Menopausal symptoms and the quality of life among pre/post menopausal women from rural area in Zagazig city

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Abstract: Introduction: "Menopause" denotes the final cessation of menstruation, either as a normal part of aging or as the result of surgical removal of both ovaries. **The aim**: this study aimed to investigate the impact of the menopausal symptoms on the quality of life of pre/post menopausal women from rural area, Zagazig city. **Research design:** a descriptive cross-sectional comparative study design was used in this study. **Settings**: This population based survey was conducted in one of rural district of Sheba, Zagazig city. **The sample**: consisted of 175; premenopausal (97) and postmenopausal (78) women whose ages ranged from 40-70 years old. **Tools**: data were collected by Menopause Rating Scale (MRS) and quality of life Brief (WHOQOL Brief). **Results**: the highest mean scores of menopausal symptoms were somatic symptoms and urogenital domains in postmenopausal women than in premenopausal women. There was a statistically significant difference between two studied groups in relation to their mean and standard deviation scores regarding their quality of life; physical, psychological and environmental domains. There was the significant negative correlation between MRS scores and WHOQOL- Brief scores in social, environmental domains, and overall mean score of quality of life for postmenopausal women. **Conclusion**: It can be concluded that post-menopausal women in the study subjects experience high prevalence of menopausal symptoms that adversely affected their quality of life. **Recommendation**: Further research addressing women's health needs is also essential for improving the quality of life of postmenopausal rural women.
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Key Words: Menopause, Severity of symptoms, Menopause Rating Scale (MRS), Quality of life, WHOQOL

1. Introduction

Menopause is defined as the permanent cessation of menses resulting from reduced ovarian hormone secretion that occurs naturally or is induced by surgery, chemotherapy, or radiation. Natural menopause is recognized after 12 months of amenorrhea that is not associated with a pathologic cause (Rahman *et al.,* 2010). Menopause is a physiological event in the women's life. It is caused by aging of ovaries which leads to decline in the production of ovarian Gonadotrophins, Estrogen and Progesterone. The deficiency of these hormones elicits various somatic, vasomotor, sexual and psychological symptoms that impair the overall quality of life of women (Dennerstein *et al.,* 2000 and Deeks & McCabe, 2004).

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 in the past few years in the west, probably because of the different 'sociocultural attitudes' towards the menopause in different communities. The western women attitude towards the menopause is generally positive and about one-third of them considers the menopause as 'a normal physiological change'. Nevertheless, the Egyptian women need an awareness campaign about menopause in order to educate them about this important stage of their lives (Sallam *et al.,* 2006).

Menopause is a normal physiological change experienced by middle aged women. Some of the menopausal symptoms experienced by these women can be severe enough to affect their normal lifestyle. Unfortunately majority of those women are not aware of the changes brought about by menopause (Lu *et al.,* 2007 and Rahman *et al.,* 2010). It was also noted in some postmenopausal women with long term estrogen deficiency, changes to the cardiovascular or bone which leads to osteoporosis. It is well documented that menopausal symptoms experienced by women affect their quality of life (Dhillon *et al.,* 2006).

Symptoms experienced at menopause are quite variable, and the etiology of the symptoms is multi factorial. Also, menopausal symptoms can affect women's health and wellbeing ((Sievert, 2001 and Daley *et al.,* 2007). Some of the menopausal symptoms included: hot flushes, urinary incontinence and reduced sexual function (Greendale *et al.,* 1999). The nature, frequency and severity of symptoms vary not only among the individuals of the same population with different cultures, ethnicities and women from different countries, but also at different

stages of menopause (Randolph *et al.,* 2003). Several studies reported the experiences of menopausal symptoms of women from different parts of world and the significant impact of these symptoms on QoL of menopausal women at different status of menopause (Blumel *et al.,* 2000 and Fuh *et al.,* 2003).

The World Health Organization (1993) defines QoL as an individual's perception of their position in life in the context of the culture and the value system in which they live and in relation to their goals, expectations, standards and concerns can be applied to menopausal women. Also, the WHO identified four broad domains as being universally relevant for the quality of life, namely physical health, psychological well-being, social relationships, and environment (Hendry & McVittie, 2004 and Pensri *et al.,* 2007).

The menopause has been reported as one of the opportunities for women, to visit health-care services (Guthrie *et al.,* 2003). The health care of women during this stage requires special attention to the identification of their health needs in order to provide competent care (Gharaibeh *et al.,* 2010).

Aim of the study: To investigate the impact of menopausal symptoms on the quality of life of pre/post menopausal women from rural area in Zagazig city.

Research question:

Is there relationship between the menopausal symptoms on the quality of life of pre/post menopausal women?

2. Subjects & Method:

Research design:

A descriptive cross-sectional comparative study design was used in this study.

Study Settings:

This population based survey was conducted in one of the rural district of Sheba area, Zagazig city, Sharkia Governorate, Egypt.

Sample size:

The sample size was calculated through EPI info (Epidemiological information system) soft ware version 6. The estimated sample size was calculated to be 175 pre/post menopausal women, whose ages ranged between 40 and 70 years.

Study subjects:

The sample consisted of 175 women their ages ranged from 40-70 years old. The data was collected through 6 months started at October 2011 and finished at March 2012. These women from Sheba village. They satisfied the following exclusion criteria, they are free from ovarectomy hysterectomy, or other chronic diseases. The number of the study population (175) was determined according to the following procedure:- A multistage stratified random sampling technique was used for the identification of eligible women. At first stage, Sheba was selected randomly using lottery method. During the second stage of sampling, a name and address list of all the women aged 40 – 70 years was drawn from the maternal center health. In the third stage, out of established list, every fourth women was selected randomly. Initially for the selection of first number the lottery method was used for the first four numbers followed by every fourth number onward included into sample.

Ethical Consideration:

Both written and oral information about the reasons of the study were given in local language to women invited to participate in the present study. The participants were informed that their inclusion in the study will be voluntary and were given a guarantee of anonymity. They were informed that they were be free to withdraw from study and if any question they do not want to answer they can withdraw it.

Tools of Data Collection:

A structured questionnaire sheet was prepared by the researchers including 3 parts:

1) First part was used to collect the socio demographic data, including: age and level of education, occupation, marital status and family size.

2) The second part is a modified vision of menopausal rating Scale (MRS) (Heinemenn *et al.,* 2003), and menopausal symptoms list done by the researchers to assess the menopausal symptoms and severity (Schneider and Behre, 2002 and Germain *et al.,* 2001).

For purpose analysis (MRS) were further categorized according to 0 no, mild to moderate and sever to very sever. *Menopause Rating Scale:* consisted of 11 items assessing menopausal symptoms, divided into three subscales. A) Somatic: Hot flushes, heart discomfort, sleep problem and muscles and joint problems. B) Psychological: depression, irritability, anxiety and physical and mental exhaustion. C) Urogenital: Sexual problems, bladder problems and dryness of vagina. Each item can be graded from 0-4, (0= not present), (1=mild), (2=moderate), (3=severe), (4=very severe) (Heinemenn *et al.,* 2003). For the present study the MRS English version was translated into local language. In order to facilitate analysis and interpretation of the result, total scores in each area were 56, those who obtained scores less than 11 were considered to have no symptoms, 12 to 35 were mild and moderate symptoms and more than 36 were

considered to have severe and very sever symptoms.

Menopause status definition:

The menopause status was defined based on the reported length of time since last menstrual period. Women who reported the normal menstrual cycle for last three months were classified as Premenopause. Women who reported change in the length of menstrual cycle for at least seven days from baseline or change in the menstrual flow like lighter or heavier from baseline for last three months were classified perimenopause, those last menstrual periods occurred 12 months or more months ago were categorized as post menopause. Surgical menopause was defined as cessation of menstruation following either removal of ovaries (with or without hysterectomy) (Soules *et al.,* 2001).

3) Third part:
   WHOQOL questionnaire was modified by the researchers for the purpose of assessing the quality of life (QOL) for menopausal women.

WHOQOL Brief:

WHOQOL questionnaire has been developed in order to make a reliable, valid and responsive assessment of generic QOL that is applicable to the people living in different conditions and cultures. Two versions are available the WHOQOL with 100 items and 26 items short form version of WhOQOL 100 (Skevington *et al.,* 2004). We have used WHOQOL Brief (Urdu Version) for its brevity. The Urdu version is has been available with excellent reliability and validity (Khan *et al.,* 2003).

The WHOQOL Brief consists of four domains physical, psychological, social and environmental. The scores were calculated according to the standard methods that the raw scores were converted to transformation scores. The first transformation converts scores to range of 4-20 and the second transformation converts domain scores to 0 to 100 scale. Higher scores reflect better quality of life.

The WHOQOL Brief contained 26 items, categorized under 4 main domains Physical, Psychological, Social and Environmental. A separate 5 point scale ranging from never (4) to always (o point) was used for the measurement of each items. total score of each domain were 108 ; the higher score indicating a good QOL, a lower score indicating a poor QOL and high effect of menopausal symptoms on quality of life. Those who obtained scores from 0 to 33.3 % were considered (poor QOL), from 33.3 % to 66.7% were considered (average QOL) and more than 66.7% were considered to have (good QOL).

Validity and reliability

The questionnaire was translated into Arabic, and then reviewed by 5 experts (2 experts from community health nursing and 3 experts from obstetrics and Gynecology nursing) who conducted face and content validity of all item. All recommended modifications were performed. Degree of reliability alpha precision 88% of the study sample.

Pilot study

It was carried on 10% of the subject to test applicability and clarity of the tools, all recommended modification was performed through an extensive review of literature regarding menopausal symptoms and quality of life. After the development of the tool, the menopausal women who were taken from the previously mentioned setting.

Field work

The study was conducted during the period October 2011 to March 2012. Informed consent to participate in the study was obtained from the subjects. Modifications of the tools were done accordingly. Each subject was individually interviewed using the previously mentioned tool. Time consumed for each interview ranges from 30 to 45 minutes. The collected data were categorized, tabulated and made ready for use. The tools of data collection were translated into Arabic by the researchers, tested and verified by bilingual persons.

Statistical analysis

Statistical package for social sciences (SPSS) version 15.0 was used for data analysis. Results are presented as numbers (percentages) for qualitative variables and mean ± standard deviation for normally distributed quantitative variables are reported. Differences in proportion for menopausal status, demographic and health characteristics were assessed by Pearson Chi-square test and difference in mean score for quality of life were compared. Pearson coefficient of correlation (r) was determined among WHOQOL and MRS score. *P*-value less than 0.05 was considered as statistically significant.

3. Results

Table (1): demonstrates the soci-demography of the study subjects. The table showed that less than half of the studied subjects (44.0%) belonged to the age group ranged from 51-60 years old. The mean age of them was 54.0± 7.9 years, in addition to 32.0% of them have primary or preparatory school while 25.1% among the studied sample were illiterate, and less than two thirds (58.3%) of them were house wife and the rest of them were worker, Low proportion of women have high income . On the other hand, (70.8%) of them were currently married. Concerning

socioeconomic status, less than two thirds of the studied subjects (58.3%) belonged to poor socioeconomic status and more than one quarter of them (39.4%) belonged to middle socioeconomic class.

Table (1): Distribution of study sample according to their socio-demographic characteristics.

	Socio-demography	No (175)	%
Age	40-50	63	36.0
	51-60	77	44.0
	> 60	35	20.0
	X ± SD	54.02± 7.97	
Education	Illiterate	44	25.1
	Primary/preparatory	56	32.0
	Secondary	35	20.0
	University	40	22.9
Occupation	House wife	102	58.3
	Worker	73	41.7
Marital status	Single	4	2.3
	Currently Married	124	70.8
	Divorced	11	6.3
	Widow	36	20.6
Family size	2 to 4	15	8.6
	5 to 6	98	56
	6 and more	62	35.4
Crowded index	2-3	16	9.1
	4-5	19	10.9
	5or more	140	80.0
Income	Not enough	84	48.0
	Enough	57	32.6
	More enough	34	19.4
Socioeconomic status	Poor	102	58.3
	Middle class	69	39.4
	Upper class	4	2.3

Table (2): illustrated the severity of the menopausal symptoms among the studied groups. It can be observed that, the highest mean scores of menopausal symptoms were somatic symptoms and urogenital domains in postmenopausal women than in premenopausal women (10.46±6.28, 9.96±5.26 and 3.31±2.46, 2.69±1.96, respectively). While the mean scores of Psychological symptoms is the lower in postmenopausal women than premenopausal women (3.38±4.22, 4.22±3.66, respectively). The mean of the total MRS score was higher in postmenopausal women than premenopausal women (16.86±9.11, 17.15±11.21, respectively), and there is no statistically significant difference between two study groups regarding total MRS score.

Table (3): showed the quality of life among study subjects. according to the findings, there was a statistically significant differences between two studied groups in relation to their mean and standard deviation scores regarding their quality of life domains regarding physical, psychological and environmental domains (44.18±12.31 , 49.30±12.59, 43.13±11.01 & 40.17±13.15, 44.09±14.66, 38.58±12.82) respectively to premenopausal and postmenopausal women ($P = 0.3, 0.1$ & 0.1), as there was increase of mean scores of social domain in premenopausal women more than postmenopausal women (53.35 ± 19.38, 48.18 ± 18.34, respectively). However, there was no statistically significant difference according to social domain betweens two studied groups. The mean of the total quality of life scores was higher in premenopausal women than postmenopausal women (50.69±12.08, 45.15±13.75, respectively). However, there was a statistically significant difference between two studied groups in relation to their total mean score of quality of life.

The correlation between menopausal rating scale scores and WHOQOL- Brief scores is shown in **(Table 4)**. There was the significant negative correlation between MRS scores and WHOQOL-Brief scores in social, environmental domains, and over all mean score of quality of life for postmenopausal women. However, there wasn't significant negative correlation between MRS scores and WHOQOL- Brief scores in Physical and psychological domains of quality of life for postmenopausal women.

Table (5) displays the relationship between socio-demographic characteristics and quality of life. It was found that more than one third (27.3%) non- educated menopausal women had poor quality of life compared to educated women that had good quality of life, there was no statistical significance differences between quality of life and education. As regards occupation, more than one tenth (11.1%) of the worker also, had poor quality of life, while (5.6%)

were employed and had good quality of life, there was no statistical significance difference between quality of life and occupation. It was observed that, the poor quality of life for the subjects who family size less than four and poor socioeconomic, (26.7%, 18.6% respectively), there was no statistical significance differences between quality of life and family size and socioeconomic class. There was a statistical significance difference between quality of life and income.

Table (2): Distribution of the menopausal symptoms among two study groups.

Subscale and symptoms	Pre-menopause (97)		Post-menopause (78)		Test	P-Value
	No	%	No	%		
Somatic	**9.96±5.26**		**10.46±6.28**		**T= 0.57**	**0.56**
1. Hot flushes						
None	36	37.1	16	20.5		
Mild - Moderate	51	52.6	51	65.4	X2 = 5.94	0.05
Sever - Very sever	10	10.3	11	14.1		
1. Sweating						
None	27	27.8	12	15.4		
Mild- Moderate	61	62.9	52	66.7	X2 = 5.68	0.06
Sever- Very sever	9	9.3	14	17.9		
2. Heart discomfort						
None	42	43.3	50	64.1		
Mild - Moderate	42	43.3	19	24.4	X2 = 10.18	0.017*
Sever - Very sever	13	13.4	9	11.5		
3. Sleeping problem						
None	15	15.5	18	23.1		
Mild- Moderate	50	51.5	31	39.7	X2 = 3.31	0.24
Sever - Very sever	32	33.0	29	37.2		
11. Muscle and joint problem						
None	5	5.2	5	6.4		
Mild - Moderate	54	55.7	40	51.3	X2 = 0.38	0.82
Sever - Very sever	38	39.2	33	42.3		
Psychological	**4.22±3.66**		**3.38±2.5**		**T= 1.72**	**0.08**
4. Depressive mood						
None	37	38.1	45	57.7		
Mild- Moderate	44	45.4	22	28.2	X2 = 7.36	0.02*
Sever- Very sever	16	16.5	11	14.1		
5. Irritability						
None	28	28.9	34	43.6		
Mild- Moderate	49	50.5	33	42.3	X2 = 4.95	0.11
Sever - Very sever	20	20.6	11	14.1		
6. Anxiety						
None	48	49.5	41	52.6		
Mild- Moderate	38	39.2	28	35.9	X2 = 0.55	0.90
Sever- Very sever	11	11.3	9	11.5		
7.Physical and mental exhaustion	48	49.5	47	60.3		
None	38	39.2	23	29.5	X2 = 4.28	0.34
Mild- Moderate	11	11.3	8	10.3		
Sever- Very sever						
Urogenital	**2.69±1.96**		**3.31±2.46**		**T= 1.85**	**0.06**
8. Sexual problem	30	31.9	23	29.5		
None	61	62.9	50	64.1	X2 = 2.32	0.97
Mild- Moderate	6	6.2	5	6.4		
Sever- Very sever						
9. Bladder problem	42	43.3	32	41.0		
None	50	51.5	30	38.5	X2 = 11.01	0.006
Mild- Moderate	5	5.2	16	20.5		
Sever- Very sever						
10. Dryness of the vagina	33	34.0	21	26.9	X2 = 3.99	0.32
None	59	60.8	49	62.8		
Mild- Moderate	5	5.2	8	10.3	**T= 0.2**	
Sever- Very sever	**16.86±9.11**		**17.15±11.21**			**0.85**
Over all score						

Table (3): relation between quality of life and menopausal symptoms among two study groups.

domains	Pre menopause(97)	Post menopause (78)	T test	*P*-Value
Physical	44.18 ± 12.31	40.17 ± 13.15	2.07	.039*
Psychological	49.30 ± 12.59	44.09 ± 14.66	2.52	.012*
Social	53.35 ± 19.38	48.18 ± 18.34	1.79	.074
Environmental	43.13 ± 11.01	38.58 ± 12.82	2.79	.012*
Overall mean score	50.69±12.08	45.15±13.75	0.005*	2.83

Table (4): Pearson's correlations of quality of life and menopausal rating scale among two study groups.

Subscale and symptoms	Pre menopause(97)		Post menopause (78)	
	r	p-value	r	p-value
Physical	.04	0.67	-.01	0.89
Psychological	-0.17	.07	-0.14	0.23
Social	-0.36	0.000*	-0.36	0.000*
Environmental	-.078	0.44	-0.27	0.01*
Overall Mean Score	-0.14	0.18	-0.25	0.01*

Table (5): Relation between socio-demographic characteristics and quality of life of the study sample.

socio-demographic characteristics	quality of life			Total (175)	X2	p-value
	poor	moderate	good			
Age						
40-50	8(12.7%)	51(81.0%)	4(6.3%)	63(100.0%)		
51-60	9(11.7%)	64(83.1%)	4(5.2%)	77(100.0%)	10.19	.037*
>60	12(34.3%)	22(62.9%)	1(2.9%)	35(100.0%)		
Education						
Illiterate	12(27.3%)	29(65.9%)	3(6.8%)	44(100.0%)		
Primary\ preparatory	14(25.0%)	42(75.0%)	0	56(100.0%)	19.53	0.003
Secondary	2(5.7%)	31(88.6%)	2(5.7%)	35(100.0%)		
University	1(2.5%)	35(87.5%)	4(10.0%)	40(100.0%)		
Occupation						
House wife	21(20.6%)	76(74.5%)	5(4.9%)	102(100.0%)	3.02	0.55
Worker	8(11.1%)	61(83.3%)	4(5.6%)	73(100.0%)		
Marital status						
Single	2(50.0%)	2(50.0%)	0	4(100.0%)		
Currently married	14(11.3%)	103(83.1%)	7(5.6%)	124(100.0%)	0.07	11.63
Divorced	2(18.2%)	9(81.8%)	0	11(100.0%)		
Widow	11(30.6%)	23(63.9%)	2(5.6%)	36(100.0%)		
Family size						
2 to 4	4(26.7%)	11(73.3%)	0	15(100.0%)		
5 to 6	15(15.3%)	80(81.6%)	3(3.1%)	98(100.0%)	5.42	0.24
6 and more	10(16.1%)	46(74.2%)	6(9.7%)	62(100.0%)		
Crowded index						
2-3	0	14(87.5%)	2(12.5%)	16(100.0%)		
4-5	2(10.5%)	15(78.9%)	2(10.5%)	19(100.0%)	7.31	0.12
5or more	27(19.3%)	108(77.1%)	5(3.6%)	140(100.0%)		
income						
Not enough	24(28.6%)	60(71.4%)	0	84(100.0%)		
Enough	1(1.8%)	52(91.2%)	4(7.0%)	57(100.0%)	27.90	0.000*
More enough	4(11.8%)	25(73.5%)	5(14.7%)	34(100.0%)		
Socioeconomic status						

4. Discussion

Menopause is a transitional phase that is immediately prior to and after menopause, when clinical, biological, and endocrinological symptoms of menstrual cession commence, it occurring universally in all women who reach midlife. The timing of menopause as well as women's experience of menopausal symptoms varies between populations and within populations (Gharaibeh *et al*., 2010). The incidence of menopausal symptoms is influenced by socio-demographic/ sociocultural factors, economical stresses, general health status, and individual perception of menopause, genetic and racial differences and reproductive parameters like parity (Nisar & Sohoo, 2010).

The current study revealed that the mean age of study subjects was 54.0± 7.9 years, similar study conducted by Dhillon *et al.* (2006) and Palacios *et al.*

(2010) reported that the mean age at menopause was 51.14 ± 2.11years. This is slightly higher than studies done in Singapore (49.1 years), and Thailand (48.7 years). However, comparing our findings with previous researcher, ours still fall between the normal range of menopausal age. Another study conducted by Delavar & Hajiahmadi, 2011 who stated that the mean age in menopause was 47.7 years. This was similar to that reported by women from Shiraz (47.8 years), and Pakistan, however, it was lower than that of Iran (49.6 years), and the USA (51.4 years).The possible explanations for the relatively lower mean age in menopause were the differences in the definition of menopause, population sample and the survey method. Hormone replacement therapy in the perimenopausal period could be an important factor of delayed menopause in developed countries.

The number of highly educated women incorporated in the present study is less than the primary or preparatory and illiterate women, and less than two thirds of them were house wives and the rest of women were worker. Low proportion of women have high income this is agree with Rahman *et al.* (2011) who emphasized that the lowest proportion of women were highly educated (5.5%). However, 85.06% of the women were housewives and 14.93% of women were involved with paid work. The highest percentage of women was from families with average income, whereas the lowest were from families with high income and figures were 66.29% and 14.14% respectively.

The findings of the present study showed that the women in postmenopausal period suffered from severe different menopausal symptoms such as: musculoskeletal, hot flushes and sweating symptoms as well as sexual, bladder problem, dryness of vagina compared to premenopausal period. This may correlates with fluctuating levels of estrogen in the blood from premenopausal to postmenopausal period. While the Psychological symptoms either decline or remain stable in the postmenopausal women. These results are congruent with Ayatollahi *et al.* (2004) who found that the most common symptoms associated with menopause in Iranian women were reported as muscle pain (75.1%), night sweats (69%) and hot flushes (67.9%). Also In Malaysia, Jahanfar *et al.* (2006) who reported that the most common symptoms were found to be joint and muscle discomfort (84.3%), followed by anxiety (71.4%), physical and mental discomfort (67.2%), hot flushes and sweating (67.1%). These differences in frequencies of symptoms may be associated to differences of race, life style, culture, genetics and diet. For example musculoskeletal symptoms in women of menopausal age may be related to hormonal changes or, they may be due to women's roles within particular culture. In the study conducted by Waidyasekera *et al.* (2009) among Sri Lankan women the joint and muscle discomfort, physical and mental exhaustion and hot flashes were the most prevalent menopausal symptoms. This similar with Gharaibeh *et al.* (2010) who found that vasomotor signs were reported to have the highest scores for severity as manifested by hot flushes and night sweating. Also Ashrafi *et al.* (2010) showed that night sweats, joint and muscle pain and hot flashes are the most common symptoms associated with menopause in Iranian women. These findings were also noted by Rahman *et al.* (2010) emphasized that the frequency of sexual problems, bladder problems and vaginal dryness were experienced mainly by perimenopausal and postmenopausal group of women and it was also significant statistically in comparison to other menopausal status. This is disagreement with Dhillon *et al.* (2006) who reported that The classical presentation of menopausal symptoms; hot flushes, sweating and night sweats were noted to be lower (35.8%) in comparison to findings from studies done on western women which were reported to be from 45% to 75%. However, our findings of low menopausal classical symptoms were shared by studies done in other Asian countries

The present study found significant difference in the mean scores of the domain Physical, Psychological as well as environmental domain and the mean of the total scores of WHOQOL- Brief at different menopausal status, in postmenopausal compared to premenopausal women. This may be due to the high scores of MRS for different menopausal symptoms. We did not found significant difference in scores for social domain of WHOQOL- Brief which due to some factors like financial resources, access to health and social care. These results were supported by Nisar & Sohoo, 2010 who found significant difference in the mean scores of the domain (Physical, Psychological, Social) and the total scores of WHOQOL- Brief at different menopausal status, these findings were inconsistent with Ozkan *et al.* (2005) and Satoh & Ohashi (2005) who reported that there was no significant difference in the mean scores in the all domains and the total score of the quality of life. Also, in the study conducted by Yakout *et al.*(2011) who stated Poor scores for different items of quality of life were observed among the study subjects including physical, role, social and psychological limitation as well as sleep and energy.

Regarding the correlation between menopausal rating scale scores and WHOQOL- Brief scores, a negative significant relation was demonstrated between quality of life in social, environmental domains, and over all means score of quality of life and postmenopausal symptoms, where quality of life

adversely affected by postmenopausal symptoms among the postmenopausal women in the study subjects. This is in agreement with the results of Karaçam and Seker (2007) who observed a significant and moderately negative relation between total menopausal symptom scores and quality of life scores. On the same line, Nisar & Sohoo (2010) highlighted that there was a negative correlation between MRS scores and WHOQOL- Brief scores in all domains for postmenopausal women. Moreover, Yakout *et al.* (2011) emphasized that the negative significant relation was demonstrated between quality of life and postmenopausal symptoms, where quality of life adversely affected by postmenopausal symptoms among the postmenopausal Saudi women in the study subjects.

According to the relationship between socio-demographic characteristics and quality of life among the post-menopausal women in the study subjects, there were no statistical significance differences between quality of life and education, occupation, and family size. While there were a statistical significance differences between quality of life and age and family income. This contrast with Sahar *et al.* (2011) who found a significant correlation was observed between quality of life and their general characteristics including: education, occupation, cohabitation, family size as well as their gravidity. This also was asserted by Gharaibeh *et al.*(2010)) who stressed that a significant relationship between the severity and occurrence of menopausal symptoms and age, family income, number of children, perceived health status and menopausal status. in another study conducted by Yakout *et al.*(2011) who mentioned that a significant relation was observed between quality of life and their general characteristics including: education, occupation, cohabitation, family size as well as their gravidity.

5. Conclusion

Menopause is an important time in a woman's life. Her body is going through many changes that can affect her quality of life, her social life, her feelings about herself, and her functioning at work. It can be concluded that post-menopausal women in the study subjects experience high prevalence of menopausal symptoms that adversely affected their quality of life. The QOL of postmenopausal rural women were decreased in its scores due to the menopausal symptoms.

Recommendations

This study demonstrated the needs of the less developed community for more effort from health care providers to start further researches about the quality of life of menopausal women. Moreover, the health care provider should implement an educational program for women about the menopausal period and how to pass it safely.

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