Levels of Internet Addiction and Loneliness among Students
(Case Study: The Students of Universities of Center of Golestan Province)

Sina Peighambari¹, Gholamreza Khoshfar²* Maryam Peighambari³, Esmail Shirdel-Havar⁴

¹Department of Psychology, Sari Branch, Islamic Azad University, Sari, Iran
²Associate Professor, Department of Social sciences, Golestan University, Golestan, Iran
³Department of Psychology, Gorgan Center, Payam Noor University, Gorgan, Iran
⁴Counseling Center of Expertise on Sexual Disorders of Pooyan, Gorgan, Iran

Abstract
Objective: The Internet, as a social tool is a small part of research on virtual communication and loneliness. Therefore, the aim of this study was to identify the difference between levels of Internet addiction and loneliness.
Method: This cross-sectional study was conducted using descriptive survey method. The population of this study was the students of the universities of Golestan, who number was 16532. To determine the size of sample, 385 people were determined by volume estimation method according to Krejces & Morgan table. A proportional stratified random sampling method was used to select samples.
Results: Findings of the research indicate that there is a significant negative relationship between loneliness and levels of internet addiction, as with increasing levels of Internet addiction, the feeling of loneliness is reduced.
Conclusion: Comparing the main result of this study with other research results indicates that the results are consistent with one another, but overall, the results indicate an apparently unexpected trend, so that public opinion is expected to have a different outcome. The point is that extreme and addictive use of the Internet often increases social isolation and loneliness, while the result of this research and other similar studies is invers of these expectations.
Keywords: Loneliness, Addiction, Internet, Students, Gorgan Universities.

* Corresponding Author Email: khoshfar@gmail.com
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Introduction

The essence of man is intrinsically social, and those who are unable to establish and maintain satisfactory relationships with others and thus have a problem in meeting the “need for belonging”, they are likely to experience a feeling of deprivation that shows themselves with a sense of loneliness. Loneliness may be persistent or temporary. Loneliness is often a situational and normal experience, the constant feeling of loneliness is disturbing (Asher & Paquette, 2003). Loneliness can be seen as a perceived weakness in interpersonal relationships that leads to dissatisfaction with social relationships (Dunn et al., 2007). Loneliness is a kind of negative emotion that results from communication conflicts or lack of interpersonal relationships, and as a result, people feel intimacy with others (Saklofske et al., 1986). Asher and Paquette describes loneliness as individual cognitive awareness of the weakness of their personal and social relationships, which leads to a sense of sadness, absurdity, or regret. Loneliness has also defined the feeling of discomfort for isolation. In general, there are several definitions of loneliness, but in all of them there are three common assumptions:

1) Loneliness is the result of a lack of perceptions of interpersonal relationships.
2) Loneliness is a mental state rather than being an objective condition.
3) Loneliness is an unpleasant and sad experience (Salimi, 2008).

Feeling lonely is different in terms of quality with loneliness or optional social withdrawal without conflicts (Stoeckli, 2010). Hughes and et al, it is believed that loneliness is not only synonymous with physical being alone, but also related to the individual’s sense of lack of interpersonal intimacy (Hughes et al., 2004). And the duration of a person’s loneliness is not a determining factor in the sense of loneliness in him. Instead, the threat of separation and attachment quality that is experienced in insecure individuals’ plays an important role in loneliness (Ahadi, 2009). In other words, in loneliness, a person’s mental feeling of quality of intimate emotional attachment with an attachment face has a much greater effect than the presence of others. Therefore, loneliness is commonplace in sudden and quick changes, and is not interpreted as incompatibility. But when it is chronically hindered by the success of homework and the normal functioning of life, it can lead to harmful emotional, social and even physical consequences (Black, 2009). In this case, loneliness is a threat to mental health and psychosocial functions of the individual (Heinrich & Gullone, 2006).

Loneliness is a fundamental fact of life, and so all people experience it in varying degrees in some periods of their lives. Loneliness is not limited to age, sexual, racial, economic or collective boundaries (Neto & Barros, 2000). As a result, people who experience loneliness are failing to enter into the path of dialogue due to negative expectations and negative predicaments, and because of the lack of necessary communication skills, they are failing to establish and maintain close friendships. These people are sensitive to social relationships, anxious and self-aware and reluctant to reject. In establishing friendly relationships, doing social activities, participating in groups, enjoying parties and controlling the environment are faced with a problem. They also consider themselves to be negative, inferior and despicable, dislike and socially unworthy, and have lower self-esteem (Salimi et al., 2009). Researches that have been implemented using the scale SELSA (Social and Emotional Loneliness Scale for Adults) on Internet users has shown a high level of Internet use with a low level of loneliness, and this is probably because Internet usage satisfies this social need. However, a high level of Internet usage is associated with an increase in emotional loneliness, probably because people who spend too much time on online buddies will not have time nor resources
for offline communication (face-to-face). On the other hand, researchers found a positive and significant correlation between loneliness and the use of the Internet among university students, which was higher in men than in women, and the higher the use of the Internet, the higher the loneliness was (Hughes et al., 2004).

Hughes maintains that this relationship has been reported among students that the excessive use of the Internet is slightly exaggerated compared to those with a moderate level of use. On the other hand, the useful hours of using the Internet did not affect loneliness over time, but psychological dependence on the Internet. As the same way, it is obvious that the Internet itself is not harmful, but rather a tool; the compulsion or strict requirements associated with the online world as an escape route may be signs of a related but separate situation. For example: Internet addiction. When we are offline, loneliness can't predict their own problems, and in addition to loneliness, it does not necessarily predict online social interaction. In fact, a study found that those who scored the most in loneliness are likely to have more Internet use for computer entertainment and information about the entertainment world (Odacı & Çelik, 2013). As the same way, when you're offline, you're feeling lonely or at least not lonely online (Whitty & McLaughlin, 2007).

The excessive use of the Internet brings people away from society and real social communication, and by eliminating social interactions and influencing people's lives, they can lead to loneliness and ultimately depression (Kraut, 1998). Loneliness is one of the products of the Internet, because users often value real-life relationships by choosing online relationships that are fabricated and weak (Salimi et al., 2009). The consequence of excessive use of the Internet is to reduce social activity and to prefer virtual communication instead of actual communication (Kafashi, 2010). Also, as the Internet user feels more accepted on the Internet, it will probably affect the family's value, and the more users enter the discussion and group discussions, it's likely that they will raise their issues with the environment. Interactive Internet and do not raise issues with the family, and make the values of the family less important. But the Internet tendency happens when a person does not have the right interpersonal relationship and communication skills (Young, 2004).

The group of friends and social networks is the source of a person's ability to use the Internet more. Therefore, the Internet acts only as a means of coping with the feeling of family loneliness and emotional emptiness created by the family, not the sense of social loneliness (Salimi et al., 2009). Approximately 2.7 billion users in March 2007 had roughly the Internet connection which in 2015 this number increased to 3.2 billion (Booth, 2000). In this way, the Internet and social interactions can be fully psychologically and lonely, and provide background research on the advantages and disadvantages of using this global technology (Hamburger & Artzi, 2000). Hamburger and Artzi used the theory of personality in the relationship between loneliness and Internet, the personal and emotional characteristics of Internet users. Their survey results showed that specific features such as introversion and loneliness lead to overuse of the Internet; therefore, the alternative model, the Kerut et al. Model (1998), was formed. According to this model, Individuals are more likely to be attracted to the Internet, with extreme use of the Internet, because of their extensive and online social networks and their modified communication patterns (Horowitz & French, 1979). On the other hand, based on the model of loneliness, those who experience loneliness have difficulty dealing with social issues because of their negative predictions and expectations (Hamburger & Artzi, 2000).
From the combination of the loneliness models and the Hamberger and Artzi models, one can assume that for the people who feel lonely, the Internet provides an ideal social environment. Online anonymity, the lack of physical presence of others, and the inaccessibility of calls to users only allow you to control their social interactions. Internet communication, debarmet, self-disclosure, intimacy, and self-provision, as well as an area for maintaining and improving communication skills. This online facility, combined with a reduction in social anxiety, allows individuals to make themselves more ideal. In addition, some people use the Internet as an escape route to reduce the stress and negative feelings associated with loneliness. Recent research has confirmed a model that, according to the research, lonely people tend to use the Internet, and that the emergence of problems such as reduced mental health, reduced social relationships, neglected responsibilities, family, jobs and education (Mashayek & Borjali, 2003).

Therefore, two hypotheses have been proposed to explain the relationship between loneliness and Internet use. First, the extreme use of the Internet leads to loneliness, and second people are the only ones who are more likely to go to the Internet and use extreme content. Despite numerous studies on the impact of loneliness on Internet usage, researchers have lesser attention to the multidimensional nature of loneliness, and research in this area is rare. There are also research in Iran (for example, Mashayekhi and Borjali). Which indicates a significant negative relationship between loneliness and chat on the Internet, but it has not been studied which one is another predictor. According to the above, the main question of the research is, are levels of Internet addiction fluctuate in the rate of loneliness? If there is a correlation between the two structures, what is the quality of the relationship?

Method
Regarding the subject of research, which is the comparison of loneliness in terms of levels of Internet addiction among students, the research method is a post-event type (causal-comparative) that has been evaluated using a questionnaire and data have been analyzed with use of statistical method depending on the variables’ measurement level by using SPSS software. The population of this study was the students of the universities of Golestan, who number was 16532. To determine the sample size, 385 people (251 females, 134 male) were determined by volume estimation method according to Krejces & Morgan table. A proportional stratified random sampling method was used to select samples. Regarding the nature of the research, the researcher, using a questionnaire, distributed among the students of the universities of Golestan province and collected data. In order to measure the main concepts of the research, two standard measurement tools were used.

Measurements
Shortened Form of the Social and Emotional Loneliness Scale for Adults (SELSA-S): In the study of the independent variable, the loneliness of the scale of the shortened form of the social and emotional loneliness scale of adults was used by DiTommaso, Brannen and Best, (2004). Cronbach’s alpha coefficient this questionnaire has been reported between 0.87 and 0.90 (In this study Cronbach’s alpha was 0.80), which indicates the proper internal consistency of this scale. This scale includes 14 items and three sub-scales of romantic loneliness (3,6,8,10), family (1,13,5,9,12) and social (2,4,7,11,14), and emotional solitude is obtained from the total score of romantic and familial sub-scales. It should be noted that on this scale, with increasing the score of individuals, their score in the overall factor of loneliness increases. In contrast
to each category, the 5th option is totally opposite (score 1), so I totally agree (score 5). Earning a score in each of these dimensions of this scale represents a greater sense of loneliness in that later.

Kimberly young internet addiction scale (1998): In the study of the Internet addiction moderating variable, the Yang Internet addiction test was used. The questionnaire consists of 20 articles and is provided by Kimberly Young for measuring the dependency of people on the Internet or computer, and is scored by Likert method (Young, 1996). To get the total score of the questionnaire, we sum each question together with the sum of the rates given by the respondent. The score is the total score of the questionnaire and will range from 20 to 100. Obviously, the higher the score, the higher the person's Internet addiction will be and conversely. This test was translated and used by Orang (2004). Validity and reliability of this questionnaire are mentioned in several studies. For example, Widyanto (2004), examined the reliability of Young’s Internet addiction measurement scale and reported the 0.89. Alavi et al (2010), in his research for the Persian version of the Five Factor Questionnaire (spending excessive time on the internet), (using the Internet to achieve inner peace), (prominence), (the use of chat rooms) and attention to job and educational tasks). In addition, for this questionnaire, two types of content validity and differential (r = 0.5) and three types of test reliability (r = 0.74), internal consistency (a = 0.88) and half-width (r = 0.82), and the best clinical point is 44. Asgari and Marashian (2009), in their research, to determine the reliability of the questionnaire, using the Cronbach's alpha and the ballad, the coefficients of 0.97 and 0.97, respectively, were reported. In this study the coefficient of Cronbach's alpha was obtained 0.863, which is great.

Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Options</th>
<th>f</th>
<th>%</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>sex</td>
<td>Male</td>
<td>134</td>
<td>34.8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>251</td>
<td>65.2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>marital status</td>
<td>Single</td>
<td>299</td>
<td>77.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>86</td>
<td>22.3</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Age group</td>
<td>17-19</td>
<td>47</td>
<td>12.2</td>
<td>-</td>
<td>22.4 0.82691</td>
</tr>
<tr>
<td></td>
<td>20-22</td>
<td>226</td>
<td>58.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>23-25</td>
<td>67</td>
<td>17.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>&lt;26</td>
<td>45</td>
<td>11.7</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

In this section, while presenting the research findings, their analysis and relations between the variables are discussed. Based on the findings, 65.2% of the respondents in this study were women and the rest of the respondents, 34.8% them are men. In other words, two thirds of the research sample is women and one third is men. Of all the respondents, 77.7% were single and the rest of the respondents were 22.3% of them married. In this research, age groups from 17 to 26 years old were up. The highest frequency of age is between 20 and 22 years old.
Findings show that loneliness with an average 3.599 is higher than the hypothetical average. Also, the dimensions of loneliness are higher than the hypothetical average; while the social loneliness is at its highest level. Although the familiar loneliness is in the middle of a social and romantic loneliness.

Findings show that around one third of samples are no addicted to internet whereas tow third of them are exposed to Internet addiction and only 6.7 percentage of them are addicted to internet. Hypothesis 1: Students average loneliness varies according to levels of Internet addiction.

According to Table 4 and the significance level of F test (0.000), there is a significant difference between loneliness and Internet addiction levels, so that people with Internet addiction have less loneliness. Hypothesis 2: There is a relationship between internet addiction and loneliness with control of Gender
### Table 6: Relationship between Internet addiction and loneliness with control of gender

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>Variable control options</th>
<th>Correlation coefficient (Spearman's rho)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet addiction</td>
<td>loneliness</td>
<td>man</td>
<td>0.443</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>woman</td>
<td>0.324</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>0.361</td>
<td>.000</td>
</tr>
</tbody>
</table>

According to Table 6, there is a positive and significant relationship between internet addiction and loneliness in all of sexual groups. I.e. the relationship in men and women are valid. Therefore, Sex has no effect on the relationship between online addiction and loneliness. Also, the severity of the relationship is greater among men than women.

### Discussion

The purpose of this study was to investigate the relationship between loneliness and levels of Internet addiction (non-addiction, exposed to Internet addiction and addicted to the Internet). The finding of this study showed a significant difference between loneliness and levels of Internet addiction. Ghasemi et al found that satisfying needs is high and meaningful in explaining Internet addiction. In a study by Salimi et al, friends and social networks are the source of a person’s use of the Internet. Therefore, the Internet acts only as a means of coping with the feeling of family loneliness and emotional emptiness created by the family, not the sense of loneliness. Booth’s research states that for people who feel lonely, the Internet provides an ideal social environment. Anonymity and the lack of physical presence of others and face-to-face, and the lack of real contact can only allow users to control their social interactions (Hamburger & Artzi, 2000). These results are consistent with the study by Hughes about loneliness and Internet addiction. They found that a high level of Internet use is associated with a low level of loneliness, which suggests that the use of the Internet meets a level of social needs. However, Internet addiction raises emotional loneliness because face-to-face communication has diminished (Hughes et al, 2004). Humberger indicates study, with the theme of Internet addiction and loneliness, it is also stated that people use their Internet preferences in different ways. Therefore, the results of this interaction between personality and the use of the Internet are likely to vary among people, and thus the effect on the health of the user is not the same (Horowitz & French, 1979). Considering the results of the research, which states that loneliness is different in terms of addiction to the Internet. It is suggested that by designing experimental research, the causes of the lack of important relationships in the lives of addicted people with the Internet and communication lost with friends, loved ones and their acquaintances are examined so that these people can face up to the amount of use of addict Their kind of internet is reduced. It is also suggested in future research that one of the variables of loneliness and addiction to the Internet predict one another.

### References


