International Journal of Chemical Studies

Deepa Kannur
Research Scholar, Department of Human Development and Family Studies, College of Community Science, UAS, Dharwad, Karnataka, India

Sunanda Itagi
Professor, Department of Human Development and Family Studies, College of Community Science, UAS, Dharwad, Karnataka, India

Influence of socio-demographic factors on menopausal problems among working and non-working women

Deepa Kannur and Sunanda Itagi

Abstract

The cross-sectional study was conducted in Dharwad and Bagalkote districts with an aims to know the menopausal problems and to assess influence of personal factors on menopausal problems. The differential research design was used to test differences between working and non-working women in menopausal problems. Correlation design was used to know the influence of personal factors on menopausal problems. Randomized sampling technique was used to elicit the information from 480 respondents (Working=240 and non-working= 240) from both rural and urban area. The findings revealed that most common menopausal problems included were joint and muscular discomforts (68.33%) of women similarly sleep problems 51.66%, hot flushes (37.50%), sweating (6.67%) and heart discomfort (9.31%). Majority (44.17%) of the women experienced moderate level of somatic problems in both districts. The respondents (40%) of them had moderate to severe level of psychological problems and remaining 44 per cent experienced mild to moderate level of urogenital problems. The mean age at menarche was 12.04 years and mean age at menopause was 46.21 years. Half of the respondents experienced 3-5 days of bleeding during menopause and nearly half (47.50%) of the women started experiencing menopausal symptoms in the age range of 36-40 years. Present chronological age, age at menopause and occupation were negative and significantly related with menopausal problems in both working and non-working women. Education was negatively significantly related with menopausal problems. The study concluded that to overcome existing somatic, psychological and urogenital menopausal problems, educational awareness and learning self-coping methods are necessary for rural and urban women.

Keywords: Menopause, symptoms, occupation

Introduction

Menopause is the permanent cessation of menstruation resulting from reduced ovarian hormone secretion that occurs either naturally or is induced by surgery, chemotherapy, or radiation. Natural menopause can be recognized after 12 months of amenorrhea that is not associated with a pathologic cause. The natural menopausal age of a woman serves as a biomarker for subsequent disease prediction and mortality. While earlier menopause is associated with an increased risk of cardiovascular disease and osteoporosis, it is also an important protector from breast cancer Epidemiological studies have identified that age adjusted mortality is reduced by 2% while the risk of uterine/ovarian cancer increases by 5% with each increasing year of age at menopause. Better medical and living facilities have led to an increased life expectancy in India, and in fact, 130 million Indian women are expected to live beyond menopause by 2015 (Gupta *et al.,* 2019). Changes in hormonal level cause various somatic, vasomotor, sexual and psychological symptoms that impair the overall quality of life. The international data about the symptoms that are associated with menopause, these are irritability (92%), lethargy (88%), depression (78%), hot flashes and night sweats (75%), headaches (71%), forgetfulness (64%), weight gain (61%), insomnia (51%), joint and muscle pain (48%), palpitations (44%), crying spells (42%), constipation (37%), dysuria (20%), and decreased libido (20%) (Batool *et al*., 2014).

Educational level, employment status and economic condition are the significant demographic variables which influence menopausal problems. Better educated women report menopausal symptoms (Jokinen *et al.,* 2003) [6]. Lower level of education in women could lead to psychological changes, which would be basis for menopausal problems (Blumel, *et al.,* 2002) [2]. Hence the study was undertaken with following objectives,

Corresponding Author:
Deepa Kannur
Research Scholar, Department of Human Development and Family Studies, College of Community Science, UAS, Dharwad, Karnataka, India

1) To know the problems among menopausal women.
2) To assess the factors influencing on menopausal problems.

Methodology
The study was conducted on women who attained menopause and belonged to 35-55 years of age, selected from 8 villages of 4 Talukas of Dharwad and Bagalkote districts of Karnataka state. A self-structured questionnaire was formulated to elicit the information regarding general and family information. Menopausal symptoms were assessed by using menopause rating scale (MRS) which deals with age-related decline of physical and mental capacity (Berlin in 1992). It consisted of 11 questions divided into 3 sub-scales such as psychological (4 to 7), somatic (1, 2, 3 and 11) and urogenital (8 to 10). The responses on each item were scored 0-4 as none to very severe. The total score was categorized as low (0-14), medium (15-29) and high (30-44) and further it was divided into somatic, psychological and urinary symptoms. Socio-economic status (SES) scale was used to assess the socioeconomic status of the family (Aggarwal *et al*, 2005).

Results and Discussion
The prevalence of menopausal women in Dharwad and Bagalkote districts. Total 9512 women were contacted in which 4225 women had menopause. Among them 92.52 per cent acquired menopause due to cessation of menstruation naturally in rural area. Similar trend was observed in Bagalkote rural area. In urban area of Dharwad district, 88.30 per cent and 11.70 per cent of the women had natural and surgical menopause due to removal of uterus. But in Bagalkote district, 23.38 per cent of the respondents underwent hysterectomy (Table 1). Similar finding observed by Patel *et al.* (2017) [8] revealed that 75-80 per cent had natural menopause while 18-21 per cent of the women underwent surgery in urban area.

The socio-demographic characteristics of the sample are presented in the Table 2. It is apparent from the table that the age ranged between 35 to 55 years. Majority (26-34%) of the women aged between 46-50 years while 24-32 per cent of them were aged between 51-55 years followed by 40-45 years (23-30%) and 35-39 years (11-19%). Half of the respondents (50.00%) were homemakers while 10-30 per cent were involved in farm activities and 11-22 per cent of them worked as daily wagers and 8-16 per cent of the women were self-employment. More than half (54-58%) of the rural women were illiterate while 37-40 per cent of the rural women completed primary school and 8-15 per cent had not attended school. Whereas among urban area, 40-56 per cent were completed primary school and 15-16 per cent of them had high school and 26-44 per cent of them had not attended school. With respect to caste, 39-55 per cent of the women from Dharwad district belonged to Other Backward Class (OBC) followed by 25-29 per cent upper caste. Whereas in Bagalkote district, majority (44-49%) of the women belonged to Other Backward Class (OBC) followed by 23-25 per cent who were dalits. On an average 50-70 per cent of a rural women had 3-4 children in their family, in contrast 28-38 per cent of them had 1-2 children, 39-50 per cent of them had 3-4 children in their family but 16-33 per cent of the respondents had 5-6 children in their family both in urban and rural area. Socio-Economic Status (SES) of the family assessed by Aggarwal tool according to score obtained showed that, majority (35-43%) of the respondents belonged to lower middle SES status followed by upper middle class (20-32%)

and 15-29 per cent of them were in poor SES category in both rural and urban area of Dharwad and Bagalkote district. In all the demographic characteristics did not differ much in the two districts.

Nearly half (48.75%) the working women attained menarche between 11-13 years while 42.50 per cent of non-working women had it between below 11 years and 19-29 per cent of women attained between 14-15 years. With regard to age at menopause, 38.33 per cent of working women and 35 per cent of non-working women attained menopause between 46-50 years and 41-45 years respectively. Only 11-13 per cent of them had attained menopause between 51-55 years of age. More than half (50-55%) of working and non-working women had reproductive years between 21-25 years and mean age at length of reproductive years was 23.16±2.45 years. Majority (43-50%) of the women had experienced 3-5 days of bleeding during menopause and 64 per cent had experienced 6-10 days of bleeding during menopause. Majority (40-47%) of both working and non-working women experienced menopausal symptoms between 36-40 years and 36 per cent of them experienced menopausal symptoms between 41-45 years of age. The study conducted by Shretha and Pandey (2017) [10] indicated that the mean age at menopause was 45.02 years (SD±1.03) and mean age at menopausal symptoms experienced by women between 35.93±3.15 years (Table 3a).

Among somatic, major problem of muscular discomfort was observed in 59-68 per cent of the working and non-working women (Table 3b). Besides 50-59 per cent of the women reported sleeping problems and 35-49 per cent of them reported hot flushes and sweating and only 4-11 per cent of the women had heart discomfort such as heart beat, tightness etc. Majority (55-60%) of the rural working women expressed psychological problems such as irritability, depressive mood and physical and mental exhaustion but 35 per cent of them experienced anxiety also nearly half of the non-working rural women suffered from irritability while 29-39 per cent of them experienced anxiety and depression. Similar trend was observed among urban working women while urban non-working women showed a similar trend as that of rural working women. Among menopausal problems only 4-15 per cent of the working and non-working women experienced urogenital problems. The bladder and sexual problems experienced among non-working women from both locality.

Among non-working rural women half (50.00%) of the respondents were had moderate level of somatic problems followed by severe (28.33%) and mild (20.33%) level of somatic problems. Whereas among psychological problems, 41.67 per cent of them had mild level of problems while 58.33 per cent were had moderate and above moderate level of problems. Surprisingly 60 per cent of them had mild urogenital problems. Similar trend was observed in urban working women (Table 3c). Among working rural women, majority (47.50%) of the women had moderate level of problems while 30.33 per cent severe and 21.67 per cent had mild level of somatic problems. In psychological problems, 40 per cent had moderate level of problems followed by severe (34.17%) and mild level of problems (25.83%). Half (50.83%) of them experienced mild level of Urogenital problems. Similar trend was observed in urban non- working women. There was significant an association observed between occupational status and menopausal problems in both localities. Similarly there was significant relationship with occupation and menopausal problems of both working and non-working women.

The difference between menopausal problems among working and non-working women in both rural and urban area are presented in Table 3d. In rural area, the mean score of somatic problems were higher than psychological and urogenital problems (8.47±1.75> 6.40±1.98 >3.77±1.99). The F-value (12.57) was found to be significant, means non-working women experienced more of somatic problems followed by psychological and urogenital problems. Similar trend was observed among rural working, urban working and non-working women. The findings supported by Salik and Kamal (2015) [9] reported that 56-60 per cent of the both working and non-working women had somatic problems and 40 per cent of working urban women had psychological problems as against 15 per cent of non-working women in Panjab state. A study conducted by Kannur and Itagi (2018) [4] revealed that there was significant differences between working and non-working women in psychological problems. It indicated that working women had more of psychological problems than non-working women.

The comparison between working and non-working women in menopausal problems are reported in Table 3e. In rural area, the working women suffered more from menopausal problems than non-working women. The mean score of working women was higher than non-working women (26.47±4.06>21.31±5.14). In case of urban women, there was significant difference in 't' value (4.93) in menopausal problems was higher in non-working women (24.82±5.90) than the mean score of working women (19.52±6.42).

Correlation co-efficient matrix between menopausal problems and personal factors among working women are presented in Table 4a. Age, age at menopause, occupation and education were negatively significantly inter-related with menopausal problems. It indicated that the respondents who had menopause at late age, who were educated and who involved in occupation were experienced more mild level of

menopausal problems. A study conducted by Kannur and Itagi (2019) [3] reported that There was a significant difference between menopausal problems it indicating that the women experienced more of somatic problems followed by psychological and urogenital problems. Age, education, occupation and socio-economic status of the respondents were negatively significantly related with menopausal problems.

Correlation co-efficient matrix between menopausal problems and personal factors among non-working women are presented in Table 4b. Age, age at menopause and occupation were negatively significantly inter-related with menopausal problems. It indicated that the respondents who had menopause at late age and who involved in occupation were experienced more mild level of menopausal problems. A study conducted by Kannur and Itagi (2018) [5] age, socio-economic status (SES) and education were negatively associated whereas occupation was positively associated with menopausal problems

Parity was non-significantly related with menopausal problems among both working and non-working women. The similar results were found by Ali et al. (2015) [1] reported that age at menopause and education levels were independent risk factors predicting more severe menopausal symptoms. So, increased severity of symptoms was found to be negatively related with age and lower educational level. Another study reported that decreased severity of menopausal symptoms were associated with education, an employed status, a history of pregnancy, longer postmenopausal duration, positive attitude to menopause, state of anxiety, heightened self-esteem and higher dyadic consensus (Lee et al., 2012) [7]. The study concluded that to overcome somatic, psychological and urogenital menopausal problems. Educational intervention and exposure to self-coping methods are necessary for middle aged women.

Table 1: Prevalence of menopausal women in rural and urban area of Dharwad and Bagalkote districts

Districts	Locality	No. of women contacted (9512)	Total menopausal women (n=4225)	Type of menopause	
				Natural (n=3648)	Surgical (n=577)
Dharwad	Rural	2020	922 (100)	853 (92.52)	69 (7.48)
	Urban	1600	1358 (100)	1199 (88.30)	159 (11.70)
Bagalkote	Rural	3290	696 (100)	639 (91.81)	57 (8.19)
	Urban	2602	1249 (100)	957 (76.62)	292 (23.38)

Figures in the parenthesis indicates percentage

Table 2: Demographic characteristics of menopausal women (N=480)

Characteristics		Variables	Dharwad		Bagalkote	
			Rural (n=120)	Urban (n=120)	Rural (n=120)	Urban (n=120)
Age (years)		35-39	20 (16.67)	16 (13.33)	23 (19.17)	14 (11.67)
		40 – 45	31 (25.83)	28 (23.33)	36 (30.00)	34 (28.33)
		46 – 50	38 (31.67)	37 (30.84)	32 (26.67)	41 (34.17)
		51 – 55	31 (25.83)	39 (32.50)	29 (24.16)	31 (25.83)
Occupation	Non-working	Housewife	60 (50.00)	60 (50.00)	60 (50.00)	60 (50.00)
	Working	Farm laborers	31 (25.83)	22 (18.33)	36 (30.00)	13 (10.83)
		Self employed	11 (10.00)	15 (12.50)	10 (8.33)	20 (16.67)
		Daily wagers	18 (15.00)	23 (19.17)	14 (11.67)	27 (22.50)
Education		High school	10 (8.33)	20 (16.67)	15 (12.50)	18 (15.00)
		Primary	45 (37.50)	68 (56.67)	35 (29.17)	49 (40.83)
		Illiterate	65 (54.17)	32 (26.67)	70 (58.33)	53 (44.17)
Caste		Upper caste	35 (29.17)	30 (25.00)	17 (14.17)	12 (10.00)
		OBC	47 (39.17)	66 (55.00)	53 (44.17)	59 (49.17)
		Dalits	25 (20.83)	15 (12.50)	31 (25.83)	28 (23.33)
		Tribals	13 (10.83)	9 (7.50)	19 (15.83)	21 (17.50)
No of children		1 – 2	19 (15.83)	46 (38.33)	13 (10.83)	34 (28.33)
		3 – 4	61 (50.83)	47 (39.17)	87 (72.50)	62 (51.67)
		5 – 6	40 (33.33)	27 (22.50)	20 (16.67)	24 (20.00)

SES of the family	High	9 (7.50)	20 (16.67)	11 (9.17)	17 (14.17)
	Upper Middle	32 (26.67)	42 (35.00)	26 (21.67)	57 (43.33)
	Lower Middle	51 (42.50)	39 (32.50)	48 (40.00)	25 (20.83)
	Poor	28 (23.33)	19 (15.83)	35 (29.17)	21 (17.50)

Figures in the parenthesis indicates percentage

Table 3a: Menopausal characteristics of working and non-working women (N=480)

Sl No	Particulars	Working (n=240)	Non-working (n=240)	Mean ± SD
A	Age at menarche (years)			
	<11	52 (21.67)	102 (42.50)	12.04±1.23
	11-13	117 (48.75)	92 (38.33)	
	14-15	71 (29.58)	46 (19.17)	
B	Age at menopause (years)			
	36-40	47 (19.58)	56 (23.33)	46.21± 1.92
	41 – 45	69 (28.75)	84 (35.00)	
	46 – 50	92 (38.33)	73 (30.42)	
	51 – 55	32 (13.33)	27 (11.25)	
C	Length of reproductive (years)			
	15-20	68 (28.33)	79 (32.92)	23.16±2.45
	21-25	120 (50.00)	134 (55.83)	
	26-30	52 (21.67)	27 (11.25)	
D	Duration of bleeding			
	3 – 5 days	104 (43.33)	121 (50.42)	5.28±1.67
	6 – 10 days	82 (34.17)	73 (30.42)	
	11 – 15 days	54 (22.50)	46 (19.16)	
E	Age at which menopausal symptoms started			
	30-35 years	47 (19.58)	56 (23.33)	36.43±2.75
	36 – 40 years	98 (40.83)	114 (47.50)	
	41 – 45 years	61 (25.42)	40 (16.67)	
	46-50 years	34 (14.17)	30 (12.50)	

Figures in the parenthesis indicates percentage

Table 3b: Menopausal problems among working and non-working women (N=480)

Sl No	Menopausal problems (*Multiple responses)	Rural		Urban	
		Working (n=120)	Non-working (n=120)	Working (n=120)	Non-working (n=120)
I	Somatic				
1	Hot flushes, sweating	42 (35.00)	57 (47.50)	45 (37.50)	59 (49.17)
2	Heart discomfort (unusual awareness of heart beat, heart skipping, heart racing, tightness)	12 (10.00)	5 (4.16)	8 (6.67)	14 (11.67)
3	Sleep problems (difficulty in falling asleep, difficulty in sleeping through, waking up early)	60 (50.00)	69 (57.50)	62 (51.66)	67 (58.84)
4	Joint and muscular discomfort (pain in the joints, rheumatoid complaints)	82 (68.33)	75 (62.50)	75 (62.50)	71 (59.17)
II	Psychological				
5	Irritability (feeling nervous, inner tension, feeling aggressive)	69 (57.50)	63 (52.50)	72 (60.00)	67 (55.83)
6	Depressive mood (feeling down, sad, mood swings)	66 (55.00)	47 (39.17)	49 (40.83)	69 (57.50)
7	Anxiety (inner restless, feeling panicky)	43 (35.83)	35 (29.17)	38 (31.67)	47 (39.17)
8	Physical and mental exhaustion (general decrease in performance and concentration, forgetfulness)	73 (60.83)	59 (49.17)	54 (45.00)	56 (46.67)
III	Urogenital				
9	Bladder problems (difficulty in urinating, increased need to urinate, bladder incontinence)	7 (5.83)	10 (8.33)	12 (10.00)	15 (12.50)
10	Dryness of vagina (sensation of dryness or burning in the vagina)	7 (5.83)	8 (6.67)	10 (8.33)	8 (6.67)
11	Sexual problems (change in sexual desire, in sexual activity and satisfaction)	5 (4.17)	6 (5.00)	7 (5.83)	9 (7.50)

Figures in the parenthesis indicates percentage

Table 3c: Distribution of working and nonworking women by menopausal problems (N = 480)

Area	Occupation	Problems	Category			χ^2	r- value
			Mild	Moderate	Severe		
Rural	Non-working (n=120)	Somatic	25 (20.83)	61 (50.83)	34 (28.33)	38.12**	0.53**
		Psychological	50 (41.67)	48 (40.00)	22 (18.33)		
		Urogenital	73 (60.83)	32 (26.67)	15 (12.50)		
	Working (n=120)	Somatic	26(21.667)	57 (47.50)	37 (30.83)		
		Psychological	31 (25.83)	48 (40.00)	41 (34.17)		
		Urogenital	61 (50.83)	36 (30.00)	23 (19.17)		
Urban	Non-working (n=120)	Somatic	28 (23.33)	52 (43.33)	40 (33.33)	40.17**	0.43*
		Psychological	20 (16.67)	46 (38.33)	54 (45.00)		
		Urogenital	55 (45.83)	38 (31.67)	27 (22.50)		

		Somatic	39 (32.50)	57 (47.50)	24 (20.00)		
	Working (n=120)	Psychological	19 (15.83)	53 (44.17)	48 (40.00)		
		Urogenital	78 (65.00)	29 (24.17)	13(10.83)		

Figures in the parenthesis indicates percentage, *significant at 0.05 level, **Significant at 0.01 level

Table 3d: Comparison of category wise menopausal problems among non-working and working women (N = 480)

Area	Occupation	Problems	Mean±SD	F-value	C.D.±S.E.m
Rural	Non-working (n=120)	Somatic	8.47±1.75	12.57*	1.081±0.352
		Psychological	6.40± 1.98		
		Urogenital	3.77±1.99		
	Working (n=120)	Somatic	12.36± 1.44	11.38*	1.079±0.348
		Psychological	7.48±1.12		
		Urogenital	3.68± 1.05		
Urban	Non-working (n=120)	Somatic	11.66±1.87	13.46*	1.093±0.470
		Psychological	6.60±1.12		
		Urogenital	4.62±2.41		
	Working (n=120)	Somatic	9.25±3.54	11.62*	1.071±0.342
		Psychological	7.36±2.01		
		Urogenital	3.08±2.34		

*significant at 0.05 level

Table 3e: Comparison of non-working and working women by menopausal problems (N = 480)

Area	Occupation	Mean±SD	t-value
Rural	Non-working (n=120)	21.31±5.14	3.93*
	Working (n=120)	26.47±4.06	
Urban	Non-working (n=120)	24.82±5.90	4.93**
	Working (n=120)	19.52±6.42	

*significant at 0.05 level **significant at 0.01 level

Table 4a: Correlation co-efficient matrix between menopausal problems and personal factors among working women (N= 240)

Particulars	Age	Age at menopause	Education	Occupation	Parity
Menopausal problems	-0.33*	-0.29*	-0.26*	-0.43**	0.03 [NS]

*significant at 0.05 level**significant at 0.01 level [NS]-Non-significant

Table 4b: Correlation co-efficient matrix between menopausal problems and personal factors among non-working women (N= 240)

Particulars	Age	Age at menopause	Education	Occupation	Parity
Menopausal problems	-0.28*	-0.32*	-0.10[NS]	-0.30*	0.01 [NS]

*significant at 0.05 level, [NS]-Non-significant

References
1. Ali G, Kecialan B, Orsal O. Marital satisfaction and influencing factors among menopausal women. Turkiye Klinikleri. J Med. Sci. 2015; 29(3):666-674.
2. Blumel JE, Castelo-Branco C, Binfa L, Gramegna G, Tacla X. Quality of life after the menopause: A population study. Maturitas. 2002; 34(1):17-23.
3. Kannur D, Itagi S. Prevalence of Menopause and Menopausal Problems in Dharwad and Bagalkote Districts, India. Int. J Curr. Microbiol. App. Sci. 2019; 8(7):2618-2626.
4. Kannur D, Itagi S. Influence of demographic characteristics on menopausal problems of rural and urban middle-aged women of Dharwad and Bagalkot, Karnataka. Int. J farm science. 2018; 8(3):62-68.
5. Kannur D, Itagi S. Psychological well-being of working and non-working menopausal women. Ind. J Positive Psychology. 2018; 9(2):271-274.
6. Jokinen K, Rautava P, Oianlatva A, Sundall J, Helenius H. Experience of climacteric symptoms among 42-46 and 52-56-years-old women. Maturitas. 2003; 46(3):199-205.
7. Lee SO, Kim JM, Park SM, Yang JK. Factors influencing the severity of menopause symptoms in Korean post-menopausal women. J Korean Med. Sci. 2012; 2(5):58-65.
8. Patel M, Shah V, Kamani H, Sonaliya K. Current scenario of menopause-related symptoms using menopause rating scale among middle-aged women of Western India: A cross-sectional study. Int. J Med. Sci. and Pub. Health. 2017; 7(2):48-52.
9. Salik R, Kamal A. Variations in menopausal symptoms as a function of education, employment status and income. J Soc. Sci. 2015; 9(2):110-116.
10. Shrestha NS, Pandey A. A study of menopausal symptoms and its impact on lives of Nepalese perimenopausal and postmenopausal women. J Kathmandu Med. College. 2017; 6(19):4-9.