Epidemiology and Health System Journal
doi: 10.34172/EHSJ.2022.31 2022 Autumn;9(4):171-177 http://ijer.skums.ac.ir

Original Article

A Study on the Relationship Between Happiness and Health Behaviors in Adolescents: Shahrekord 2019

Ghazal Rezaie[1], Masoumeh Moezzi[1*], Masoud Lotfizadeh[1], Fariba Fathollahi Dehkordi[2]

[1]Social Determinants of Health Research Center, Shahrekord University of Medical Sciences, Shahrekord, Iran
[2]Social Medicine Department, Medical College, Shahrekord University of Medical Sciences, Shahrekord, Iran

*Corresponding Author:
Masoumeh Moezzi,
Email: lmoezzi@yahoo.com

Abstract

Background and aims: Recently, positive psychology has received increasing importance, and research has shown that higher levels of happiness reduce the risk of mortality and morbidity. The aim of this study was to investigate the relationship between happiness and health behaviors in adolescents in Shahrekord.

Methods: In this cross-sectional-analytical study conducted in 2018-2019, 428 first and second cycle secondary school students were enrolled and filled out the Oxford Happiness Questionnaire and Health Behavior Questionnaire. Then, data were analyzed by SPSS.

Results: The mean age of the participants was 15.42 ± 1.59 (range: 12-18) years, and 158 (36.9%) of them were boys. The mean score of happiness was 48.34 ± 18.98 out of 87 (range: 0-87), which is high. The mean score of health behaviors was calculated to be 12.21 ± 1.66 out of 16 (range: 8-16), which is moderate. In addition, the mean happiness score was significantly associated with gender ($P=0.001$), education level ($P=0.01$), family income ($P=0.001$), living status with parents ($P=0.015$), and personal estimate of happiness status ($P=0.001$). Moreover, the mean score of health behaviors had a significant association with gender, educational district, education level, parents' education level, birth order, income, and personal estimate of happiness ($P<0.05$). Further, scores on happiness and health behaviors were positively correlated with each other ($r=0.391$, $P=0.001$) and negatively correlated with age ($r=-0.139$, $P=0.004$).

Conclusion: The levels of happiness among adolescent students were relatively good, their levels of health behaviors were moderate, and both of them were associated with each other and with demographic and socioeconomic variables. Accordingly, happiness should be promoted in society, particularly in students, to achieve a higher level of health-promoting behaviors.

Keywords: Happiness, Health behaviors, Adolescents

Received: April 20, 2022
Accepted: October 8, 2022
ePublished: November 30, 2022

Introduction

According to the World Health Organization (WHO) report in 2001, 70%-80% of deaths in developed countries and 40%-50% of deaths in developing countries are due to lifestyle diseases.[1] The WHO has reported that many of the risk factors that are among the most important causes of death can be efficiently addressed by changing and modifying lifestyles.[2] Health-promoting lifestyle includes behaviors in which a person strives to eat well, exercise regularly, avoid detrimental behaviors and drugs, prevent accidents, detect his/her physical symptoms early, control his/her emotions and thoughts, cope with stress and problems related to the psychological dimension, independence, and adaptation, and improve interpersonal relationships in the social dimension.[3]

Desirable lifestyle is so important that a new branch has recently emerged in medical sciences called lifestyle medicine that addresses the prevention and control of diseases. According to this branch, a healthy lifestyle includes all related factors such as nutrition, exercise, stress control, and smoking cessation.[2] It is, therefore, necessary for health care systems to pay serious attention to behavioral approaches and risk factors, along with clinical examinations.[4] Adolescence is one of the most important stages of life and is the transition from childhood to adulthood. This intermediate stage is associated with significant physical, psychological, and social changes as well as rapid shifts in behavioral patterns that have substantial impacts on functioning in adulthood.[4] Behaviors and lifestyle in adolescence have a tremendous impact on the burden of major diseases in the future. This issue is of particular importance because the pattern of diseases has changed and diseases related to unhealthy lifestyle patterns have excelled the list of causes of death.[4] For example, obesity in adolescence is associated with the occurrence of this phenomenon and the increase in accompanying complications at old age.[2]

Research on happiness indicated that higher levels of happiness have numerous health benefits such as the reduced risk of disease, disability, and mortality.[5]

Happiness-related health is associated with health behaviors that reduce the risk of diseases and promote health.[5,6] Although there is ample evidence that health behaviors are associated with negative moods, the relationship between a healthy lifestyle and happiness has not yet been conclusively confirmed. Given the importance of happiness and health behaviors in the success of adolescents[6] as a major and influential group in society in the future and also since few studies have so far been conducted on the relationship between health behaviors and happiness in adolescents, the present study investigated the relationship between happiness and health behaviors so that the results can help delineate ways of health promotion.

Materials and Methods

Type of Study

This study was a cross-sectional, descriptive-analytical study.

Study Population

The population of this study consisted of adolescent students in Shahrekord, the capital of Chaharmahal and Bakhtiari province, southwestern Iran.

Sample Size and Sampling Method

Samples included 384 students according to the Morgan table and population proportion sample size formula, and confidence level was 95%, $P = 50\%$, $d = 0.05$, and $N = 24\,000$ students. However, the final participants were 428 first and second cycle secondary school students aged 12-18 years. The inclusion criterion was ages between 12-18, and exclusion criteria were having chronic diseases, disabilities, and incomplete forms.

Stratified random sampling was used as the sampling method. In the first step, we considered two educational districts of Shahrekord. Then, 5 schools from district 1 and 6 schools from district 2 were selected based on district socioeconomic, population volume, gender, grade of students, and type of schools. In the second step, 428 students were selected randomly among these schools according to population number, gender, and education levels.

Data Collection Tools

Necessary information was collected using data collection tools that included a demographic checklist for obtaining age, gender, school name, grade, district area, parents' education, living status (with or without parents), and students' viewpoints about family income. The main tools were two electronic questionnaires, including the standardized Oxford Happiness Questionnaire (OHQ) and Health Behavior Questionnaire (HBQ). The OHQ has 29 items, and each item includes four choices ranging from 0 to 3. The score on the scale ranges between 0 and 87 with scores under 22 indicating low happiness, 22-43 moderate happiness, 44-67 high happiness, and 68-87 very high happiness. HBQ has 8 items, and each item involves two choices rating from 1 to 2. The score on the scale ranges between 8–16, and scores of 15 and higher were regarded as high, 12 -14 as moderate, and lower than 12 as low.

Validity and Reliability of Tools

OHQ is a standard questionnaire with acceptable validity and reliability in the Persian version with a Cronbach's alpha equal to 0.87.[7] HBQ was developed using a questionnaire administered in a cross-sectional study investigating happiness and health behaviors among South Korean adolescents.[8] This questionnaire is about health behavior (e.g., smoking status, alcohol consumption, breakfast eating, daily fruit intake, vegetable consumption, daily physical activity, inactive behaviors, and sleep hours). The qualitative face and content validity of the translated version was investigated by experts on social medicine, health education, and the Security Department of Education Organization. Each item with one acceptable criteria less than 80% was modified. All questions were remained, and the questionnaire was finalized and confirmed after some minor modifications. Its reliability was acceptable, and Cronbach's alpha was 0.85 using test-retest.

Method of Data Gathering and Analysis

Based on sample size and sampling method, questionnaires were randomly distributed among students by Porcelain software. Necessary explanations were provided about the study procedure and how to respond to the items. After completing the standardized OHQ, the level of happiness of students was measured. Data from the HBQ were also collected. Then, the relationship between health behaviors and happiness was determined. Data were analyzed using analysis of variance and Pearson's correlation coefficient by SPSS version 21, and the significance level was considered to be < 0.05.

Results

Participants included in the study were 428 students with a mean age of 15.42 ± 1.59 (range: 12-18), of whom 158 (36.9%) were boys and 270 (63.1%) were girls. Further, 211 (49.3%) of the participants were the first cycle secondary school students, 69 (16.1%) were vocational second cycle, and 148 (34.6%) were theoretical second cycle school students (Table 1).

Table 2 displays the distribution of health behaviors among participants. Vegetable consumption, physical activity with increasing heart rate and respiration, and sufficient sleep on working days are proper in less than 50% of students.

As Table 3 indicates, the mean score of the students on the Happiness Questionnaire was 48.34 ± 18.98, which is classified as a high score, and their mean score on health behaviors was 12.21 ± 1.66, which is classified as a moderate score. According to Pearson's correlation coefficients, the

Table 1. Frequency Distribution of Different Variables in Studied Students

Variable	Level	No. (%)
Gender	Male	158 (36.9)
	Female	270 (63.1)
Educational district	One	199 (46.5)
	Two	229 (49.3)
Grade	First cycle	211 (49.3)
	Theoretical second cycle	148 (34.6)
	Vocational second cycle	69 (16.1)
Father's education level	Under high school diploma	142 (33.2)
	High school diploma and associate's degree	157 (36.7)
	Bachelor's degree and higher	129 (29.2)
Mother's education level	High school diploma	125 (29.2)
	High school diploma and associate's degree	201 (23.8)
	Bachelor's degree and higher	102 (23.8)
Birth order	First	195 (45.6)
	Second	149 (34.8)
	Third	60 (14)
	Fourth and higher	24 (5.6)
Family income	High	11 (2.6)
	Medium upward	80 (18.7)
	Medium	227 (53)
	Medium downward	71 (16.6)
	Low	39 (9.1)
Living with parents' status	Living with parents	396 (92.5)
	Living with a parent's family	1 (0.2)
	Living with just father	6 (1.4)
	Living with just mother	16 (3.7)
	None	9 (2.1)
Personal estimate of happiness	Upset	19 (4.4)
	A little upset	24 (5.6)
	Indifferent	80 (18.7)
	A little happy	93 (21.7)
	Happy	212 (49.5)

score of health behaviors had a significant and positive correlation with the score of happiness, and the scores of health and happiness behaviors had a significant and inverse correlation with age, so the scores of health and happiness behaviors decreased with increasing age.

The results of the comparison between happiness and health behaviors with different variables are presented Table 4. According to the results, there was no difference between educational districts 1 and 2 regarding happiness, but the score of health behaviors in district 2 is more significant ($P=0.021$). The score of happiness ($P=0.01$) and health behaviors ($P=0.001$) are significantly higher in male students than in females. Further, there was no significant relationship between living with parents' status, but there was a significant relationship between health behavior and education level, parents' education level, birth order, family income, and personal estimate of happiness ($P<0.05$). Happiness score also had no significant relationship with education level, parents' education level, birth order, and medical history but had a significant relationship with gender, education level, family income, living with parents status, and personal estimate of happiness ($P<0.05$).

Discussion

In the present study, which aimed to investigate the relationship between happiness and health behaviors in adolescents in Shahrekord, the mean happiness score was 48.34 (range: 0-87), which was high. In various studies conducted on Iranian students, the happiness score was similar to or lower than that in the present study and was often moderate. In the study by Hashemi et al in Mashhad on male high school students, the average happiness score was 48.1 (range: 0-87),[9] which is partly similar to the results of the present study. In the study by Moeini et al in Kermanshah, the average happiness score of female high school students was 39.60 (range: 0-87),[10] which is lower than the mean score obtained in the current study. In another study by Soleimani et al on elementary school students in Mashhad public schools, the average happiness score was 89.23 (range: 29 to 116), which was satisfactory [11]. Moreover, the happiness score of 307 elementary students in Rey, Tehran province, was 63.83 (range: 29 to 116), which was moderate.[12] It seems that the observed differences are due to the differences in various variables such as age, education level, gender, and place of residence among the study populations. Their utilized questionnaires and range of happiness scores are also different from those in the current study.

In the study by Moeini et al, there was no significant relationship between demographic variables (e.g., the field of study, age, and grade of study) and happiness, but there was a significant relationship between family economic status and happiness[10] which is consistent with the finding of the present study. The study of Mertoğlu on 2187 students from 28 schools in Mirzmir-Dikili, Turkey revealed that students' happiness score was not significantly related to education level, number of siblings, family economic status, and mother's employment status but was lower in students whose father was unemployed and whose parents were divorced. In addition, the findings showed that the happiness score decreased with increasing age.[13] However, the results regarding the relationship of happiness with age and living with parents' status are similar to those in our study.

In a study conducted by Kiani and Mazaheri on high school students in Zahedan, the average happiness score of girls was lower than that of boys[14] which is consistent with the present study and is probably due to sociocultural issues and imposing comparably more restrictions on girls in Iran. The study by Piqueras et al on 3461 adolescents aged 17-24 in a university in Chile found that happiness score is significantly related to gender and is higher in

Table 2. Frequency Distribution of Health Behavior Questionnaire Items in Students Under Study

Variable	Level	No. (%)
How much breakfast have you eaten in the last 7 days?	More than or equal to 3 times	269 (62.9)
	Less than 3 times	159 (37.1)
How much fruit have you eaten in the last 7 days?	At least 1 unit per day	316 (73.8)
	Less than 1 unit per day	112 (26.2)
How many vegetables have you eaten in the last 7 days?	At least 1 unit per day	178 (41.6)
	Less than 1 unit per day	250 (58.4)
During the last 7 days, how many days did you have physical activity for 1 hour or more that did not increase your heart rate and respiration?	At least 3 times a week	231 (54)
	Less than 3 times a week	197 (46)
During the last 7 days, how many days did you have physical activity for 1 hour or more that did not increase your heart rate and respiration?	At least 3 times a week	193 (45.1)
	Less than 3 times a week	235 (54.9)
How many hours do you spend on work per day after school and in your spare time, such as watching TV, watching movies, and playing computer games?	At least 2 hours a day	271 (63.3)
	Less than 2 hours a day	157 (36.7)
How many hours did you sleep in a working day during the last 7 days?	More than 8 hours a day	207 (48.4)
	At most 8 hours a day	221 (51.6)
How many hours did you sleep on a holiday during the last 7 days?	More than 8 hours a day	258(60.3)
	At most 8 hours a day	170(39.7)
Have you used tobacco or alcohol in the last month?	Yes	29(6.8)
	No	399(93.2)

Table 3. Correlation Between Age, Happiness Score, and Health Behavior Scores Based on Pearson's Correlation Coefficients

Variable	Happiness	Health behaviors	Age
Happiness	48.34 ± 18.98 (mean ± SD)	r = 0.391, *P* = 0.001	r = -0.210, *P* = 0.001
Health behaviors		12.21 ± 1.66 (mean ± SD)	r = -0.139, *P* = 0.004
Age			15.42 ± 1.59 (mean ± SD)

Note. SD: Standard deviation.

girls.[15] The results of the study by Moradi indicated a significant relationship between students' happiness and parents' education level and employment status, so the students' happiness increased with increasing the parents' education level and promoting their employment status.[16] Contrary to the study of Moradi, in the present study, there was no significant relationship between parents' education level and happiness.

In the study by Salehi Omran and Abedini Baltork on first and second cycle high school students in Mazandaran province, the mean happiness score had no significant relationship with gender but had a significant relationship with the place of residence (urban vs. rural), academic achievement, and field of study.[17] Conversely, a significant relationship was observed between gender and happiness in the present study. Jahed et al conducted a study on primary school students in Rey, Tehran province, finding that the level of happiness was not significantly related to the mother's employment status and the student's age,[12] which is not in agreement with our findings. Some demographic and socioeconomic variables seemed to affect students' happiness status. However, it seems that the discrepancy between research findings may be related to the variations among the study populations, which is probably due to demographic and, especially cultural differences.

In the present study, the mean score of health behaviors on the used scale was 12.21, which is moderate. In the study by Piri et al among female students in the first and second cycle of high school in Poldakhtar, Lorestan province, the overall score of health-promoting behaviors on the Health Promoting Behaviors Questionnaire was 64.6 out of 102, which is moderate,[18] and this result is similar to our finding. In the study by Musavian et al on high school students in Rasht, the average score of health-promoting behaviors was 3.58 out of a score range of 1-5, which is moderate[19] and consistent with the present study. Similar results were reported by Rayat et al for high school students in Qazvin.[20] Motaghi et al investigated high school students in Isfahan and found that the score of health-promoting behaviors is 71.2 out of the score range of 0-165, which is moderate.[21] These results are in agreement with our study. Further, in the study by Piri et al on first- and second cycle high school female students in Poldakhtar, parents' education level, mother's employment status, and family size had a significant relationship with health-promoting behaviors; hence, the score was higher in students with more educated parents, employed mothers, and fewer siblings,[18] which is consistent with the present study. In the study by Musavian et al on adolescents in Rasht, health-promoting behaviors was significantly related to age, gender,

Table 4. Comparison Between Happiness and Health Behavior Scores and Studied Variables

Variable	Level	Happiness (Mean ± SD)	*P*-value	Health Behaviors (Mean ± SD)	*P* Value
Gender	Male	51.44 ± 17.55	0.01	12.56 ± 1.57	0.001
	Female	46.52 ± 19.57		12.01 ± 1.68	
Educational district	One	46.61 ± 19.72	0.078	12.02 ± 1.68	0.021
	Two	49.85 ± 12.39		12.39 ± 1.63	
Grade	First cycle	52.59 ± 17.79	0.001	12.44 ± 1.73	0.002
	Theoretical second cycle	37.73 ± 20.37		11.65 ± 1.55	
	Vocational second cycle	47.23 ± 17.94		12.16 ± 1.54	
Father's education level	Under high school diploma	45.83 ± 19.18	0.146	11.84 ± 1.68	0.004
	High school diploma and associate's degree	49.21 ± 18.56		12.38 ± 1.66	
	Bachelor's degree and higher	50.05 ± 19.12		12.43 ± 1.58	
Mother's education level	Under high school diploma	45.15 ± 19.37	0.072	11.83 ± 1.69	0.003
	High school diploma and associate's degree	49.26 ± 19.22		12.28 ± 1.67	
	Bachelor's degree and higher	50.45 ± 17.63		12.56 ± 1.51	
Birth order	First	50.22 ± 18.65	0.158	12.28 ± 1.67	0.012
	Second	47.03 ± 20.10		12.39 ± 1.59	
	Third	47.96 ± 16.79		11.91 ± 1.72	
	Fourth and higher	42.16 ± 18.61		11.33 ± 1.57	
Family income	High	62.54 ± 17.79	0.001	12.45 ± 1.91	0.001
	Medium upward	53.37 ± 19.08		12.58 ± 1.46	
	Medium	49.09 ± 18.28		12.43 ± 1.61	
	Medium downward	42.39 ± 18.18		11.61 ± 1.67	
	Low	40.48 ± 19.10		11.23 ± 1.64	
Living with parents' status	Living with parents	49.15 ± 18.62	0.015	12.27 ± 1.63	0.141
	Living with a parent's family	18.00 ± 0.00		12.00 ± 0.00	
	Living with just father	32.66 ± 21.27		11.66 ± 1.36	
	Living with just mother	42.75 ± 20.62		11.56 ± 2.03	
	None	36.44 ± 21.75		11.22 ± 1.98	
Personal estimate of the state of happiness	Upset	27.21 ± 23.54	0.001	12.67 ± 1.62	0.001
	A little upset	32.12 ± 14.97		12.08 ± 1.39	
	Indifferent	35.35 ± 17.01		11.58 ± 1.65	
	A little happy	44.00 ± 12.97		11.50 ± 1.74	
	Happy	58.88 ± 14.87		11.36 ± 1.70	

Note. SD: Standard deviation.

education level, parents' education level, and mother's employment status. Further, health-promoting behaviors were higher in male and comparably younger students with educated parents, which is in agreement with the present study.[19] Motaghi and colleagues' study explored high school students in Isfahan, revealing a significant relationship between some domains of health-promoting behaviors and the number of siblings, mother's education level, family income, and relationship with parents,[21] which is in agreement with the present results. Moreover, Karimi et al reported that the education level of parents, especially mothers, plays an important role in student nutrition.[22] In fact, educated parents encourage their children to adopt a healthy lifestyle by transferring their health knowledge to them and providing social support for them.[19] The obtained results in both of the above-cited studies are similar to those in the present study. Another finding of this study was that students from smaller and higher-income families had better health-promoting behaviors. To explain this finding, it can be argued that in large and low-income families, it is more likely that the health and nutrition facilities provided to each member of the family are fewer, while children in small families enjoy a greater share of facilities and parents' attention.

In the present study, Pearson's correlation coefficient showed a significant and positive correlation between scores on health behaviors and happiness, so the health behavior scores increased with increasing happiness. A study by Piqueras et al on 3461 adolescents aged 17-24 in a university in Chile found that happiness score is significantly associated with health behaviors. In that study, individuals with daily physical activity and daily consumption of vegetables and fruits were more likely to belong to the Very Happy group,[15] which is consistent with

the present study. The study by Grant et al in 12 European countries and the United States also demonstrated that life satisfaction is significantly associated with the number of prudent health behaviors such as physical activity, fruit and vegetable consumption, and reduction of smoking and alcohol consumption.[23] A study by Kang in South Korea showed that happiness and economic status are strong predictors of health-promoting behaviors in clinical nurses.[24] Mortazavi in a study on 384 medical students at Kerman University of Medical Sciences observed a significant, negative correlation between happiness and smoking dependence in the students.[25] Kye et al in a study on South Korean adolescents found that a high level of happiness is associated with non-smoking, lack of alcohol consumption, eating breakfast, daily fruit consumption, vegetable consumption, having at least 60 minutes of daily physical activity, avoiding inactive behaviors, and increasing sleep hours,[8] which is consistent with the results of the current study.

Strengths and Weaknesses of the Study

As a strong point, in this study unlike other similar studies, we considered two main variables: happiness and health behaviors with each other and investigate their correlation in 428 various adolescent students (just like the study by Kye et al[8]). Further, due to the type of study, we have little recall bias. However, one drawback of this study was the completion of the questionnaires without attendance. Of course, to overcome this limitation, necessary explanations were provided about the study procedure and how to respond to the items for participants.

Conclusion

Based on the results of this study, there was a significant and positive correlation between the levels of happiness and health behaviors scores in adolescent students in Shahrekord. The levels of happiness among adolescent students were good, and their levels of health behaviors were moderate. Moreover, there was a significant and negative correlation between scores of health and happiness behaviors and age. Accordingly, happiness should be promoted in society, particularly in students, to achieve a higher level of health-promoting behaviors and consequently wholeness. Since happiness and health behaviors are changeable and promotable traits, educational intervention methods can be used to promote both of them in students.

Recommendations

It is recommended that future studies investigate the effectiveness of educational and behavioral interventions for improving health behaviors and happiness in adolescent students in Shahrekord. It is also recommended to increase the level of health behaviors by providing appropriate training for increasing happiness levels.

Acknowledgments

Shahrekord University of Medical Sciences, Vice Chancellor for Research and Technology, provided a grant for this research project and issued necessary approvals for it (Code number 2995). The authors sincerely appreciate the assistance and cooperation of the officials of the General Department of Education of the province, educational districts 1 and 2 of the Shahrekord Education Organization, and the principals of high schools under study.

Author Contributions

Conceptualization: Masoumeh Moezzi.
Data curation: Ghazal Rezaie, Masoumeh Moezzi.
Formal Analysis: Masoumeh Moezzi, Masoud Lotfizadeh.
Funding acquisition: Masoumeh Moezzi.
Investigation: Masoumeh Moezzi, Ghazal Rezaie, Masoud Lotfizadeh, Fariba Fathollahi Dehkordi.
Methodology: Masoumeh Moezzi and Masoud lotfizadeh.
Project administration: Masomeh Moezzi.
Resources: Masoumeh Moezzi and Ghazal Rezaie.
Software: Gazal Rezaie, Masoumeh Moezzi.
Supervision: Masoumeh Moezzi.
Validation: Masoud Lotfizadeh, Fariba Fathollahi Dehkordi.
Visualization: Masoumeh Moezzi.
Writing-original draft: Ghazal Rezaie, Masoumeh Moezzi.
Writing – review & editing: Masoumeh Moezzi, Fariba Fathollahi Dehkordi, Masoud Lotfizadeh.

Conflict of Interest Disclosures

The authors declare that they have no conflict of interests.

Ethical Approval

The ethics code (IR.SKUMS.REC.1397.33) was obtained from the Ethics Committee of the University after approving the study protocol. The permission to start the study was obtained from the Vice Chancellor for Research of the Shahrekord University of Medical Sciences. Then, necessary coordination was made with the Central Headquarter of the Education Organization, the Education Organization of District 1, the Education Organization of District 2, and the principals of the 11 first and second cycle schools (theoretical and vocational) under study. Next, students were provided with informed consent to participate in the study and then received the questionnaires.

References

1. Dickey RA, Janick JJ. Lifestyle modifications in the prevention and treatment of hypertension. Endocr Pract. 2001;7(5):392-9. doi: 10.4158/ep.7.5.392.
2. Borhani F, Abbszadeh A, Kohan S, Golshan M, Dortaj Rabari E. Correlation between lifestyle and body mass index among young adults in Kerman. Iran J Nurs Res. 2008;2(7):65-72. [Persian].
3. Naghibi F, Golmakani N, Esmaily H, Moharari F. The relationship between life style and the health related quality of life among the girl students of high schools in Mashhad, 2012-2013. Iran J Obstet Gynecol Infertil. 2013;16(61):9-19. doi: 10.22038/ijogi.2013.1661. [Persian].
4. Balcázar HG, de Heer H, Rosenthal L, Aguirre M, Flores L, Puentes FA, et al. A Promotores de Salud intervention to reduce cardiovascular disease risk in a high-risk Hispanic border population, 2005-2008. Prev Chronic Dis. 2010;7(2):A28.
5. Parkin DM, Boyd L, Walker LC. The fraction of cancer attributable to lifestyle and environmental factors in the UK in 2010. Br J Cancer. 2011;105(Suppl 2):S77-81. doi: 10.1038/bjc.2011.489.
6. Natvig GK, Albrektsen G, Qvarnstrøm U. Associations between psychosocial factors and happiness among school adolescents. Int J Nurs Pract. 2003;9(3):166-75. doi: 10.1046/j.1440-172x.2003.00419.x.
7. Najafi M, Dehshiri G, Dabiri S, Sheykhi M, Jafari N. Psychometric properties of Farsi version of the Oxford

happiness questionnaire among college students. Quarterly of Educational Measurement. 2013;3(10):55-73. [Persian].
8. Kye SY, Kwon JH, Park K. Happiness and health behaviors in South Korean adolescents: a cross-sectional study. Epidemiol Health. 2016;38:e2016022. doi: 10.4178/epih.e2016022.
9. Hashemi SE, Mahoor H. The effectiveness of mindfulness training on students happiness. Research in Clinical Psychology and Counseling. 2017;6(2):111-20. doi: 10.22067/ijap.v6i2.57004. [Persian].
10. Moeini B, Babamiri M, Mohammadi Y, Barati M, Rashidi S. Relationship between happiness and mental health status among high school female students: a descriptive –analytic study. J Urmia Nurs Midwifery Fac. 2017;14(11):942-51. [Persian].
11. Solamani F, Saadati A. The relationship between happiness and self-esteem and social development of elementary students. Educ Res J. 2013;2(1):35-9. [Persian].
12. Jahed H, Hosseini SA, Toghyani Dolatabadi Z, Abdolmaleki S. Relationship between mother's employment with happiness and academic self-efficacy of students. Education Strategies in Medical Sciences. 2020;13(1):53-61. [Persian].
13. Mertoğlu M. Factors affecting happiness of school children. J Educ Train Stud. 2020;8(3):10-20.
14. Kiani Z, Mazaheri M. A comparative survey of the happiness between boys and girls high-school students in Zahedan city. J Educ Psychol Stud. 2018;15(31):199-216. doi: 10.22111/jeps.2018.4275. [Persian].
15. Piqueras JA, Kuhne W, Vera-Villarroel P, van Straten A, Cuijpers P. Happiness and health behaviours in Chilean college students: a cross-sectional survey. BMC Public Health. 2011;11:443. doi: 10.1186/1471-2458-11-443.
16. Moradi Z. Investigating the relationship between parent's employment and student's happiness through performance mediation. J Med Sci. 2014;12(2):22-34.
17. Salehi Omran E, Abedini Baltork M. Examine the relationship between happiness and academic success of students educational spaces Mazandaran province with emphasis on the role of educational planning. J Educ Plan Stud. 2018;7(13):121-45. doi: 10.22080/eps.2018.2025. [Persian].
18. Piri N, Garmaroudi G, Noori K, Azadbakht M, Hashemi S. Health-promoting behaviors of first and second grade high school female students in Poldokhtar in 2014. Yafteh. 2015;17(3):47-56. [Persian].
19. Musavian AS, Pasha A, Rahebi SM, Atrkar Roushan Z, Ghanbari A. Health promoting behaviors among adolescents: a cross-sectional study. Nurs Midwifery Stud. 2014;3(1):e14560. doi: 10.17795/nmsjournal14560.
20. Raiyat A, Nourani N. Samiei Siboni F, Sadeghi T, Alimoradi Z. Health improving behaviors in students of Qazvin secondary schools in 2011. Journal of Health. 2012;3(3):46-54. [Persian].
21. Motaghi M, Afsar M, Tavakoli N. Examination of the relationship between health-promoting behaviors and family characteristics in high school girl students. J Urmia Nurs Midwifery Fac. 2015;13(5):395-403. [Persian].
22. Karimi B, Sadat Hashemi M, Habibian H. Study of the breakfast habits and its relationship with some factors in Semnan (Iran) pupils. Koomesh. 2008;9(4):285-92. [Persian].
23. Grant N, Wardle J, Steptoe A. The relationship between life satisfaction and health behavior: a cross-cultural analysis of young adults. Int J Behav Med. 2009;16(3):259-68. doi: 10.1007/s12529-009-9032-x.
24. Kang S. Influence of fatigue, health perception, and happiness on health promoting behaviors among general hospital nurses. Journal of the Korea Academia-Industrial Cooperation Society. 2018;19(8):456-65.
25. Mortazavi Z. Study on relationship between stress and social suport and happiness with smoking in medical student in Kerman University. Kerman Uni J. 2017;2(11):22-9.