ORİJİNAL ARAŞTIRMA ORIGINAL RESEARCH

DOI: 10.5336/medsci.2018-61843

Healthy Lifestyle Behaviors and Quality of Life Status of Public Health Directorate Workers in a City of Turkey

Türkiye'de Bir İlde Halk Sağlığı Müdürlüğü Çalışanlarının Sağlıklı Yaşam Biçimi ve Yaşam Kalitesi Durumları

Ayşe Gülsen TEKER,[a]
Nimet Emel LÜLECİ[b]

[a]Department of Public Health, Dokuz Eylül University Faculty of Medicine, İzmir, TURKEY
[b]Department of Public Health, Marmara University Faculty of Medicine, İstanbul, TURKEY

Received: 14.06.2018
Received in revised form: 24.09.2018
Accepted: 20.10.2018
Available online: 03.12.2018

Correspondence:
Ayşe Gülsen TEKER
Dokuz Eylül University Faculty of Medicine, Department of Public Health, İzmir, TURKEY/TÜRKİYE
agulsenteker@hotmail.com

ABSTRACT Objective: Health promotion services are primarily provided by public health directorates in our country. Therefore, identifying healthy lifestyle behaviors in health workers serving in these directorates is important. The quality of life status of health care workers matters for both their health and the health of individuals and the society they serve. This study aimed to assess the status of healthy lifestyle behaviors and quality of life in health care workers and identify the relationship of these two elements with each other and with other factors. **Material and Methods:** This cross-sectional study was conducted by applying Healthy Lifestyle Behavior Scale II (HLSBS II) and Turkish Version of the World Health Organization Quality of Life Instrument (WHOQOL-BREF-TR) to the staff of a public health directorate. **Results:** The HLSBS II scores of participants ≥40 years old, females, participants who exercise and participants who work as civil servants were higher. The participants with the lowest income had lower HLSBS II and WHOQOL-BREF-TR scale scores. The participants who work as subcontracted workers had lower WHOQOL-BREF-TR scale scores. There was a positive correlation between the two scales (ρ=0.584 $p<0.001$). **Conclusion:** The studies targeting to develop healthy lifestyle behaviors in society should focus on both genders and all age groups. Policies aimed at improving any area of health should also include eliminating socioeconomic disparities. Exercise is a component of healthy lifestyle behaviors and also an encouraging factor for other health promoting behaviors. Improving the quality of life of the individuals in society enables developing healthy lifestyle behaviors or vice versa.

Keywords: Public health; health promotion; healthy lifestyle; quality of life; health personnel

ÖZET Amaç: Ülkemizde sağlığı geliştirme hizmetleri öncelikle halk sağlığı müdürlükleri tarafından sunulmaktadır. Bu yüzden halk sağlığı çalışanlarında sağlıklı yaşam biçimi davranışlarının belirlenmesi önemlidir. Sağlık çalışanlarının yaşam kalitesi durumları ise hem kendi sağlıkları hem de hizmet ettikleri birey ve toplumların sağlıkları için önem taşır. Bu araştırmanın amacı, sağlıklı yaşam biçimi davranışları ve yaşam kalitesinin halk sağlığı müdürlüğü çalışanlarındaki durumunu değerlendirmek; bu iki unsurun birbiriyle ve diğer faktörlerle ilişkisini belirlemektir. **Gereç ve Yöntemler**: Bu kesitsel araştırmada bir ilin halk sağlığı müdürlüğünde çalışanlara Healthy Life Style Behaviour Scale II (HLSBS II), Dünya Sağlık Örgütü Yaşam Kalitesi Ölçeği Kısa Formu Türkçe Versiyonu (WHOQOL-BREF-TR) uygulanmıştır. **Bulgular:** 40 yaş ve üzerinde olan grubun, kadınların, egzersiz yapan ve memur statüsünde çalışan katılımcıların HLSBS II ölçek puanları daha yüksektir. Gelir düzeyi en düşük olan gruptaki katılımcılar ise HLSBS II ölçeğinden daha düşük puan almışlardır. Özel şirkete bağlı olarak çalışan ve en düşük gelir grubundaki katılımcılar WHOQOL- BREF-TR ölçeğinden daha düşük puan almışlardır. Araştırmada kullanılan iki ölçek arasında pozitif yönde korelasyon bulunmuştur. **Sonuç:** Toplumda sağlıklı yaşam biçimi davranışlarını geliştirmeyi hedefleyen çalışmaların odağı her iki cinsiyeti ve tüm yaş gruplarını kapsamalıdır. Sağlık konusunda her hangi bir alanda iyileşmeyi hedefleyen politikalar sosyoekonomik eşitsizlikleri düzeltmeyi de içermelidir. Egzersiz yapmak sağlıklı yaşam biçimi davranışlarının bir bileşeni olmanın yanı sıra sağlığı geliştirici davranışlar için teşvik edici bir faktördür. Toplumdaki bireylerin yaşam kalitelerini iyileştirmek, sağlıklı yaşam biçimi davranışlarını geliştirmelerini sağlayacak unsurlardan biridir ya da sağlıklı yaşam biçimi davranışları geliştirmek bireylerin yaşam kalitelerini artırmaktadır.

Anahtar Kelimeler: Halk sağlığı; sağlığın geliştirilmesi; sağlıklı yaşam biçimi; yaşam kalitesi; sağlık çalışanları

The main purpose of health services is to improve the health of people and to ensure them not to be sick, that is to say, to protect them from diseases.[1] In line with this, today's perspective of health accepts an approach which protects, maintains and improves the health of the individual, family and society. This perspective is based on ensuring that the individual gains the behaviors which would protect, maintain and improve his/her well-being and makes right decisions about his/her health.[2] This concept which is called health promotion is the process by which people increase their control over their health and improve their health levels by this way.[3] In the concept of health promotion which focuses on behavior change, it is necessary to acquire knowledge, skill, attitude and positive behavior in order to bring health to the highest level. These behaviors, which play a key role in health promotion are called healthy lifestyle behaviors and include the steps of self-actualization, health responsibility, exercise, nutrition, interpersonal support and stress management.[4] Today it is well known that if other chronic diseases apart from the heart diseases are also taken into consideration, non-communicable diseases account for 75% of the deaths in our country. A significant proportion of non-communicable diseases can be reduced by preventive measures, in other words, healthy lifestyle behaviors against four major risk factors; namely, smoking, lack of physical activity, excessive alcohol use and unhealthy nutrition.[5] Because of their professional responsibilities and social roles, health workers are capable of being a role model with the lifestyle that they engage and influencing the group that they serve.[6.] Public health is a field which is closely associated with health promotion. Health promotion service is primarily served by the public health directorates in our country. Therefore, it is also important to determine healthy lifestyle behaviors in health care workers.

The concept of quality of life has also become an important goal for healthcare services as the approaches for health promotion come into prominence.[7] The quality of life includes the physical functions, state of mind, social relations in and outside the family, environmental exposure levels of individual and shows how it affects the functionality of individual.[8] People need to have a quality life so that they can maintain their lives happily, in harmony with themselves and their surroundings and in life satisfaction. The World Health Organization (WHO) has set the goal that individuals should be healthy and have a better quality of life in addition to being productive in social, economic and psychological sense.[9] For this reason, there is an increasing endeavor regarding the subjects of well-being and quality of life. WHO has been carrying out studies to measure and assess the quality of life since 1980. The relationship between health and quality of life has been the subject of many studies. The status of quality of life in health care workers matters for both their health and the health of individuals and society they serve. However, the number of the studies conducted on this subject is limited abroad and in our country.[8.]

The aim of this study was to assess the status of healthy lifestyle behaviors and quality of life, which are two important components of health promotion, to examine the relationship between these two elements and to identify the factors associated with these elements.

MATERIAL AND METHODS

THE TYPE, PLACE AND TIME OF THE STUDY

This cross-sectional study was conducted in a public health directorate between the dates of January 2016-February 2016. The necessary permission and the approval from the ethics committee (Protocol Number: 09.2017.049 Date: 06.01.2017) for the study were obtained, all participants were included into the study after being informed and taking their consents.

THE POPULATION AND SAMPLE OF THE STUDY

The study's population consisted of all of the personnel working in the public health directorate. The total number of the personnel during the period of the study was 114. This study in which a sample was not selected, aimed to reach the entire population.

DATA COLLECTION INSTRUMENTS

Descriptive Survey

The survey which was prepared by researchers consisted of 16 questions which involved also the questions about socio-demographic characteristics and height and weight information based on participants' discourse.

Healthy Lifestyle Behavior Scale II (HLSBS II)

It was developed by Walker et al. as a 48-item scale and then was revised and 4 items were added increasing to 52 items.[10] The scale measures health promoting behaviors associated with the individual's healthy lifestyle. The scale is composed of a total of 52 items and consists of 6 subscales which are *self-actualization, health responsibility, physical activity, nutrition, interpersonal support* and *stress management.* Self-actualization subscale determines the life goals, self-development ability of individual and how well she/ he recognizes and satisfies himself/ herself. Health responsibility subscale determines the level of responsibility of individual on his/ her own health, and the level of participation in his/ her health. Exercise subscale indicates at what level the physical exercises performed by the individual. Nutrition subscale determines the behaviors in selecting and arranging individual meals and the behavior of food choices. Interpersonal support subscale shows the communication and continuity level of individual with his/her close surroundings. The stress management subscale assesses the individual's level of recognition of stress sources and stress control mechanisms. The total score of the scale gives the score of healthy lifestyle behaviors. All items of the scale are positive. The total score varies between 52 and 208. As the score rises, the level of positive health behavior increases. The Turkish validity and reliability studies of the scale were firstly revised by Esin et al. the Turkish validity and reliability studies of revised HLSBS II were carried out by Bahar et al. The Cronbach alpha value of the scale for this study was 0.90.[11,12]

Turkish Version of the World Health Organization Quality of Life Instrument (WHOQOL-BREF-TR)

The scale was developed by WHO, and the Turkish validity and reliability studies were carried out by Eser et al. There are two versions of the scale, the long (WHOQOL-100) and the short (WHOQOL-BREF) form. WHOQOL-BREF consists of 27 questions.[13,14] The first two questions are scored and evaluated on their own. Out of these questions, the first one gives the score of general health status and the second gives overall quality of life score. In the scale, which has 4 domains, physical health domain, psychological domain, social relations domain and environmental domain, each domain is evaluated independently and total scores ranging from 4 to 20 are calculated for each domain. All items of the scale are positive. The high score denotes better quality of life. *Physical health domain* score in the scale is calculated by evaluating the subheadings of activities of daily living, dependence on medical aid, energy and fatigue, mobility, pain and discomfort, sleep and rest, and work capacity. The subheadings that are evaluated in the score calculations of the other domains are as follows; bodily image, negative feelings, positive feelings, self-esteem, religion/personal beliefs, thinking, learning, memory and concentration for *psychological domain***;** personal relationships, social support, sexual activity for *social domain***;** access to health and social services, home environment, accessibility to new knowledge and skills, leisure activity, physical environment (pollution, noise, traffic, climate) for *environmental domain*. The last question is the national environmental domain question. For Turkey, this question came in view as a result of focus group interviews and is considered on its own as the first two questions.[9,15] The Cronbach's alpha value of the scale was calculated as 0.81 for the study group.

STATISTICAL ANALYSIS

SPSS version 15.0 package program was used for analysis of the data. Descriptive findings were expressed as number, percentiles and mean values. In the analysis of mean differences, Student's t test, one way analysis of variance (ANOVA) and Tukey HSD significance tests were used if the data nor-

mally distributed and if not Mann Whitney U and Kruskal Wallis tests were used to compare groups. Correlation between the two scales was assessed by Spearman correlation analysis. p <0.05 was accepted as statistical significance level.

RESULTS

RESULTS OF INDIVIDUAL CHARACTERISTICS:

Out of 114 health care workers, 96 participated in the study (84.2%). Of the participants 45.8% were female and 54.2% were male. The mean age was 38.2 years and the ages ranged between 23-63 years. The education level in 62.5% of the participants was university or above university. High school graduates accounted for 28.1%, while junior high school/primary education graduates accounted for 4.2% and primary school graduates accounted for 5.2% of the participants. The rate of married participants was 86.2%. Regarding the monthly total income of household, the participants were divided into 3 groups. The participants with an income less than 1500 TL (Turkish Lira) was 6.3%. The participants with an income between 1501-4500 TL was 56.8% and the participants with an income between 4501-10000 TL was 36.8%. Of the participants, 86.3% were at the status of civil servant and 13.7% worked under private company (subcontracted workers). Of the participants, 31.3% were smoking. According to the body mass indexes calculated based on the values of height and weight disclosed by the participants, 73.1% of males and 41.3% of females were overweight or obese. The rate of physical exercise was found to be 29.2%.

RESULTS OF HEALTHY LIFESTYLE BEHAVIOR SCALE II (HLSBS II)

The mean of HLSBS II total score of the participants was 125.7±18.9. For HLSBS II subscales, the lowest mean score was obtained from *physical activity* subscale (14.5±5.1); the highest mean score was obtained from *self-actualization* subscale (26.2±3.6) (Table 1).

The group aged 40 years and over were found to have statistically significantly higher scores for the subscales of *nutrition and health responsibility* (p=0.005 and p=0.026, respectively) compared to the group aged under 40 years. Considering gender difference, females had higher scores than males for the *nutrition, health responsibility* and *stress management* subscales (p=0.008 p=0.004 and p=0.042, respectively). According to the total monthly income of household, the participants with the lowest income level among the three groups were found to have lower scores for the *nutrition* subscale compared to other two groups (p=0.032). The scores of the participants who worked in the category of civil servant were higher for the *physical activity, nutrition, and health responsibility* subscales compared to those who work under private company (p=0.042 p=0.002 and p=0.031, respectively). Regarding the body mass index, the scores of the participants in the obese group were lower for the *health responsibility* subscale compared to the other participants (p=0.025). The participants who exercised obtained higher scores from four subscales including *physical activity, nutrition, health responsibility* and *stress management* (p<0.001 p=0.020 p=0.002 and p=0.007, respectively) compared to those who did not exercise. Table 2 shows the comparison of the scores for the HLSBS II subscales according to the individual characteristics of the participants (Table 2).

The mean of HLSBS II total score of the participants was found to be 125.7±18.9. The mean of HLSBS II total score was observed to change with statistical significance according to age, working

TABLE 1: HLSBS II* scores of participants.

Subscales	max. and min. scores of scale	max. and min.scores taken in this study	mean score (X±sd)
Physical activity	8-32	8-30	14.5±5.1
Stress management	8-32	11-29	18.4±3.6
Health responsibility	9-36	12-30	19.8±3.9
Nutrition	9-36	11-33	21.3±4.7
Interpersonal support	9-36	16-33	25.2±4.0
Self-actualization	9-36	18-36	26.2±3.6
Total HLSBS II Score	52-204	92-172	125.7±18.9

* Healthy Lifestyle Behavior Scale II.

TABLE 2: Comparison of the scores for the HLSBS II* subscales according to the individual characteristics of the participants.

Subscales	Individual characteristics	median/IR**	p value
Physical activity	**working style (n=)**		
	civil servent (82)	15.0/6.0	
	subcontracted workers (13)	11.0/3.5	p=0.042
	physical exercise status (n=)		
	yes (28)	18.0/8.5	
	no (68)	12.0/5.0	p<0.001
Nutrition	**age (n=)**		
	<40 age (53)	20.0/7.0	
	≥40 age (43)	24.0/5.5	p=0.005
	gender (n=)		
	female (44)	23.0/6.0	
	male (52)	20.0/7.0	p=0.008
	income (n=)		
	1500 tl and under (6)	16.0/7.25	
	1501-4500 tl (54)	22.0/7.0	
	4501-10000 tl (35)	21.0/7.0	p=0.032
	working style (n=)		
	civil servent (13)	22.0/6.0	
	subcontracted workers (82)	18.0/5.5	p=0.002
	physical exercise status (n=)		
	yes 828)	24.0/7.6	
	no (68)	20.0/7.0	p=0.020
Health responsibility	**age (n=)**		
	<40 age (53)	19.0/5.0	
	≥40 age (43)	21.0/6.0	p=0.026
	gender (n=)		
	female (44)	21.0/4.0	
	male (52)	18.0/5.0	p=0.004
	working style (n=)		
	civil servent (13)	20.0/6.0	
	subcontracted workers (82)	17.0/5.50	p=0.031
	physical exercise status (n=)		
	yes (28)	22.5/6.0	
	no (68)	19.0/4.0	p=0.002
	BMI (n=)		
	underweight (2)	22.0/2.0	
	normal (37)	21.0/5.0	
	overweight (37)	19.0/5.5	
	obese (20)	17.0/5.5	p=0.025
Stress management	**gender (n=)**		
	female (44)	19.0/3.0	
	male (52)	18.0/5.0	p=0.042
	physical exercise status (n=)		
	yes (28)	22.5/6.0	
	no (68)	18.0/4.0	p=0.007

* Healthy Lifestyle Behavior Scale II

**Interquartile Range. BMI: Body mass index.

style and exercise status. According to this; the mean of HLSBS II total score was higher in those who aged 40 years and over compared to those who were under 40 years of age; it was higher in those who worked as civil servants compared to those who worked under private company and it was also higher in those who exercised compared to those who did not exercise (p=0.037 p=0.011 and p<0.001, respectively) (Table 3).

The survey also asked the participants that how many of the diseases could be prevented by healthy lifestyle behaviors and 34.4% answered as "all" and 54.1% answered as "many'. To the question of: Would you like to participate if a training or activity on "Developing Healthy Lifestyle Behaviors" was held in your institution? 68.8% of the participants answered as "yes".

Results of Turkish Version of the World Health Organization Quality of Life Instrument (WHOQOL-BREF-TR)

When the scores obtained from the WHOQOL-BREF-TR Quality of Life Scale were evaluated, the mean score of general health of the participants was found to be 3.4±0.7 out of 5 points and the overall quality of life score was found to be 3.5±0.8. The lowest score of the scale was obtained from the physical health domain (13.0±1.9) and the highest score was obtained from the social domain (15.0±3.0) (Table 4). For the last question, which is about environmental domain: What are your difficulties with regard to pressure and control in your relationships with those who are close to you (spouse, colleague, relative) in your life? The mean score of the participants was calculated as 2.5±0.8 out of 5.

TABLE 3: Comparison of the total scores for the HLSBS II* according to the individual characteristics of the participants.

Individual Characteristics	mean score (X±sd)	p value
age (n=)		
<40 age (53)	122.0±16.8	
≥40 age (43)	130.1±20.5	p=0.037
working style (n=)		
civil servent (13)	127.7±18.4	
subcontracted workers (82)	113.4±18.6	p=0.011
physical exercise status (n=)		
yes (28)	137.6±20.8	
no (68)	120.8±15.7	p<0.001

* Healthy Lifestyle Behavior Scale II

TABLE 4: WHOQOL-BREF-TR* Scores of participants.

Subscales	max. and min. scores of scale	max. and min. scores taken in this study	mean score (X±sd)
General health score	1-5	1-5	3.4±0.7
Overall quality of life score	1-5	1-5	3.5±0.8
Physical health domain	4-20	9-18	13.0±1.9
Environmental domain	4-20	9-18	14.1±1.8
Psychological domain	4-20	9-19	14.4±1.8
Social domain	4-20	9-20	15.0±3.0

* Turkish Version of the World Health Organization Quality of Life Instrument.

When the variation of the scores obtained from the WHOQOL-BREF-TR Quality of Life Scale according to the individual characteristics of the participants were examined, it was found that there was a statistically significant difference in terms of work style and income status. The scores of o*verall health status*, *overall quality of life* and *environmental domain* were found to be lower in participants working under private company (p=0.002 p=0.006 and p=0.007, respectively). When the participants were assessed according to their income status, the *perceived general health status* score in the group with income less than 1500 TL was found to be lower than other income groups (p =0.017).

Results of Correlation Analysis Between HLSBS II and WHOQOL-BREF-TR Scales

When the correlation between Healthy Lifestyle Behavior Scale-II and WHOQOL-BREF-TR Quality of Life Scale was examined, a statistically significant and positive correlation were detected between the scores obtained from HLSBS II scale and the scores obtained from the domains of perceived general health status, overall health status, overall quality of life, physical health domain, psychological domain and environmental domains of WHOQOL-BREF-TR Quality of Life Scale. This correlation was high between HLSBS II and physical health domain; moderate between HLSBS II and overall health status, psychological and envi-

ronmental domains and low between HLSBS II and overall quality of life (Table 5).

DISCUSSION

As a result of this study, the mean of HLSBS II total score was found to be 125.7±18.9. The mean scores were found to be 117.5±17.1, 121.57±19.65 and 122.0±17.2 in previous studies.[2,16,17] However, in these studies, the unrevised 48-item form of the scale was used. In a study using the 52-item scale as in this study, the mean of HLSBS II total score was found to be 139.5±18.0.[4] It can be said that the mean of HLSBS II total score in this study is lower than the previous studies. The lowest mean score was obtained from the physical activity subscale. Similar results were found in the studies by Pasinlioglu and Gozum which was carried out on health personnel working in primary health care.[16] In another study conducted with health care workers, the mean score was found to be the lowest for physical activity.[6] When the effects of individual characteristics on the scores obtained from HLSBS II scale were examined, it was noted that the individuals aged 40 years and over were found to have higher scores on both nutrition and health responsibility subscales and on the total score of HLSBS II. This result is similar with a previous study.[6] When the differences according to gender were examined, females had higher scores than males on nutrition, health responsibility and stress management subscales. In the study conducted by Yalcinkaya et al. on "health care workers", females obtained higher scores from the subscales of "nutrition and health responsibility" compared to males.[6] Also in the study by Zaybak and Fadiloglu with university student, girls obtained higher scores from the subscale of health responsibility compared to boys.[18] According to these results, the focus of studies aiming to develop healthy lifestyle behaviors in society should include both genders but especially men and boys and all age groups especially young ages. The interventions for the different groups should be in accordance with the characteristics of the group and they should be presented with a proper language. For example, studies aiming at the development of healthy eating behaviors shouldn't only or more frequently be aimed at females, but should also aim to reach men, and the language and content of the study should be appropriate. Another individual characteristic that influenced the way in which healthy lifestyle behavior was investigated was socioeconomic status. Previous studies have also shown that groups with poor socioeconomic status have low scores on the HLSBS II scale.[2,7,19] The low level of socioeconomic status as in many issues related to health creates disadvantages in developing healthy lifestyle behavior. As Acheson et al stated, if the interventions to eliminate disparities in the society's health indicators are not aimed at reducing socio-economic disparities, then we should not expect to accomplish a result.[20] People at low socioeconomic level are unable to develop healthy lifestyle behavior, so they are not protected from many health problems, especially chronic diseases. This should be taken into account when developing general politics of the country, not just health politics. Another remarkable finding of the study was that the participants who exercised had higher scores on both the total score of HLSBS II and the subscale

TABLE 5: Results of correlation analysis between HLSBS II* and WHOQOL-BREF-TR**

	WHOQOL-BREF-TR					
	General health	Overall quality of life	Physical health domain	Psychological domain	Social domain	Environmental domain
HLSBS II	ρ=0.359	ρ=0.254	ρ=0.584	ρ=0.303	ρ=0.174	ρ=0.344
	p<0.001	**p=0.013**	**p<0.001**	**p=0.003**	**p=0.091**	**p=0.001**

* Healthy Lifestyle Behavior Scale II

** Turkish Version of the World Health Organization Quality of Life Instrument

scores of HLSBS II. Similar results were obtained for the groups who exercised in previous studies.[2,6] The people who exercise have healthier nutrition, have better stress management and take more responsibility for their own health. These results indicate that exercise, in addition to being a component of healthy lifestyle behaviors, is also an encouraging factor for health promoting behaviors.

When the WHOQOL-BREF-TR scores were evaluated, the highest mean score was obtained from the social domain and the lowest mean score was obtained from the physical health domain. These results are similar to those of a previous study which was conducted to assess the quality of life of health care workers.[8] When examining the variables affecting the quality of life, the WHOQOL-BREF-TR scores of participants with worse socioeconomic status were found to have lower general health, overall quality of life and environmental scores. In two different studies evaluating the quality of life of health care workers, it was found that socioeconomic status is related to quality of life as it is in this study.[8,9] In a study evaluating socioeconomic disparities in health, it was found that all of the variables, namely, monthly income, living neighborhood, perceived economic status and health insurance affect the quality of life.[7]

When the relationship between the scales assessing healthy lifestyle behaviors and quality of life was examined, a positive correlation was found between these two items. A positive correlation was also found between the two scales in the study of Kocoglu and Akin.[7] This demonstrates that improving the quality of life of all individuals in society is one of the factors that will enable them to develop healthy lifestyle behaviors. Or improving the healthy lifestyle behaviors of individuals in society will increase their quality of life.

Most of the participants in the study indicated that they would like to participate if most of the diseases are prevented by healthy lifestyle behaviors and if training or activities on "Developing Healthy Lifestyle Behaviors" would be held in their institutions. The conducted studies showed that health promoting behaviors can be improved. In a study conducted with menopausal females, healthy lifestyle behaviors increased significantly with a planned training program for females in this period.[21] In another study with nursing college students, health behaviors were found to be lower in the first and second grades and higher in the third and fourth grade students who take the course of health protection and promotion.[2] Health care workers are actively involved in the health promotion activities of society and they are expected to be a role model for the society in this respect. Therefore, trainings, regulations and all other work on the development of healthy lifestyle behaviors of health care workers will be useful in improving the health of whole society.

CONCLUSIONS

In conclusion, this study which evaluated healthy lifestyle behaviors and quality of life in health care workers showed that scores of healthy lifestyle behavior scale differed according to age groups and gender characteristics. This demonstrated that the focus of studies aimed at improving healthy lifestyle behaviors in society should involve both genders and all age groups. The socioeconomic status affects both healthy lifestyle behaviors and quality of life. Therefore, policies aimed at improving any area of health care should include the improvement of socioeconomic disparities as well. Having better scores on other healthy lifestyle behaviors by the participants who exercise showed that exercise was a contributing factor to healthy lifestyle behaviors as well as an encouraging factor for health promoting behaviors. A positive correlation was found between the scales that assess healthy lifestyle behaviors and quality of life. This demonstrates that improving the quality of life of all individuals in society is one of the factors that will enable them to develop healthy lifestyle behaviors or improving the healthy lifestyle behaviors of individuals in society will increase their quality of life.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that

provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

All authors contributed equally while this study preparing.

REFERENCES

1. T.C Sağlık Bakanlığı Sağlık Eğitimi Genel Müdürlüğü. Eğitimciler İçin Eğitim Rehberi: Sağlık ve Sağlığın Korunması Modülü. Sağlık Bakanlığı Yayın No: 722. Ankara: İlkay Ofset Matbaacılık; 2008. p.159.
2. Ayaz S, Tezcan S, Akinci F. [Health development behaviours of nursing school students]. C.Ü. Hemşirelik Yüksek Okulu Dergisi 2005;9(2):26-34.
3. Guler C, Akin L. Halk Sağlığı: Temel Bilgiler. 3. Baskı. Ankara: Hacettepe Üniversitsi Yayınları; 2015. p.1680.
4. Kaya F, Unuvar R, Bicak A, Yorganci E, Oz B, Kankaya F. [Health promoting behaviors of the lecturers and factors determining these behavior]. Kor Hek 2008;7(1): 59-64.
5. T.C. Sağlık Bakanlığı Türk Halk Sağlığı Kurumu. Türkiye Kronik Hastalıklar ve Risk Faktörüleri Sıklığı Çalışması. Ünal B, Ergör G, editörler. Sağlık Bakanlığı Yayın No: 909. Ankara: Anıl Matbaa Ltd Şti; 2013. p.291.
6. Yalcinkaya M, Ozer FG, Karamanoglu AY. [Evaluation of healthy lifestyle behaviors in health care workers]. TSK Koruyucu Hekimlik Bülteni 2007;6(6):409-20.
7. Kocoglu D, Akin B. [The relationship of socioeconomic ınequalities to healthy lifestyle behaviors and quality of life]. DEUHYO ED 2009;2(4):145-54.
8. Yildirim A, Haciosmanoglu R. [Quality of life and effective variables among health care professionals]. Journal of Psychiatric Nursing 2011;2(2):61-8.
9. Ergen A, Tanrıverdi Ö, Kumbasar A, Arslan E, Atmaca D. [A cross-sectional study on the quality of life of health personel]. Med Bull Haseki 2011;49(1):14-9.
10. Walker SN, Sechrist KR, Pender NJ. The health-promoting lifestyle profile: development and psychometric characteristics. Nurs Res 1987;36(2):76-81.
11. Esin MN. [Adaptation of the healthy life style behavior scale to the Turkish language]. Hemşirelik Bülteni 1999;2(45):87-96.
12. Bahar Z, Beser A, Gordes N, Ersin F, Kıssal A. [Healthy life style behavior scale II: a reliability and validity study]. C.U. cumhuriyet Journal of Nursing 2008;12(1):1-12.
13. Development of the World Health Organization WHOQOLBREF Quality of Life Assessment. The WHOQOL Group. Psychol Med 1998;28(3):551-8.
14. Eser E, Fidaner H, Fidaner C, Eser SY, Elbi H, Goker E. The psychometric properties of WHOQOL-100 and WHOQOL-BREF. 3P Dergisi 1999;7:23-40.
15. Whoqol-Bref Introduction, Administration, Scoring and Generic Version of the Assessment Field Trial Version. Geneva: World Health Organization, 1996. p.18. Available from: http://www.who.int/mental_health/media/en/76.pdf?ua=1
16. Pasinlioglu T, Gozum S. [Health behaviours of health staff working in the primary health services]. C.Ü. Hemşirelik Yüksekokulu Dergisi 1998;2(2):60-8.
17. Yilmazel G, Cetinkaya F, Nacar M. [Health promoting behaviors in nursing Students]. TAF Prev Med Bull 2013;12(3):261-70.
18. Zaybak A, Fadiloglu C. [Determining of the health promotion behaviors of university students and the factors affecting these behaviors]. Ege Üniversitesi Hemşirelik Yüksekokulu Dergisi 2004;20(1):77-95.
19. Bilgili N, Ayaz S. Women's health promotion behavior and affecting factors. TAF Prev Med Bull 2009;8(6):497-502.
20. Acheson D, Alleyne GA, Casas JA, Castillo-Salgado C, Barzach M, Braveman P, et al. Round table discussion. Health inequalities and the health of the poor. Bull World Health Organ 2000;78(1):75-85.
21. Tortumluoglu G, Erci B. The effectiveness of planned health education given to climacteric women on menopausal sypmtoms, menopausal attitude and health behaviours. Atatürk Üniv Hemşirelik Yüksekokulu Dergisi 2004;7(2).