

Psychological Problems and its Association to Other Symptoms in Menopausal Transition

**Muhammad Aqeel, Khaula B. Arbab, and
Tanvir Akhtar**

Foundation University

This study investigated the association among stress, anxiety, and depression in menopause transition. Moreover, to assess how other menopausal symptoms contribute to elevate stress, anxiety, and depression in Pakistani women, 150 female participants (Premenopausal, $n = 57$; Perimenopausal, $n = 33$; Postmenopausal, $n = 60$) with menopausal complaints were recruited from various public and private hospitals, at their respective gynaecological wards in Peshawar, Rawalpindi, and Islamabad, Pakistan, in 2015. Participants' age ranged from 40 to 60 years ($M = 47.44$; $SD = 5.40$). Purposive-convenient sampling and a cross-sectional design were employed. Two instruments, Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995) and Bradford Somatic Inventory (Mumford et al., 1991) were used to measure somatic symptoms, stress, anxiety, and depression in women with menopausal symptoms. Findings demonstrated that head symptom significantly positively predicted psychological problems such as stress and depression for women with perimenopause. Moreover, it also significantly positively predicted anxiety for postmenopausal women. Results also demonstrated that chest symptom significantly positively predicted psychological problems like anxiety for perimenopausal women. Results further revealed that fatigue symptom significantly positively predicted depression and stress in premenopausal women. Additionally, findings showed that panic symptoms significantly positively predicted anxiety and depression for postmenopausal women.

Keywords: Anxiety, depression, stress, somatic symptoms, menopausal transition

Menopause is characterized by a stable termination of menstruation and is marked following one year of amenorrhea, lacking any other medical reason (Suzan, 2016). Human development

Muhammad Aqeel, Khaula B. Arbab, and Tanvir Akhtar, Foundation University, Rawalpindi Campus, Rawalpindi, Pakistan.

Correspondence concerning this article should be addressed to Muhammad Aqeel, Foundation University, Rawalpindi Campus, Rawalpindi, Pakistan. Email: aqeel1924@yahoo.com

cycles through numerous imperative phases from infancy till old age. All these stages are distinguished through important characteristics which are visible in all people. Several researches, conducted separately, study these different phases although adulthood phase particularly concerning the period of menopause period is still controversial and requires substantial attention. Menopause is the most vital hypercritical phase in lives of women (Rossouw et al., 2002). Menopause is a worldwide physiological fact and this phenomenon occurs in all women. Previous studies revealed that menopausal transition leads to health and psychological problems (Dvornyk et al., 2006; Elsborg, Andersen, & Stelter, 2018).

Menopause is mostly a tedious phase of life, while menopausal transition is characterized by a phase marked with a woman becoming physiologically vulnerable, manifesting as biological, somatic, and psychological symptoms. It is generally portrayed as a period when women experience illness, lowered sexual attractiveness and mental health issues (Chrisler, 2008; Swartzmann, Edelberg, & Kemmann, 1990). It is said that women in perimenopausal stage are more susceptible to depression, while this susceptibility increases from initial premenopausal stage till later stage, and a decrease is seen in the postmenopausal stage (Sharifi, Anoosheh, Foroughan, & Kazemnejad, 2014). It includes normal transition such as physiological, cultural and social variations associated with the aging process in women's life (Rossouw et al., 2002; Zöllner, Acquadro, & Schaefer, 2005). Menopausal change may start when a woman reaches 45 to 55 years of age. Throughout this transition phase, the hormonal changes could stimulate the psychological and physical problems in women. The most hypercritical stages of life is menopause in middle-aged women (Rossouw et al., 2002). A study has identified menopause as a health risk for women (Dvornyk et al., 2006).

Menopausal status is categorized into three types: (1) Peri menopause: a time of one year before commencing the menopause in which physiological and clinical features of menopause appear. Women experience irregular menstruation for last 3 months in this period, (2) Pre-menopause: Regular menstruation within last year before commence of menopause, (3) Post-menopause: Time period which begins from the last menopause up till death is called post menopause, characterized by absence of menses for the whole previous whole year (Hunter & O'Dea, 1997; Hunter & Rendall, 2007; Kaewboonthum, 2003). Prior studies have argued that the psychological (depression, anxiety, nervousness) and physiological issues (fatigue, headache, hot flashes) are associated with menopause transition in older women worldwide (Sharifi et al., 2014). However,

several women are going through the menopausal change with minor complexity. Conversely, most of women may pass through a lot of stress (Pillitteri, 2010). Throughout menopause, several women experience severe psychological and physiological symptoms such as vasomotor, reduced sexual function, vaginal dryness, sleep disturbance and depressed mood (North American Menopause Society, 2010).

Indisputably, it is a tricky period in a life for a woman. Several prior studies have reported that menopause symptoms are allied with stress, depression, anxiety, mood disorders and other somatic complaints. The state of depression is associated with feelings of lowered enthusiasm for one's life, hopelessness, lacking interest, self-criticism, and inertia (Bromberger et al., 2001; Dennerstein, Smith, & Morse, 1994; Lovibond & Lovibond, 1995; Maartens, Knottnerus, & Pop, 2002). On other hand, menopausal women are shown to have more depression (Avis, Crawford, Stellato, & Longcope, 2001; Bromberger et al., 2001). The results of studies systematically confirm that premenopausal and perimenopausal period, as well as some time after postmenopause, is the period of increased risk of the development of depression (Bromberger et al., 2001). Anxiety is defined as pain in skeletal muscle, unconscious arousal, situational anxiety (Bromberger et al., 2001; Maartens et al., 2002). Several previous studies' findings elaborated that somatic symptoms of menopause have been linked to higher anxiety levels in old age women (Bromberger et al., 2001; Maartens et al., 2002).

Somatic symptoms are characterized by feelings of distress, emotional and psychological difficulties manifesting as physical complaints (Elsborg et al., 2018). AlQuaiz, ab Salwa, and Habibac (2013) postulated that those women who were passing through perimenopausal phase inclined more to somatic complaints as compared to those women who were facing period of premenopausal and postmenopausal. The domino theory proposes that the discomfort caused by somatic symptoms of the perimenopause (e.g., night sweats and hot flushes) provokes physical changes (e.g. sleep disturbance) and consequently affects mood stability. It is well recognized that menopausal transition is linked to persisting somatic and psychological menopausal symptoms and elevated risk of a lot of health states (Greenblum, Rowe, Neff, & Greenblum, 2013; Hu et al., 2017; Whitcomb, Whiteman, Langenberg, Flaws, & Romani, 2007), psychological problems such as self-esteem, loneliness, stress, depression, and anxiety (Elavsky & McAuley, 2007; Hu et al., 2017; Parry & Shaw, 1999). And also, significantly decrease life satisfaction (Dennerstein, Dudley, Guthrie, & Barrett-Connor, 2000). While

similar evidence was found in association to positive mental health consequence in postmenopausal women, there were some methodological restrictions and contradictory results (Elavsky & McAuley, 2007). Further, the bulk of prior researches spotlighted the effects of menopausal symptoms on physiological consequence, scarce attention has been given to mental health problems. Menopausal signs may sway psychological outcomes in menopausal women, like self-esteem, loneliness, stress, anxiety, and depression (Elavsky & McAuley, 2007; Hu et al., 2017; Parry & Shaw, 1999), which may drastically decrease their mental health (Elavsky & McAuley, 2007). Both qualitative (Parry & Shaw, 1999) and quantitative studies (Elavsky & McAuley, 2007; Moilanen et al., 2012) of menopausal women propose that, menopausal transition affects mental health. Conversely, researches examining the association between menopausal somatic complaints and mental health were implicit regarding scarce evidence of incorporation of other psychological problems as stress, anxiety and depression, despite the fact that there is a suspected association between menopausal symptoms and mental health issues (Elavsky & McAuley, 2007; Hu et al., 2017; Parry & Shaw, 1999). But this topic is remaining controversial and open for debate.

The relationship between somatic complaints stress, anxiety and depression, is not absolutely implicit. This connection may be fallacious, with a third unique variable affecting both somatic complaints and psychological problems. Menopausal status such as premenopausal, perimenopausal, postmenopausal status was planned as the mainly possible specious variable (Dvornyk et al., 2006; Mishra & Kuh, 2006; Rahman, Zainudin, & KarMun, 2010; Rossouw et al., 2002; Zöllner, Acquadro, & Schaefer, 2005). Comparatively, in Pakistani context, only a few studies have systematically studied influence of menopausal complaints in depressive symptoms, increased anxiousness and stress levels in older females. This natural phase of human development remains understudied and vague (Arbab, Aqeel, Wasif, & Ahmed, 2018; Baig & Karim, 2006; Nisar & Sohoo, 2010; Yahya & Rehan, 2002). Still, one needs to know about menopause and how to deal with frequent menopausal symptoms which make this natural event a distress for women (Mishra & Kuh, 2010; North American Menopause Society, 2010; Rahman, Zainudin, & KarMun, 2010; Ray, 2010; Zöllner et al., 2005).

Objectives

1. To examine menopausal transition phases (postmenopausal, premenopausal and perimenopausal) differences on somatic,

stress, anxiety, and depressive symptoms in women of Pakistan.

2. To investigate the role of somatic symptoms on stress, depression and anxiety in perimenopausal, premenopausal, and postmenopausal women.
3. To study the moderating role of menopausal status in the relationship between somatic symptoms and depression, anxiety and stress.

Method

Sample

A purposive sampling technique and cross-sectional design was employed in present study. One hundred and fifty women (postmenopausal = 60; premenopausal = 57; perimenopausal = 33) with the chief complaint of gynecological problems were incorporated from the gynecological department of three district hospitals in Peshawar, Rawalpindi, and Islamabad, Pakistan, in 2015. The sample had an age range of forty to sixty years ($M = 47.44$, $SD = 5.40$). An inclusion criterion was set for participation. The following inclusion criteria were used in present study: only those women who were diagnosed with menopausal problems since last 2 years were recruited in current study. Menopausal status was also characterized based on self-reported bleeding, which is reproductive period before the menopause. Those women who had a history of gynecological form that caused past menopause (younger than 45 years old); having any psychological problems such as mood disorder or having any medical sickness that may influence menopausal signs (thyroid disease, malignancy, heart diseases, & autoimmune diseases).

Instruments

Two instruments were employed in the present study.

Depression Anxiety and Stress Scale (DASS). Urdu version of DASS (Lovibond & Lovibond, 1995; Zafar & Khalily, 2014) was employed to measure stress, anxiety and depression in women. It comprised of forty-two statements which inquire women about the degree of concurrence with all statements, rating the responses on a 4-point scale ranging from: 0 (*Did not apply to me at all*) to 3 (*Applied to me very much*) rating scale. The higher scores on each dimension reflect higher level of stress, anxiety, and depression while lower

scores demonstrate lower levels. In the current study this scale showed adequate reliability of .92.

Bradford Somatic Inventory (BSI). It (Mumford et al., 1997) was designed to assess somatic symptoms which are associated with anxiety and depression. The statements in this inventory inquire about past events, that occurred a month ago (Mumford et al., 1997). It comprises 44 items that inquire women to rate their level of concurrence for each item of all dimensions on a 0 to 2 rating scale. Different categories of somatic symptoms were evaluated through BSI: Head, Chest, Abdomen, Fatigue, Heat, Globus, Frequency, and Panic. The higher scores on each subscale show more prevalence of somatic symptoms while lower scores demonstrate lower prevalence of somatic symptoms.

Procedure

The data comprised of patients who were recruited from the gynecological department of three district hospitals in Peshawar, Rawalpindi, and Islamabad, Pakistan, from January 2015 to December 2015. Permission to conduct this study was obtained from the higher executive authorities of the hospitals, after clarifying the research endeavor and providing assertion that all the data and patient information would be kept confidential. In the present study, only women with the chief complaint of gynecological problems who were willing to take part in the study were included. All women were aged between 40 to 60 years.

Informed consent was obtained from each woman and appropriate information concerning the study was offered to them. The participants underwent standardized psychological and physiological assessments done by two independent professionals, gynecologist and psychologist. The current research got endorsement by the Institutional ethics review committee of Foundation University, Rawalpindi Campus, Rawalpindi, Pakistan.

Results

Firstly, imputation method was carried out to handle missing values using SPSS-18. Secondly, Analysis of Variance was carried out to measure the difference among premenopausal, perimenopausal, and postmenopausal women on somatic symptoms, anxiety, stress, and depression. Finally, moderation analysis was performed to evaluate the potential moderation pathways among somatic symptoms, anxiety, stress, and depression in premenopausal, perimenopausal, and postmenopausal via SEM 20.

Table 1

Differences Across Menopausal Transition on Study Variables (N = 150)

Variables	Premenopause (n = 57)	Perimenopause (n = 33)	Postmenopause (n = 60)	F	p
	M(SD)	M(SD)	M(SD)		
1.AX	18.43(11.10)	13.86(12.76)	20.27(12.50)	3.00	.05
2.Stress	21.45(12.18)	18.04(13.50)	24.24(12.95)	2.49	.08
3.DP	20.17(11.50)	16.06(13.53)	22.54(12.71)	2.83	.06
4.BST	38.59 (24.31)	36.90(26.61)	45.75(23.92)	1.79	.16
5.HD	9.20(5.63)	8.68(5.90)	10.50(5.96)	1.24	.29
6.ABD	5.17(4.21)	5.38(4.76)	6.97(4.05)	2.87	.06
7.CST	4.97(3.65)	4.28(3.80)	6.10(3.43)	2.97	.05
8.HT	3.75(2.98)	2.90(3.11)	3.80(2.74)	1.17	.31
9.GLB	1.32(1.62)	1.21(1.74)	1.64(1.75)	.84	.43
10.FTU	7.32(4.20)	7.63(4.35)	9.10(3.85)	2.99	.05
11.PC	5.57(4.40)	5.21(4.37)	5.91(4.24)	.27	.76
12.FRQ	1.25(1.45)	1.57(1.72)	1.69(1.68)	1.17	.31

Note. AX = Anxiety; STR = Stress; DP = Depression; BSI = Bradford Somatic Inventory; HD = Head; CST = Chest; ABD = Abdomen; FTU = Fatigue; FRQ = Frequency; PC = Panic; HT = Heat; GLB = Globus.

Table 1 shows nonsignificant mean differences on study variables implying that there is no difference among three groups.

Table 2

Moderating Effect of Menopausal Status on the Relationship between Somatic Symptoms and Depression, Anxiety, and Stress in Women (N = 150)

Variables		Pre-menopause			Perimenopause			Post-menopause		
IV	DV	<i>B</i>	<i>S.E.</i>	<i>β</i>	<i>B</i>	<i>S.E.</i>	<i>β</i>	<i>B</i>	<i>S.E.</i>	<i>β</i>
HD	DP	.47	.26	.97**	.63	.33	1.45**	.43	.24	.91**
HD	AX	.62	.20	1.20**	.49	.29	1.06**	.58	.18	1.21**
HD	Stress	.47	.28	1.03**	.71	.30	1.64**	.55	.24	1.18**
CST	AX	.01	.35	.02	.60	.52	2.00**	.04	.30	.17
FTU	DP	.33	.30	.91**	.26	.36	.83*	.26	.29	.84**
FTU	Stress	.26	.33	.76*	.15	.37	.49	.25	.33	.83*
PC	AX	.25	.23	.62**	-.20	.46	-.60	.29	.24	.86**
PC	DP	-.06	.13	-.16	-.05	.23	-.15	.14	.15	.41*

Note. IV = independent variable; DV = dependent variable; HD = Head; CST = Chest; FTU = Fatigue; PC = Panic. DP = Depression; AX = Anxiety.

* $p < .01$. ** $p < .001$.

Model fit indices for the following model shows that the model fits the data adequately; $\chi^2(12) = 16.96$, $p < .15$, $\chi^2/df = 1.41$, RMSEA = .05(.06, .04), CFI = .99, NFI = .98, IFI = .96, TLI = .97.

Findings of current study demonstrated that head symptom significantly positively predicts psychological problems such as stress and depression for perimenopause. Moreover, it also significantly positively predicts anxiety for postmenopausal women. Results also demonstrated that chest symptom significantly positively predicts psychological problems like anxiety for perimenopause women. Results further revealed that, fatigue symptom significantly positively predicts depression in premenopausal women. However, fatigue symptom significantly positively predicts stress in post-menopause. Additionally, findings show that panic symptoms predicted anxiety and depression for postmenopausal women significantly and positively. The current study illustrated that menopausal status is predicting somatic symptoms, stress, anxiety and depression.

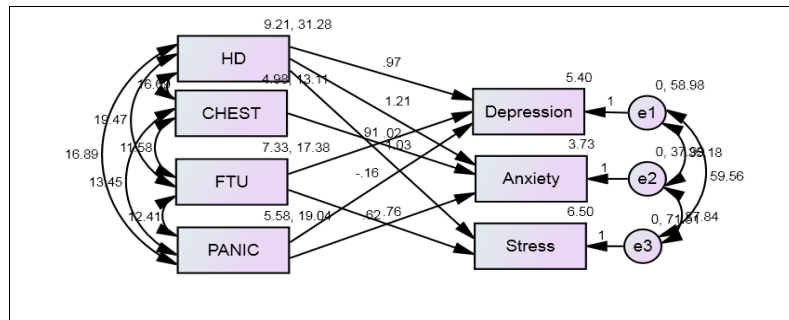


Figure 1. Effect of somatic symptoms on stress, depression, and anxiety in women in premenopause stage.

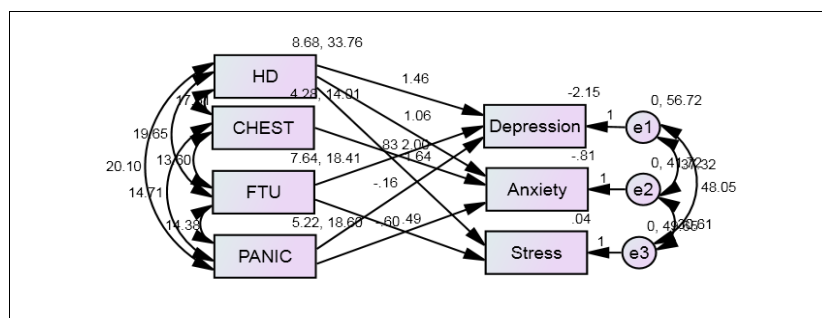


Figure 2. Effect of somatic symptoms on stress, depression, and anxiety in women in perimenopause stage.

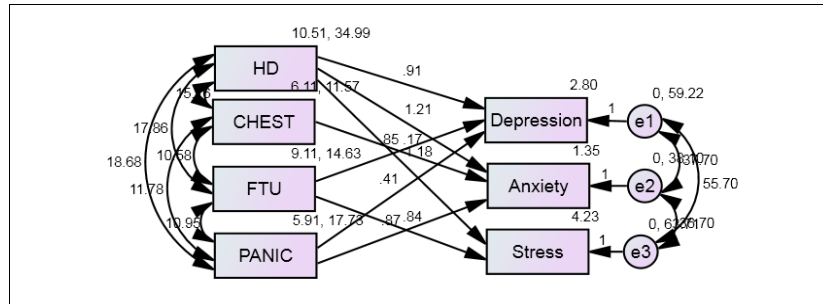


Figure 3. Effect of somatic symptoms on stress, depression, and anxiety in women in postmenopause stage.

Discussion

The present paper inspected the potential moderating pathways among in the relationship between women's somatic symptoms and depressive, anxious, and stress symptoms. Furthermore, this study aimed to investigate the role played by somatic symptoms in leading to the occurrence of mental health problems such as stress, depression and anxiety in perimenopausal, premenopausal, and postmenopausal women. Additionally, it aimed to examine menopausal transition phases (postmenopausal, premenopausal and perimenopausal) differences on the above mentioned relationships.

This study's results propose that somatic symptoms such as head, abdomen and chest could contribute to enhance and develop psychological problems such as stress, anxiety, depression in women with chief complaint of menopause. Moreover, the current study also illustrated that menopausal status moderates on relationship between somatic symptoms and stress, anxiety and depression in women, these obtained results are also consistent with the findings of previous similar studies (Chrisler, 2008). Additionally, this present paper further illustrated that postmenopausal women experienced more anxiety, stress, depression, chest, and fatigue symptoms as compared to premenopausal and perimenopausal women. The current results explained present paper objective number 1, and they are also similar with the findings of previous similar studies (Bromberger et al., 2007).

Prior studies shed light that the psychological (depression, anxiety, nervousness) and physiological issues are associated with menopause transition in older women worldwide (Sharifi et al., 2014). Undeniably, it is a complicated period for woman. Studies have

reported that menopause symptoms coupled with stress, depression, anxiety, mood disorders and other somatic complaints (Lovibond & Lovibond, 1995; Bromberger, et al., 2001; Maartens et al., 2002; Dennerstein, Smith, & Morse, 1994). Menopausal women are shown more depression (Avis, Crawford, Stellato, & Longcope, 2001; Bromberger et al., 2001). The results of studies systematically confirm that premenopausal and perimenopausal period, as well as some time after postmenopause, is the period of increased risk of the development of depression (Bromberger, et al., 2007). Several previous studies finding elaborated that somatic symptoms of menopause have been linked to higher anxiety levels in old age women (Bromberger et al., 2001; Maartens et al., 2002). Al Quaiz et al. (2013), postulated that those women who were passing through perimenopausal phase inclined more to somatic complaints as compared to those women who were facing period of premenopausal and postmenopausal. In addition, somatic symptoms are more prevalent among perimenopausal than among premenopausal women.

Implications

This current paper has demonstrated numerous avenues for prospective studies. The findings of this study could be utilized to extend knowledge and offer guidance for women with menopause, such as ways to deal with this up-and-coming issue, through innovative psychological preventive strategies and interventions in the Pakistani culture. This present study has further illustrated that women with menopausal problem may develop psychological distress. Although this advocates that they are suitable plans for upcoming study on this topic. This research may also be useful as it highlights the sensitive topic like menopause, which is considered as taboo to talk about in our society. Though the sample is not representative of all cities and rural areas of Pakistan, still it provides a picture of depression, anxiety and stress and somatic symptoms related to menopause of middle-aged women.

Conclusion

This study concluded that somatic symptoms may well trigger psychological problems such as anxiety, stress, depression in perimenopausal, premenopausal, and postmenopausal women. Additionally, the combination of somatic complaints and menopausal transition gives an imperative explanation for the issues related to

adjustment in women in this phase. These results illustrate that menopausal transition phase plays an important role to develop psychological problems related to somatic symptoms. For instance, women who underwent postmenopausal period have been more inclined to psychological problems. Finally, this study instigated that the occurrence of psychological issues was exaggerated by the interaction between somatic complaints and menopausal transition. Certainly, menopausal transition status is central perplexing factor affecting STRESS, anxiety and depression of women.

References

- AlQuaiz, A. M., ab Salwa, A. T., & Habibac, F. A. (2013). Assessment of symptoms of menopause and their severity among Saudi women in Riyadh. *Annals of Saudi Medicine*, 33(1), 63.
- Arbab, K. B., Aqeel, M., & Wasif, M., & Ahmed, A. (2018). Linking menopausal status, climacteric and psychological symptoms: Evidence from middle aged Pakistani women. *Foundation University Journal of Psychology*, 3(1), 107-132.
- Avis, N. E., Crawford, S., Stellato, R., & Longcope, C. (2001). Longitudinal study of hormone levels and depression among women transitioning through menopause. *Climacteric*, 4(3), 243-249.
- Baig, L. A., & Karim, S. A. (2006). Age at menopause, and knowledge of and attitudes to menopause, of women in Karachi, Pakistan. *British Menopause Society Journal*, 12(2), 71-74.
- Bromberger, J. T., Meyer, P. M., Kravitz, H. M., Sommer, B., Cordal, A., Powell, L., ... & Sutton-Tyrrell, K. (2001). Psychologic distress and natural menopause: a multiethnic community study. *American Journal of Public Health*, 91(9), 1435-1442.
- Chrisler, J. C. (2008). 2007 Presidential address: Fear of losing control: Power, perfectionism, and the psychology of women. *Psychology of Women Quarterly*, 32(1), 1-12.
- Dennerstein, L., Dudley, E., Guthrie, J., & Barrett-Connor, E. (2000). Life satisfaction, symptoms, and the menopausal transition. *Medscape Women's Health*, 5(4), 1-4.
- Dennerstein, L., Smith, A. M., & Morse, C. (1994). Psychological well-being, mid-life and the menopause. *Maturitas*, 20(1), 1-11.
- Dvornyk, V., Long, J. R., Liu, P. Y., Zhao, L. J., Shen, H., Recker, R. R., & Deng, H. W. (2006). Predictive factors for age at menopause in Caucasian females. *Maturitas*, 54(1), 19-26.
- Elavsky, S., & McAuley, E. (2007). Physical activity and mental health outcomes during menopause: A randomized controlled trial. *Annals of Behavioral Medicine*, 33(2), 132-142.

- Elsborg, P., Andersen, V., & Stelter, R. (2018). The effects on mental health of group coaching following a physical activity intervention for women undergoing menopause. *Health Education and Behavior, 16*(1), 10-15.
- Greenblum, C. A., Rowe, M. A., Neff, D. F., & Greenblum, J. S. (2013). Midlife women: Symptoms associated with menopausal transition and early postmenopause and quality of life. *Menopause, 20*(1), 22-27.
- Hu, L., Zhu, L., Lyu, J., Zhu, W., Xu, Y., & Yang, L. (2017). Benefits of walking on menopausal symptoms and mental health outcomes among Chinese postmenopausal women. *International Journal of Gerontology, 11*(3), 166-170.
- Hunter, M., & Rendall, M. (2007). Bio-psycho-socio-cultural perspectives on menopause. *Best Practice & Research Clinical Obstetrics & Gynaecology, 21*(2), 261-274.
- Hunter, M. S., & O'Dea, I. (1997). Bodily changes and multiple meanings. In J. M. Usshar (Ed.), *Body talk: The material and discursive regulation of sexuality, madness, and reproduction*, (pp. 199-222). London: Routledge.
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scale* (2nd ed.). Sydney, Australia: Psychology Foundation of Australia.
- Maartens, L. W. F., Knottnerus, J. A., & Pop, V. J. (2002). Menopausal transition and increased depressive symptomatology: A community based prospective study. *Maturitas, 42*(3), 195-200.
- Mishra, G., & Kuh, D. (2006). Sexual functioning throughout menopause: The perceptions of women in a British cohort. *Menopause, 13*(6), 880-890.
- Moilanen, J. M., Aalto, A. M., Raitanen, J., Hemminki, E., Aro, A. R., & Luoto, R. (2012). Physical activity and change in quality of life during menopause-an 8-year follow-up study. *Health and Quality of Life Outcomes, 10*(1), 8.
- Mumford, D. B., Bavington, J. T., Bhatnagar, K. S., Hussain, Y., Mirza, S., & Naraghi, M. M. (1991). The Bradford Somatic Inventory: A multi-ethnic inventory of somatic symptoms reported by anxious and depressed patients in Britain and the Indo-Pakistan subcontinent. *The British Journal of Psychiatry, 158*(3), 379-386.
- Nisar, N., & Sohoo, N. A. (2010). 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, 2*(5), 118.
- North American Menopause Society. (2010). Estrogen and progestogen use in postmenopausal women: 2010 position statement of The North American Menopause Society. *Menopause, 17*(2), 242.
- Parry, D. C., & Shaw, S. M. (1999). The role of leisure in women's experiences of menopause and mid-life. *Leisure Sciences, 21*(3), 205-218.

- Pillitteri, A. (2010). *Maternal & child health nursing: Care of the childbearing & childrearing family*. Lippincott Williams & Wilkins, 1137-1138.
- Rahman, S. A., Zainudin, S. R., & KarMun, V. L. K. (2010). Assessment of menopausal symptoms using modified Menopause Rating Scale (MRS) among middle age women in Kuching, Sarawak, Malaysia. *Asia Pacific Family Medicine*, 9(1), 1-10.
- Ray, S. (2010). Is menopause a health risk for Bengali women. *The Open Anthropology Journal*, 3, 161-167.
- Rossouw, J. E., Anderson, G. L., Prentice, R. L., LaCroix, A. Z., Kooperberg, C., Stefanick, M., . . . Johnson, K. C. (2002). Risks and benefits of estrogen plus progestin in healthy postmenopausal women: Principal results from the women's health initiative randomized controlled trial. *JAMA*, 288(3), 321-333.
- Sharifi, K., Anoosheh, M., Foroughan, M., & Kazemnejad, A. (2014). Barriers to middle-aged women's mental health: A qualitative study. *Iranian Red Crescent Medical Journal*, 16(6), 1-7.
- Suzan, T. M. (2016). Evaluation of post-menopausal symptoms: It's effect on females quality of life. *International Journal of Nursing Didactics*, 6(9), 01-10.
- Swartzmann, L. C., Edelber, R., & Kemmann, E. (1990). Impact of stress on objectively recorded menopausal hot flushes and on flush report bias. *Health Psychology*, 9, 529-545.
- Whitcomb, B. W., Whiteman, M. K., Langenberg, P., Flaws, J. A., & Romani, W. A. (2007). Physical activity and risk of hot flashes among women in midlife. *Journal of Women's Health*, 16(1), 124-133.
- Yahya, S., & Rehan, N. (2002). Age, pattern and symptoms of menopause among rural women of Lahore. *Journal of Ayub Medical College Abbottabad*, 42(50), 51-60.
- Zafar, H., & Khalily, M. T. (2014). *Dysfunctional separation-individuation and low of autonomy in adolescents: Manifestations and management of psychological stress*. (Unpublished Doctoral Dissertation). International Islamic University, Islamabad, Pakistan.
- Zöllner, Y. F., Acquadro, C., & Schaefer, M. (2005). Literature review of instruments to assess health-related quality of life during and after menopause. *Quality of Life Research*, 14(2), 309-327.

Received 24th March, 2017

Revision received 31st October, 2018