Psychological Problems and Coping Strategies Adopted By Post Menopausal Women

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Abstract: ***Background: Hormones are important in menstruation and in post menopausal period, blood level of some of the hormones is decreased. There are physical, physiological, psychological and social effects due to changed hormonal level. In some women psychological changes are more prominent and may affect the mental health and social life of the women. Modifications in life style and adopting coping strategies during menopausal period are important. Methods: A survey of 100 postmenopausal women, selected by convenient sampling method was done using structured questionnaire Pune city. The questions were directed towards assessment of psychological problems faced by the samples and coping strategies adopted by them to overcome the psychological problems.Findings: 57% women have mild psychological problems and 78% women are adopting coping strategies to overcome these problems. Association between the psychological problems and coping strategies shows that there is a strong significant association between the psychological problems and coping strategies. Score of both psychological problems and coping strategies are observed to be lying between 21-60.It shows that the postmenopausal women's are having mild to moderate psychological problems and they are using coping strategies often.Conclusion: Post menopausal women face psychological problems; they also adopt coping strategies to overcome these problems. Nurse educators.***

Keywords: Harmonal levels in postmenopausal women, psychological problems & coping strategies

1. Introduction

Human being goes through various stages of life. Each stage of life is influenced by specific aspect as infancy, childhood, adolescent, adult, middle age, old age. Womens of postmenopausal period is very important since it influences psychological, social, and emotional aspects due to physiological changes. Psychological problems affects your physical well-being, resulting in chronic fatigue, sleep problems, and changes in appetite. It affects your mood, with feelings of sadness, emptiness, hopelessness and dysphoria. It affects the way you think, interfering with concentration and decision making. And, it affects your behavior, with increased irritability and loss of temper, social withdrawal, and a reduction in your desire to engage in pleasurable activities. Postmenopausal woman is mainly affected by the hormonal factors. It is believed that a cause of depression is a change in estrogen levels, which occur during menopause. Menopause has been considered a major transition point in women's reproductive and emotional life. While its reproductive significance is clear, its emotional implications have been confused. Menopause refers to the end stage of a natural transition in a woman's reproductive life when ovaries stop producing eggs and a woman is no longer able to get pregnant naturally. Post-menopause refers to a woman's time of life after menopause has occurred. When women approach physiological changes that lead to mood swings, forgetfulness, hot flashes and all the other symptoms associated with menopause. The symptoms of depression and menopause are similar. [1] In coping with stress, people tend to use one of the three main coping strategies: either appraisal focussed, problem focussed, or emotion focussed coping. Various coping strategies are adopted by post menopausal womens. Yoga is, instead, an adaptive discipline that can support the body through the myriad of biological changes it is making. Importantly, it can also support our minds and emotions, and allow us to come to a perspective on the inner processes that are happening. Many perimenopausal women have found both the physical and less tangible benefits of yoga helpful at this time. There are some general points about asanas (poses), however. Back bends can be great for improving one's mood and lifting energy levels, and forward bends are good for anxiety and stress.

Given that quite active physical exercise had been found to help with menopause, this observation is no real surprise. Ultimately, it depends on what is going on for each woman, and this can vary over time anyway. If you're feeling really tired all the time, restorative poses may be best for that period. However, if you've got more energy, there are a number of other asanas that can really help [2].

2. Literature Survey

Related research & non- research literature was reviewed to broaden the understanding & to gain insight into the selected problem under study. The review of literature is organized under the following headings.

a) Literature related to the psychological problems of postmenopausal women.

b) Literature related to the coping strategies adopted by postmenopausal women.

a) Literature Related to the Psychological Problems of Postmenopausal Women

It has been reported that most women in developed countries will live a third of their lives after the menopause (Rozenberg et al., 2000) and vasomotor as well as psychosomatic symptoms occur frequently during this period of life although their severity and duration may vary widely between individuals.

The menopausal symptomatic reaction can be taken to be the sum of the impact of the three components of (a) the amount of estrogen depletion and the rate at which estrogen is withdrawn (b) the inherited and acquired propensities to succumb or withstand the imposition of the overall aging process and (c) the psychologic impact of aging and the individual`s reaction to the emotional implications of a change of life (Speroff et al., 1999). The psychological or psychosomatic symptoms (including insomnia, depression, irritability, dizziness, nervousness) are sometimes grouped together as the menopausal syndrome and their causal relation with estrogen is uncertain. It is also known that many postmenopausal women obtain inadequate sleep and that sleep problems are common during the menopausal transition (Landis and Moe, 2004). It can be argued that sleep quality is an important determinant of health status and quality of life for women during and beyond menopause.

Similarly many studies are conducted on post menopausal women to assess the psychological problems and coping strategies which highlights the post menopausal women were experiencing severe psychological problems and they are using coping strategies moderately.[3]

Similarly such study is done by Hunter M, et all (1986), on the 'Relationships between psychological symptoms, somatic complaints and menopausal status' concludes that the importance of distinguishing climacteric symptoms from other psychological and somatic complaints has been repeatedly stressed, Eight hundred and fifty pre-, peri- and post-menopausal women, aged 45-65 yr, took part in a cross-sectional survey of general health, psychosocial factors and current symptomatology.

They were a non-menopause clinic sample and were blind to the purpose of the study. Using a principal components analysis, the relationships between symptoms were examined. Certain psychological and somatic symptoms occurred together in specific clusters. Some of these symptom clusters, e.g., vasomotor symptoms and sexual difficulties, were best predicted solely by menopausal status, while others, such as psychological and somatic symptoms, were more clearly associated with psychosocial factors.[4]

Similarly Discigil G, et all (2006) conducted a study on,' Profile of menopausal women in west Anatolian rural region sample,' proved that urogenital, and psychological problems in post-menopausal women are the most prevalent symptoms.[5]

This is found that similarly many such studies have been conducted considering many aspects of demographic profile such as, A study conducted by Lagos X, et all (1998) on,' Prevalence of biological and psychological symptoms in postmenopausal women from different socioeconomic levels in the city of Temuco,' proved that Bone and muscle aches were the most frequent referred symptoms in 36% of women. Thirty one percent complained of vaginal dryness and 28% of headache. No differences in symptom frequency per age or between post or pre menopausal women, were observed. Depressive disorders were found in 39% of women, mostly in women not working outside their houses. 67% of women had a PAP smear and 58% had a mammography performed. Women of low income levels had a greater prevalence of biological and psychological symptoms and a lower frequency of self care behaviors.[6]

Shipra Nagar, Parul Dave, 2005, conducted a study on,' Perception of women towards psychological problems faced at post menopause,' proved that the post menopausal women faced psychological problems like headache, backache uneasiness, fatigue, hot flushes & sleep disturbances.[7]

Similarly such study conducted by Juang KD, et all (2005) on 'Hot flashes experienced by post menopausal women are associated in the higher level of anxiety and depression & has low prevalence of vasomotor symptoms.[8]

Similarly such study conducted by Osinowo HO, (2003) conducted a study on,' Psychosocial factors associated with perceived psychological health, perception of menopause and sexual satisfaction in menopausal women,' proved that post-Menopausal women reported better psychological health compared to the pre-menopausal women but no significant differences in their attitude regarding their sex role. Post menopausal women had more positive attitude to sex and were more knowledgeable about menopause. Women with conservative/reactionary preference for traditional sex roles reported negative perception of menopause compared to those with liberal attitude toward sex role. Menopausal Status, Educational level and social support predicted positive attitude to sex, Age, self-image and attitude to sex domain of the marital satisfaction scale predicted better psychological health, and marital cordiality predicted better psychological health as measured by GIIQ. Marital satisfaction significantly predicted better sexuality. Sources of information on menopause included health institutions, books, doctors, and books/health workers & concludes that the study highlights the need for sensitizing menopausal Nigerian women on how to improve their self-

image, marital satisfaction, and sexual satisfaction. Conventional treatment options emphasizing hormone replacement therapy, need for nutritional supplement, dietary changes, marital and sex therapy are emphasized.[9]

Yasui T, et all (2007) conducted a study on,'Association of serum cytokine concentrations with psychological symptoms in post menopausal women's,' Suggest that Psychological stress manifested as climacteric symptoms in post menopausal women may be associated with increases in serum concentrations.[10]

Amore M, et all (2007) conducted a study on,' Sexual and psychological symptoms in the climacteric years,' suggest that Depressive and sexual symptoms presented greater severity in the post-menopausal group. Both clusters of symptoms were strongly associated with life events.

The parallel course of the two clusters could be related with a common pathoplastic action of life events, both on sexual symptoms and on depressive symptoms, occurring right at the time that a woman has to face the transition into menopause.[11] Similar such study was conducted by Kalpakjian CZ et all (2007)on 'Menopause as predictors of subjective sleep disturbance in poliomyelitis survivors,' proved that Psychological symptoms is the basic reason for sleep disturbance in postmenopausal women [12].

b) Literature Related to the Coping Strategies Adopted by Post Menopausal Women

A postmenopausal women experience many psychological problems. When any individual experience psychological problems he/she adopts the different ways to overcome the problems. Similarly many psychological problems like Depressive disorders, anxiety, poor self-image, fatigue due to insomnia reduction in self confidence faced by postmenopausal women & to overcome such psychological problems different coping strategies are adopted by them. Similarly such studies are carried out by researcher on coping strategies adopted by postmenopausal women. Emotionally, post menopausal women may experience depression, fatigue due to insomnia, hot flashes and night sweats, and a reduction in self confidence and libido. Although these emotional responses can be triggered by hormonal changes, they may also be related to other factors. Reaching the menopause, and the changes happening in her body, may make a woman feel old, unattractive and worthless and these feelings can trigger depression and lack of sex drive.

Thus there are many ways to overcome these problems. The coping strategies to overcome these problem is exercise This is one crucial way to control these conditions. Exercise keeps bones, joints and cartilage healthy, guarding against osteoporosis as well as arthritis. It reduces the risk of heart disease by stimulating circulation, controls weight, and enhances emotional well being.

Similarly such study conducted by Ahn S, (2007)on,' Effects of walking on cardiovascular risk factors and psychosocial outcomes in postmenopausal obese women,' Suggest that 3 months of moderate-intensity exercise training can improve psychosocial outcomes but further studies are needed to replicate walking exercise on physiologic variables among postmenopausal obese women. These findings are of public health relevance and add a new facet to the growing literature on the health benefits of moderate,exercise.[13]

Asbury EA et all (2006) conducted a study on,' The importance of continued exercise participation in quality of life and,psychological well-being in previously inactive postmenopausal women,'suggest that Healthy postmenopausal women gain significant psychological benefit from moderate-intensity exercise. However, exercise participation must continue to maintain improvements in psychological well-being and quality of life.[14]

Maintaining a healthy diet is another way for post menopausal women to remain problem free. They may want to think about supplements such as vitamin D and calcium to guard against osteoporosis. Not smoking may not only put off the menopause by a couple of years, it will also reduce the risk of heart disease and osteoporosis. Using progesterone creams may keep the vagina and bladder area healthier, and make intercourse more comfortable and therefore more appealing.

Lee HG et all (2002) conducted a study on,' Sexuality and quality of life after hematopoietic stem cell transplantation in menopause,' conclude that although sexuality is affected by the physical changes following HSCT, we should not overlook the psychological and social effects on the sexuality of post-transplant patients. Therefore, educational and counseling programs are very important to restore and improve their sexuality.[15]

There are many problems associated with post menopausal women, but by exercising regularly and maintaining a healthy lifestyle they don't have to mean a huge decrease in quality of life. Işil İrem Budakoğlu et all conducted a study on,' Quality of life and postmenopausal symptoms among women in a rural district of the capital city of Turkey,' proved that Quality of life is worse in postmenopausal women than premenopausal women, and in older than younger women in the postmenopausal period. Thus rural populations are primarily in need of public health care in the postmenopausal period.[16]

Kruk J, 2007 conducted a study on,' Association of lifestyle and other risk factors with breast cancer according to menopausal status: a case-control study in the Region of

Western Pomerania (Poland),' is proved that there is evidence for a dose-response relationship between several lifestyle factors and breast cancer risk. The results also suggest that some different mechanisms may operate in breast cancer etiology inpre-and post-menopausal women. A multifactorial process of breast cancer development, the complex interaction between physical activity, diet, energy intake and body weight, inconsistent and in conclusive data on breast cancer risk factors coming even from well-designed epidemiological studies are the case for continual update knowledge on primary prevention and identification of changes in behavior that will reduce the risk.[17]

Schneider HP. 2002 conducted a study on,' the quality of life in the post-menopausal woman,' The most important factors analysed were attractiveness, self-confidence, re-orientation in life and partner relationship shows that the severity of menopausal symptoms is what reflects best the profile of quality-of-life dimensions.[18] Giusti M, et all (1999) conducted a study on,' Assessment of quality of life in recently post-menopausal women on dopaminergic therapy for pathological hyperprolactinaemia,' proved that Quality of life seems unchanged in recently post-menopausal women with a long-term history of hyperprolactinaemia currently on dopaminergic therapy. The present study does not therefore support the differences in psychological profile reported in literature between untreated hyperprolactinaemic and control women unselected for age.[19]Monterrosa et all (2009) conducted a study on,' Quality of life impairment among postmenopausal women varies according to race,' concluded that In this postmenopausal Colombian series, menopausal symptoms in indigenous (urogenital) and black (somatic/psychological) women were more severe (impaired QoL) when compared to Hispanic ones.[20]

Ekström H, Hovelius B, (2000) conducted a study on,' Quality of life and hormone therapy in women before and after menopause,' proved that the effects of menopause on QoL seemed generally to be of minor importance. QoL in women was lower in those with a history of HT than in those with no such experience.[21] Owing to menopause, women as they age, face problems ranging from mood swings to hot flashes to sleepless nights. In order to cope with the increasing life expectancy women often struggle to overcome the effects of natural hormone decline using synthetic hormonal replacement. Ueyama T et all (2007) conducted a study on ,' Chronic estrogen supplementation following ovariectomy improves the emotional stress-induced cardiovascular responses by indirect action on the nervous system and by direct action on the heart,' These data suggest that estrogen supplementation partially prevents emotional stress-induced cardiovascular responses both by indirect action on the nervous system and by direct action on the heart.[22]

Similarly such study was conducted by Baksu B et all (Feb 2009) on,' Effect on hormonal therapy on postmenopausal women proved that hormonal therapy helps in reducing psychological symptoms of postmenopausal women.[23]
Blümel JE et all (2008) conducted a study on,' Effect of androgens combined with hormone therapy on quality of life in post-menopausal women with sexual dysfunction,' is proved that quality of life was unchanged in the placebo group whereas AHT significantly improved scores of vasomotor, psychological, physical and sexual symptoms. As expected, FSFI was not modified in the placebo group while in AHT group the FSFI score improved significantly so adding methyl-testosterone to hormone therapy improves quality of life and sexuality in post-menopausal women with sexual dysfunction.[24]

France CR et all (2004) conducted a study on,' Laboratory pain perception and clinical pain in post-menopausal women and age-matched men with osteoarthritis: relationship to pain coping and hormonal status,' proved that women were more likely than men to report using emotion-focused pain strategies, and that emotion-focused coping was associated with more arthritic pain and lower electrocutaneous pain tolerance. Correlations between coping measures and pain reports revealed that catastrophizing was associated with greater arthritis pain and lower pain threshold and tolerance levels. However, catastrophizing was not related to nociceptive flexion reflex threshold, suggesting that the observed relationship between catastrophizing and subjective pain does not rely on elevated nociceptive input. Thus, older adults with osteoarthritis do not exhibit the pattern of sex differences in response to experimental pain procedures observed in prior studies, possibly due to the development of disease-related changes in pain coping strategies. Accordingly, individual differences in clinical and experimental pain may be better predicted by pain coping than by sex or hormonal differences.[25]

Klinika Ostrych Zatruć, Instytut Medycyny Pracy w Lodzi, conducted a study on,'The impact of personal resources on coping with stress in climacteric women,' Climacterium is a physiological (so absolutely normal) occurrence in a woman's life. Menopause is not a disease but some women have somatic and/or psychic (for example: stress related) problems connected with this life-stage transition. The presented study examined stress-coping strategies and personal coping resources (optimism, emotional control, sense of self-efficacy, sense of self-worth and sense of life satisfaction). Fifty post menopause women completed the psychological questionnaires. suggest that stress-coping strategies and personal coping resources are often used by post menopausal women's.[26]

3. Aim and Objectives

"A study to assess the psychological problems & coping strategies adopted by postmenopausal women in selected areas of pune city."

3.1 Objectives

1) To assess the psychological problems of postmenopausal women.
2) To identify the coping strategies adopted by postmenopausal women.
3) To correlate identified psychological problems with coping strategies adopted by postmenopausal women
4) To correlate identified psychological problems with selected demographic variables.
5) To correlate identified coping strategies adopted by the postmenopausal women with selected demographic variables.

4. Methods / Approach

4.1 Research Approach

Survey approach. non experimental descriptive design. padmavati area, Taljai area, Shankar maharaj math, Chavan nagar,and Sahakar nagar. reliability of the tool & pilot study was proposed to be conducted in sahakar nagar and date vasti. 100 postmenopausal women Non probability convenience sampling technique

4.1.1 Inclusion Criteria

1) The women whose age group between 40yrs-59yrs & those who attained menopause.
2) The women's who are residents of the padmavati area, Taljai area, Shankar maharaj math, Chavan nagar &Sahakar nagar.
3) The women's who understand Marathi & English.

4.1.2 Exclusion Criteria

1) The women who has attained menopause surgically.
2) The likert scale for collection of data in relation to the psychological problems faced by the post menopausal womens.
3) The likert scale for collection of data in relation to the coping strategies adopted by the post menopausal womens.
4) In this study psychological problems was assessed by five point likert type of rating scale. This scale consisting of 25 structured items. Alternative responses were None, Mild, Moderate, Severe & Very severe. The psychological problems scale range as,0-4.

5. Results / Discussion

5.1 Organization of Study Findings

5.1.1 Section I - Description of Sample Characteristics

It deals with the analysis of demographic data. This part deals with the analysis of demographic characteristics. Age, Education, Occupation, Marital status when did you achieved your menopause, any disease condition before menopause, any disease condition after menopause, Monthly family income.

Table 1: Demographic description of personal variables by frequency and percentage

Sr.No	*Variables*	*Frequency*	*Percentage*
1	Age in years		
	40-44	11	11.0
	45-49	22	22.0
	50-54	26	26.0
	55-59	41	41.0
2	Education		
	Illiterate	67	67.0
	Primary	25	25.0
	Secondary/Higher secondary	6	6.0
	Graduate/Post graduate	2	2.0
3	Occupation		
	Unemployed/Housewife	82	82.0
	Laborer/Daily wages	15	15.0
	Business	0	0
	Government service	3	3.0
	Professionals	0	0
4	Marital status		
	Married	64	64.0
	Unmarried	0	0
	Widow	36	36.0
	Divorce	0	0
5	When did you achieved your menopause		
	1-3 yrs back	30	30.0
	4-6 yrs back	22	22.0
	7-9 yrs back	11	11.0
	10-12 yrs back	36	36.0
	Any other specify	0	0
6	Any disease condition before menopause		
	Hypertension	3	3.0
	Diabetes	1	1.0
	Cancer	0	0
	Any other specify	4	4.0
	None	92	92.0
7	Any disease condition after menopause		
	Hypertension	8	8.0
	Diabetes	3	3.0
	Cancer	0	0
	Any other specify	4	4.0
	None	85	85.0
8	Monthly family income		
	Rs. 1000-5000	93	93.0
	Rs. 5001-10000	3	3.0
	Rs. 10001-15000	3	3.0
	Rs. 15001-20000	1	1.0

The sample distribution in table 1 shows that 41% (N=100) samples were between age group of 55-59, 67% were illiterate 82% were Unemployed/Housewife, 64% were married, 36% had achieved menopause 10-12years back, 92% were having no any disease condition before menopause, 85% were having no any disease condition after menopause, 93% were from Rs.1000-5000 income group.

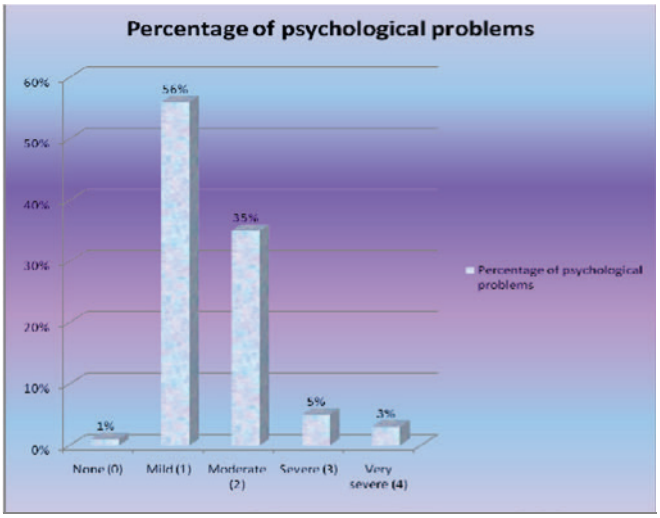

Figure 1: Diagram showing percentage of psychological problems of post menopausal womens

Figure 1 shows that 56% post menopausal women's are having mild psychological problems.

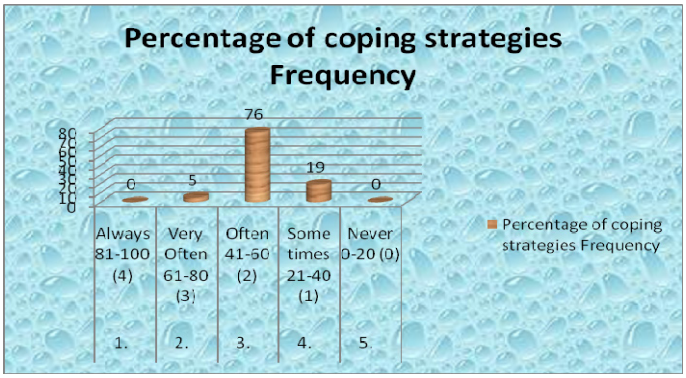

Figure 2: Diagram showing percentage of coping strategies of post menopausal woman's

Figure No 2 shows that 76% post menopausal women's are using coping strategy often.

Table 2: Description of association between the psychological problems and coping strategies adopted by postmenopausal women.

	Coping strategies (Category)				
Psychological problems (Category)	*21-40*	*41-60*	*60-80*	*Total*	*P value*
0-20	0	0	1	1	.001
21-40	8	46	3	57	
41-60	11	22	1	34	
61-80	0	5	0	5	
81-100	0	3	0	3	
Total	19	76	5	100	

The table 2 shows that there is a strong significant association between the psychological problems and coping strategies. Score of both psychological problems and coping strategies are observed to be lying between 21-60.It shows that the postmenopausal women's are having mild to moderate psychological problems and they are using coping strategies often.

There is no significant association between the age, education, occupation, marital status, when did you achieved your menopause, any disease condition before menopause , any disease condition after menopause, monthly family income and psychological problems because P-value is less than 0.05. There is a strong significant association between any disease condition before menopause because P-value is < 0.001 and any disease condition after menopause with coping strategies because P-value is smaller than 0.05 & no significant association between age, education, occupation, marital status, when did you achieved your menopause, monthly family income with psychological problems because P-value is more than 0.05.

6. Conclusion

Post menopausal women face psychological problems; they also adopt coping strategies to overcome these problems.

7. Future Scope

Nurse Educators should give stress on educating students about post menopausal problems and coping strategies.

References

[1] Sue Taylor. Menopause: The Emotional & Psychological Impact. (Online). 4/20/2006 April 21.
[2] Rebecca Prescott Coping Strategies - Yoga For Menopause Relief. (Online). 12/31/2006, http://www.buzzle.com/articles/coping-strategies-yoga-menopause-relief.html
[3] T. Subha Rani, 'A study is done on the assessment of psychological problems and coping strategies of

postmenopausal women in selected rural settings at Chennai. Proceedings of the Indian society of psychiatric nurses conference 2002-2005: 138-141.

[4] Hunter M, Battersby R, Whitehead M. Relationships between psychological symptoms, somatic complaints andmenopausal status. Republished from: Maturitas. 1986 Oct;8(3):217-28. PMID: 19434883.

[5] Discigil G, Gemalmaz A, Tekin N, Basak O. Profile of menopausal women in west Anatolian rural region sample. Maturitas. 2006 Oct 20;55(3):247-54. Epub 2006 May 3. PMID: 16675168 [PubMed - indexed for MEDLINE].

[6] Lagos X, Navarro N, Illanes E, Bustos L. Prevalence of biological and psychological symptoms in perimenopausal women from different socioeconomic levels in the city of Temuco. Rev Med Chil. 1998 Oct;126(10):1189-94. PMID: 10030090 [PubMed - indexed for MEDLINE].

[7] Shipra Nagar, Parul Dave. Perception of women towards psychological problems faced at post menopause. 2005. 173-175. URL: Available from http://www.krepublishers.com/02-Journals/T-Anth/Anth-07-0-000-000-2005-Web/Anth-07-3-161-236-2005-Abst-PDF/Anth-07-3-173-175-2005-252-Nagar-S/Anth-07-3-173-175-2005-252-Nagar-S-Full-Text.pdf.

[8] Juang KD, Wang SJ, Lu SR, Lee SJ, Fuh JL. Hot flashes are associated with psychological symptoms of anxiety and depression in peri- and post- but not premenopausal women. Maturitas. 2005 Oct 16;52(2):119-26. PMID: 16186074 [PubMed - indexed for MEDLINE].

[9] Osinowo HO. Psychosocial factors associated with perceived psychological health, perception of menopause and sexual satisfaction in menopausal women and controls. : West Afr J Med. 2003 Sep;22(3):225-31. PMID: 14696946 [PubMed - indexed for MEDLINE].

[10] Yasui T, Maegawa M, Tomita J, Miyatani Y, Yamada M, Uemura H,UenoS, NumataS, Ohmori T, Tsuchiya N, Yuzurihara M, Takeda S, Irahara M. Association of serum cytokine concentrations with psychological symptoms in midlife women. J Reprod Immunol. 2007 Aug;75(1):56-62. Epub 2007 Apr 6. PMID: 17412426 [PubMed – indexedfor[MEDLINE]

[11] Amore M, Di Donato P, Berti A, Palareti A, Chirico C, Papalini A, Zucchini S. Sexual and psychological symptoms in the climacteric years. Maturitas. 2007 Mar 20;56(3):303-11. Epub 2006 Nov 2. PMID: 17084047 [PubMed - indexed for MEDLINE].

[12] Kalpakjian CZ, Quint EH, Toussaint LL. Menopause and post-polio symptoms as predictors of subjective sleep disturbance in poliomyelitis survivors. Climacteric. 2007 Feb;10(1):51-62. PMID: 17364605 [PubMed - indexed for MEDLINE].

[13] Ahn S. Effects of walking on cardiovascular risk factors and psychosocial outcomes in postmenopausal obese women Taehan Kanho Hakhoe Chi. 2007 Jun;37(4):519-28. PMID: 17615473 [PubMed - indexed for MEDLINE].

[14] Asbury EA, Chandrruangphen P, Collins P. The importance of continued exercise participation in quality of life and,psychological well-being in previously inactive postmenopausal women: a pilot,study. Menopause. 2006 Jul-Aug;13(4):544-5.PMID: 16837877 [PubMed - indexed for MEDLINE].

[15] Lee HG, Park EY, Kim HM, Kim K, Kim WS, Yoon SS, Kang WK, Park KC, Park CH. Sexuality and quality of life after hematopoietic stem cell transplantation. Korean J Intern Med. 2002 Mar;17(1):19-23. PMID: 12014208 [PubMed - indexed for MEDLINE].

[16] Işil İrem Budakoğlu, Cihangir Özcan, Derya Eroğlu and Filiz Yanik. Quality of life and postmenopausal symptoms among women in a rural district of the capital city of Turkey. Gynecological endocrinology 2007, Vol. 23, No. 7, Pages 404409. Available from:http://informa healthcare.com/doi/abs/10.1080/09513590701444748.

[17] Kruk J. Association of lifestyle and other risk factors with breast cancer according to menopausal status: a case-control study in the Region of Western Pomerania (Poland). Asian Pac J Cancer Prev. 2007 Oct-Dec;8(4):513-24. PMID: 18260721 [PubMed - indexed for MEDLIN].

[18] Schneider HP. The quality of life in the post-menopausal woman. Best Pract Res Clin Obstet Gynaecol. 2002 Jun;16(3):395-409. PMID: 12099670 [PubMed - indexed for MEDLINE]

[19] Giusti M, Foppiani L, Penati S, Marugo A, Montini P, Menichini U, Rasore E, Giordano G. Assessment of quality of life in recently post-menopausal women on dopaminergic therapy for pathological hyperprolactinaemia. Minerva Endocrinol. 1999 Mar;24(1):11-9. PMID: 10731741 [PubMed - indexed for MEDLINE].

[20] Monterrosa, Alvaro, Blumel, Juan, Chedraui, Peter, Gomez, Belkis, Valdez, Cenilda. Quality of life impairment among postmenopausal women varies according to race. Gynecological Endocrinology, Volume 25, Number 8, August 2009 , pp. 491-497(7). Available from URL:

[21] Ekström H, Hovelius B. Quality of life and hormone therapy in women before and after menopause. Scand J Prim Health Care. 2000 Jun;18(2):115-21. PMID: 10944068 [PubMed - indexed for MEDLINE].

[22] Ueyama T, Ishikura F, Matsuda A, Asanuma T, Ueda K, Ichinose M, Kasamatsu K, Hano T, Akasaka T, Tsuruo Y, Morimoto K, Beppu S. Chronic estrogen supplementation following ovariectomy improves the emotional stress-induced cardiovascular responses by indirect action on the nervous system and by direct action on the heart. Circ J. 2007 Apr;71(4):565-73. PMID: 17384461 [PubMed - indexed for MEDLINE].

[23] Baksu B, Baksu A, Göker N, Citak S. Do different delivery systems of hormone therapy have different effects on psychological symptoms in surgically menopausal women? A randomized controlled trial. Maturitas. 2009 Feb 20;62(2):140-5. basakbaksu@yahoo.com
[24] Blümel JE, Del Pino M, Aprikian D, Vallejo S, Sarrá S, Castelo-Branco C. Effect of androgens combined with hormone therapy on quality of life in post-menopausal women with sexual dysfunction. Gynecol Endocrinol. 2008 Dec;24(12):691-5. PMID: 19172538 [PubMed - indexed for MEDLINE].
[25] France CR, Keefe FJ, Emery CF, Affleck G, France JL, Waters S, Caldwell DS, Stainbrook D, Hackshaw KV, Edwards C, Laboratory pain perception and clinical pain in post-menopausal women and age-matched men with osteoarthritis: relationship to pain coping and hormonal status. Pain. 2004 Dec;112(3):274-81. PMID: 15561382 [PubMed - indexed for MEDLINE].
[26] Klinika Ostrych Zatruć, Instytut Medycyny Pracy w Lodzi. The impact of personal resources on coping with stress in climacteric women. Psychiatr Pol. 2006 Mar-Apr;40(2):301-10. PMID: 17037105 [PubMed - indexed for MEDLINE].

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