

Access this article online
Quick Response Code:

Website: www.jehp.net
DOI: 10.4103/jehp.jehp_1639_21

Health-promoting behaviors in staff and students of Ardabil University of Medical Sciences

Abdollah Dargahi¹, Helia Gholizadeh², Mohsen Poursadeghiyan³,
Yousef Hamidzadeh Arbabi³, Mohammad Hossein Hamidzadeh Arbabi²,
Javad Hosseini⁴

Abstract:

BACKGROUND: The staff of health and dentistry schools can play an important role in encouraging students and their clients to adopt health and preventive behaviors. The aim of this study was to compare health-promoting behaviors in staff and students of health and dental schools in Ardabil University of Medical Sciences (ARUMS).

MATERIALS AND METHODS: This cross-sectional descriptive-analytical study was conducted in 2021. The research population was staff and students of health and dental schools. Staff sampling was by census and students were sampled by simple random sampling. The data collection tool was a questionnaire whose validity and reliability had been confirmed in previous studies. Data analysis was performed using descriptive and analytical statistics tests using SPSS version 20 software. Linear regression was performed using stepwise method.

RESULTS: The results showed that the mean score of the individuals was 99.2 ± 20.24 . In the leveling, the behaviors of 33 people (17.55%) were appropriate, desirable and good, and the health-promoting behaviors, 154 people (82.45%), were moderate and low. The correlation between age, gender, marital status, and workplace of the individuals with health-promoting behaviors was not statistically significant ($P > 0.05$). The output of stepwise regression analysis showed that the variables were significant and could predict the scores of health-promoting behaviors.

CONCLUSIONS: Health-promoting behaviors in <20% of students and staff are desirable, and in more than 80% of them are moderate and poor. Therefore, educational administrators should use these results in curriculum planning to increase health-promoting behaviors of students and staff. The score of health-promoting behaviors is related to the above-mentioned areas, but the relationship may not be linear.

Keywords:

Ardabil University of Medical Sciences, health-promoting behaviors, schools of health and dentistry, staff and students

Introduction

Health-promoting behaviors are one of the main factors determines health and as a factor in preventing the occurrence of noncommunicable and chronic diseases today is known. In addition to, Maintain and improve health and prevent diseases are directly related

to health behaviors.^[1] Healthy human beings are recognized as the main factor of development and health provision is considered a necessary condition for the existence of healthy human beings and sustainable development. To achieve the good health, we must use all the capacities based on experience and intellect, and a healthy lifestyle is one of these capacities.^[2,3] According to Hörnquist, the

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Dargahi A, Gholizadeh H, Poursadeghiyan M, Hamidzadeh Arbabi Y, Hamidzadeh Arbabi MH, Hosseini J. Health-promoting behaviors in staff and students of Ardabil University of Medical Sciences. *J Edu Health Promot* 2022;11:283.

¹Social Determinants of Health Research Center, Ardabil University of Medical Sciences, Ardabil, Iran, ²Medical student of Islamic Azad University, Ardabil Branch, Ardabil, Iran, ³Department of Occupational Health and safety Engineering, School of Health, Ardabil University of Medical Sciences, Ardabil, Iran, ⁴Department of Biostatistics, School of Public Health, Hamadan University of Medical Sciences, Hamadan, Iran

Address for correspondence:

Dr. Yousef Hamidzadeh Arbabi,
Department of Occupational Health and Safety Engineering, School of Health, Ardabil University of Medical Sciences, Ardabil, Iran.
E-mail: hamidzade2015@gmail.com

Received: 09-11-2021
Accepted: 02-01-2022
Published: 28-09-2022

quality of life has five domains as follows: physical domain, including the health of the body and the stress of a particular disease; psycho-emotional domain, including a sense of life satisfaction; social domain, including social contact and proper communication with others in general and with family and spouse in particular; behavioral-activity domain including accepting one's reality and doing work and activity and interfering in social affairs, and material domain including economic and financial status.^[4] According to the definition of the World Health Organization, lifestyle includes performing behaviors that lead to empowering the individual to increase control over their health and ultimately improve the health of the community.^[5,6] According to the World Health Organization, 70%–80% of deaths in developed countries and 30%–40% of deaths in developing countries are due to lifestyle-related diseases.^[7] Study on health behaviors in 35 countries showed that about 60% of people's quality of life and health depend on their behavior and lifestyle.^[8] Health-promoting behaviors as a dynamic, continuous, and positive process include facilitation of the use of energy and potential of individuals to improve the quality of life, productivity, and use of personal abilities in relation to health.^[9] Health-promoting behaviors in this study are behaviors that regardless of the actual or observed health status, are performed for maintaining, supporting and promoting the health of the person^[10] and included the status and type of nutrition such as fruit and vegetable, fluids intake, salt and fat intake, physical activity and exercise, sleep status, stress management, healthy recreation status, smoking status, responsibility for protecting own health and the health of others and so on, which were measured. Health-promoting behaviors have become one of the research priorities around the world. Of course, most studies on health-promoting behaviors have been conducted in developed countries and few studies on health-promoting behaviors have been performed in Eastern countries, including Iran. On health-promoting behaviors in different groups of society including students, professors, nurses, health workers, the elderly, etc., and different results have been obtained.^[11-15] There was no study to compare health-promoting behaviors in students and staff in schools of health and dental. Students are often young people with flexible personalities, future health-care workers, and at the same time, tomorrow's parents of a community. Considering that health-promoting behaviors have an essential role in providing and maintaining health, and the student community in the country is wide and there is no sufficient research evidence on the status of students' health-promoting behaviors and especially its comparison with staff, the present study was selected and conducted with the aim of determining and

comparing health-promoting behaviors in students and staff of health and dental school of Ardabil University of Medical Sciences (ARUMS).

Materials and Methods

Study design and setting

This cross-sectional descriptive study was conducted in 2021 to compare health-promoting behaviors in staff and students of health and dental schools in Ardabil. The data were collected by two trained public health students and medical. After collecting the data, the data of 188 people were analyzed.

Study participants and sampling

Participants included staff and students of the school of health and dentistry. The statistical population consisted of staff (experts in education and research units, public health, environment health engineering, occupational health engineering, and dental medical departments, laboratories, staff of financial, student-cultural and well-being service departments) and students of health and dental schools of Ardabil University of Medical Sciences in the second half of the academic year 2020–2021 who were working or studying in ARUMS. In this study, almost all the staff (48 of 52 people) of all units of the mentioned faculties entered the study by census. Furthermore, students (from students of all disciplines and entrances such as public health, environment health engineering, occupational health engineering, and dental medical students) who were present at the schools of health and dentistry at the time of completing and collecting the questionnaires were selected as a sample in this study by simple random sampling. According to university education unit statistics, the total number of students in the schools of health and dentistry was approximately 482 people that of these, 140 people were selected as a sample. Based on the equation 1, the sample number was 188 people. To prevent the standard input error and ensure sampling error and sample loss, the final number of sample size was estimated to be 210 people. It should be noted that 22 participants did not specify their age, gender, marital status, etc., and were discarded due to deficiencies. Therefore, the characteristics of 188 people were analyzed.

$$n = \frac{Nz^2pq}{Nd^2 + z^2pq} \quad (\text{Eq. 1}),$$

N = Society (total) size, $z = 1.96$, $P = q = 0.5$, d = Error value.

Data collection tool and technique

Health-promoting behavior is any action that is taken to maintain or increase the health and self-actualization of an individual or group and include the status and type

of nutrition, fluids intake, salt and fat intake, physical activity and exercise, sleep status, stress management, healthy recreation status, smoking status, responsibility for protecting own health and the health of others and so on, which were measured. The data collection tool was a lifestyle questionnaire that its validity and reliability have been obtained by Lali, Abedi, and Kajbaf and included demographic information and questions about health-promoting behaviors.^[16] The questionnaire consisted of two parts: the first part was related to demographic characteristics (eight questions) and the second part was related to health-promoting behaviors. Health-promoting behaviors questionnaire had 10 areas and each area had seven questions and the average score of each of them was distributed between 0 and 14. The items were organized into physical health, physical activity, weight control, disease prevention, mental health, spiritual health, social health, abstinence from alcohol, tobacco and psychotropic substances, accident prevention and environmental health. For example, some of items related to physical health were: I try to keep my body healthy, I take care of my health and see a doctor if necessary for medical examinations, I am always able to rest and calm down, I suffer from chronic diseases or physical disabilities and etc., with answers: 0 = never, 1 = sometimes, and 2 = often). The score of each section according to the calculation of Lali, Abedi, and Kajbaf study questionnaire was between 0 and 14 variables (70 questions with answers: 0 = never, 1 = sometimes, and 2 = often); therefore, the scores of the individuals from 10 sections of health-promoting behaviors were calculated between 0 and 140. The method of completing and collecting the questionnaires in the employees was that the questioners referred to each room and the workplace and, while introducing themselves, asked the employees to complete the health-promoting behaviors if they wished. It took <10 min to complete the questionnaire. In the case of students, the completeness of the questionnaire was such that the questioners referred to the classrooms and asked for the students' cooperation in completing the questionnaire, and the students who wished to cooperate received and completed the questionnaire and delivered it to the questioners. Each person's average score of health-promoting behaviors was calculated and graded. The scores of health-promoting behaviors in the individuals were classified according to Lali, Abedi, and Kajbaf's studies to three levels: level 1 or poor health-promoting behaviors, level 2 or moderate health-promoting behaviors, and level 3 or good and high health-promoting behaviors. Based on similar studies and according to this leveling, people whose health-promoting behavior scores ranged from 0 to 79 were Level 1, people whose health-promoting behaviors scores ranged from 80 to 119 were Level 2, Individuals with a health-promoting behavior score between 120

and 140 were ranked at level 3. The collected data were entered into SPSS version 20 software (SPSS Inc., Chicago, IL, USA) environment and analyzed using descriptive statistics, *t*-test, and correlation tests.

Results

The results showed that out of 188 individuals, the minimum age was 19 years and the maximum age was 60 years, the mean age of students was 21.88 ± 3.34 years, the mean age of staff was 36.33 ± 7.11 years and the total mean age was 28.61 ± 10.1 years. Forty people (22.47%) were male and 138 people (77.53%) were female. One hundred and thirty-two people (70.21%) were single and 56 people (29.79%) were married. Nine of the married people (13.85%) were students and the rest were employees. One hundred and forty people (74.47%) of the individuals were students and 48 people (25.53%) were employees (formal, contractual, etc.). Since some of the staff were shared between the faculties, it was not possible to separate them. One hundred and thirty-six people (72.34%) of the individuals were employees and students of the Faculty of Health and the rest, i.e., 52 individuals (27.66%) were employees and students of the Faculty of Dentistry. Out of the 140 students studied, 100 individuals (71.43%) were student of health fields and 40 individuals (29.67%) were dental students (10 individuals from each entrance in the past 4 years). Out of 100 students of health fields, 32 individuals were students of continuous public health (8 individuals from each entrance), 32 individuals were students of continuous environmental health (8 individuals from each entrance), and 36 individuals were the students of occupational health (9 individuals from each entrance). Table 1 shows the relationship between the demographic characteristics of the individuals with the levels of health-promoting behaviors.

As can be seen in the table above, no significant correlation was found between variables such as gender, marital status, occupation, and workplace of the individuals and the level of their health-promoting behaviors using the Chi-square test ($P > 0.05$).

Overall mean scores of health-promoting behaviors in staff and students

The scores of health-promoting behaviors were distributed between 0 and 140 in the staff and students studied. The minimum score was 34 and the maximum was 139. The mean score of the individuals was 99.2 ± 20.24 .

Comparison of the mean score of health-promoting behaviors in employees and students

The minimum score of health-promoting behaviors in employees was 34 and the maximum was 136 and the

Table 1: Relationship between demographic characteristics of the individuals with their levels of health-promoting behaviors

Student variables	Category	Level of health promotion behaviors			P
		Low, n (%)	Moderate, n (%)	High, n (%)	
Entrance year	1394 (2015)	11 (31.44)	12 (34.28)	12 (34.28)	0.253
	1395 (2016)	11 (31.44)	12 (34.28)	12 (34.28)	
	1396 (2017)	11 (31.44)	12 (34.28)	12 (34.28)	
	1397 (2018)	11 (31.44)	12 (34.28)	12 (34.28)	
Sex	Female	28 (20.29)	72 (52.17)	38 (27.54)	0.12
	Male	7 (17.5)	25 (62.5)	8 (20)	
Marital status	Married	34 (25.76)	78 (59.09)	20 (15.15)	0.157
	Single	12 (21.43)	33 (58.93)	11 (19.64)	
Course and job	Dentist students and personals	13 (25)	22 (42.31)	17 (32.69)	0.089
	Health students and personals	27 (19.85)	77 (56.62)	32 (23.53)	

mean score of health-promoting behaviors in employees was 96.47 ± 23.99 . Furthermore, the minimum score of health-promoting behaviors in students was 50 and the maximum was 139 points. The mean score of health-promoting behaviors in 140 students was 100.57 ± 18.20 . Although the scores of students' health-promoting behaviors were relatively better than staff, the *t*-test did not show a significant difference between the mean scores of the two groups ($P > 0.05$). The results are shown in Table 2.

As can be seen from the table above, the difference between the scores in the dimensions and domains of health-promoting behaviors in the three groups was not statistically significant ($P > 0.05$).

Comparison of the mean score of health-promoting behaviors in health and dental students

The minimum score of health-promoting behaviors in 100 health students was 34 and the maximum was 139 points. The mean score of health-promoting behaviors in them was 101.89 ± 25.16 . Furthermore, the minimum score of health-promoting behaviors in 40 dental students was 36 and the maximum was 138 points. The mean score of health-promoting behaviors in them was 99.93 ± 18.57 . Although the scores of health-promoting behaviors of health students were relatively better than those of dental students, statistical *t*-test did not show a significant difference between the mean scores of the two groups ($P > 0.05$).

Leveling the scores of staff and students' health-promoting behaviors

The scores of health-promoting behaviors in the individuals were classified according to Lali, Abedi and Kajbaf studies: Level 1 or poor health-promoting behaviors, Level 2 or moderate health-promoting behaviors, and Level 3 or good and high health-promoting behaviors. The results of this leveling can be seen in Table 3.

As can be seen, the behaviors of 33 people (17.55%) were appropriate and good, and the health-promoting behaviors in other people are moderate and low. At the same time, both employees and students, especially in critical situations, should be role models for other people in society. The output of regression analysis when using the stepwise method is presented in Table 4. Based on the results, regression coefficients or the same parameter estimation also appeared in the coefficients table. The fixed value or "width from the origin" is equal to 8.918 and the "slope of the line" is also obtained for the variables equal to 1.254, 1.011, and etc., The significant (Sig) column indicates a level of significance and indicates that the variables were able to predict the scores of health-promoting behaviors to some extent. The score of health-promoting behaviors is related to the above-mentioned areas, but the relationship may not be linear.

Discussion

The results of the present study showed that health-promoting behaviors of staff and students is not at the desired level so that only the behaviors of 33 people (18%) of students and staff studied were evaluated appropriate, and the health-promoting behaviors of the other individuals were moderate and low. The results of the present study are almost consistent with the findings of the study of Emami *et al.*^[17] Since, in their study, the behavior of the majority of people was evaluated at a moderate level, and the highest scores were obtained in the areas of spiritual development and interpersonal relationships, and the lowest scores were obtained in the areas of physical activity. This finding is also consistent with the results of the study of Somayeh and Marzieh.^[18] In their study, students had moderate quality health behaviors and health-promoting behaviors, and the highest score belonged to the items of responsibility for health, stress management, and nutrition in girls, and in boys to the areas of spiritual growth, self-fulfillment, and nutrition. In Nilsaz *et al.*'s

Table 2: Average scores of staff and students of health and dental schools of Ardabil University of Medical Sciences in 10 areas of health-promoting behaviors

Variables	Dentist students	Health students	Employees	Total (mean±SD)	P*
Somatic health	3.3±7.87	3.35±8.36	3.53±8.11	3.39±8.11	0.73
Physical activity	4.1±7.62	3.38±8.55	4.1±8.2	3.85±8.14	0.67
Weight control and nutrition	3.38±8.17	3.23±8.59	3.33±8.32	3.31±8.36	0.61
Avoid tobacco and drugs	2.12±11.06	2.32±11.63	2.47±10.88	303.2±19.11	0.55
Mental health	2.16±11.21	2.22±11.39	2.2±11.29	2.17±11.29	0.76
Spiritual health	2.8±12.65	2.11±12.88	2.22±11.8	2.53±12.44	0.88
Social health	1.88±12.03	1.34±12.26	1.51±12.18	1.58±12.16	0.83
Environmental health	3.93±9.43	3.76±10.09	3.00±9.68	3.56±9.73	0.72
Disease prevention	3.04±9.35	3.37±10.32	3.45±10	3.54±9.89	0.91
Accident prevention	3.58±9.44	3.8±9.79	4.03±9.02	3.8±9.62	0.92

*p<0.05. SD=Standard deviation

Table 3: Leveling the scores of health-promoting behaviors of staff and students of health and dentistry schools Ardabil University of Medical Sciences

Row	Levels of health-promoting behavior	Scores, n (%)
1	Level 1 (weak) 0-79	35 people (18.62)
2	Level 2 (intermediate) 80-119	120 people (63.83)
3	Level 3 (good) 120-140	33 people (17.55)
Total	-	188 people (100)

Table 4: Evaluation of the effect of health-promoting behavioral scores of individuals studied in the schools of health and dentistry of Ardabil University of Medical Sciences

Model	B	SE	β	t	Significance
Constant	8.918	1.142	-	7.808	0.000
Accident prevention	1.254	0.246	0.163	5.107	0.030
Somatic health	1.011	0.014	0.116	70.052	0.000
Weight control and nutrition	1.008	0.032	0.142	31.115	0.000
Mental health	1.036	0.083	0.094	12.548	0.001
Physical activity	0.983	0.046	0.129	21.490	0.002
Social health	0.959	0.126	0.128	7.630	0.005
Spiritual health	0.846	0.080	0.081	10.556	0.005
Disease prevention	1.483	0.153	0.189	9.717	0.000
Avoid tobacco and drugs	0.810	0.222	0.071	3.651	0.004

SE=Standard error

study, more than half of the studied students had poor and moderate health-promoting behaviors, which in line with the results of our study, are consistent with those findings.^[19] In the study of Nilsaz *et al.*, The average age of students was 22.78 years; 17% of students were married; but in the present study, the mean age of students was 21.88 ± 3.34 years; Among the married, only nine people (13.85%) were students and the rest were employees, which indicates a decrease in student age and a decrease in the marriage rate among them. In the study of Emami *et al.*, in medical students of Mazandaran, the health-promoting behaviors of students were reported as moderate and acceptable, but they did not specify whether this situation is desirable.^[17] This

finding is inconsistent with the results of the present study in terms of averageness because, in the present study, more than 63% of people had moderate and low health-promoting behaviors, which may be due to cultural and ecological differences between the two regions. Cassoff *et al.* in a descriptive-analytical cross-sectional study for determining the health-promoting behaviors rate among 421 first- and second-grade female high school students showed that health behaviors of Pol-e Dokhtar city students is moderate and the two structures of stress management and physical activity were in an unfavorable situation compared to other structures, which our findings are consistent with them.^[20] Furthermore, the results of the present study are consistent with the findings of Rastegar *et al.* Because in a descriptive-analytical study with the aim of examining the health-promoting lifestyle in adolescents, which was done by multi-stage sampling method on 476 high school girl students in Kerman, they found that the individuals obtained the highest mean in the subdomain of personal relationships and the lowest score in the subdomain of physical activity, and in general, lifestyle scores of health-promoting of girl students is in moderate condition, but in terms of physical activity, they were not in good condition.^[15] Of course, the statistical population of these two studies was not common and was from the same group. In the study of Tawafian and Agha Molaei, which was performed on 400 high school students in Bandar Abbas city by multi-stage sampling method, it was found that in general, lifestyle and health-promoting behaviors in students were lower than usual.^[21] Kyrkou *et al.*, in a study aimed at identifying student diet behavior living in dormitories of Greek university during 2006–2016, which did a total of 450 students, i.e., 163 students in 2006 and 242 students in 2016 and they found that students' eating habits generally changed in the right direction and possible reasons for the transition to healthier and more balanced eating habits could include Greek budget constraints over the past decade, increased nutrition awareness, and other sociocultural factors that

define this target group. They added that a deeper understanding of these relationships will be critical to promoting nutrition education and increasing the effectiveness of health promotion campaigns.^[22] However, in the present study, health-promoting behaviors in the field of nutrition were not evaluated as appropriate and there is a need to change food style. It seems that living in a dormitory and away from the family environment, not presenting fruit in the college buffet and students' desire for fast food and their reasonable prices are involved in this situation. Other reasons behind the lack of health-promoting behaviors in students and staff can be the lack of necessary facilities, the lack of appropriate promotional programs in university activities for the student, lack of awareness or not taking seriously the effect of health-promoting behaviors in the prevention of diseases, the severity of dentistry courses, etc. The fact that the score of interpersonal communication between students and staff was relatively better may be because experts believe that communication skills are necessary for health workers and therefore has been emphasized by experts.^[23,24] For example, Shams believes that the decision to consciously and voluntarily change steady patterns of behavior to retrieve, maintain, and promote health and a healthy lifestyle depends on the skills of receiving, understanding, analyzing, and using health information and is the basis for the success of educational programs and health information also constitutes effective communication between providers and recipients of health services.^[25] In addition, the results of this study regarding the domain of health-promoting behaviors in the spiritual realm were consistent with the results of the study of Stark *et al.*^[26] According to the results of that study, approximately 54% of these students had a moderate level of health-promoting lifestyle. Important reasons for the high level of mental health of the study population are the value culture of society, religious beliefs of the individual and family, the performance of various cultural and religious ceremonies, especially prayers related to disasters in the national media and representation of the Supreme Leader and Student Cultural Vice-Chancellor, and etc., Perhaps, the cross-sectional nature of the study and the completing the questionnaire by self-declaration could not clearly show the reasons for the health-promoting behaviors of staff and students, and therefore, these results cannot be generalized to all students and staff, but more and deeper studies can be implemented. One of the limitations of the study was the quality of the tools and the lack of accurate indigenous tools for measuring health-promoting behaviors quantitatively in the academic community. Although the study questionnaire was valid and reliable, because the data collection tool was completed by self-administered method, thus there was a possibility of bias by the individuals who completed the

questionnaires. Finally, participation in the school of dentistry was low for various reasons, including attending clinics. It is possible to increase the level of physical activity in students and staff by holding various intra-cultural and sports competitions of the faculty and the culture of cycling and walking and eliminating the student parking lot. In addition, it is recommended that future studies be conducted to identify and influence the use of strategies and factors such as sports-art competitions and nutrition that encourage students and staff to use health-promoting behaviors. It is possible to increase the level of physical activity in students and staff by holding various intra-cultural and sports competitions of the faculty and the culture of cycling and walking and eliminating the student parking lot. It is also recommended that in future studies, the weight of individuals, waist circumference, smoking status, the status of COVID-19 In two groups of observers and nonobservers, the type of exercise that individuals do, and the health status of their body and teeth be extracted through medical examination and with the comparison of the results of the self-regulatory questionnaire. Policymakers and relevant bodies, including the headquarters of the Supreme Council of the Cultural Revolution, universities of medical sciences, the Ministry of Health, the Ministry of Sports and Youth, the Ministry of Education, and the Radio and Television, use the results of the study to improve the health-promoting behaviors and preventing of unhealthy lifestyles of academics. Furthermore, the predictors of health-promoting behaviors in students and staff of medical, dental, and health schools should be compared using regression.

Limitations

One of the limitations of this study was the mere use of questionnaires and self-reporting, which may cause students and staff to estimate their health-promoting behaviors more or less than real, and to overcome this limitation, you can observe the behavior and complete the questionnaire at the presence of the questioner increased the possibility of carefully examining the behaviors.

Positive points and innovations

One of the positive points and innovations of this study is comparing the health-promoting behaviors of the students of the two faculties and comparing them with the staff.

Conclusion

The results of the present study showed that health-promoting behaviors in students and staff of the School of Health and Dentistry are not satisfactory. Students, as future employees of the health system and

parents, need to recognize and change unhealthy habits and behaviors to promote healthy behaviors and prevent the occurrence of acute and chronic diseases. Given that the staff of educational centers can play a significant role in encouraging students to adopt health and preventive behaviors, thus poor performance in this group does not seem acceptable; so, necessary measures should be taken to increase health-promoting behaviors in students and staff of health and dental schools.

Acknowledgment

We would like to thank Ardabil University of Medical Sciences for their financial support. The authors of this article consider it necessary to thank the members of the Student Research Committee, the Research Council and the University Ethics Committee, and all the participants who helped the researchers in Approval the plan and completing the questionnaire.

Financial support and sponsorship

This study was approved and implemented with the code: IR.ARUMS.REC.1400.005.

Conflicts of interest

There are no conflicts of interest.

References

1. Pourfarzi F, Rahim Pouran S, Dargahi A, Karami C, Fouladi N, Zandian H, *et al.* The healthy behaviours and COVID-19 mortality among Iranian women: a case-control study. *BMC Women's Health*. 2021;21 (1):1-8.
2. Zandian H, Sarailoo M, Dargahi S, Gholizadeh H, Dargahi A, Vosoughi M. Evaluation of knowledge and health behavior of University of Medical Sciences students about the prevention of COVID-19. *Work* 2021;68:543-9.
3. Jari A, Niazmand-Aghdam N, Mazhin SA, Poursadeqiyam M, Salehi Sahlabadi A. Effectiveness of Training Program in Manual Material Handling: A Health Promotion Approach, *J Edu Health Promot* 2022;11:81.
4. Hörnquist JO. The concept of quality of life. *Scand J Soc Med* 1982;10:57-61.
5. Dargahi A, Jeddi F, Vosoughi M, Karami C, Hadisi A, Mokhtari SA, *et al.* Investigation of SARS CoV-2 virus in environmental surface. *Environ. Res*. 2021 Apr 1;195:110765.
6. ZahirianMoghadam T, Pourfarzi F, Karami C, Rahimpouran S, Zandian H, Dargahi A. The Effect of Working-based Individual Protective Behaviors (WIPB) on COVID-19 Mortality in North-West of Iran: A Case-Control Study. *JOHE*. 2021;10(3):158-68.
7. Karami C, Normohammadi A, Dargahi A, Vosoughi M, Zandian H, Jeddi F, *et al.* Investigation of SARS-CoV-2 virus on nozzle surfaces of fuel supply stations in North West of Iran. *Sci. Total Environ*. 2021;780:146641.
8. Persson L, Haraldsson K. Health promotion in Swedish schools: School managers' views. *Health Promot Int* 2017;32:231-40.
9. Barati M, Fathi N, Ahmadpur E, Jormand H. Investigate the relationship between health literacy and health promoting behavior in students. *J Health Lit* 2019;4:56-65.
10. Mazloomi Mahmoodabad SS, Mehri A, Morowatisharifabad MA. The Relationship of Health Behavior with Self-esteem and Self-efficacy in Students of Yazd Shahid Sadooghi University of Medical Sciences (2005). *Strides Dev Med Educ* 2007;3:111-7.
11. Arefi MF, Babaei AP, Barzanouni S, Ebrahimi S, Salehi AR, Khajehnasiri F, *et al.* Risk Perception in the COVID-19 pandemic: A health promotion approach. *J Edu Health Promot* 2022;11:118.
12. Cheng LA, Mendonça G, Farias Júnior JC. Physical activity in adolescents: Analysis of the social influence of parents and friends. *J Pediatr (Rio J)* 2014;90:35-41.
13. Al-Rifaai JM, Al Haddad AM, Qasem JA. Personal hygiene among college students in Kuwait: A Health promotion perspective. *J Educ Health Promot* 2018;7:92.
14. Panahi D, Pirposhteh EA, Moradi B, Poursadeqiyam M, Sahlabadi AS, Kavousi A. Effectiveness of educational intervention on reducing oxidative stress caused by occupational stress in nurses: A health promotion approach. *Journal of Education and Health Promotion*. 2022 Jan 1;11(1):273.
15. Rastegar M, Zendehtalab H, Yavari M, Mazlom S. Health-promoting lifestyle and its related factors among health volunteers Mashhad in 2015. *J Torbat Heydariyeh Univ Med Sci* 2015;3:55-48.
16. Mohsen L, Ahmad A, Bagher KM. Construction and validation of the lifestyle questionnaire (LSQ). *Psychol Res* 2012;15:15-25.
17. Emami S, Bagheri Nesami M, Nabinezhad Male F, Alitabar Malekshah R. Health promotion behaviors and its related factors in students of Mazandaran University of Medical Sciences 201. *Tabari Biomed Stud Res J* 2016;1:25-32.
18. Somayeh H, Marzieh A. Investigation of Healthy Lifestyle Promoting Behaviors among Ferdows Paramedical and Health Students in 2014. *Proceedings of the Research Conference of the Students of Eastern Iran*; 2015. p. 84.
19. Nilsaz M, Tavassoli E, Mazaheri M, Sohrabi F, Khezli M, Ghazanfari Z, *et al.* Study of Healthpromoting behaviors and Life Style among students of Dezful universities. *J Ilam Univ Med Sci* 2013;20:168-75.
20. Cassoff J, Knäuper B, Michaelsen S, Gruber R. School-based sleep promotion programs: Effectiveness, feasibility and insights for future research. *Sleep Med Rev* 2013;17:207-14.
21. Aghamolaei T, Tavafian SS. Health behaviors of a sample of adolescents in Bandar Abbas, Iran. *Int J High Risk Behav Addict* 2013;2:34-8.
22. Kyrkou C, Tsakoumaki F, Fotiou M, Dimitropoulou A, Symeonidou M, Menexes G, *et al.* Changing trends in nutritional behavior among university students in Greece, between 2006 and 2016. *Nutrients* 2018;10:64.
23. Quail M, Brundage SB, Spitalnick J, Allen PJ, Beilby J. Student self-reported communication skills, knowledge and confidence across standardised patient, virtual and traditional clinical learning environments. *BMC Med Educ* 2016;16:73.
24. Sarailoo M, Matin S, Vosoughi M, Dargahi A, Gholizadeh H, Rajabi Damavandi M, *et al.* Investigating the relationship between occupation and SARS-CoV2. *Work*. 2021;68 (1): 27-32.
25. Mohsen S, editor. *The Role of Health Literacy in Promoting Healthy Iranian Lifestyle. The First National Conference on Healthy Lifestyle*; 2016.
26. Stark MA, Manning-Walsh J, Vliem S. Caring for self while learning to care for others: A challenge for nursing students. *J Nurs Educ* 2005;44:266-70.