Perimenopausal symptoms, quality of life and eating behavior in west Algerian women

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Abstract— *This study was conducted to find out the impact of menopausal transition symptoms on quality of life and eating behavior in west Algerian women.*

Subjects and methods: *A prospective cross sectional survey was conducted between February 22 and April 30, 2016 in Oran (west Algeria). Eighty (48±2 years) perimenopausal women participated to the study. A structured interview survey was developed on socioeconomic level, climacteric symptoms and quality of life. Daily energy expenditure (DEE) was assessed by an adapted questionnaire and food intake by a 24h "Recall and Record".*

Results. *Hot flushes, night sweats, palpitations, anxiety, headaches, memory loss and insomnia were the symptoms feeling by women. The quality of life assessment showed that 53% had a moderate quality of life (10 to 15 symptoms), 16% with poor quality of life (16-20 symptoms) whereas 25% had a good quality of life (5 to 10 symptoms) and 6% of women had an excellent quality of life (≤ 5 symptoms). At this time of the menopausal transition, 64% reported modification in their eating behavior.*

Conclusion: *Clinical symptoms of perimeanopausal period influence the quality life of women on menopausal transition.*

Keywords: Perimenopause, Quality of life, Behavior food

I. INTRODUCTION

Peri-menopause is the tormented period that precedes menopause and is reflected by symptoms of hyperestrogenism or hypoestrogenism, evidence of the progressive weakening of hormonal secretions.[1] It spreads over 2 to 8 years preceding menopause and 1 year after the final menstruation. [2]

Menopause is defined as the permanent cessation of menstruation. The age at which it occurs is between 45 and 55 years.[3] Menopause is a physiological event in the women's life. Natural menopause is recognized after 12 months of amenorrhea that is not associated with a pathologic cause. [4] It is caused by aging of ovaries which leads to decline in the production of ovarian estrogen and progesterone. That occurs naturally or is induced by surgery chemotherapy or radiation. The deficiency in these hormones elicits various somatic, vasomotor, sexual and psychological symptoms that impair the overall quality of life of women. [5]

During the menopausal transition, women undergo various physical, psychological and social changes that can affect their quality of life. [6] Several symptoms including hot flushes, night sweats, vaginal dryness, depression, irritability, headaches and sleep disorders, cognitive impairment may occur more frequently in this period. [2]

These symptoms may exist at other times in their lives, so none can be considered specific to perimenopause. This symptomatology can also vary from the perimenopausal period to the menopausal and post-menopausal period. [7] The severity of these symptoms and the degree to which they interfere with the activity and quality of life is variable in women. Climacteric symptomatology may be transient (one or two years) but may last much longer in some women. [8]

It is quite evident that a severe symptomatology with the "domino" effect (nocturnal sweats altering sleep, tiredness impairing cognitive faculties, physical performance and therefore self-esteem and finally sexuality disorders) can profoundly affect the personal, social and quality of life of some women. [9]

The broad definition of quality of life includes areas such as physical health, psychological status, and level of independence, social relationships, environmental characteristics and spiritual aspirations. [10] The symptoms of menopause have a negative impact on the quality of life, especially in women on menopausal transition. [6]

Quality of life as a clinical measure is a complicated and controversial construction requiring scales to be evaluated. Some are specific to the menopausal transition, others have a broader view of health, including questions about physical, psychological function and are global scales of quality of life. [10] Studies showed that physical activity has positive effect on quality of life regardless of age, activity and health status. [11,12] Physical activity is also associated with many health benefits, including reduced risk of cardiovascular disease, metabolic syndrome, obesity, cancer, osteoporosis and depression. There is evidence that regular physical activity can be an effective way to prevent or alleviate symptoms related to menopause. [2]

Researchers are focused on eating disorders among women aged between 40 and 65 years.[13, 14,15] Indeed, around the average age of perimenopause an increase in eating disorders and related symptoms are also observed in women.[14,15] The eating disorder in women aged 40 to 60 years was found significantly higher in perimenopausal women than in premenopausal women. [16]

There is lack of studies on the relationship between menopause transition and the quality of life and food behavior in Algerian women. The aim of this study was to find out the perimenopausal symptoms, quality of life and eating behavior in west Algerian women.

II. METHODOLOGY

A prospective cross sectional study was carried out between February 22 and April 30, 2016 in 80 (48 ± 2 years) perimenopausal women, recruited at the Public Proximity Health Center, Misserghine, Oran. The aim of this study was explained to all subjects and the investigation was carried out with their consent.

For this purpose, a questionnaire was developed to collect all the information needed to assess socio-economic status, quality of life in the form of various clinical symptoms, feeding behavior and daily energy expenditure in various meals. Information of the subjects were recorded on a pre designed and pre-tested performa. To correct and validate all questionnaires, a pre-survey was conducted in 10 perimenopausal women to check errors, rehearsals and poorly formulated questions.

The clinical record was used to collect all anthropometric characteristics of women such as; age, height, weight, hip circumference, waist circumference and blood pressure. For socio-economic assessment, educational, occupational, family responsibilities etc. were asked.

Food behavior and their feeding habits were also assessed such as importance of breakfast, consumption of meals outside the home, consumption of meals and food preference. To estimate food consumption a 24-h "Recall and Record" method was used.

Quality life was assessed as per various symptoms like hot flushes, night sweats, depressed mood, sleep disorders, sexual difficulties, cognitive disorders, vaginal dryness, urinary incontinence, joint pain etc. Quality life was considered as excellent, good, acceptable and poor when women had equals to or less than five symptoms, 6-10 symptoms, 11-15 symptoms and more than 15 symptoms respectively.

Statistical Method: Data thus collected were entered in MS Excel worksheet 2007 as master chart. These data were tabulated and analyzed as per objectives. Socioeconomic levels, clinical symptom frequencies, quality of life and eating behavior were calculated by the frequency. Quantitative data like age, menstrual cycle etc were assessed as mean and standard deviation.

III. RESULTS

Out of these 80 women, 62 (77.5%) were married, 5 were unmarried, 6 were divorced and 7 were widowed. It was also observed that 71.25% were responsible for their family and 55% were having family size of more than 4 persons. Majority of women were lower secondary level educated and unemployed. (Table 1).

Table 1
Profile of Study Population

S. No.	Variables	Number	%
1	Marital Status		
	Married	62	77.5
	Unmarried	5	6.25
	Divorced	6	7.5
	Widowed	7	8.75
2	Family responsibility		
	Yes	57	71.25
	No	23	28.75
3	Number of Family Members		
	≤ 4 people	36	45
	> 4 people	44	55
4	Level of Education		
	Illiterate	9	11.25
	Primary	16	20
	Lower secondary	20	25
	Secondary	18	22.5
	University	17	21.25
5	Employment status		
	Employee	29	36.25
	Unemployed	51	63.75

Mean age of these women was found 48±2 years, mean weight was 74±11 Kg, mean body mass index (BMI) found 29±4 kg/m2 and mean waist size/ hip circumference ratio was found 0.86±0.06. Mean menstrual cycle was of 30±2 days and mean menstrual period was 5±1 days. (Table 2).

Table 2
Quantitative Variables of Study Population

S. No.	Quantitative Variables	Mean	SD
1	Age (Years)	48	2
2	Size (in Meter)	1.6	0.07
3	Weight (Kg)	74	11
4	BMI (Weight (kg) / Size² (m²))	29	4
5	Waist Size/Hip Circumference	0.86	0.06
6	Menstrual Cycle (Days)	30	2
7	Menstrual Duration (Days)	5	1

Out of these women 66% have a regular menstrual cycle compared to 34% of women with an irregular cycle. Results showed that 75% of women used contraception, 69% on oral contraceptives and 31% of them used an intra-uterine device, while 25% of women do not used contraceptives. (Table 3) questions.

Table 3
Variables related to Menstrual Cycle and Contraceptive use of Study Population

S. No.	Variables	Number	%
1	Menstrual Cycle		
	Regular	62	66
	Irregular	5	34
2	Contraceptive use		
	Yes	57	75
	No	23	25
3	Type of Contraceptive in use		
	Oral	36	69
	IUD/Implants	44	31

Quality of life of these women was assessed by having various symptoms (Table 4). It was observed that 71% of women gained weight during menopausal transition. Other symptoms that affect women's quality of life are like hot flushes in 81% of women, night sweats in 56%, palpitations in 70%, anxiety in 79%, headaches in 75%, memory loss in 60% and sleep disturbed in 67% of women. Hair loss, urinary incontinence, urinary tract infection and vaginal dryness were noted in 35% of women.

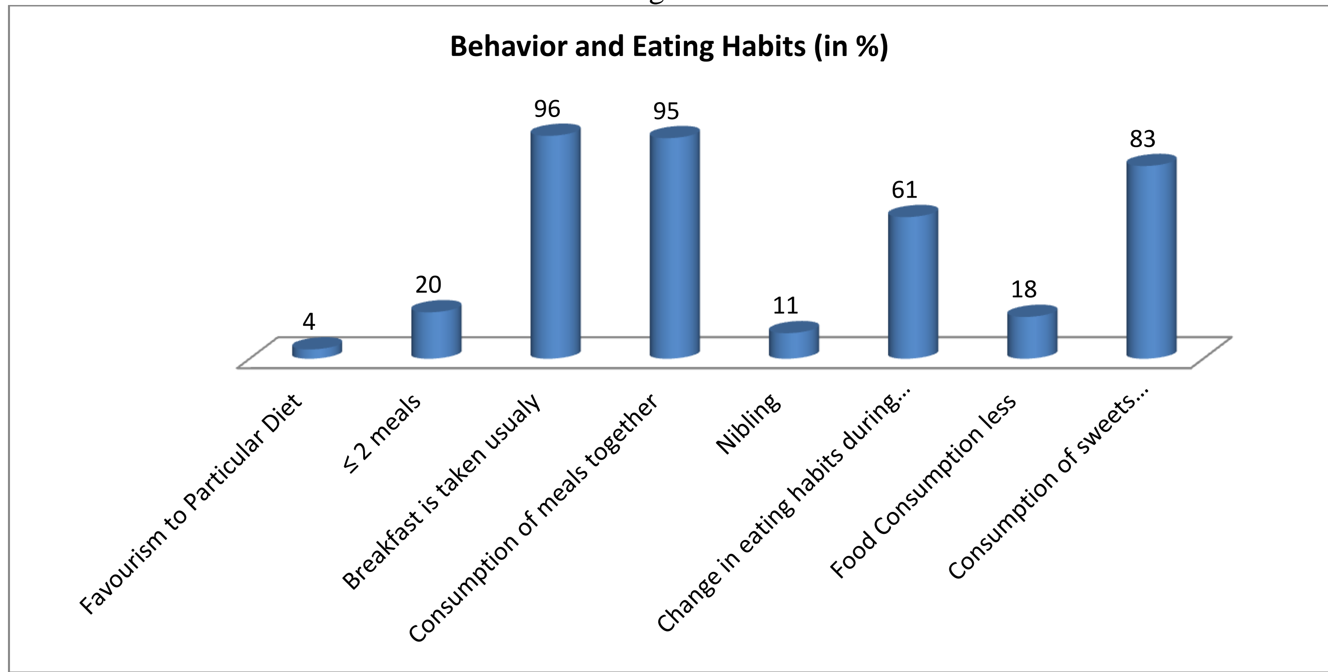
Table 4
Clinical Symptoms wise distribution of Study Population

Clinical Symptoms	Present (%)	Clinical Symptoms	Present (%)
Weight gain	71	**Breast pains**	81
Hot flashes	54	**Pain in the joints**	84
Night sweating	56	**Heavy legs**	67
Daytime sweating	21	**Leg cramps**	5
Insomnia	58	**Feeling tired**	89
Disturbed sleep	67	**Headaches, migraines**	75
Anxiety, Sadness, Nervousness	79	**Hair Loss**	39
Abdominal bloating	70	**Urinary incontinence**	34
Palpitations	70	**Repeated urinary infection**	29
Memory gaps	60	**Vaginal dryness**	43

Majority of women eat 4 meals a day with the note that only 20% women used to have ≤ 2 meals per day and the breakfast of which was unavoidable in the almost all (96%). Majority (95%) of women eat together with their families and only 5% of women who eat individually. In the period of menopausal

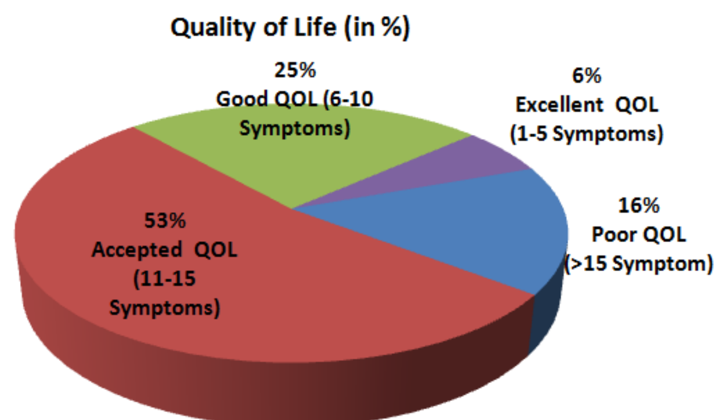
transition, 61% of women reported changes in their eating behavior out of which 50% reported that they consumed more food and 18% who consumed less food than before. The results showed that 83% of women consumed a lot of sweets and fatty products in the form of snack, chocolates, sweets etc than before this period. In addition, for the most part also preferred traditional dishes. The minority of women nibbled and eating outside the house. (Figure 1)

Figure 1



When quality of life of these women was assessed as per the number of various symptoms mentioned in table no.3, women having more than 16 symptoms i.e. poor quality of life was found in 16% and only 6% were having excellent quality of life (≤ 5 symptoms). Out of these women, 53% women having 11-15 symptoms i.e. acceptable quality of life was found whereas 25% were having good quality of life (6-10 symptoms). (Figure 2)

Figure 2



IV. DISCUSSION

The aim of this study was to assess the perimenopausal symptoms, quality of life and food behavior in west Algerian women. Mean menstrual cycle was of 30±2 days and mean menstrual period was 5±1

days. This variation may be more because of the critical threshold these become increasingly resistant to gonadotropins[19] The intensity of this phenomenon varies from one follicle to another. Indeed, while some people no longer have the capacity to respond to FSH, others have retained a reserve of FSH sensitivity sufficient to over-respond to the high levels of circulating FSH in these patients. Thus, the length of the cycles will become variable depending on whether or not there is terminal follicular maturation.[9]

Various symptoms found in this study showed that hot flushes, night sweats, palpitations, anxiety, headaches, memory gaps, disturbed sleep were the most frequent in this period influencing quality of life of the women. Rui-xia et al.[20] also reported their observations well in resonance to this study. Hot flushes were the most frequent symptom in perimenopausal women due to the sudden fall in estrogen levels during periods of ovarian hypoactivity that disrupt certain neural systems involved in temperature regulation.[19] Night sweating, palpitations, difficulty falling asleep, disturbed sleep were influenced by hot flushes. Also for anxiety, nervousness and sadness play a very important role in altering well-being of women. Several studies indicate that the perimenopausal period was a period at a higher risk of developing depressive syndrome than the confirmed menopausal period, especially when there was a personal history of depression.[9, 21]

In this study psychological symptoms were found in 79% of women had a depressed mood problem, which was quite less i.e. 41% in a study conducted by Manal *et al* (2015).[22]

This study showed that 81% of women suffered from hot flashes and night sweats. These observation were in line of observations of Yakout *et al*[23] who noted that 85% of women had a severe degree of hot flushes and night sweats in their study among Saudi women.

This study also showed that 43% of women suffered from vaginal dryness and sexuality, while Yakout *et al* [23] noted that more than half (62.5%) of women had sexual problems.

In this study, urinary incontinence or urinary tract infections were found in 34% which was almost similar in a study conducted by Manal *et al*[22] who reported that 36% of women had urinary problems. But Yakout *et al*[23] reported 67% had these problems.

The quality of life was assessed by the number of symptoms of perimenopause, the maximum score was 20 symptoms and the latter were divided into 4 classes: excellent, good, accepted and poor. In the present study, it was found that quality of life of these women was found of poor i.e. women having more than 16 symptoms in 16% and only 6% were having excellent quality of life (≤ 5 symptoms). Out of these women, 53% women having 11-15 symptoms i.e. acceptable quality of life was found whereas 25% were having good quality of life (6-10 symptoms). Manal *et al* [22] conducted a study in Qena City (Egypt) in year 2015 and reported that 57% had an average quality of life, 6% had a good quality of life, 35% a bad quality of life and 2% had an excellent quality of life.

V. CONCLUSION

It can be concluded that perimenopausal women suffer from several climates (hot flushes, night sweats, palpitations, anxiety, nervousness, vaginal dryness, etc.), which may be the causes of several diseases that occur after Menopause such as cardiovascular disease, osteoporosis and impairment of cognitive function. For this, a healthy and balanced diet associated with regular physical activity was recommended in this period.

CONFLICT OF INTEREST

None declared till now.

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