Research Article

Assessment of menopausal problems among rural women using modified menopause rating scale

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ABSTRACT

Background: Menopause, although not a disease in itself, is associated with many frustrating physiological changes, diverse symptoms and psychological dysfunctions such as anxiety, depression, lack of concentration and decreased self-esteem to the extent of affecting the quality of life of middle aged and elderly women. Hence, to ensure quality life to these women, attention needs to be focused on menopausal problems too to mitigate/manage these problems through appropriate interventions. **Objectives:** To assess the magnitude of menopausal problems and associated factors among rural women. **Materials and Methods:** A cross-sectional study was conducted among rural women aged 40-60 years resident of study area. A random sample of 400 eligible women was drawn from those. The required information was collected on a pretested, semi-structured schedule from randomly selected respondents by the investigators by house-to-house visits. **Results:** Mean age of menopause was 46.2 ± 1.61 standard deviation (SD) years, median 46 years with a range from 43 to 50 years. Mean age of menarche was 11.95 ± 0.775 SD years. The most frequent menopausal symptoms were joint and muscular discomfort (77.5%), sleep problems (76.5%), hot flushes (62.0%), irritability (58.5%), and bladder problems (54.5%). Awareness about these problems was inadequate. **Conclusions:** The mean age at menopause of 46.2 years is in the lower side of the global range of 45-55 years (as per WHO) and lies almost in the middle of the observed range of 43-49 years for developing countries. The magnitude of menopausal/perimenopausal problems was very high and the common problems were almost similar to as observed in other such studies but varied in frequency possibly due to difference in perception, adaptation, sociocultural environment, etc. The awareness about menopausal problems was inadequate necessitating to educate and to counsel these women to make them fully aware about menopausal phenomenon.

KEY WORDS: Menopausal Age; Menopausal Problems; Age at Menarche

INTRODUCTION

Menopause is understood to be as a universal reproductive phenomenon. Modern medicine has contributed significantly in prolonging human lifespan.[1] All the women who live beyond the age of 45-50 years, experience a period of transition from reproductive to nonreproductive stage of life as a normal physiological change.[2] Natural menopause is recognized after 12 consecutive months of amenorrhea for which there is no obvious pathological or physiological cause.[3] The word climacteric is used to refer to a wide variety of physiological changes occurring in the years immediately surrounding the menopause.[4] The year before menopause that encompasses the changes from normal ovulatory cycles to cessation of menses is known as premenopausal transition[5] and the term postmenopause is defined as dating from last menstrual period regardless of whether the menopause was induced or spontaneous.[6]

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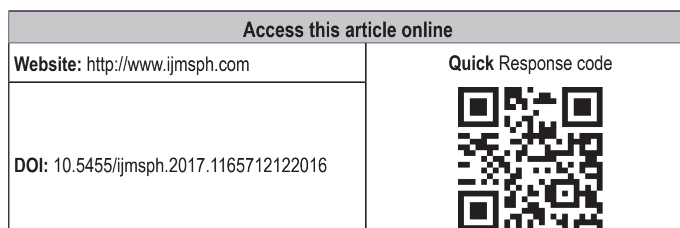

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References from all over the world show that an event of menopause is highly variable in timing and pattern. According to the WHO, natural menopause takes place between the age of 45 and 55 years for the women worldwide. It is generally accepted that the average age at menopause is about 51 years in industrialized countries,[6] but in developing countries, it ranges from 43 to 49 years.[7-10] The reproductive aging in women is the depletion of ovarian follicles which results in profound fall in the production of hormones - estrogen and progesterone. The deficiency of these hormones causes various menopausal symptoms.[11] The commonly observed symptoms are irregular skipped periods, insomnia, mood swings, fatigue, depression, irritability, headache, vaginal dryness, muscle ache, bladder control problems, etc. However, every woman's experience of the menopause is unique. She may experience all of the above symptoms or none of them. Some find the transition barely noticeable while other find it life altering.[12] Hence, the years immediately preceding and the decades afterward, however, are of much clinical significance.[13]

The nature, severity, and frequency of symptoms vary not only among the individuals of different countries but also in the same population with different cultures and ethnicities. The concept of local biology, reproductive characteristics, and sociocultural aspects in relation to menopausal symptoms has been discussed in various studies.[14,15] Menopause becomes important for clinicians and health policy-makers as with general increase in life expectancy; women are likely to live for more than 20 years after menopause in estrogen-deprived state with impaired quality of life due to menopausal symptoms.[16]

The quality of life of the increasing aging female population is now becoming an important issue. However, there are very little data on the menopausal problems especially from rural areas in Haryana to deal effectively with them. Hence, this study was undertaken with an attempt to evaluate the menopausal symptoms/problems of women aged 40-60 years to understand the prevalence and pattern; so as to plan interventions for remedial measures and also to create awareness among women for improving their health status and quality of life.

Aims and Objectives

1. To assess the magnitude of menopausal problems among rural women.
2. To find out the factors associated with menopausal problems.

MATERIALS AND METHODS

Study Design

A community based cross-sectional study.

Study Area

The study was carried out at a primary health centre (PHC), a rural field practice area attached to a Government Medical College for Women in District Sonepat, Haryana, India. The PHC comprises seven health subcenters serving a population of 38,100.

Study Subjects

Women aged between 40 and 60 years residing in the study area.

Sample Size

Assuming the prevalence (p) of any of the major menopausal problems as 50% and 10% allowable error (L) of p at 95% level of significance; using the standard formula for calculating sample size (N) = $4pq/L^2$ (where q =1−p; the sample size came out to 400.

Methodology

Two health subcenters were selected randomly out of the total seven in the PHC area. All the eligible women in the age group of 40-60 years in the selected health subcenters were enlisted to serve as sampling frame and out of them, 400 were selected randomly. The required data were collected on a pretested, semi-structured schedule by house-to-house visits by the investigators after taking informed consent. The sampled woman who could not be contacted even after three visits or refused to participate in the study was replaced by the succeeding one in the list/sampling frame. If the succeeding woman also was not available then preceding woman was selected. Help from field health workers of PHC was taken in contacting and tracing the sampled study subjects. The variables covered in study were (a) Sociodemographic variables: Age, educational status, household types, number of family members, employment status, income level, etc., (b) information regarding menopausal status of the women, and (c) reproductive history: Age at menarche, age at marriage, parity, use of oral contraceptives, and duration of breast feeding.

Menopause rating scale (MRS) questionnaire after suitable modification was used as a basis for assessing menopausal symptoms. MRS questionnaire is an instrument which has been widely used in many clinical and epidemiological studies in which the respondent answers the given questions, i.e., whether or not they had experienced the menopausal symptoms shown in the questionnaire in the previous one month. However, it was noted during the pilot study that most of these rural women were illiterate and also had difficulties in grading the symptoms as per scale. Hence, to minimize these difficulties, the MRS questionnaire was modified into a schedule, i.e., the responses were filled by the investigator herself and severity grades of symptoms were merged as part of modification.

Statistical Analysis

The Statistical Package for the Social Sciences Software Version (17.0) was used for analyses.

Inclusion Criteria

Women aged 40-60 years without any chronic medical problem and resident of the study area and offered informed consent to participate in the study.

Exclusion Criteria

The study subjects who could not be contacted even after three consecutive visits or refused to participate in the study or who had undergone hysterectomy or were having uncontrolled medical conditions such as hypertension, diabetes mellitus, or heart disease or who were undergoing treatment for cancer or were in remission or who had history of drug or alcohol abuse and on hormone replacement therapy and the women who were not resident of the study area were excluded from the study.

RESULTS

The study covered 400 eligible women aged 40-60 years and 222 (55.5%) of them were in postmenopausal state and the rest (44.5%) in perimenopausal state. Marital status wise, 312 (78%) women were currently married whereas the rest 22% were widows/divorced/separated. The current mean age of study subjects was 52.49 ± 6.18 standard deviation (SD) years. The highest number of women was in the age group of 50-54 years (30%) followed by 45-49 years (29%). Mean age of menarche of study women was 11.95 ± 0.775 SD years and about two-third of them (62%) had menarche at the age of 12-13 years. Mean age of marriage was 18.21 ± 0.932 SD and 62.3% of study women got married at the age of 18 years. 15.2% women got married even before the legal age of marriage (18 years). The mean age of menopause was 46.2 ± SD 1.61 years and median age was 46 years with a range from 43 to 50 years. Two-third of women (66.7%) had menopause at the age of 46 years. Literacy status wise analysis revealed that more than one-fourth (27%) women were illiterate and a little less than half (46.1%) were literate up to primary level (fifth class) only. Merely, 9.25% women were having literacy level of higher secondary or more. The annual income of about 40% families of women was below rupees hundred thousand and 44.8% had income between one to two hundred thousand rupees. About two-third (65.75%) women had four and more children indicating a trend of large family size during their active reproductive phase. Only 10.2% women had two children and none had <2 (Table 1).

Table 1: Distribution of study women according to demographic variables (n=400)

Demographic variables	Number (%)
Current age (years)	
40-44	101 (25.2)
45-49	116 (29.0)
50-54	120 (30.0)
55-60	63 (15.8)
Age at menarche (years)	
Less than 12	86 (21.5)
12-13	248 (62.0)
14-15	52 (13.0)
More than 15	14 (3.5)
Mean age at menarche was 11.95±0.775 SD	
Age at marriage (years)	
Up to 16	8 (2.0)
17	53 (13.2)
18	249 (62.3)
19	27 (6.8)
20 or more	63 (15.8)
Mean age at marriage (years): 18.21±0.932 SD	
Age at menopause (years)	
Up to 45	17 (7.7)
46	148 (66.7)
47	41 (18.5)
48 and above	16 (7.1)
Mean age at menopause (years): 46.2±1.61 SD and median age 46 years with a range from 43 to 50 years	
Literacy level	
Illiterate	108 (27.0)
Primary	185 (46.3)
Secondary	70 (17.5)
Higher Sec. and above	37 (9.3)
Annual income (rupees in hundred thousand)	
<1	157 (39.3)
1-2	179 (44.8)
2-3	47 (11.8)
3-4	13 (3.3)
4 and above	4 (1.0)
Parity	
One	0 (0)
Two	41 (10.2)
Three	96 (24.0)
Four	162 (40.5)
Five or more	101 (25.3)

SD: Standard deviation

The analysis of menopausal symptoms/problems and their frequencies as assessed using modified MRS questionnaire revealed as shown in Table 2. The most common problem was joint pain and muscular discomfort (77.5%), followed by sleep problems (76.5%), hot flushes (62.0%), irritability (58.5%), and bladder problems (54.5%). The least common symptoms were heart discomfort, sexual problems, depressive

Table 2: Menopausal symptoms/problems and their association with menopausal status

Symptoms present	Perimenopausal (*n*=178)	Menopausal (*n*=222)	Total (*n*=400)	p value
Somatic				
Hot flushes	97 (54.5)	151 (68.0)	248 (62.0)	0.01
Heart discomfort	16 (9.0)	52 (23.4)	68 (17.0)	0.00
Physical and mental exhaustion	79 (44.3)	92 (41.4)	171 (42.8)	0.55
Joint and muscular discomfort	149 (83.7)	160 (72.1)	309 (77.5)	0.01
Psychological				
Depressive mood	75 (42.1)	55 (24.7)	130 (32.5)	0.00
Irritability	103 (57.9)	130 (58.6)	233 (58.5)	0.89
Anxiety	75 (42.1)	73 (32.9)	148 (37.0)	0.05
Sleep problems	137 (77.0)	169 (76.8)	306 (76.5)	0.85
Urogenital				
Sexual problems	56 (31.5)	58 (26.1)	114 (28.5)	0.24
Bladder problems	96 (53.9)	122 (54.9)	218 (54.5)	0.84
Dryness of vagina	73 (41.0)	71 (32.0)	144 (36.0)	0.05

mood, anxiety, etc. The association of symptoms/problems with menopausal status revealed that joint and muscular discomfort, depressive mood, anxiety, and dryness of vagina were significantly more in perimenopausal women whereas physical and mental exhaustion, sleep problems and sexual problems were also more during perimenopausal period but were not significant. The hot flushes and heart discomfort were significantly more in postmenopausal women. Irritability and bladder problems were also more during postmenopause period but statistically were insignificant. The reporting of menopausal problems by women is highly affected by differences in adaptability to and perception of menopausal problems by women (Table 2).

DISCUSSION

The highest number of women was in the age group of 50-54 years (30%), more than three-forth women were currently married. About three-fourth (73%) women were illiterate or literate up to primary level only. About two-third (65.75%) women had four and more children. Mean age of menarche was 11.95 ± SD 0.775 and of marriage was 18.21 ± SD 0.932 years. The mean age at menopause observed in our study was 46.2 ± SD 1.61 years with a range from 43 to 50 years. More than half (55.5%) women among study subjects were in postmenopausal state and the rest were in perimenopausal state. The most frequent symptoms were joint and muscular discomfort (77.5), sleep problems (76.5%), hot flushes (62.0), irritability (58.5), and bladder problems (54.5).

The mean age at menopause observed in our study of 46.2 ± SD 1.61 years with a range from 43 to 50 years was almost same to the study conducted by Aaron et al.[7] in rural area of Vellore. It was lower than the menopausal age of 51.28 ± 2.28 as observed in the study done in rural area by Sarkar et al.[20] and in urban area by Rahman et al.[17] and was more than menopausal age of 44.7 years as observed in study conducted by Shah et al.[18] among the women in Mumbai. These diversities in menopausal age probably may be because of regional, community, and ethnic variations. Genetic and environment factors may also play role for the same.

In our study, prevalence wise main symptoms were joint and muscular pain (77.5), sleep problems (76.5%), hot flushes (62.0), irritability (58.5), and bladder problems (54.5) and the least common symptoms were heart discomfort, sexual problems, depressive mood, anxiety, etc. It is beyond any controversy that the burden of menopausal problems was enormous among these aging women making their life full of frustration. The most common problems of joint and muscular pain is almost same to as observed by Rahman et al.[19] (76.2%) and are more than 64% as observed by Sarkar et al.[20] and was slightly <80.1% observed by Rahman et al.[17] Similarly, other problems like sleep problem was more than the most of studies as conducted by Nisar et al.[21] (40.9%), Rahman et al.[17] (52.2%), and Sarkar et al.[20] Likewise, irritability (58.5%) was almost similar to as observed by Sarkar et al.[20] (56.7%). However, it was more than the others studies as conducted by Rahman et al.[19] (36%) and Rahman et al.[17] (37.9%). Furthermore, the hot flushes (62.0%) were less as compared to the observations by Nisar et al.[21] (72%) but more as compared to Sarkar et al.[20] (47.3%) and Rahman et al.[17] (41.6%). Similarly, bladder problems (54.5%) were higher as compared to other studies.[17,20,21] The physical and mental exhaustion (42.7%) was less as compared to as observed by Rahman et al.[19] (60.9%) and Rahman et al.[17] (67.1%) and Nisar et al. (85.5).[21] The sexual problems (28.5%), slightly more in perimenopausal women (31.5%) than postmenopausal (26.1), were almost similar to other studies by Rahman et al.[17] and Rahman et al.[19] But were slightly more than studies done by Deotale et al.[22] and Sarkar et al.[20] The problem of depressive mood (32.5%) was slightly less than Nisar et al.[21] (38.2)and Rahman et al.[19]

Thus, the differences in the frequency of menopausal problems are there in different studies and truly expected too. Variety of reasons may be responsible for the variations in frequency of menopausal problems/symptoms. The different sociocultural aspects, economical status, reproductive parameters like number of children and individual perception of menopause and likewise others can be some of the reasons for different frequencies. Along with all the above differences, the difference in study design and the instruments used may also account for differences among results reported in different studies. Moreover, most of the studies available on menopausal problems are cross-sectional surveys only. Hence, nothing conclusive can be commented on the variations in frequencies of menopausal problems among different populations and nature of association with different factors.

Strength of the Study

Community-based study, randomly selected fairly large sample size, menopausal rating scale, widely used scale was employed in study though was modified as to suit the local population, etc., are some of the main strengths of the study.

Limitations of the Study

Most of the rural women were illiterate and also had difficulties in grading the symptoms as per menopausal rating scale, comparatively large allowable error (10%), etc., are some of the limitations of the study.

Recommendations

- With the increase in life expectancy, the population of postmenopausal women is increasing rapidly and accordingly, there is need for substantial enhancement in attention to their menopausal health problems.
- For effective management of menopausal problems, the basic principles of management of health problems should be observed, i.e., for proper management of acute emergency health problems, services need to be provided round the clock; but these can be spaced geographically matching with the resources available. On the other hand, for effective management of chronic health problems, services need to be provided universally to all areas; but can be spaced in terms of time on weekly or fortnightly basis depending on resources. Since, most of the menopausal problems are chronic in nature, these can be managed effectively on weekly or fortnightly basis, i.e., spacing the services in terms of time to economize the limited resources. Hence, the services of health personnel specially trained in managing menopausal problems should be provided through special clinics organized at PHC or health subcenters on weekly or fortnightly basis.
- Efforts are needed to educate menopausal women to make them aware about various menopausal symptoms and clear their doubts & fears. This will enable them to recognize these symptoms at the earliest, seek timely medical intervention for the same and improve their quality of life.
- Media for mass awareness should also be used to create understanding of physical, nutritional, psychosocial, and emotional needs of menopausal women.

CONCLUSION

Mean age of menopause of 46.2 ± SD 1.61 years was similar to the age observed in other studies from rural areas of developing countries, i.e., lower than developed countries. The most common menopausal symptoms/problems were also similar to most of the studies along with expected inherent variation in frequencies among menopausal and perimenopausal women due to differences in cultural, rural, urban and other such factors. Only a small fraction of women took treatment for postmenopausal problems and the majority suffered from them without seeking any treatment viewing these problems as a normal phenomenon of postmenopausal period. With the increase in life expectancy of menopausal women, the menopausal problems are acquiring considerable public health importance. Hence, in the current scenario, postmenopausal heath should be given due importance. Efforts are needed to educate and counsel these women to make them aware about various menopausal problems and available treatment options. Health personnel also need to be trained and be made sensitive to menopausal problems for appropriate attention for improving the quality of life of aging women.

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