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Impact of Menopausal Symptoms on Psychological Problems among Middle-Aged Women

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Abstract

Background: Menopause characters the end of the female reproductive period. Psychological problems as anxiety and depression are reported among woman in menopausal period. The aim of the research is to find out the impact of menopausal symptoms on psychological problems among middle aged women problems.

Materials and Methods: A descriptive cross-sectional design was used. The study was conducted at eight colleges from Zagazig University. Sample of convenience is composed of 200 menopausal women. Four tools were used for collection of data, Interview questionnaire, Menopause Rating Scale, Beck Depression Inventory Scale and Taylor Manifest Anxiety Scale.

Results: More than three quarters of the studied sample were aged above 50 years with Mean ± SD 53.6 ± 6.3; nearly half of them had severe menopausal symptom. More than one third of the studied sample had mild depression and more than half of them had severe anxiety.

Conclusion: Positive significant correlation between total menopausal symptom with anxiety and depression score. The present study highlights that depression and anxiety are widely prevalent among the middle aged women so that women should be screened in the menopause transition especially for clinically significant depression and anxiety as some changes in women lifestyle like diet and exercises can improve good mood.

Introduction

Menopause is the end of the female reproductive period. During the menopausal transition there is a progressive and irreversible decline of ovarian function, which causes an array of symptoms [1]. Changes in menstrual bleeding patterns signal the approach of menopause in mid-life women, and many women report hot flashes, poor sleep, depressed mood, anxiety and other symptoms along with these menstrual changes [2]. Menopause is concerned with stopping of the ovulation and is generally occurred in 47 to 53 years old. Estrogen deficiency resulted from it causes hot flashes, sleep disorders, atrophy, vaginal dryness and cognitive-emotional disorders. The osteoporosis, dementia and cardiovascular diseases risks are subsequently increased in postmenopausal women. The depression during menopause is attributed to empty nest syndrome [3,4]. Depressive symptoms are common in all populations but appear to increase among women in the transition to menopause. Major depression is more common in women than in men in all age groups until late life, with a lifetime prevalence of 21% compared to 12% for men in the National Comorbidity Survey [5]. Depression in women also appears to increase around reproductive events. Postpartum depression following childbirth, premenstrual dysphoric disorder linked to the menstrual cycle, and depression around menopause may possibly share sensitivity

to normal shifts in reproductive hormones, which in turn modulate neuro-regulatory systems associated with mood and behavior [6].

Psychological problems, particularly depression are one of the major problems affecting postmenopausal women in many communities. The prevalence of depression, the most common mood disorder (sometimes called psychological flu), is reportedly 43% during menopause [7]. Depression is a common and major complaint among some mid-life women. It adversely affects an individual's social relationship, capacity to work and learn, and is an indicator of the risk of self-harm and suicide [8]. Anxiety is highly prevalent during the peri- and early postmenopausal stage, mainly due to hormonal changes [9]. Anxiety is seen in 5 to 15% of the population and is two to three times more likely to affect women. A study performed by using the beck depression inventory (BDI) showed that depression and anxiety can increase in postmenopausal women [10].

Significance of the Study

A report by WHO stated that depression and anxiety threaten to be the world's most common illness by the end of the century, especially in middleaged women [11]. The mean age of the menopause in Egypt is 46.7 years, which is low compared to many countries, but this age has been rising recently. The incidence of menopause-associated symptoms in Egyptian women is higher than in the West, probably because of the different 'socio cultural attitudes' towards the menopause. In our health system, in Middle East countries women of

the reproductive age group are given more importance. Menopausal women in both the urban and the rural areas are neglected. Therefore, in this study, the most common post-menopausal symptoms, namely the vasomotor, psychological symptoms which occur in the postmenopausal women, have been stressed on. Menopause, an important stage within the continuum of the health in a woman's life, has gained a lot of attention since the last century. Since menopausal women reported more psychological distress, more medical problems and lower morale than men anxiety and depressive disorders are among the most common psychiatric disorders in the community. However, most patients with this disorder go unrecognized [12].

Materials and Methods

A descriptive cross-sectional design was used in carrying out this study. The aim of the study is to assess the impact of menopausal symptoms on psychological status of middle age women.

Research question

Is there a relation between menopausal symptoms and degree of anxiety and depression among middle age women?

Research design

A descriptive design was used in the present study to assess the socio-demographic and anthropometric profile and correlate them with the severity of menopausal symptoms and degree of anxiety and depression in postmenopausal women.

Setting of the study

The study was conducted at selected four collage selected randomly from Zagazig University (Nursing, Education, Physical Education and Faculty of Literature). Sample of convenience composed of 200 women, all available women who are working as administrators and worker at the selected eight colleges in Zagazig University were recruited for the study. Women were interviewed after agreeing to participate in the study.

Inclusion criteria

- Women at menopause stage whose age ranged between 40-55 years.
- Women who have symptoms of menopause.
- Women who have menstruation stopped at least from 6-12 months.

Exclusion criteria

The women who have attained menopause surgically are;

- Women who are use hormonal replacement therapy (HRT)
- Women who had surgical or chemotherapy

Tools for data collection

Four tools were used for data collection:

Tool 1-Interview questionnaire: The study questionnaire was designed by the researcher after revising of related literature and opinions of expertise for content of validity and included the following: Socio-demographic characteristics namely age, marital status,

educational level and BMI as well the medical and obstetric history was evaluated.

Tool II-Menopause Rating Scale: Menopausal symptoms were assessed by the Menopause Rating Scale (MRS). The MRS consists of 11 questions evaluated on a scale from 0 (no symptoms) to 4 (most severe), which are divided into 3 domains: somatic symptoms (e.g., sweating, heart complaints, joint/muscle pain), urogenital symptoms (e.g., sexual problems, urinary problems, vaginal dryness), and psychological symptoms (e.g., depression, irritability, anxiety). The total score is calculated by summing up the scores for each domain. Higher MRS scores are indicative of more severe symptoms. A total MRS score $\geq$ 17 was defined as severe QoL impairment. Heinemann et al. have proposed cutoff values to define severe symptoms according to each subscale: somatic (>8), psychological (>6), and urogenital (>3) [13].

Tool III-Beck Depression Inventory Scale: Developed by Beck et al. [14], is a self-report inventory and one of the most widely used instruments for measuring the severity of depression. It was used to assess the level and intensity of depression, which consist of 21 self-report items that assess the presence and severity of depressive symptoms over the past 2 weeks such as hopelessness, suicidal ideation and loss of interest. Items are scored on a four-point likert scale ranging from 0 to 3. According to Beck et al. scores are classified as follows 0-13 minimal range; 14-19 mild; 20-28 moderate and 29-63 severe range of depression.

Tool IV-Taylor Manifest Anxiety Scale: Developed by Taylor [15] was used to assess anxiety. It has a high degree of validity and reliability. The scale has 50 statements with yes/no answer. The number of yes responses is calculated by simple summation. The scores are categorized by levels of anxiety as follows. Non<17, mild: 17-20, moderate: 21-62, severe: 27-29, very severe: 30.

Procedure of data collection

- Validity of the research tool was ensured through a review by 3 experts who hold a PhD in nursing and the necessary modifications were made tools language was also tested for clarity of meaning.
- A pilot study was conducted on 10% of the study subjects to ensure the feasibility of the tools and time needed to answer the questions.
- Data collection for the study was carried out in the period from June 2016 to September 2016.
- An official permission was obtained from at the selected four collage in Zagazig University were recruited for the study.
- The researcher told the women that participation is voluntary base, confidentiality of each subject will be assumed.
- The researchers interviewed the women face to face and introduced herself to the eligible women and briefly explained the nature of the study.
- The consent was obtained from women orally before being involved in the study during this interview fill the questionnaire assess the severity of menopausal symptoms, anxiety and depression scale filled.

Statistical analysis

All data were coded, tabulated and subjected to statistical analysis that was performed using SPSS version 20. Quantitative variables were described by the Mean, Standard Deviation (SD), while qualitative

categorical variables were described by proportions and percentages. Descriptive statistics were used to analyze the response to individual items and the respondents' characteristics. The Mont Carlo exact probability test was used to assess samples normality. P- Value less than 0.05 was considered significant.

Results

More than three quarters of the studied sample (77%) were aged above 50 years with Mean ± SD 53.6 ± 6.3, ranged between (40 to 55) years and among them (72%) were married, (45%) had moderate education.

Variables		Number	Percentage (%)
Age	40-	46	33
	50+	154	77
	Mean ± SD	53.6 ± 6.3	-
	Median (Range)	53.5 (40-65)	-
Marital status	Married	144	72
	Others	56	28
Education level	Illiterate	26	13
	Primary	16	8
	Second	90	45
	University	68	34
Occupation	House wives	76	38
	Work	124	62
Duration of menopause (years)	1-	136	68
	6-	32	16
	11-	32	16
BMI	Non-obese	104	52
	Obese	96	48
Health problem	Absent	64	32
	Present	136	68
Smoking	Non-smoker	156	78
	Smoker	2	1
	Passive smokers	42	21
Previous pregnancy	No	10	5
	Yes	190	95
Method of labour	Normal	158	83
	Caesarian	28	15
	Both	4	2.1

Table 1: The socio-demographic characteristics of the studied sample.

This table also shows that, more than two third of the studied sample (68%) their Duration of menopause from 1 to 5 years (Table 1). Slightly more than half of them (52%) were non-obese. (68%) had health problems. More than three quarters (78%) were non-smoker. Most of them (95%) had previous pregnancy and 83.3% had normal labor.

Among them 68% had Mild to moderate Somatic symptom, 54% had Mild to moderate psychological symptoms and more than half of the studied sample had sever urogenital symptom (58%) (Table 2).

Variables		Number	Percentage (%)
Total menopausal symptom	Mild to moderate	102	51
	Severe	98	49
Somatic menopausal symptom	Mild to moderate	136	68
	Severe	64	32
Psychological menopausal symptom	Mild to moderate	108	54
	Severe	92	46
Urogenital menopausal symptom	Mild to moderate	84	42
	Severe	116	58

Table 2: Nearly half of the studied sample (49%) had severe menopausal symptom.

Table 3 illustrated the frequency distribution of depression and anxiety levels among the studied sample. More the one third (34%) of the studied sample had mild depression and more than half of them had sever anxiety and (24%) had moderate anxiety.

Variables		Number	Percentage (%)
Depression level	Minimal	28	14
	Mild	68	34
	Moderate	52	26
	Severe depression	52	26
Anxiety level	No	12	6
	Mild	22	11
	Moderate	48	24
	Severe anxiety	118	59

Table 3: Frequency distribution of depression and anxiety levels among the studied sample.

Table 4 illustrated the relation between demographic characteristics and total menopausal symptoms score among the studied sample. This table shows statistically significant relation between total menopausal symptoms score and both educational level and duration of menopause among the studied sample (p<0.05).

Variables		Total	Total Menopause symptoms		X^2	P
			Mild to moderate Impairment number (%)	Sever impairment number (%)		
Age	40-	46	26 (57)	20 (43)	0.7	0.4
	50+	154	76 (49)	78 (51)		
Marital status	Married	144	72 (50)	72 (50)	0.2	0.65
	Unmarried	56	30 (54)	26 (46)		
Education level	Illiterate	26	12 (46)	14 (54)	15	0.002*
	primary	16	2 (12.5)	14 (87.5)		
	Second	90	44 (49)	46 (51)		
	University	68	44 (65)	24 (35)		
Occupation	Housewives	76	38 (50)	38 (50)	0.05	0.8
	Work	124	64 (52)	60 (48)		
Duration of menopause (years)	1 to 5	136	70 (51)	66 (49)	9	.01*
	6 to 10	32	22 (69)	10 (31)		
	11+	32	10 (31)	22 (69)		
BMI	Non-obese	104	52 (50)	52 (50)	0.1	0.76
	Obese	96	50 (52)	46 (48)		
Health problem	Absent	64	34 (53)	30 (47)	0.17	0.7
	Present	136	68 (50)	68 (50)		
Smoking	Non-smoker	156	84 (54)	72 (46)	3.7	0.2
	Smoker	2	0	2 (100)		
	Passivesmokers	42	18 (43)	24 (57)		

Table 4: Relation between demographic characteristics and total menopausal symptoms score among studied sample.

Table 5 demonstrates statistically significant relations between anxiety grade and marital state, education level and those suffering from health problems among the studied sample (P<0.05).

Variables			Depression				X^2	P
			Minimal Grade Number (%)	Mild Grade Number (%)	Moderate Grade Number (%)	Severe Grade Number (%)		
Age	40-	46	4 (9)	6 (13)	12 (26)	24 (52)	1.5	0.6
	50+	154	8 (5)	16 (10.5)	36 (23.5)	94 (61)		
Marital status	Married	144	8 (5)	20 (14)	40 (28)	76 (53)	10.5	0.01*
	Others	56	4 (7.1)	2 (3.6)	8 (14.3)	42 (75)		
Education level	Illiterate	26	0	2 (8)	10 (38)	14 (54)	20	0.02*
	primary	16	0	0	0	16 (100)		
	Second	90	6 (7)	14 (15.5)	18 (20)	52 (57.5)		

	University	68	6 (9)	6 (9)	20 (29)	36 (53)		
Occupation	House wives	76	2 (2.5)	8 (10.5)	18 (24)	48 (63)		
	Work	124	10 (8)	14 (11)	30 (24)	70 (57)	2.7	0.4
Duration of menopause (years)	1 to 5	136	12 (8.8)	14 (10.3)	36 (26.5)	74 (54.4)		
	6 to 10	32	0	2 (6.2)	8 (25)	22 (68.8)		
	11+	32	0	6 (18.8)	4 (12.5)	22 (68.8)	11.7	0.07
BMI	Non-obese	104	6 (5.8)	12 (11.5)	24 (23.1)	62 (59.6)		
	Obese	96	6 (6.2)	10 (10.4)	24 (25)	56 (58.3)	0.16	0.9
Health problem	absent	64	2 (3.1)	2 (3.1)	22 (34.4)	38 (59.4)		
	present	136	10 (7.4)	20 (14.7)	26 (19.1)	80 (58.8)	11	0.02*
Smoking	Non-smoker	156	10 (6.4)	18 (11.5)	38 (24.4)	90 (57.7)		
	Smoker	2	0	0	0	2 (100)		
	Passive smokers	42	2 (4.8)	4 (9.5)	10 (23.8)	26 (61.9)	1.7	0.9

Table 5: Relation between demographic characteristics and Anxiety grade among studied sample.

Table 6 shows statistically significant relation between depression grade and age group, education level, occupation, Duration of menopause (year) and those suffering from health problems among the studied sample (P<0.05).

Variables			Depression				X^2	P
			Minimal Grade Number (%)	Mild Grade Number (%)	Moderate Grade Number (%)	Severe Grade Number (%)		
Age	40-	46	14 (30.4)	14 (30.4)	12 (26.2)	6 (13)		
	50+	154	14 (9)	54 (35)	40 (26)	46 (30)	15.6	0.001*
Marital status	Married	144	22 (15.3)	54 (37.5)	34 (23.6)	34 (23.6)		
	Others	56	6 (11)	14 (25)	18 (32)	18 (32)	4.7	0.19
Education level	Illiterate	26	2 (7.7)	6 (23.1)	16 (61.5)	2 (7.7)		
	primary	16	0	4 (25)	0	12 (75)		
	Second	90	14 (15.6)	30 (33.3)	22 (24.4)	24 (26.7)		
	University	68	12 (17.6)	28 (41.2)	14 (20.6)	14 (20.6)	42	0.0001*
Occupation	House wives	76	8 (10.5)	18 (23.7)	20 (26.3)	30 (39.5)	13	
	Work	124	20 (16)	50 (40.2)	32 (25.8)	22 (18)		0.004*
Duration of menopause (years)	1 to 5	136	24 (17.6)	54 (39.7)	26 (19.2)	32 (23.5)		
	6 to 10	32	2 (6.2)	10 (31.3)	8 (25)	12 (37.5)		
	11+	32	2 (6.2)	4 (12.5)	18 (56.3)	8 (25)	25	0.0001*
BMI	Non-obese	104	16 (15.5)	38 (36.5)	20 (19.2)	30 (28.8)		
	Obese	96	12 (12.5)	30 (31.2)	32 (33.3)	22 (23)	5	0.15
Health problem	absent	64	8 (12.5)	30 (46.9)	10 (12.6)	16 (25)		
	present	136	20 (14.7)	38 (27.9)	42 (30.9)	36 (26.5)	8.6	0.03*

	Non-smoker	156	22 (14.1)	56 (35.9)	40 (25.6)	38 (24.4)		
	Smoker	2	0	0	0	2 (100)		
Smoking	Passive smokers	42	6 (14.3)	12 (28.6)	12 (28.6)	12 (28.6)	6.6	0.3

Table 6: Relation between demographic characteristics and depression grade among studied sample.

Discussion

Women being go through various stages of life. Each stage of life is influenced by specific aspect as infancy, childhood, adolescent, adult, middle age, old age. Menopause has been considered a major transition point in women's reproductive and emotional life. Physiological changes of postmenopausal period are very important since it influences psychological, social, and emotional aspects of women life. Psychological problems affect physical well-being, resulting in chronic fatigue, sleep problems, and changes in appetite. It affects mood, with feelings of sadness, emptiness, hopelessness and dysphoria which interfering with concentration and decision making. It is believed that a cause of depression and anxiety results from a change in estrogen levels, which occur during menopause [16].

The present study results showed that, the more than two third of the study subjects were in the age group 50 years or more, married and had menopause from 1-5 years. Also nearly half of them were secondary educated. This finding was disagreed with Delaver and Hajiahmadi, who study Psychological Problems and Coping Strategies Adopted by Post-Menopausal in Indian Women who stated that, the mean age in menopause was 47.7 years [17]. About 67% were illiterate 82% were Unemployed/Housewife, 64% were married, 36% had achieved menopause 10 to 12 years back. Also, Nisar N and Ahmed S who mentioned that, the majority of women as a house wife in their study about Severity of Menopausal symptoms and the quality of life at different status of Menopause: a community based survey from rural Sindh, Pakistan [18]. Regarding presence of health problems the present study results revealed that, more than two third of the study sample had health problem. Also majority of them had previous pregnancy and had normal vaginal delivery. In contrast, Potdar and Shinde (2014) reported that, 92% were having no any disease condition before menopause, 85% were having no any disease condition after menopause.

Investigating the severity of the menopausal symptoms among the study subject the present study results reported that nearly half of them had severe total menopausal symptoms. More than half had mild to moderate somatic and psychological symptoms and severe urogenital symptoms. This result agrees with Yakout et al. who mentioned that, the highest mean score of menopausal symptoms were in different domains urinary tract, muscles and skeletal compared to cardiovascular which are the lowest, in their study about menopausal symptoms and quality of life among Saudi women in Riyadh and Taif [19]. Similarly, Moustafa et al. reported that, more than one-third of women have severe urinary bladder problems in their study about impact of menopausal symptoms on quality of life among women's in Qena City [20]. Concerning depression and anxiety levels among the studied sample.

More the one third of the studied sample had mild depression and more than half of them had severe anxiety and (24%) had moderate anxiety. In the same line, Bansal et al. in the study about depression and anxiety in rural Punjab, who reported that, the levels of depression

and anxiety was found to be 86.7% and 88.9%, respectively [21]. Most of the subjects had the moderate type of depression (49.5%) followed by mild (29.4%) and severe depression (7.8%). While in case of anxiety, most of the subjects (69.4%) had a mild form of anxiety and 17.8% had moderate anxiety level. Also Whiteley et al. mentioned that, less than half of women experiencing at least one of the listed symptoms as anxiety, depression, hot flushes, difficult sleeping andvaginal dryness in their study about the impact of menopausal symptoms on quality of life, productivity and economic out comes [22]. In contrast, Moustafa et al. reported that, Less than half of their study sample had severe depressed mood in their study about impact of menopausal symptoms on quality of life among women's in Qena City.

According to the present study results there were statistically significant relation between total menopausal symptoms score and both educational level and duration of menopause among the studied sample. This result supported by Bener et al. who study depression, anxiety, and stress symptoms in menopausal Arab women who reported that, there were statistically significant differences between menopausal stages with regards to age, ethnicity, educational status, occupation status, and place of living [23]. As regards to relation between anxiety and demographic characteristics the current study results demonstrates statistically significant relations between anxiety grade and marital state, education level and those suffering from health problems among the studied sample (P<0.05). This result consistent with Bansal et al. in the study about depression and anxiety in rural Punjab found that, a significant relationship was observed between anxiety levels and marital state [21]. Moderate anxiety was seen more prevalent among widows (44.4%) as compared to currently married women (14.8) (Figure 1).
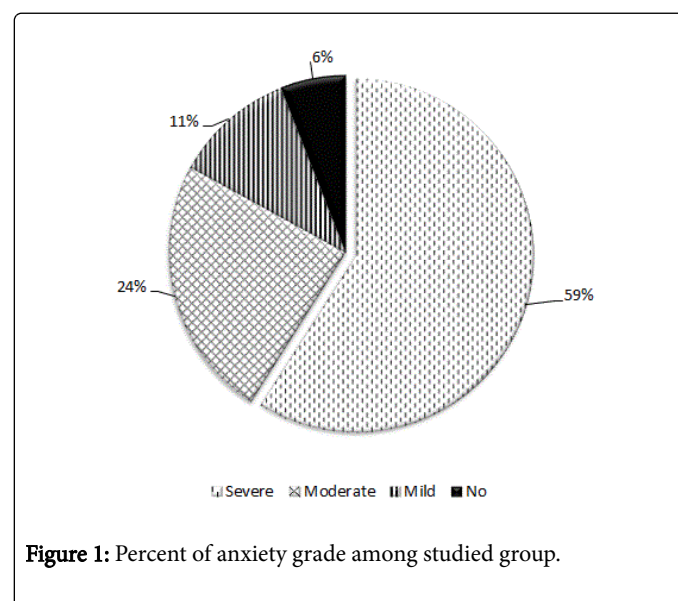

Figure 1: Percent of anxiety grade among studied group.

Considering to relation between demographic characteristics and depression grade among studied sample there was statistically significant relation between depression grade and age group, education level, occupation, Duration of menopause (year) and those suffering from health problems among the studied sample. This finding was in contrast with, Bansal et al. in the study about depression and anxiety in rural Punjab [21]. It was seen that with increasing age, there was an increasing trend toward depression, however, this difference was found to be statistically non-significant (P=0.101). Depression not found to be significantly affected by education, BMI, and socioeconomic status (Figure 2).
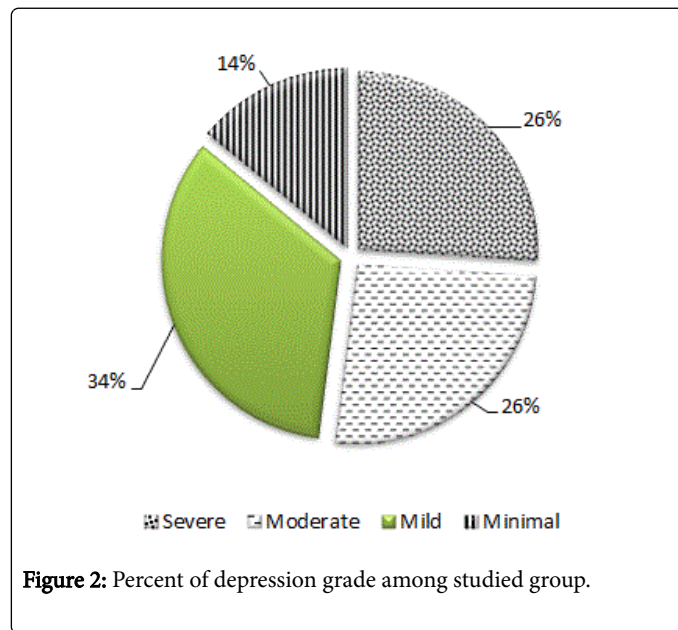
Figure 2: Percent of depression grade among studied group.

The present study results show positive significant correlation between total menopausal symptom with anxiety and depression score. This finding was in agreement with Chedraui et al. and Reed et al. [24,25].

Freeman et al. who investigating the relationship between severity of menopausal symptoms with depression, anxiety other Menopausal symptoms in Iran also found similar results that were consistent with the findings of the present study [26].

However, conflicting results were observed in the study of Bahri et al. which reported no significant relationship between the severity of menopausal symptoms and the two variables of depression and anxiety (Figure 3) [27].

Similarly, Ziagham et al. in the study about the Relationship between Menopausal Symptoms, Menopausal Age and Body Mass Index with Depression in Menopausal Women of Ahvaz in 2012 [28]. Who reported that, there was statistically a significant relation-ship was observed between depression and Menopausal Symptoms in all the three areas (Figure 4).

The present study results show that there is statistical significant relation between depression grade and grade of total menopausal symptoms, somatic, psychological and urogenital among the studied sample.

This finding was in agreement with Karaoulanis et al. found a significant relationship between depression and hot flashes, concluding

that depressed premenopausal women experience higher severity and frequency of hot flashes than did healthy premenopausal women.
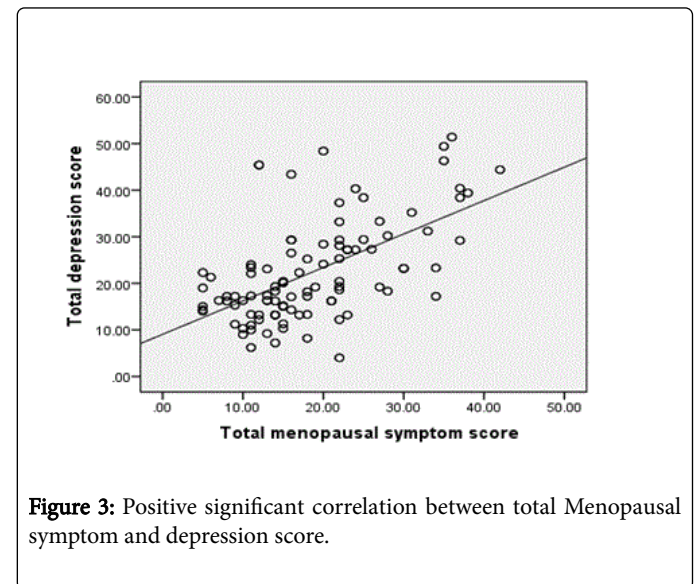

Figure 3: Positive significant correlation between total Menopausal symptom and depression score.
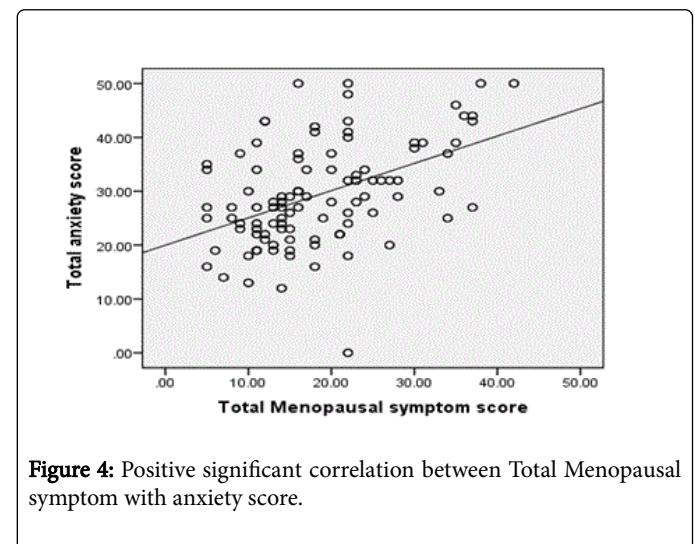

Figure 4: Positive significant correlation between Total Menopausal symptom with anxiety score.

In addition, the results of a study by Melby et al. showed that women with moderate to severe depression had more complaints of vasomotor symptoms than those without depression or with mild depression [29-31].

Conclusion

It can be concluded that there is a positive significant correlation between total menopausal symptom with anxiety and depression score. Based on the results of the study the following recommendations were suggested:

- Women should be screened in the menopause transition especially for clinically significant depression and anxiety. Staying connected with family and friends can nurture wellbeing.
- Attention of changing life style as Self-supporting skills such as yoga, rhythmic breathing and meditation are helpful in menopause. Also healthy food and exercise can improve good mood.

Ethical Considerations

To carry out the study, the necessary official approval was obtained from the Manager of the selected four collages. The aim of the study was explained to each woman and an oral consent to participate was obtained. Women were assured that the obtained information will be confidential and will be used only for the purpose of the study.

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