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Determination of the Relationship Between Internet Addiction and the Level of Loneliness Among Nurses

Hemşirelerde İnternet Bağımlılığı ve Yalnızlık Düzeyi Arasındaki İlişkisinin Belirlenmesi

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ABSTRACT

AIM: In this study our aim was to compare the socio-demographic factors associated with internet addiction and loneliness level among nurses and determine a correlation between the two.
METHODS: This descriptive and cross-sectional study was conducted with all volunteered nurses (N=361). Who had not had psychiatric diseases, and working in two hospitals, in Balıkesir Province Turkey between January 15 and December 15, 2015. A total of 203 nurses participated in this study, and all data were collected using the personal information form, Internet addiction scale and University of California, Los Angeles (UCLA) Loneliness Scale. Ethics Committee approval was received for the application of the research. In the analysis of the data, percentages, Mann-Whitney U, One Way ANOVA, Dunnett's test and Spearman correlation analysis were used.
RESULTS: The mean internet addiction and loneliness scores of the nurses were found to be lower relative to the lowest and highest mean scores that could be obtained from these scales. Internet addiction scores were found to be higher in males aged 35 years or below, those who used the internet at the service, spent more than 1 h online compared with females aged 36 years or above, those who did not use the internet at the service or spent less than 1 hour online, respectively. A weakly positive linear correlation was found between the loneliness score and problematic social relation and internet addiction of the nurses.
CONCLUSIONS: There was a weak positive relationship between loneliness and internet addiction scores in nursing group in the study. Investigation of the internet addiction with a larger sample is recommended.

Keywords: Internet addiction, loneliness, nurse

ÖZ

AMAÇ: Bu çalışmada, hemşirelerin sosyodemografik faktörlerine göre internet bağımlılığı ve yalnızlık düzeylerinin karşılaştırması ve internet bağımlılık düzeyi ile yalnızlık düzeyi arasındaki ilişkinin belirlenmesi amaçlanmıştır.
YÖNTEM: Tanımlayıcı ve kesitsel tipteki bu araştırmanın evrenini 15 Ocak-15 Aralık 2015 tarihleri arasında Balıkesir'de bulunan iki hastanede çalışan, çalışmaya katılmayı kabul eden ve herhangi bir psikiyatrik hastalık öyküsü olmayan hemşirelerin tamamı (361 kişi) oluşturmuştur. Araştırmaya 203 hemşire katılmıştır. Araştırma verileri, "Kişisel Bilgi Formu, İnternet Bağımlılığı Ölçeği ve UCLA Yalnızlık Ölçeği" kullanılarak toplanmıştır. Araştırmanın uygulanabilmesi için etik onam alınmıştır. Verilerin analizinde yüzdeler, Mann Whitney U, Tek yönlü ANOVA, Dunnett testi ve Spearman korelasyon analizi kullanılmıştır.
BULGULAR: Hemşirelerin internet bağımlılığı ve yalnızlık ölçeği puan ortalaması ölçekten alınabilecek en düşük ve yüksek puan ortalamasına göre düşük düzeyde saptanmıştır. Erkek hemşirelerin kadınlara göre, 35 yaş ve altı olanların diğerlerine göre, serviste internet kullananların kullanmayanlara göre, internette 1 saatten fazla zaman geçirenlerin internette 1 saatten daha az zaman geçirenlere göre internet bağımlılığı ölçeğinden aldığı puan daha yüksektir. Hemşirelerin yalnızlık puanı ile sosyal ilişkilerde olumsuzluk ve internet bağımlılığı arasında pozitif yönde doğrusal bir ilişki olduğu saptanmıştır.
SONUÇ: Çalışmada hemşirelerde yalnızlık ve internet bağımlılığı arasında pozitif yönde zayıf bir ilişki saptanmıştır. Daha geniş örneklem üzerinde çalışma yapılması önerilir.

Anahtar kelimeler: İnternet bağımlılığı, yalnızlık, hemşire

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INTRODUCTION

In this era of technology, the internet use has become an essential part of our daily lives (Arısoy, 2009). The internet provides unique opportunities for our daily lives and offers an interactive environment for social interaction and information seeking independently of time and space (Lin et al., 2013). It is described as a double-edged sword because the internet use can lead to inhabitance, addiction, and negative academic, mental, physical, and social effects while serving as a useful concept in terms of information transfer/update, system simplicity, and higher efficiency and effectiveness during the progress of mankind (Sulania et al., 2015). Although the intention of using internet is to increase communication and facilitate information sharing, but the faster-than-expected spread of the internet has led to internet addiction (Arısoy, 2009). Internet addiction is a concept that describes the uncontrolled and harmful use of the internet (Şahin and Korkmaz, 2011). Internet addiction has become an issue for some users due to its increasing popularity each year (Shinde and Patel, 2014). Losing control over the use of internet leads to an uncontrolled behavior, creating difficulties for users in their daily lives and relationships (Alhajjar, 2014; Khalil et al., 2016).

Social phobia, major depression, anxiety disorders, shyness, introversion, and personality disorders were found to be the factors related to internet addiction (Şenormancı, et al., 2010). An intense aboulia with decreased professional/school success, sleep disorder, and the perception that life is boring and meaningless without the internet, muscle and skeletal system problems due to the excessive use of the internet, and seizures triggered by certain kinds of games are indications of internet dependency (Nalwa and Anand, 2003). It has been stated that internet addiction causes problems in five different areas including academic life, familial, and social, and financial relationships, and finally work and physical health (Young, 1998). Individuals who are considered as internet addicts experience social isolation, loneliness (Durualp and Çiçekoğlu, 2013), reduction in social relations, and issues in their interpersonal relationships (Welsh, 1999). Although individuals can express their feelings, opinions, and thoughts freely and easily on the internet, they are pushed into loneliness as the most important result of this advanced technology (Arabzadeh et al., 2012). It is thought that the excess time spent on the internet destroys real-life relationships. These individuals were found to spend more time on artificial or temporary online relationships (Ditmen, 2003). At the same time, these individuals, who have social barriers in their real-life experiences, resort to the internet to reestablish and maintain their personal relationships and use internet instead of face-to-face communication (Durak Batıgün and Hasta, 2010). Nurses are among the groups that are under the risk of internet addiction and loneliness because they have to use internet technology.

Internet addiction in nursing and university students is related to loneliness (Sulania et al., 2015). Nevertheless, whether such a relationship exists in nurses still needs to be explored. Nursing institutions consider technology as the fundamental building block of nursing practices and emphasize the ability to use technology effectively and the knowledge, skills, and attitudes as required qualifications in nursing. The UK National Health Service Information Authority proposes to seek the European Computer Use License as a basic competency for all nurses working in their own field (Köse et al., 2012). It is well known that the internet is a fast and effective tool to access current medical information (Ajuwon, 2003) and evidence to support nursing practices (Morris-Doccker et al., 2004). The internet is also an important global communication tool for health professionals to provide easy consultation through chat groups and access into vocational training programs, journals, and other information (Gilmour et al, 2008). However, no recent studies have explored internet addiction and loneliness caused by an excessive internet use among nurses. If long working hours are considered as a risk factor for loneliness in nurses, internet addiction can also be considered as a possible risk factor. The correlation between internet addiction and loneliness among nurses is an important issue that needs to be addressed because it affects the well-being of nurses and leads to medical errors related to deterioration in their job performance. It is important to determine whether a correlation exists between internet addiction and levels of loneliness in nurses in terms of the health of nurses and patient safety.

METHODS

Study design and purpose: This is a descriptive, cross-sectional and relationship-seeking study. The aims of the study were to determine (1) internet addiction levels, (2) loneliness levels, (3) Comparison of internet addiction and UCLA loneliness scale scores of the nurses according to their sociodemographic features, (4) the correlation between internet addiction and loneliness levels in nurses.

Sample and participants: This study was conducted with all nurses (N=361) working in two hospitals, in Balıkesir, Turkey, between January 15 and December 15, 2015, who had no histories of psychiatric diseases and agreed to participate in this study. A total of 203 nurses participated in this study. Nurses on leave, those assigned to work in different institutions or did not want to participate in this study were excluded.

Instruments: The personal information form, the Internet Addiction Scale (IAS), and the UCLA Loneliness Scale were used as data collection tools.

Personal information form: The personal information form consisted of 14 questions including sociodemographic features (e.g. age, gender, and educational status…) and the statements (e.g. duration of staying online per day, internet use in the service…) of the nurses related to their internet use. This form was formulated based on literature information.

Internet Addiction Scale: It is a Likert-type 5-point scale designed by Hahn and Jerusalem and adapted to Turkish by Şahin and Korkmaz (2011). It consists of 19 items grouped under 3 factors. The five responses were as follows: 1-Never, 2-Rarely, 3-Sometimes, 4-Usually, and 5-Always. The lowest and the highest scores obtained from the test are 19 and 95 points, respectively. The level of dependence increased as the scale scores increased. The scale have three subscales as follows: "control loss," "desire to stay online more," and "problems in social relations." Internal consistency coefficients of the factors vary between 0.88 and 0.92 and internal consistency coefficient is calculated as 0.86 for the generalized scale (Şahin and Korkmaz, 2011). The internal consistency coefficient of the scale was found to be .95 in this study.

UCLA Loneliness Scale(IAS): It is a Likert-type scale that consists of 20 questions and measured the loneliness feeling in individuals. It was developed by Russel et al. (1980) and adapted into Turkish by Demir (1989). It comprises 10 items (1, 4, 5, 6, 9, 10, 15, 16, 19, and 20) measuring positive expressions reflecting the satisfaction obtained from social relationships and 10 items (2, 3, 7, 8, 11, 12, 13, 14, 17, and 18) measuring negative expressions as a result of dissatisfaction retrieved from social relationships. Individuals evaluate each item according to how well and how frequently each sentence express their feelings appropriately. These items are graded between 1 and 4 points according to the responses given as "Never," "Rarely," "Sometimes," and "Usually." The lowest and the highest scores obtained from the test were 20 and 80, respectively. The increase in scores obtained from the scale indicated that the individual experienced more intense loneliness. Demir (1989) found the Cronbach alpha coefficient of the UCLA Loneliness Scale as 0.96. The internal consistency coefficient of the scale was found to be .77 in this study.

Data analyses: The data obtained from the study were analyzed with a statistical package program called Statistical Package for Social Sciences for Windows (SPSS 18.0; SPSS, IL, USA). Accordingly, percentages, Mann-Whitney U, One way ANOVA, Dunnhett's test and Spearman correlation analyses were used for analyzing the data. p value <0.05 was considered as the level of significance.

Ethical considerations

The institutional approval of the study was taken from the Non-Interventional Drug-Free Clinical Trials Ethics Committee of Public Hospitals of Balıkesir, Turkey. The ethics committee approval was obtained from the Ethics Committee of Balikesir University Clinical Research. The approval of Şahin and Korkmaz was obtained for the use of the IAS. The participants were informed about the aim and content of the study, and their verbal and written consents were taken before the data collection process.

Limitations of the study

This study was conducted with a small number of participants in Balıkesir province, Turkey. Therefore, the generalizability of the study was limited. Another limitation of the study was that only 56% of the nurses in the referred hospitals participated in the study.

RESULTS

Table 1: Sociodemographic Features of The Nurses (N:203).

Sociodemographic features	N	%
Gender		
Female	178	87.7
Male	25	12.3
Age (year)		
35 and below	121	59.6
36 and above	82	40.4
Education status		
Health vocational high school	39	19.2
Associate degree	60	29.6
Bachelor's degree or higher	104	51.2
Task in the service		
Nurse practitioner	192	94.6
Nurse manager	11	5.4
Total	203	100

Table 1 shows the sociodemographic features of the nurses included in this study; 87.7% of the nurses participating in the study were female, and 59.6% were in the age group of 35 and below. It was found that 51.2% of the nurses had a bachelor's degree or higher, and 94.6% of them were working as a staff nurse.

Table 2: Internet Addiction and UCLA Loneliness Scale Scores of the Nurses (N:203).

Variables (items in the scale)	Minimum score	Maximum score	Mean score	SD
Control loss (1-7)	7.00	26.00	10.64	4.63
Desire to stay online more (8-10)	4.00	18.00	6.67	3.26
Problems in social relationships (11-19)	8.00	29.00	10.90	5.11
Internet addiction (1-19)	19.00	67.00	28.22	12.03
UCLA loneliness (1-20)	22.00	61.00	37.54	8.81

Table 2 presents mean scores of nurses taken from IAS and UCLA loneliness scales. Nurses' mean IAS and subscale scores were found to be low (as the lowest and highest values that can be obtained from the scale). The nurses obtained lower mean UCLA loneliness scale scores.

Table 3: Comparison of IAS and UCLA Loneliness Scale Scores of the Nurses According to Their Sociodemographics (N:203).

	Control loss	Desire to stay online more	Problems in social relationships	Internet addiction	UCLA loneliness
Features	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**	**Mean (SD)**
Duration of staying online per day (n)					
0-60 min (63)[a]	8.58 (2.97)	5.33 (2.19)	9.30 (3.31)	23.22 (7.70)	37.74 (8.56)
61-180min (81)[b]	10.82 (4.14)	7.07 (3.04)	11.40 (5.13)	29.30 (11.29)	38.65 (9.21)
181 min or more (59)[c]	12.59 (5.74)	7.55 (4.03)	11.93 (6.22)	32.08 (14.88)	35.79 (8.39)
	F=12.851	F=8.683	F=4.852	F=9.545	F=1.833
	p=0.000	p=0.000	p=0.009	p=0.000	p=0.163
Significance	a<b,c	a<b,c	a<b,c	a<b,c	
Gender					
Female (178)	98.61	98.44	98.96	98.78	102.19
Male (25)	126.16	127.38	123.64	127.38	100.62
	z=-2.134	z=-2.376	t=-2.147	z=-2.229	z=-0.128
Significance	p=0.033	p=0.017	p=0.032	p=0.026	p=0.90
Age					
35 years and below (121)	111.95	7.05 (3.38)	11.35 (5.56)	29.77 (12.87)	36.61 (8.45)
36 years and above (82)	87.32	6.10 (3.02)	10.24 (4.32)	25.93 (10.34)	38.91 (9.20)
	z=-3.005	z=-2.511	z=-2.093	z=-2.881	z=-1.568
Significance	p=0.003	p=0.012	p=0.036	p=0.004	p=0.117
Internet use in the service (n)					
User (88)	110.84	107.42	101.88	108.20	99.23
Nonuser (115)	94.57	97.11	101.22	96.53	103.18
	z=-2.006	z=-1.276	z=0.088	z=-1.424	z=-0.475
Significance	p=0.045	p=0.202	p=0.930	p=0.155	p=0.635

Table 3 shows that the subscales of internet addiction (p<0.001), control loss (p<0.001), desire of staying online more (p<0.001) and problems in social relationships (p<0.001) were higher in male nurses than in female ones. Also, the nurses aged 35 years and below were more likely to have internet addiction, control loss, desire to stay online more and problems in social relationships compared with the nurses aged 36 years and above (p<0.001). The control loss scores of the nurses who used the internet in the service were higher than the scores of those who did not with a statistically significant intergroup difference was (p<0.05). However, no statistically significant difference was found in their UCLA loneliness scale scores according to their age, sex, internet use in the service, and the duration of the internet use.

These nurses' internet addiction scores were found to increase as the duration of their internet use increased. The results of analysis conducted to determine whether these differences were significant or not showed that the difference between the internet addiction total score (F=9.545; p<0.000) and the subscales such as control loss (F=12.551, p<0.000), desire of staying online more (F=8.683, p<0.000), and problems in social relationships (F=4.852, p=0.009) was significant. According to the results of the Dunnett's test performed to determine the groups with differences, the scores of the nurses who used the internet for 0-1 h per week were significantly lower than the scores of those who used the internet for more than 1 hour.

Table 4: Correlation Results of the UCLA Loneliness Levels and Internet Addiction (with its subscales) of the Nurses (N:203).

Variables		Control loss	Desire of staying online more	Problems in social relationships	Internet addiction	UCLA loneliness
Control loss	r	1	.857	.7444	.954	.101
	P		.000	.000	.000	.152
Desire of staying online more	r		1	.724	.936	.097
	P			.000	.000	.168
Problems in social relationships	r			1	.844	.259
	P				.000	.001
Internet addiction (Total)	r				1	.140
	P					.046
UCLA loneliness	r					1
	P					

The relationship between the internet addiction and the loneliness score of nurses is shown in Table 4. A positive weak linear correlation was found between the internet addiction and the UCLA loneliness scores ($r = .140$; $p<0.05$).

DISCUSSION

Nurses use the internet for learning and providing information, but they are also at risk of problematic internet use. Problematic internet use among nurses may cause delays in patient care besides being a risk factor for their own health (Lin et al., 2013; Taş et al., 2017). Therefore, the correlation between internet addiction status and loneliness levels among nurses was explored in this study.

The increased ease of internet access through mobile devices and the tendency to use interactive internet applications may increase the susceptibility to internet addiction in the new generation of nurses (Lin et al., 2013). In this study, IAS and subscale scores of the nurses were found to be lower than the lowest and highest values that could be obtained from the scale. In other words, these nurses were not addicted to internet. A study conducted by Lin et al. (2013) found possible internet addiction in 10% of the nurses participating in their study. Orak et al. (2016) reported that 88.2% of the nurses used the internet, 79.6% of them used social networking sites, and 47.3% of them surfed on the internet mostly to access social networking sites. In this study, the loneliness scores of the nurses were low than the lowest and highest values that could be obtained from the scale. It is believed that nurses stop feeling lonely through frequent communication and interaction with patients, patient's relatives, and other health team members.

Many studies have investigated gender differences in internet addiction (Bakken et al., 2009, Say and Batıgün Durak, 2016). These studies reported that males were more addicted to the internet compared to females (Şahin, 2011; Tonioni et al., 2012; Wu et al., 2015). This study found that the "Internet addiction" total scores, and the "control loss," "desire of staying online more," and "problems in social relationships" subscale scores were higher in male nurses than in their female colleagues. This might be because males are directed to technological devices at earlier ages, tend to use the computer more, and go to the internet cafes more often.

In the literature, internet addiction is considered as a risk factor for young people (Mishra et al., 2015). Young people are becoming more addicted to the internet to communicate, learn, and follow innovations and also, they even find face-to-face communication unnecessary and become more internalized (Flora, 2014). The present study found that the internet addiction, control loss, and desire to stay online more were at higher levels in the nurses aged 35 years and below compared to the nurses aged 36 years and above. A study by Tonioni et al. (2012) also found that the people who became addicted to the Internet at younger ages showed a higher level of internet addiction. A study by Şahin (2011) found that the internet addiction level of the individuals aged 19 years and below was found to be higher than that of individuals aged 20 years and above. Bakken et. al. (2009) found that the majority of internet addicts were young people.

This study found that the control loss scores of the nurses who used the internet in the service were higher compared to those who did not use the internet in the service. Demirer et al. (2013) found that internet addiction levels were higher in teacher candidates who had the internet access. In addition, people using the internet for 0–1 h per

day got lower scores from the IAS compared with people using the internet for more than 1 h per day. This result shows that the internet addiction risk might occur due to an increase in the length of time spent online. Similarly, a study conducted by Marahatta et al. (2015) with health care students found that people who spent more time online tended to show more addiction behavior compared with those who spent less time online. Bakken et al. (2009) found that the internet addicts spent more time on the internet. The risk of internet addiction in nurses can be reduced by making improvements and rearrangements on their computer-based works.

Lonely people who feel socially hindered and anxious have problems with self-expression. The internet provides an ideal social environment for these people (Morahan-Martin and Schumacher, 2003). In our study, positive correlations were found between the loneliness score and the internet addiction and the "problems in social relationships" subscale of IAS. In their study, Morahan-Martin and Schumacher (2003) found that lonely people use the internet and e-mail more often compared with others for emotional support. Demirer et al. also found a positive correlation between the internet addiction and loneliness levels of teachers. Yaylacı et al. (2016) found a significant positive correlation between students' problematic internet use and loneliness levels. A study conducted on the internet-addicted patients showed that patients used the internet to avoid interpersonal communications in real life and used only a communicative interaction with virtual subjects (Tonioni et al., 2012). Hence, providing training on interpersonal communication and social skills to these individuals may prevent both internet addiction risk and loneliness.

CONCLUSIONS

The mean internet addiction and the loneliness mean scores of the nurses were found to be lower than the lowest and highest values that could be obtained from the scale. The internet addiction scores were found to be higher in male nurses, those aged 35 years or below, those who used the internet at the service or spent more than 1 hour online compared with female nurses, those aged 36 years or above, those who did not use the internet at the service, and those who spent less than 1 hour online.. A weakly positive linear correlation was found between the level of loneliness scores and the social relation problems and the internet addiction scores of the nurses. Investigation of the internet addiction with a larger sample is recommended.

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