



COMPARING LIFESTYLE AND HEALTH OF WOMEN IN PRE, NEAR AND POST-MENOPAUSAL IN EMPLOYEES OF TABRIZ UNIVERSITY OF MEDICAL SCIENCES, 2003

Nasrin Mohammadi Azarlou¹, Vahid Alinejad², Sadeghi Sadeghi Khameneh³, Hossein Kushavar⁴, Mahin Alinejad^{5*}

1. Graduate Student, School of Nursing and Midwifery, Tabriz University of Medical Sciences and Health Services.
2. Reproductive Health Research Center, School of Public Health, Urmia University of Medical Sciences, Urmia, Iran.
3. Faculty member of Nursing and Midwifery. Medicine, Tabriz University of Medical Sciences and Health Services.
4. Faculty member of Health and Nutrition. Tabriz University of Medical Sciences and Health Services.
5. M.Sc. Student of Health Education, Tabriz University of Medical Sciences, Tabriz, Iran

ARTICLE INFO

Received:

03th Jun 2017

Accepted:

29th Nov 2017

Available online:

14th Dec 2017

Keywords: *Lifestyle, Women's health, Menopause.*

ABSTRACT

Introduction: Menopause is one of the most important stages of a woman's life. Women's life expectancy has increased and by almost one-third of their life is spent at this time. Lack of knowledge about self-care and unhealthy lifestyle of menopausal women is a source of many serious complications in that period. Healthy lifestyle and health habits lead to better health and a better experience about menopause in this period. Since midwives can play an important role in helping women to comply with menopause, aim of the present study was to evaluate lifestyle and health of women in pre, near and post-menopausal in employees of Tabriz University of Medical Sciences.

Methods: This is a descriptive-comparative study that 167 staff of Tabriz University of Medical Sciences (62 patients before, 55 near and 50 post-menopausal) were investigated and were compared using standardized questionnaire of lifestyle and health and data was analyzed using SPSS 11/win software and descriptive and inferential statistics.

Results: In this study, there were significant differences among three groups of women (before, near and after menopause) in health scores ($P < 0.001$). The regression analysis showed that there was a significant relationship between the stress management and diet with women's health ($p = 0.001$, and $p = 0.02$, respectively). There was no significant difference in three groups between BMI and lifestyle ($p = 0.98$ and $P = 0.591$, respectively). There was no significant relationship between BMI and health of women in three groups ($P = 0.121$).

Conclusion: The results showed that in three groups, there was difference between women's health and there was correlation between lifestyle and women's health in three groups. In order to promote health of women in national development during midlife and menopause, it is recommended to teach healthy lifestyle (exercise, proper diet, no smoking, getting adequate rest and sleep and using stress reduction techniques).

Copyright © 2013 - All Rights Reserved - Pharmacophore

To Cite This Article: Mahin Alinejad, (2017), "Comparing lifestyle and health of women in pre, near and post-menopausal in employees of tabriz university of medical sciences, 2003", *Pharmacophore*, 8(6S), e-1173561.

Introduction

Menopause and its related issues in recent years, especially in developed countries, have considerable importance. With the increase in average life expectancy of women to more than 80 years, almost a third of a woman's life is spent after menopause.

Corresponding Author: Mahin Alinejad, M.Sc. Student of Health Education, Tabriz University of Medical Sciences, Tabriz, Iran. Email: Mahin.Alinejad@yahoo.com

Long-term effects of estrogen deficiency can endanger a woman's life and cause significant impairment in quality of life in postmenopausal women, this deficiency will adverse effects on postmenopausal women and the family [1] Women who come to late reproduction relieved from a series of pressures early in their life that have faced such as fear of unwanted pregnancy an unable to make independent decisions. In societies that midlife and menopause is mentioned as a lack of sexual attraction, symptoms of menopause and menopausal period will experience an unpleasant stage [2], menopause is a crucial stage in a woman's life, that cause biologic, psychosocial and societal changes in women [3]. A cultural study in different communities shows that positive or negative reactions toward menopause or menstrual problems, originate from cultures. In countries where older people are respected and due to their experiences and knowledge have high confidence. Women in menopausal period experience fewer psychological and physical problems [4, 5] In this regard, negative futurism about menopausal period cause anxiety among post-menopausal women [6] Woman as the center of family, motherhood role, and other features play an important role in the stability and health of the family [7, 8]. Thus, women's health can help, as a vital issue, to develop the community [9, 10]

Reducing mortality and population growth and increasing life expectancy lead to major changes in the age structure of population of many communities, including Iran [7] In 2050 life expectancy will be 82 years for women and 76.7 years for men and in contrast 22.1 male population, female population aged 65 years and older will be 33.4 million [11].

1996 census data shows that nearly 4 million women over 45 years are living in Iran that their life expectancy has increased from 47 to 69 years this figure compared with 1991 figures that had been estimated nearly 3.5 million people show increase of nearly one hundred thousand people in a year [12] According to Intelligence Bureau of Women's Health Center of East Azerbaijan women's population 40 years and over in 2001 was approximately 522,929 people that in comparison with the population of about 407,284 people in 1991, show an increase of over one hundred thousand people [13] the number of annual postmenopausal women in the United States is reported approximately 125,000 people [14].

Signs and symptoms, which are associated with near menopause and sexual decline period, are experienced by about 80% of women. Due to the severity and duration of symptoms, approximately 40% of women due to discomfort from menopause symptoms, seek medical treatment [14].

Studies in five European countries has shown that 55% of postmenopausal women complained of hot flashes, 40% of fatigue, 39% of sweating, 38% of headache, 33% of insomnia and 30% of depression [9].

A study in Sweden (2002) showed that 53% of women have complained of hot flashes and sweating, 57% of depression and irritability, 52% of sleep disturbances, 57% of muscle and joint pain, 37% of loss of sexual desire, 21 % of vaginal dryness, 11% of urinary tract infections, and 34% of urinary incontinence (climacteric htm).

Menopause causes many physiological changes that can explain a high prevalence of chronic diseases in women after menopause. Of public and important health issues in post-menopausal period can note problems such as heart diseases, cancer, obesity, diabetes, osteoporosis and depression. [16]

Physical activity and good nutrition have important role in the prevention of the above issues [17]. Survey of Department of Epidemiology of America showed that subclinical progression of atherosclerosis associated with menopause and diet and exercise intervention slows down the progress [18]. Of benefits of exercise and diet are their prophylaxis property in preventing osteoporosis and heart diseases [19].

Since menopause is one of the important women's health issues [14]; Studies in 2002 about the health of post-menopausal women indicate that the health and physical well-being, in perimenopausal associated with protective variables such as the health status of the whole body, positive attitude to aging, being beside spouse, good and favorable social communication and physical activity and non-smoking. Among women that are acknowledged of their biology and body process and accept it compared with women who did not deal properly with their biological process associated with better health status [6].

Studies indicate that there is a correlation between lifestyle and health [20]

Breslow writes: One of the reasons for individual susceptibility to disease is their unhealthy lifestyle behaviors. Some of the behaviors of individuals increase their risk for disease that a change in these behaviors can effectively prevent individual susceptibility to some diseases. Unhealthy lifestyle behaviors include using alcohol, smoking, poor diet, sedentary lifestyle, poor response to stress and lack of health-promoting measures such as screening tests, etc. [21].

Each individual's health is not only depending on genetic, environmental, cultural and economic conditions and information availability and health care, but also has a strong association with factors such as personal habits and lifestyle [22]

Healthy lifestyle and health habits lead to better health and a better experience from menopause in menopause period [4]. Healthy lifestyle is a way of life that would provide, maintain and improve the health and welfare and quality of life [23]. Lifestyle, includes dimensions and components such as: principles of proper nutrition, regular physical activity and adequate and sufficient entertainment, no smoking, alcohol, and other addictive substances, narcotics and stimulants, perform periodic checkups regularly, management stress and relaxation and participate older people sufficiently in social activities with family [24]. The most optimal healthy lifestyle include exercise and a balanced diet alongside other proven methods for maintaining health, play an important role in increasing life expectancy by delaying or preventing diseases associated with age [25].

According to the study that was conducted in Australia, symptoms of menopause are in strong accordance with stress, lifestyle, personality, education and employment [26].

Assessing the health of women 50 years and older require unique measures. Important lifestyle changes, such as leaving children, divorce, and retirement, death of a spouse, aging changes and health problems may be experienced by women [27, 28]. Currently, health professionals are described lifestyle as one of the most important factors affecting health and hygiene [29]. The world is in transition from infectious diseases to non-infectious diseases. According to a trend in 2020, non-infectious diseases will account for 73% of mortality and 60% of the diseases that this issue in developing countries is more significantly in progress. Cardiovascular diseases are the leading cause of death in women over 50 years in developing countries (Ahmadzadeh AR). Only in America the cost of cardiovascular diseases in 1998 was estimated at about 274 billion dollars [29]. Inactivity and lack of exercise is a worldwide health threat. More than 60% of the world population is not active, and physical inactivity is more prevalent in women and girls (Ahmadzadeh AR). Western countries with a large measure of prevention and public education for social reform of wrong habits (reducing fat intake, increasing physical activity and reducing smoking), and improving diagnosis and treatment methods, can reduce the prevalence of risk factors and reduce cardiac mortality by more than 50%. In Iran, based on the findings of Tehran Health Survey, 27% of men and 3% of women aged 15 to 69 are smoking. And 26% of men and 52% of women in Tehran have BMI over 27; in addition, 80% of men and 85% of women are not mentioned in any activity outside home, workplace or even in walking [31]. Cancer in Canada is the second cause of mortality after cardiovascular diseases [32]. In Iran after cardiovascular diseases and incidents, cancer is the third leading cause of mortality. Epidemiologists contributed 25% to 40% of the whole mortality cases resulting from cancer to smoke. Evidences indicate that diet is associated with various types of cancer, including stomach, colon, pancreas, breast and ovary, endometrium, and prostate According to the Canadian Cancer Center if the routine continues until 2010 the number of new cancer cases will increase by 40%. Effective prevention and controlling and changing lifestyle factors can reduce cancer mortality by 50% or more [32].

Changing the lifestyle is a difficult task. Attitudes and personal habits are shaper over the years and influenced every aspect of their lives. Provoking people to change and modify unhealthy lifestyle is the most important factor in successful change of lifestyle.

Lifestyle and related factors are of the most crucial modifiable and affecting factors on health of Americans today that with the start of a new method of self-care in 1960 interest in maintaining the healthy lifestyle become common [29].

Health staff should help the woman through the stages of menopause to spend the period with better quality [17]. Since the family is the fundamental unit of society and is the main center of human development and woman has a determining role in this unit, so physical and psychological health should be in charge of health programs [32].

According to the World Health Organization and Dehaan and Bruker comments, midwives are an essential member of the family health care team and an important factor in providing services to the women which can play an important role in education, counseling, detection of problems, referral to treatment and timely prevention of adverse consequences of menopause [9], so conducting research as comparing the lifestyle and health of women in three groups of pre, near and post menopause seems necessary. It is hoped that the findings of this study can be in charge of health centers to provide education programs for guiding women in menopausal period and also provide education programs for developing the quality of care and the developing healthy lifestyle.

Materials and Methods

This is a descriptive-analytic study in which women's lifestyle and health were compared in 3 groups, pre, near and post menopause in workers of Tabriz University of Medical Sciences. The subjects in this study were women 40-60 years employed in Tabriz University of Medical Sciences that had the following characteristics: 1- were not pregnant and 2- at least one intact ovary. To determine the sample size for this study, since previous studies and papers were not similar, considering facilities and according to the Advisor Professor of Statistics, 62 were selected from premenopausal patients, 55 were from perimenopausal and 500 were from post-menopausal patients. In terms of sampling method with referring to Tabriz University of Medical Sciences Personnel list of all employed women over 40 were received and to observe a random sample, the list was sorted by the first letter of the last name then from the first person in the list the questionnaire was filled as long as the number of members of each group were selected that in this study research media include Faculty of Medicine - Dentistry - Pharmacy Nursing and Midwifery - Paramedical- Health and Nutrition and Hospitals: Alzahra- Imam Khomeini – Shahid Madani – Taleghani- Sina- Shahid Ghazi- Kudakan- Razi- Alavi - Shohada- Nikukari and Asadabadi and Information Center and Deputy of Support of Tabriz university of Medical Sciences and Health Services that the researcher has been attempted to sampling in 2003 with reference to the above areas.

The instrument used in this study was a questionnaire that includes two sections: Section 1: 1- demographic characteristics of the study population, which included personal characteristics, obstetric history, job, family, menstruation, and surgical and medical history of volunteer and the use of hormone replacement therapy in postmenopausal volunteers. 2- Women's health assessment questionnaire with 36 questions involving women's health during climacteric in 3 areas of mental, physical and sexual health that has been answered and checked by candidates with four options of always, sometimes, rarely and never. 3- Questionnaire was related to standardized questions of WHO's lifestyle that the questionnaire consisted of four sections fitness, dietary habits, smoking and stress management, and the answers given by the candidates.

Areas of exercise, dietary habits and stress management have 4 questions and 3 questions in the smoking area that the options are almost never, sometimes, almost always. To avoid the effects of fatigue and workplace, the candidates are explained to complete the questionnaire at home and at leisure time. Ethical issues concerning consent and confidentiality were considered. All the questionnaires were coded and analyzed using SPSS software and using statistical methods such as mean, standard deviation and frequency distribution tables and inferential statistics, ANOVA, Regression and Correlation.

Results

Demographic data shows that the majority of the subjects:

Belonging to the age group 49-50 years (43.1%), highly educated (52.1%), married (69.5%), employee (92.8%), administrative staff (34.3%) and of work experience 25-29 years (44.3%), the majority was lived with wife and children (59.2%) and were satisfied with married life with husband (84.5%) and using the normal procedure (46.8%) were prevented from the pregnancies. The majority of subjects (40.3%) had 3-4 pregnancies and (44.4%) 2 children and a BMI of 19.8-26 (44.9%).

Table 1: Comparison of mean women's health score in three groups, pre, near and post-menopause (first objective)

| P-value | | SD | Mean | Number | |
|---------|--------|-------|-------|--------|------|
| Near | Post | | | | |
| 0.038 | <0.001 | 11.2 | 64.08 | 62 | Pre |
| | 0.003 | 13.89 | 58.23 | 55 | Near |
| | | 13.33 | 49/94 | 50 | Post |

To compare the health score of three groups , pre, near and post-menopause one way ANOVA was used that the difference of health score of the three groups was statistically significant (P<0/001)

As can be seen in the table, each of the study groups is significantly different.

To compare the mean lifestyle score of three groups, pre, near and post-menopause (second objective) one way ANOVA was used that the difference of mean lifestyle score of the three groups was not statistically significant (P=0/591)

To compare the mean BMI score of three groups, pre, near and post-menopause (third objective) one way ANOVA was used that the difference of mean BMI score of the three groups was not statistically significant (P=0/98)

To achieve the fourth objective "the relationship between lifestyle and weight control with health, in three groups, pre, near and post-menopause" the following order was performed:

1- To determine the presence or absence of a correlation between lifestyle and weight control with health, in premenopausal women attempted to calculate the Pearson correlation coefficient that the following results were obtained:

- Between lifestyle and health with respect to (P=0/349), there was no statistically significant relationship.
- Between weight control (body mass index) with health of women in this group there was no statistically significant relationship (p=0/178)

2- To determine the presence or absence of a correlation between lifestyle and weight control with health, in perimenopausal women attempted to calculate the Pearson correlation coefficient that the following results were obtained:

- Between weight control (body mass index) with health of women in this group there was no statistically significant relationship (p=0/522)
- Between lifestyle and health among women in the perimenopausal group, there was significant correlation. (r=0/26, P=0/007)

To find the relationship between exercise, diet, smoking and stress management with women's health in perimenopausal group regression analysis was used and as a result, only stress management variable was significantly associated with women's health in this group (P=0/001). The regression equation is as follows.

(Stress Control Score) $0.3+41.375=\text{health score}$

3- To determine the presence or absence of a correlation between lifestyle and weight control with health, in post-menopausal women attempted to calculate the Pearson correlation coefficient that the following results were obtained:

- Between weight control (BMI) and health among women in this group, according to (p=0.453) there was no significant correlation.
- Between lifestyle and health among women in this group, there was significant correlation. (r=0/398, P=0/004)

To find the relationship between exercise, diet, smoking and stress management with women's health in post-menopausal regression analysis was used and as a result, only diet variable was significantly associated with women's health in this group (P = 0/026).

The regression equation is as follows.

(Diet Score) $32.076+0/177=\text{health score}$

Discussion

A detailed look at the results of the study elucidates following results:

In terms of the first objective: Comparison of women's health status in three groups, pre, near and post-menopause in employees of Tabriz University of Medical Sciences, showed that there is statistically a significant difference between mean health score in three groups, pre, near and post-menopause. As shown in Table 3 the maximum score is in premenopausal group and the minimum score is in postmenopausal group (mean health score: 64.08, 58.23 and 49.94, respectively in pre, near and post-menopause women ($p=0/001$). Comparing each groups with each other in terms of health scores according to p-values given in Table 3 statistically significant differences between groups are as follows: (pre and near group with $p=0/038$, pre and post group with $P<0/001$, near and post group with ($p=0/003$).

Additionally, Hemminki et al. study (1995) on Finnish women's experiences and opinions confirms the results of the present study, which indicate that women's health decreases with increasing age ($p<0/001$), ratio of those with poor health from age group 50-54 years to 45-49 years was twice (12% vs. 6%, with $p<0/05$) [33].

Groneveld et al. (1996) also believe that vasomotor symptoms and women's health are depending on menopause. In their findings women with vasomotor symptoms in pre and post- menopause had less health than women who had no symptoms (OR: 4.8) and vice versa no significant difference was observed in the health of women with vasomotor symptoms and lack of symptoms in perimenopausal (OR>1). The authors believe that health status, comparing the effects of menopause is more age-related, which is somewhat consistent with the present study [34].

Additionally, the findings of Blumel et al. indicate that postmenopausal women have a lower quality of life than premenopausal women; this is associated with health problems such as vasomotor symptoms, palpitations and painful intercourse that more occurs after menopause. Authors believe that menopausal status and position of the individual have more important effect on quality of such that employed women have better quality of life than housekeepers ($P<0.001$) [35]

Dennerstein study results showed that women's health was significantly associated with lower stress, living with a spouse, exercise at least once a week, psychosocial and social variables and lifestyle and the role of these factors are preferred in determining women's health to the hormonal changes of menopause.

Collins study on middle-aged women also indicates that health status of women is not related to menopausal status. [36]

In relation to the second research objective: comparison of lifestyle (physical activity- diet- smoking and stress management) in three groups pre, near and post-menopause, there is no statistically significant difference (mean score of lifestyle 68.66 and 67.63 and 66.10, respectively pre, near and post-menopause and $p=0.591$) Table 4.

In this regard, Wooster writes, lifestyle is a unique combination of thoughts, feelings, and the manner in which are often rooted in culture and history of individual that can influence individual health behaviors [37, 38]. According to the above definition, it should be mentioned that, probably lack of significant difference in the lifestyle of people in three groups, pre, near and post-menopause may be due to social culture and probably to some extent under the influence of women's employment outside home.

In relation to the third research objective: "Comparison of mean BMI score in three groups pre, near and post-menopause", it was found that there is no statistically significant difference between mean BMI score in three groups pre, near and post-menopause ($p=0/98$). As shown in Table 5 mean BMI score is 25.80 and 26.86 and 7.64, respectively in pre, near and post-menopause. It should be noted that the majority of subjects (44.9%) in group $19.9<BMI<26$ i.e. normal group and 26.3% of those in group $26<BMI<29$ (overweight) and 25.7% in group $BMI>29$ obese and about 3% in group $BMI<19.8$ low weight.

In relation to menopausal age and its affecting factors findings of Jung-ling Fu et al. showed that there is a significant difference between body mass index (BMI) in three groups pre, near and post-menopause, BMI (22.83 and 24.43 and 24.43) were respectively mean BMI score groups pre, near and post-menopause and was related to menopausal status. [39].

The findings of Nagata (1998) in relation to diet and other lifestyle factors and the onset of menopause in Japanese women showed a statistically significant difference between mean body mass index before and after menopause (mean body mass index 22.5 ± 2.7 and 22.2 ± 2.7 , respectively in women before and after menopause, with $P<0/01$) and the inverse relationship was found between BMI and menopausal age [40].

The results of Bloch (2001) study showed that (9/9%) of women had $BMI<19.8$ and 47.1% had $>BMI>29$ overweight and about 43% of women had $1.8<BMI<26$ that is almost consistent with the results of the present study [6].

In relation to the fourth objective of the study "to determine the relationship between lifestyle and weight control with health in three groups, pre, near and post-menopause." Independently in three groups, primarily the relationship between lifestyle and weight control with women's health was assessed that the following results were obtained:

- 1- In premenopausal group: the relationship between lifestyle and health of women, according to $P=0.349$ was not statistically significant and also correlation between weight control (body mass index), with health of women in this group due to ($p=0.178$) was not statistically significant.
- 2- In perimenopausal group: the relationship between lifestyle and health of women was statistically significant ($r=0.36$ and $p=0.007$). To find the relationship between exercise, diet, smoking and stress management with women's health in this group Correlation coefficient and regression analysis was used that only stress management variable was significant ($P=0/001$).

1. Between weight control with health in perimenopausal women, the relationship was not statistically significant ($p=0.001$)
- 3- In postmenopausal group: relationship between women's health and weight control with respect to ($p=0.522$) was not statistically significant. In relation to lifestyle and health status of women with respect to ($r=0.398$ and $P=0.004$) correlation was statistically significant and to find the relationship between exercise, diet, smoking and stress management with women's health in this group regression analysis was used and as a result, diet variable was significantly associated with women's health in this group ($P=0/026$).

Finally, in relation to fourth objective of the study "to determine presence and lack of relationship between lifestyle and weight control with health in three groups of women pre, near and post-menopause" correlation test results were as follows:

- Between weight control and health among women in three groups pre, near and post-menopause due to ($P=0.121$) had no significant correlation.
- Between lifestyle and health among women in three groups with ($r=0.312$ and $p<0.001$) significant correlation was observed. To find the relationship between exercise, diet, smoking and stress management, weight control with health in three groups FORWARD regression method was used and it was found that diet and stress control variables, respectively with ($p=0.001$ and $p=0.003$) health in three groups have shown a significant correlation. Among which stress control show a stronger relationship.

The results of Gould et al. study (1997) show that women in perimenopausal period have more complaints related to menopausal symptoms than women before and after menopause and a higher frequency of symptoms and complications compared with older age with menopausal status was related and cigarette smoking, inactivity and increased BMI was associated with increased complaints of symptoms of menopause. In women with lower mobility than their peers all complaints and menopausal symptoms that affect their health including stiff and painful joints and palpitation, amnesia, sleep problems with (OR: 2.23 and OR: 1.56 and OR: 1.51 and OR: 2 and CI: 95%, respectively) had higher prevalence [43].

In relation to menopausal age and the effective factors, Jung-ling Fu et al study results showed that body mass index changes significantly with menopausal status ($p=0.002$). Menopausal problems and genitourinary problems and vasomotor in perimenopausal and postmenopausal were significantly higher compared to premenopausal, $P=0.01$ and $P=0.02$, respectively.

Caffeine alcohol, regular exercise habits and BMI are not significantly associated with health and vasomotor symptoms [39].

In a study by Brett et al. (2002) on factors associated with transition to menopausal period, results showed that cigarette has a strong association with postmenopausal status (CI: 95% and OR: 2.2). And also weakly associated with the perimenopausal phase (CI: 95% and OR: 1.4).

Increasing BMI was associated positively with the perimenopausal phase, but there was no significant relationship between exercise and menopausal status [41].

In a study by [42] in relation to attitudes and beliefs, and symptoms in midlife women following results were determined:

- 1- Between lifestyle behaviors and overall menopausal symptoms affecting the health of women, there is a negative relationship (regression coefficient -1.51 and $P<0.001$)
- 2- A positive correlation between anxiety and symptoms and menopausal complaints was observed (regression coefficient 0.45 and $P<0.001$)
- 3- A positive correlation was found between overall number of menopausal complaints and stress, in women with high scores on stress more menopausal complaints were reported (regression coefficient 0.79 and $P<0.001$) [42].

Conclusion:

1- It can be concluded from the first hypothesis that:

Comparison of health score among three groups, pre, near and post-menopausal, there was statistically a significant difference ($p=0.001$). Health score was **maximum** in pre-menopausal women and was **minimum** in post-menopausal women and as a result, the first hypothesis that health status in three groups, pre, near and post-menopausal is the same, rejected.

2- It can be concluded from the second hypothesis that:

Comparison of lifestyle among three groups, pre, near and post-menopausal, there was not statistically a significant difference in mean lifestyle score of three groups, pre, near and post-menopausal ($p=0.591$). As a result, the second hypothesis: lifestyle in three groups, pre, near and post-menopausal is the same, accepted.

3- It can be concluded from the third hypothesis that:

In pre- menopausal group relationship between lifestyle and health according to $p=0.349$ and also relationship between weight control and health according to $p=0.178$ was not statistically significant.

In perimenopausal group relationship between lifestyle and health according to $p=0.007$ and $r=0.36$ was significant and only stress control variable in regression model was statistically significant ($p=0.001$). Between weight control with health in perimenopausal group relationship was not statistically significant ($p=0.522$).

In post- menopausal group relationship between weight control and health according to $p=0.453$ was not statistically significant and in relation to lifestyle and health according to $r=0.398$ and $p=0.004$ the relationship was significant and using regression test, it was determined that diet had significant relationship with health ($p=0.026$)

In determining the presence or lack of correlation between lifestyle and weight control with health it was found that:

Between weight control and health in three groups pre, near and post-menopausal according to $p=0.121$, the relationship was not significant.

Between lifestyle and health in three groups ($p=0.001$ and $r=0.312$) the correlation was significant and using regression test, it was determined that diet and stress control ($r=0.03$ and $p=0.001$, respectively) with health in three groups had significant relationship among which stress control showed stronger relationship.

Probably due to less number of smokers in this study (1.8%) smoking effect was not clearly shown.

Therefore third hypothesis of the study: there is relationship between lifestyle and women's health status in pre, near and post-menopausal period is rejected.

Given the radical changes in all facets of human life in recent century and according to the motto of population in 2010 of increasing the quality and number of years of life that should, under any conditions, provide disease prevention services and facilities during midlife and menopause, therefore considering the findings of this study, it is suggested that in order to promote women's health in middle age, pay more attention to training to enjoy a healthy lifestyle, exercise, proper diet, not smoking, getting adequate rest and sleep and using stress reduction techniques, etc. and also composed programs should be carried out in the provision of providing services by the health workers and sending health messages through the public media in order to contribute to the health of women and families in line with national development.

Acknowledgements

Hereby, we acknowledge and appreciate the School of Nursing and Midwifery, Tabriz for cooperation in this project.

References

1. Aghazadeh Naini A. Symptoms of menopause treatment, *Qom, Ansarian Press, 1995*, Ahmadizadeh AR. Active life, Raze Behzistan, No. 21.
2. Makhoulouf C. Schulein M. Hiji, N. Azelment M. Menopause in morocco MAT (2002):41: 84-95
3. Svhnneider H. P. G schutz B. Rosemeier H.P. Behre H.M. Assessing wellbeing meno pausal women, In: sttuud J. editors. The management of the menopause, the millennium review, Logdon: the Parthenon publishing group: 2000.
4. Berahmand A. The translator of menopause without drugs, Linda Ojeda (Author) printing, Tehran, Institute for publications Teymourzadeh, 2001
5. Farrokh-Eslamlou H, Oshnouei S, Alinejad V. Novel restricted access to vasectomy in Iran: addressing changing trends in vasectomy clients' characteristics over 16 years in northwestern Iran. *Contraception*. 2015 Nov;92(5):488-93. doi: 10.1016/j.contraception. 2015.07.010. Epub 2015 Jul 28.
6. Bloch A Self –awareness during the menopause. *Maturities* 2002, 41:61- 68 from internet www. Elsevier. Com
7. Mardani, AR, Azizi F, Larijani B. Iran's health, first edition, published by UNICEF, 1998
8. Hosseinlou A, Alinejad V, Alinejad M, Aghakhani N. The effects of fish oil capsules and vitamin B1 tablets on duration and severity of dysmenorrhea in students of high school in Urmia-Iran. *Glob J Health Sci*. 2014 Sep 18;6(7 Spec No):124-9. doi: 10.5539/gjhs.v6n7p124.
9. Jafarzadeh Kenarsari F. Survey of knowledge and attitude towards life during menopause in Rasht, 1997. A thesis submitted for the degree of master in midwifery, Real tendency of Midwifery, Tabriz, October 1997
10. Rasmi Y, Sadreddini M, Jamali M, Peirouvi T, Khosravifar F. Frequency of cytotoxin associated gene A(+) Helicobacter pylori in peptic ulcer disease: Difference between gastric and duodenal ulcer disease. *Journal of Medical Sciences* Volume 9, Issue 3, 2009, Pages 146-150.
11. Hemmatkhah F. In translating clinical diagnosis of Obstetrics and Gynecology Hormone, Speroff (Author), fifth edition, Tehran, Shahab Pub, 1997
12. Jamshidimanesh M. Study of the relationship between knowledge and attitudes of midwives about health care in menopausal period at health centers affiliated to Tehran University of Medical Sciences, *Journal of Family Planning in the fifth year*, No. 20
13. Health Center of East Azerbaijan province, Bureau of Statistics, Tabriz, 2002
14. Fallah Hosseini K. In translating health in women (from infancy to menopause, Klanderch, Blard, Chandler S. (authors), First Edition, Tehran, 2001.
15. Kass BT, Annese. Management of the perimenopausal & postmenopausal women California: Lippincott: 1999
16. Alinejad V, Mahmodi M, Alinejad M, Besharat E, Gholizade R, Tabbakhi E, Shojaei Pour A, Gharaaghaji R. Investigation of long-and short-term relationships between cesarean delivery and its effective factors in Malayer. *Global Journal of Health Science*;doi: 10.5539/gjhs.v6n7pl. Vol 6, No. 7; 2014. Pages 1-7
17. Waren. M Artcho. A Role of exercise and nutrition in: lobo R. editors. Treatment of the postmenopausal. 2 ed Philadelphia: Lippincott Williams Wilkins: 1999.p.417-35

18. Wildman RP, Schott LL, Brockwell S, Kuller LH, Sutton Tyrrell K. A dietary and exercise intervention slows menopause-associated progression of subclinical atherosclerosis as measured by intima-media thickness of the carotid arteries. *J Am coll cardiol* 2004 Aug 4; 44(3):579-585.
19. Luckey M, Kagan R, Greenspan S, Bone H, Kiel RD, Simon J, et al. Once-weekly alendronate 70 mg and raloxifene 60 mg daily in the treatment of postmenopausal osteoporosis. *Menopause* 2004 ju1 Aug; 11(4):405-415.
20. Helm Seresht P, Delpisheh E. Principles of Public Health, Tehran – Shokrat Publications Chehr Authority, 1992
21. Mazooji F. Assessing health behaviors related to health of female staff in health and training centers of Kordestan University of Medical Sciences, Medicine and Purification, 2002, No. 45
22. Christiani K. Womens health: Effect on morbidity and mortality in pregnancy and birth Midwifery 1996: 12: 113: 19.
23. Eshaghi R, Farajzadegan Z, Babak A. Healthy lifestyle assessment questionnaire in elderly: Translation, Reliability and validity. *Payesh* 2010; 9(1):90-99.
24. Samadi S, Bayat A, Taheri H, Junaid B, Roozbahani N, Knowledge, attitudes and practices in elderly to ward healthy lifestyle in old age. *J Gazvin univ med* 2007; 11(1):84-85.
25. Olshansky SJ, Hayflick L, Carnes B A. Position Statement on Human Aging. *J Gerontol A: Biol Sci Med Sci* 2002; 57(8): B292–B297.
26. Anderson RN, Posner N. Relationship between experiencing menopause, *int J of Nursing practice* 2002: 8: 265-73.
27. Lowder milk, Perry Bobak. *Maternity nursing*. 5th ed. Mosby: 1999.
28. Sharafkhani R, Dastgiri S, Gharaaghaji R, Ghavamzadeh S, Didarloo A. The role of household structure on the prevalence of food insecurity. *European Journal of General Medicine* Volume 7, Issue 4, 2010, Pages 385-388
29. Edelman LC, Mandle LC. *Health promotion throughout the life span*. 5th ed. louse mosby: 2001.
30. Azizi F, Hatami H, Janghorbani M. *Epidemiology and control of epidemic diseases in Iran*, Second Ed, Tehran, Eshtiagh Publication, 2001
31. Dastgiri S, Sharafkhani R, Asl R.G, Ghavamzadeh S. Prevalence, influencing factors and control of food insecurity: A model in the northwest of Iran. *Asia Pacific Journal of Clinical Nutrition* Volume 20, Issue 4, December 2011, Pages 613-617
32. Marrett LD, Theis B, Ashburg FD & expert panel. Work shop Report: physical Activity and cancer prevention. *Chronic diseases in Canada* 2001:21:1-7 from internet.
33. Hemminki E. Topop. kangas L. Experience and opinions of climacterium by Finnish women. *European J of obg Gy and Reproductive Biology* 1995: 62:81-87
34. Groeneveld FPMJa bareman FP, Barensten R, Dokter Hj, Drogendijk Ac, Hoes AW Vasomotor symptoms and well-being in the climacteric years *Mat* 1996: 23: 293-99 from internet
35. Blumel JE Branco CC, Binfal, Gramegna G, Taclax Aracena B, et al. Quality of life after the menopause: a population study *mat* 2000: 34: 17-23 from internet.
36. Dennerstein L. Well-being symptoms and the menopausal transition *Mat* 1996: 23: 147-57.
37. Taylor C, lillis. C. lemon p. *fundamentals of nursing* 40th ed 2001: Lippincott Williams & Wilkins
38. Lowder milk, Perry Bobak *maternity & women’s Health care* 70th ed. USA. Mosby. 2000.
39. Guh jL, Wang SJ, LU SR, juang kD, ChiulM. Thekinmen women- Health investigation (KIWI): a menopausal study of a population aged 40-54 *Mat* 2001: 39: 117-24. From internet.
40. Nagatac, Takatsuka N inabs S, Kawajami N, Shimizu H. Association of diet and other life style with onset of menopause in Japanese women, *Maturitas* 1998: 29: 105-13 form internet. Elsevier. Com.
41. Brett KM, Cooper Gs Associations with menopause and menopausal transition in a nationally represent tative us sample *Mat* 2003: 45: 89-97.
42. Conboy L, Domar A.o Connell E. Women at midlife: symptoms, attitudes, and choice an internet based survey. *Mat* 2001: 38:129- 36 from internet. www. Elsevier. com.
43. Gold EB Sternfeld B, Kelsey J, Browns, mouton C Reame N. et al. Relation of demographic and life style factors to symptoms ina multi- Racial Ethnic population of women 40-45 of age A, m *jof edmiology* 2000: 152: No5:963-73