

Original Article

The Relationship of Internet Addiction and Physical Activity in Healthcare Professionals

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Keywords: *Healthcare workers, physical activity level, internet addiction***Abstract**

The aim of the study is to determine the Internet addiction and physical activity levels of healthcare professionals. This study has been planned as a descriptive relational. The study was conducted with 140 healthcare workers working. In collecting data; The personal information form, the International Physical Activity Questionnaire and the Young Addiction Scale were used. When the physical activity level is evaluated; 62.1% of the individuals were found to be inactive in terms of physical activity. When the internet addiction level was evaluated, it was seen that 46.4% of the healthcare workers were possibly addicted. A high negative correlation was found between physical activity and internet addiction. As the physical activity level of healthcare professionals decreases, the level of internet addiction increases.

1. Introduction

The Internet is an important resource for accessing the latest information, enabling us to communicate with others, and encouraging us to do research (Khan, Shabbir & Rajput, 2017). However, the widespread use of the internet day by day and the prediction that it will become more widespread caused an increase in the interest in this issue and the investigation of the problems thought to be experienced in the subject (Kutlu et al., 2016, Stodt et al., 2018). At this point, the most important concept we come across is internet addiction. Withdrawal symptoms such as anger, nervousness and tension when internet is not available in internet addiction; Lack of self-control and excessive use of the internet (postponing the most basic needs such as sleeping and eating, feeling lost of time),

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desire to have better computers and better programs, and desire to spend more time on the Internet, marked tolerance and negative consequences of addiction. (failure at school / work, lying, social isolation, feeling of burnout, etc.) can be seen almost all of them (Young 2007, Korkeila et al., 2010, Kuss et al., 2014).

One of the problems that we encounter due to individuals spending too much time on the internet is the decrease in sedentary life and physical activity (Lepp Barkley & Sanders, 2013, Kim, 2013). Lack of physical activity and increasing sedentary behavior have been included as risk factors for Internet addiction in the literature (Lin, Ko & Wu, 2011, Griffiths, 2010). In a study, it was reported that individuals with low levels of physical activity have a high average score for internet addiction, and increasing physical activity will help reduce the average score for internet addiction (Lok, Lok & Canbaz, 2017).

It is thought that the emergence of many health problems along with the fact that internet addiction is a global problem requires scientists to understand internet addiction and its related variables and to conduct more studies in different groups. In addition, understanding the physical activity levels of individuals and its relationship with internet addiction is important in planning effective interventions to improve health in this area. In this context, it should not be forgotten that healthcare professionals have important roles and responsibilities in protecting health and preventing diseases. Health professionals should protect their own health and regulate their lifestyle in a way that improves health, depending on their professional and social roles and the necessity of being role models for the society they serve.

2. Material and methods

Purpose of research and questions of the research

In this study, it is aimed to determine the Internet addiction and physical activity levels of healthcare workers, and to examine the relationship between Internet addiction and physical activity level and sociodemographic variables.

1. What is the Internet addiction level of healthcare professionals?
2. What is the physical activity level of the healthcare professionals?
3. Does internet addiction level change according to the socio-demographic characteristics of healthcare professionals?
4. Does the level of physical activity change according to the socio-demographic characteristics of healthcare professionals?
5. Is there a relationship between physical activity level and internet addiction?

Type of research

This study is descriptively planned as relational.

The place and features of the research

The study was carried out with healthcare professionals working in a hospital in Konya's Selçuklu district.

Study group of the research

The sample size in the research was calculated using G * Power 3.1.9.2 analysis program. With 0.24 effect size, 90% power, 5% margin of error, Yılmaz et

al. (2014), the average score of the "Young Internet Addiction Scale" was calculated as 140 by taking into account (73.54 ± 26.27).

The inclusion criteria of the study will be taken by the healthcare professionals working in the hospitals in Selçuklu district of Konya.

Data Collection Techniques and Tools

The data of the research were collected through Google Forms between April 1-15, 2021. The questionnaires were delivered to the participants via social media; After reaching the sufficient number of samples, the data collection process was terminated. In collecting data; The personal information form that questioned the socio-demographic characteristics and prepared by the researchers, the International Physical Activity Questionnaire and the Young Addiction Scale were used.

International Physical Activity Questionnaire (UFAA); Physical activity levels of individuals were determined by the International Physical Activity Questionnaire (UFAA). The validity and reliability study of the questionnaire was conducted in Turkey (Saglam et al., 2010). In our study, the short form of the questionnaire, which can be administered by itself and includes "last seven days", was used to evaluate the level of physical activity. This short form consists of seven questions and provides information about sitting, walking, moderately vigorous activities and time spent in vigorous activities. The calculation of the total score for the short form includes the total duration (minutes) and frequency (days) of walking, moderate vigorous activity, and vigorous activity. The sitting score (sedentary behavior level) is calculated separately. In the evaluation of all activities, the criterion is that each activity is done at least 10 minutes at a time. Multiplying the minute, day, and MET value (multiples of resting oxygen consumption) a score is obtained as "MET-minute / week". The walking time (minutes) was multiplied by 3.3 MET in calculating the walking score. In the calculation, 4 METs were taken for moderate activity and 8 MET values were taken for vigorous activity. Physical activity levels are classified as physically inactive (3000 MET-min / week) (Öztürk 2005).

Young's Internet Addiction Test Short Form (YIBT-SF); YIBT-SF, developed by Young and converted into short form by Pawlikowski et al., Consists of 12 items. As a result of the confirmatory factor analysis of the scale, which is a five-point Likert type, it has been determined that the YIBT-SF has a good fit ($\chi^2 = 173.58$, $sd = 53$, $CFI = 0.95$, $SRMR = 0.064$ and $RMSEA = 0.079$). The internal consistency reliability coefficient of the scale was calculated as 0.85. For this study, the internal consistency reliability coefficient of the scale was calculated as .77 (Kutlu et al., 2016). The 8-question "Diagnostic Questionnaire", which was adapted from the Young DSM-IV's "Pathological Gambling" criteria, was later developed and the 20-question "Internet Addiction Scale" was created. This scale is prepared as a self-report test. It is a Likert-type scale and participants are required to tick one of the options "Never", "Very Few", "Occasionally", "Frequently", "Very Often", "Always" for each question. Points of 0, 1, 2, 3, 4 and 5 are given to these options, respectively. Those with a total score between 70 and 100 were defined as "dependent", those between 40 and 69 as "possibly dependent", and

those with a total score of 39 and below as "non-dependent".

Data Evaluation. The data of the study were evaluated using the SPSS for Windows 22.0 (Statistical Package for Social Science) statistical package program. Unit number (n), percentage (%), mean \pm standard deviation (mean (SD)) values were used as summary statistics. The chi-square test and Pearson correlation analysis were used in the analysis of the data. Results were evaluated at 95% confidence interval and $p < 0.05$ significance level.

Ethical Procedure. Ethical permission was obtained from the Faculty of Sport Sciences Ethics Committee (Date: 25.03.2021, Decision number: 56) for the ethical permission of the study. Before starting the research, the informed consent form of the individuals was taken online.

3. Results and Discussions

The average age of the individuals is 34.45 ± 7.55 , 50.7% of them are women, 41.4% are undergraduate, 52.1% are single, 45.0% have a medium income and 45%, 0 of them were found to perceive their health at a moderate level. It was found that 55.0% of the individuals had any chronic disease, 41.4% worked as a nurse and 40.7% had been working for 6-10 years.

The physical activity level and internet addiction levels of the participants are evaluated in Table 1. When the physical activity level is evaluated; 62.1% of the individuals were found to be inactive in terms of physical activity. When the internet addiction level was evaluated, it was seen that 46.4% of the healthcare workers were possible addicts (Table 1).

Table 1. *Distribution of Participants' Physical Activity Level and Social Media Addiction Scale Mean Scores*

Scales	Number (n)	Percent (%)
Physical Activity Questionnaire		
Physically inactive (Inactive) (<600 MET-min / week)	87	62.1
With a low level of physical activity (600-3000 MET-min / wk) (Less Active)	53	37.9
Internet addiction		
Not addicted	33	23.6
Possible addict	65	46.4
Dependent	42	30.0

When the physical activity status of the participants was evaluated according to their sociodemographic characteristics; It was determined that women were more inactive than men in terms of physical activity and the difference was statistically significant ($p < 0.05$). It was determined that singles were more inactive than married couples in terms of physical activity and the difference was statistically significant ($p < 0.05$). It was determined that those with chronic diseases were more inactive in terms of physical activity than those without chronic diseases and the difference was statistically significant ($p < 0.05$). When the physical activity status of the participants was evaluated according to their professions, it was determined that nurses were more

inactive than other healthcare professionals in terms of physical activity, and the difference was statistically significant ($p < 0.05$). When the physical activity status of the participants according to their working time in the profession was evaluated, it was determined that those with a working period of 6-10 years were more inactive in terms of physical activity, and the difference was statistically significant ($p < 0.05$). No statistical significance was found between educational status, perceived income, and health status and physical activity ($p > 0.05$) (Table 2).

Table 2. *Distribution of Participants' Physical Activity Levels by Sociodemographic Characteristics*

Variables	Physical Activity Levels		Test value p value
	Inactive n (%)	Minimal Active n (%)	
Gender			
Woman	50(%36.4)	27(%19.3)	X ² : 0.966 p:0.002*
Male	36(%25.7)	26(%18.6)	
Education Status			
High school	16(%11.4)	13(%9.3)	X ² : 0.941 p:0.625
Associate Degree	36(%25.7)	22(%15.7)	
University	35(%25.0)	18(%12.9)	
Marital status			
Married	41(%29.3)	26(%18.6)	X ² : 0.825 p:0.049*
Single	46(%32.9)	27(%19.3)	
Perceived Income Level			
Good	31(%22.1)	14(%10.0)	X ² : 4.711 p:0.095
Middle	33(%23.6)	30(%21.4)	
Bad	23(%16.4)	9(%6.4)	
Perceived Health Level			
Good	26(%18.6)	13(%9.3)	X ² : 2.138 p:0.34
Middle	35(%25.0)	28(%20.0)	
Bad	26(%29.9)	12(%8.6)	
Presence of Chronic Disease			
Yes	54(%38.6)	23(%16.4)	X ² : 4.640 p:0.024*
No	33(%23.6)	30(%21.4)	
Job			
Doctor	13(%9.3)	8(%5.7)	X ² : 16.295 p:0.001*
Nurse	35(%25.0)	23(%16.4)	
midwife	20(%14.3)	1(%0.7)	
Health Technician	13(%9.3)	9(%6.4)	
Health Technician	6(%4.3)	12(%8.6)	
Working Time (years)			
1-5 years	19(%13.6)	26(%18.6)	X ² : 11.790 p:0.003*
6-10 years	29(%20.7)	9(%6.4)	
11 years and above	39(%27.9)	18(%12.9)	

X²:Chi-Square test, *p<0,05

When internet addiction levels are evaluated according to the sociodemographic characteristics of the participants; It was determined that males were more internet addicted than females and the difference was statistically significant ($p < 0.05$). When the internet addiction levels of the participants were evaluated according to their

educational status, it was determined that those who had an associate degree were more addicted to the Internet and the difference was statistically significant ($p < 0.05$). It was determined that singles were more Internet addicted than married couples and the difference was statistically significant ($p < 0.05$).

Table 3. *Distribution of Young's Internet Addiction Levels by Sociodemographic Characteristics of the Participants*

Variables	Internet Addiction Level			Test value P value
	Not addicted n (%)	Possible addict n (%)	Addicted n (%)	
Gender				
Woman	21(%15.0)	31(%22.1)	19(%13.6)	X ² : 2.946 p:0.031*
Male	12(%8.6)	34(%24.3)	23(%16.4)	
Education Status				
High school	3(%2.1)	11(%7.9)	11(%7.8)	X ² : 12.209 p:0.016*
Associate Degree	19(%13.6)	24(%17.1)	19(%13.6)	
University	11(%7.9)	30(%21.4)	12(%8.6)	
Marital status				
Married	14(%10.0)	36(%25.7)	17(%12.1)	X ² : 2.783 p:0.002*
Single	19(%13.6)	29(%20.7)	25(%17.9)	
Perceived Income Level				
Good	11(%7.9)	5(%3.6)	19(%13.6)	X ² : 20.161 p:0.0001*
Middle	16(%11.4)	30(%21.4)	14(%10.0)	
Bad	6(%4.3)	30(%21.4)	9(%6.4)	
Perceived Health Level				
Good	8(%5.7)	16(%11.4)	15(%10.7)	X ² : 1.991 p:0.737
Middle	16(%11.4)	31(%22.1)	16(%11.4)	
Bad	9(%6.4)	18(%12.9)	11(%7.9)	
Presence of Chronic Disease				
Yes	14(%10.0)	36(%25.7)	27(%19.3)	X ² : 3.576 p:0.002*
No	19(%13.6)	29(%20.7)	15(%10.7)	
Job**				
Doctor	6(%4.3)	5(%3.6)	10(%7.1)	X ² : 24.074 p:0.002*
Nurse	19(%13.6)	22(%15.7)	17(%12.1)	
Midwife	4(%2.9)	10(%7.1)	7(%5.0)	
Health Technician	4(%2.9)	28(%20.0)	8(%5.7)	
Working Time (years)				
1-5 years	17(%12.1)	24(%17.1)	4(%2.9)	X ² : 32.922 p:0.0001*
6-10 years	1(%0.7)	26(%18.6)	11(%7.9)	
11 years and above	15(%10.7)	15(%10.7)	27(%19.3)	

When the internet addiction levels of the participants were evaluated according to their perceived income status, it was determined that those who perceived their income as good were more Internet addicts and the difference was statistically significant ($p < 0.05$). It was determined that those with chronic diseases were more Internet addicts than those without chronic diseases and the difference was statistically significant ($p < 0.05$). When the internet addiction levels of the participants were evaluated according to their professions, it was determined that nurses were more

internet addicted than other professions and the difference was statistically significant ($p < 0.05$). When the internet addiction levels of the participants according to their years of employment were evaluated, it was determined that those who worked for 11 years or more were more Internet addicts and the difference was statistically significant ($p < 0.05$). No statistically significant difference was found between perceived health status and internet addiction ($p < 0.05$) (Table 3).

The relationship between the physical activity level of the participants and the addiction scale is evaluated in Table 4. A high negative correlation was found between physical activity and internet addiction ($r = -0.715$, $p = 0.02$). It was observed that as the level of physical activity increased, internet addiction decreased (Table 4).

Table 4. *Relationship between the Participants' Physical Activity Questionnaire and Young's Internet Addiction Scale*

Scales	Physical Activity Questionnaire	Internet Addiction Scale
Physical Activity Questionnaire	1.00	
Internet Addiction Scale	$r = -0.715$ $p = 0.02^*$	1.00

Discussions

In this study, it was determined that 46.4% of the healthcare workers are possible addicts and 30% are dependent. Kaygusuz, Oguzoncul and Erensoy (2019) stated in the study they conducted with 407 medical faculty students that 19.4% were potential addicts and 3% were addicts. In a different study, it was determined that 18.5% of medical faculty students are internet addicts (Gedam et al., 2016). In a study conducted in Nepal, internet addiction was determined as 44.6% (Pramanik, Sherpa & Shrestha, 2012). It can be said that these differences in studies on the prevalence of internet addiction in the society are caused by different study populations, different times and differences in methodological evaluation. 62.1% of the healthcare workers participating in the study were found to be inactive in terms of physical activity. Similarly, Yıldırım et al. (2019) stated that only 25.4% of them performed sufficient physical activity in their study with 240 healthcare workers. In a study conducted with physicians, it was found that 49% of the participants were physically active (Keohane, Mulligan, & Daly, 2018). Chappel et al. (2017) stated in their systematic review that nurses' physical activity level is low. Lack of physical activity, which is the fourth risk factor among the global causes of death, may be a problem that health professionals experience due to intense working pace and excessive working hours.

In the study, it was determined that women were more inactive than men in terms of physical activity and the difference was statistically significant. Similarly, according to the literature, it is observed that men are more active than women (Genç et al., 2011, Yerlisu Lapa & Haşıl Korkmaz, 2017). Contrary to the results of this study, Yıldırım, Yildirim and Eryilmaz (2019) determined that female healthcare workers are more active than men.

In the study, it was determined that singles were more inactive than married

people in terms of physical activity and the difference was statistically significant. Hallal et al. (2003) stated in their study that the activity level of single or lonely women was lower than married women. Contrary to the results of this study, Yıldırım et al. (2019) stated that single healthcare workers are more active than married people, and this may be related to the fact that single individuals can devote more time to themselves. This difference in study results may be due to differences in sample groups and measurement tools.

In this study, it was determined that male healthcare workers are more internet addicted than women and the difference is statistically significant. According to the Household Information Technologies Use Research data, 82.9% of women and 91.5% of men have internet access (Turkstat, 2017). Similarly, Malviya et al. (2014) reported that the Internet addiction level of men is higher than that of women. Eroğlu and Kutlu (2020) reported in their study with nurses that the internet addiction level of men is higher than women. This may be due to the cognitive difference between genders and the fact that men are in an advantageous position compared to women in terms of access to the internet. In the study, it was determined that singles are more internet addicted than married ones and the difference is statistically significant. Eroğlu and Kutlu (2020) reported that single nurses have higher internet addiction levels than married nurses. This may be due to the fact that the responsibilities of married individuals working in the field of health are higher than that of singles.

When the internet addiction levels of the participants were evaluated according to their perceived income, it was determined that those who perceived their income as good were more internet addicts and the difference was statistically significant. Kırış and Güver (2019) reported in a study they conducted with 291 nursing students that there was a significant relationship between socioeconomic status and internet addiction, and those with good socioeconomic status had a high level of internet addiction. Contrary to the findings of this study, Bakken et al. (2009) stated that Internet addiction is more common in people with low income; Aslan and Yazıcı (2016) stated in their study that there is no significant difference between income and internet addiction. This difference in the literature is thought to be due to the fact that the studies were conducted in different cultures, sociodemographic variables and methodological differences. In addition, parallel to these findings, it can be thought that the increase in income and the easier access of individuals to the Internet affects the emergence of addiction.

It was determined that those with chronic diseases are more Internet addicts than those without chronic diseases and the difference is statistically significant. Kırış and Güver (2019) stated that nursing students with poor perception of health status have a high level of internet addiction, but there is no correlation between the status of being diagnosed with the disease and the level of internet addiction.

When the internet addiction levels of the participants were evaluated according to their professions, it was determined that nurses were more internet addicted than other professions and the difference was statistically significant. The fact that the internet is an effective tool in reaching information about nursing

practices and that they benefit from the internet during professional practices may cause addiction. They may also be using applications such as social media accessed via the internet to cope with occupational stress. It can be thought that this situation increases the risk of internet addiction.

When the relationship between physical activity and internet addiction level of the participants was evaluated, it was found that there was a high negative correlation between physical activity and internet addiction. In other words, it is seen that as the level of physical activity increases, internet addiction decreases. According to the literature, it is seen that there is a relationship between internet addiction and physical activity, and being physically active is a preventing factor in the evolution of internet use addiction (Lin et al., 2011, Li et al., 2015, Khan et al., 2017).

4. Conclusions

In terms of physical activity, women, singles, patients with chronic diseases, nurses and employees for 11 years or more are in the risk group. In terms of internet addiction, males, associate degree graduates, singles, people with good income perception, nurses and those working for 11 years or more are in the risk group. In addition, as the physical activity level of healthcare professionals decreases, the level of internet addiction increases. It is observed that a significant portion of the healthcare professionals participating in the study are internet addicts. In line with these results, it is recommended to provide education and counselling services on internet addiction to healthcare professionals who should be role models for the society, to provide the necessary opportunities for regular physical activity in the institutions where they work, and to encourage healthcare professionals for regular physical activity.

Limitations of the Study. This study has some limitations. One of the limitations is that the study was conducted with healthcare professionals working in hospitals in a certain region in Konya and the sample was small.

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