Menopausal Symptoms and Health-Promoting Lifestyle Behaviors among Women in Tanta, Egypt: An Analytic Cross-sectional Study

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Abstract:
Background: Although menopause is a normal physiologic stage of women's life, a considerable proportion of them are likely to experience various symptoms during this period. Menopausal symptoms could adversely affect the physical, mental, and social well-being of menopausal women. **Objectives:** To study the relationship between health promoting lifestyle behaviors and menopausal symptoms among Egyptian women. **Methods:** Two hundred menopausal women were recruited randomly from all attendees presented to outpatients' clinics of Tanta University Hospital. For all participants, socio-demographic, medical profile, Health Promotion Lifestyle Profile-II (HPLP-II) and Menopause Rating Scale (MRS), were assessed through self-administered questionnaire or personal interview. **Results:** The average of total Health-Promoting Lifestyle Profile-II score was moderate among the studied menopausal women (120.38±16.63), with the highest scores of its subscales were for "Spiritual" domain followed by "Interpersonal Relations" and the lowest scores were for "Physical Activity" and "Health-responsibility" subscales. A significant negative statistical correlation was found between health-promoting lifestyle behaviors scores (total and subscales), and menopausal symptoms. critical Factors (age, educational level, income, marital status, and occupation) had significant statistical association with health-promoting behaviors. **Conclusion:** Health promoting behavior correlated negatively with menopausal symptoms in the participating women. Health education programs about health-promoting lifestyle behaviors could reduce women's menopausal symptoms and improving their quality of life.
Keywords: Menopause, Well-being Practices, Women

Introduction:

Recently, many health systems developed their programs based on family health. In this regard, women are at the core of family health as they not only manage other family members' health condition, but also represent the main guide of education and promotion of a healthy lifestyle to the next generations. Moreover, women constitute the bigger part of population in most age groups.

Furthermore, their average life expectancy is longer than men even though they have a higher disease burden. Women must face specific problems arising from their natural physiological conditions, such as menopause. [1] Overall, by increasing life expectancy, more than one third of a woman's life is spent in menopause, which cause many of physical and psychological changes in women. [2]

Although menopause is a normal physiological stage of women's life, a significant proportion of women are likely to have various problems during this period. Moreover, epidemiological studies have shown that approximately 65-85% of the women go through menopause symptoms, including hot flashes, sweating, palpitation, sleep disorder, irritability, lethargy, depressed mood, insomnia, aching in muscles and joints, short breath, weight gain, increased facial hair, anxiety, sexual problems, and urinary tract problems.

These symptoms decrease women's health and affect their biological, psychological, and social health.[3,4] Health promotion and lifestyle

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improving are basic requirements in human societies. Health promotion is defined as the science and art of lifestyle change for achieving health perfection. The main aim of health promotion is to achieve healthy lifestyle behaviors. Healthy lifestyle behaviors include self-actualization, health responsibility, exercise, nutrition, interpersonal relations, and stress management.[5,6]

Health-promoting behaviors are one of the main effective components of health as a known underlying factor in the prevention of many diseases. Health promotion and prevention of diseases are associated with these behaviors, so following these health-promoting behaviors is one of the best ways by which people can protect and control their health.[7] Health promotion includes behaviors in which the individual selects proper nutrition, regular exercise, avoid destructive behaviors and drugs, protection against accidents, early diagnosis of symptoms physical and emotional-related diseases, control of feelings, away from stress and fatigue, and sleep for 7 to 8 hours.[8] Walker et al. have categorized health-promotion behaviors based on the health promotion model into six subscales: health responsibility, physical activity, nutrition, spiritual growth, stress management, and interpersonal relations.[9]

Women in menopause should be familiar and aware with dimensions of healthy lifestyle and should be encouraged to apply health-promoting behaviors for controlling signs and side-effects of menopause. The present study was conducted to assess the health-promoting lifestyle behaviors and menopausal symptoms among women in Tanta, Egypt.

Methods:

Study Design: The present study followed a cross-sectional analytic study design.

Study Setting: The study was carried out at the outpatient clinics of Tanta University Hospital, Egypt; over a period of three months from May to July 2019. This clinic serves a large geographic area in the Delta region in Egypt, with a wide spectrum of sociodemographic characteristics of the population.

Participants: All female attendees aged 45 years and more, presented to the general reception department of the outpatient clinics (patients and their companions), were interviewed by the researchers to ensure that they are have been in menopause for at least one year, having menopausal symptoms, didn't use hormonal replacement therapy and their menopause was not as result of surgical intervention or radiation therapy. All females fulfilling the previous characteristics were eligible to be included in the study. Study subjects were recruited by systematic random technique. The time needed for filling the questionnaire for individual case was between 15-20 minutes in average. The target sample size of 200 participants was achieved through a period of three months, from May to July 2019.

Tool: The data of this study was collected using a questionnaire sheet which was self-administered for educated participants, or by interviewing the illiterates and lower educated

ones. From every participant the following data were collected:

i) Sociodemographic and health profile; age, residence, marital status, number of offspring, family income, educational level, employment, family accommodation, smoking, body weight status and chronic disease history.

ii) Menopause Rating Scale (MRS); MRS was developed by Heinmann et al. in 2003[10]. It consists of 11 items (symptoms or complaints) categorized into three subscales, namely, somato-vegetative, psychological and urogenital symptoms. The somato-vegetative subscale includes "sweating/hot flushes, heart discomfort, sleep problems, and joint and muscle problems". The psychological subscale includes "depressive mood, irritability, anxiety, and physical/mental exhaustion". Lastly, the urogenital subscale includes "bladder problems, sexual problems, and vaginal dryness". The items are scored on a 5-point Likert scale ranging from 0 (no symptom) to 4, (1 = mild, 2= moderate, 3 = severe, 4 = very severe) depending on the severity of the complaints perceived by women. The total score of MRS is computed by summing up the points of each item and ranges between 0 (asymptomatic) and 44 (highest degree of complaints). The total score is determined by summing up the scores for each item. Higher MRS scores denote more severe symptoms. A total MRS score of 17 or greater was defined as severe degree of symptoms. Heinemann et al. in 2004 have used cutoff values to define severe symptoms

according to each subscale; somatic (>8), psychological (>6), and urogenital (>3).[11]

iii) Health Promotion Lifestyle Profile-II (HPLP-II); this instrument was designed by Walker, Sechrist and Pender in 1987 to measure health promoting behaviors.[9] Fifty two health promoting lifestyle behaviors are measured in a four point Likert scale for each item ranging from 1 (never) to 4 (routinely). The HPLP-II includes six subscales: health responsibility (9 items), physical activity (8 items), nutrition (9 items), spiritual growth (9 items), interpersonal relationships (9 items), and stress management (8 items). The overall score of the instrument ranges from 52 to 208, where each domain has its own separate score and higher scores indicate a better adherence to health promoting behavior. In this way, scores 52-103 means a low level of adherence to these behaviors and scores 104-155 and score above 156 imply a moderate and high level, respectively. Additionally, the total score of each subscale is calculated by computing the mean of responses to that subscale's items. The total score is obtained by calculating the mean of responses of all the 52 items.

Ethical Considerations: Approvals of the Institution Review Board and the administration of the outpatient clinic were obtained prior conduction of the study. Informed consent was obtained from each study participant. Explanation the purpose of the study with emphasis on their right to withdraw from the study at any point was assured. Privacy of the

participants and confidentiality of the collected data were guaranteed.

Data management: The collected data were organized, coded, tabulated and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 19, SPSS Inc. Chicago, IL, USA). For quantitative data, range, mean and standard deviation were calculated. For qualitative data, frequency and percentage was used. For comparing means of two groups of parametric data of independent samples, student t-test was used. For comparing more than two means of parametric data, F value of ANOVA test was calculated. Statistical significance level was adopted at $p < 0.05$.

Results:

Table (1) shows basic characteristics of the studied menopausal women from outpatient clinic in Tanta University Hospital. It was observed that the highest frequency of them were (83.0 %) aged more than 55 years and 76% of them were unemployed. More than half (52.0%) of them were illiterate. Three quarters of study participants (75%) were rural residents. Most study participants were married (66%) and the great majority of them declared to have enough income (82%). Also, it was observed that nearly all the studied menopausal women (96%) were living in cohesive families and most of them had chronic diseases and overweight/obese (73% and 77%), respectively.

Table (2) shows scores and ranks of Health-Promoting Lifestyle Profile-II (HPLP-II) domains among the studied menopausal women from outpatient clinic in Tanta university hospital. Regarding the total Health-Promoting Lifestyle Profile-II, it was found the studied menopausal women had moderate health promoting behavior total score (120.38±16.63). Regarding health promoting behavior subscales, it was observed that the highest scores were spiritual domain followed by Interpersonal Relations and the lowest scores were for physical activity and Health-responsibility.

Table (3) shows scores and ranks of severity of Menopause Rating Scale (MRS) subscales among the studied menopausal women from outpatient clinic in Tanta University Hospital. Regarding the total Menopause Rating Scale (MRS) Score, it was found the studied menopausal women reported severity of symptoms of Menopause Rating Scale (MRS) Score of (17.94±3.90). In relation to Menopause Rating Scale (MRS) subscales ranking, it was observed that the first rank was for Somato-vegetative symptoms (1.96±0.55) followed by Psychological symptoms (1.45±0.63), and Urogenital symptoms (1.44±0.70), respectively.

Table (4) shows correlation between of Menopause Rating Scale (MRS) (subscales and total scores) and Health-Promoting Lifestyle Profile-II (domains and total scores) among the studied menopausal women from outpatient clinic in Tanta university hospital. There was negative significant correlation between health promoting behavior total score and menopausal symptoms total scores (r= -0.865, p=0.0001). Regarding correlation between health promoting behavior total scores and menopausal symptoms subscales scores; a significant

negative correlation between HPLP-II total scores and menopausal symptoms subscales scores namely Psychological symptoms and Urogenital symptoms (r=-0.543 and -0.915, respectively) and p=0.0001. On the other hand, no correlation between total HPLP-II scores and Somato-vegetative symptoms subscale of Menopause Rating Scale (MRS) (r= 0.086, p= 0.393).

Table (5) highlights the relation between total Menopause Rating Scale (MRS)score and sociodemographic and health characters of study group; it was found that there is a significant relation between severity of menopausal symptoms and rural residence, married/widowed, lower educational level, more offspring, living in a cohesive family and smokers (p<0.05). On the other hand, the relation between total HPLP-II scores and the same variables of study group, it was found that there is a significant relation between better health promoting profile and being married, with lower number of offspring, higher educational levels, employed and living in a cohesive family (p<0.05).

Discussion:

Physiological changes of menopausal period are very important as they influence psychological, social, and emotional aspects of women life. The improvement of health-promoting lifestyle behaviors is one of the effective measures to moderate these symptoms by facilitating the women to enhance their lifestyle behaviors through making proper choices.[12] The current study revealed that the

studied menopausal women had moderate health promoting behavior total score. This in line with a study was done by Bakouei et al 2017 in Iran. [13] These results are also like another study conducted by Park S among Korean perimenopausal middle-aged women. [14] In a study among Taiwanese women; the overall score for health promoting lifestyle behaviors was within the low range, a considerable predictor was attributed to the inability to read in Chinese. This indicates cultural differences between different countries. [15]

Regarding health promoting behavior subscales, it was observed that the highest scores were in the spiritual domain followed by interpersonal relations and the lowest scores were for physical activity and health-responsibility. This in concordance with another study found a high mean score of spiritual domain which is similar to the menopausal Iranian women of a fore mentioned study.[13] This can be attributed to the Islamic rules in spiritual enhancement. Spirituality gives people meaning and direction in life and provides a harmonious and integrated relationship between the internal forces. Moreover, our study participants' health responsibility scores were low, and these results were in concordance with other studies [16.17]. It could be explained as individuals did not consider their health control as a necessity. Mostly, subjects will not do anything to promote his/her health unless he/she has problems with it.

Similarly, the high score in the HPLP-II subscales of women was found for interpersonal

relations and spiritual growth and the lowest for the physical activity subscale have been reported in another study similar with our findings. [18] The women who scored highest in interpersonal relations might have been influenced by the local cultures that have a cordial relationship in their families as well as the society.

In this study female have the lowest score in physical activity; this is similar to a study in 2012 that was conducted on middle-aged Iranian women.[16] In another study that was conducted among nurses working in Ankara University Medical Faculty Hospital in Turkey, it was found that 77.0% of them were overweight which was attributed to the lack of physical activity.[19] Women in general, especially in traditional communities, do not perceive physical activity as part of a healthy lifestyle because of cultural or personal reasons. In general, women are distinctive in mental health dimensions of HPBs such as stress management, interpersonal relations, and spiritual growth. However, their behaviors in the physical health dimension (physical activity, health responsibility and nutrition) that may negatively impact their physical health later in life.

On the other hand, the relation between total HPLP-II scores and the same variables of study group, it was found that there is a significant positive relation between better health promoting profile and being married, with lower number of offspring, higher educational levels, employed and living in a cohesive family. This study also shows a significant correlation for total health behaviors and weight. A similar study on postmenopausal women also showed a significant relationship between the whole score of health promoting behavior and lower body mass index of women and their level of education. [20]

Educational level was one of the effective factors in health promoting behaviors; women with higher educational level had better status which is in concordance with another study.[21] In the current study, it was found that with increase in the number of children, health promoting life style status got poor, which was in concordance with the study by Enjezab et al.[16] but Wang J and Geng L[22] did not report significant statistical relationship in their study. Women with more children have less time to take care of themselves in comparison with those with fewer children. Opposite to expected, lack of statistical difference in the HPLP-II subscales between the employed women and housewives was found, this could be explained by the opposing effects of negative factors as increased stress and positive factors such and self-confidence. [23] As predicted, the current study showed a positive significant relationship between the economic status and the whole score of lifestyle. This finding was in concordance with the studies conducted by Wang J and Geng L in 2019.[22] Adequate income is an important factor in individual's effective use of health care services. Additionally, financial stability has a positive effect on health promoting behaviors such as

using appropriate sport facilities and having healthy nutrition.

Regarding the total Menopause Rating Scale (MRS) score, it was found the studied menopausal women reported a high severity of symptoms of Menopause Rating Scale (MRS) score. Regarding the subscales of Menopause Rating Scale (MRS ranking, it was observed that the first rank was for Somato-vegetative symptoms followed by Psychological symptoms and the last was the Urogenital symptoms. This in line with a study assessing the severity of the menopausal symptoms and showed that nearly half of the participants had severe total menopausal symptoms. More than two-thirds had mild to moderate somatic symptoms, whereas more than half of them had psychological symptoms and severe urogenital symptoms. This was explained by that majority of menopausal women were not aware about hormone replacement therapy that can alleviate the severity of menopausal symptoms. [23] On the other side, Farahat et al.[24] stated that more than one-third of women had urinary bladder problems in their study among women in an Egyptian village. The reason behind severity of symptoms is poor knowledge that may be due to inappropriate sources of information. Knowledge of menopause was found to be crucial in improving ability to manage menopause.

Regarding correlation between Menopause Rating Scale (MRS) (subscales and total scores) and Health-Promoting Lifestyle Profile-II (domains and total scores), among the studied menopausal women, there was negative significant correlation between health promoting behavior total score and menopausal symptoms total scores. Regarding correlation between health promoting behavior total scores and menopausal symptoms subscales scores; a significant negative correlation between HPLP-II total scores and menopausal symptoms subscales scores namely, Psychological symptoms and Urogenital symptoms. On the other hand, no correlation between total HPLP-II scores and Somato-vegetative symptoms subscale of Menopause Rating Scale (MRS). This is in agreement with findings of the study conducted by J. Moilanen et al. [25] on Finnish post-menopausal women that proved a relationship between menopause symptoms and lifestyle. Based on these results, unhealthy lifestyle could increase the occurrence and severity of menopausal symptoms. Therefore, the unhealthy lifestyle positively correlates with the severity of menopause symptoms. Unhealthy lifestyle is one of the risk factors for cardiovascular disease and osteoporosis in menopausal women, which can increase the incidence and severity of menopausal symptoms. [26] Debra Anderson carried out a study on Australian postmenopausal women and proved that a multidimensional intervention through implementation of a twelve-week educational program on healthy lifestyle was effective in boosting health-promoting behaviors and alleviating menopausal symptoms.

The results of post-test of that study showed a significant reduction in psychological manifestations, hot flushes, night sweats, and physical conditions in the group that had received face-to-face education and counseling.[27] Regarding the relation between total Menopause Rating Scale (MRS) score and socio-demographic and health characters of study group, it was found that there is a significant relation between severity of menopausal symptoms and rural residence, married, lower educational level, more offspring, living in a cohesive family and smokers. These results were supported by Bener et al. (2016) who studied psychological symptoms in menopausal Arab women, and reported that there were statistically significant differences between menopausal symptoms regarding age, educational levels, occupation status, and place of living.[28]

Limitations: The study was conducted in a governmental hospital, so presentation of females with high economic levels was not guaranteed.

Conclusions: The results of the study showed that menopausal women's health promoting lifestyle status was average. Women's highest mean scores were in "spiritual growth" and lowest mean scores were in 'physical activity". Sedentary lifestyle is an important threat to postmenopausal women. The study also concluded that menopausal women reported a high severity of symptoms of Menopause Rating Scale (MRS). The first rank was for Somato-vegetative symptoms followed by

Psychological symptoms, and Urogenital symptoms, respectively. There was negative significant correlation between health promoting behavior total score and menopausal symptoms total scores. Moreover, a significant negative correlation between HPLP-II total scores and menopausal symptoms subscales scores namely, psychological, and urogenital symptoms. On the other hand, no correlation between total HPLP-II scores and Somato-vegetative symptoms subscale of Menopause Rating Scale (MRS). Regular training programs in the field of menopause and healthy lifestyle are very necessary to empower postmenopausal women to control and reduce the menopausal symptoms. One of the most important duties of health settings is taking care of postmenopausal women and to explain health promoting behaviors, in addition to designing and performing educational and interventional plans to create motivation towards a healthy lifestyle.

Conflict of Interest: There was no conflict of interest as well.

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Table (1): Basic Characteristics of the Studied Menopausal Women from Outpatient Clinic in Tanta University Hospital (N=200)

Variables	The studied menopausal women (n=200)	
	No.	%
Age years:		
▪ 45- < 55	34	17.0
▪ ≥ 55	168	83.0
Residence:		
▪ Urban	50	25.0
▪ Rural	150	75.0
Marital status:		
▪ Married	132	66.0
▪ Widow	56	28.0
▪ Divorced	12	6.0
Number of offspring:		
▪ < 3	70	35.0
▪ 3- 4	54	27.0
▪ ≥ 5	76	38.0
Education level:		
▪ Illiterate	104	52.0
▪ Read and write	32	16.0
▪ Secondary school	40	20.0
▪ University	24	12.0
Employment:		
▪ Employed	48	24.0
▪ Unemployed	152	76.0
Family income:		
▪ Enough	164	82.0
▪ Not enough	36	18.0
Accommodation:		
▪ With their family	192	96.0
▪ Not living with their family	8	4.0
Type of family:		
▪ Cohesive family	192	96.0
▪ Disjoined family	8	4.0
Smoking:		
▪ Yes	22	11.0
▪ No	178	89.0
Perceived overweight /obesity:		
▪ Yes	154	77.0
▪ No	46	23.0
Suffer from chronic disease:		
▪ Yes	146	73.0
▪ No	54	27.0

Table (2) Scores and Ranks of Health-Promoting Lifestyle Profile-II (HPLP-II) Domains among the Studied Menopausal Women from Outpatient Clinic in Tanta University Hospital (N=200)

Health-Promoting Lifestyle Profile-II (HPLPII) domains	No. of items (Score range)	Scores and ranks of HPLPII domains among of the studied menopausal women (n=200)		
(Each item was scored 1-4)		Range Mean±SD	Range Mean±SD/No. of items	Rank
▪ **Health-responsibility**	9 (9-36)	13-27 19.44±4.59	1-3 2.16±0.51	**5**
▪ **Physical Activity**	8 (8-32)	8-21 11.43±3.68	1-3 1.43±0.46	**6**
▪ **Nutrition**	9 (9-36)	16-27 20.89±2.86	2-3 2.32±0.32	**4**
▪ **Spiritual Growth**	9 (9-36)	14-36 25.52±5.34	1-4 2.84±0.59	**1**
▪ **Interpersonal Relations**	9 (9-36)	14-36 24.32±5.40	1-4 2.70±0.60	**2**
▪ **Stress Management**	8 (8-32)	12-31 18.78±4.53	1-4 2.35±0.57	**3**
Total HPLPII Scores	**52 (52-208)**	**95-161 120.38±16.63**		

Table (3): Scores and Ranks of Menopause Rating Scale (MRS) Subscales among the Studied Menopausal Women from Outpatient Clinic in Tanta University Hospital (N=200)

Menopause Rating Scale (MRS) symptoms subscales	No. of items (Score)	Scores and ranks of MRS subscales among of the studied menopausal women (n=200)		
(Each item was scored 0-4)		Range Mean±SD	Range Mean±SD/No. of items	Rank
▪ **Somato-vegetative symptoms**	4 (0-16)	3-12 7.83±2.19	1-3 1.96±0.55	**1**
▪ **Psychological symptoms**	4 (0-16)	1-10 5.80±2.51	0-3 1.45±0.63	**2**
▪ **Urogenital symptoms**	3 (0-12)	0-7 4.31±2.09	0-2 1.44±0.70	**3**
Total Menopause Rating Scale Scores	**11 (0-44)**	**12-27 17.94±3.90**		

Table (4): Correlation between Scores of Menopause Rating Scale (MRS) Subscales aAnd Scores of Health-Promoting Lifestyle Profile-II (HPLP-II) Domains among The Studied Menopausal Women from Outpatient Clinic in Tanta University Hospital (N=200).

Health-Promoting Lifestyle Profile-II (HPLP-II) domains	Scores of Menopause Rating Scale (MRS) subscales of the studied menopausal women (n=200)			
	Somato-vegetative symptoms	Psychological symptoms	Urogenital symptoms	Total MRS scores
	r p	r p	r p	r p
▪ **Health-responsibility**	-0.107 0.291	-0.367 0.0001*	-0.192 0.056	-0.279 0.005*
▪ **Physical Activity**	-0.160 0.112	-0.215 0.032*	-0.541 0.0001*	-0.518 0.0001*
▪ **Nutrition**	-0.701 0.0001*	-0.177 0.078	-0.519 0.0001*	-0.499 0.0001*
▪ **Spiritual Growth**	-0.084 0.408	-0.401 0.0001*	-0.896 0.0001*	-0.404 0.0001*
▪ **Interpersonal Relations**	-0.033 0.745	0.145 0.151	-0.920 0.0001*	-0.447 0.0001*
▪ **Stress Management**	-0.732 0.0001*	-0.690 0.0001*	-0.893 0.0001*	-0.572 0.0001*
Total HPLP-II scores	0.086 0.393	-0.543 0.0001*	-0.915 0.0001*	-0.865 0.0001*

*Significant ($P<0.05$)   r=Correlation Coefficient

Table (5): Total Menopause Rating Scale (MRS) and Total Health-Promoting Lifestyle Profile-II (HPLP-II) in Relation to Basic Characteristics of the Studied Menopausal Women from Outpatient Clinic in Tanta University Hospital (N=200).

Basic characteristics	Total scores of the studied menopausal women (n=200)			
	Total MRS scores	t-test of F value	Total HPLP-II scores	t-test of F value
	Mean± SD	p	Mean± SD	p
Age years:				
▪ 45- <55	16.53±2.50	1.649	121.82±14.33	0.391
▪ ≥ 50	18.23±4.08	0.102	120.08±17.12	0.697
Residence:				
▪ Urban	16.16±3.02	2.715	116.56±17.94	1.331
▪ Rural	18.53±4.00	0.008*	121.65±16.09	0.186
Marital status:				
▪ Married	18.33±3.87	5.634	123.57±18.03	4.721
▪ Widow	18.07±3.74	0.005*	112.50±11.89	0.011*
▪ Divorced	13.00±0.00		122.00±0.00	
Number of offspring:				
▪ > 3	17.11±3.22	9.449	130.94±17.44	8.087
▪ 3- 4	20.15±4.91	0.0001*	116.44±9.00	0.0001*
▪ ≥ 5	17.13±3.07		113.45±15.40	
Education level:				
▪ Illiterate	18.86±4.24	2.941	116.75±13.99	17.153
▪ Read & write	18.12±2.50	0.037*	107.00±14.42	0.0001*
▪ Secondary school	16.25±3.43		137.15±15.43	
▪ Faculty	16.50±3.65		126.00±4.18	
Job:				
▪ Employed	16.75±3.34	1.730	126.25±3.10	2.0104
▪ Unemployed	18.31±4.01	0.087	118.53±18.64	0.047*
Income:				
▪ Enough	18.00±4.13	0.326	119.88±17.85	0.642
▪ Not enough	17.67±2.70	0.745	122.67±9.25	0.522
Living accommodation:				
▪ With their family	18.10±3.90	2.094	121.44±16.12	3.264
▪ Not living with their family	14.00±0.00	0.039*	95.00±0.00	0.002*
Type of family:				
▪ Cohesive family	18.10±3.90	2.094	121.44±16.12	3.264
▪ Disjoined family	14.00±0.00	0.039*	95.00±0.00	0.002*
Smoking:				
▪ Yes	20.91±1.04	2.761	123.64±1.57	0.687
▪ No	17.57±3.97	0.007*	119.9817.59±	0.494
Suffer from overweight /obesity:				
▪ Yes	18.13±3.84	0.889	120.31±18.02	0.075
▪ No	17.30±4.14	0.376	120.61±11.04	0.941
Suffer from chronic disease:				
▪ Yes	18.08±3.93	0.597	119.56±18.80	0.808
▪ No	17.55±3.88	0.552	122.59±8.19	0.421

الملخص العربي
أعراض انقطاع الطمث وسلوكيات نمط الحياة المعززة للصحة بين النساء في طنطا، مصر: دراسة مقطعية تحليلية

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الخلفية: على الرغم من أن انقطاع الطمث يعتبر مرحلة طبيعية في حياة المرأة ، إلا أنه غالبا ما يعاني عدد كبير من النساء من مشاكل مختلفة قبل هذه الفترة وبعدها. تؤثر أعراض انقطاع الطمث سلبًا على الصحة البدنية والعقلية والاجتماعية للنساء في هذه المرحلة. **الأهداف:** تقييم العلاقة بين سلوكيات نمط الحياة المعززة للصحة وأعراض انقطاع الطمث لدى النساء بعد انقطاع الطمث.

المشاركون والطرق: تم اختيار مائتي امرأة في مرحلة انقطاع الطمث بشكل عشوائي من جميع المترددات علي العيادات الخارجية بمستشفى جامعة طنطا. تم لجميع المشاركين ، تقييم المواصفات الشخصية و الاجتماعية والديموغرافية والطبية و كذلك تم قياس مدي نمط الحياة المعزز للصحة II (HPLP-II) ومقياس درجة أعراض انقطاع الطمث (MRS) من خلال استبيان ذاتي أو المقابلة شخصية. **النتائج:** كان متوسط مجموع نقاط نمط الحياة المعزز للصحة II متوسطاً بين المشاركات (16.63 ± 120.38) ، وكانت أعلى الدرجات من مقاييسه الفرعية هي للمجال الروحي تليها العلاقات بين الأشخاص وكانت أقل الدرجات للنشاط البدني و المسؤولية الصحية. كانت هناك علاقة عكسية بين سلوكيات نمط الحياة المعززة للصحة (الدرجات الإجمالية والمقاييس الفرعية)، و مدي شدة أعراض انقطاع الطمث. كما وجد أن عوامل مثل العمر والمستوى التعليمي والدخل المادي والحالة الاجتماعية والمهنة لها ارتباط كبير بالسلوكيات المعززة للصحة. **الخلاصة والتوصيات:** يرتبط السلوك المعزز للصحة بشكل سلبي بأعراض انقطاع الطمث لدى النساء المشاركات. لذلك ، يمكن استخدام برامج التثقيف الصحي حول أنماط الحياة التي تعزز الصحة لتقليل أعراض انقطاع الطمث لدى النساء وتحسين نوعية حياتهن.