

Quality of Life of Menopausal Women in Majhifeda VDC, Kavrepalanchok, Nepal

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ABSTRACT

Background

Menopause is defined as the permanent cessation of menstruation resulting from the loss of ovarian follicular activity. This is established fact that the quality of life of menopausal women deteriorates as the effect of menopausal symptoms.

Objective

To assess the physical domain, psychological domain, vasomotor domain for quality of life and its association with selected socio-demographic variables of menopausal women.

Method

Descriptive cross-sectional study was conducted among the menopausal women aged 45-60 years whose menstruation has ceased for a complete one year naturally excluding those having thyroid disorders and mentally disable. Structured questionnaire was used adopting Nepali version of Modified Menopause-Specific Quality of Life (MENQOL) questionnaire. Data collection was accomplished during August - September 2016. Data entered in MS excel were analysis using SPSS version 21. Descriptive as well as inferential statistics were applied for the data analysis.

Result

Among vasomotor domain hot flushes or flashes (81.9%), sweating (76.7%) and night sweats (73.3%); among psychosocial domain accomplishing less than I used to (94.8%), experiencing poor memory (80.2%), being impatient with other people (76.7%), feeling depressed down or blue (71.6%), feeling anxious or nervous (55.2%), feeling of wanting to be alone (55.2%) and being dissatisfied with my personal life (37.1%). Among physical domain aching in muscles and joints (94.8%), decrease in physical strength (94.8%), low backache (88.8%), feeling tired or worn out (84.0%), difficulty sleeping (81.0%), aches in back of neck or head (76.7%) were the major symptoms. Among sexual domain vaginal dryness during sexual intercourse (60.3%), avoiding intimacy (52.6%) and change in sexual desire (55.2%) were the major symptoms. Overall observation is that vasomotor symptoms were highest followed by sexual, psychosocial and physical symptoms having statistically significant association between vasomotor symptoms and ethnicity ($p=0.019$) and sexual symptoms and marital status ($p=0.010$).

Conclusion

Majority of the study subjects were from the marginalized groups of people. Vasomotor symptoms had highest prevalence followed by sexual, psychological and physical symptoms. As significant associations were observed between vasomotor symptoms and ethnicity and sexual symptoms and marital status, awareness and periodical checkups were recommended.

KEY WORDS

Physical, Psychological, Quality of life, Sexual, Symptoms, Vasomotor

INTRODUCTION

Menopause is defined as the permanent cessation of menstruation resulting from the loss of ovarian follicular activity.¹ Natural menopause is recognized to have occurred gradually after 12 consecutive months of amenorrhea, for which there is no other obvious pathological or physiological cause.^{2,3} Quality of life comprises of four domains including vasomotor, psychosocial, physical and sexual domains which are experienced by 80% of the menopausal women.³ This is established fact that the quality of menopausal women deteriorates as the effect of menopausal symptoms.⁴⁻⁷

Globally, 20% of women have no noticeable changes, other than their periods stopping. However 70% consider menopausal changes a mild to moderate nuisance. About 10% find their symptoms severely distressing.⁸ In Nepal, about 11% of the total female population are between age 45-59.⁹ Life expectancy of female is increasing and has reached 68.56 at present.¹⁰ Normally most Nepali women have menopause during the age of 48 and 49.⁸ Due to increase in life expectancy and growing population of above 40 years of women their health demands priority in Nepal. Large efforts are required to educate and aware about the health problems of these segments of population. Proactively managing menopause is an opportunity for women to prevent disease and improve their long-term health and quality of life.¹¹ The prevalence of menopausal symptom among Asian women is reported ranging from 10-40%, whereas, in western countries a higher prevalence of physical and psychological symptoms around menopause is reported.¹²

This study helps for early reorganization of the symptoms and reduction of the discomfort and fears, and to seek the appropriate remedy. Furthermore, it helps health personnel to plan health interventions. Hence, this study is an attempt to assess the Physical domain, Psychological domain, vasomotor domain for quality of life and its association with selected socio-demographic variables of menopausal women.

METHODS

Descriptive cross-sectional study was conducted among the menopausal women aged 45-60 years whose menstruation has ceased for a complete one year naturally excluding those having thyroid disorders and mentally disable. The study site was Majipheda, village development committee (VDC) of Kavrepalanchok district of Nepal. In total 116 women were taken applying systemic random sampling technique. The voters' list of four randomly selected wards (wards 2, 3, 8 and 9) was taken from the VDC office. There were 235 eligible menopausal women in those wards. The calculated sample size was 116 women. Every second eligible from the participants were taken as the study subjects.

Structured questionnaire was used adopting Nepali version of Modified Menopause-Specific Quality of Life (MENQOL) questionnaire. For each of the items, participants responded whether they had experienced the problem in the past six months. Those who responded "yes" were asked further the rates how much they had been bothered by the problem ranging from 1. *Not bothered at all*, 2. *Somewhat bothered*, 3. *Moderately bothered*, 4. *Very much bothered*, and 5. *Extremely bothered*. The questionnaire included the following four domains. Vasomotor domain questionnaire included three questions including (1) *Hot flushes or flashes*, (2) *Night sweats*, and (3) *Sweating*. Physical domain questionnaire included 13 questions including (1) *Flatulence or gas pains*, (2) *Aching in muscles and joints*, (3) *Feeling tired or worn out*, (4) *Difficulty sleeping*, (5) *Aches in back of neck or head*, (6) *Decrease in physical strength*, (7) *Drying skin or changes in appearance, texture or tone of skin*, (8) *Weight gain*, (9) *Increased facial hair*, (10) *Feeling bloated*, (11) *Low backache*, (12) *Frequent urination*, and (13) *Involuntary urination when laughing or coughing*. Psychosocial domain questionnaire included seven questions including (1) *Being dissatisfied with my personal life*; (2) *Feeling anxious or nervous*; (3) *Experiencing poor memory*; (4) *Accomplishing less than I used to*; (5) *Feeling depressed, down or blue*; (6) *Being impatient with other people*, and (7) *Feelings of wanting to be alone*. Sexual domain questionnaire included 3 questions (1) *Change in sexual desire*, (2) *Vaginal dryness during sexual intercourse*, and (3) *Avoiding intimacy*. The questionnaire was pre-tested in the area away from the study area. Data collection was accomplished during August - September 2016.

Ethical approval for this study was taken from the Institutional Review Committee (IRC) of Kathmandu University School of Medical Sciences (KUSMS). Written consent was taken from all the participants prior to the interview.

Data entry was done in the MS excel software and data analysis was done by using SPSS version 21. As the descriptive statistical proportion, median and inter-quartile range were computer and as inferential statistics Mann Whitney U test was applied to assess the association of MENQOL and age group, ethnicity, education status, occupation status, marital status and last menstrual period of women. The significance was set at $p < 0.05$ level.

RESULTS

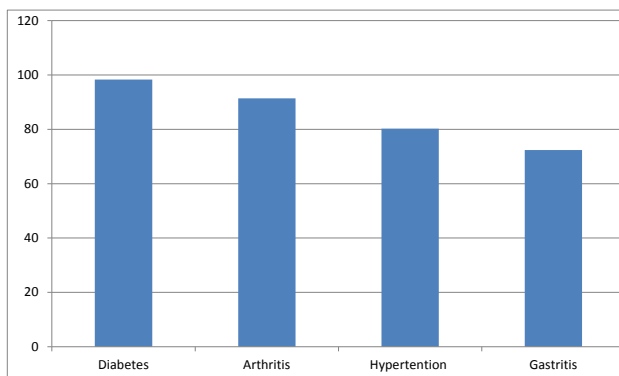
As the women assessed were all menopausal, the mean \pm standard deviation of the age of them was 55.70 ± 4.37 years with the range of 42-60 years in this study. Approximately three fifth of the women were of age group 56-60 years, about two third of them were Tamang ethnic group, just about 10% of them were literate, most of them involved in the agriculture work, 93.1% of them stayed with the couple

Table 1. Socio-demographic characteristics

Age group	Frequency	Percent
45-50 years	18	15.5
51-55 years	29	25.0
56-60 years	69	59.5
Mean± standard deviation = 55.70 ± 4.37 years with the range from 42-60 years		
Ethnicity		
Tamang	76	65.5
Non Tamang	40	34.5
Education status		
Illiterate	105	90.5
Literate	11	9.5
Occupation		
Agriculture	112	96.6
Others	4	3.4
Marital status		
Stay with couple	108	93.1
Currently single woman	8	6.9
Last menstrual period		
Menopause duration ≤5 years	43	37.1
Menopause duration >5 years	73	62.9
Total	116	100.0

and slightly above three fifth of them entered menopausal stage before five years (Table 1).

About two percentage of the women had diabetes, about 20% of them had hypertension, 27.6% had gastritis and about nine percent had arthritis (fig. 1).

**Figure 1. Bar diagram of percentage of selected chronic diseases**

Among vasomotor domain; the prevalence were hot flushes or flashes 81.9%, night sweats 73.3% and sweating 76.7%. In the psychosocial domain; the prevalence were being dissatisfied with my personal life 37.1%, feeling anxious or nervous 55.2%, experiencing poor memory 80.2%, accomplishing less than I used to 94.8%, feeling depressed down or blue 71.6%, being impatient with other people 76.7%, feeling of wanting to be alone 55.2%. Within the factors of physical domain; the prevalence were flatulence or gas pains 50.9%, aching in muscles and joints 94.8%, feeling tired or worn out 84%, difficulty sleeping 81.0%, aches in back of neck or head 76.7%, decrease in physical

strength 94.8%, drying skin 62.1%, weight gain 21.6%, increased facial hair 9.5%, feeling bloated 60.3%, low backache 88.8%, frequent urination 54.3% and involuntary leakage of urine 45.7%. And, within the sexual domain; the prevalence were change in sexual desire 55.2%, vaginal dryness during sexual intercourse 60.3% and avoiding intimacy 52.6% (Table 2).

Table 2. Vasomotor domain of the modified MENQOL questionnaire (n=116)

Parameters	Frequency (%)	Md ⁿ (Q ₁ ,Q ₃)
Vasomotor domain		
Hot flushes or flashes	95(81.9)	2 (2, 3)
Night sweats	85(73.3)	3 (2, 3)
Sweating	89(76.7)	2 (2, 3)
Psychosocial domain		
Being dissatisfied with my personal life	43(37.1)	2 (2, 3)
Feeling anxious or nervous	64(55.2)	2 (2, 3)
Experiencing poor memory	93(80.2)	3 (2, 3)
Accomplishing less than I used to	110(94.8)	3 (2, 4)
Feeling depressed down or blue	83(71.6)	3 (2, 3)
Being impatient with other people	89(76.7)	3 (2, 3)
Feeling of wanting to be alone	64(55.2)	2 (2, 3)
Physical domain		
Flatulence or gas pains	59(50.9)	2 (2, 3)
Aching in muscles and joints	110(94.8)	3 (3, 4)
Feeling tired or worn out	109(84.0)	3 (3, 4)
Difficulty sleeping	94(81.0)	3 (2, 3)
Aches in back of neck or head	89(76.7)	3 (2, 3)
Decrease in physical strength	110(94.8)	3 (3, 4)
Drying skin	72(62.1)	2 (2, 3)
Weight gain	25(21.6)	2 (2, 3)
Increased facial hair	11(9.5)	2 (1, 2)
Feeling bloated	70(60.3)	3 (2, 3)
Low backache	103(88.8)	3 (2, 3)
Frequent urination	63(54.3)	3 (2, 3)
Involuntary leakage of urine	53(45.7)	3 (2, 3)
Sexual domain		
Change in sexual desire	64(55.2)	2 (2, 3)
Vaginal dryness during sexual intercourse	70(60.3)	3 (2, 3)
Avoiding intimacy	61(52.6)	2 (2, 3)

When the composite prevalence were calculated, it was found that vasomotor symptoms were 69%, psychosocial symptoms were 19.9% physical symptoms 2.6% and sexual symptoms were 44%. The statistical association was assessed applying Mann Whitney U test for the composite prevalence of MENQOL and the age, ethnicity and literacy, occupation and marital status of the women. Significant association were observed vasomotor domain and ethnicity ($p=0.019$), and sexual domain and marital status ($p=0.010$) (Table 3).

Table 3. Frequencies and Mann Whitney U test between quality of life and socio-economic parameters

Parameters	Frequency (%)	Md ^a (Q1,Q2)	P Value				
			Age	Ethnicity	Literacy	Occupation	Marital status
Vasomotor	80 (69.0)	2 (2, 3)	0.706	0.019*	0.100	0.406	0.703
Psychosocial	23 (19.9)	3 (2, 3)	0.165	0.153	0.886	0.314	0.705
Physical	3 (2.6)	3 (2, 3)	0.974	0.312	0.793	0.922	0.844
Sexual	51 (44.0)	2 (2, 3)	0.382	0.311	0.169	0.439	0.010*

DISCUSSION

In our current study, just about one in ten of women were literate, most of them involved in the agriculture work, 93.1% of them stayed with the couple and slightly above three fifth of them entered menopausal stage before five years. In a similar type of previous study, the proportion of women who had no formal education was 85.3%, only 1.3% of them having 12 years or > 12 years of education, most of women (99.1%) were married, house wives (75.6%) and living with husband (76.9%), majority of the them (64.6%) belongs to poor socioeconomic status, while only a few (5.7%) were from upper class.¹³

In this study, about two percent of the women had diabetes, about 20% had hypertension, 27.6% had gastritis and about nine percent had arthritis. The common general health problems reported in a previous study were gastritis (38.3%), headache (33.3%), eye problems (32%), urinary problems (30.7%) and musculoskeletal problems (27.3%) followed hypertension (19%) and diabetes (17.7%).⁹ In a previous study conducted in Qatar, it was found that the most common disease was diabetes mellitus (11.4%), followed by hypertension (6.6%), asthma (5.6%) and CHD (2.5%).¹²

Among vasomotor symptoms; hot flushes or flashes (81.9%), sweating (76.7) and night sweats (73.3) were prevalent. In a similar type of study conducted in Nepal, it was revealed that the most frequently reported symptoms hot flushes (69.7%).⁴ In a previous study, experiences of vasomotor symptoms were 32.1% of the women reporting hot flushes and 24.9% reported night sweats.¹⁴

Amongst the parameters of psychosocial symptoms in this study; being dissatisfied with my personal life was 37.1%, feeling anxious or nervous was 55.2%, experiencing poor memory was 80.2%, accomplishing less than I used to was 94.8%, feeling depressed down or blue was 71.6%, being impatient with other people was 76.7% and feeling of wanting to be alone was 55.2%. In previous study, the psychological symptoms as reported by the respondents were that nearly half of the respondents reported insomnia (49.7%), followed by anxiety (35%), palpitation (26.3%), depression (22.7%), fear of cancer (19.3%) and only 10.3% reported irritability.⁹ In other study, the major symptoms in psychosocial domain were poor memory (73.7%), accomplishing less than they used to (47.4%) and feeling anxious or nervous (40.2%).¹⁴ A study in Iran showed that the frequency of severe and moderate insomnia

was 8.4% and 11.8% and severe daytime sleepiness was present in 27.9% of the participants.¹⁵ In a similar type of study conducted in Nepal, it was revealed that the most frequently reported symptoms were, sleeping problems (78.7%) and mental exhaustion (73.5%).⁴

Amid the physical domain; flatulence or gas pains was 50.9%, aching in muscles and joints was 94.8%, feeling tired or worn out was 84%, difficulty sleeping was 81%, aches in back of neck or head was 76.7%, decrease in physical strength was 94.8%, drying skin was 62.1%, weight gain was 21.6%, increased facial hair was 9.5%, feeling bloated was 60.3%, low backache was 88.8%, frequent urination was 54.3% and involuntary leakage of urine was 45.7%. A previous study revealed that feeling tired or worn out (67.5%), decrease in physical strength and stamina (64.1%), muscles and joint pain (55.0%), aches in the back of neck or head (54.5%), flatulence or gas pain (50.7%), low back ache (51.7%), lack of energy (47.8%), difficulty in sleeping (44%), feeling bloated (38.8%), involuntary urination while laughing, coughing (38.8%) were reported.¹⁴ In a similar type of study conducted in Nepal, it was revealed that the most frequently reported symptoms was joint and muscular discomfort (68.6%).⁴ A study conducted in Saudi Arabia revealed that the most severe symptoms in vasomotor, psychosocial, physical and sexual domains were, hot flushes (29%), experiencing poor memory (48.3%), being dissatisfied with their personal life (44.8%), low backache (41.9%), and change in your sexual desire (36.8%).^{5,16} A study conducted in Pakistan revealed that most prevalent physical symptom within study subjects was body ache (81.7%), the least frequent symptom was increase in facial hair (9.9%), 68.8% reported lack of energy and 66.3% reported that they suffered decreased physical strengths.¹⁷

Among the sexual domain; change in sexual desire was 55.2%, vaginal dryness during sexual intercourse was 60.3% and avoiding intimacy was 52.6% were found in this study. The reported pre, peri and menopausal symptoms in previous study were dryness of vagina (32%), painful periods (28.12%), excessive bleeding (26.04%), dizzy spells (23%), sexual discomfort (20.7%), hot flushes (15.3%), pain in the breast (8.3%), cold hand and feet (7.3%) and night sweats (2.0%).⁹ In a similar type of study conducted in Nepal, it was revealed that the most frequently reported symptoms was dryness of vagina (61.6%).⁴

In this current study, when the composite prevalence were calculated and found that vasomotor symptoms were 69.0%, psychosocial symptoms were 19.9% physical symptoms 2.6% and sexual symptoms were 44.0%. In a study conducted in Latin America revealed that 90.9% of women had at least one menopausal symptom (complaint) that they rated and muscle and joint discomfort, physical and mental exhaustion and depressive mood were highly prevalent and rated as severe - very severe.¹⁸ The most frequently symptoms in postmenopausal women were sexual problems (57.05%), muscle/joint pain (53.29%) and insomnia (51.02%).⁵ The study in Sri Lanka revealed that the most prevalent menopausal symptoms were joint and muscular discomfort (74.7%), physical and mental exhaustion (53.9%), and hot flushes (39.1%).¹⁹ A study in US showed that menopausal women suffered from hot flashes affected work (46.0%), social activities (44.4%), leisure activities (47.6%), sleep (82.0%), mood (68.6%), concentration (69.0%), sexual activity (40.9%), total energy level (63.3%) and overall quality of life (69.3%).¹ A study in India revealed that the most common symptom within study subjects were low back ache (79%) and muscle-joint pain (77.2%). The least frequent symptoms were increase in facial hair (15%) and feeling of dryness during intimacy (10.8%).²⁰ Another study in India showed that menopause-specific quality of life decreases with the increase in duration of postmenopausal years.²¹

The statistical association was assessed applying Mann Whitney U test for the composite prevalence of MENQOL and the age, ethnicity and literacy, occupation and marital status of the women. Significant associations were observed between vasomotor domain and ethnicity at $p < 0.05$ and sexual domain and marital status at $p < 0.05$. In a previous study in Qatar, it was found that 69.0% of the women reported physical symptoms, 58.7% reported psychosocial symptoms, 40% reported vasomotor symptoms and 37.9% reported sexual symptoms.²² In contrast to this study a previous study revealed that married women had significantly lower symptoms on psychosocial, physical and sexual domains indicating better quality of life.³ In the previous study, the quality of life in postmenopausal women had significant correlation with their age, education level, marital status, and employment status.²³ A study conducted in China revealed that

women with poor educational background, low income and divorcee showed higher menopausal symptoms.⁶ Comparatively the symptoms of vasomotor domain were statistically significantly different in postmenopausal women group at $p < 0.001$ than the premenopausal women group and physical and psychological domain symptoms were also statistically significantly different in postmenopausal women group with at $p < 0.01$ and $p < 0.01$ respectively in another study.¹⁴ Although in our study the statistically significant associations were observed only with some components, the symptoms of physical domain were significantly more in postmenopausal group at $p < 0.01$ while the symptoms of psychological domain were significantly high in menopause transition group at $p < 0.01$ in a previous study.¹⁷ The statistically significant association was observed variably in various previous studies in various countries. Another Indian study showed that menopausal status was significantly associated only with the physical domain after removing the effects of sociodemographic characteristics.¹¹ A study conducted in Poland revealed that education status demonstrated statistically significant differences within bodily pain and mental health of postmenopausal women ($p < 0.05$).²⁴ Another study in Poland revealed that respondents living permanently in urban areas as well as better educated women, those with full-time employment, especially those doing intellectual work, women remaining in a long-lasting relationship, and women assessing their financial situation and living conditions as well.²⁵

CONCLUSION

Most of the study subjects were from the marginalized groups of people including about two third of Tamang ethnic group, nine out of ten were illiterate and most of them involved in the agriculture work. Vasomotor symptoms had highest prevalence followed by sexual, psychological and physical symptoms. A significant association observed for vasomotor symptoms and ethnicity as well as sexual symptoms and marital status.

Education and awareness programs as well as periodical check up by physician are recommended for the women and family members to improve their conditions.

REFERENCES

- Williams RE, Levine KB, Kalilani L, Lewis J, Clark RV. Menopause-specific questionnaire assessment in US population-based study shows negative impact on health-related quality of life. *Maturitas*. 2009;62(2):153-9.
- Mohammad-Alizadeh-Charandabi S, Rezaei N, Hakimi S, Montazeri A. Predictors of health-related quality of life in postmenopausal women: a population-based study. *Journal of Caring Sciences*. 2012;1(4):201-8.
- Bouzari Z, Kotenaie MJ, Darzi A-A, Hajian K. Menopausal symptoms can be influenced by various sociodemographic factors and quality of life (QoL) decreases after the menopause. *World Appl Sci J*. 2013;23(9):1221-30.
- Chuni N, Sreeramareddy CT. Frequency of symptoms, determinants of severe symptoms, validity of and cut-off score for Menopause Rating Scale (MRS) as a screening tool: a cross-sectional survey among midlife Nepalese women. *BMC Women's Health*. 2011;11(1):30.
- Joseph N, Nagaraj K, Saralaya V, Nelliyanil M, Rao PJ. Assessment of menopausal symptoms among women attending various outreach clinics in South Canara District of India. *Journal of Mid-life Health*. 2014;5(2):84.
- Li L, Wu J, Pu D, Zhao Y, Wan C, Sun L, et al. Factors associated with the age of natural menopause and menopausal symptoms in Chinese women. *Maturitas*. 2012;73(4):354-60.

7. EL Matty GMA, El-Hakeem S, EL-Ganazory GS. Effect of menopausal symptoms on women's quality of life in Benha city (Egypt) and Arar city (Kingdom of Saudi Arabia). *Med J Cairo Univ.* 2010;78:319-30.
8. CBS. Nepal in Figures 2016. Kathmandu: Government of Nepal, National Planning Commission, Central Bureau Statistics; 2016.
9. Acharya D, Gautam S, Neupane N, Kaphle HP, Singh JK. Health problems of women above forty years of age in Rupandehi district of Nepal. *Int J Health Sci Res.* 2013;3(3):29-36.
10. Bairy L, Adiga S, Bhat P, Bhat R. Prevalence of menopausal symptoms and quality of life after menopause in women from South India. *Australian and New Zealand Journal of Obstetrics and Gynaecology.* 2009;49(1):106-9.
11. Som N, Roy P, Ray S. Menopause-specific quality of life of a group of urban women, West Bengal, India. *Climacteric.* 2014;17(6):713-9.
12. Bener A, Falah A. A measurement-specific quality-of-life satisfaction during premenopause, perimenopause and postmenopause in Arabian Qatari women. *Journal of Mid-life Health.* 2014;5(3):126.
13. Nisar N, Sohoo NA. Severity of Menopausal symptoms and the quality of life at different status of Menopause: a community based survey from rural Sindh, Pakistan. *International Journal of Collaborative Research on Internal Medicine & Public Health.* 2010;2(5).
14. Nayak G, Kamath A, Kumar P, Rao A. A study of quality of life among perimenopausal women in selected coastal areas of Karnataka, India. *Journal of Mid-life Health.* 2012;3(2):71.
15. Yazdi Z, Sadeghniaat-Haghighi K, Ziaee A, Elmizadeh K, Ziaeeha M. Influence of sleep disturbances on quality of life of Iranian menopausal women. *Psychiatry Journal.* 2013;2013.
16. Elazim HA, Lamadah SM, Al Zamil LG. Quality of Life Among of Menopausal Women. *Journal of Biology, Agriculture and Healthcare.* 2014;4(11):78-88.
17. Nisar N, Sohoo NA. Frequency of menopausal symptoms and their impact on the quality of life of women: a hospital based survey. *JPMA.* 2009;59(11):752-6.
18. Blümel J, Chedraui P, Baron G, Belzares E, Bencosme A, Calle A, et al. Menopausal symptoms appear before the menopause and persist 5 years beyond: a detailed analysis of a multinational study. *Climacteric.* 2012;15(6):542-51.
19. Waidyasekera H, Wijewardena K, Lindmark G, Naessen T. Menopausal symptoms and quality of life during the menopausal transition in Sri Lankan women. *Menopause.* 2009;16(1):164-70.
20. Poomalar G, Arounassalame B. The quality of life during and after menopause among rural women. *J Clin Diagn Res.* 2013;7(1):135-9.
21. Som N, Ray S. Menopause-specific quality of life of urban women in West Bengal, India. *Menopause international.* 2012;18(3):99-105.
22. Bener A, Rizk DE, Shaheen H, Micallef R, Osman N, Dunn EV. Measurement-specific quality-of-life satisfaction during the menopause in an Arabian Gulf country. *Climacteric.* 2000 Mar;3(1):43-9.
23. Norozi E, Mostafavi F, Hasanzadeh A, Moodi M, Sharifirad G. Factors affecting quality of life in postmenopausal women, Isfahan, 2011. *Journal of education and health promotion.* 2013;2.
24. Wieder-Huszla S, Szkup M, Jurczak A, Samochowiec A, Samochowiec J, Stanisławska M, et al. Effects of socio-demographic, personality and medical factors on quality of life of postmenopausal women. *Int J Environ Res Public Health.* 2014;11(7):6692-708.
25. Żołnierczuk-Kieliszek D, Kulik TB, Janiszewska M, Stefanowicz A. Influence of sociodemographic factors on quality of life in women living in Lublin Province in Poland. *Przegląd Menopauzalny Menopause review.* 2014;13(1):13.