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Original Article

Attitudes towards menopause and depression, body image of women during menopause

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ABSTRACT

Introduction: Menopause is an important and normal developmental process in a woman's life. During menopause women experience physical, psychological and social changes.
Objective: Aim of the study was to investigate attitude towards menopause, body image and depression level of Turkish women in menopause.
Methods: The data of this descriptive and cross-sectional study were collected via questionnaire form, Attitude towards Menopause Scale (ATMS), Body Image Scale (BIS) and Beck Depression Inventory (BDI).
Results: 54.1% of women held negative attitudes towards this transition. The rate of women who fit the borderline evaluation for depression was 27.5%. Women with low depressive symptom severity and positive attitudes towards menopause had higher positive body image scores. Women with positive attitudes towards menopause had a more positive body image and they experienced lower depressive symptoms. ATMS, BIS and BDI scores of women in naturally menopause who had not had menstruation for at least one year or who had entered menopause due to surgery were compared; menopause attitude scores and body image scores of women in naturally menopause was significantly more positive. There was a significant positive correlation between ATMS and BIS scores of women in menopause, also there was a significant negative correlation between MAS and BDI scores of women.
Conclusions: Women with an optimistic attitude towards menopause tend to have a more positive body image and their depression level is lower.

1. Introduction

Menopause is an important and normal developmental process in a woman's life. It is marked by the permanent cessation of menstruation resulting from the loss of ovarian follicular activity.[1] In western societies, attitudes towards menopause are influenced by social and cultural assumptions about older women, and the transition into menopause is often perceived as a time of changing emotional and physical health. Yet anthropological studies have shown how menopause can be a positive event, particularly when it signifies a change in social status.[2,3] During menopause women experience physical, psychological and social changes. Hormone levels change as estrogen levels decrease, FSH and LH levels increase, and there are also decreases in levels of prolactin, thyroid and parathyroid hormone.[4] These changes can cause vasomotor symptoms, night sweats, hot flushes, muscular and skeletal problems, cardiovascular system diseases, breast and skin atrophy, and senile vaginitis.[5]

Together with all the changes associated with menopause, many middle-aged women are often occupied with other challenges. These include physical disease affecting them or their husband, the death of their spouse or parents, caring for ill family members, marital difficulties, and grown children leaving home. In fact, the departure of children into leading their own independent lives may trigger depression in women.[4,6] The ability to cope with all the changes during menopause is influenced by socio demographic variables, education status, income, work situation and social relations.[6]

Puberty, pregnancy, and the menopausal transition are milestones in a woman's life with accompanying bodily changes and symptoms that can have a profound effect on her body image. The bodily changes in appearance and functions that some women face can change the way a woman thinks and feels about her body.[7] The changes can occur in a woman's shape, weight, with heavy unpredictable bleeding, sleep disruption through night

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sweats, and physical markers of aging, such as changes in skin, hair and sexual function.[8]

In order to successfully navigate the menopausal transition, a woman's attitude towards the changes will determine her experience.[9] These are certainly influenced by the cultural norms of her origins and present environment.[10] Hall et al. integrated the results of numerous qualitative studies and concluded that although many women had positive experiences as they progressed through menopause, ambivalent feelings were common.[11] Ayers et al. noted that women with a positive attitude towards menopause tended to view this change as a natural life process and transition.[9] Cheng et al. stated that while women with negative attitudes were younger and premenopausal, post-menopausal women tended to have more positive attitudes towards menopause.[12] Nusrat et al. found that 78.79% of Pakistani postmenopausal women were relieved to have menstruation come to an end.[13] Erbil et al. reported that 57.8% of Turkish women with an average age of 30.06 years old had negative attitudes towards menopause.[14]

There are few studies which have investigated the relationship between attitudes towards menopause, body image, and depression of Turkish women during menopause. The aim of this study was to investigate the relationship between body image, depression, and attitudes towards menopause of women in menopause.

2. Materials and methods

2.1. Design and participants

The sample of this descriptive and cross-sectional study was conducted in gynecologic outpatient clinic of one public hospital in a northern province of Turkey. A convenience sample of 109 volunteer women who had entered menopause naturally or due to surgery was recruited.

2.2. Data collection

The data was collected via a questionnaire form, Attitude towards Menopause Scale (ATMS), Body Image Scale (BIS) and Beck Depression Scale (BDS) through face to face method.

2.2.1. Attitude towards menopause scale

Attitude towards menopause scale was developed by Neugarten et al.[15] Turkish version of the scale was adapted and revised by Uçanok and Bayraktar.[16] The scale is used to measure towards menopausal life and post-menopausal attitudes of women in different age groups. Attitude towards menopause scale contains 20 items regarding menopause. Two items of the scale include positive statements (1. and 18. items), other items is negative statements. Total scale scores range from 0 (most negative) and 80 (most positive) point. The cut-off point of the scale was 40 points. The hypothesis was that women who receive 40 points or higher have positive attitude. The initial Turkish internal consistency coefficient for the scale was 0.86.[16] The internal consistency coefficient for this study was 0.88.

2.2.2. Body image scale

Body Image Scale consists of 40 items, which was developed by Secord and Jourand and had been adapted to Turkish by Hovardaog Ju.[17,18] Each item of the scale is related to a part of the body or a function. The total score varies between 40 and 200; a higher score indicates positive body image.

2.2.3. Beck depression inventory

BDI was developed by Beck et al. and adapted to Turkish by Hisli.[19,20] BDI Turkish form is a self-report scale with 21 items, each item of the scale is including four option. The BDI scale isn't to diagnose depression, but to objectively determine the severity of depressive symptoms. The highest score obtainable is 63. BDI scores $\geq$ 17 were reported to discern depression that might require treatment with more than 90% accuracy. In this study, women with a BDI score of 17 or higher were evaluated as having the possibility of experiencing depression. The initial Turkish internal consistency coefficient for the scale was 0.80.[20] The internal consistency coefficient for this study was 0.88.

2.3. Ethical considerations

The research protocol for the use of human subjects was approved by Gynecologic and Obstetric Hospital's Review Board. All of the women were volunteers and gave verbal permission to participate in the research. The data were collected via face -to-face interviews. The study was carried out a proper research to Helsinki Declaration Principles.

2.4. Statistical analysis

In the data analysis of this study were used mean, standard deviation [±SD], frequency, and percentage from descriptive statistics. In analysis of parametric variables with two categories was used *t*-test. Kruskal Wallis ANOVA and the Mann-Whitney *U* test were tested for interval variables, with distribution significantly deviating from the norm. The linear relationship between ATMS score, BIS score and BDI scores were evaluated with Pearson's linear correlation coefficient. The level of significance used was $p < 0.05$.

3. Results

The mean age of women was 54.84 ± 7.07 years (range 38–75 years). Duration of marriage was 31.66 ± 10.06 (range 2–51), mean of number of living children was 3.36 ± 1.57 (range 0–8 children), mean of menopause duration of women was 8.38 ± 6.80 years (range 1–30 years). It was determined that 69.1% of them were 51 age and older, 87.2% of women were housewife, 36.7% of women were primary school graduate, 93.6% of women have social security, 63.3% of women have "middle" income perception. It found that place of residance of 71.6% of women were city, 14.7% of women smoked cigarette, 30.3% of women had history of psychiatric disorders (see Table 1).

Totally, it was found that the ATMS average score of women was 38.92 ± 12.18 (range 10–63); BIS average score of women was 140.18 ± 15.48 (range 90–200); BDI average score of women was 12.31 ± 6.96 (range 1–34). It was determined that was no correlations between age, marriage duration, menopause duration, number of children and ATMS, BIS and BDI scores ($p > 0.05$).

ATMS, BIS and BDI scores of women were compared according to their some characteristics. Menopause attitude score of women who were naturally transition to menopause (41.38 ± 12.23) was higher than women who were surgically transition to menopause (36.02 ± 11.57) and the difference between groups was statistically significant ($p = 0.021$). ATMS scores according to age, occupation, education level, social security, income perception, place of residence, smoking and history of psychiatric disorder of women weren't statistically significant ($p > 0.05$). BIS scores of women who have social security, without a history of psychiatric disorder, naturally transition to menopause were higher than other women, and differences were significants ($p = 0.044$, $p = 0.004$, $p = 0.018$, respectively). BIS scores according to age, occupation, education level, outcome perception, place of residence, smoking, support of husband in menopause, hormone replacement therapy during

Table 1
Women's socio-demographic characteristics and ATMS, BIS and BDI scores according to their characteristics.

Women's characteristics	n	%	ATMS mean ± SD	BIS mean ± SD	BDI mean ± SD
Age (year)					
50 age and elder	33	30.3	37.00 ± 10.97	136.90 ± 13.01	12.69 ± 7.08
51 and older	76	69.1	39.76 ± 12.64	141.60 ± 16.32	12.13 ± 6.94
p value[*]			p = 0.279	p = 0.147	p = 0.699
Occupation					
Housewife	95	87.2	38.41 ± 11.91	140.42 ± 13.84	13.94 ± 6.74
Working	7	6.4	42.71 ± 14.69	137.00 ± 18.50	12.57 ± 11.11
Retired	7	6.4	42.14 ± 14.01	140.14 ± 30.97	12.57 ± 6.45
p value[†]			p = 0.573	p = 0.718	p = 0.402
Education level					
Literate	20	18.3	39.75 ± 10.13	142.95 ± 12.33	13.65 ± 7.22
Unliterate	28	25.7	33.89 ± 10.23	138.35 ± 15.34	15.92 ± 5.61
Primary school	40	36.7	41.12 ± 12.49	140.40 ± 13.18	13.20 ± 7.31
Secondary school	5	4.6	36.20 ± 10.35	140.40 ± 9.55	10.40 ± 6.06
High school	9	8.3	40.44 ± 15.04	135.00 ± 21.38	15.11 ± 8.93
University	7	6.4	44.14 ± 17.08	145.57 ± 29.31	9.42 ± 6.13
p value[†]			p = 0.139	p = 0.868	p = 0.085
Social security					
Yes	102	93.6	39.11 ± 12.26	140.78 ± 15.69	13.72 ± 7.07
No	7	6.4	36.14 ± 11.42	131.42 ± 8.77	14.42 ± 6.01
p value[‡]			p = 0.625	**p = 0.044**	p = 0.625
Income perception					
Good	33	30.3	40.90 ± 12.23	141.30 ± 18.75	13.87 ± 6.86
Middle	69	63.3	38.47 ± 11.71	141.17 ± 12.05	12.95 ± 6.27
Bad	7	6.4	34.00 ± 16.28	125.14 ± 22.64	21.28 ± 10.48
p value[†]			p = 0.476	p = 0.203	p = 0.091
Place of residence					
Village	12	11.0	37.00 ± 13.19	141.66 ± 16.32	14.58 ± 6.09
Town	19	17.4	35.73 ± 10.39	139.57 ± 10.68	14.31 ± 5.69
City	78	71.6	40.00 ± 12.39	140.10 ± 16.46	13.51 ± 7.45
p value[†]			p = 0.488	p = 0.907	p = 0.395
Smoking					
Yes	16	14.7	44.06 ± 11.35	143.12 ± 21.78	11.93 ± 9.65
No	93	85.3	38.04 ± 12.15	139.67 ± 14.22	14.08 ± 6.44
p value[‡]			p = 0.065	p = 0.557	p = 0.055
History of psychiatric disorders					
Yes	33	30.3	36.69 ± 12.28	133.69 ± 16.25	18.21 ± 7.49
No	76	69.7	39.89 ± 12.09	143.00 ± 14.35	11.84 ± 5.84
p value[*]			p = 0.209	**p = 0.004**	**p = 0.000**

[*] *t* test.
[†] Kruskal-Wallis variation analysis.
[‡] Mann Whitney-*U* test.

Table 2
Women's menopausal characteristics and ATMS, BIS and BDS scores according to these characteristics.

Characteristics of women	n	%	ATMS mean ± SD	BIS mean ± SD	BDI mean ± SD
Menopause type					
Natural menopause	59	54.1	41.38 ± 12.23	143.38 ± 14.51	13.06 ± 6.30
Surgery menopause	50	45.9	36.02 ± 11.57	136.40 ± 15.88	14.60 ± 7.71
p value[*]			**p = 0.021**	**p = 0.018**	p = 0.257
Support of husband in menopause					
Yes	52	47.7	39.65 ± 12,44	140.25 ± 14,02	13.25 ± 6.08
No	57	52.3	38.26 ± 12,01	140.12 ± 16,83	14.24 ± 7.76
p value[*]			p = -0.554	p = 0.966	p = 0.461
HRT therapy during menopause (n = 50)					
Yes	21	42.0	38.87 ± 14.02	139.51 ± 15.16	13.15 ± 5.96
No	29	58.0	38.95 ± 11.00	140.55 ± 15.75	14.11 ± 7.53
p value[†]			p = 0.942	p = 0.737	p = 0.495
Menopause knowledge					
Yes	37	33.9	39.27 ± 12.07	142.10 ± 11.76	11.91 ± 6.05
No	72	66.1	38.75 ± 12.31	139.19 ± 17.07	14.72 ± 7.29
p value[*]			p = 0.834	p = 0.355	**p = 0.047**

[*] *t* test.
[†] Mann Whitney-*U* test.

menopause, knowledge about menopause in premenopausal period of women of women weren't statistically significant ($p > 0.05$). BDI scores of women who have a history of psychiatric disorder (18.21 ± 7.49), without knowledge about menopause in

Table 3
Distribution of women according to intensity of menopause attitude.

Attitude score	n	%	ATMS mean ± SD	BIS mean ± SD	BDI mean ± SD
Negative attitude (0–39 points)	59	54.1	29.71 ± 6.92	135.69 ± 15.30	14.27 ± 7.38
Positive attitude (40–80 points)	50	45.9	49.80 ± 6.88	145.48 ± 14.08	10.00 ± 5.69
Total	109	100.0	38.92 ± 12.18	140.18 ± 15.48	12.31 ± 6.96
p value[*]			p = 0.000	p = 0.001	p = 0.001

SD, Standard deviation.
[*] *t* test.

Table 4
Distribution of women according to intensity of depressive symptoms.

Depression status	n	%	BDI mean ± SD	ATMS mean ± SD	BIS mean ± SD
No (0–16 points)	79	72.5	8.87 ± 3.97	41.48 ± 11.60	145.24 ± 12.01
Yes (17 points and higher)	30	27.5	21.36 ± 4.61	32.20 ± 11.22	126.86 ± 15.86
Total	109	100.0	12.31 ± 6.96	38.92 ± 12.18	140.18 ± 15.48
p value[*]			p = 0.000	p = 0.000	p = 0.000

SD, standard deviation.
[*] *t* test.

Table 5
Correlations between ATMS, BIS and BDI scores of women.

Correlations between ATMS, BIS and BDI scores of women	BIS	BDI
MAS	r = 0.386, p = 0.000[*]	r = −0.423, p = 0.000[*]
BIS	–	r = −0.639 p = 0.000[*]

[*] Pearson correlation test.

premenopausal period (14.72 ± 7.29) was higher than women who without history of psychiatric disorder (11.84 ± 5.84) and with knowledge about menopause in premenopausal period (11.91 ± 6.05), and differences were statistically significant (p = 0.000, p = 0.047, respectively). BDI scores according to age, occupation, education level, social security, outcome perception, place of residence, smoking, type of transition to menopause, support of husband in menopause, hormone replacement therapy during menopause of women weren't statistically significant (p > 0.05), (see Tables 1 and 2).

In this study, attitudes towards menopause of 54.1% of women were negative. ATMS average score of women who have negative attitude towards menopause was 29.71 ± 6.92; BIS average score was 135.69 ± 15.30. ATMS and BIS scores of women who have negative attitude towards menopause were lower than women who have positive attitudes towards menopause and differences were statistically significant (respectively p = 0.000, p = 0.001), and BDI average score of women who have negative attitude towards menopause (14.27 ± 12.01) was higher than BDI average score of women who have positive attitudes towards menopause (10.00 ± 5.69) and difference was statistically significant (p = 0.001), (see Table 3).

In this study, the proportion of women who were in the border evaluation for depression were 27.5% and the women in this group BDI score (21.36 ± 4.61) was higher than women without depression (8.87 ± 3.97), difference was statistically significant (p = 0.000). ATMS and BIS scores of women with depression were lower than women without depression and the differences was statistically significant (see Table 4). Body image and attitude towards menopause of women living intense depressive symptoms can be said to be affected negatively.

There was a significant positive correlation between ATMS and BIS scores of women in menopause (r = 0.386 p = 0.000); was negative correlation ATMS and BDI scores of women (r = -0.423 p = 0.000). There was a significant negative correlation between BIS scores and BDI scores (r = -0.639 p = 0.000), (see Table 5).

4. Discussion

The present study found that 54.1% of women already in menopause held negative attitudes towards this transition. Women with positive attitudes towards menopause had a more positive body image and they experienced lower depressive symptoms. A previous study of women in developed countries by Berger noted that women's attitudes towards menopause were negative because of the loss of sexuality and attractiveness.[21] Liu and Eden reported that menopause was experienced negatively.[22] Sommer et al. found that African American women were more positive in attitude, and the least positive groups were the less acculturated Chinese American and Japanese American women.[23] Menopause status in a society seems to have an impact on women's attitudes towards this life change.[23] Postmenopausal and older women consistently expressed more positive feelings about menopause than younger women in their forties and those in their teens and twenties.[23] Numerous Turkish studies have revealed that Turkish women had negative attitudes about menopause. They lamented the inability to conceive children ever again, the loss of their physical strength, the loss of feminine attractiveness, and changes in their bodies as well as their marital relationship. Furthermore, losses were also felt in their sexual life related to negative perceptions of women in menopause.[24,25] Nevertheless, some studies have revealed positive attitudes of women towards menopause.[26,27] The result of this study is consistent with previous research results.

The physiological symptoms associated with menopause, such as hot flushes and osteoporosis, may affect a women's body image.[7] Changes to the body associated with aging, such as the physical appearance of wrinkles, may contribute to women's negative body image, thus resulting in a depressive mood.[28,29] This study found that the BIS average score was 140.18 ± 15.48, and women's body image was higher than the average. Results also showed women with low depressive symptom severity and positive attitudes towards menopause had higher positive body image scores (see Tables 1 and 2). Furthermore, the BIS average scores of women who had social security, a history of psychiatric disorders, and natural menopause were higher than other women, and the differences between groups were statistically significant (see

Tables 4 and 5). Similarly, Khorshid et al. found that the BIS average score of Turkish women in menopause was 139.46 ± 20.8, and there was no significant difference betweeen BIS average points according to age group, marital status, job, education level, place of residence, income, number of children, or whether they had undergone hysterectomy.[30] Bellerose and Binik indicated that women who had experienced the natural menopausal transition were more likely to feel satisfied and comfortable with their bodies and view their bodily change as positive than women who had experienced a surgical menopause.[31] One study noted that menopause influenced a woman's evaluation ratings of her fitness and appearance. Women who were perimenopausal and recently post-menopausal were more likely to rate their levels of fitness and appearance negatively compared to women who were premenopausal.[32] A prospective study showed that post-menopausal women felt more satisfied with their appearance than with their youngerselves.[33] Bloch reported that 60.8% of menopausal women regarded themselves as attractive, but 49.9% of them were not satisfied with their physical appearance, 43.1% were not content with their looks, 17.6% regarded themselves attractive yet were dissatisfied with their own looks.[34] Women's attitude towards menopause was influenced by the symptoms they experienced during this time. These included depression and headache. Women who had a negative attitude towards menopause suffered much more from such symptoms than women who had a positive one. In addition, women who were satisfied with their physical appearance experienced fewer troublesome symptoms, and there was a significant association between fewer menopausal symptoms and high self-esteem.[34] A negative attitude towards the menopausal transition and high levels of concern about body image may be due to women perceiving the relationship between the menopausal transition and aging as synonymous, and the feeling of being invisible and less sexually attractive.[35] The results of this study are consistent with the literature.

The rate of women who fit the borderline evaluation for depression was 27.5% in this study. Indeed, women who were suffering from intense symptoms of depression expressed more negativity towards their body image and the transition of menopause. Although the cause of depression in the menopausal period is not precisely known, it is thought to be associated with hormonal changes in menopause.[36] The decrease in estrogen levels may cause depression. This can result in a negative effect on mood which is further complicated by hot flushes and sweating, sleep disturbances, and other life stressors in women's lives.[36,37] Women who suffer menopausal symptoms such as hot flushes, night sweats, vaginal dryness and dyspareunia are more likely to report anxiety and/or depressive symptoms.[36] Llaneza et al. noted that the depression prevalence of women in the premenopausal period was 5.8–11%.[36] In a Chinese study found that psychological and somatic symptoms were more common than vasomotor symptoms.[38] Lu et al. found that the prevalence of depression among menopausal women in Taiwan was 31.2%.[39] Depression was positively correlated with life-event stresses and climacteric physiological symptoms and was negatively correlated with a woman's attitude towards menopause and self-concept.[39] Yangın et al. revealed that 29.3% of menopausal Turkish women have depression.[6] The result of this study is consistent with previous research results. Depression is also found in women who have undergone a hysterectomy, which results in the loss of reproductive function. After this surgery, many women experience decreased sexual interest and changes in body image.[40] In a review, Flory et al. reported that hysterectomy does not generally cause psychological problems, but 10–20% of women experience decreases in sexual interest, arousal and orgasm, while depressive symptoms and impaired body image increase.[41] Results of this study found that attitude towards menopause and body image of women who transition into natural menopause were more positive than women who had experienced surgical menopause. The differences were statistically significant ($p = 0.021$, $p = 0.018$), but the severity of depressive symptoms did not differ between surgical or natural menopausal transition ($p = 0.052$).

This study also revealed that the severity of depressive symptoms of women with a psychiatric illness history was greater ($p = 0.000$). Bloch indicated that women with postmenopausal estrogen levels did not experience more menopausal symptoms than women with an average estrogen level.[34] Morever, the symptoms were neither fewer nor more as to whether or not the women had undergone a hysterectomy or whether they had received hormonal treatment.[34] Bellerose and Binik showed that body satisfaction was significantly lower for women who had undergone an oophorectomy, while in women who had undergone a hysterectomy there was a lower body image satisfaction score than for women who had experienced a natural menopause.[31] Avis and McKinlay confirmed these findings in their sample, which included women who had undergone surgical menopause.[42] These women held more negative attitudes towards menopause than those going through the normal transition. A previous study revealed that stress, educational level, ethnicity, socioeconomic factors and partner status may increase the prevalence and clinical course of both menopause symptoms and depressive disorders.[36] Michael and O'Keane reported that problems, including sexual dysfunctions and a decrease in sexual desire after hysterectomy, usually lead to a development of depression and that the most common psychiatric problem after hysterectomy is depression.[43] The literature findings are similar to the results of this study.

5. Conclusions

In conclusion, women with an optimistic attitude towards menopause tend to have a more positive body image and their depression level is lower. The results of our research showed that body image and the menopausal attitudes of women who entered menopause naturally are more positive than women who had undergone surgical menopause.

To create a healthy attitude towards menopause, women need accurate and positive information from health professionals throughout their lives. Since depression during the menopausal transition can occur, women who have suffered with depression prior to the onset of menopause should be carefully monitored. Depression that is a lifelong condition may be associated with other serious conditions. Monitoring is very important to ensure early detection of depression. It may be advisable to follow women's mental health status during the menopause transition to prevent depression disorders. Advising women to engage in various activities during menopause can positively affect their attitudes towards menopause, improve their body image and decrease symptoms of depression. Finally, larger-scale follow-up studies should be conducted to investigate the factors that make women more susceptible to depression during menopause.

Limitations of the study

Limitations of the study are that it was a cross-sectional study and a small sample size confined to specific Turkish women. The study sample was performed in a public hospital in the northeast of Turkey. Therefore, the results of this study can be generalized only to the subjects of this study.

Conflict of interest statement

The author declares no conflicts of interest.

Author contributions

Study design, data collection, data analysis and manuscript preparation was done by NE.

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