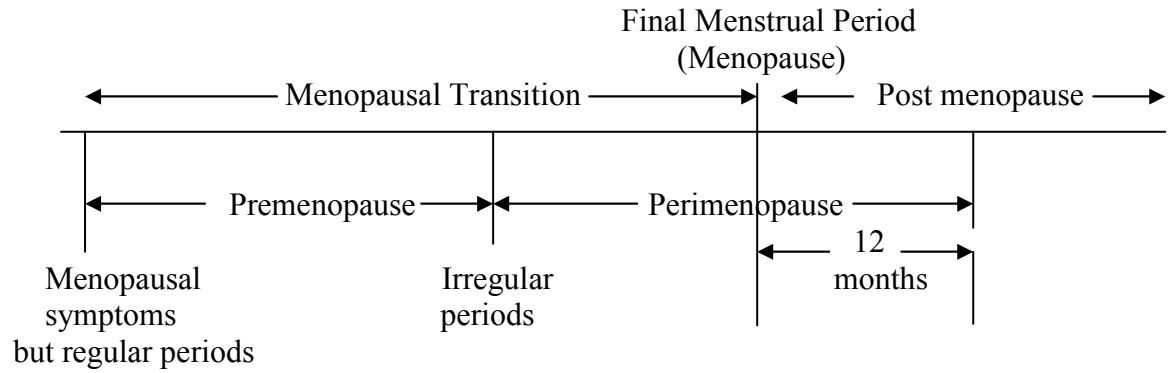
Human beings, both male and female experience many body changes throughout their lifetime. Many of these changes are mainly due to varying levels of hormones in the body, which occur at different stages of life. Accordingly, menopause is a normal but one of the major transitional periods in the life of every woman. It is one step in a long, slow process of reproductive aging. It involves series of body changes that can last from one year to as long as 10 years. Menopause is derived from the Greek word '*menos*' means month and '*pause*' means to stop - which refers to the 'last menstrual period' and is generally considered to have occurred after one year of amenorrhoea. Once the body of woman has completed the changes, and she has not had periods for 12 months in a row, she is said to have passed through menopause (Margolese, 2003). Though menopause is natural for most of the women, some times it can also be induced. For instance, removal of the uterus (hysterectomy) surgically or through radiation or chemotherapy will make the periods stop.

The cause of natural menopause is 'burning out' of the ovaries. Female sex hormones estrogen and progesterone are produced in sub critical quantities for a short time after menopause, but over a few years fall almost to zero. These hormones are important for keeping the vagina and uterus healthy as well as for normal menstrual cycles and for successful pregnancy. Estrogen also helps to keep bones healthy. It helps women to keep good cholesterol levels in their blood (National Institute on Aging, 2002). During menopausal transition there will be a lot of fluctuation in these hormone levels and thus women may experience many symptoms and conditions. However, the influence of this fluctuation varies from one woman to another. Some of the important and common symptoms women can experience during menopausal transition are Changes in periods, Hot flashes and night sweats, Problems with vagina and bladder, Changes in sexual desire, Sleep problems, Mood changes/swings, Changes in the body. There are also some serious medical concerns related to menopause as, firstly loss of bone tissue that makes the bones weak and cause osteoporosis and secondly, heart disease risk may grow due to age-related increases in weight, blood pressure and cholesterol levels (Marcus 1999, Silberstein 1999, Mikhail and Ragheb 1996,

George 1996, Sayed 2000, Kwawukume et al 1993, Rizk 1998, Kirchengast 1992, Kandil et al 1999, Odum et al 1999, Mashiloane 2002).

The whole process of transition into menopause can be divided into different phases as Premenopause, Perimenopause and Postmenopause. Few studies have defined premenopause and perimenopause based on the regularity of the menstruation only (Sayed 2000). Women are considered as postmenopausal if they have more than 12 months amenorrhoea (Sayed 2000 and Ismail et al 1998) or sometimes just 6 months of amenorrhoea (Lindquist and Bengtsson 1978, Rizk 1998). In the present paper, all those women getting their menstruation regularly and not reported any of the listed menopausal symptoms are defined as 'not in menopausal transition'; those who are found to experience at least one menopausal symptom but having regular menstruation are considered as 'premenopausal'; women who feel some changes in their menstruation either in the frequency of menstrual periods or in the flow of bleeding are defined as 'perimenopausal' women; and all those who have not got their periods during last one year are coded as 'postmenopausal'.

Fig 1: Diagrammatic representation of different phases of menopause



Objectives of the study

The main objective of the paper is to build an in-depth understanding of the transition of women into menopause in an Indian rural setting.

The specific objectives of the paper are,

1. To determine age at menopause
2. To analyse the symptoms and disorders associated with menopause and treatment seeking behaviour for it
3. To see the after-effects of menopause

Methodology

The findings of this paper are based on the primary data conducted in a village of north Karnataka in India during June 2004 to September 2005. Both quantitative and qualitative research methods have been adopted to collect the information. Initially a census of the village was done during which 588 households were listed and 3059 people including 1609 males and 1450 females were enumerated from these households. Further, all the women between 30 to 54 years are interviewed. This age-group is decided after analysing the results of earlier studies. All the earlier studies of menopause, specifically done on Indian women say that in our country most of the women attain menopause between 40 to 47 years (Singh and Ahuja 1980, Sharma and Hiramani 1985, Randhawa et al 1987). To meet the objective of studying premenopausal and perimenopausal phases it was essential to go back at least 10 years. The upper age limit of 54 years was decided as almost all women attain menopause by this time. Hence the age group 30 to 54 is considered as the most ideal age range to study the above said objectives in an Indian village. As menopause is a biological phenomenon, all women irrespective of their marital status were considered for the study. On the whole 399 women were interviewed by personal interview method. Their height, weight and blood haemoglobin level were also assessed. In Addition to above interviews, 10 focus group discussions (FGDs) (7 with women and 3 with men), twenty case studies and 60 follow-up interviews were also done.

Background characteristics of women

Background characteristics of women as age, education, occupation and marital status are presented in Table 1. Women were between 30 to 54 years. As high as 82 percent of these women were illiterates and 4 percent of them had gone to the primary schools only, 9 percent of them had attended middle schools. Women having high school and college level education was 5 percent and less than 1 percent respectively. As agriculture is the backbone of Indian economy and it is a family enterprise most of these women were found to engage in agricultural work in addition to their daily routine household activities. Around 27 percent of them were working only in their own fields and 43 percent of them were working as 'coolies' (labourers) in others' fields and 4 percent of them were having their own business, mostly small petty shops. Another 2 percent of the women were having salaried jobs and around 1 percent of them were doing different family occupations as pot-making, washing clothes etc. One-fourth of the women were doing only household work. Among these women, majority were married as they account for about 81 percent and 12 percent of the them were widows.

Another 5 percent of them were separated from their husbands and 2 percent didn't get married mainly because of their physical disability.

Table 1: Percent distribution of women by their background characteristics

Particulars	Number	Percent
Age of woman		
30-34	113	28.3
35-39	104	26.1
40-44	81	20.3
45-49	59	14.8
50-54	42	10.5
Education of woman		
Illiterate	326	81.7
Primary	15	3.8
Middle	35	8.8
High school	20	5.0
Above SSLC	3	0.8
Occupation of woman		
Cultivator	109	27.3
Coolie	172	43.1
Business	15	3.8
Salaried	7	1.8
Family occupation	3	0.8
Household work	93	23.3
Marital status		
Married	322	80.7
Widowed	49	12.3
Separated	20	5.0
Unmarried	8	2.0
All	399	100.0

Reproductive health related characteristics of women

Some reproductive health related characteristics of women are analysed and are presented in Table 2.

Table 2: Age at menarche, marriage and number of living children

Particulars	Mean
Age at menarche (N=399)	12.9
Age at marriage (N=391)	14.6
Living children (N=391)	2.9
Male living children (N=391)	1.5
Female living children (N=391)	1.4

The mean age at menarche is found to be 12.9 years and mean age at marriage is found to be 14.6 years for these women. Average number of living children is around 3 per woman with slightly less number of female living children.

Further, extent of child loss, fetal loss as experienced by these women and use of contraception are shown in Table 3. As high as 23 percent of them had experienced the death of at least one of their children. Further, 15 percent had experienced death of at least one male child and 13 percent of them had to face the shock of their daughters' death. Further, 19 percent of these women had experienced one or the other types of foetal losses among which 6 percent of them had at least one still births, 12 percent of them experienced spontaneous abortions and 4 percent of them had undergone an induced abortion. Overall 80 percent of these women had used permanent methods of family planning. Further, 66 percent had undergone Tubectomy operation, 11 percent of them had undergone Laparoscopy operation and husbands of 3 percent of these women had undergone Vasectomy operation. However use of spacing methods is very low among these women as just 1 percent of them had used oral pills and less than 1 percent had got inserted an IUD.

Table 3:Child loss, foetal loss and use of contraception

Particulars	Number	Percent
Prop. of women experienced		
At least one child loss	91	23.3
At least one male child loss	58	14.8
At least one female child loss	50	12.8
Any foetal loss	76	19.4
At least one still birth	22	5.6
At least one spontaneous abortion	45	11.5
At least one induced abortion	16	4.1
Use of contraception		
Tubectomy	257	65.7
Laparoscopy	44	11.3
Vasectomy	13	3.3
IUD	3	0.8
Oral pill	4	1.0
Number	391	391.0

Age at menopause

One way of analysing age at menopause is to see what proportion of women have reached menopause in different age groups and the figures are presented in Table 4. Out of 399 women, 99 women were not in menopausal transition, 23 were in premenopausal phase, 60 women were in perimenopause and 117 were in postmenopause. As the table indicates, half

of the women in the age group 30-34 were not yet experiencing the menopausal transition and half of the women in the age group 35-39 years were in premenopause. By 40-44 years one-third of them reached menopause and this proportion increased to more than two-third during 45 to 49 years. Majority of them entered menopause between 46-47 years as indicated in Figure 3.

Table 4: Percent distribution of women by age and menstrual status

Age of woman	Not in transition	Premenopause	Perimenopause	Postmenopause	Number
30-34	50.4	42.5	7.1	0.0	113
35-39	26.9	50.0	15.4	7.7	104
40-44	17.3	19.8	28.4	34.6	81
45-49	0.0	11.9	18.6	69.5	59
50-54	0.0	0.0	4.8	95.2	42
All	24.8	30.8	15.0	29.3	399

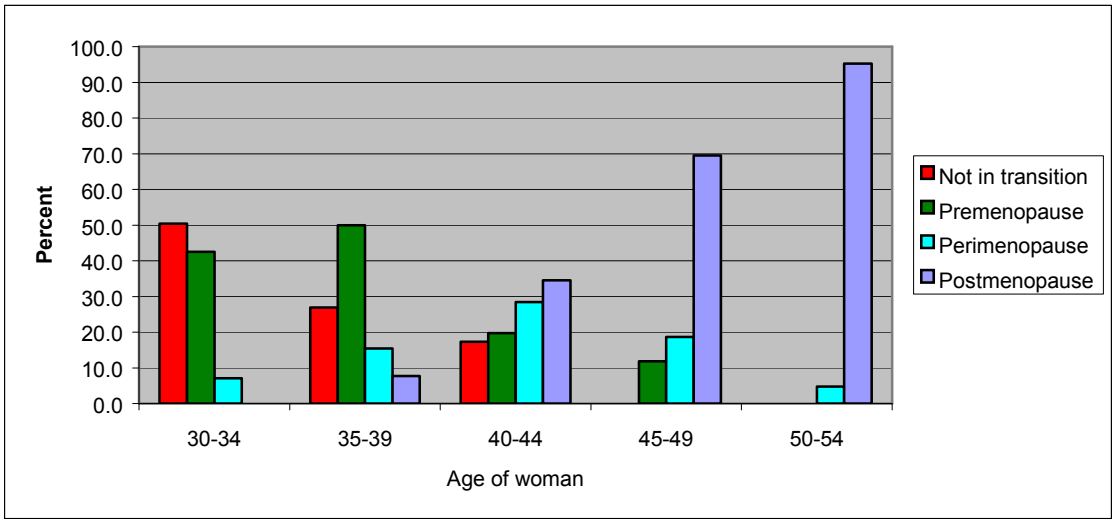


Figure 2: Menstrual status of women by age

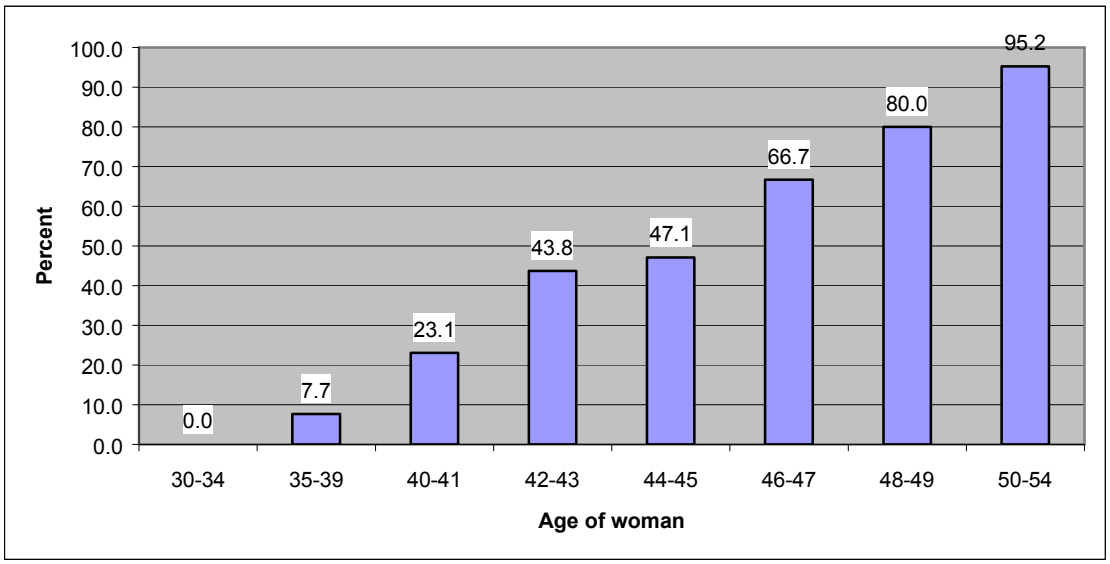


Figure 3 : Proportion of women in postmenopause by age

Mean and median age at menopause

Many studies have tried to estimate the mean age at menopause in different countries and in different cultures in the last 3-4 decades. Studies conducted in European and American countries put the age at menopause between 50 to 52 years (Fischl 1992, Drife 1997, Villadsen et al 1985, Treloar 1972 and 1971) and those conducted in Africa estimated it around 48 to 50 years (Frere 1971, McMaster et al 1997, Okonofua et al 1990, Odum et al 1999, Kwawukume et al 1993, Mashiloane 2002, Sayed 2000, Kandil et al 1999). The findings of the studies conducted in Asian countries like Japan, Taiwan, Indonesia and United Arab Emirates indicate mean age at menopause between 48 to 50 years (Osei-Hyiaman et al 1998, Chow et al 1997, Agoestina and Vankeep 1984, Rizk 1998). Very few studies have tried to analyse the mean age at menopause in India and they estimated it between 44 to 47 years (Singh and Ahuja 1980, Sharma and Hiramani 1985, Randhawa et al 1987).

Some studies have tried to analyse the menopausal age in terms of its median. In American and European countries it is found to be between 51 – 52 years (Stanford et al 1987, Brambilla and Mckinlay 1989, Luoto et al 1994). In Africa the figure is estimated to be 48 years (Okonofua et al 1990, Kwawukume et al 1993, Noreh et al 1997). In accordance with that of mean age at menopause, median also showed the declining trend in the studies conducted in Nepal and India as they estimated it around 46 years (Beall 1983 and Sidhu 1986). However, when we compare mean and median age at menopause from the studies that have estimated both, not much difference can be seen between the two figures (Okonofua et al 1990, Kwawukume et al 1993, Rizk 1998, and Sayed 2000).

In the present study mean and median age at menopause are found to be 41.6 and 42 years respectively. Life table analysis done including all the 399 women increased the above figures to 44.9 and 45.2 years. (Table 5). As expected, age at menopause in India is comparatively low.

Table 5: Age at menopause

	Mean	Median	Number
Among those attained menopause	41.6	42.0	111
All women (Life table analysis)	44.9	45.2	399

Menopausal Symptoms and its Management

Due to decreasing levels of hormones like estrogen and progesterone in the women's body during menstrual transition, there will be many symptoms women may experience at this

time. Almost all the women felt and/or expressed about the changes in the menstrual cycles either in terms of interval between two cycles or in terms of flow of bleeding. Hence menopausal symptoms are categorised into 'menstrual changes' and 'other symptoms' and analysed separately here. Again with regard to 'other symptoms', there are some symptoms which can be attributed only to the menopause, and others which can be felt not only due to menopause but also due to some other reasons. Hence after discussing with the leading gynaecologists of the research area, 'other symptoms' are categorised into two types and put separately into two tables Table 7 and Table 8.

Among 111 postmenopausal women only, 49.5 percent (55 in number) reported that they had experienced some changes in their menstruation before reaching menopause and rest others reported that their menstruation stopped all of a sudden without any changes. Hence these 55 women were asked further what all menstrual changes they observed. As one woman could not able to explain the changes, analysis with regard to menstrual changes is done only for 54 postmenopausal women and all the 60 perimenopausal women and results are presented in Table 6.

Table 6: Menstrual changes during menopause

Menstrual pattern	Women in perimenopause (N=60)	Women in postmenopause (N=54)
Interval between 2 cycles		
With in a month	21.7	29.6
Up to 3 months	40.0	33.3
More than 3 months	38.3	37.0
Duration of each period (Days bleed)		
1-2 days	21.7	18.5
3-5 days	58.3	46.3
> 5 days	20.0	35.2
Flow of bleeding		
Heavy	26.7	53.7
Normal	46.7	18.5
Scanty	26.7	27.8
Prop. Felt periods as painful	40.0	33.3
Duration experiencing/experienced menstrual changes		
<7 months	31.7	38.2
7-12 months	41.7	21.8
> 12 months	26.7	27.3
Don't know	0.0	12.7

As the above table indicates, majority of the women started getting their periods at larger intervals. About 40 percent of perimenopausal women and 33 percent of postmenopausal women experienced their periods once in 2-3 months. Another 38 percent in each of the categories got it at still larger intervals, sometimes up to 8 months also. Nearly half of the women in both the phases got the bleeding for about 3-5 days and 20 percent and 35 percent of the women in perimenopause and postmenopause got the bleeding for more than 5 days, sometimes even up to 10-15 days. Comparatively more women in postmenopause felt that they got heavy bleeding during this menstrual irregularity time. On the other hand 40 percent of perimenopausal women and one third of postmenopausal women felt their periods became painful during this time. About 38 percent of postmenopausal women reported that they got these menstrual changes just for 6 months and other 27 percent of them experienced it for more than 1 year.

Further, 'other menopausal symptoms', which can be attributed mainly to menopause, are presented in Table 7. As the table indicates, irritability, anxiousness, mood swings, joint/limbs pain and weight gain are some of the common symptoms experienced by all the women irrespective of their menopausal phase. More than one-fourth of the women in perimenopause phase felt hot flashes and night sweats, and just 15 percent of the women in premenopause reported these two symptoms. However, only 4 percent of postmenopausal women were able to recall that they used to get these symptoms during their transitional period. It is very prominent from the table that comparatively few postmenopausal women had reported the experience of all the symptoms. As it is a past experience for them they might have forgotten it or they may not be willing to report it.

Table 7: Proportion of women experienced menopausal symptoms by their menstrual status

Menopausal symptoms	Women in premenopause	Women in peri menopause	Women in post menopause	All
Prop. of women experiencing/experienced				
Irritability	48.8	46.7	13.5	26.2
Anxiousness	40.7	45.0	12.6	23.2
Mood swings	39.8	28.3	6.3	18.6
Hot flashes	16.3	26.7	4.5	10.4
Night sweats	15.4	26.7	3.6	9.9
Feel joint/limbs pain	43.1	31.7	9.9	21.1
Feel weight is gained	35.0	43.3	9.9	20.4
Feel vagina is dry	4.9	1.7	2.7	2.5
Pain during intercourse	0.8	0.0	0.9	0.5
Lack of desire/interest in sex	2.4	0.0	0.9	1.0

There are some symptoms, which can be felt both due to menopausal transition and due to other factors. These symptoms as experienced by women in different phases are given in Table 8. As we can see some of the symptoms are experienced even by the women who are not in menopausal transition. Severe headache, poor memory, white discharge, fatigue, and difficulty in concentration are some of the common symptoms which most of the women experienced/experiencing. Comparatively, more women in premenopause and perimenopause reported these symptoms than the other two categories namely women not in transition and postmenopausal women.

Table 8: Proportion of women experienced menopausal symptoms by their menstrual status

Menopausal symptoms	Women not in transition	Women in pre menopause	Women in peri menopause	Women in post menopause	All
Prop. of women experiencing/experienced					
Severe headache	39.4	52.8	58.3	19.8	41.0
Poor memory	22.2	56.1	61.7	27.0	40.2
More vaginal/white discharge	12.1	26.8	35.0	20.7	22.6
More tired/Fatigue	12.1	35.0	36.7	9.9	22.4
Difficulty in concentrating	11.1	37.4	35.0	9.0	22.4
Sleeplessness	11.1	22.0	33.3	8.1	17.0
Crying without reason	0.0	29.3	33.3	7.2	16.3
Urine leaks while sneezing/sitting	2.0	16.3	21.7	6.3	10.7
Skin crawling	0.0	3.3	10.0	27.9	10.4
Heart palpitation	3.0	15.4	18.3	6.3	10.2
Urinating more often	3.0	16.3	15.0	6.3	9.9
Feel breast tenderness	0.0	12.2	21.7	3.6	8.1
Pain/burning while urinating	3.0	9.8	8.3	7.2	7.1
Feel vaginal itching	2.0	7.3	3.3	2.7	4.1
Genital prolapse	1.0	2.4	1.7	4.5	2.5
Number	99	123	60	111	393

Management of menopause

Menopause is a natural and expected part of a woman's development and does not need to be prevented. However, there are many ways to reduce or eliminate some of the symptoms that accompany menopause. There are many therapies for symptoms and conditions associated with menopause. They can be divided into two broad categories as Hormone Replacement Therapy (HRT) and Non-Hormonal Therapy. HRT involves taking estrogen plus progesterone. Use of HRT for menopausal symptoms varies from one culture to other. In Taiwan HRT use rate found to be around 80 percent (Chow et al 1997) and in UAE it is around 20 percent (Rizk 1998). However, in Egypt and African studies HRT use is found to

be very negligible with less than 5 percent (Sayed 2000, Ismail et al 1998, Mashiloane 2002).However, no Indian studies have talked about use of HRT. Some of the non-hormonal therapies are, Herbal Treatment, Chinese Medicine, Homeopathy, Aromatherapy, Diet, Exercise and Education.

All the women in perimenopause and postmenopause were asked further, what they did for these discomforts or symptoms (Table 9). For irregularity of periods, seeking treatment is found to be very low, as 78 percent of postmenopausal women and 58 percent of perimenopausal women did nothing when their periods became irregular. According to them they knew that woman's periods become irregular for some time and it stops somewhere around 40 years or when she gets her first grand child. Irregularity of menstruation during this age is not considered as a problem. Hence they felt there is no meaning in contacting any health personnel as long as they don't have any other problems. They visit the health provider only if they get problems as severe bleeding and very painful periods. For other symptoms, 59 percent of perimenopausal women and 43 percent of postmenopausal women did nothing. Among those who sought treatment for these symptoms, majority had gone to private hospitals.

Table 9: Treatment seeking behaviour for menopausal symptoms by menstrual status

	Irregular periods		Other symptoms	
Treatment seeking behaviour	Women in Peri menopause	Women in Post menopause	Women in Peri menopause	Women in Post menopause
Not done anything	57.5	77.5	58.7	42.9
Visited private hospital	27.5	11.7	34.8	40.5
Visited others (govt. doctor, FPAI, ANM)	15.0	10.8	6.5	16.6

All those women who did nothing were asked further, why they had not sought any treatment for these symptoms and the reasons as given by the women are presented in Table 10. Many women had the opinion that all these problems are very common, they will be cured on their own or they had not taken these symptoms very seriously. About one-third of them just took some pain killing tablets on their own or by asking them in the nearby shops. Some women said, due to family or financial problems they were not able to go to the hospitals even though it is severe. About 7 percent of them felt they don't like to go to any hospitals or don't like to take any tablets. None of them got HRT treatment. This is again supported by the doctors as they felt now a days they have stopped giving HRT to menopausal symptoms.

Table 10: Reasons for not seeking treatment					
Reasons	Women not in transition	Women in pre menopause	Women in peri menopause	Women in post menopause	All
Such problems are very common	4.2	13.7	14.8	11.1	11.7
Not taken it seriously	20.8	49.0	44.4	33.3	40.0
It will be OK on its own	0.0	3.9	0.0	11.1	3.3
Own medication/ from nearby shop	66.7	23.5	29.6	22.2	33.3
Family problems	0.0	2.0	0.0	5.6	1.7
Financial problems	0.0	2.0	0.0	0.0	0.8
Don't like/fear to go to hospital	4.2	2.0	3.7	11.1	4.2
Don't take any medicine	0.0	2.0	7.4	0.0	2.5
Do yoga	0.0	2.0	0.0	0.0	0.8
Planning to go in near future	4.2	0.0	0.0	0.0	0.8
Feel shy to disclose the problem	0.0	0.0	0.0	5.6	0.8
Number	24	51	27	18	120

After-Effects of Menopause

After menopause, many women have been found to experience genital and /or urinary troubles (Ismail et al 1998), prevalence of hypertension and coronary heart disease became high, osteoporosis and increased incidence of bone fractures are found, lower back ache found to be the major problem with fatigue, decreased memory, vaginal dryness, insomnia, loss of libido, dry skin and depression (Chow et al 1997, Noreh et al 1997, Chowdhury and Alam 2000, Mahadevan et al 1982). After-effects of menopause have been analysed here in terms of how women feel about their health after reaching menopause, what all changes they have observed in terms of sexual relationship with husband, social relationship with family members and others and also in terms of their diet.

All those 111 women who had reached menopause were asked whether their health is same as it was earlier, or it has deteriorated or it has improved (Table 11). Around half of them felt that their health is same as it was earlier and they didn't find any impact of menopause on their health. Another 35 percent of them opined that their health has improved and only 15 percent of them reported that it has deteriorated after attaining menopause. Reasons for deterioration were mainly headache, limbs/joints pain, body ache, heaviness of the body and general fatigue, which they were getting due to stoppage of periods. Not getting periods was reported as the main reason for improvement in the health.

Table 11: Perceived changes in health after menopause and reasons for it	
Particulars	Percent
Perceived changes in health after menopause	
Health deteriorated	14.4
Remained same	47.7
Health improved	35.1
Can't say	2.7
Number	111
Reasons for deterioration	
Backache, limbs pain, headache	37.5
Fatigue, heaviness	18.8
Heaviness, joint pain	18.8
Many general health problems	25.0
Number	16
Reasons for improvement	
No problems of menstruation	87.2
Clean like a man	7.7
No menstruation, so no weakness	2.6
Indigestion problem reduced	2.6
Number	39

These women were asked further, whether they experienced any health problems due to the attainment of menopause, whether they sought any treatment if any and where they sought the treatment. The results are presented in Table 12.

Table 12: After effects of menopause and treatment seeking behaviour	
Prop. experienced any health problems after menopause (N=111)	26.1
Type of health problems	
Backache, limbs pain, headache	41.4
Heaviness	10.3
Limbs pain, Sleeplessness	3.4
Body pain, Fatigue	17.2
White discharge	6.9
Eyesight problem	3.4
Tuberculosis	6.9
Skin problems	3.4
Mouth ulcers	3.4
Prop. sought treatment among those experienced problems	72.4
Place where treatment was sought	
Government hospital	14.3
Private hospital	81.0
Self medication	4.8

Around one-fourth of them felt that they had some health problems soon after menopause and they were mainly body pain, limbs pain and fatigue. They felt that as dirt was not sent outside in the form of monthly bleeding after attaining menopause, it would be accumulated in the body and created weight gain, heaviness and in turn lead to all these body pains and limbs/joint pains. About 72 percent of them had sought treatment for these problems mainly from the private doctors.

Effect of menopause on sexual relationship, social relationship and food intake

Menopause brings a radical change in the relationship of man and woman. Most of the women totally lack interest in sexual activities and become withdrawn. With menopause there is lack of necessary and essential hormones - estrogen and progesterone - in the body. As a result of it, there will be decrease in the flow of blood in the vagina. Because of this, walls of vagina will become thinner and they will loose their elasticity. These factors cause discomfort while having sex. There may be irritation and infection too causing serious aversion to sex (McMaster et al 1997). Thus menopause, all over the world, is believed to be a cause in the decrease in sexual activity. However, experts believe that this may not always be so. Menopause is the stage when no ovulation takes place in the woman's body and this is related to her reproductive cycle and not to her sex drive. Thus it is the misconception in the minds of people that menopause is the end of sex life and it has to be cleared. (Anonymous 1979, Odum et al 1999, Chen and Ho 1999).

All the 84 postmenopausal and married women were asked whether they have continued their sexual relationship with their husband. As Table 13 indicates half of the women in the age group 35-39, around 30 percent of the women between 40-49 and only 4 percent of the women in the age group 50-54 reported that they still have sexual relationship. As high as more than three-fourth of the postmenopausal women reported they didn't have any sexual relationship with their husbands now. However, as reported by them reason for not continuing sex was mainly lack of privacy or they used to sleep separately.

Table 13: Proportion of postmenopausal women continuing sexual relationship with their husbands

Age of woman	Proportion having sexual relationship	Number
35-39	50.0	4
40-44	28.6	21
45-49	32.3	31
50-54	3.6	28
All	22.6	84

Further, all the 111 postmenopausal women were asked whether they find any change in their food intake, relationship with family members and relation with neighbours/friends after attaining menopause and results are presented in Table 14. More than three-fourth of the women reported there was no change in their diet after menopause. Only four women felt that they were feeling hungrier since attaining menopause and rest others opined that they were taking comparatively less food. With regard to change in the relationship with the family members, 88 percent of them did not notice any changes in the behaviour of their family members and rest others felt that their family members were treatment them as elders. Similarly 72 percent of them did not find any changes in the relationship of friends/neighbours and rest others felt that their neighbours started giving more respect to them by calling them to all the poojas, ceremonies and festivals. This clearly indicates that people feel women as elderly after reaching menopause and women also enjoy that status.

Table 14: Percent distribution of postmenopausal women by their opinion on change in diet, change in personal relationships and change in social relationships after reaching menopause

Particulars	Number	Percent
Change in diet		
No change	86	77.5
Take less food (Don't feel hungry / Indigestion)	17	15.3
Not eating fried things	1	0.9
Not feeling tasty, indigestion problem	2	1.8
Feel heavy after eating rice	1	0.9
Take more food (feel more hungry)	4	3.6
Change in relationship with family members		
No change	98	88.3
Respect as elders	13	11.7
Change in relationship with neighbours/friends*		
No change	80	72.1
Respect as elders	16	14.4
Respect as elders and invited to all functions	11	9.9
Call to cook food during puja	4	3.6
Give small children without any hesitation	1	0.9
Number	111	100.0

* Multiple answers received

Anthropometric measurements like height, weight and blood haemoglobin level were assessed for all the 399 women. Body mass index was calculated using height and weight of these women. Prevalence of anaemia and obesity are presented in Table 15. Significant difference was not observed between the women of various menopausal phases with regard to anaemia. However prevalence of anaemia found to be very high among these women as just 5

percent of all women were found to be in the normal category blood haemoglobin level. With regard to obesity, postmenopausal women found to slightly higher obese than the other 3 categories.

Table 15: Percent distribution of women by their nutritional status and menstrual status

Particulars	Women not in transition	Women in pre menopause	Women in peri menopause	Women in post menopause	Combined
Prevalence of anaemia					
Moderate and severe	28.7	22.1	25.9	22.4	24.4
Mild	64.9	74.6	69.0	73.8	71.1
Normal	6.4	3.3	5.2	3.7	4.5
Prevalence of obesity					
Underweight	34.3	27.6	26.7	25.6	28.6
Normal range	58.6	57.7	58.3	55.6	57.4
Overweight	7.1	14.6	15.0	17.9	13.8
Number	99	123	60	117	399

Summary and Conclusion

Average age at menopause varies from one culture to another. Differences in the age at menopause have also been found between women in developed and developing countries. Age at menopause is found to be very low among Indian rural women. Women were aware only about irregularity of menstruation as a symptom of menopause. Though they experienced other symptoms they could not relate them to menopause. Most of the women experienced menstruation at the larger intervals and with heavy bleeding. Irregularity of menstruation during middle age is not at all considered as a problem and many preferred not to seek any treatment for it. If at all women face any problems along with irregularity of menstruation as severe bleeding or pain, they prefer to visit lady private doctors. Women were having the opinion that their health was remained same or improved compared to that of earlier. Effect of menopause was found to be very low on the relationship of women with others as well on food intake. However women tend to become overweight after menopause and many women found to discontinue their sexual relationship.

Women and men need to educate their partners about the changes that occur in their bodies as well as those they experience. They can build mutual support by keeping one another informed. Counselling of couples can be very valuable for partners in mid-life. Other family members, relatives and friends can provide important support during this crucial stage of

menopause. More than anything else, preparing oneself for perimenopause and menopause psychologically and emotionally works out more effectively. One should eat healthy diet, which is low in fat and cholesterol, high in fibre and well balanced with vitamins and minerals, mainly calcium. Fruits, vegetables, and whole grains should be included in the daily diet. More Calcium rich foods should be taken to prevent the bone loss. If one is overweight, she should try to loose weight by light exercises or by going on long walks. Regular general check-up including blood pressure and blood sugar, checking cholesterol is very much essential. Regular pelvic and breast examinations are to be done

According to Hill (1995) the number of postmenopausal women in the world will rise from 467 million in 1990 to 1.2 billion by 2030. Most of the increase in number will occur in developing countries. Sulak (1996) also reports that in the next 20 years, more women will experience perimenopause and menopause than ever before since they comprise the baby boomer generation. They are unique in that many women have delayed child bearing into their thirties or forties and many have chosen to have no children at all. This uniqueness and the very large number of women who are entering or are currently in the perimenopausal period make it particularly essential for health care providers to completely understand the variability, effects, and treatment regimens during decreasing ovarian function. Health care providers must also assess and manage correctly the risk factors for common health problems among perimenopausal and/or menopausal women, including osteoporosis, heart disease, and cancers. They should offer screening tests and dietary and exercise recommendations. For our grandmother and great-grandmother, life expectancy was shorter. Reaching menopause often meant that their life was nearing an end. But this is no longer true. Today women are living longer. Today's women will live a third of her life after menopause. By educating her, and planning ahead for this time of challenges and opportunities, every woman can make this period as one of the most rewarding and enriching time of her life. The real importance of menopause today lies in the increasing longevity of the 20th century woman. By making wise decisions about menopause and a healthy lifestyle, we can make the most of the 20, 30, or more years we have ahead!

References

AGOESTIN, A. T. AND P. A. VAN KEEP. 1984. The climacteric in Bandung, West Java Province, Indonesia. A survey of 1,025 women between 40-55 years of age *Jr Maturitas* 6 (4).

ANONYMOUS. 1979. Fertility in middle age *Jr Research in Reproduction* 11(1).

ANONYMOUS. 1979. Progesterone therapy for hot flashes? *Jr Medical World News* 20 (15).

BEALL, C. M. 1983. Ages at Menopause and Menarche in a high-altitude Himalayan Population *Jr Annals of Human Biology* 10 (4).

BRAMBILLA, D. J. AND S. M. MCKINLAY. 1989. A Prospective Study of Factors Affecting Age at Menopause. *Jr Journal of Clinical Epidemiology* 42 (11).

CHEN, J. AND S. C. HO. 1999. Contraceptive Status and Sexual Function of Climacteric Chinese Women *Jr Contraception* 59 (2).

CHOW, S. N., C. C. HUANG, Y. T. LEE. 1997. Demographic Characteristics and Medical Aspects of Menopausal Women In Taiwan. *Journal of the Formosan Medical Association* 96 (10).

CHOWDHURY, S. N. AND S. M. ALAM. 2000. *Beyond Reproductive Years: An Exploratory Study on Women's Health after Menopause* [Dhaka], Bangladesh, Population Council, 2000 Dec.

DRIFE, J. O. 1977. The Human Menstrual Cycle *Jr Scottish Medical Journal* 22 (3).

FATHALLA, M. F. 1994. *From family planning to reproductive health* In: L.A. Mazur (ed) Beyond the numbers. A reader on population, consumption, and the environment. Island Press, Washington DC.

FISCHL, F. 1992. Contraceptive in the Climacteric *Wiener Medizinische Wochenschrift*. 142 (5-6)4.

FRERE, G. 1971. Mean Age at Menopause and Menarche in South Africa *Jr South African Journal of Medical Sciences* 36.

GEORGE, T. 1996. Women in a South Indian Fishing Village: Role Identity, Continuity and The Experience of Menopause *Jr Health Care For Women International* 17 (4).

HILL, K. 1995. *The Demography of Menopause* Baltimore, Maryland. Johns Hopkins Population Center, WP 95-07 Papers On Population.

ISMAIL, S. A., S. M. MOHAMAD, A. E. OMRAN, H. T. SALEM. 1998. A Study of the Factors Affecting the Age of Natural Menopause In Sohag Governorate *Jr Egyptian Society Of Obstetrics And Gynecology* 24 (1-3).

KANDIL, O. F., M. K. HASSANEIN, H. O. KANDIL, A. M. FATA. 1999. The Menopausal Age And Distribution of Menopausal Symptoms Among Some Egyptian Women *Jr Egyptian Society Of Obstetrics And Gynecology* 25 (10-12).

KIRCHENGAST, S. 1992. Relations Between Fertility, Body Shape And Menopause In Austrian Women *Jr Journal Of Biosocial Science* 24 (4).

KWAWUKUME, E. Y., T. S. GHOSH, J. B. WILSON. 1993. Menopausal Age Of Ghanaian Women *Jr International Journal Of Gynecology And Obstetrics* 40 (2).

LINDQUIST, O. AND C. BENGTSSON. 1978. Menopausal Age In Relation To Smoking (To Be Published In Acta Medica Scandinavica).

LUOTO, R., J. KAPRIO, A. UUTELA. 1994. Age At Natural Menopause And Socio-demographic Status In Finland *Jr American Journal Of Epidemiology* 139 (1).

MAHADEVAN, K., M. S. R. MURTHY, P. R. REDDY, S. BHASKARAN. 1982. Early Menopause And Its Determinants *Jr Journal Of Biosocial Science* 14 (4).

MAOZ, B., A. ANTONOVSKY, A. APTER, H. WIJSENBEEK, N. DATAN. 1977. The Perception Of Menopause In Five Ethnic Groups In Israel. *Jr Acta Obstetricia Et Gynecologica Scandinavica* (Suppl. 65).

MARCUS, D. A. 1999. Focus On Primary Care Diagnosis And Management Of Headache In Women *Jr Obstetrical & Gynecological Survey* 54 (6).

MASHILOANE, C. D., J. BAGRATEE, J. MOODLEY. 2002. Awareness Of And Attitudes Toward Menopause And Hormone Replacement Therapy In An African Community *Jr International Journal Of Gynecology And Obstetrics* 76.

MCMASTER, J., M. PITTS, G. POYAH. 1997. The Menopausal Experiences Of Women In A Developing Country: "There Is A Time For Everything: To Be A Teenager, A Mother And A Granny" *Jr Women And Health* 26 (4).

NOREH, J., C. SEKADDE-KIGONDU, J. G. KARANJA, N. G. THAGANA. 1997. Median age at menopause in a rural population of Western Kenya *Jr East African Medical Journal* 74 (10).

ODUM, C. U., R. I. ANORLU, N. I. OHAYA. 1999. Clinical presentation and management of menopause in Lagos, Nigeria *Jr International Journal Of Gynecology And Obstetrics* 66 (3).

OKONOFUA, F. E., A. LAWAL, J. K. BAMGBOSE. 1990. Features of menopause and menopausal age in Nigerian Women *Jr International Journal Of Gynaecology And Obstetrics* 31 (4).

OSEI-HYIAMAN, D., T. SATOSHI, M.UEJI, T. HIDETO, K. KANO. 1998. Timing of menopause, reproductive years, and bone mineral density *Jr American Journal Of Epidemiology* 148 (11).

RANDHAWA, I., H. K. PREMI, T. GUPTA. 1987. The age at menopause in the women of Himachal Pradesh and the factors affecting the menopause *Jr Indian Journal of Public Health* 31 (1).

RIZK, D. E., A. BENER, M. EZIMOKHAI, M. Y. HASSAN, R. MICALLEF. 1998. The age and symptomatology of natural menopause among United Arab Emirates Women *Jr Maturitas* 29 (3).

SAI, F. AND J. NASSIM. 1989. The need for a reproductive health approach. *International Jouranal of gynaecology and obstetrics* suppl. 3.

SAYED, G. H., I. H. EL-NASHAR, A. NASR, O. EL-GEBALY, M. M. SHAABAN. 2000. The menopausal transition-An Egyptian Perspective *Jr Egyptian Society of Obstetrics and Gynaecology* 25 (7-9).

SHARMA, N., A. B. HIRAMANI. 1985. Estimation of reproductive span of Brahmin and Chaudhary females of Kangra (Himachal Pradesh) *Jr Journal of Family Welfare* 32 (1).

SIDHU, S. 1986. Reproductive life of some Gujar women of Punjab Indian *Jr Journal of Physical Anthropology and Human Genetics* 12 (3).

SILBERSTEIN, S. D. 1999. Menstrual migraine *Jr Journal of Women's Health and Gender-Based Medicine* 8 (7).

SINGH, L., S. AHUJA. 1980. An Estimation of Reproductive Performance in the Women of Punjab Jr Anthropologischer Anzeiger 37 (4).

SINGH, L., S. AHUJA. 1980. Trend of menopause among the Women of Punjab *Jr Anthropologischer Anzeiger* 38 (4).

STANFORD, J. L., P. HARTGE, L. A. BRINTON, R. N. HOOVER, R. BROOKMEYER. 1987. Factors influencing the age at natural menopause *Jr Journal of Chronic Diseases* 40 (11).

SULAK, P. J. 1996. The Perimenopause: A critical time in a woman's Life *Jr International Journal Of Fertility* 41 (2).

TRELOAR, A. A. 1973. Variations in the human menstrual cycle In: Uricchio, W.A. And Williams, M.K., Eds. Proceedings of a Research Conference on Natural Family Planning, Airlie House, Warrenton, Virginia Washington, D.C., The Human Life Foundation.

TRELOAR, A. E. 1971. Reproduction capacity of the human female, From Menarche to Menopause. [Unpublished] Presented at the North American conference on fertility and sterility, Puerto Vallarta, Mexico.

UNITED NATIONS. 1994. Programme of action of the 1994 International Conference on Population and Development (A/CONF.171/13). Reprinted in *Population and Development Review* 21 (1) and 21 (2).

VILLADSEN, S., B. JEUNE, T. KONGSHAVN, S. H. PEDERSEN. 1985. The age of the menopause *Jr Methodological problems in historical and geographic comparisons, Ugeskrift For Laeger* 147 (45).

WORLD HEALTH ORGANIZATION. 1981. Scientific group, research on the menopause. World health organization technical report series 670.

ZURAYCK, H. 1994. Population and Health International Conference on Population and Development ICPD 1994. IUSSP, Liege.