Determining The Relationship Between Smoking Habits and Healthy Lifestyle Behaviors of Health Workers: Smoke-Free Hospital, Healthy Life

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Original Research / Orijinal Araştırma

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ABSTRACT

Aim: Using tobacco and tobacco products is an important public health issue. This study aims to determine the smoking status of hospital staff and to examine the relationship between their smoking habits and healthy lifestyle behaviors.

Methods: This cross-sectional study was carried out between March and September 2018 with 387 health workers in Izzet Baysal Training and Research Hospital affiliated to Bolu Abant Izzet Baysal University. Data were collected using the Healthy Lifestyle Behaviors Scale II and the Fagerstrom Test for Nicotine Dependence, which were applied via face-to-face interview technique to health workers who accepted to participate in the study.

Results: The study sample consisted of 387 health workers. Of them, 58.7% of the participants were exposed to smoking in the workplace, and 75.9% of the nonsmokers were exposed to smoking environment, which was statistically significantly high. A statistically significant difference was found between the health workers' Healthy Lifestyle Behaviors Scale mean scores with respect to gender, smoking status, being in a smoking environment, and duration of smoking.

Conclusion: Determining the relationship between smoking habits and healthy lifestyle behaviors of health workers, identifying their negative or incomplete behaviors in this regard, and developing training and support programs for their relevant needs are considered to positively affect the images of health workers in society, and thus to increase healthcare quality and satisfaction.

Keywords: health personnel, smoking cessation, healthy lifestyle

Sağlık Çalışanlarının Sigara Kullanma Durumları ile Sağlıklı Yaşam Biçimi Davranışları Arasındaki İlişkinin Belirlenmesi: Dumansız Hastane, Sağlıklı Yaşam

ÖZ

Amaç: Tütün ve tütün ürünü kullanmak önemli bir halk sağlığı sorunudur. Çalışmamız hastanede çalışan personelin sigara kullanma durumlarını saptamak ve sağlıklı yaşam biçimi davranışları ile arasındaki ilişkiyi belirleyebilmek amacıyla yapılmıştır.

Yöntem: Çalışmamız kesitsel olarak planlanmış, Mart-Eylül 2018 arasında Bolu Abant İzzet Baysal Üniversitesi İzzet Baysal Eğitim Araştırma Hastanesinde 387 kişi ile yapılmıştır. Bu kişilerden çalışmaya katılmayı kabul eden sağlık personeline yüz yüze görüşme tekniğiyle, sosyo-demografik özellikler ve sigara içme durumu bölümlerinden oluşan Sağlıklı Yaşam Biçimi Davranışları Ölçeği II ile Fagerström Nikotin Bağımlılık Testi' nden oluşan anket formları doldurularak yapılmıştır.

Bulgular: Çalışma 387 kişi ile tamamlandı. Katılımcıların %58,7'si işyerinde sigaralı ortama maruz kalmaktaydı. Sigara kullanmayanların %75,9'u sigaralı ortama maruz kaldığını ifade etmişti ve istatistiksel olarak anlamlı derecede yüksekti. Sağlık çalışanlarının cinsiyet, sigara içme, sigaralı ortamda bulunma, sigara içtikleri yıl sayısına göre sağlıklı yaşam biçimi davranışları puan ortalamaları incelendiğinde aralarında istatistiksel olarak anlamlı farklılık olduğu saptandı.

Sonuç: Sigara içme durumları ile sağlıklı yaşam biçimleri arasındaki ilişkinin belirlenerek, sağlık çalışanlarının konuyla ilgili olumsuz ya da eksik davranışlarının saptanmasının, çalışanların gereksinimlerine yönelik eğitim ve destek planlarının geliştirilmesinin, sağlık çalışanlarının toplum üzerindeki imajını olumlu etkileyeceği ve bunun yansıması olarak, hizmet kalitesi ve memnuniyeti arttıracağı düşünülmektedir.

Keywords: sağlık personeli, sigara bırakma, sağlıklı yaşam tarzı

Introduction

Tobacco use is one of the major public health threats ever encountered in the world, and is also one of the leading causes of common preventable early age morbidity and mortality across the world (1-3). Tobacco use causes about 6 million deaths per year worldwide today, which increase to more than 8 million deaths annually by 2030 as long as the current trends continue (4,5).

Health promotion is defined as the process of helping individuals make informed decisions to optimize their physical and mental health and improve their physical and social environment. Health promotion can be achieved by improving and controlling one's own health, and thus achieving full health potential. Risky behaviors such as smoking, poor nutrition, lack of physical activity, violence and stress should be avoided to achieve this goal (6). Smoking alone is estimated to cause 71% of lung cancers, 42% of chronic respiratory diseases, and 10% of cardiovascular diseases (5). Tobacco use is a major cause of preventable health issues in both Turkey and across the world (7).

Physicians and other health workers play a leading role in society by promoting smoking cessation activities in the fight against smoking. Health workers are responsible for both protecting and improving their health and also being a positive role model for all members of the society by not smoking (4,5,8). However, smoking habits of health workers may limit their ability to intervene in smokers (9). Non-smoker health workers were observed to have healthier lifestyle behaviors (6). Health workers who care about their own health are considered to make efforts to improve healthy lifestyle behaviors in society and surrounding environment. Health workers who significantly care about smoking cessation are more likely to advise their patients quite smoking (4). Tobacco use is quite high among the health workers (2,10).

Health workers, who are expected to lead the society in healthy life, should serve as a role model by correcting their negative or incomplete behaviors of smoking (6). In this sense, it is very important to know the rates of smoking and passive smoking in health workers, to determine the measures to be taken on this subject, and to develop training programs that people need for reducing smoking rates.

This study was conducted to determine the smoking status of hospital staff and to examine the relationship between their smoking habits and healthy lifestyle behaviors.

Methods

This cross-sectional study was carried out between March and September 2018 in Izzet Baysal Training and Research Hospital affiliated to Bolu Abant Izzet Baysal University.

The study population consisted of 820 hospital staff (physicians, midwife-nurses, other healthcare professionals (anesthesiologist, radiologist, laboratory specialist, physiotherapist, pharmacist, and psychologist), administrative employees and subcontracted workers (data entry, cleaning, security and technical personnel). The average smoking prevalence of health workers was found to be around 30% (11,12). By accepting the prevalence of smoking in health workers as 30%, the effect size as 0.06, and the confidence interval as 99%, the sample size was determined as 387 (13). Therefore, the study sample consisted of 387 health workers who wanted to participate in the study. Informed consent was obtained from those health workers.

Data were collected using the Healthy Lifestyle Behaviors Scale II (HLB-II) and the Fagerstrom Test for Nicotine Dependence (FTND), which were applied via face-to-face interview technique to health workers who were accepted to participate in the study.

Health workers were grouped as physicians, midwife-nurses, other healthcare professionals, administrative employees and subcontracted workers.

The study was planned by including all cigarette and hand-rolled cigarette smokers. Smoking status is classified as follows: non-smokers, those who have smoked a total of less than 100 cigarettes in their lifetime. Former smokers, those who smoked more than 100 cigarettes but quitted smoking now. Smokers, regardless of their regular or irregular smoking

behaviors, those who have smoked a total of more than 100 cigarettes (14).

The duration of smoking (year) was calculated using the formula of "cigarette box/year", taking into account the number of cigarettes smoked per day and the years passed by smoking so far.

The Smoke-Free Air Zone Policies implemented in the hospital where the study was conducted. In this context, all hospital employees are provided with detailed and up-to-date information on the subject within the context of occupational health and safety trainings.

Healthy Lifestyle Behaviors Scale II was developed by Walker et al. (1987) and revised in 1996 (15). Its Turkish validity and reliability study was conducted by Bahar et al. (16). The scale measures health-promoting behaviors in relation to an individual's healthy lifestyle. The internal consistency coefficient was 0.92 for the scale and ranged from 0.71 to 0.83 for its subscales. The scale has six subscales: health responsibility (9 items), physical activity (8 items), nutrition (9 items), self-realization (9 items), interpersonal support (9 items) and stress management (8 items). As the total score increases, the individual is considered to have healthier lifestyle behaviors. The total scale score gives the score of healthy lifestyle behaviors. All items of the scale are positive. This is 4-point Likert type scale with choices of never (1), sometimes (2), often (3), regularly (4). The lowest and highest scores on the scale are 52 and 208, respectively (17).

Fagerstrom Test for Nicotine Dependence test consists of six questions. The minimum and maximum FNBT scores are 0 and 10, respectively, in which a higher score indicates a higher level of nicotine dependence. The nicotine dependence levels are classified as very low (0-2 points), low (3-4 points), moderate (5 points), high (6-7 points), and very high (8-10 points) (18).

This study was approved by Bolu Abant Izzet Baysal University Clinical Researches And Ethics Committee (Decision No:2017/46).

SPSS 25.0 program (SPSS Inc., Chicago, Illinois, USA) was used for data analysis. Shapiro Wilk tests

and histogram graphs were used to assess the fit of the scale data to normal distribution. Normal distribution data were compared with t-test and One-Way ANOVA test for independent groups. After the One-Way ANOVA test, the hypothesis of variance homogeneity was checked and Tukey HSD or Tamhane's T2 post-hoc tests were performed to compare the two groups. The results were assessed at a level of $p<0.05$ significance.

Results

The mean age of the participants was 33.92 ± 7.35 years (min: 23; max: 52) in males and 34.67 ± 7.79 years (min: 20; max: 52) in females. Of them, 26.9% were male (n=104), 73.1% (n=283) were female and 65.1% (n=252) were married. In addition, 13.7% (n=53) had to have regular medication, 80.7% (n=312) were living with their families, and 45.2% (n=175) were between the ages of 30-39 years. Moreover, 33.1% (n=128) were midwife-nurses. Table 1 shows the participants' descriptive characteristics.

Table 1. Descriptive characteristics of the health workers included in the study

		n	%
Gender	Male	104	26.9
	Female	283	73.1
Age	20-29	108	27.9
	30-39	175	45.2
	40 and above	104	26.9
Marital status	Married	252	65.1
	Single	135	34.1
Job title	Physician	68	17.6
	Nurse-Midwife	128	33.1
	Other healthcare personnel	31	8.0
	Service purchase	160	41.3
Cohabitants	Alone	54	14
	Spouse	162	41.9
	Family	150	38.8
	Other	21	5.4
Smoking	Yes	94	24.8
	Former smokers	166	42.9
	No	127	32.8
Fagerstrom Test for Nicotine Dependence Score	Low dependence (0-2)	11	11.2
	Low to moderate dependence (3-4)	25	25.5
	Moderate (5)	9	9.2
	High (6-7)	28	28.6
	High dependence (8-10)	25	25.5

Of the participants, 24.3% (n=94) were smokers and 58.7% were exposed to smoking in the workplace. However, 75.9% of the non-smokers (n=126) reported to be exposed to smoking environment, which was statistically significantly high (p<0.001). The average daily cigarette consumption of the smokers was 13.35 ± 6.80 cigarettes, and the mean duration of smoking was 9.40 ± 7.04 years. A statistically significant difference was found between the participants' smoking habits with respect to gender (p<0.001), where 40.4% (n=42) of the males and 18.4% (n=52) of the females were smokers.

The most frequently reported reason for smoking was "pleasure" as 24.8% (n=32), whereas 33.7% (n=31) of the participants answered as "I don't know". The mean FNBT score of the smokers was 5.45 ± 2.36. The midwife-nurses constituted 50% (n=14) of those with high nicotine dependence, which was significantly higher than other groups (p=0.034).

The smokers had significantly lower mean scores on the subscales of health responsibility (p=0.03), nutrition (p=0.002) and stress management (p=0.033).

The health workers who were used to smoke more than 10 years had significantly lower mean scores on the subscales of self-realization (p=0.036), health responsibility (p=0.006) and interpersonal relation-ships (p=0.001) (Table 2).

Table 2. Distribution of the health workers' healthy lifestyle behaviors subscales mean scores

Subscales	Healthy Lifestyle Behaviors Subscales Scores	
	X± SD	Min – Max
Self-realization	25.42±4.47	14-36
Health responsibility	20.72±4.23	10-50
Physical activity	16.46±4.25	8-32
Nutrition	20.65±3.67	12-36
Interpersonal support	24.67±4.08	15-34
Stress management	18.60±3.52	11-32
Total	126.53±18.38	78-203

A statistically significant difference was found between the health workers' HLB-II mean scores with respect to gender, smoking status, being in a smoking environment, and duration of smoking (p<0.05) (Table 3).

Discussion

The advices of physicians and other health workers are considered to have a significant impact on reduction of smoking prevalence, which is the most fatal cause of diseases across the world today (4,8). However, the prevalence of smoking is quite high among health workers. Sağlam (19) found the prevalence of smoking as 18.7% for doctors, 34% for nurses and 50.4% for allied health personnel. In a study conducted with hospital staff in Egypt, more than 90% of respondents stated that smoke-free hospitals would improve healthcare quality, and the doctors and nurses reported that smoke-free air policies would positively affect both the work performance of health workers and the public image of hospitals (20). In the present study, 58.7% of the participants and 75.9% of the non-smokers reported to be exposed to smoking environment. These results are important in terms of showing that there was a high passive smoking exposure in the hospital despite of its smoke-free air zone policy, which should be eliminated within the scope of occupational health and safety.

The ability to determine one's own behaviors affecting his/her health and to choose relevant behaviors suitable for his/her health in daily activities is defined as healthy lifestyle. By transforming these behaviors into attitudes, an individual can maintain a healthy lifestyle and make it even better (21). It is also beneficial for health workers to develop healthy lifestyle behaviors in terms of improving public health. Therefore, they should get into healthy lifestyle habits by making behavioral changes (22). Özçelik et al. (23) reported that compared to other occupational groups, family care physicians had lower mean scores on both the total HLB II and subscales of self-realization, health responsibility, nutrition, interpersonal support, and stress management. Smoking, which is common among health workers in Turkey, is also one of the negative lifestyle habits. Besides, smoking can adversely affect positive lifestyle habits such as adequate and balanced nutrition, physical exercise, and voiding stress. One study conducted in Brazil found the prevalence of smoking as 20% in health

workers and determined a very low rate of adapting healthy lifestyle behaviors by them. The study also reported that the smoker health workers were less likely to advice healthy lifestyle behaviors for their patients (24). In the present study, the smokers had significantly low mean scores on the subscales of health responsibility, nutrition, and stress management. When people do something positive for their health, they can try to make other habits positive.

Health professionals should protect and improve their health in order to deliver healthcare services at their best performance. As a starting point to develop healthy lifestyle behaviors, it is necessary to organize programs that can help stop smoking in health workers who spend most of their time in the workplace, and to implement legal regulations to eliminate passive smoking exposure to non-smokers.

Table 3. Distribution of the health workers' healthy lifestyle behavior subscales mean scores by descriptive characteristics, smoking status and being in a smoking environment

		Healthy Lifestyle Behaviors Scale Mean Scores						
		Self-realization	**Health responsibility**	**Physical activity**	**Nutrition**	**Interpersonal support**	**Stress management**	**Total**
		X ± SD	X ± SD	X ± SD	X ± SD	X ± SD	X ± SD	X ± SD
Gender	**Male**	26.24±4.83	20.69±4.03	17.52±4.95	20.92±3.76	25.04±4.36	19.18±3.83	129.6±20.38
	Female	25.12±4.3	20.73±4.32	16.08±3.91	20.56±3.64	24.54±3.98	18.39±3.39	125.41±17.53
	p[b]	**0.029**	0.932	**0.008**	0.387	0.288	**0.049**	**0.047**
Age groups	**20-29**	26.04±4.44	20.81±3.97	17.31±4.23	20.64±4	25.12±4.39	19.11±3.72	129.03±19.52
	30-39	25.23±4.71	20.52±4.56	16.16±4.33	20.36±3.47	24.69±4.19	18.21±3.26	125.15±17.96
	≥40	25.12±4.04	20.97±3.96	16.11±4.07	21.17±3.63	24.19±3.53	18.72±3.71	126.28±17.88
	p[a]	0.240	0.676	0.051	0.202	0.255	0.105	0.225
Marital status	**Married**	25.52±4.23	20.99±4.23	16.02±4.01	20.81±3.48	24.73±3.93	18.33±3.39	126.4±16.99
	Single	25.19±5	20.07±4.23	17.28±4.66	20.27±4.11	24.54±4.46	19.06±3.84	126.4±21.45
	p[b]	0.498	**0.049**	**0.007**	0.186	0.671	0.060	1
Job title	**Physician**	25.31±5.06	20.24±3.88	16.51±4.75	20.59±4.19	24.4±4.33	18.32±3.78	125.37±21.66
	Nurse-Midwife	25.3±4.03	20.84±3.46	16.39±4.09	20.59±3.42	24.66±4.04	18.19±3.15	125.97±16.2
	Other healthcare personnel	24.71±4.25	19.71±4.23	16.16±3.84	20.42±3.85	24±3.65	18.74±3.22	123.74±14.94
	Service purchase	25.71±4.6	21.03±4.89	16.57±4.27	20.79±3.63	24.93±4.11	19.02±3.73	128.04±19.21
	p[a]	0.660	0.306	0.960	0.940	0.618	0.215	0.538
Cohabitants	**Alone**	25.37±5.18	20.85±4.27	18.24±5.24	20.26±4.39	25.39±4.82	19.15±4.12	129.26±22.63
	Spouse	25.93±3.96	21.1±4.44	15.99±3.88	20.69±3.54	24.96±3.95	18.51±3.32	127.17±16.92
	Family	25.07±4.7	20.36±4.14	16.5±4.22	20.83±3.62	24.23±4.11	18.5±3.6	125.49±18.69
	p[a]	0.199	0.411	**0.005**	0.724	0.154	0.675	0.389
Smoking	**Yes**	25.01±4.93	19.89±3.92	15.88±4.34	19.62±3.34	24.36±4.49	17.93±3.4	122.63±18.65
	No	25.56±4.31	20.99±4.31	16.66±4.22	20.99±3.72	24.77±3.95	18.82±3.55	127.78±18.19
	p[b]	0.304	**0.030**	0.126	**0.002**	0.394	**0.033**	**0.019**
Being in a smoking environment	**Yes**	25.13±4.48	20.43±4.38	16.18±4.23	20.15±3.53	24.55±4.1	18.28±3.51	124.7±18.26
	No	25.84±4.43	21.14±4.01	16.88±4.26	21.38±3.76	24.85±4.07	19.06±3.51	129.16±18.36
	p[b]	0.121	0.102	0.108	**0.001**	0.478	**0.032**	**0.019**
Number of cigarettes per day	**<10**	27.61±3.84	20.36±3.81	14.75±4.06	20.11±4.25	25.64±4.56	17.79±3.67	126.25±17.82
	Between 10-20	23.95±4.96	19.6±3.78	16.13±4.47	19.29±2.87	23.75±4.31	17.84±3.18	120.44±18.32
	>20	23.25±4.57	21.25±6.5	18±5.03	20.75±3.1	24.5±5.8	19.75±4.92	127.5±28.44
	p[a]	**0.003**	0.542	0.231	0.436	0.176	0.542	0.339
Duration of smoking (year)	**<5**	26.92±4.49	21.31±3.02	15.77±5.05	19.38±2.43	26.58±3.35	17.81±2.48	127.77±11.94
	Between 5 – 10	25.26±4.24	21.05±3.95	16.63±3.2	20.84±3.92	25.32±4.19	19.05±3.85	128.16±20.37
	>10	23.9±5.1	18.69±3.96	15.5±4.46	19.22±3.45	22.8±4.56	17.52±3.57	117.45±19.69
	p[a]	**0.036**	**0.006**	0.638	0.185	**0.001**	0.243	**0.022**

[a] One way ANOVA. [b] Independent samples t test

Health responsibility refers to an individual's protective, preventive and health-promoting behaviors and attitudes, and behavioral changes in relation to his/her own health (25). Self-realization, which is one of the basic human functions, includes the realization of one's life purpose by uncovering his/her potential and achieving personal satisfaction, personal success and scientific discoveries. The ability to adopt and display healthy lifestyle behaviors depends on the responsibility of one's own health. The environment has a great impact on one's sense of responsibility (26). The present study found that the married health workers had higher health responsibility subscale mean score than the single ones. This may because married health workers have increased responsibilities for their dependents and especially those who work in shifts at hospitals do their work right and fulfill their responsibilities, so that they do not want to face administrative problems in taking a day off when they or their relatives get sick.

Studies have shown that health workers with poor physical activity habits do not care and recommend physical activity (27). Today, health protection, maintenance and development has gained importance rather than treatment of the disease. In this context, the role of health workers has changed and developed (28). Studies suggest that health workers with poor physical activity do not advise patients to increase their activity levels. Programs such as exercise classes and group walks to increase the physical activity of health workers may be effective for both employees and service users (29,30). In the present study, physical activity subscale mean scores were low in all groups, but lower in smokers, married ones, and females. It should be noted that, as in other issues, the positive changes that health workers in their physical activity behaviors reflect positively on the behaviors of groups they serve for.

The limitation of this study was that all employees working in the hospital could not be reached, so only those who voluntarily agreed to participate in the study were included in the study. This caused differences between the participation rates of the employee groups.

Conclusion

It is important to determine the smoking status of health workers as smoking affects their health and they serve role models for the society's smoking behaviors. Determining the relationship between smoking habits and healthy lifestyle behaviors of health workers, identifying their negative or incomplete behaviors in this regard, and developing training and support programs for their relevant needs are considered to positively affect the images of health workers in society, and thus to increase healthcare quality and satisfaction.

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