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Original article

Determination of Nutritional Habits and Physical Activity Levels of Healthcare Professionals

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Summary. In this study, it was aimed to examine the nutritional habits and physical activity levels of healthcare professionals. 131 (67 women, 64 men) volunteer healthcare professionals working in health institutions in Elazığ participated in the study. "Personal Information Form" was used to determine the demographic information of the participants, "Nutritional Habits and Nutrition Information Levels" developed by Yücel (2015) to determine the nutritional habits and knowledge levels, and the "International Physical Activity Survey" short form was determined to determine the physical activity levels. SPSS package program was used to analyze the data. In the study, $p<0.05$ was accepted as significant. According to the results of the research, 55% of healthcare professionals did not have any nutrition education, and 68.7% were not doing any sports. It was found that none of the participants had any chronic diseases. In our study, 53.4% of the participants were having 3 main meals a day, 63.4% were not having breakfast regularly, 53.4% were skipping meals during the day, and the most skipped meal was breakfast. Missing meal was mostly because not having time, and 41.2% of them were having one snack, 29% were consuming carbonated drinks between meals, 32.8% were drinking 2 liters of water daily. It was determined that 35.1% of participants were preferring meals less salty, 35.1% of them were eating fast. Emotional status was affecting eating less as 34.4% when they were sad, and 38.2% when they were happy. It was determined that the healthcare professionals participating in the study had low physical activity levels. Even if there were no statistically significant data between nutritional status, knowledge and demographic variables, there was a statistically significant difference between physical activity levels and their profession levels. As a result; it was stated that healthcare professionals do not have a regular healthy lifestyle and their physical activity levels were low. In this context, we believe that there is a need for educations that encourage regular physical activity and a healthy lifestyle for healthcare professionals.

Key words: Nutrition, Healthcare Professionals, Nutritional Habit, Physical Activity

Introduction

World Health Organization determines health as referring not just to the absence of a physical problem, but to the individual's physical, mental and social well-being. Considering all these features, health is a state of integrity that includes the concepts of protecting, maintaining and improving health condition as well as the physical well-being of the individual. In order to maintain and improve the health and well-being of communities and individuals, it will be possible with sufficient balanced eating and nutritional habits and regular physical activity along with many factors (1). Maintaining a healthy lifestyle is not only important for every society segment (2), but also for healthcare professionals. As a result of the excessive workload of healthcare professionals, it causes health problems (cardio vascular diseases, obesity etc.) in the body due to the bad eating habits and the possibility of doing physical activity. In addition to adequate and balanced nutrition, it is important to make physical activity a lifestyle in order to prevent these problems that will happen in the body (3, 4, 5,6).

Nutrition is a vital phenomenon that takes place in every period of life and is extremely important for

health especially chronic diseases (7). With the continuation of the lifetime, with environmental factors (family, friend, profession, etc.) and many other interactions, individuals create their own diet and maintain throughout their lives. In general, diets adopteating and nutritional habits as inadequate and unhealthy. The acquisition of adequate and balanced eating habits are important for maintaining a healthy life (8,9,10,11). Adequate and balanced nutrition can be identified as adequate amounts and at appropriate times for the nutrients that the body needs in order to protect health, with increasing the quality of life and ensuring growth and development (12). However, not only adequate and balanced nutrition is sufficient to sustain a healthy life, physical activity is important too (13). Physical activity can be expressed as the activity that requires energy expenditure by using muscles and joints of the individual that leads to physical and physiological changes in the body. Having physical activity as a way of life will benefit the protection of health and avoidance of health problems that can be faced in the future (14, 15, 16, 17).

In line with all nutritional and physical activity as it can be said health information, it is necessary for healthcare professionals to take part in a regular physical activity program in their lives along with an adequate and balanced eating and nutritional habits in order to sustain their lives in a healthy way. In this context, it was aimed to determine physical activity and nutrition knowledge levels of healthcare professionals.

Material and Method

The population of the research was composed of healthcare professionals working in Elazığ province, and 131 (67 women, 64 men) of them voluntarily participated in the sample group. The survey method, one of the data collection techniques, was used in the research. In order to determine the demographic information of the participants, a "Personal Information Form" and a questionnaire consisting of 25 questions about "Nutritional Habits and Nutrition Knowledge Levels" to determine the nutritional habits and knowledge levels, and the "International Physical Activity Survey" short form were used to determine the physical activity levels. The questionnaire applied to the participants was benefited from the questionnaire used by Yücel (2015). The questionnaire was adapted according to the purpose of the study and applied to the participants in obtaining the data.

MET (Metabolic Equivalence) Calculation

1 MET = 3.5 ml / kg / minute oxygen consumption

MET x 3.5 x body weight (kg) / 200 = … kcal / min.

According to the physical activity score, the physical activity levels of the participants were classified as "low, medium and high" (19):

- 3 <3 MET light severe activity,
- 3–6 MET moderate to severe activity,
- 6> 6 MET high intensity activity

Statistical analysis

Data were analyzed by using the IBM SPSS Statistics version 15 software for Windows. For the normality analysis of the data, "Kolmogorov-Smirnov" normality analysis was performed. After determining as normal distribution, Independent Samples t and One-Way ANOVA tests were applied for intra-group comparisons. Significance level was taken as<0.05.

Results

In the present study, 51.1% of the participants were female and 48.9% were female, 55% were married and 45% were single. The data of healthcare professionals were grouped according to their age, height and body weight.

In this study, it was stated that 55% of healthcare professionals participating took nutritional education, 61.8% were not on any medication, 70.2% were nonsmokers, 61.1% were not using alcohol, 68.7% were not doing any sports and all participants did not have any chronic disease.

Table 1. Demographic Variables of Participants

		n	%
Gender	Female	67	51.1
	Male	64	48.9
Marital status	Married	72	55
	Single	59	45
PProfession	Nurse	55	42
	Intern	76	58
Educational status	Undergraduate	102	77.9
	Post-graduate	29	22.1
	Other Undergraduate Program	38	19
Age	18-23 year	63	48.1
	24-29 year	50	38.2
	30-35 year	18	13.7
Height	150-160 cm	80	61.1
	161-170 cm	33	25.2
	171-180 cm	7	5.3
	181cm and above	11	8.4
Body weight	40-50 kg	28	21.4
	51-60 kg	46	35.1
	61-70 kg	34	26
	71-80 kg	23	17.6
Income status	3001-4000 TL	35	26.7
	4001-5000 TL	49	37.4
	5001-6000 TL	28	21.4
	6000 TL and above	19	14.5

Table 2 Health and Nutritional Statuses of Participants

		n	%
Nutritional Education	Yes	72	55
	No	59	45
Chronic Disease	Yes	-	-
	No	131	100
Medication Status	Yes	50	38.2
	No	81	61.8
Smoking Status	Yes	39	29.8
	No	92	70.2
Alcohol Use	Yes	51	38.9
	No	80	61.1
Doing Sports	Yes	41	31.3
	No	90	68.7

In this study, it was found that 53.4% of the participants were having 3 main meals a day, 63.4% were not eating breakfast regularly, 53.4% were skipping meals during the day and the most skipped meal (37.4%) were breakfast meals, 45.8% were missing the meals because of not having time, 41.2% were having one snack, 29% were consuming carbonated drinks between meals, 32.8% were consuming 2 liters of water daily, 35.1% were preferring their meals less salty, 35.1% were eating fast. From the point of view of emotional eating, 34.4% were eating less when they are sad, 38.2% were eating less when they are happy.

Table 3 Participants' Nutritional Knowledge Status

Nutritional Knowledge Questions		**n**	**%**
Main meals	1 meal	-	-
	2 meals	61	46.6
	3 meals	70	53.4
	More than 3 meals	-	-
Regular breakfast	Yes	48	36.6
	No	83	63.4
Skipping meals	Yes	70	53.4
	No	61	46.6
Most skipped meal	Breakfast	49	37.4
	Lunch	48	36.6
	Dinner	34	26
Reasons for skipping meals	Not having time	60	45.8
	Not wanting	34	26
	To lose weight	17	13
	Not having habit	20	15.3
Snack	Never	16	12.2
	1	54	41.2
	2	41	31.3
	3 and more	20	15.3
The most frequently consumed food / beverage between meals	Tea / coffee	13	9.9
	Carbonated drinks	38	29
	Fruit juice	30	22.9
	Cake / Cookie / Biscuit	24	18.3
	Candy / Chocolate etc.	15	11.5
	Fruit / Dried Fruit	11	8.4

Table 3 (Continued)

Daily water intake	1 liter	26	19.8
	1.5 liter	38	29
	2 liter	43	32.8
	2.5 liter	17	13
	3 liter and more	7	5.3
Daily tea / coffee consumption (cup)	Never	34	36
	1	9	6.9
	2	23	17.6
	3	17	13
	4	14	10.7
	5	21	16
	6	13	9.9
Salt preference in your meals	Without salt	34	26
	Less salty	46	35.1
	Medium salt	29	22.1
	Very salty	22	16.8
Eating speed	Fast	46	35.1
	Normal	45	34.4
	Slow	30	22.9
	Very slow	10	7.6
Eating status when you are sad / tired	I never eat	36	27.5
	I eat less	45	34.4
	I eat more and often than ever	24	18.3
	No change	13	9.9
	Other	13	9.9
Eating status when you are joyful / excited	I never eat	18	13.7
	I eat less	50	38.2
	I eat more and often than ever	31	23.7
	No change	13	9.9
	Other	19	14.5

In this present study, it was determined that there were no statistically significant difference between the health behaviors and nutritional knowledge levels according to participants' gender, marital status, educational status, occupation, age, height, body weight and income status.

In the present study, it was determined that there were no statistically differences between the levels of physical activity according to their gender, marital status, educational status, age, height, weight and income status, while there was a statistically significant difference between their profession levels.

Discussion

In this present study, participants' nutritional statuses, knowledge levels and physical activity levels were discussed below. Gürcani et al. (2010) determined in the study that nurse's healthy lifestyles, and the mean eating habits score of the participants was not high and the mean scores for their physical activity levels were low. In another study, Özyazıcıoğlu et al. (2011) studied with the nursing department students and they determined that interns' healthy lifestyle, eating habit levels of the participants were moderate and the eating habits of the female students were higher than the male students. Gürbüz and Yetiş (2018) found that the students were satisfied with their eating habits. Akbulut et al. (2016) determined that the participants had an unhealthy lifestyle in the study in which university students determined their healthy living and nutritional status. Ndetan et al. (2019) stated that the excessive stress burden brought by the work life of the participants led to unhealthy lifestyles in the study in which a rural hospital evaluated the health status of the employees. Tuncel et al. (2016) stated that in the study in which the college staff determined their healthy life and physical activity levels, the participants' physical activity levels were high, their healthy life levels were low and there was a need for improvement. Sharafi et al. (2020) stated that sleep quality and internet use affect healthy lifestyle and physical activity level in the study in which university students evaluate nutritional levels. Bilgin et al. (2019) determined that university students study healthy lifestyles, and that healthy lifestyle behaviors are higher than students studying in health related departments. Kahssay et al. (2020) stated that adolescent individuals have an unhealthy lifestyle in the study in which they evaluate healthy lifestyles in adolescent individuals. Yanık and Doğanay (2017) found that the healthcare behaviors of the participants were moderate and their physical activity levels were low in the study where healthcare professionals determined their healthy lifestyles. In

Table4. Nutritional Habits and Knowledge Levels According to Demographic Variables

		Nutritional Habits				Nutritional Knowledge			
		$\overline{X}$	SD	t	p	$\overline{X}$	SD	t	p
Gender	Female	30.72	3.74	-0.303	0.763	9.23	3.29	1.824	0.070
	Male	30.91	3.60			8.88	1.16		
Marital status	Married	30.94	3.51	0.341	0.734	9.07	1.01	0.036	0.971
	Single	30.72	3.78			9.06	1.14		
Educational status	Undergraduate	30.62	3.80	-1.110	0.269	9.08	1.13	0.383	0.702
	Post-graduate	31.48	3.07			9.00	0.92		
Profession	Nurse	30.89	3.83	0.196	0.845	9.16	1.13	0.847	0.398
	Intern	30.76	3.55			9.00	1.05		

***p<0.05**

Table 5 Variance Analysis of Nutritional Habits and Knowledge Levels According to Demographic Variables

		Nutritional Habits				Nutritional Knowledge			
		$\overline{X}$	SD	F	p	$\overline{X}$	SD	F	p
Age (year)	18-23	31.49	3.60			8.82	1.11		
	24-29	29.85	3.59			9.25	1.09		
	30-35	31.33	3.63	2.939	0.057	9.20	1.01	2.476	0.088
Height (cm)	150-160	31.05	3.71			9.10	1.12		
	161-170	30.68	3.32			9.00	0.92		
	171-180	31.42	4.96	0.615	0.606	8.57	0.78		
	181 and above	29.54	3.41			8.90	1.13	0.606	0.613
Body weight (kg)	40-50	30.39	4.75			9.03	1.10		
	51-60	30.62	3.09			9.07	1.14		
	61-70	31.97	3.49	1.539	0.208	9.00	0.88		
	71-80	30.17	3.11			9.00	1.16	0.038	0.990
Income status (TL)	3001-4000	29.88	3.25			9.14	1.11		
	4001-5000	30.77	3.73			9.00	1.09		
	5001-6000	31.67	3.84	1.429	0.237	9.28	1.01		
	6000 and above	31.36	3.66			8.78	1.13	0.903	0.442

*p<0.05

Table 6 Physical Activity Levels According to Demographic Variables

		Physical Activity			
		$\overline{X}$	SD	t	P
Gender	Female	1.2231	0.15		
	Male	1.2381	0.14	-0.570	0.570
Marital status	Married	1.2152	0.15		
	Single	1.2435	0.14	-1.074	0.285
Educational status	Undergraduate	1.2365	0.15		
	Postgraduate	1,2105	0,14	0,822	0,413
Profession	Nurse	1.1890	0.15		
	Intern	1.2609	0.14	-2.776	0.006*

*p<0.05

Table 7 Variance Analysis of Physical Activity Levels According to Demographic Variables

		Physical Activity			
		$\overline{X}$	SD	F	p
Age (year)	18-23	1.2328	0.16		
	24-29	1.2338	0.13		
	30-35	1.2153	0.13	0.110	0.896
Height (cm)	150-160	1.2311	0.16		
	161-170	1.2478	0.13		
	171-180	1.1825	0.11		
	181 and above	1.2075	0.08	0.466	0.706
Body weight (kg)	40-50	1.2038	0.13		
	51-60	1.2395	0.15		
	61-70	1.2528	0.14		
	71-80	1.2136	0.14	0.694	0.557
Income status (TL)	3001-4000	1.2415	0.14		
	4001-5000	1.2182	0.14		
	5001-6000	1.2119	0.16		
	6000 ve üstü	1.2307	0.15	1.429	0.237

*p<0.05

the present study, it was found that health habits of health professionals were evaluated as, 55% had nutrition educations, 61.8% were not using any medication, 70.2% were non-smokers, and 68.7% were not playing sports. It was determined that none of the participants had chronic diseases. In addition, nutritional habits of healthcare professionals were found to be irregular. In line with these results, we think that the lack of healthy eating habits of healthcare professionals generally results from the high workload.

Nutritional knowledge and nutritional habits are linked together. Yaşar et al. (2018) determined that the nutritional knowledge levels of the participants in their study were moderate in which the nursing department students examined their healthy lifestyle. Vayısoğlu and Öncü (2018) determined that nutritional knowledge and physical activity levels were low in nursing students, where the effect of individual study method on healthy life behavior and health self-efficacy perception was evaluated. Matsumoto et al. (2019) stated that in the study in which individuals between the ages of 18-64 skipped breakfast meals mostly. Duran and Sümer (2014) observed that the nutritional knowledge levels of midwifery students were moderate. Bundala et al. (2019) studied with mothers living in the rural areas of Tanzania, it was determined that the majority of the participants had insufficient nutritional knowledge. In another study, Söyler et al. (2019) determined that the nutrition knowledge levels of the students were moderate, and the mean scores of male students were higher than females in health department. Gonzalez et al. (2019) stated in their study about health professionals' nutritional knowledge levels, there has been a positive improvement in nutritional education and post-nutritional knowledge levels. Akbulut and Aygören (2020) found that the nutritional knowledge levels of students studying in health-related departments were higher than male students. Güler and Güner (2018) determined that Van Nutrition School students' health life styles were not high in their research. Külcü et al. (2019) determined that students' nutritional knowledge levels were low in the study in which health education students determined their healthy life behaviors. When the nutritional knowledge levels of healthcare professionals were examined; 53.4% were consuming 3 main meals a day, 63.4% were not having breakfast

regularly, 53.4% were skipping meals during the day and the most skipped meal was breakfast.In our study, 45.8% of them missed meals because they could not have time, 41.2% of them had one snack. Meal preferences as 29% carbonated drinks between meals, 32.8% 2 liters of water daily, 35.1% less salty meals, 35.1% eating fast. And eating less with emotions stated as 34.4% sadness and 38.2% happiness. In addition, the participants' nutritional knowledge levels are observed to be low. The differences in nutritional knowledge levels of healthcare professionals are thought to be caused by work-related stress as well as environmental factors.

Physical activity is as important as nutrition, because it is a part of healthy life. In his research, Erdogan (2011) determined that the level of physical activity of desk employees was low and their body mass index values were high. Korkmaz and Deniz (2013) determined that the physical activity levels of the participants were low and that the physical activity levels of women were higher than men. Roskoden et al. (2017) determined in their study that shifted healthcare professionals determined physical activity levels, shifted working nurses had lower physical activity level from office staff. Kitiş and Gümüş (2015) determined that the physical activity levels of women aged 20 and over evaluated the physical activity levels of the vast majority of participants and their BMI levels were 28.87. In the study that conducted by İskender et al. (2018), they found that the vast majority of students did not have exercise habits. Gormley and Melby (2020) stated that nursing students' physical activity levels were low. Saridi et al. (2019) determined that the physical activity levels of the participants were low in the study where healthcare professionals assessed their physical activity levels. Demirtürk et al. (2017) determined that health science students had low physical activity levels and male students had higher physical activity levels than female students. In their study, Jun et al. (2019) determined that the level of physical activity of employees working in a university hospital was not high, and the level of physical activity of doctors compared to nurses and support staff was low. Korkmaz and Demirkan (2017) stated that the level of physical activity of the participants was low and there were differences in physical activity levels according to gender in the study where healthcare professionals determined their physical activity levels. In the study where Peters et al. (2020) determined the physical activity levels of shifted healthcare professionals, they found that the emergency physicians' levels of physical activity were lower than others. When the physical activity levels of the healthcare professionals participating in this study were evaluated, it was observed that the participants' physical activity levels were low. These results are thought to be due to the limited opportunities for physical activities in healthcare professionals in their work environments.

Conclusion

In this present study, it was determined that the healthcare professionals'physical activity levels were low and healthy lifestyle habits were inadequate. In line with these results, we believe that giving the necessary importance to physical activity and both eating and nutritional behavior will increase the quality of life of healthcare professionals. As a result, following suggestions were listed.

Suggestions

- Organizing nutrition educations for healthcare professionals,
- Working on reducing the increasing daily workload of healthcare professionals,
- Performing studies to determine the physical activity levels at certain times of the year by experts in the field are important, and
- Physical activity and healthy living habits should not be limited to healthcare professionals only.

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