Health-promoting lifestyle among Mashhad School of Health Students, Mashhad, Iran, 2014

Zohreh Kamrani Rad (BSc)[1]*, Fahimeh Attarian (BSc)[1], Hossein Ebrahimi Pour (PhD)[2]

[1] Bachelor in Public Health, Student Research Committee, School of Health, Mashhad University of Medical Sciences, Mashhad, Iran
[2] Associate Professor in Health Care Management, Health Sciences Research Center, School of Health, Mashhad University of Medical Sciences, Mashhad, Iran

A R T I C L E I N F O	A B S T R A C T
	Background & aim: Health-promoting lifestyle (HPL) is one of the main criteria which determine health and underlying factors preventing the health-threatening factors. HPL includes six dimensions of spiritual growth, health responsibility, nutrition, stress management, interpersonal relations, and physical activity. Considering the importance of students' health, both at individual and social levels, the present study was carried out to evaluate HPL among students (mainly females) of School of Health, affiliated to Mashhad University of Medical Sciences in 2014. ***Methods:*** In this cross-sectional descriptive study, 107 students of Mashhad School of Health using stratified random sampling were included. In order to collect data, Walker questionnaire, with a 4-point Likert scale, was utilized which included two sections of demographic questions, and questions related to the six dimensions of HPL. The collected data were analyzed by descriptive statistics and independent T-test, using SPSS version 11.5. The significance level was considered less than 0.05. ***Results:*** Lifestyle of 9.3%, 84.1%, and 6.5% of the students was poor, moderate and good, respectively. The mean scores of HPL dimensions were as follows: spiritual growth: 30.27±5.4, health responsibility: 32.15±6.5, nutrition: 15.65±4.06, stress management: 12.76±2.9, interpersonal relations: 21.34±4.35, and physical activity: 13.69±5.1. A significant relationship was seen between gender and physical activity ($p<0.05$). ***Conclusion:*** The majority of students had a moderate score of HPL. Since the lowest scores were related to physical activity and stress management, more facilities and training programs are required to improve these issues. It is recommended to provide high-quality healthcare services for students and raise their awareness about the benefits of physical activity via mass media.

Introduction

Lifestyle is the typical way of life of an individual, and includes activities and attitudes, which influence his/her health (1, 2). In fact, lifestyle is determinant of an individual's health status (3). Recent studies have shown that many chronic diseases are associated with poor lifestyle and unwise human behavior (4).

People can maintain and control their health by adopting health-promoting behaviors (2). Dietary habits, stress management, physical activity, and smoking cessation are the most important aspects of a healthy lifestyle (5, 6).

Assessment of contributing factors plays a major role in promoting health-related activities, particularly among students (7). Although early years of life are determinant of an individual's lifestyle choices, lifestyle-related behaviors are formed over years of attending university, and if left unnoticed, can have harmful effects on the student's well-being.

During adulthood years, many internal and external changes occur in the body, mind, and social relations of an individual (8). At university, students are exposed to various

---

* *Corresponding author:* Zohreh Kamrani Rad, School of Health, Mashhad University of Medical Sciences, Mashhad, Iran.Kamraniz891@mums.ac.ir

living conditions and lifestyles, which are sometimes difficult to cope with Changes in study methods and unfamiliar living conditions may result in a wide range of unhealthy behaviors such as inadequate nutritional intake, rest, and physical activity (9-13).

World Health Organization (WHO) indicated that60% of an individual's health-related quality of life depends on his/her lifestyle (14). Risky health-related behaviors include activities, which increase a person's vulnerability or susceptibility to health risks (15). In contrast, health-promoting behaviors entail a positive approach to life and a means to increase well-being and self-actualization (16).

WHO offers health-promoting principles and strategies for different populations, and the strategies are not limited to a particular health issue. Development of health-promoting behaviors is feasible through education and community development policies, rules, and regulations. In fact, these behaviors can help with the prevention of infectious diseases, injuries, violence, and mental illnesses (17).

Health promotion is directly associated with disease prevention, and prevention is obviously preferred to treatment. Health-promoting lifestyle (HPL) is a component of health promotion and includes six dimensions: physical activity, nutrition, health responsibility, spiritual growth, interpersonal relations, and stress management. This type of lifestyle, in addition to improving one's health status and well-being, promotes a sense of satisfaction, personal gratification, and self-improvement (18).

Unfortunately, few studies have evaluated factors related to women's lifestyle, which indirectly influence maternal health. Given the major role of women in reproductive health, health-promoting behaviors can be effective in the improvement of reproductive health in the future. This study was performed with the aim to evaluate various aspects of health-promoting behaviors among students (particularly females), who experience new and sometimes demanding situations during years of education.

Materials and Methods

This analytical, cross-sectional study was conducted with the aim to evaluate health-promoting behaviors and lifestyle of 107 students of School of Health, affiliated to Mashhad University of Medical Sciencesin2013. Stratified random sampling was employed; each considered as a stratum. The subjects were excluded from the study in case they had completed less than 50% of the questionnaires or were unwilling to continue the study.

Data were collected via questionnaires. The questionnaire included the following two sections: 1) demographic questions, and 2) questions related to the six dimensions of HPL. The validity of this questionnaire was confirmed in a study by Mohammadi Zaidi et al., in 2011(19).

The questions related to HPL were concerned with spiritual growth (11 questions), health responsibility (13 questions), interpersonal support (8 questions), stress management (6 questions), physical activity (8 questions), and nutritional status (8 questions). A 4-point Likert scale was utilized (options were as follows: never, sometimes, often, always), scored from 1 to 4 respectively).

After introducing the study objectives to the participants, informed consents were obtained from the subjects and questionnaires were gathered with regard to ethical considerations.

The collected data were analyzed using SPSS version 11.5, and descriptive statistics (frequency, percentage, mean, and standard deviation) and independent t-test were applied. The significance level was 0.05.

Results

In this study, 33% of participants were under 20 years and 66.4% over 20 years. 72% of participants were female, 71% were single and 51.4% dormitories. 81 participants were educating at the undergraduate level (75.5%), 21 (19.6%) at Msc (Table 1).

Health-promoting lifestyle questionnaire includes 6 dimensions that according to (Table 2), mean score of health-promoting lifestyle was obtained (125.88 ± 20.04). Highest score was in the subgroup of spiritual growth (0.49±2.75) from score4, and the lowest score in the subgroup of physical activity (0.73±1.95). In terms of health-promoting lifestyle, 9.3% of students were poor, 84.1% moderate, and 6.5% were in good status.

In this study, mean score of health- promoting

Table 1. Frequency distribution of students' demographic characteristics

	Classification	N	%
Age	<20 years	36	33.6
	>20 years	71	66.4
Gender	Female	77	72.0
	Male	30	28.0
Marital status	Single	76	71.0
	Married	29	27.1
Residence status	Native	51	47.7
	Dormitory	55	51.4
Educational course	Public health	40	37.4
	Environmental health	32	29.9
	Occupational health	14	13.1
	MSc	21	19.6
Educational level	Associate's degree	5	4.7
	Bachelor	81	75.5
	MSc	21	19.6

Table 2. Meanand standard deviation of various dimensions of health-promoting behaviors and lifestyle

	N	Mean	Minimum score	Maximum score
Spiritual growth	107	2.75±.49	1.27	3.64
Health responsibility	107	2.47±.50	1.15	3.54
Interpersonal support	107	2.66±.54	1.25	3.88
Stress management	107	2.12±.49	1.33	3.67
Physical activity	107	1.95±.73	1.00	4.00
Nutrition	107	2.23±.58	1.00	4.00

Table 3. The relationships between HPL dimensions and residence status

	Residence status	N	Mean and SD	t-test significance (P-value)
Spiritual growth	Non-native	55	2.75±.50	1.000
	Native	51	2.75±.49	
Health responsibility	Non-native	55	2.48±.50	0.89
	Native	51	2.47±.51	
Interpersonal relationship	Non-native	55	2.75±.48	0.071
	Native	51	2.56±.59	
Stress management	Non-native	55	2.22±.53	0.042
	Native	51	2.02±.45	
Physical activity	Non-native	55	2.02±.72	0.41
	Native	51	1.90±.74	
Nutrition	Non-native	55	2.1662	0.22
	Native	51	2.30±.56	

lifestyle was moderate that reflects the poor commitment of students to a healthy life style. According to the classification of life style to poor, moderate and good, 84.1% of articipants had moderate status. The mean score of interpersonal relationship was higher in male subjects, compared to female participants, although the difference was not significant; also, dormitory students obtained higher scores, but the difference was not significant (Table 3). The

mean score of stress management in male subjects was higher than the females. (Table 4) In the present study, male subjects obtained higher scores in terms of stress management, compared to female participants; however, no significant difference was found. The mean scores of interpersonal relationship and stress management were lower in native students compared to non-native students, and the difference was significant in terms of stress

Table 4. The relationships between HPL dimensions and gender

	Gender	N	Mean and SD	t-test results (P-value)
Spiritual growth	Female	77	2.70 ± .50	0.09
	Male	30	2.87±.46	
Health Responsibility	Female	77	2.51±.51	0.18
	Male	30	2.36±.48	
Interpersonal relationship	Female	77	2.64±.52	0.47
	Male	30	2.72±.59	
Stress management	Female	77	2.06±.41	0.11
	Male	30	2.27±.64	
Physical activity	Female	77	1.82±.60	0.015
	Male	30	2.29±.93	
Nutrition	Female	77	2.27±.51	0.35
	Male	30	2.13±.72	

Table 5. The relationships between HPL dimensions and marital status

	Marital status	N	Mean and SD	t-test results (P-value)
Spiritual growth	Single	76	2.74±.50	0.62
	Married	29	2.79±.49	
Health Responsibility	Single	76	2.41±.51	0.80
	Married	29	2.61±.48	
Interpersonal relationship	Single	76	2.65±.57	0.67
	Married	29	2.70±.46	
Stress management	Single	76	2.18±.51	0.10
	Married	29	2.0±.45	
Physical activity	Single	76	2.19±.61	0.20
	Married	29	2.35±.50	
Nutrition	Single	76	2.04±.80	0.01
	Married	29	1.71±.46	

Table 6. The relationships between HPL dimensions and age

	Age	N	Mean and SD	t-test results (P-value)
Spiritual growth	<20 years	36	2.70±.51	0.48
	>20 years	71	2.77±.48	
Health Responsibility	<20 years	36	2.34±.40	0.06
	>20 years	71	2.53±.54	
Interpersonal relationship	<20 years	36	2.59±.50	0.31
	>20 years	71	2.70±.56	
Stress management	<20 years	36	2.18±.54	0.36
	>20 years	71	2.09±.47	
Physical activity	<20 years	36	1.98±.81	0.74
	>20 years	71	1.93±.70	
Nutrition	<20 years	36	2.23±.52	0.98
	>20 years	71	2.23±.61	

management (P= 0.042). There were significant relationships between marital status and physical activity (P =0.20), stress management and educational course (P =0.006), and spiritual growth and educational course (P =0.021). For instance, the spiritual growth of MSc students of environmental health was better than other students (P =0.041), and stress management of public health students (P = 0.01) and health professionals (P = 0.017) was more satisfactory.

Male participants were more physically active, and the difference with female subjects

was significant. The nutritional status of female participants was better than their male counterparts (Table 4), but no significant difference was found.

According to Table 3, dormitory students obtained the lowest mean score.

Dormitory students obtained the lowest scores in this subgroup, which represents the unsuitable nutritional status of students in university dormitories.

A significant difference was found between marital status and physical activity. In fact, single people were more physically active than married individuals; (Table 5). There was no significant relationship between marital status and other health-promoting behaviors.

There was no relationship between age and health-promoting behaviors in the current study, which could be due to the uniformity of age groups (Table 6).

In the present study, no significant relationship was found between the total score of lifestyle and age, gender, marital status, residence status, or education level (Tables 3-6).

Discussion

Very few studies in the country have evaluated high-risk behaviors among students.

This study was performed with the aim to evaluate health-promoting life style and its dimensions among the students of health school.

In this study, according to the classification of life style to poor, moderate and good, 84.1% of participants had moderate status. This finding was consistent with the study of Motlagh et al., on the students of Shahid Sadoughi, Yazd University of Medical Sciences, with mean of 130 (20).

The results of Maheri and colleagues on the students in dormitory of Tehran University dormitory students, which mean score of lifestyle had been achieved 119 confirm the results of present study (21). Packer et al., also on Turkish student obtained moderate lifestyle in most students which is consistent with the results of present study (22). Motlagh, Maheri, Packer and Babanejad also in their study obtained moderate lifestyle of students (20-23).

Generally, for a better lifestyle, establishing training classes and also defining the concept of a healthy life style for students is recommended.

In the study of Nilsaz and Associates that was done on the students of Dezful University of Medical Sciences, lifestyle of 11.3% of students was poor, 54.3% moderate, 34.3% good (24).

Overall, mean score of health-promoting behaviors among the students of present study was 81.71 which is consistent with the results of Tulle et al., In the study of Fang-Hsin Lee and Hsiu-Hung Wang on Asian Taiwan women, total score of lifestyle was reported 60.4 which is inconsistent with the results of present study (25). In the study performed by Jalili and colleagues on the students of Kerman University of Medical Sciences, mean score of health-promoting behaviors was 134.6 which is consistent with the results of the present study (26). In the study evaluating the lifestyle and predicting changes in factors affecting it in the health student of Tehran Shahid Beheshti University performed by Babanejad and colleagues, lifestyle of most students were in moderate level that is quite similar to the present study (23).

In another study performed by Babanejad and colleagues on the students of Ilam University of Medical Sciences, the lifestyle of more than half of the students was moderate (27). According to the results of the present study (Table 2), the highest score was in the subgroup of spiritual growth that may be related with the society culture and ideological-system. In the study of Fang-Hsin Lee and Hsiu Hung Wang on the Southeast Asian Taiwan also spiritual growth achieved the highest score (25).

In the study of Maheri and colleagues on the study that students living in dormitories of Tehran University of Medical Sciences, Health-promoting lifestyle score of students was in moderate status. In this study, the highest score was in the subgroup of spiritual growth and the lowest score was obtained in the subgroups of stress management, physical activity, and nutrition which is consistent with the results of the present study (21). In the study of Madeleine J. et al., spiritual growth obtained the highest score which the status was better in married than singles (28).

In the study performed by Tulle et al., on the graduate students of Health School, Isfahan University of Medical Sciences, spiritual growth and responsibility for health obtained the

highest scores and physical activity was assigned to the lowest score that was similar to the results obtained in the present study (18). In the study of Motlagh and colleagues, the lowest score was in the sub group of physical activity and the highest score was in spiritual growth which is consistent with the results of present study (20).

In the study by Norouzinia et al., performed on students of Alborz University of Medical Sciences, spiritual growth and physical activity were assigned the highest and lowest scores, respectively. The mean score of spiritual growth in male participants was higher than that of females, although the difference was not statistically significant (29). In the study by Motlagh and colleagues, the mean score of spiritual growth in females was higher than males; however, the difference was not statistically significant, which is inconsistent with the results of the present study (20).

In the present study, the females' mean score of responsibility for health was higher than the males' score, but the difference was not significant (Table 4). The mean score of interpersonal relationship was higher in boys compared to girls, which was in congruence with the results obtained by Alkandari et al., in Kuwait, and inconsistent with the results obtained by Motlagh and colleagues (30).

In the study by Norouzinia et al., performed on students of Alborz University of Medical Sciences, the mean score of responsibility for health was higher in girls, but the difference was not statistically significant (29).
In the study by Norouzinia and colleagues, the score of interpersonal relationship was higher in girls, compared to boys, although the difference was not significant. Also, non-native students obtained a higher mean score and a significant difference was observed between the two groups; in addition, students who lived with their families had the lowest mean score. The married group showed a higher mean score, but the difference was not significant; this finding was in consistence with the results obtained in the present study.

In the present study, the mean score of stress management in male subjects was higher than the females. This was consistent with the results obtained by Maheri and colleagues,who

evaluated HPL of nursing students in Kuwait.

According to the results of the study by Norouzinia et al., students who lived with their families obtained lower scores in the subgroups of stress management and interpersonal relationship. It appears that personal independence leads to improved emotional control and interpersonal relationships. In this study, male participants were more physically active, and the difference with female subjects was significant; results obtained in the study by Maheri et al., also confirmed this finding (21).

In the study by Motlagh and colleagues, physical activity was significantly higher in males, compared to females (20). Similarly, In the study by Norouzinia and colleagues, the mean score of physical activity was lower in girls compared to boys, and there was a significant difference between the two groups (29).

In present study, dormitory students obtained the lowest mean score. In the study by Norouzinia et al., performed on students of Alborz University of Medical Sciences, the mean score of nutrition was higher in females compared to males, and a significant difference was observed between the two genders. In this study, dormitory students obtained the lowest scores in this subgroup, which represents the unsuitable nutritional status of students in university dormitories. Similarly, in a study conducted on students in Greece, only 20% of them had proper nutrition.

In the present study,single people were more physically active than married individuals; this difference can be justified since single people have more free time and fewer responsibilities. There was no significant relationship between marital status and other health-promoting behaviors. This result was consistent with the findings of the study by Motlagh and colleagues (20), although this association was significant in the study by Maheri and colleagues (21).

In present study, there was no relationship between age and health-promoting behaviors in the current study, which could be due to the uniformity of age groups. Contrarily, in the study by Maheri and colleagues, performed on dormitory students of Tehran University of Medical Sciences, a significant relation was

reported between health-promoting behaviors and age.

In the study by Tulle and colleagues, there was a statistically significant relationship between stress management and the gender of students, but this relationship was not significant in our study, which may be related to the higher scores of stress management among Isfahan students (18).

In the study by Larouche on 151 students, nutritional status, interpersonal relationship, responsibility for health, and health-promoting lifestyle of female students were better than their male counterparts. The findings of the present study were consistent with other studies only in terms of physical activity (31).

In the present study, no significant relationship was found between the total score of lifestyle and age, gender, marital status, residence status, or education level (Tables 3-6). Similarly, in the study conducted on students of Ilam University of Medical Sciences by Babanejad, no significant relationship was found between lifestyle and age, gender, place of residence, or education level (27).

Motlagh and colleagues in their study on students of Yazd University of Medical Sciences showed a significant relationship between health-promoting behavior scores and the education level of students (20); however, in the study by Ahmadnia et al., in Zanjan, no significant correlation was found between lifestyle and students' education level (32).

In the study by Norouzinia et al., health-promoting behaviors were not significantly correlated with gender or being a native; also, the correlation between marital status and health-promoting behaviors was not significant (29). Also, in the study by Peker and Bermark, the total score of lifestyle was not associated with age, gender, or place of residence (22).

Limitations of the study

Two limitations can be considered for the present study. First, cross-sectional studies cannot indicate the causes and changes in lifestyle behaviors over time. Second, the subjects might have been inaccurate in completing the questionnaires. Finally, in generalization of the obtained results, the influence of culture and customs of a country should be considered.

Conclusion

Although the majority of students in this study had a proper lifestyle in terms of health promotion, it is necessary to hold classes on this subject. Based on the findings of this study, 84.1% of the students followed a moderate lifestyle. Although the obtained result seems acceptable, training and interventions are required for the improvement of students' health-promoting lifestyle. However, the mean score of physical activity was lower in women compared to men, and this difference was statistically significant. Therefore, it is necessary to train women and hold fitness classes in order to improve their health.

Acknowledgement

Conflict of Interest

The authors declare no conflicts of interest.

References

1. Darby SAC. Older people, nursing, and mental health. Philadelphia: Elsevier Health Sciences; 1999, P: 4.
2. DeLaune SC, PK L. Fundamentals of nursing standards & practice. New York: Delmar Thomson Learning; 2002, P: 65.
3. US Department of Health andHuman Services. Healthy People 2010. With understanding and improving health and objectives for improving health. 2nd ed. Washington, DC: US Government Printing Office; 2000.
4. Shaban M, Mehran A, Taghlili F. Relationship between Perception of Health Concept and Health Promoting Behaviors: A Comparative Study among Tehran University Medical and Non-medical Students. Hayat. 2007; 13(3):27-36.
5. Borhani F, Abbaszaeh A, Kohan S, Golshan M, Raberi Eshagh E. Life style and BMI asociation in kerman young people. Iranian JournalofNursingResearch. 2008; 2(6):65-72.
6. Nola IA, Jelinić JD, Matanić D, Pucarin-Cvetković J, Bergman Marković B, Senta A. Differences in eating and Lifestyle habits between first- and

sixth-year medical students from Zagreb. Collegium antropologicum. 2010;34(4):1289-1294.

7. Von Bothmer MI, Fridlund B. Gender differences in health habits and in motivation for a healthy lifestyle among Swedish university students. Nursing & Health Sciences. 2005;7(2):107-118.

8. Organization WH. Coming of age: from facts to action for adolescent sexual and reproductive health. Geneva: WHO; 1977.

9. American College Health Association. American College Health Association National College Health Assessment (ACHA-NCHA) Spring 2005 Reference Group Data Report (Abridged). Journal of American College Health.2006;55(1):5-16.

10. Fujii T, Ohsawa I, Nozawa A, Mori K, Kagaya M, Kajioka T. The association of physical activity level characteristics and other lifestyle with obesity in Nagoya University alumni, Japan. Scandinavian Journal of Medicine & Science in Sports. 1998;8:57–62.

11. Hawks SR, Madanat HN, Merrill RM, Goudy MB, Miyagawa T. A cross-cultural analysis of 'motivation for eating' as a potential factor in the emergence of global obesity: Japan and the United States. Health Promotion International. 2003;18:153-161.

12. Nakamura T. The integration of school nutrition program into health promotion and prevention of lifestyle-related diseases in Japan. Asia Pacific Journal of Clinical Nutrition. 2008;17(S1):349–351.

13. Werch CEC, Bian H, Moore MJ, Ames S, DiClemente CC, Weiler RM. Brief multiple behavior interventions in a college student health care clinic. Journal of Adolescent Health. 2007;41:577-585.

14. WHO. The WHO cross-national study of health behavior in school-aged children from 35 countries: Findings from 2001-2002. Journal of School Health. 2004;74:204-206.

15. Engle PL, Castle S, Menon P. Child development: Vulnerability and resilience. Social Science & Medicine. 1996;43:621-635.

16. Pender NJ. Health promotion in nursing practice. 3rd ed. Stamford, CT: Appleton & Lange; 1996.

17. WHO[online].availablefrom:<http://who.int/health promotion/en.

18. Tol A, Tavassoli E, Shariferad GR, Shojaeezadeh D. Health-promoting lifestyle and quality of life among undergraduate students at school of health, Isfahan University of Medical Sciences. Journal of Education and Health Promotion. 2013;2(1):11.

19. Mohammadi Zeidi I, Pakpour Hajiagha A, Zeidi BM. Reliability and validity of Persian version of

the health-promoting lifestyle profile. Journal of Mazandaran Univercity of Medical Sciences. 2012;22(Supple 1):103-113.

20. Motlagh Z, Mazloomy-Mahmoodabad S, Momayyezi M. Study of Health-promotion behaviors among university of medical science students. Zahedan Journal of Research in Medical Sciences. 2011;13(4):29-34.

21. Maheri A, Bahrami MN, Sadeghi R. The Situation of Health-Promoting Lifestyle among the Students Living in Dormitories of Tehran University of Medical Sciences, Iran. Journal of Health & Development. 2013; 1(4): 275-286.

22. Peker K,Bermek G. Predictors of health-promoting behaviors among freshman dental students at Istanbul university. Journal of Dental Education. 2011;75(3):413-420.

23. Babanejad M, Rajabi A, Mohammadi S, Partovi F, Delpisheh A. Investigation Lifestyle and Predictionof Changes in Its Associated Factors amongst Health Students.Journal of Health &Hygiene. 2013;2(4):147-155.

24. nilsaz M, Tavassoli E, Mazaheri M, Sohrabi F, Khezli M, Ghazanfari Z. Study of Health-promoting behaviors and Life Style among students of Dezful universities. Scientific Journal of Ilam University of Medical Sciences. 2013; 20 (5):168-175.

25. Lee FH, Wang HH. A preliminary study of a health-promoting lifestyle among Southeast Asian women in Taiwan. The Kaohsiung Journal of Medical Sciences. 2005;, 21(3): 114-120.

26. Jalili Z, Nakhaee N, Haghdust A. Health promoting behavior and psychosocial health of Kerman University of Medical Science. Proceedings of the 3rd National Congress of collection of healtheducation and health promotion. Hamadan Univercity of Medical Sciences. 2008;60.

27. Babanejad M, Zarin HK, Sayehmiri K, Delpisheh A. Lifestyle investigation and its associated factors in students of Ilam University of Medical Sciences. Pajoohandeh Journal. 2012; 17(5): 252-257.

28. Kerr MJ, Ritchey DA. Health-Promoting Lifestyles of English-Speaking and Spanish-Speaking Mexican-American Migrant Farm Workers. Public Health Nursing. 1990;7(2):80-67.

29. Norouzinia R, Aghabarari M, Kohan M, Karimi M. Health promotion behaviors and its correlation with anxiety and some students' demographic factors of Alborz University of Medical Sciences. Journal of Health Promoting Management. 2013;2(4):39-49.

30. Al-Kandari F, Vidal VL, Thomas D. Healthpromoting lifestyle and body mass index among College of Nursing students in Kuwait: a correlational study. Nursing & Health Sciences.

2008; 10(1): 43-50.

31. Larouche R. Determinants of college students' health-promoting lifestyles. Clinical Excellence for Nurse Practitioners: The International Journal of NPACE. 1998;2(1):35-44.

32. Ahmadnia E, Shakibazadeh E, Emamgholi Khooshehcheen T. Life Style-Related Osteoporosis Preventive Behaviors among Nursing and Midwifery Students. Journal of Faculty of Nursing and Midwifery, Tehran University of Medical Sciences. 2010;15(4):50-99. (InPersian).