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Original research article

Quality of Life among Post-Menopausal Women Residing in Rural and Urban Areas

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Abstract

Introduction: Women form the most important part of the family and society, and community health is dependent on the health status of the women. Menopause is biological event occurring in women that indicates the end of reproductive stage to non-reproductive stage. There are several scales for rating the quality of life of menopausal women like Menopausal specific Quality of Life scale [MENQOL], Cervantes Scale [CS], Midlife Women's Symptoms Index [MSI], The Utain Quality of Life [UQOL], Menopause Rating Scale [MRS].Menopausal specific Quality of Life [MENQOL] is used to rule out common post- menopausal symptoms. It has 4 domains - vasomotor, psychosocial, physical and sexual health. Various studies from several countries have indicated that menopause is negatively related to Quality of Life (QOL) by menopause symptoms based on their severity.

Objectives: To Observe Socio demographic features of post-menopausal women residing in rural and urban areas

To analyse Quality of life among post-menopausal women

Methodology: A descriptive community based cross-sectional study conducted in the urban and rural field practice area of Prathima Institute of Medical Sciences, Karimnagar for period of 18 months (April 2018 - October 2019). 300 study participants were selected for the study. Women of age group 45-60 years, who attained natural menopause were included and Induced Menopause were excluded from the study.

Results: The mean age of the total study population was 54.21 $\pm$ 4.02 (SD) years. The mean age of study population in urban area and rural area was 53.45 $\pm$ 4.09 (SD) years and 54.97$\pm$3.83 (SD) years respectively. Among all scores of menopausal quality of life for each MENQOL domain ,it was observed that the highest mean score was in vasomotor domain (2.13±1.35), followed by physical (1.94± 0.98) then psychosocial (1.60 ± 0.74) and finally sexual symptoms (1.11± 0.29) which indicates that the quality of life of women was more affected by vasomotor symptoms compared to other symptoms.

Conclusion: Quality of life of menopausal women was significantly affected majorly by vasomotor symptoms followed by other menopausal symptoms. Poor quality of life was observed in rural menopausal women compared to urban menopausal women.

Key Words: Post-menopausal women, Quality of life

Introduction

Women form the most important part of the family and society, and community health is dependent on the health status of the women.[1] Menopause is biological event occurring in women that indicates the end of reproductive stage to non-reproductive stage.[2]
The average age at menopause ranges from 45 - 53 years both in the developed as well as developing countries. [3-6] This implies that women now live approximately more than one third of their life after cessation of ovarian function. WHO report shows that during the last decade of the 20th century, 40% of postmenopausal women lived in the world's industrialized regions while 60% lived in developing countries. By the year 2030, however, although overall numbers will have increased, the projected proportion of postmenopausal women living in the industrialized regions will have declined to 24%, and 76% will be living in developing countries.[4] The proportion of women aged 45-59 years is 15.3 per cent (Sample Registration System 2014) which is a significant proportion of the population.[7]

Quality of life has been defined by the WHO as the "individual's perceptions of their position in life in the context of the cultural and value systems in which they live and in relation to their goals, expectations, standards, and concerns". [8] Many studies have been reported that based on the severity of menopausal symptoms, quality of life among menopausal women is affected. [9-11]

The nature of symptoms during the menopausal period also varies among the individual. These symptoms have marked impact on menopausal women's quality of life .[12-13] There are several scales for rating the quality of life of menopausal women like Menopausal specific Quality of Life scale [MENQOL], Cervantes Scale [CS], Midlife Women's Symptoms Index [MSI], The Utain Quality of Life [UQOL], Menopause Rating Scale [MRS].Menopausal specific Quality of Life [MENQOL] is used to rule out common post- menopausal symptoms. It has 4 domains - vasomotor, psychosocial, physical and sexual health. Various studies from several countries have indicated that menopause is negatively related to Quality Of Life (QOL) by menopause symptoms based on their severity.[14-17]

Material and Methods:

Objectives:

To Observe Socio demographic features of post-menopausal women residing in rural and urban areas
To analyse Quality of life among post-menopausal women

Methodology:

A descriptive community based cross-sectional study conducted in the urban and rural field practice area of Prathima Institute of Medical Sciences, Karimnagar for period of 18 months (April 2018 - October 2019). 300 study participants were selected for the study. Women of age group 45-60 years, who attained natural menopause were included and Induced Menopause were excluded from the study.

A list of all the houses in the study area were obtained from the household survey registers maintained at the urban and rural health center. Out of the total houses, 300 houses were selected by simple random sampling technique using random number table. Only one woman of age group between 45 - 60 years, who attained natural menopause from each of the selected houses was included in the study. In case if more than one woman was found in the house belonging to the same age group then the women was selected randomly by lottery method. If

the selected house was found to be locked or the woman was unavailable due to any reason, then immediate next house was selected. Out of total 300 study participants, 150 were studied in urban slum area and another 150 were studied in rural field practice area. A predesigned and pretested semi structured proforma was used for data collection. The data was collected by verbal interview technique after taking the informed written consent.
The seven-point likert scale used during the administration of the MENQOL is converted for scoring and data analysis. For each of the 23 items, this seven-point likert scale is converted to an eight-point scale, ranging from 1 to 8.

Results:
The mean age of the total study population was 54.21 ± 4.02 (SD) years. The mean age of study population in urban area and rural area was 53.45 ± 4.09 (SD) years and 54.97±3.83 (SD) years respectively. Out of total 300 menopausal women surveyed, majority, 120 (40%) were of the age group of 51-55 yrs. Majority of the study population in urban area were of the age group of 51- 55 yrs, 58 (38.7%) and in rural area were of the age group of 56-60 yrs, 64 (42.7%). Majority were Hindus, 269 (89.7%) both in urban, 124 (82.7%) and rural, 145 (96.7%) areas. majority of the study population, 181 (60.3%) were illiterates both in urban, 71 (47.3%) and rural, 110 (73.3%) areas. Majority of the study population in urban area were having Primary, 44(29.3%), secondary, 0(6.7%) and Intermediate and above education, 25(16.7%) compared to rural area, 23(15.3%), 7(4.7%) and 10(6.7%) respectively.

The socio economic status was assessed by modified B.G.Prasad Classification and it was found that out of total 300 menopausal women, majority of the study population belonged to the Class II,89 (29.7%) followed by Class IV, 73(24.3%). Majority of the study population in urban area belonged to Class II, 61(40.7%) whereas in rural area, they belonged to Class IV, 51(34%).

overall scores of menopausal quality of life for each MENQOL domain. It was observed that the highest mean score was in vasomotor domain (2.13±1.35), followed by physical (1.94± 0.98) then psychosocial (1.60 ± 0.74) and finally sexual symptoms (1.11± 0.29) which indicates that the quality of life of women was more affected by vasomotor symptoms compared to other symptoms.

Table No 1: MENQOL scores four domains in urban and rural area.

MENQOL Domain	MENQOL score (Mean ± S.D.)		' t ' test	p-value
	Urban	Rural		
Vasomotor	1.72 ± 0.86	2.54 ± 1.59	5.52	p<0.001
Psychosocial	1.20 ± 0.40	2.00 ± 0.78	11.18	p<0.001
Physical	1.26 ± 0.39	2.63 ± 0.91	16.99	p<0.001
Sexual	1.04 ± 0.17	1.18 ± 0.37	4.53	p<0.001

When assessed for quality-of-life scores among menopausal women, significant highest mean scores were found in vasomotor symptoms of hot flushes (2.29±1.50) and sweating (2.79±1.94) in rural menopausal women compared to urban menopausal women (p<0.001)

The highest significant mean score was observed in psychosocial symptom of dissatisfied with personal life in rural study population compared to urban study population (p=0.01).It was observed that significant highest mean scores were observed in psychosocial symptoms of anxiety (1.97±1.23), poor memory (1.6±1.22), accomplishing the task less than before (1.73 ±1.01), depression (2.09 ± 1.48), Impatient with other people (3.42±2.01) and wanting to be alone (1.79±1.44) among rural study population compared to urban study population (p<0.001). No significant difference was observed in the psychosocial symptom of accomplishing the task less than before.

The highest significant mean scores (p<0.001) were observed for physical symptoms of muscle and joint ache (5.07±2.52), tiredness (3.72±2.13), sleep disturbances (3.02±2.13). ache in back of neck and head (4.07±2.04), decrease in physical strength (3.84±2.21) and low backache (3.78 ±2.32) in rural study population compared to urban study population. Significant (p=0.005) highest mean score of facial hair (1.13±0.47) was observed in urban study population compared to rural study population. No significant difference was observed in the physical symptoms of drying of skin, weight gain, change in appearance /texture/tone of skin and frequent urination among urban and rural study population.
It was observed that the mean score of change in sexual desire symptom was higher in rural study population (1.22±0.55) compared to urban study population (1.05±0.32) and the difference is statistically significant (p=0.002). Significant highest mean score of sexual symptoms of vaginal dryness during intercourse (p=0.003) and avoiding intimacy (p<0.002) was observed in rural study population compared to urban study population.

Discussion:

Socio demographic features:
A total of 300 menopausal women in the age group 45-60 yrs were studied and it was found that the mean age of the study population was 54.21 $\pm$ 4.02 years. Similar findings were observed in a study conducted by Rahman S et al (54.50 ± 70 (SD) years) [18] and Mazhar S B et al (56 years).[19] Comparatively higher mean age of study population was reported by Christian D et al **(**58.32 years), [5] Khan S et al (58.14 $\pm$ 8.45 years) [20] and Dienye PO et al (58.4 $\pm$ 10.39 years).[21] In contrast to the present study lower mean age of study participants was reported by Surendar R et al (51 ± 2 years), [22] Dutta R et al (50.20 years) [13] and Rahman SA et al (50.83 $\pm$ 6.30 (SD) years). [18]

In the present study, majority (60.3%) of the study population were illiterate, followed by 22.3% who were educated up to primary school. Similar to the present study, most of the study population were found to be illiterate as observed in the studies conducted by Christian D et al,[23] Geeta R et al, [24] Bansal P et al , [25] Khan S et al, [26] Dienye PO et al ,[21] and Surendar R et al. [22] As far as occupation is concerned, the present study reveals that majority of the study population were housewives (89.3%), followed by 6 % being laborers, 3% were Professionals and 1.7% were self-employed. In accordance with the present study, in the studies done by Rahman S et al, [18] Christian D et al, [5] Kaulagekar A,[27] Geeta R et al,[24] and Surendar R et al, [22] the majority of the study population were housewives followed by other occupation. On the contrary, Dienye PO et al reported that the majority of the study participants were farmers (23.4%) followed by housewives (16.1%).[21]

According to modified B.G.Prasad classification,[28] out of total 300 menopausal women, majority of the study population belonged to the Class II,89 (29.7%) followed by Class IV [73(24.3%)] .Majority of the study population in urban area belong to Class II, 61(40.7%)

whereas in rural area, they belong to Class IV, 51(34%). In a study done by Surendar R et al, it was observed that 81% of study population belonged to lower socioeconomic status.[22] Christian D et al, observed that majority of the study participants belong to Class IV (58.5%), followed by Class V (40.8%).[5] Khan S et al reported that 35.8% of the respondents were in Low socio- economic class.[20] Dienye PO et al reported that 44.94% of study participants belong to Class IV, followed by Class V (24.94%) .[21]

QUALITY OF LIFE (QOL):

In the present study, the highest mean score was observed in vasomotor domain (2.13 ± 1.35), following by physical (1.94 ± 0.98), psychosocial (1.60 ± 0.74) and sexual domain (1.11 ± 0.29) which indicates that vasomotor symptoms primarily affect the quality of life of menopausal women. The highest mean score indicates the poor quality of life.[29] Similar findings were reported by Utian et al that vasomotor symptoms may exert a significant effect on the quality of life of women, resulting in the deterioration of their physical condition, decrease in productivity at work, as well as contributing to disorders in social relations.[30] In contrast to the present study, Elazim et al in Saudi Arabia observed that the overall scores of menopausal quality of life for each MENQOL domain indicated that the highest mean score in sexual domain (3.19± 1.99), following by psychosocial (2.94± 1.45), vasomotor (2.55± 1.53) and physical symptoms (2.28± .749) suggesting that menopausal symptoms were associated with decrease in women quality of life.[31]

A cross-sectional study was conducted by Rathnayake N et al in Srilanka showed that the QOL was significantly impaired among postmenopausal women and menopausal symptoms contributed to the poorer QOL in postmenopausal women.[32] Waidyasekera et al observed that women with menopausal symptoms had significantly lower ($P < 0.05$) quality-of-life scores in most of the domains of the Short Form 36 compared with women without symptoms.[33] Poomalar et al conducted a study in Puducherry among rural women and observed that the menopause related symptoms had a negative effect on the quality of life of the perimenopausal and the postmenopausal women.[34]

Satoh et al reported the decreased quality of life was correlated with the severity of the menopausal symptoms in the peri- and postmenopausal women.[35] Mohamed HA et al observed the highest mean score in sexual domain (3.19 ± 1.99), followed by psychosocial (2.94 ± 1.45) from the overall scores of menopausal quality of life for each domain. [29] A study conducted by Ganapathy et al observed an overall mean MENQOL score of physical, psychological, vasomotor and sexual health-related QOL among menopausal women showed poor QOL. [36] It was observed in the present study that the scores of vasomotor domain (2.54 ± 1.59), psychosocial domain (2.00 ± 0.78), physical domain (2.63 ± 0.91) and sexual domain (1.18 ± 0.37) were significantly higher in rural study population compared to scores in urban study population ($p<0.001$). This indicates that the quality of life (QOL) of menopausal women of rural area were found to be more distressing than that of urban area.

Similar were the findings in a study in Mangalore where the mean QOL score of rural women was higher than the mean QOL score of urban women indicating that the quality of life of rural menopausal women was low compared to urban women.[3] In the current study, according to quality of life scores among menopausal women, significant highest mean scores were found in vasomotor symptoms of hot flushes (2.29±1.50) and sweating (2.79±1.94) in rural menopausal women compared to urban menopausal women ($p<0.001$). Similar significant difference was found between sweating symptoms among rural post-menopausal women

(4.56±1.81) and urban post-menopausal women (3.6±1.3), (t=3.4, P<0.05) in the study conducted by Devi B et al.[37]

In the present study, highest significant mean score was observed in psychosocial symptom of dissatisfied with personal life (1.36 ± 0.79) in rural study population compared to urban study population (p=0.01).It was observed that significant highest mean scores were found in psychosocial symptoms of anxiety (1.97 ± 1.23), poor memory (1.69 ± 1.22), accomplishing the task less than before (1.73 ± 1.01),depression (2.09 ± 1.48), Impatient with other people (3.42 ± 2.01) and wanting to be alone (1.79 ± 1.44) among rural study population compared to urban study population (p<0.001). Similarly, there is a significant difference observed between feeling anxious or nervous symptoms (t=4.4, P<0.05), accomplishing the task less than before (t=2.8, P<0.05),feeling depressed down or blue (t=2.17, P<0.05) and feeling of wanting to be alone (t=5.6, P<0.05), among rural post-menopausal women and urban post- menopausal women in a study conducted in Sikkim.[37]

In this study, the highest significant mean scores (p<0.001) were observed in physical symptoms of muscle and joint Ache (5.07 ± 2.52), tiredness (3.72 ± 2.13), sleep disturbances (3.02 ± 2.13). ache in back of neck and head (4.07 ± 2.04),decrease in physical strength (3.84 ± 2.21) and low backache (3.78 ± 2.32) in rural study population compared to urban study population. Significant (p=0.005) highest mean score of facial hair (1.13 ± 0.47) was observed in urban study population compared to rural study population. No significant difference was observed in the physical symptoms of drying of skin, weight gain, change in appearance /texture /tone of skin and frequent urination among urban and rural study population.

In contrary to the present study, there is a significant difference found between feeling a lack of energy symptoms (t=2.02, P<0.05), dry skin symptoms (t=1.99, P<0.05), increased facial hair symptoms (t=2.1, P<0.05), feeling bloated symptoms (t=2.1, P<0.05) and low backache(t=2.02, P<0.05) among rural post- menopausal women and urban post- menopausal women in a study conducted by Devi B et al (2018) in Sikkim.[37]

It was observed in the present study that the mean score of change in sexual desire symptom is high in rural study population (1.22 ± 0.55) compared to urban study population (1.05 ± 0.32) and the difference was statistically significant (p=0.002).

Significant Highest mean score of sexual symptoms of vaginal dryness during intercourse (p=0.003) and avoiding intimacy (p<0.002) was observed in rural study population compared to urban study population.

In a study conducted by Devi B et al, there is a significant difference found between avoiding intimacy symptoms among rural post-menopausal women and urban post-menopausal women (t=8.46, P<0.05) but no significant difference was observed in change in sexual desire and vaginal dryness.[37]

Zolnierczuk-Kieliszek et al conducted a study in Lublin Province and observed that the quality of the women's life was significantly affected by the place of permanent residence. The worst quality of life was found in permanent country dwellers. City and town inhabitants revealed a considerably higher level of quality of life. Permanent place of residence in the country was an independent predictor of a poorer quality of life. [38] The worst quality of life was observed in country dwellers, while city or town dwellers enjoyed a significantly better quality of life. A

similar correlation was observed by Amore et al who studied the quality of life in Italian women aged 45-55 years.[39]

A cross sectional study conducted by Sharma S et al found that the severity of symptoms was more distressing for rural women. The quality of life in urban society was average and better in rural women.[10] This is in contrast to the present study.

In contrast to the present study, Yohanis et al concluded the QOL showed no significant difference between rural and urban women.[40] The reason for the discrepancy might be because of the character and culture of rural communities in their study that they were more accepting to the differences they have experienced since menopause, the idea that menopause is a natural thing that must happen in every menopausal woman and it is not just a aging or loss of beauty, but also a process of maturation.

Forouhari S et al reported that increased awareness of females on menopause improves their quality-of-life and promotes their health.[1] The most probable reason behind this might be that education predisposes to greater awareness level and thus results in a much better perception of severity of symptoms. Likewise, being engaged in some sort of work can divert attention and can subjectively reduce the severity of symptoms.

Conclusion:

Quality of life of menopausal women was significantly affected majorly by vasomotor symptoms followed by other menopausal symptoms. Poor quality of life was observed in rural menopausal women compared to urban menopausal women. The findings in this study may contribute to form the basis for health promotional activities by drawing the attention of physicians and policy makers towards the unaddressed needs of the middle age females and thus improving their quality of care so that they can spend their twilight years happily.

References:

1. Forouhari S, Khajehei M, Moattari M, Mohit M, Rad MS, Ghaem H. The effect of education and awareness on the Quality-of-Life in postmenopausal women. Indian J Community Med. 2010 Jan 1;35(1):109–14.
2. Bener A, Falah A. A measurement-specific quality-of-life satisfaction during premenopause, perimenopause and postmenopause in Arabian Qatari women. J Midlife Health. 2014;5(3):126.
3. Bromberger JT, Matthews KA, Kuller LH, Wing RR, Meilahn EN, Plantinga P. Prospective study of the determinants of age at menopause. Am J Epidemiol. 1997;145(2):124–33.
4. Tasnim S, Haque MA, Nazmeen S. Experience of menopause and menopausal transition among middle aged women attending a periurban hospital. Bangladesh J Obstet Gynecol. 2016;31(1):10–5.
5. Christian D, Kathad M, Bhavsar B. socio-demographic characteristics of post-menopausal women of rural area of vadodara district, gujarat. Vol. 2, National Journal of Community Medicine.
6. Abdullah B, Moize B, Ismail BA, Zamri M, Farhah N, Nasir M. Prevalence of menopausal symptoms , its effect on quality of life among Malaysian women and their treatment seeking behaviour. 2017;72(2):94–9.
7. 2014 BS. Sample Registration System Baseline Survey 2014. Regist Gen India. 2014;22.
8. De Vries, J. and Van Heck G. Programme on Mental Health Whoqol. Eur J Psychol Assess [Internet]. 1998;13(3):1-15. Available from:

http://www.who.int/mental_health/media/68.pdf
9. Greenblum CA, Rowe MA, Neff DF, Greenblum JS. Midlife women: Symptoms associated with menopausal transition and early postmenopause and quality of life. Menopause. 2013 Jan;20(1):22–7.
10. Sharma S, Mahajan N. Menopausal symptoms and its effect on quality of life in urban versus rural women : A cross-sectional study. 2017;6(1):16–20.
11. Nisar N, Ahmed Sohoo N, Jaspreet Brar AS. Severity of Menopausal symptoms and the quality of life at different status of Menopause: a community based survey from rural Sindh, Pakistan [Internet]. Vol. 2, Ahmed Sohoo N International Journal of Collaborative Research on Internal Medicine & Public Health. 2010.
12. Vijayalakshmi S, Chandrababu R EVL. Menopausal transition among Northern Indian women. Nitte Univ J Heal Sci. 2013;3(2):73–9.
13. Dutta R, Dcruze L, Anuradha R, Rao S RM. A population based study on the menopausal symptoms in a rural area of Tamil nadu, India. J Clin diagnostic Res. 2012;6(4):597–601.
14. Williams RE, Levine KB, Kalilani L, Lewis J CR. Menopause-Specific Questionnaire Assessment in US Population-Based Study Shows Negative Impact On Health-Related Quality Of Life. Maturitas. j.maturitas. 2008;62(2):153– 9.
15. Lee, Bokim. Im,Eun-Ok.Chee W. NIH Public Access. West J Nurs Res. 2011;32(8):1091–111.
16. Jenabi E, Shobeiri F, Hazavehei SMM, Roshanaei G. Assessment of Questionnaire Measuring Quality of Life in Menopausal Women: A Systematic Review. 2015;30(3):151–6.
17. Heinemann K, Ruebig A, Potthoff P, Schneider HPG, Strelow F, Heinemann LAJ, et al. The Menopause Rating Scale (MRS) scale : A methodological review. Health Qual Life Outcomes. 2004;2(45):1–8.
18. Rahman S, Salehin F, Iqbal A. Menopausal symptoms assessment among middle age women in Kushtia, Bangladesh. BMC Res Notes. 2011;4.
19. Batool Mazhar S, Rasheed S. Menopause Rating Scale (MRS) Syeda Batool Mazhar and Sabeena Rasheed Ann. Vol. 5, Pak. Inst. Med. Sci. 2009.
20. Khan S, Shukla M, Priya N, Ansari M. Health seeking behaviour among post-menopausal women: a knowledge, attitude and practices study. Int J Community Med Public Heal. 2016;1777–82.
21. Dienye PO, Judah F, Ndukwu G. Frequency of symptoms and health seeking behaviours of menopausal women in an out-patient clinic in Port Harcourt, Nigeria. Glob J Health Sci. 2013;5(4):39–47.
22. Surendar R, Durgapriya G, Arthi M, Srikanth S. Quality of life among post -menopausal women in rural Puducherry. 2019;6(3):112–8.
23. Christian D, Kathad M, Bhavsar B. Socio-Demographic Characteristics of Post-Menopausal Women of Rural Area of Vadodara District, Gujarat. Natl J Community Med. 2011;2(3):419–22.
24. Geeta R PL. Prevalence of menopausal problems and the strategies adopted by women to prevent them. IJSR. 2013;4(4):790–5.
25. Bansal P, Chaudhary A, Soni RK, Gupta VK. Original Article Epidemiological Determinants of Age at Natural Menopause in Rural Women of Punjab. 2014;2(1):24–8.
26. Khan S, Shukla M, Priya N, Ansari M. Health seeking behaviour among post- menopausal women: a knowledge, attitude and practices study. Int J Community Med Public Heal. 2016;1777–82.
27. Aarti K. Age of Menopause and Menopausal Symptoms among Urban Women in Pune , Maharashtra. J Obstet Gynecol India. 2011;(June):323–6.
28. Pandey VK, Aggarwal P KR. Modified BG Prasad Socio-economic Classification, Update

- 2019. INDIAN J COMMUNITY Heal. 2019;31(01):123–5.
29. Mohamed GAE. Quality of life among menopausal women. Int J Reprod Contracept Obs Gynecol [Internet]. 2014;3(3):2320–1789. Available from:http://dx.doi.org/10.5455/2320-1770.ijrcog20140906
30. Utian WH. Psychosocial and socioeconomic burden of vasomotor symptoms in menopause : A comprehensive review. Heal Qual Life Outcomes 2005,. 2005;3(47):1–10.
31. Elazim HA, Lamadah SM, Al Zamil LG. Quality of life among of menopausal women in Saudi Arabia. Jordan Med J [Internet]. 2014;48(4):227–42. Available from: www.iiste.org
32. Rathnayake N, Lenora J, Alwis G, Lekamwasam S. Prevalence and Severity of Menopausal Symptoms and the Quality of Life in Middle-aged Women: A Study from Sri Lanka. Nurs Res Pract. 2019 Jul 1;2019:1–9.
33. Waidyasekera H, Wijewardena K, Lindmark G, Naessen T. Menopausal symptoms and quality of life during the menopausal transition in Sri Lankan women. Menopause [Internet]. [cited 2019 Oct 21];16(1):164–70.
34. Poomalar GK, Arounassalame B. The quality of life during and after menopause among rural women. J Clin Diagnostic Res. 2013 Jan 1;7(1):135–9.
35. Satoh T, Ohashi K. Quality-of-life assessment in community-dwelling, middle- aged, healthy women in Japan. Climacteric. 2005 Jun;8(2):146–53.
36. Ganapathy T, Saud S, Furaikh A. Health - related Quality of Life among Menopausal Women. 2018;16–23.
37. Devi B, Karki P, Chhetry R, Sharma N, Niroula M, Lepcha PC, et al. Quality of life of post-menopausal women residing in rural and urban areas of Sikkim, India. Int J Reprod Contraception, Obstet Gynecol. 2018;7(12):5125.
38. Zołnierczuk-Kieliszek D, Kulik TB, Jarosz MJ, Stefanowicz A, Pacian A, Pacian J, et al. Quality of life in peri- and post-menopausal Polish women living in Lublin Province - differences between urban and rural dwellers. Ann Agric Environ Med. 2012;19(1):129–33.
39. Amore M, Di Donato P, Papalini A, Berti A, Palareti A, Ferrari G, et al. Psychological status at the menopausal transition: An Italian epidemiological study. Maturitas. 2004 Jun 16;48(2):115–24.
40. Yohanis M, Tiro E IT. Women in the rural areas experience more severe menopause symptoms. Indone J Obs Gynecol. 2013;37(10):86–91.