

## Relationship between the Levels of Loneliness and Internet Addiction

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**ABSTRACT** The purpose of this study is to reveal the relationship between the levels of loneliness and internet addiction in teacher candidates. The research group of this study is formed with 347 teacher candidates who were attending Pedagogical Formation Program at Ankara University and Mimar Sinan Fine Arts University. In the study, two different data collection tools were used. One of them was "UCLA Loneliness Scale" and the other one is "Internet Addiction Scale". The opinions of the teacher candidates about loneliness and internet addiction did not differ according to the variables of gender, marital status, employment, accessibility to the internet at home and online time spent daily except for studying. However, there is a positive relationship in medium level between the loneliness and internet addiction levels of teacher candidates.

### INTRODUCTION

Loneliness, which is considered resulting from modern life and urbanization (Gun 2006), is described as a different situation other than being alone (Peplau and Perlman 1982; cited in Wright et al. 2006). Loneliness is an unpleasant depressing emotion resulted because of qualitative and quantitative deficiencies in the individual's social network (Peplau and Perlman 1982; cited in Kahraman et al. 2011). Moreover, loneliness is an indication that there are significant deficiencies in individual's social relations; in other words, it is a clue that things are not going well. In this context, the importance of the style of interpersonal relationships comes into play (Durak-Batigun 2006). Many life pleasures and happiness depend on the relationships you have with other people and it changes according to how well a communication is established (Matthews 1993; cited in Durak-Batigun 2008). At the same time, loneliness is an emotion felt when the person perceives that their social network is smaller than what they desire or when they are less satisfied (Peplau and Perlman 1979; cited in Bulus 1996). Loneliness emerges when interpersonal relations cannot meet social needs and cannot achieve to satisfy personal needs and when the number of social awards decrease. Therefore, loneliness is not an emotion that simply arises because of being alone physically (Russell et al. 2012). The individual can feel lonely

when he/she is with others (Rubenstein et al. 1979; cited in Bulus 1996). According to Reichmann, loneliness is unavoidable even if the person opens himself to other people (Altan 2008). In this case, it is very difficult to imagine the loneliness of people who always put instrumental distances between themselves and their emotions. However, to be able to see how this loneliness is experienced, internet environment must be examined. The most popular one of the tools that is used to try to recover the feeling of loneliness is internet (Altan 2008).

Brelim (1985; cited in Bulus 1997) attributes loneliness to the deficiencies in the existing relationships, expected or desired changes in relationships and personal characteristics. That the use of internet and technology has reached a level that can affect people's social relations has revealed negative sides of internet and this problem was described as "internet addiction" for the first time by Goldberg (1996). Although internet addiction is measured by different scales, the signs of internet addiction can be given as follows (Ogel 2012):

- ♦ Be engaged in internet,
- ♦ The need for more online time,
- ♦ Repeated attempts to reduce the use of internet,
- ♦ Failure to quit while trying to reduce the use of internet,
- ♦ The issues of time management,
- ♦ Concerns about social environment (family, school, work, friends),

- ♦ Lying about the time spent online,
- ♦ The change of mood through the use of internet,

McKenna and the others (2002) state that lonely individuals can express themselves better when they are online compared to the period they are offline (Caplan 2007). Many studies verify these findings. In a study conducted by Morahan-Martin and Schumacher (2003), they discovered that UCLA loneliness scale scores of the university students who have pathological use of internet are higher and they use the internet to meet new people, look for emotional support and play interactive games; besides, they are socially under more pressure. Similarly, a relationship was found between the internet addiction and the level of loneliness of university students in the studies conducted over high school and university students in Turkey (Ceyhan and Ceyhan 2008; Durak-Batigun and Hasta 2010; cited in Siyez Uz-Bas 2013). It is seen that in the studies conducted, internet addiction can be described as under the names of pathological internet use (Morahan-Martin and Schumacher 2000) and problematic internet use (Davis 2001; Davis et al. 2002; Caplan 2002; Ozcan and Buzlu 2005). While internet addiction is described as generally a new and unidentified clinical disorder that cause the user to lose control over online time and affect user's life causing professional and social problems (Young 1996), nowadays internet addiction is described as an affective disorder or a behavioral problem (Shek et al. 2013; Yaoa and Zhong 2014) and is treated in clinics.

When the literature was examined, it was seen that internet addiction can cause loneliness or the loneliness can cause internet addiction. Whang et al. (2003), in their studies, which aimed to determine the psychological profile of those who overuse the internet, found out that internet addiction is related to psychological states such as loneliness, depressive mood and passion; besides, according to the findings obtained from psychological well-being scale, normal users are psychologically more healthy compared to internet addicts. When all these research findings were examined collectively, those who are healthier in social, psychological and physiological aspects are less prone to the risk of addiction and they prefer to seek happiness and achievement in their normal lives (Zerayak 2008).

In a study Chou and Hsiao' nun (2000) conducted, it was found out that an increase in internet use reduced the time allocated for real so-

cial relations and caused a social isolation; besides, the loneliness of these kinds of people increased. However Amichair et al. (2003) found that internet addiction does not increase the level of loneliness; in fact, internet addiction emerges because of loneliness.

In literature, there are studies that proved some factors such as self-esteem and loneliness (Kraut et al. 1998; Amichair et al. 2003; Odaci and Kalkan 2010; Nalwa and Anand 2003; Engelberg and Sjöberg 2004; Ceyhan et al. 2007; Kurtaran 2008; Bulut-Serin 2011; Esen and Siyez 2011), depression (Ozdemir et al. 2014), demographic factors and personality (Servidio 2014; Usta et al. 2014), social anxiety (Caplan 2005; Morahan-Martin and Schumacher 2000, 2003; Siyez Uz-Bas 2013; Cuhadar 2012) and shyness (Pilkonis 1977 a b; cited in Chak and Leung 2004; Caplan 2002; Goulet 2002; Siyez Uz-Bas 2013) affect internet addiction.

In literature, there are more researches about internet and loneliness. Especially, relationships between factors are important variables in the research about teacher and teacher candidates. The internet is the most important source in knowledge and learner tool. Internet has more advantages but also more disadvantages if not used correctly. This research has planned because of the idea that teacher candidates' internet addiction and also loneliness level was be affected your jobs.

In this study, it is aimed to present the relationship between the loneliness and internet addiction of teacher candidates.

The following questions were developed to find answers in the study:

1. What are the opinions of teacher candidates on internet addiction?
2. Do the opinions of teacher candidates on loneliness and internet addiction differ in terms of gender, marital status, age, employment, internet accessibility at home and time spent online daily except for studying variables?
3. What is the relationship between the loneliness and internet addiction of teacher candidates?

## METHOD

### The Research Method

The study is in Relational Survey Model. In this research, researchers tried to present what

the opinions of teacher candidates on loneliness and internet addiction are.

**Research Group**

The research group was formed with 347 teacher candidates who had been attending Pedagogical Formation Program at Ankara University and Mimar Sinan Fine Arts University. 77 % of the teacher candidates who participated in study were females and 23 % were males. 83 % of teacher candidates were between 20-30 age range and 17 % of them were 31 years and over. 67 % of the participants were single (n=233) and 33 % were married (n=114). 55 % of the teacher candidates were employed but 45 % of them did not work. 90% of the candidates had internet connection. When this research was examined their accessibility, it was seen that 86 % of the candidates had internet connection at home, 40 % of them had internet connection on their mobiles and 23 % of them had internet connection at work. When this research was examined their purpose of using internet, it was seen that 94 % of the participants used internet for the purpose of research, 27 % of them for playing games and 47 % of them used it for chat. When it is examined in terms of the time spent online daily except for studying, it was seen that 81 % of them spent 1-3 hours, 11 % spent 3, 5 hours and 3 % spent 5-7 hours online.

**Data Collection Tools**

UCLA Loneliness Scale and Internet Addiction Scale were used in the study.

**UCLA Loneliness Scale**

In the first version of UCLA Loneliness Scale, which was developed to determine the emotion of loneliness, all twenty items were negative statements. Later, in the second version developed by Peplau and Cutrona (1980), there were ten positive and ten negative statements. While negative statements reflect dissatisfaction in social relations, positive statements reflect satisfaction in social relations. While selecting the items, subjective loneliness assessments index and their correlation values were used as the criteria. The items that finalized the scale had the highest correlation (all of them are over .40). Negative statements that existed in the original form

and newly added positive statements were blended through random method and included in the scale (Russell et al. 1980). When the score is low, it indicates a low emotion of loneliness but when the score increases, it shows that the intensity of the emotion of loneliness increases. In the study conducted with the Turkish version of the scale, Demir (1989) obtained a high internal coefficient consistence like .96 as in the study conducted with original version. He applied the scale to the normal group five weeks later in order to check test retest reliability and he found a very high correlation like .94 between the scores obtained from two applications. Similarly, as it was in the validity studies, reliability studies done with Turkish and English versions prove that the scale has sufficient reliability coefficients and it is an effective measurement tool in determining the levels of loneliness.

**Internet Addiction Scale**

Internet addiction scale, which has 26 items, was used in this study. It was an extension of computer addiction scale, which was developed by university students by Cakir et al. (2011). The scale is in 5-Point Likert type. The internal reliability coefficient consistence of the scale which explains 38.04 % of the total variance, was found as .95. Load factor values of the scale are between .424 and .788.

**RESULTS**

Descriptive statistics were examined on the scores that teacher candidates got from loneliness and internet addiction scales for the first research question and results were given in Table 1.

**Table 1: Descriptive analysis results for loneliness and internet addiction**

Scale	N	The lowest	The highest	X	ss
Loneliness	260	18	55	30.13	6.89
Internet addiction	257	25	65	37.63	8.78

According to the Table, the lowest score obtained from loneliness scale is 18 and the highest score is 55. Besides, the score range was obtained as 37. It can be seen that the average score is 30.13.

While the lowest score obtained from internet addiction scale is 25, the highest score is 65

and the score range was found as 40. The average score that the teacher candidates got from internet addiction scale was found as 37.63.

For the second purpose of the study, whether average scores that teacher candidates got from loneliness and internet addiction scales show any significant difference according to the variables like gender, marital status, employment, accessibility to the internet at home, and the time spent online except for studying was examined.

In Table 2, t-test results for independent groups were given about the comparison of the opinions of teacher candidates according to gender, marital status, age and working status.

As it is seen in Table 2, the participants' opinions on loneliness and internet addiction differ according to the variable gender. It is seen that male teacher candidates ( $X=34.27$ ) are more lonely compared to female teacher candidates ( $X=31.88$ ). Similarly, it is seen that the participants' opinions on the levels of internet addiction differ in the same way. Male teacher candidates ( $X=46.03$ ) are more addicted to internet than female teacher candidates ( $X=41.50$ ).

The participants' opinions on loneliness differ according to marital status; however, their opinions on internet addiction do not differ according to their marital status. It is seen that married teacher candidates ( $X=43.70$ ) are more internet addicted compared to single teacher candidates ( $X=40.16$ ).

The participants' opinions on loneliness differ according to age variable; however, their opinions on internet addiction do not differ according to age variable. Teacher candidates who are between 20-30 years old ( $X=43.35$ ) are more internet addicted compared to candidates who are over 31 ( $X=38.62$ ).

The participants' opinions on internet addiction do not differ according to their working status.

The participants' opinions on loneliness differ according to whether there is internet connection at home or not; however, their opinions on internet addiction do not differ according to whether there is internet connection at home. It is seen that the participants who do not have internet connection at home ( $X=36.93$ ) are more lonely than the participants who have internet connection at home ( $X=31.84$ ).

Kruskal Wallis test results about the comparison of the levels of loneliness and internet addiction according to the time spent online daily except for studying were given in Table 3. As it is seen in Table 3, according to the results of the analysis, the levels of internet addiction of the teacher candidates who participated in the study differ significantly according to the time spent online except for studying [ $\chi^2(3) = 19.211$ ,  $p < .05$ ]. When mean ranks are considered, it is seen that those who use the internet more than 7 hours have the highest average and those who

**Table 2: The comparison of the opinions of the teacher candidates on loneliness and internet addiction according to gender, marital status, age and working status**

Variables		<i>n</i>	<i>X</i>	<i>ss</i>	<i>sd</i>	<i>t</i>	<i>p</i>
Loneliness	Female	267	31.88	8.55	345	-2.19	.029
	Male	80	34.27	8.65			
Internet Addiction	Female	267	41.50	12.90	345	-2.68	.008
	Male	80	46.03	14.29			
Loneliness	Married	233	32.83	9.02	338	1.51	.130
	Single	107	31.31	7.46			
Internet Addiction	Married	233	43.70	6.66	338	2.26	.024
	Single	107	40.16	7.03			
Loneliness	20-30 years old	288	32.43	8.55	345	.011	.99
	31-50 years old	59	32.42	9.03			
Internet Addiction	20-30 years old	288	43.35	13.65	345	2.49	.013
	31-50 years old	59	38.62	11.09			
Loneliness	Working	189	32.06	7.98	343	-.722	.471
	Not working	156	32.73	9.17			
Internet Addiction	Working	189	42.77	13.75	343	.351	.726
	Not working	156	42.26	12.94			
Loneliness	Have internet connection at home	311	31.84	8.10	339	-3.12	.002
	No internet connection at home	30	36.93	11.02			
Internet Addiction	Have internet connection at home	311	42.30	12.91	339	-1.03	.303
	No internet connection at home	30	45.00	18.17			

**Table 3: Kruskal Wallis test results about loneliness and internet addiction levels of teacher candidates according to the time spent online daily except for studying**

		<i>N</i>	<i>Mean rank</i>	<i>sd</i>	$\chi^2$	<i>p</i>
<i>Loneliness</i>	1-3 hours	7	180.93	3	2.536	.469
	3-5 hours	281	164.85			
	5-7 hours	38	186.17			
	More than 7 hours	10	195.30			
<i>Internet Addiction</i>	1-3 hours	7	91.43	3	19.211	.000
	3-5 hours	281	162.48			
	5-7 hours	38	203.11			
	More than 7 hours	10	260.05			

use internet 3-5 hours have the lowest average. This finding can be interpreted as if online hours except for studying increase, there will be more loneliness and internet addiction.

The relationship between the levels of internet addiction and loneliness of the participants was examined by calculating Pearson Product-Moment Correlation Coefficient and it is observed that there is a positive relationship in a medium level between loneliness and internet addiction ( $r = .348$ ;  $p < .01$ ). When the determination coefficient ( $r^2 = .348$ ) was taken into consideration, it can be said that 12 % of total variance resulted from loneliness (Table 4).

**Table 4: The relationship between the opinions of teacher candidates on loneliness and internet addiction**

		<i>Loneliness</i>	<i>Internet addiction</i>
<i>Loneliness</i>	<i>p</i>	1	.348**
	<i>r</i>		.000
	<i>n</i>	347	347
<i>Internet Addiction</i>	<i>p</i>	.348*	1
	<i>r</i>	.000	
	<i>n</i>	347	374

**DISCUSSION**

When the levels of loneliness of 347 teacher candidates were examined according to UCLA loneliness scale, it can be seen that they got 18 points the lowest and 55 the highest and their mean score is 30.13. It is seen that internet addiction scores teacher candidates in the study group got from the internet addiction scale are 25 points the lowest and 65 points the highest and their mean score is 37.63. It can be said that the study group has loneliness in a medium level and has both loneliness and internet addiction in a medium level.

The loneliness levels of teacher candidates do not show a significant difference according to variables like marital status, age, working status, online time daily except for studying. However, loneliness levels of teacher candidates differ according to variables like gender and having internet connection at home. The loneliness levels of male teacher candidates are higher than loneliness levels of female teacher candidates. This conclusion can be explained because women are more socially active compared to men.

While the internet addiction levels of teacher candidates differ significantly according to variables like gender, marital status, age and online time except for studying, the internet addiction levels of teacher candidates do not show a significant difference according to working status variable. The internet addiction levels of male candidates are higher than the internet addiction levels of female candidates. There are studies that support this conclusion (Odaci and Kalkan 2010; Cuhadar 2012). There are also studies that have contradictory results or do not have any differences. In a study, Odaci and Berber Celik (2011) conducted on university students; it was found that problematic internet use is higher in females compared to males. When the studies conducted not only in Turkey but also abroad were examined, it is seen that the results are inconsistent in terms of gender and internet addiction (Siyez Uz-Bas 2013). Ceyhan (2010) and Dogan et al. (2008) found out that problematic internet use do not show difference according to gender.

Internet addicted individuals use more behavioral inhibitions in interpersonal relations compared to those who are not and it was found that their loneliness levels are higher (Batigun and Hasta 2010).

It was seen that there is a positive relationship in a medium level between internet addic-

tion and loneliness levels of teacher candidates. A similar result can be seen in a study conducted by Ayas and Horzum (2013). The study revealed the relationship between depression, self-esteem, loneliness and internet addiction. In this study, it was seen that there is positive relationship in a low-level between the loneliness and internet addiction. Similar results can be found in the studies conducted abroad (Caplan 2002; Morahan-Martin and Schumacher 2000). According to Yaoa and Zhong (2014), there is a positive relationship in a medium-level and internet addiction emerges because of loneliness.

The effects of depression and loneliness on internet addiction and the mediator role of low self-control on the relationship between depression, loneliness and internet addiction. Loneliness was significantly associated with internet addiction, whereas depression was not (Ozdemir et al. 2014).

### CONCLUSION

At the end of this study, researchers found that the opinions of the teacher candidates about loneliness and internet addiction did not differ according to the variables of gender, marital status, employment, accessibility to the internet at home and online time spent daily except for studying. However, there is a positive relationship in a medium level between the loneliness and internet addiction levels of teacher candidates.

### RECOMMENDATIONS

In the future studies, more participants can be included in that type of studies with the same subjects. Moreover, the same subject research can be repeated with the participants with more levels of loneliness internet addiction.

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