Original Article

To compare sociodemographic profile, attitude, coping strategies and psychiatric morbidity among rural and urban menopausal women

Singla M[1], Sharma A[2], Samuel C[3], George J[4]

[1]Dr Mamta Singla
MD, Assistant professor
ramansingla27@gmail.com
[2]Dr Arvind Sharma
MD, Professor and head, Psychiatry
Guru Gobind Singh medical college and hospital
Faridkot, Punjab, India
sharma_adr@yahoo.com
[3]Dr Clarence Samuel
MD, Associate professor, Preventive and social medicine
arvindsharma7557@gmail.com
[4]Jenny Mariam George
Internship trainee
[1,2,4]Department of psychiatry
[1,3,4]Christian Medical College and Hospital, Ludhiana, Punjab, India

Received: 17-08-2015
Revised: 07-09-2015
Accepted: 15-09-2015

Correspondence to:
Dr Arvind Sharma
sharma_adr@yahoo.com

ABSTRACT

Background:

Objective: *In our study, 95 Urban and 56 rural populations of menopausal women were subjected to SCL 80 scale to determine psychiatric morbidity.*

Material and methods: *Assessment was made using ATM scale, MRS scale and their coping strategies were noted. Data was statistically analyzed.*

Results: *The rural women were found to succumb 1.4 times more to physical and mental exhaustion after menopause than urban women (P<0.042). Percentage scores of the urban respondents were significantly more concerned how their husbands would feel about them after menopause (χ2 =8.35, p<0.004). Statistically significant (p<0.011) urban women (5.47) show more depressive symptoms than rural women (3.08) and statistically significant (p<0.019) urban (2.33) than rural women (1.25) had more of anger hostility symptoms.* ***Conclusion:*** *Emotionally stable, literacy, medical knowledge about menopause, good social support was among predominant markers for positive outcome.*

Key words: *SCL (symptom check list-80), ATM (attitude towards menopause), menopause rating scale (MRS), coping stratigies, anger hostility, psychiatric morbidity*

Introduction

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. [1] Huffman et al concedes that menopause is multidimensional influenced by biological, psychological and sociocultural factors and requires responses that are equally multidimensional. [2] Menopause is an event that typically occurs in women in midlife, during their late 40s or early 50s, and it signals the end of the fertile phase of a woman's life. [3]

During the transition to menopause, women may experience vasomotor, urogenital, psychosomatic, and psychological symptoms, as well as sexual dysfunction. The prevalence of each of these symptoms related to menopause varies across ethnic groups and between rural and urban women. [4, 5, 6, 7, 8, 9] Social support is a well known correlate of menopause symptoms and physical and

psychological wellbeing in women and low social support and distressing relationships are reported to lead to stress and illness. [10] Menopause symptoms are frequently reported by women including hot flashes, night sweats, vaginal dryness, reduced libido, sleep disturbance, headaches, palpitations, foggy thinking, poor concentration and fatigue,[11] Some women also experience a profound sense of loss at menopause (e.g. loss of maternal role, youth or beauty) which may lead them to feel that life has lost its purpose. [12] Some peri-menopausal women may also experience anxiety, depression and/or irritability, [11] although it is not clear exactly how mood symptoms are related to menopause. For example, mood disorders are reported to worsen the experience of somatic symptoms, [13] and severe or protracted menopause symptoms may also worsen mood in some women. [14]

National Co-morbidity Study found rates of recurrent depression to be highest among women between the ages of 45 and 54 years when compared to older women.[15] for the majority of women, the process of menopause occurs between the ages of 45 to 54 years. However, several studies have shown no association between menopause and increased depressive symptoms. [16] Less clear is the association between depression and peri-menopause, the time before cessation of menses that is characterized by increased occurrence of symptoms such as hot flashes and night sweats that may lead to insomnia and depressed mood. [17, 18] Studies have suggested modest increases in depressive symptoms at peri menopause but it is unclear whether hormonal shifts during peri-menopause increased depressive symptoms or that climacteric symptoms were being interpreted as depressive symptoms. Because depression symptoms may be related to decreasing levels of endogenous estrogen associated with peri-menopause, researchers have explored whether HRT has an antidepressant role. Findings are equivocal. [17, 19]

Emotional Intelligence (EI) has recently been shown to be associated with the maintenance of better social and interpersonal relationships. Low social support may potentially mediate between EI and worse menopause symptoms, although such a proposition has not previously been evaluated. Its assumed:

(i) High stress, anxiety, depression, low social support (number & quality), proactive coping and EI and negative attitude to menopause will be directly related to poor physical health and worse menopause symptoms;

(ii) Relationships between EI to menopause symptoms and EI to physical health will be mediated by high levels of stress, anxiety and depression, low social support and proactive coping and a negative attitude to menopause. [20]

Since it is a preventable cause of psychiatric morbidity and no intensive literature is available in india on this especially in our region, so we opted to carry out research on this important aspect of females life.

Material and Method

Data was collected from 151 post-menopausal women aged between 45 to 60 years belonging to the rural and urban areas. Data on rural women were collected from villages of Hambra, Ludhiana and Kisanpura (Moga district), Punjab and on urban women from Punjab Agriculture University, Khalsa college for women and BCM school, Ludhiana after ethical clearance from concerned authorities.

Inclusion criteria:
Menopausal females of all age group who gave consent for the study. The nature of research was explained to all of the participants and written consent was taken from each of them before the data were collected.

Exclusion criteria:
Women with history of any apparent medical or psychiatric illnesses at the time of interview and patients who did not give consent or discrepencies in written consent were exclused from the study. Surgical menopause was not included in the study.

Instruments used for study
Biodata performa
The chosen participants were subjected to a structured Performa prepared by the researchers to collect data on sociodemographic variables. These variables included age at onset of menopause, marital and employment status, education status, awareness of husbands about the menopausal status of their spouses, menopause by natural, surgical or other reasons; history of addictions and physical activity.

Menopausal Rating Scale
Severity of menopausal symptoms was assessed using the Menopausal Rating Scale (11-item) which contains three subscales evaluating urogenital, other somatic and psychological symptos on 5-point Likert scales, ranging from 0 (none) to 4 (very severe). Only total symptom scored were used in this study, with high scores indicating more severe menopausal symptoms.

Attitude towards Menopause
Attitude Towards Menopause (ATM) was assessed using a checklist developed by Neugarten et al (1963) and modified by Huffman et al (2005).For this study the modified ATM Checklist had 19 items.

Symptom check list-80
The psychiatric co-morbidity of the participants was assessed by applying the SCL-80 scale. It consisted of 80 items. These items are further divided into nine subscales namely:

- Depression subscale (13)
- Anxiety subscale (10)
- Interpersonal sensitivity subscale (10)
- Somatization subscale (12)
- Phobic anxiety subscale (7)
- Obsessive Compulsive neurosis subscale (10)
- Anger hostility subscale (6)
- Paranoid ideation subscale (8)
- Additional symptoms subscale (7)

The items included in each subscale are listed in the scoring key. The sum total of all the students was computed out of a maximum of 320. Each item had maximum score of four, depending cone the severity of symptom. The score one was given when student complained of a little hit of symptom, score four for extremely severe. The severity of symptom in each subscale was divided into Absent/Mild/Moderate and severe depending upon the total score obtained by a given subject in the said subscale. For this purpose, maximum score obtained by any given subject was taken into consideration. If a given subject scored between 25-50% of the maximum score, he/she was placed in the category of mild. If the score was between 50-75%, she was placed in the category of moderate, if the

score obtained was 75-100%, he/she was placed in the category of severe. If the score obtained by a given subject was 0-25%, he/she was placed in the category of absent. The coping strategies of the subjects were also recorded verbatim among both the groups.

Statistical analysis of the data was done using SPSS V. 16.0. The researchers used nonparametric tests (chi-square) and t-test to determine the association between the prevalence of menopausal symptoms, attitude towards menopause, psychiatric co-morbidity and rural-urban residence.

Results

Sociodemographic profile of the patients:

It indicates that majority of the rural women belonged to the age group of 45-50 years in 37.5% cases vs.35.7% of the urban women were 56-60 years. A greater proportion of the women from both groups were married. >60% of the urban women were employed vs. 87.5% of rural women, who were homemakers, the difference being significant ($\chi2$ = 41, p<0.001).The employed urban women were engaged in professions such as teaching and office jobs, whereas the employed rural women were mostly engaged as skilled or unskilled laborers. A significant rural-urban difference was noted in the literacy status of the study participants ($\chi2$ =54.08, p<0.001) with greater part of the rural having completed till primary school education and the urban their post graduation. There was no significant difference regarding the awareness of the husbands regarding the menopausal status of their wives among the two groups. However, the rural women were found to be more sedentary than the urban group, the difference being statistically significant ($\chi2$ =13.03, p<0.001).

Attitude towards menopause results

In the psychological domain, the rural women were found to succumb 1.4 times more to physical and mental exhaustion after menopause than urban women (P<0.042). This includes a general decrease in performance, impaired memory, decrease in concentration and forgetfulness and is of statistical significance.

On attitude towards menopause, percentage scores of the urban respondents were significantly more concerned how their husbands would feel about them after menopause ($\chi2$ =8.35, p<0.004), while majority of the urban women feel like consulting their doctor at menopause, perceiving it to be an unpleasant experience and a biggest change in their life ($\chi2$ =15.58, p<0.001; $\chi2$ =11.93, p<0.001; $\chi2$ =4.12, p=0.042).

In contrast to a rural population of 5.4%, 27.4% of the urban women consider just about every women to be depressed about menopause ($\chi2$ =11, p<0.001). Interestingly, it was a rural population of 75% who identifies menopause to be only about a cessation in the menstrual cycle and besides the bodily changes, 'she doesn't change much' (87.5%) vs. 57.9 % and 71.6% of the urban women respectively. This difference was found to be significant ($\chi2$ =5.20, p<0.022; $\chi2$ =3.95, p<0.046). Also of significance, the urban side believes life to be more interesting after menopause wherein she gets more confidence in herself. ($\chi2$ =8.65, p<0.003; $\chi2$ =10.14, p<0.001).

Symptom check list (SCL80) results

On examining the mean scores of SCL-80, statistically significant (p<0.011) urban women (5.47) show more depressive symptoms than rural women (3.08). Similarly statistically significant (p<0.019)

urban (2.33) than rural women (1.25) had more of anger hostility symptoms. However on individual subscales, results were comparable.

Table 1: Attitude towards Menopause Checklist

S.No	Statement	%Agreement Rural n	Rural %	Urban n	Urban %	Statistical Significance
1.	A woman is concerned about how her husband will feel about her after menopause.	4	7.1	25	26.3	X^2= 8.35 **P= 0.004***
2.	A woman should see a doctor at menopause	15	26.8	57	60.0	X^2= 15.58 **P< 0.001***
3.	Menopause is one of the biggest changes that happens in a woman's life	15	15.0	58	58.0	X^2=11.93 **P<0.001***
4.	Menopause is an unpleasant experience.	16	16.0	43	43.0	**X^2=4.12 P=0.042***
5.	After menopause a woman feels freer to do things for herself	41	41.0	61	61.0	X^2=1.30 P=0.253
6.	Women think of menopause as the beginning of the end.	2	3.6	10	10.6	X^2=2.33 P=0.126
7.	Women generally feel better after menopause.	27	48.2	49	51.6	X^2=0.08 P=0.783
8.	Frankly speaking, just about every woman is depressed about menopause.	3	5.4	26	27.4	X^2=11 **P<0.001***
9.	Women are generally calmer and happier after Menopause	29	51.8	46	48.4	X^2=0.16 P=0.68
10.	Menopause is a disturbing thing that women generally dread.	28	50.0	36	48.4	X^2=0.10 P=0.754
11.	Women should expect some troubles during menopause	49	87.5	74	77.9	X^2=2.15 P=0.14
12.	A woman's body may change in menopause but otherwise she doesn't change much.	48	87.5	68	71.6	X^2= 3.95 **P=0.046***
13.	Women usually feel "down in the dumps" at the time of menopause	7	12.5	26	27.4	X^2= 4.56 P=0.03
14.	Life is more interesting for a woman after menopause	10	32.2	39	36.8	X^2= 8.65 **P=0.003***
15.	After menopause, women do not consider themselves "real women"	8	14.3	10	10.5	X^2= 0.47 P=0.49
16.	Changes inside the body that women cannot control cause all the trouble at menopause	16	28.6	45	47.4	X^2= 5.17 P=0.022
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	42	75.0	55	57.9	X^2=5.20 **P=0.022***
18.	Going through menopause really does not change a woman in any important way	42	75.0	66	69.5	X^2= 0.53 P=0.46
19.	A woman gets more confidence in herself after menopause.	9	16.1	39	41.1	X^2= 10.14 **P=0.001***

Coping strategies among patients

Addressing the coping status of the participants, it was noted that the urban had use more coping strategies than the rural women. The rural response varied from none to five with maximal number being one strategy (48.2%) while the urban women had a minimum of one and maximum of eight options at tackling menopause, most being two options (27.4%). The three most frequent responses were talking to friends/relatives (53.35%), getting involved in religious activities (53.30%) and relaxation by either television/literature (41.3%). Though both the groups indulge in activities like talking, physical activity and relaxation by T.V. viewing or literature (assuming the literate urban crowd to engage more in reading than rural); the responses are significantly higher in urban women ($\chi 2$ =11.333, $p<0.001$; $\chi 2$ = 6.808, $p< 0.009$; $\chi 2$ = 11.973, $p<0.001$). Also of significance, only 8.9% of the rural women cope with the help of socialization/gatherings compared to 28.4% of the urban ($\chi 2$ =8.015, $p<0.005$). Interestingly, none of the rural respondents visit their gynecologist while 12.6% of the urban do so, which is statistically significant ($\chi 2$ =7.684, $p<0.006$).

Table: 2 Coping Strategies between the rural and urban women

S.No	Coping Strategy	Rural		Urban		Statistical Significance
		n	%	n	%	
1.	**Talking to friends/relatives***	**22**	**39.3**	**64**	**67.4**	X^2= 11.333 **P= 0.001***
2.	**Physical Activity (walking/yoga/gym etc:)***	**8**	**14.3**	**32**	**33.7**	X^2= 6.808 **P= 0.009***
3.	**Relaxation : T.V. /Reading***	**15**	**26.8**	**53**	**55.8**	X^2=11.973 **P=0.001***
4.	**Socialization / Gatherings***	**5**	**8.9**	**27**	**28.4**	**X^2=8.015 P=0.005***
5.	**Alternative Medicine**	**1**	**1.8**	**9**	**9.5**	X^2=3.367 P=0.066
6.	**Psychotherapy**	**2**	**3.6**	**3**	**3.2**	X^2=019 P=0.891
7.	**Visits her Gynecologist***	**0**	**0**	**12**	**12.6**	**X^2=7.684 P=0.006**
8.	**Religious activities**	**32**	**57.1**	**47**	**49.5**	X^2=0.831 P=0.362
9.	**Charity Groups**	**0**	**0**	**2**	**2.1**	X^2=1.195 P=0.274
10.	**Others**	**14**	**25.0**	**16**	**16.8**	X^2=1.473 P=0.225

Discussion

Syamala and Sivakami found that the mean age at menopause of Indian women is 44.3 years and that 11% of women attain menopause before the age of 40 years. [21] This frequency has increased slightly 0.5% in subsequent years. [22] In comparison with the national average, [21] the women (rural and urban combined) of this study group had a higher age at menopause, with 4.4% of them reaching menopause before the age of 40 years. [23, 9]

Majority of the rural women belonged to the age group of 45-50 years in 37.5%

vs.35.7% of the urban women who were 56-60 years. A greater proportion of the women from both groups were married. >60% of the urban women were employed vs. 87.5% of rural women, who were homemakers. A significant rural-urban difference was noted in the literacy status of the study participants ($\chi 2 = 54.08$, $p<0.001$). Bauld and Brown found mean age of participants was 50.04 years. 65% women were married or in a de facto relationship (65%), 9.5% single/never married, 22.4% divorced/separated or 2.6% widowed. 46% women worked fulltime. Nearly half (45%) had a university or college degree. Most women indicated they were peri-menopausal (39%) or menopausal (25%), with the remainder being naturally (30%) or surgically (6%) post-menopausal. [24] similarly Dasgupta and Ray the mean age of the participants for both rural and urban areas was 53.9 ± 4.37 and 51.39 ± 4.6 years, respectively and more than half of the urban women were employed and that an overwhelming majority of the rural women were homemakers. [25]

On menopausal rating scale, the most common menopausal symptoms for all women (n=151) in order of prevalence were joint and muscular discomfort (76.85%), anxiety (67.15%), irritability (64.6%), physical and mental exhaustion (63.4%), hot flushes (59.25%) and sleep disturbances (54.1%). Rahman et al in his study found three most prevalent menopausal symptoms of joint and muscular discomfort (80.1%), physical and mental exhaustion (67.1%) and sleeping problems (52.2%). This was followed by symptoms of hot flushes and sweating (41.6%), irritability (37.9%), dryness of vagina (37.9%), anxiety (36.5%), depressive mood (32.6%), sexual problem (30.9%), bladder problems (13.8%) and heart discomfort / palpitation (18.3%). [26]

Our study concluded that though on attitude towards menopause the impact of menopause on somatic and urogenital systems of the two groups was comparable, psychologically the rural women were found to be more prone to physical and mental exhaustion than the urban crowd. Osarenren et al bearing in mind that the urban women are more educated than the rural; there is a probable increase in their self-consciousness and awareness about the bodily changes and symptoms associated with menopause. This understanding of the changes might result in a low self-esteem, feeling of apprehension and need for re-assurance.[3] The urban respondents were found significantly more concerned how their husbands would feel about them after menopause ($p<0.004$) and were of the opinion that a menopausal woman should consult her doctor ($p<0.001$). Women from developing countries, tend to view menopause and its symptoms as a natural process that does not require medical care, so they are less aware about the health-related issues of menopause. [27, 28, 29] Scrutinizing the rural mindset, a significant majority consider only a woman's body to change during menopause ($p<0.046$) with the sole difference being a cessation of their cycles ($p<0.022$). While the urban menopausal population recognizes more changes be it physically, mentally or emotionally. Yet in a negative context, 43% of the urban community perceive menopause to be an unpleasant experience ($p<0.042$) and 27.4% of them conclude that every women is depressed about menopause ($p<0.001$). It is of no wonder that compared to the rural, the urban discern menopause as one of the biggest

changes in their lives (p<0.001). A culture of silence also prevents them from seeking health care. However, recent studies have also shown that educated women from developing countries are now seeking treatment for menopausal problems. [30, 31] Hence, the increased concern and health seeking behavior of the urban to the rural population can be explained.

Dennerstein et al 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. [32] Bowles also maintained that attitudes influence menopausal experience. [33] On an overview of the attitude towards menopause- urban women being of a higher educational and employment status (p<0.001) are bound to have more access to information about menopause than the rural thereby sensitizing them to it. In a recent psycho-education intervention, fostering a positive attitude to menopause was found to associated with less severe menopause symptoms and psychological distress, although it is not clear whether the changes were mediated by a change in attitude, proactive coping, social support or information provision. [34] Interestingly, the study reveals that the urban residents find life more engaging after their menses (p<0.003) and feel more confident (p<0.001) in contrast to the rural. This may be attributed to the dissolution of their fear of pregnancy, hassle behind the use of contraception, an end to their 'unclean days' freeing them for their religious practices and other lifestyle indulgences like social gatherings, charity groups, health clubs, recreation etc;-

Saucier also explained that problems related to a woman's realization that she no longer conforms to society's standards of youth and beauty includes low self-esteem, depression and anxiety. These problems are basically because women seem to be more vulnerable than men to the pressure from society to conform to its expectations and as a result face more questions of self-worth as they enter the middle years of their life. Menopause is a landmark event during this period.

Hence, while considering it to be a period of momentous changes there stems a significant negative attitude of depression (27%), distress (43%) and apprehension (25%) in the urban. Fortunately, there is also a significant proportionate rise in the health seeking behaivour (57%) than the rural (26.8%). This could denote a need for more effective counseling and therapy.[35] Relatively few studies have systematically evaluated relationships between stress, psychological distress (i.e. anxiety, depression) and menopause symptoms and their results are not wholly consistent. Nor have many studies evaluated relationships between other related psychosocial factors (e.g. social support, coping), cognitive factors (e.g. attitude to menopause) and menopause symptoms. Depression and menopause have previously been linked in the literature, but there is limited supporting evidence. [36, 12, 17, 10, 37] For example, a recent 5-year observational study of 2,565 women aged 45 to 55 found no association between menopausal status and depression, although women with a longer peri-menopause (> 27 months) experienced more depressive symptoms. [14] In a logistic-regression analysis, significant factors associated with increased depressive symptoms included physical inactivity, inadequate income, use of

estrogen/ progesterone combination and presence of climacteric symptoms (trouble sleeping, mood swings, or memory problems). Menopausal status was not associated with depressive symptoms. In this sample of women age 45 to 54 years, climacteric symptoms but not menopausal status was associated with higher rates of depressive symptoms. [37]

Since menopause and its related consequences are multifactorial and our study also concludes various psychiatric problems related to it, which can make menopausal women compromised in various day to day activities. Emotional intelligence has emerged as a useful therapeutic tool to help these women cope with the menopause by increasing their positive attitude and better coping skills towards menopause.

References

1. Huffman SB, Myers JE. Counselling women in midlife: An integrative approach to menopause. Journal of Counselling Development 1999;77:258–66.
2. Huffman SB, Myers JE, Tingle LR, Bond LA. Menopause symptoms and attitudes of African American women: Closing the knowledge gap and expanding opportunities for counsellor. Journal of Counselling & Development 2005;83(1): 48–56.
3. Osarenren N, Ubangha MB, Nwadinigwe IP, Ogunleye T. Attitudes of Women to Menopause: Implications for Counselling. Edo Journal of Counselling 2009;2(2):157-164.
4. Bernis C, Reher DS. Environmental aspects of menopause in Spain: Comparative results from recent research. Menopause 2007;14:777–87.
5. Damodaran P, Subramaniam R, Omar SZ, Nadkarni P. Profile of a menopause clinic in an urban population in Malaysia. Singapore Medical Journal 2000;41:431–35.
6. Dennerstein L, Guthric J, Birkhauser M, Sherman S. Symptoms and the Menopause. In: Nanette K. Wegner, R. Paoletti, CJM Lenfant, VW Pinn, editors. International position on women's health and menopause: A comprehensive approach. Bethesda: National Institutes of Health; 2002.p.43-64.
7. Frackiewicz EJ, Cutler NR. Women's health care during the perimenopause. Journal of the American Pharmaceutical Association 2000;40:800–11.
8. Gelfand MM. Sexuality among older women. Journal of Women's Health and Gender Based Medicine 2000;9:S15–S20.
9. Malacara JM, Cetina CDT, Bassol S, Gonzalez N. Symptoms at pre- and postmenopause in rural and urban women from three States of Mexico. Maturitas 2000;43:11–19.
10. Lachman M. Development in midlife. Ann Rev Psychol 2004;55:305-31.
11. Morse C, Smith A, Dennerstein L. The treatment-seeking woman at menopause. Maturitas 1994;18:161-173.
12. Glazer G, Zeller R, Delumba L. The Ohio Midlife Women's Study. Health Care Women Int 2002;2:612-30.
13. Cohen LS, Soares CN, Vitonis AF. Risk for new onset of depression during the menopausal transition. Arch Gen Psychiatry 2006;63:385-90.
14. Choi M. Menopause and mood: are they connected? Female Patient 2001;26:62-63.

15. Kessler RC, McGonagle KA, Swartz M, Blazer DG. Sex and depression in the National Comorbidity Survey 1: lifetime prevalence, chronicity and recurrence. J Affect Disord 1993;29:85–96.
16. Hallstrom T, Samuelsson S. Mental health in the climacteric: the longitudinal study of women in Gothenburg. Acta Obstet Gynecol Scand 1985;Suppl 130:13–18.
17. Hunter MS. Somatic experience of the menopause: A prospective study. Psychosom Med 1990;52:357–67.
18. Palinkas LA, Barrett-Connor E. Estrogen use and depressive symptoms in menopausal women. Obstet Gynecol 1992;80:30–36.
19. Avis NE, Brambilla D, McKinlay SM, Vass K. A longitudinal analysis of the association between menopause and depression: results from the Massachusetts Women's Health Study. Ann Epidemiol 1994;4:214–20.
20. Schutte N, Malouff JM, Bobik C. Emotional intelligence and interpersonal relations. J Soc Psychol 2001;141:523-36.
21. Syamala TS, Sivakami M. Menopause: An emerging issue in India. Economic and Political Weekly 2005;XL:19–25.
22. Indian Institute of Population Sciences, ORC Macro. National Family and Health Survey-3, 2005–2006. Mumbai, India: Author;1:2007.
23. Bernis C, Reher DS. Environmental aspects of menopause in Spain: Comparative results from recent research. Menopause 2007;14:777–87.
24. Bauld R, Brown FR, Stress, psychological distress, menopause symptoms and physical health in women. Journal: Maturitas:1-18.
25. Dasgupta D, Ray S. Menopausal problems among rural and urban women from eastern india. Journal of Social, Behavioral and Health Sciences 2009;3(1):20–33.
26. Rahman SASA, Zainudin SR, Mun VLK. Assessment of menopausal symptoms using modified menopause rating scale among middle age women in Kuching, Sarawak, Malaysia. Asia Pacific Family Medicine 2010;9(5);2-6.
27. Defey DE, Storch S, Cardozo OD, Fernandez G. The menopause: Women's psychology and health care. Social Science and Medicine 1996;42:1447–56.
28. Mashiloane CD, Bagratee J, Moodley J. Awareness of and attitudes toward menopause and hormone replacement therapy in an African community. International Journal Gynaecology and Obstetrics 2001;76:91–93.
29. Wasti S, Robinson SC, Akhtar Y, Khan S, Badaruddin N. Characteristics of menopause in three socioeconomic urban groups in Karachi, Pakistan. Maturitas 1993;16:61–69.
30. Obermeyer CM, Schulein M, Hajji N, Azelmat M. Menopause in Morocco: Symptomatology and medical management. Maturitas 2000;41:87–95.
31. Taechakraichana N, Wipatavit V, Thamanavat N, Panyakhamlerd K. Hormone replacement therapy: Attitude and acceptance of Bangkokian women. Journal of Medical Association of Thailand 2003;86(2):S385–S398.
32. Dennerstein L, Smith A, Morse C. Psychological well-being, mid-life and the menopause. Maturitas 1994;20:1–11.
33. Bowles C. Measure of attitude toward menopause using the semantic differential model. Nursing Research 1986;35:81–85.
34. Rotem M, Kushnir T, Levine R. A psycho-educational program for improving

women's attitudes and coping with menopause symptoms. JOGNN 2005; 34:233-40.
35. Saucier MG. Midlife and beyond: Issues for aging women. Journal of Counselling and Development 2004;82(4):420–25.
36. Matthews K. Myths and realities of the menopause. Psychosom Med 1992;54:1-9.
37. Bresnahan M, Murray-Johnson L. The Healing Web. Health Care Women Int 2002;2:398-407.
38. Hayden HB, Bastian LA, Kuchibhatla MN, Steffens DC .Depressive Symptoms, Menopausal Status, and Climacteric Symptoms in Women at Midlife. Psychosomatic Medicine 2001;63(4): 603-608.

Cite this article as: Singla M, Sharma A, Samuel C, George J. To compare sociodemographic profile, attitude, coping strategies and psychiatric morbidity among rural and urban menopausal women. Int J Med and Dent Sci 2016;5(1):1016-1026.

Source of Support: Nil
Conflict of Interest: No