Extended Abstract

Comparing Internet Addiction in Students with High and Low Socioeconomic Status Levels[*]

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Abstract

Internet addiction varies according to the geographic, cultural, and socioeconomic conditions that an individual experiences. In adolescence, uncontrolled Internet use opens the way to cases of clinical-level addiction, and the likelihood of this addiction is thought to be closely related to individuals and family's socioeconomic levels. This research investigates adolescents whose families have a high socioeconomic level (266 students) and those whose families have a low socioeconomic level (187 students). This study applies the Internet addiction scale, which was developed by Günüç and Kayri. The study is grouped according to similarities of addiction levels using cluster analysis. Internet addiction levels in the sample with high socioeconomic levels were calculated as $M = 75.507$; $SD = 29.307$. Afterwards, addiction levels were divided into three groups in accordance with two-step clustering analysis. While the first group located 74 students (27.8%) who were not addicted, $M = 43.81$, the second group was composed of 121 students (45.5%) who were at risk, $M = 1.75$, and the third group was composed of 71 students (26.7%) who were addicted, $M = 114.94$. The level of Internet addiction in the sample with a low socioeconomic level was obtained as $M = 68.588$, $SD = 21.424$. In accordance with findings of the two-step clustering analysis, this sampling was collected into three groups based on their similarities. The first group ($n = 91$; 48.7%) did not have addiction, $\bar{x} = 51.14$; individuals in the second group ($n = 79$; 42.2%) were observed to be at risk, $M = 78.72$, and the third group ($n = 17$; 9.1%) showed addiction, $M = 114.88$. While elevated dependency was calculated at a rate of 26.7% in students with a high socioeconomic level, the rate of elevated dependency was calculated as 9.1% for the group with a low socioeconomic level. Additionally, this study discusses the possible impact of different socioeconomic levels on Internet addiction.

Keywords

Internet addiction • Socioeconomic level • Cluster analysis • Adolescence

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Information and communication technologies have become widespread throughout society's developmental and economic levels. Access to technology varies proportionally with the economy of both society and the family, who are the building blocks of society. Information and communication technologies, especially the Internet, have anymore become a part of social life with the many possibilities and benefits that they offer. Addiction occurs in some individuals in societies where Internet use has practically become a requirement, especially in excessive and uncontrolled use. However, many psychological and sociological factors can be mentioned that affect Internet Addiction, like family supervision, self-control, and interpersonal relations (Wo, 2003). These factors can be seen among both reasons that lead to Internet addiction and determinants that facilitate Internet addiction.

According to the results of research on information technology use in 2015 from the Turkish Statistical Institute (Türkiye İstatistik Kurumu [TÜİK], 2015), 96.8% of households have mobile phones, 70% have Internet access, 56% of individuals use the Internet, 25% have a desktop computer, and 43% have portable computers (i.e., laptops, tablet PC's). Alongside this, 39% of households without Internet access asserted the high connection costs as the reason for not having an Internet connection at home. Socioeconomic factors like family income, place of residence, work situation, and parents' educational level are known to affect Internet access (Taylor, Zhu, Dekkers, & Marshall, 2003). While even if some of the problems are perceived as being brought by Internet access, one cannot deny that this is an inescapable era of Internet use. On this point, rather than Internet access and use, whose proper use is quite important and needs to be widespread, proper and conscious use of the Internet pervades.

Today's children and adolescents, especially those growing up in a technological environment (like home or school), are defined by concepts like digital natives (Prensky, 2001), students of the new millennium (Pedró, 2006), Generation Y (McCrindle, 2016), Internet Generation (Oblinger & Oblinger, 2005), and technological migrant (Monereo, 2004). The proximity of this age's children with technology is pictured and described through their interests, curiosity, and skills (Kurt, Günüç, & Ersoy, 2013). Regardless of the intensity with which children these days are interested in the Internet, the economic possibilities of a family are undoubtedly decisive as a crucial factor on this point.

This study is limited to determining socioeconomic status within the scope of number of children, family's income, parents' work status, and the environmental conditions and possibilities of their neighborhood. Undoubtedly, social structure and differences also stand out in studies that examine the impact of socioeconomic factors on Internet addiction. Therefore in that sense, the fact that the findings reached in all societies have evaluated separate perspectives and made socioeconomic descriptions carries importance in this sense.

Method

Sample

This study investigates adolescents with a high socioeconomic level (266 students) and those with a low socioeconomic level (187 students) using the purposeful sampling method. The individuals with a high socioeconomic level are students attending private preparatory schools, and those with a low socioeconomic level are students learning in public schools located on the city's outskirts. Adolescents' average age is around 15.

Data Collection Tool

Internet Addiction Scale. The scale, developed by Günüç and Kayri (2010), consists of 35 items forming four sub-dimensions being: deprivation, power of control, impaired functionality, and social isolation. The reliability coefficient of the original scale is .94. In this study Cronbach's alpha coefficient of reliability was determined to be 0.959. Similarly, the year the scale was developed, the total variance had explained 47.463% of the scale; in this study, exploratory factor analysis was performed again and the total variance explaining the scale was obtained as 56.356%. The items' load factor values ranged between 0.406 and 0.763. All these findings indicate that the reliability and validity of the Internet addiction scale are still maintained. A higher total score obtained from the scale indicates Internet addiction. The minimum score for the scale is 35, and the maximum score is 175. A cut-off value was not determined while determining the sample's level of addiction; addiction levels were grouped using a two-step clustering analysis. Additionally, the scale does not examine sub-dimensions; the total score indicates a general sense of addiction.

Data Analysis

Two-Step Clustering Analysis. Generalizations made over a heterogeneous sample may cause biased or aberrant results. With this in mind, clustering individuals from the sample according to similarities in terms of variables will bring out more consistent findings (Kayri, 2007). In a general sense, one performs cluster sampling by taking advantage of *similarity* and *distance* measures. The distance method is used as a basis in accordance with the type of variable that is being clustered; the distance methods used are Mahalanobis, Minkowski, and Manhattan City Block (Tatlıdil, 2002). Alongside these, one of the effective methods that can also cluster in accordance with logarithmic probability is two-step clustering analysis. In forming homogeneous subgroups in two-step clustering analysis, Akaike information criterion (AIC) and Bayesian information criterion (BIC) are used. Kayri (2007) stated obtaining more effective results in forming homogenous subgroups in two-step clustering analysis

from BIC. Due to its successful clustering property, BIC has also been used in this study in the process of two-step clustering analysis and forming of homogeneous subgroups.

Findings

In the sample with a high socioeconomic level, the level of Internet addiction was calculated as $M = 75.507$, $SD = 29.307$. Afterwards, addiction levels were examined using two-step clustering analysis. The success of clustering analysis at identifying homogenous subgroups was calculated according to the silhouette measure, obtaining a silhouette performance value of 0.70 (good level).

When examining the addiction scores belonging to the sample with a high socioeconomic level through two-step clustering analysis, BIC was seen to divide the heterogeneous sample into three subgroups. While 74 students (27.8%) were located in the first group (not addicted, $M = 43.81$); the second group had 121 students (45.5%) who were at risk, $M = 71.75$, and the third group had 71 students (26.7%) who were addicted, $M = 114.94$. In this case, 26.7% of students with a high socioeconomic level could be said to have Internet addiction.

In the sample with a low socioeconomic level, the Internet addiction score was calculated as $M = 68.588$, $SD = 21.424$. It is worth comparing the addiction averages of samples with a high and those with a low socioeconomic level before cluster analyzing the low socioeconomic sample. As a reminder, the average score of the sample with a high socioeconomic level is 75.507. When examining the difference in averages from the samples with a high and those with a low socioeconomic level statistically, the Mann–Whitney U test identified that the sample averages exhibited a significant difference statistically ($p < .05$). The averages of the two samples were compared using the Mann–Whitney U test from the non-parametric methods because the addiction scores showed skewing in accordance with the Kolmogorov-Smirnov test. It showed the general averages of the adolescents with a high socioeconomic level and those with a low socioeconomic level exhibited a statistically significant difference ($p = .049$).

After these findings, the sample with a low socioeconomic level was examined through two-step clustering analysis. According to the findings from the two-step clustering analysis, this sample was gathered into three groups according to their similarities. In the sample of adolescents with a high socioeconomic level, the silhouette was used as a measure of the quality of clustering and obtained a value of .70; the silhouette also exhibited the same performance in the sample with a low socioeconomic level. As a result of analysis, this sample was determined to have three homogenous groups. The first group ($n = 91$; 48.7%) was not addicted,

M = 51.14; the second group (n = 79; 42.2%) indicated a risk group, M = 78.72, and the third group (n = 17; 9.1%) indicated addictions, M = 114.88. In light of the findings, students with a low socioeconomic status occur as Internet addicted adolescents at a rate of 9.1%.

Discussion and Conclusion

This study aims to investigate students with a high socioeconomic condition and those with a low socioeconomic condition by comparing them from the perspective of Internet addiction. Therefore, private preparatory schools are chosen for students with a high socioeconomic level, and public schools on the city outskirts are chosen for students with a low socioeconomic level. According to the obtained results concerning students with a high socioeconomic level, 27.8% were determined to not have Internet addiction, 45.5% were identified as being in a risk group, and 26.7% were Internet addicts. However for the students with a low socioeconomic level, 48.7% were identified as not addicted to the Internet, 42.2% were determined to be in the risk group, and 9.1% were Internet addicts. As a result, the students with a high socioeconomic level and those with a low one showed a significant difference in addiction percentages (High: 26.7%; Low: 9.1%). In other words, the children of families with a high socioeconomic level can be said to have a greater likelihood of becoming addicted to the Internet.

In the findings of this study, some demographic variables related to families' socioeconomic levels are thought to play a role in its emergence. In families of high socioeconomic status, these variables are considered to be having a small number of children, (usually one or two), family's monthly income is quite high (4,000-5,000 TL or more), both parents are often working, and good conditions and opportunities in the neighborhood. However, these determinants in families with a low socioeconomic status are considered to be having a greater number of children (usually above three or four), low family income (minimum wage on average), only the father working (or unemployment in some families), and inadequate environmental conditions and opportunities in the neighborhood. In families with few children, parents excel at fulfilling their children's technological demands. Contrary to this, especially in low-income families with a large number of children, it is especially difficult to allocate a budget for technological devices or, if the children are far apart, buying technological devices for each child. Alongside this, children are more likely to turn to the Internet if mom and dad are both working, especially in families with one child. This situation can be perceived as a positive factor in families with many children where the siblings spend a lot more time together, whether at home or outside, and are considered to feel less of a need for the Internet. Undoubtedly, if it also becomes more possible through increased income levels for children to

own more and have more access to technology, then this situation can pave the groundwork for the formation of problematic usages like the inability to properly use them together with addiction. In this case, children with access to technology who have all kinds of technological opportunities need to have their Internet use monitored and limitations need to placed, especially by the parents.

In families with low socioeconomic status, especially with many children, computers and Internet access can bring problematic behaviors in some situations. Parents who cannot show all their children enough attention can end up driving their children to the Internet or to Internet cafes. In this situation, the child can want to meet their need for social support, attention, love, or companionship from the Internet (Günüç & Doğan, 2013). Unsupervised use can lead to problematic Internet use along with it. Indeed, the situation has become more expected in some cases that children whose Internet use is quite restricted because of economic reasons at home or at Internet cafes form behaviors that are frustrated, stressed, extremely physically reactionary, and prone to violence (Gunuc, 2015).

This research is limited to only examining Internet addiction from a socioeconomic perspective. How socioeconomic factors can also be affected by other factors should be considered together with this. Another limitation of this study is that the data on demographic variables related to determining socioeconomic status were collected in a general context. Therefore, separate relational and comparative analyses on each variable were not performed. An important reason for this is that a sound result could not be received in sharing real data related to the children's family income, technology owned at home, number of siblings, and conditions related to their neighborhood. In other words, despite information about children of high socioeconomic status' number of siblings, technology owned, and neighborhood conditions being easily provided, information about family income was not found to be very solid. Again, children with low socioeconomic status were observed to hesitate about providing information about their number of siblings, family income, and neighborhood. Therefore, this information was not collected from the students; the data related to general class was provided by the school administration. This situation presented key findings on demographic data obtained in such a way as to not pose a problem in the sense of looking at the overall impact of socioeconomic status.

In this study, Internet addiction was only dealt with from the socioeconomic perspective, and this factor was revealed to play quite an important role. However, neither examining a single factor nor comparing its relationships is considered to be sufficient at preventing or treating Internet addiction. For future studies, the effect of socioeconomic factors is recommended for examination together with other common variables like families' inner communications, family structure, parental

effectiveness, peer influence, environment of friends, and personal predisposition, or examined together on their own. Additionally, conducting research in future studies directed toward determining the ratio of effect of socioeconomic factors on Internet addiction is recommended.

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