



# The Relationship Between Social Media Use and Smartphone Addiction in Adolescents and Parental Neglect During the Pandemic

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## Abstract

The aim of this study was to examine the relationships between social media and smartphone addiction in adolescents and their parents' neglectful behaviors in the pandemic. The main problem of the research is to examine whether the increasing socialization and intimacy needs of adolescents during the pandemic period are an important factor in the emergence of social media and smartphone addiction due to their parents' inability to adequately meet these needs and neglecting their children, especially in terms of supervision. The study group consisted of 280 adolescents aged between 11-14 attending secondary schools in the city center of Ankara, Türkiye and their parents. In terms of the data gathering instruments, an Individual Information Form was administered to both the children and parents for the purpose of gathering socio-demographic data. In addition, adolescents were administered Smartphone Addiction Scale for the purpose of assessing their smartphone addiction levels along with Social Media Addiction Scale for the purpose of assessing their social media addiction levels. On the other hand, the Multidimensional Neglectful Behaviors Scale was administered to the parents in order to assess the level of their neglectful behaviors. As a result, 86.5% (n=218) of adolescents stated that their smartphone use and 78.5% (n=204) stated that their social media use increased during the pandemic period. When the smart phone and social media addiction status of adolescents were compared according to the level of neglect by their parents, it was determined that the neglect scores of adolescents with addiction level-smart phone and -social media use were significantly higher. In addition, it was found that parental neglect levels were positively associated with both smart phone addiction and social media addiction in adolescents, and there was a positive relationship between smart phone addiction and social media addiction in adolescents. The findings were discussed in line with the related literature.

**Keywords:** Social media, smartphone, adolescent, neglect, pandemic

## **1. Introduction**

The use of social media and the internet has become a daily trend. The increase in the use of social media and smart devices is particularly notable among adolescents. The increasing use observed during adolescence raises several concerns regarding the cognitive, social and physical development of adolescents. This rise in usage has also led to the emergence of the concepts of concepts such as social media and smartphone addiction in the literature (Kwon et al., 2013). The notion of internet addiction has taken on a new dimension with these devices that make the internet portable and has morphed into smartphone addiction (Lin et al., 2015). The use of technology, the internet and social media, which was already increasing in the context of the impact of developing technology, has accelerated the current rise due to the restrictions experienced during the pandemic period. The closures experienced during the Covid 19 pandemic and the fact that education is also provided via the internet have brought forward the age at which children encounter the internet, causing them to spend more time at home like adults and increasing the time spent on technological devices (Montag & Elhai). According to data from the Turkish Statistical Institute (2022), the rate of internet use among children in the 6-15 age group was 50.8% in 2013, while it was determined to be 82.7% in 2021. According to the same survey, 90.1% of these age groups use the internet on a daily basis. It was also found that 31.3% of children use the internet for social media and that the time they spend on social media is about three hours a day on average. These findings show that children's use of social media has been increasing due to uncontrolled use of the internet outside of educational activities.

The upward trend in children's social media use has become even more pronounced during the pandemic, which has caused radical changes in the daily life habits of adolescents as well as adults. In this process, social distancing measures and curfews have led to a notable increase in the reliance on online activities, accompanied by a significant surge in the use of social media and smartphones. While social media platforms played an important role in meeting the need for social connection during the pandemic, excessive use of these platforms has the potential to create addictive effects in individuals (Parlak Sert & Başkale, 2023; Rouleau et al., 2023). In this process, smartphones have become the primary means of accessing social media, which has led to the spread of smartphone addiction (Li et al., 2021). Findings from a study conducted by Marengo et al. (2022) showed that excessive use of smartphone and especially use of social media applications were strong determinants of social media addiction during the pandemic period.

There is a growing body of research on the negative developmental effects of excessive social media use, internet and smartphone addiction. The concept of 'text neck' has been used to describe the physiological deterioration and pain in the head, neck and back extremities due to the increased use of smartphones and handheld electronic devices (Thiyagarajan & Telegbal, 2015). In a study of neck pain in adolescents, pain was reported due to smartphone use in the absence of other physiological findings, and adolescents reported changes in psychological and social behaviour (Fares et al., 2017). Wacks and Weinstein (2021) also found that excessive smartphone use in adolescents and young adults was associated with cognitive-emotional regulation difficulties, impulsivity, social network addiction, shyness and low self-esteem, alongside sleep problems, decreased physical fitness, unhealthy eating habits, decreased cognitive control and changes in brain grey matter volume in these children. In light of these findings, it is clear that uncontrolled use of social media by adolescents can have a negative impact on their development. Therefore, in order to prevent adolescents from being negatively affected by internet and social media use, it is necessary to both control and limit this use.

The primary responsibility for controlling and supervising adolescents and providing them with the care they need rests primarily with parents. Parental inadequacies and deficiencies in providing for the care, needs and welfare of their children and in fulfilling their duty to protect

their children are defined as neglect (McCoy & Keen, 2014). Attitudes and behaviours such as leaving the child's home environment unregulated and unsupervised, not taking the necessary precautions to prevent the child from viewing inappropriate content on television or the internet, allowing unrestricted access to the internet without supervision, not preventing others from harming the child or the child from harming others, not protecting the child from behaviours that harm themselves or others are some of the examples of the most common neglectful behaviours of parents (Morrongiello & Cox, 2020; Ruiz-Casares et al., 2015). Woo (2013) conducted a study that revealed a relationship between parental neglect and abuse and smartphone addiction in adolescents. Similarly, Kwak and colleagues found in their study on adolescents' smartphone addiction and the level of neglect in their families that the level of parental neglect was significantly associated with adolescents' smartphone addiction (Kwak et al., 2018). A strong relationship has also been identified between parents who exhibit "phubbing," a form of interpersonal neglect characterized by social exclusion, and their children's smartphone addiction. In light of these findings, it can be assumed that neglected children use the internet and cyber platforms as a means of socialization and seek the attention they need in these environments; therefore, during the pandemic, when social interaction decreased and lockdowns occurred, interest in social media tools and smartphones increased even further. In the daily routine, the role of control and supervision of adolescents, which is carried out in collaboration with the school, parents and the environment, has become the responsibility of the parents alone due to the closures experienced as a result of the pandemic. Therefore, it can be suggested that adolescents' increased need for socialisation and intimacy during the pandemic period may be an important factor in the emergence of social media and smartphone addiction, as their parents did not sufficiently and adequately meet their need for socialisation and intimacy.

Furthermore, social connection theory posits that individuals utilize social media extensively to fulfill their social attachment needs (Peters & Salazar, 2020). Extraordinary situations, such as pandemics, can further exacerbate this phenomenon, while parental neglect can result in an inability to fulfill these needs, leading to a dependency on social media and smartphones. With regard to behavioral addiction, it is postulated that individuals may overuse social media and smartphones due to the presence of reward mechanisms associated with anxiety avoidance and socialization, which may ultimately result in addiction (Li et al., 2020; Wegmann et al., 2020). In this respect, it can be hypothesized that adolescents' increased use of social media and smartphones during the pandemic may be associated with their parents' neglectful behaviors and that adolescents who are neglected by their parents may have social media addiction and smartphone addiction. Depending on this hypothesis, this study aimed to investigate whether there is a relationship between adolescents' social media use and smartphone addiction and parents' neglectful behaviours during the pandemic period and to determine the levels of social media and smartphone addiction of adolescents during the pandemic, to examine whether the smartphone and social media use of adolescents during the pandemic period does not differ according to their neglect by their parents, and also to examine the relationship between the negligent behavior of parents during the pandemic process and adolescents' social media and smartphone addiction. It is anticipated that the findings of this study will offer significant insights into public health and family dynamics, elucidating the impact of extraordinary circumstances such as pandemics on adolescents' digital media usage and the association between this usage and parental neglect.

Within the framework of these objectives, the study aims to answer the following questions:

- Did adolescents' social media usage increase during the pandemic?
- Did adolescents' smartphone usage increase during the pandemic?
- If an increase was observed, was there any impact from parents' neglectful attitudes?

## 2. Method

### 2.1. Participants

The participants in the study consisted of 280 adolescents aged between 10 and 14 years, studying in two separate primary schools in the city centre of Ankara, Türkiye, and 280 parents. In order to form the study group, information about the primary schools in the centre of the province was obtained from the Provincial Directorate of National Education. According to the information received, two schools were selected for the study on the basis of population size and socio-economic characteristics, which were considered to be representative of the province in general. The mean age of the children was  $12.30 \pm 1.16$  years. Of the children, 135 (48.2%) were girls and 145 (51.8%) were boys. The mean age of the parents was  $40.13 \pm 5.31$  years. 214 (76.4%) were mothers and 66 (23.6%) were fathers.

### 2.2. Instruments

*Individual Information Form:* A researcher-designed form was used to collect socio-demographic data from children and parents participating in the study. The form for children included questions about gender, age, school attended, grade level, and use of smartphones and social media during the pandemic. The parent form included information on age and gender.

*Smartphone Addiction Scale-Short Version for Adolescents:* The scale was developed by Kwon et al. (2013) to assess smartphone addiction. It consists of a single sub-dimension and a total of 9 items. Responses to the scale range from strongly disagree (1) to strongly agree (6). The scores that can be obtained from this scale vary between 10 and 60 points. The cut-off score for the scale is 29.50. Scores higher than this indicate smartphone addiction. The scale was adapted into Turkish by Şata and Karip (2017), and the Cronbach's alpha coefficient was found to be 0.90 in their study.

*Social Media Addiction Scale for Adolescents Short Form (SMAS):* This scale was developed by van den Eijnden et al. (2016) as a unidimensional scale to determine the level of social media addiction in adolescents, taking into account the diagnostic criteria for internet gaming addiction in DSM-5. The long form of the scale consists of 27 items and the short form of 9 items. Items on the scale are answered 'yes' or 'no'. A score of 1 is given for 'yes' and 0 for 'no'. The lowest score on the scale is 0, the highest score is 9, and the cut-off score is 5. Accordingly, those who answer 'yes' to 5 or more of the 9 items are considered to be addicted to social media. The scale was adapted into Turkish by Taş (2017), and the Cronbach's alpha coefficient of the scale was found to be 0.76.

*Multidimensional Neglectful Behaviors Scale-Parents Form:* The scale was developed by Kaufman Kantor et al. (2003) to assess parents' behaviour towards their children aged 10-15 years, which can be classified into physical, emotional, cognitive and supervisory neglect. The scale was adapted into Turkish by Beyazıt and Ayhan (2017). As a result of the validity and reliability analyses, the Turkish form of the scale was reduced to 23 items and consisted of a total of 6 dimensions: cognitive neglect, supervisory neglect, physical neglect, abandonment, inadequate protection and alcohol consumption. The lowest and highest scores that can be obtained from the sub-dimensions of the scale range from 0 to 21, and the lowest and highest scores that can be obtained from the total scale range from 0 to 69. High scores on the scale indicate neglectful behaviour by parents towards their children. The Cronbach alpha coefficient for the whole scale was found to be .68.

### 2.3. Procedure

As part of the study, the researcher contacted 280 students from two different schools and their families. Initially, the administrators of the schools were contacted and informed about the study and an agreement was made about the appropriate day and time to administer the forms

to the students. The content of the study was then explained to the adolescents in the classroom on the agreed day and time. Adolescents were informed that the study was voluntary and those who agreed to participate were given pre-numbered parent and adolescent forms. The adolescents were asked to complete the self-report forms in the classroom. It was explained that the other form was to be completed by the parents and the adolescents was given three days for this purpose. The implementation of social distancing measures and school closures during the pandemic presented significant challenges to the collection of data. The administration of the forms was conducted in a manner that permitted students to complete them individually, with due consideration for the necessity of maintaining a safe distance in the classroom setting. Both the researcher and the participants needed to arrange the classroom environment to ensure social distancing. Therefore, available empty classrooms in the institution were utilized to minimize social contact. Additionally, to prevent disruptions in the data collection process due to lockdowns, the data collection schedule was intensified to mitigate potential losses during these closures. In the event that a student was absent from school or unable to attend the administration of the forms in their classroom, a spare form was left with the guidance service. The administration of these forms was then conducted by guidance counselors. Subsequently, these forms and the forms filled out by parents at home and sent to the school were then received by the researchers. Finally, the adolescents' and parents' data were matched according to the numbers given as codes, and then the analysis was carried out.

#### 2.4. Data Analysis

Prior to commencing the analyses, a preliminary test was carried out and the normal distribution of the scale scores was examined using the Kolmogorov-Smirnov test. It was found that the data had a normal distribution. In accordance with these results, the Mann-Whitney U test was used for comparison analyses and the Spearman test for correlation analyses. Data were analysed using SPSS 25.

### 3. Results

The use of smartphones and social media by adolescents during the pandemic according to the level of neglect by their parents is shown in Table 1.

*Table 1. Comparison of adolescents' smartphone and social media use during the pandemic according to their neglect by their parents*

Variables	n	Mean Rank	Z	p
Did your smartphone use increase during the pandemic compared to previous periods?				
Yes	218	125.53	-.538	.591
No	34	132.75		
If yes, by how many hours per day has it increased?				
1-2 Hours	120	92.18	-.611	.541
3 hours and more	60	87.17		
Did your social media use increase during the pandemic compared to previous periods?				
Yes	204	133.85	-1.371	.170
No	56	11.31		

Variables	n	Mean Rank	Z	p
If yes, by how many hours per day has it increased?				
Yes	126	102.87	-.755	.450
No	74	96.47		
Smartphone use				
Addiction-level	108	165.54	-4.105	<.001**
Nonaddiction-level	172	124.78		
Social media use				
Addiction-level	77	165.73	-3.215	.001*
Nonaddiction-level	203	130.93		

Note. \*p<.01

As shown in Table 1, when adolescents' use of smartphones and social media during the pandemic period was compared according to their level of parental neglect using the Mann-Whitney U test, it was found that adolescents' use of smartphones and social media during the pandemic period did not differ according to the level of parental neglect ( $p>.05$ ). In parallel, adolescents whose smartphone and social media use increased during the pandemic period also did not differ according to the level of parental neglect ( $p>.05$ ). On the other hand, when the smart phone ( $Z=-3.215$ ,  $p<.001$ ) and social media addiction ( $Z=-4.105$ ,  $p<.001$ ) status of the adolescents was compared according to the level of neglect, a significant difference was found and it was found that the neglect scores of the adolescents with addiction level - smart phone (165.54) and social media use (165.73) were higher.

The descriptive statistics and correlations between the scales administered in the study are presented in Table 2.

Table 2. Descriptive Statistics and Correlation Coefficients Results

Scales	M	SD	1	2	3
1. Smartphone Addiction Scale	27.43	11.89	-		
2. Social Media Addiction Scale	2.75	2.47	.661*	-	
3. Multidimensional Neglectful Behaviors Scale-Parents Form	17.52	8.96	.197*	.221*	-

Note. \*p<.01

As shown in Table 2, levels of parental neglect were found to be positively and highly significantly associated with both smartphone addiction ( $r=.197$ ,  $p<.01$ ) and social media addiction ( $r=.221$ ,  $p<.01$ ) in adolescents, and there was a positive and highly significant relationship ( $r=.661$ ,  $p<.01$ ) between smartphone addiction and social media addiction in adolescents.

Prior to conducting regression statistical analysis, the relevant regression assumptions were tested. In line with this aim, the autocorrelation, linearity and normality of the data were examined. As a first step, to test whether the data showed a normal distribution, residual statistics were examined using regression standardised residuals and it was found that the distribution of the data was close to normal. As a second step, variance inflation factors (VIF) and tolerance values were examined to investigate the multicollinearity of the data. In both the smartphone and social media models, the VIF values varied between 1.001 and 1.007, while the tolerance values varied between 993 and 0.999 in the smartphone model. Since a tolerance value greater than 0.1 and a VIF value less than 10 are accepted as indicators of the absence of multicollinearity (Tabachnick & Fidell 2013), it was concluded that multicollinearity was not

an issue for the present study. Finally, the Durbin-Watson (D-W) value was examined to investigate autocorrelation in the residuals and it was found that the D-W value was 1.541 for the smartphone and 1.201 for the social media model. Since a value around 2 is accepted as an indication of the absence of autocorrelation (Freund et al. 2006), it was concluded that autocorrelation was not a concern in this study either. In line with the results of these preliminary analyses, it was found that the assumptions of regression analysis were met, and consequently multiple linear regression analyses were conducted separately for the smartphone and social media models. The results of the regression analyses are shown in Table 3.

Table 3. Multiple Regression Analysis Results Related To The Prediction of Smart Phone and Social Media Addiction in Adolescents

Models	Variables	B	St. Error B	$\beta$	t	p
Smart Phone	Parental neglect	.266	.078	.200	3.412	.001
	Parents' age	-.236	.131	-.106	-1.803	.073
	Adolescents' age	.783	.603	.076	1.298	.195
	Adolescents' gender (girl vs. boy)	.646	1.394	.027	.463	.644
$F_{4,279} = 4.216, p < .01, R = 0.240, R^2 = 0.058$						
Social Media	Parental neglect	.060	.016	.219	3.736	<.001
	Parents' age	-.014	.027	-.030	-.515	.607
	Adolescents' age	.155	.125	.072	1.236	.217
	Adolescents' gender (girl vs. boy)	.546	.289	.110	1.888	.060
$F_{4,279} = 4.749, p < .01, R = 0.254, R^2 = 0.051$						

As shown in Table 3, multiple regression analyses were conducted separately for smartphone and social media addiction. In both models, parental neglect, parental and child age, and child gender were entered as independent variables, while smart phone and social media addiction were entered as dependent variables. Prior to regression testing, the gender of the adolescent was recoded as a dummy variable. As the results of the analysis were related, it was found that for both models of smart phone and social media addiction, parental neglect was the only variable predicting smart phone addiction in adolescents ( $p < .01$ ), whereas parental and child age and child gender were not significant predictors ( $p > .05$ ).

#### 4. Discussion

The present study aimed to examine the relationships between adolescents' smartphone and social media addiction and their parents' neglectful behaviours during the pandemic. As a result of the analyses, it was found that the level of social media and smartphone addiction among adolescents was also found to increase during the pandemic period. There are several parallel research findings in the literature. Fernandes et al. (2020) found in a study of 185 adolescents from countries including the UK, India, Mexico, the Philippines, and Malaysia that the pandemic led to an increase in internet use and escape behaviors among young people and this heightened the risk of social media and smartphone addiction, particularly among adolescents. Other studies from different countries conducted during the pandemic have also confirmed that the utilization of digital media by young people increased considerably during this period. In a study involving 10,963 participants, Luo et al. (2021) examined how social media use changed before and after the pandemic. The results indicated a significant increase in social media addiction during the pandemic. In a study conducted in Turkey and involving 376

participants, Güldal et al. (2022) found that the increase in social media use during the pandemic was particularly associated with anxiety related to the novel coronavirus.

The present study also found that both smartphone and social media addiction were associated with parental neglect, and that smartphone and social media addiction was higher among adolescents who were neglected by their parents. In other words, parental neglect was found to be associated with social media and smartphone addiction regardless of the pandemic period. In a study conducted by You and Zhou (2014), which included secondary school students in the 2019-2020 period, it was found that fathers' responsive parenting attitudes and adolescents' social media addiction were negatively associated with adolescents' social media addiction and positively associated with mothers' responsive parenting attitudes, while no significant difference was found in the prevalence of social media addiction before and after the pandemic. In a study conducted by Kwak et al. (2018), it was found that there was a significant relationship between parental neglect and smartphone addiction in adolescents, and that adolescents who were neglected by their parents had higher levels of smartphone addiction. Similarly, Bashir et al. (2021) demonstrated a correlation between parental neglect and adolescents' social media addiction. In parallel with these findings, there are a number of other studies in the literature that have found levels of parental neglect to be associated with social media (Bashir et al., 2022; Chidambaram et al., 2023; McDowell, 2022) and mobile device (Goa et al., 2022) addiction during the pandemic. Similar results have also been found in studies on addiction to digital games. The rate of digital game addiction among children of parents who were neglectful in protecting their children from harmful content was also found to be high (Gül, 2023). Furthermore, the study found a high positive correlation between social media and smartphone addiction among adolescents. In various studies in the literature, it has been found that habitual smartphone use increases the level of smartphone addiction (van Deursen, et al., 2015) and there is a relationship between smartphone use and internet use (Ayar, et al., 2017; Choi, et al., 2015). Furthermore, it has been found that playing digital games with smartphone applications can also lead to an increase in smartphone addiction (Liu, et al., 2016). As internet addiction and digital games may also be associated with the use of social platforms, it is suggested that excessive smartphone use may be a risk factor that could lead to social media addiction. When these findings from the literature and those of the current study are considered together, it can be argued that children of neglectful parents are at risk of internet, digital game, social media and smart device addiction are more prone to digital addictions. Furthermore, it can be proposed that adolescents who experience parental neglect during the pandemic may have increased social media and smartphone addictions.

In the regression analyses of the study, it was determined that the ages of the parents and the age and gender of the adolescents did not predict social media and smartphone addiction in adolescents. Supporting this finding, in the study conducted by Gümüş et al. (2023) and covering the pandemic period, it was determined that social media addiction was not predicted by the age and gender of adolescents. While in a study conducted by Chen et al. (2017), it was found that gender did not have a significant relationship with smartphone addiction in different age groups, Davey et al. (2020) found that smart phone addiction was more common in males, and Su et al. (2020) found that social media addiction was more common in females. It is thought that the finding in the present study may be related to the fact that the use of social media and smartphones increased in both female and male adolescents during the pandemic.

#### **4.1. Limitations**

This study has several limitations. First, the selection of participants was limited to specific schools, which may restrict the generalizability of the findings. Additionally, the use of self-report methods carries the risk of bias, as participants may present themselves in a more favorable light. Furthermore, the challenges posed by the data collection process during the

pandemic, particularly due to social distancing measures, may have negatively impacted the participation of some individuals in the study. The validity and reliability of the scales used to measure parental neglect may also be a limiting factor. Finally, the unique circumstances of the pandemic could affect the generalizability of the results, suggesting that future research should involve a larger sample and be conducted under different conditions.

#### **4.2. Conclusions and Future Directions**

As a result, the present study has demonstrated that parental neglect represents a significant predictor of both social media and smartphone addiction. Adolescence is a period during which the importance of love, parental attention, and acceptance by peer groups increases in terms of self-esteem and personality development (Kulaksızoğlu, 2013). During this period, it is hypothesized that factors such as family dynamics that are not conducive to the psycho-social development of adolescents, parents' inability to meet the needs of adolescents, including love, acceptance, and emotional closeness, adolescents' lack of acceptance by peer groups, and feelings of loneliness may contribute to the overuse of smartphones and social media by adolescents. The increased prevalence of social isolation, particularly during the pandemic, may have contributed to this phenomenon, and adolescents who are exposed to parental neglect may be more likely to engage in excessive smartphone and social media use. As internet and social media use is typically accomplished through smartphones, excessive social media use may also result in increased smartphone use. These findings indicate that extraordinary circumstances, such as a pandemic, may precipitate an increase in adolescents' use of digital media, thereby elevating the risk of addiction. These findings have significant implications for both family dynamics and public health. It is imperative that families assume a more active role in regulating and directing their children's engagement with digital media. This responsibility is particularly crucial during periods of emergency.

In light of the aforementioned findings, it can be posited that parents who neglect their children, particularly during the ongoing pandemic, do not impose limitations on the time their children spend on social media, do not oversee their children's internet usage, and do not provide their children with sufficient and accurate guidance on the appropriate utilisation of the internet. Consequently, children who are neglected may be at an elevated risk of developing an addiction to social media and smartphones. Given that there is no significant difference between the sexes or age groups, it can be assumed that all age groups and both genders are at risk. These findings indicate that parents should exercise caution regarding their children's social media and smartphone use, regardless of age or gender. Adolescents who are neglected seek the closeness they require from others, rendering them more susceptible to the perils of behavioral addiction and the internet environment. It is imperative that parents are able to meet their children's psychological, social, and physical needs in a timely, appropriate, and adequate manner. Furthermore, they should strive to be positive, warm, caring, and accepting in their relationships with their children. Training programs should be developed for parents on child neglect, and parents should be informed and made aware of this issue. Additionally, both parents and young people should be supported against behavioral addictions and dangers specific to the cyber environment.

While the study is of great importance, it is not without limitations. First and foremost, the fact that the sample utilized in the data collection process was drawn exclusively from two schools situated within the Ankara provincial center constrains the extent to which the findings can be generalized. Furthermore, the reliance on self-assessments in the scales utilized in the study may potentially compromise the precision of the data obtained. Finally, as the study employs a cross-sectional design, it is important to consider that the findings may not be sufficient to elucidate cause-and-effect relationships. To enhance the generalizability of the findings, future studies should endeavor to conduct research in diverse geographical regions and with a more

expansive participant population. Furthermore, longitudinal studies could be conducted to examine the long-term effects of extraordinary situations, such as pandemics, in greater detail. Such studies may elucidate the relationship between parental neglect and social media and smartphone addiction with greater precision, thereby contributing to the development of potential intervention methodologies. Furthermore, future research could investigate the potential of parent education programs to prevent such addictions, thereby assisting parents in strengthening their relationships with their children and more effectively managing their digital media use.

## References

- Ayar, D., Bektas, M., Bektas, I., Akdeniz Kudubes, A., Selekoglu Ok, Y., Sal Altan, S., & Celik, I. (2017). The Effect of Adolescents' Internet Addiction on Smartphone Addiction. *Journal of Addictions Nursing, 28*(4), 210–214.
- Bashir, R., Kazmi, F., Khan, S., & Shams, S. (2021). A quantitative correlational study of parental neglect, conduct problems and social media addiction among adolescents. *PalArch's Journal of Archaeology of Egypt/Egyptology, 18*(7), 2600-2609.
- Beyazıt, U., & Bütün Ayhan, A. (2019). The psychometric properties of the Turkish version of the Multidimensional Neglectful Behavior Scale-Parents Form. *Current Psychology, 38*(5), 1121-1130.
- Chen, B., Liu, F., Ding, S., Ying, X., Wang, L., & Wen, Y. (2017). Gender differences in factors associated with smartphone addiction: a cross-sectional study among medical college students. *BMC Psychiatry, 17*, 1-9.
- Chidambaram, V., Shanmugam, K., & Parayitam, S. (2023). Parental neglect and emotional wellbeing among adolescent students from India: social network addiction as a mediator and gender as a moderator. *Behaviour & Information Technology, 42*(7), 869-887.
- Choi, S.W., Kim, D.J., Choi, J.S., Ahn, H., Choi, E.J., Song, W.Y., Kim, S., & Youn, H. (2015). Comparison of risk and protective factors associated with smartphone addiction and Internet addiction. *J Behav Addict, 4*(4), 308-14.
- Davey, A., Nasser, K., & Davey, S. (2020). Gender differential for smart phone addiction and its predictors among adolescents: Assessing relationship with self control via sem approach. *Journal of Indian Association for Child and Adolescent Mental Health, 16*(3), 80-101.
- Fares, J., Fares, M. Y., & Fares, Y. (2017). Musculoskeletal neck pain in children and adolescents: risk factors and complications. *Surgical Neurology International, 8*(72), 1-5.
- Fernandes, B., Nanda Biswas, U., Tan-Mansukhani, R., Vallejo, A., & Essau, C. A. (2020). The impact of COVID-19 lockdown on internet use and escapism in adolescents. *Revista de Psicología Clínica con Niños y Adolescentes, 7*(3), 59–65.
- Freund, R. J., Wilson, W. J., & Sa, P. (2006). *Regression analysis. Statistical modeling of a response variable* (2<sup>nd</sup> Ed.). Elsevier.
- Gao, Q., Zheng, H., Sun, R., & Lu, S. (2022). Parent-adolescent relationships, peer relationships, and adolescent mobile phone addiction: The mediating role of psychological needs satisfaction. *Addictive Behaviors, 129*, 107260.

- Güldal, Ş., Kılıçoğlu, N. A., & Kasapoğlu, F. (2022). Psychological flexibility, coronavirus anxiety, humor and social media addiction during COVID-19 pandemic in Turkey. *International Journal for the Advancement of Counseling, 44*(2), 220–242
- Gümüş, D., Sevim, S., & Kızıl, M. (2023). Social Media Addiction and Adolescents: Relationship Between Social Media and Eating Behaviors During Pandemic. *Addicta: The Turkish Journal on Addictions, 10*(1), 59-66.
- Kaufman Kantor, G., Holt, M., & Straus, M. A. (2003). The Parent-Report Multidimensional Neglectful Behavior Scale. <http://pubpages.unh.edu/~mas2/NS7.pdf>.
- Kulaksızoğlu, A. (2013). *Psychology of adolescence* (15<sup>th</sup> Ed.). Remzi Publishing.
- Kwak, J. Y., Kim, J. Y., & Yoon, Y. W. (2018). Effect of parental neglect on smartphone addiction in adolescents in South Korea. *Child Abuse & Neglect, 77*, 75-84.
- Kwon, M., Lee, J.Y., Won, W.Y., Park, J.W., & Min, J.A. (2013). Development and validation of a smartphone addiction scale (SAS). *Plos One, 8*(2), 1-7.
- Li, S., Wang, Y., Xue, J., Zhao, N., & Zhu, T. (2020). The impact of COVID-19 epidemic declaration on psychological consequences: A study on active Weibo users. *International Journal of Environmental Research and Public Health, 17*(6), 2032.
- Li, J., Zhan, D., Zhou, Y., & Gao, X. (2021). Loneliness and problematic mobile phone use among adolescents during the COVID-19 pandemic: The roles of escape motivation and self-control. *Addictive Behaviors, 118*, 106857.
- Liu, C. H., Lin, S. H., & Pan, Y. C. (2016) Smartphone gaming and frequent use pattern associated with smartphone addiction. *Medicine, 95*(28), e4068.
- Luo, T., Chen, W., & Liao, Y. (2021). Social media use in China before and during COVID-19: Preliminary results from an online retrospective survey. *Journal of Psychiatric Research, 140*, 35-38.
- Marengo, D., Fabris, M. A., Longobardi, C., & Settanni, M. (2022). Smartphone and social media use contributed to individual tendencies towards social media addiction in Italian adolescents during the COVID-19 pandemic. *Addictive Behaviors, 126*, 107204.
- McCoy, M. L., & Keen, S. M. (2014). *Child abuse and neglect*. (2nd Ed.). Psychology Press.
- McDowell, L. N. (2022). Emotional Neglect in Childhood and Attachment Anxiety in Adult Relationships as Predictors of Social Networking Addiction. *Honors Undergraduate Theses*. 1251.
- Morrongiello, B. A., & Cox, A. (2020). Issues in defining and measuring supervisory neglect and conceptualizing prevention. *Child Indicators Research, 13*, 369-385.
- Montag, C., & Elhai, J. D. (2020). Discussing digital technology overuse in children and adolescents during the COVID-19 pandemic and beyond: on the importance of considering affective neuroscience theory. *Addict Behav Rep., 12*, 100313.
- Parlak Sert, H., & Başkale, H. (2023). Students' increased time spent on social media, and their level of coronavirus anxiety during the pandemic, predict increased social media addiction. *Health Information & Libraries Journal, 40*(3), 262-274.
- Peters, J. B., & Salazar, L. F. (2020). The application of social network theory to social media use and addiction. *Journal of Addiction Research & Therapy, 11*(4), 384.

- Rouleau, R. D., Beaugard, C., & Beaudry, V. (2023). A rise in social media use in adolescents during the COVID-19 pandemic: the French validation of the Bergen Social Media Addiction Scale in a Canadian cohort. *BMC Psychology*, 11(1), 92.
- Ruiz-Casaresa M., Trocmé N. & Fallond B. (2012). Supervisory neglect and risk of harm: Evidence from the Canadian Child Welfare System. *Child Abuse & Neglect*, 36, 471–480.
- Şata, M. ve Karip, F. (2017). Turkish culture adaptation of Smartphone Addiction Scale-Short Version for Adolescents. *Cumhuriyet International Journal of Education*, 6(4), 426–440.
- Su, W., Han, X., Yu, H., Wu, Y., & Potenza, M. N. (2020). Do men become addicted to internet gaming and women to social media? A meta-analysis examining gender-related differences in specific internet addiction. *Computers in Human Behavior*, 113, 106480.
- Tabachnick, B. G, & Fidell, L. S. (2013). *Using multivariate statistics*. Pearson.
- Taş, İ. (2017). The study of validity and reliability of the social media addiction scale short form for adolescents. *Online Journal of Technology Addiction & Cyberbullying*, 4(1), 27-40.
- Thiyagarajan, S., & Telegbal, S. V. (2015). Text Neck: Is it a new term for physiotherapist?. *Indian Journal of Medical & Health Sciences*, 2(2), 119.
- Turkish Statistical Institute (2022). Youth in Statistics 2021. <https://data.tuik.gov.tr/>
- van Deursen, A. J., Bolle, C. L., Hegner, S. M., & Kommers, P. A. (2015). Modeling habitual and addictive smartphone behavior: The role of smartphone usage types, emotional intelligence, social stress, self-regulation, age, and gender. *Computers In Human Behavior*, 45, 411-420.
- van Den Eijnden, R.J.J.M., Lemmens, J.S., & Valkenburg, P.M. (2016). The social media disorder scale. *Computer in Human Behavior*, 61, 478-487.
- Wegmann, E., Ostendorf, S., & Brand, M. (2020). Is it beneficial to use social media? The impact of habitual and addictive use on well-being. *Computers in Human Behavior*, 107, 106328.
- Woo, S. (2013). The effects of parental abuse and neglect, and children's peer attachment, on mobile phone dependency. *Family and Environment Research*, 51(6), 583-590.
- Xie, X., Chen, W., Zhu, X., & He, D. (2019). Parents' phubbing increases Adolescents' Mobile phone addiction: Roles of parent-child attachment, deviant peers, and gender. *Children and youth services review*, 105, 104426.
- Yu, L., & Zhou, X. (2024). Social media addiction among Hong Kong adolescents before and after the pandemic: The effects of parenting behaviors. *Computers in Human Behavior*, 108233.