

Self-Esteem, Social Media and Internet Addiction Regarding Adult Individuals

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The aim of current research is to analyze adult individuals' levels of self-esteem, internet and social media addiction. Moreover, adult individuals' levels of self-esteem, social media and internet addiction were investigated according to their employment and marital status, age and gender. In current research, Rosenberg Self-Esteem Test, Young Internet Addiction Test, Social Media Addiction Test for Adults, Descriptive Information Form, which were prepared by researchers were conducted for collecting necessary data for this research from the participants of 528 adult individuals. The results of the current research indicated that there are significantly negative relationships among adults' levels of internet, social media addiction and the self-esteem; the higher their levels of self-esteem the lower their levels of social media and internet addiction. It was concluded that the adults' addiction levels of social media and internet significantly predicted their self-esteem level. In addition, there exist significant differences regarding adults' levels of social media and internet addiction, and self-esteem according to working and marital status and age. It was found that there is insignificant difference with regard to gender.

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Keywords: Internet addiction, self-esteem, social media addiction, adult individuals

INTRODUCTION

In the information age in which we live, technological changes are taking place at a dizzying pace. Many of these changes are undoubtedly related to the computer, social media and the internet. The internet is a constantly evolving technology which enables billions of people and millions of technological products to interact throughout the world. The existence of the internet and social platforms is extremely important because they enable information and communication to be established and maintained. Social media, which emerged as result of the advances in the internet in the 2000s, are used by people predominantly as a communication tool (Tekin, 2019).

Among the several benefits of social media and the internet which have become widespread are the ease of obtaining information, conducting research and communicating freely with others. Even so, the fact cannot be ignored that despite all the possible benefits, there are also negative effects. An example of the internet's negative effects on people is that it causes addiction (Eroglu, 2014). In general terms, addiction to the internet is regarded as the inability of people to control their usage of the internet and to use it excessively (Arisoy, 2009). It has been stated that the internet sometimes gets out of the control of the individual user, and when this happens, the person's functionality in many areas of life is negatively affected (Beard, 2005).

Interest in addiction to the internet has increased in parallel with the ease of computer usage and access to the internet (Shaw & Black, 2008). The definition of internet addiction includes the excessive use of the internet by people in an uncontrollable way, in that they are thinking of being on the internet even when internet access is not available, and showing different emotional reactions when they cannot use the internet, such as nervousness and anger (Young & De Abreu, 2011). The symptoms of internet addiction include high tolerance, preoccupation, dysfunction, loss of control, withdrawal and decreased ability (Craparo et al., 2014). Young (1999) stated that it is important to take into account information about the addictive behaviors (use of

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drugs, alcohol or various foods) in the past of individuals in order to correctly diagnose that their internet use is at the level of addiction. People who use the internet at the level of addiction engage in behaviors such as lying about the time spent on the internet, feeling guilty, trying to shorten the time they spend on the internet, and using the internet when they have bad feelings and when they are alone or anxious, to get rid of these moods (Balci & Gulnar, 2013).

The social media emerged with the development of the internet and provide both personal and collective communication opportunities, and they have become one of the channels which people use regularly, with their increasing use in people's lives and the various opportunities which they offer, such as making comments about others (Balci et al., 2019). It can be expected, therefore, that problems such as social media addiction will arise because of people, regardless of age, spending excessive time on social media platforms. In addition, this excessive time spent on social media platforms affects the lives of such people in personal, academic and professional ways, making it difficult for them to fulfill many responsibilities (Sahin & Yagci, 2017). Various psychological, social and physical problems can occur in these people as well as health-threatening behavior (Chegeni et al., 2021).

Addiction to social media (Tutgun Unal, 2015) is defined as a psychological problem which develops because of behavioral, emotional and mental processes which cause several problems in people's lives. The symptoms of social media addiction include using social media more and more frequently, lying about the duration and amount of usage, being constantly busy with social media and related elements for avoiding problems, and exhibiting continuous use despite knowing its negative consequences (Aydın et al., 2021; Yukay-Yuksel et al., 2020).

Since internet and social media addiction can affect behavioral health, policy makers need to implement preventative and educational practices to develop the skills and knowledge of individuals in different societies (Chegeni et al., 2021). Some companies and application owners see excessive use of social media as a behavioral reaction rather than an addiction or disorder. They also see individuals using social media and internet excessively as a commercial business area (Kang et al., 2013).

People with low self-esteem, who are concerned about appearing unworthy when they are outside in a social environment, exhibit avoidance behavior in such an environment. Such people choose ways to meet their need to communicate with others by hiding in the internet and the various channels which it provides, and thus away from society. This behavior could be a reason for the increase in the problematic internet usage (Halkacioğlu, 2019).

Self-esteem contains psychological qualities, actions and life goals, evaluating abilities and opportunities to achieve them. It is known that people's self-esteem level is influenced by the feedback given by their environment, as well as someone's thoughts about her/himself (Twenge & Campell, 2002). When self-esteem is considered in general, it can be seen as a personality variable which makes these feelings visible. If someone has good feelings about her/himself, it is likely that the level of self-esteem is high (Tuna, 2018).

Rosenberg (1965) said that the interaction between a person's behavior and the way in which that person perceives and judges her/his own behavior reflects the individual's self-esteem. This explanation means that the self-esteem levels of individuals are low if they evaluate themselves negatively but high if they evaluate themselves positively. Moreover, people's self-esteem emerges as result of all the negative or positive feelings they attribute to their self. High self-esteem predicts success and comfort in areas of life such as relationships, work and health (Orth & Robins, 2014). It has been stated that concepts such as perceived life satisfaction, problem-solving skills, resilience, secure attachment, self-efficacy and empathy are protective factors regarding self-esteem and that risk factors for self-esteem are stress, loneliness, depression, anxiety, insecure attachment style, childhood traumas and social appearance anxiety (Seki & Dilmac, 2020).

Several studies have shown that internet addiction and uncontrolled and excessive usage of social media tools are associated with psychological and social problems in people's lives (Younes et al., 2016). For instance, Brunborg et al. (2014) and Young (2009) found that internet addiction was positively correlated with depression. Similarly, individuals who have internet addiction display more attention deficit and hyperactivity symptoms than those who do not (Ko et al., 2012; Panagiotidi & Overton, 2018; You et al., 2004). Moreover, internet addiction and life satisfaction (Ay & Ozgun-Basibuyuk, 2020; Sahin, 2016; Tasliyan et al., 2018; Yalcin-Cinar & Mutlu, 2019) and social media addiction concepts have been analysed and found to be associated (Yukay-Yuksel et al., 2020). In addition, self-efficacy (Aslan, 2021), forgiveness (Yukay-Yuksel et al.,

2020) and social media addiction (Yuksel-Sahin & Oztoprak, 2019) are examples of concepts which have been found to be linked to self-esteem.

In order to encourage correct internet use and protect people from its harmful effects and to increase public awareness of its harmful effects, education, skills training, behavior change programs and behavior change practices are required (Chung et al., 2019). Wölfling et al. (2019) stated that the effect of treatment can be more effective when cognitive behavioral therapy and pharmacotherapy are combined for the treatment of internet addiction.

With the increasing use of digital tools in Turkey and around the world, it has been seen that excessive usage of social media and the internet has been increasing recently due to the Covid-19 pandemic. Since uncontrolled usage of social media and internet can lead to addiction, it is thought that early recognition of the effects of such problematic usage for people of different ages and taking the necessary precautions will make significant contributions to the health and quality of people's lives by implementing awareness-raising activities by means of counseling and guidance services for individuals (Balci, 2017; 2019).

Although there have been studies of the psycho-social and demographic variables associated with self-esteem, social media addiction and internet addiction among adolescents and young adults reported in the literature, no study examining adults' self-esteem, social media addiction and internet addiction together could be found in the literature search. In current research, it is thought that examining adults' levels of internet addiction, self-esteem and social media addiction will contribute to the literature and suggest areas for future research. Considering these reasons for the current study, social media addiction, self-esteem and the internet addiction levels of adult individuals are examined together.

The purpose of the research

The current study was designed to analyse the self-esteem level and the social media and internet addiction levels of adults and whether these variables differ according to employment status, marital status, gender and age. In line with this purpose, the following research questions were addressed:

1. What are the self-esteem and social media level and internet addiction level of adults?
2. Do the self-esteem, social media and internet addiction levels of adult individuals differ with regard to employment status, marital status, gender and age?
3. Is there a significant relationship between adults' level of self-esteem and their social media and internet addictions?

METHOD

Research model

The study was designed to analyse the self-esteem and the social media addiction levels and internet addiction levels of adults, and whether these concepts differ according to various demographic variables; a descriptive research format was employed and was designed with regard to the correlational survey model. Descriptive research involves studies conducted with large groups in which the views of the people in the group regarding a particular concept are sought and these cases are defined as precisely and carefully as possible (Buyukozturk et al., 2020; Karasar, 2016). The correlational survey model examines the existence, direction and level of the correlation between two or more variables (Karasar, 2016).

Participants

The participants in the study comprised people between the ages of 22 and 60, residing in Turkey between November 2021 and February 2022, who had active internet use. The participants were 528 volunteers between the ages of 22 and 60 who were recruited by means of the convenience sampling technique because of the risk posed by the deadly Covid-19 pandemic. In convenience sampling, the participants are volunteers who are easy to access. In the current study, this prevented not only the loss of time, money and labor but also the risks imposed by the pandemic. The researcher was able to recruit a sample starting from the most accessible participants until an appropriate group size was achieved (Buyukozturk et al., 2020). The participants' descriptive information is presented in Table 1.

Table 1. Participants' descriptive information

| <i>Variables</i> | <i>Mean</i> | <i>Sd</i> |
|------------------|-------------|-----------|
| Age | 35.31 | 10.45 |
| | <i>N</i> | <i>%</i> |
| Gender | | |
| Female | 286 | 54.17 |
| Male | 242 | 45.83 |
| Marital status | | |
| Single | 215 | 40.72 |
| Married | 313 | 59.28 |
| Education level | | |
| Primary | 39 | 7.39 |
| High school | 91 | 17.23 |
| University | 349 | 66.10 |
| Postgraduate | 49 | 9.28 |
| Working status | | |
| Unemployed | 156 | 29.55 |
| Employed | 372 | 70.45 |

As Table 1 shows, the participants' age mean was 35.31 ($S_s = 10.45$, min. = 22.00, max. = 62.00); 286 (54.17%) were female and 242 (45.83%) were male; 215 (40.72%) of them were single and 313 (59.28%) were married; and 372 (70.45%) of the participants were working and 156 (29.55%) were not.

Data Collection Tools

For collecting the data for the research, Young's Internet Addiction Test (YIAT), the Social Media Addiction Test for Adults (SMATA), the Rosenberg Self-Esteem Test (RSET) and a specially devised Descriptive Information Form were employed.

Young's internet addiction test (YIAT)

Young (1999) prepared the YIAT measurement tool as 20 items and it was translated into the Turkish language by Balta and Horzum (2008). Pawlikowski et al. (2013) developed a short form of the test. There are twelve items in the Turkish YIAT and it does not contain any reverse-scored items. It is known that the scores obtained from the test range between 12 and 60 (Kutlu et al., 2016). This scale has no sub-dimensions. In order to test the validity level of the YIAT, confirmatory factor analysis and exploratory factor analysis were applied and it was determined by Kutlu et al. (2016) that the factor loads of its items were between 0.33 and 0.67 for university students and 0.49 and 0.71 for adolescent individuals. Additionally, the items' total correlation values of scale were found to be between 0.36 and 0.62 for university students. The correlation coefficients of test-retest reliability were calculated to be 0.93 for university students and 0.86 for adolescents. The Cronbach Alpha result obtained by the researcher based on the data in the current study was determined to be $\alpha = .90$. It was therefore decided that the scale was reliable (Buyukozturk, 2011). Three examples of items in the YIAT are 'How often do you stay online longer than you planned?'; 'How often do you get sleep deprived because of the time you spend on the internet at night?'; and 'How often do you try and fail to reduce the time you spend online?'

Social media addiction test for adults (SMATA)

Şahin and Yağcı (2017) devised the SMATA measurement tool as a five-point Likert-type test prepared to collect data about levels of addiction to social media in adults. It has twenty items. Its sub-dimensions are virtual tolerance (eleven items) and virtual communication (nine items). Its scores therefore range between 20 and 100. An increase in the score obtained from the test shows an increase in social media addiction. Reverse coding is done for two items (items 5 and 11). In order to test the validity level of SMATA, confirmatory factor analysis and exploratory factor analysis were applied and it was reported by Şahin and Yağcı (2017) that the factor loads of its items were between 0.61 and 0.87. Additionally, the items' total correlation values of scale were found to be between 0.36 and 0.62 for university students. The internal consistency values of the scale and its subscales were calculated to be .94 for the total scale, .92 for the virtual tolerance sub-dimension and .91 for the virtual communication sub-dimension. The correlation coefficients of the test-retest reliability of the scale were found to be 0.93 for the total scale, 0.91 for the virtual tolerance sub-dimension and 0.90 for the

virtual communication sub-dimension. The exploratory and confirmatory factor analyses findings of the SMATA were therefore found to be at an acceptable level (Şahin & Yağcı, 2017). The Cronbach alpha results obtained by the researcher for the data in the current study was found to be $\alpha=0.90$, with virtual tolerance at $\alpha=0.80$ and virtual communication at $\alpha=.85$ (Tecimer, 2022). It was therefore decided that the scale was reliable (Buyukozturk, 2011). Three examples of items in the SMATA are 'Being on social media relaxes me when I feel unhappy'; 'I notice that my productivity has decreased because of social media'; and 'The first thing I do when I wake up in the morning is to use social media'.

Rosenberg self-esteem test (RSET)

In this study, the RSET developed by Rosenberg (1965) and whose reliability and validity studies for adults in Turkey were conducted by Korkmaz (1996) was used. It is four-point Likert-type test containing ten items. The grading system ranges from 'Totally appropriate' to 'Not at all suitable'. Scores from this test range between 10 and 40, and the higher the scores the higher the self-esteem. As a result of internal consistency reliability analyses performed on 63 items in the twelve sub-dimensions of the scale by Korkmaz (1996), it was observed that the alpha values ranged from 0.07 to 0.70. The concurrent validity level of the criterion-related validity of the scale was examined with the Coopersmith Self-Esteem Inventory and the validity coefficient between the total scores of the two scales was found to be -0.54. The Cronbach Alpha value obtained by the researcher for the data in the current study was $\alpha=0.84$ (Tecimer, 2022). It was therefore decided that the scale was reliable (Buyukozturk, 2011). Three examples of items in the RSET are 'Do you ever have annoying headaches?'; 'Have you been biting your nails right recently?' and 'Do you dream about what kind of person you will be in the future?'.

Descriptive information form

A descriptive information form was prepared by the researchers for collecting the required data regarding the employment status, marital status, gender and age of the participants and to provide explanatory information about the subject and purpose of the research.

Analysis of the data

In order to use the YIAT, SMATA and RSET for the data collection, permission was requested and received by email from the researchers who developed these scales. The approval of the university's ethics committee was also given for this research, indicating that it was fully compliant with the principles of scientific research ethics (Kırıkkale University; Approval Number/ID: 16/08/2021-8). An analysis program was conducted for statistical data analysis. The analysis was performed on data obtained from the 528 participants and before performing the statistical analyses and examining the data's distribution of normality, the skewness and kurtosis values were examined after the normality analysis was performed. In the current study, the skewness and kurtosis values were found to be between -0.38 and 1.33. According to Şencan and Fidan (2020), values of skewness and kurtosis between of -1.5 and +1.5 indicate that the data group has a normal distribution. Parametric analyses were therefore carried out due to the data's distribution of normality.

A t-test for independent samples was applied to test the differences between the mean scores of RSET, SMATA and YIAT of the categorical variables consisting of two groups; and to test the differences between the mean scores of the variables with more than two subgroups regarding RSET, SMAS and YIAT, an ANOVA was applied. Pearson correlation analysis was performed to determine any correlations between age, RSET, SMATA and YIAT as continuous variables. A level of the significance of 0.05 was taken into account for the data analysis.

FINDINGS

The findings of the analyses carried out within the research scope and comments regarding these findings are given in this part of the paper.

Findings regarding the participants' self-esteem and their addiction levels to the internet and to social media

The lowest and highest scores, arithmetical means and standard deviations (SD) of the participants from the self-esteem test and the internet and social media addiction tests are presented in Table 2.

Table 2. Values of the participants' self-esteem and their addiction levels to the internet and social media

| <i>Variables</i> | <i>N</i> | <i>Min.</i> | <i>Max.</i> | <i>Mean</i> | <i>SD</i> | <i>Skew.</i> | <i>Kurto.</i> |
|-------------------|----------|-------------|-------------|-------------|-----------|--------------|---------------|
| YIAT total | 528 | 12.00 | 60.00 | 23.51 | 8.59 | 1.07 | 1.33 |
| SMATA total | 528 | 20.00 | 89.00 | 48.34 | 13.34 | 0.39 | -0.23 |
| Virtual tolerance | 528 | 11.00 | 53.00 | 27.82 | 7.77 | 0.32 | -0.09 |
| Virtual commun. | 528 | 9.00 | 45.00 | 20.52 | 7.05 | 0.63 | 0.27 |
| RSET total | 528 | 10.00 | 40.00 | 31.00 | 5.12 | -0.38 | 0.24 |

Table 2 shows that the total scores in the internet addiction test applied to collect data on the internet addiction levels of the participants varied between 12 and 60. Table 2 also shows that the total mean value of internet addiction was 23.51 (SD=8.59). Considering that the scale's highest score is 60 and its lowest score is 12, this means that the participants' addiction level to the internet was not at a high level.

Table 2 shows that the total test scores in the social media addiction test which was applied to collect data on social media addiction varied between 20 and 89. The virtual tolerance sub-dimension mean score was 27.82 (SD = 7.77, min = 11.00, max. = 53.00) and the mean score for the sub-dimension of virtual communication was 20.52 (SD = 7.05, min = 9.00, max. = 45.00). The mean value of the social media addiction total score was 48.34 (SD=13.34). Considering that the scale's possible scores range between 20 and 100, it can be seen that the participants' addiction level to social media was not at a high level.

Table 2 also shows that the scores on self-esteem levels varied between 10 and 40, and the mean of the total self-esteem value was 31 (SD = 5.12). Considering that its possible highest score is 40, this means that the self-esteem levels of the participants were at a high level.

Findings regarding the participants' internet addiction by demographic variables

The respondents' levels of addiction to the internet and social media and their self-esteem level were examined with regard to employment status, marital status, age and gender and the findings are set out in Table 3.

Table 3. Values with regard to the correlation between the participants' age and their levels of self-esteem, social media addiction and internet addiction

| | <i>Age</i> | <i>SMATA</i> | <i>Virtual tolerance</i> | <i>Virtual communication</i> | <i>YIAT total</i> | <i>RSET</i> |
|-----------------------|------------|--------------|--------------------------|------------------------------|-------------------|-------------|
| Age | - | | | | | |
| YIAT total | -0.26** | | | | - | |
| SMATA Total | -0.21** | - | | | | |
| Virtual tolerance | -0.26** | 0.91** | - | | | |
| Virtual Communication | -0.10** | 0.89** | 0.62** | - | | |
| RSET total | 0.18** | | | | | |

** p<0.01

The values set out in Table 3 show that there were significantly negative correlations between the participants' age and their internet addiction ($r = -0.26$, $p < 0.01$) and their social media addiction ($r = -0.21$, $p < 0.01$); between their age and the virtual tolerance sub-dimension ($r = -0.26$, $p < 0.01$) and between their age and the virtual communication sub-dimension ($r = -0.10$, $p < 0.01$). This means that as their age increases, their internet addiction decreases, their social media addiction decreases and its virtual tolerance and virtual communication sub-dimension levels also decrease.

Table 3 shows that there was a significantly positive correlation between the participants' age and their self-esteem levels ($r = 0.18, p < 0.01$). This means that as their age increases, their self-esteem levels also increase.

Table 4. Results of a t-test on the internet addiction levels of the participants by gender, marital status and employment status

| <i>YIAT</i> | <i>Mean</i> | <i>SD</i> | <i>t</i> | <i>P</i> |
|----------------|-------------|-----------|----------|----------|
| Gender | | | -1.17 | 0.244 |
| Female | 23.10 | 8.03 | | |
| Male | 23.98 | 9.20 | | |
| Marital status | | | 5.41 | <.001** |
| Single | 25.97 | 9.32 | | |
| Married | 21.81 | 7.62 | | |
| Working status | | | 3.98 | <.001** |
| Unemployed | 25.91 | 9.34 | | |
| Employed | 22.50 | 8.06 | | |

The t-test values presented in Table 4 show that there was an insignificant gender difference in the participants' internet addiction levels [$t(526) = -1.17, p = 0.244$]. This finding means that their internet addiction levels did not differ between male and female respondents.

Significant differences were identified, however, with regard to the effect of marital status [$t(397.81) = 5.41, p < .001, d = 0.49$] and employment status [$t(256.55) = 3.98, p < .001$] on the participants' internet addiction levels. These findings show that the internet addiction mean score of single adults (Mean = 25.97, SD = 9.32) was significantly higher than that of married respondents (Mean = 21.81, SD = 7.62) and that the internet addiction mean score of non-working adults (Mean = 25.91, SD = 9.34) was significantly higher than that of working adults (Mean = 22.50, SD = 8.06). Accordingly, the internet addiction levels of single and non-working adults were significantly higher than those of married and working respondents.

Findings about addiction to social media according to the demographic variables

Table 5 presents the findings from the analysis of the participants' addiction level to social media with regard to employment status, marital status and gender.

Table 5. T-test results of the participants' social media addiction in terms of employment status, marital status and gender

| <i>Variables</i> | <i>SMATA</i> | | <i>N</i> | <i>Mean</i> | <i>SD</i> | <i>t</i> | <i>P</i> |
|------------------|-----------------------|------------|----------|-------------|-----------|----------|----------|
| Gender | SMATA (Total) | Female | 286 | 48.43 | 12.99 | 0.18 | 0.859 |
| | | Male | 242 | 48.22 | 13.76 | | |
| | virtual tolerance | Female | 286 | 28.23 | 8.05 | 1.31 | 0.191 |
| | | Male | 242 | 27.34 | 7.41 | | |
| | virtual communication | Female | 286 | 20.20 | 6.58 | -1.09 | 0.274 |
| | | Male | 242 | 20.88 | 7.56 | | |
| Marital status | SMATA (Total) | Unmarried | 215 | 51.00 | 13.14 | 3.85 | < .001** |
| | | Married | 313 | 46.50 | 13.18 | | |
| | virtual tolerance | Unmarried | 215 | 29.94 | 7.86 | 5.34 | < .001** |
| | | Married | 313 | 26.36 | 7.37 | | |
| | virtual communication | Unmarried | 215 | 21.06 | 6.89 | 1.46 | 0.144 |
| | | Married | 313 | 7.14 | 1.46 | | |
| Working status | SMATA (Toplam) | Employed | 372 | 47.12 | 13.05 | 3.25 | 0.001** |
| | | Unemployed | 156 | 51.22 | 13.62 | | |
| | virtual tolerance | Employed | 372 | 27.00 | 7.47 | 3.79 | < .001** |
| | | Unemployed | 156 | 29.78 | 8.13 | | |
| | virtual communication | Employed | 372 | 20.12 | 6.87 | 1.98 | 0.049* |
| | | Unemployed | 156 | 21.45 | 7.39 | | |

The t-test results set out in Table 5 show that the addiction levels to social media [$t(526) = 0.18, p = 0.859$] and its virtual tolerance mean scores [$t(526) = 1.31, p = 0.191$] and the virtual communication sub-dimension mean scores [$t(481.79) = -1.09, p = 0.274$] of the participants did not differ significantly by gender. Accordingly, these findings mean that there were insignificant differences between the level of addiction to social media and its virtual tolerance and virtual communication sub-dimensions between male and female participants.

Table 5 also shows that significant differences were found between the addiction levels to social media [$t(526) = 3.85, p < .001$] and its virtual tolerance [$t(526) = 5.34, p < .001$] sub-dimension with regard to the participants' marital status. It can be seen that the total mean scores on social media addiction (Mean = 51.00, SD = 13.14) and virtual tolerance level (Mean = 29.94, SD = 7.86) of the single adults was significantly higher than that of the married adults (Mean = 46.50, SD = 13.18); (Mean = 26.36, SD = 7.37). Accordingly, these findings show that single people's addiction to social media and its virtual tolerance sub-dimension level were significantly higher than those of married adults.

In addition, there was no significant difference between the mean scores of the social media addiction virtual communication sub-dimension according to marital status ($p > 0.05$). In relation to this, it was found that the participants' level of addiction to virtual communication did not differ with regard to their marital status.

The findings in Table 5 also show that the participants' social media addiction [$t(526) = 3.25, p = 0.001$], its virtual tolerance [$t(526) = 3.79, p = 0.001$] and its virtual communication [$t(526) = 1.98, p = 0.049$] sub-dimension levels had a significant difference with regard to their working status. Moreover, the total mean score on social media addiction (Mean = 51.22, SD = 13.62), its virtual tolerance (Mean = 29.78, SD = 8.13) and its virtual communication (Mean = 21.45, SD = 7.39) sub-dimensions of the non-working adults was significantly higher than that of the working adults (Mean = 47.12, SD = 13.05), (Mean = 27.00, SD = 7.47), (Mean = 20.12, SD = 6.87). Accordingly, these findings mean that the non-working participants compared with the working participants had significantly higher levels of social media and its virtual tolerance and virtual communication sub-dimensions.

Findings concerning the participants' level of self-esteem with regard to demographic variables

The respondents' self-esteem levels are given in Table 6 with regard to marital status, gender and employment status.

Table 6. T-test results of the participants' self-esteem according to gender, marital status and employment status

| <i>RSAT</i> | <i>N</i> | <i>Mean</i> | <i>SD</i> | <i>t</i> | <i>P</i> |
|-------------------|----------|-------------|-----------|----------|----------|
| Gender | | | | 1.30 | 0.195 |
| Female | 286 | 31.27 | 5.36 | | |
| Male | 242 | 30.69 | 4.80 | | |
| Marital status | | | | -2.85 | 0.005** |
| Unmarried | 215 | 30.22 | 5.57 | | |
| Married | 313 | 31.54 | 4.71 | | |
| Employment status | | | | -4.55 | < .001** |
| Unemployed | 156 | 29.33 | 5.81 | | |
| Employed | 372 | 31.71 | 4.63 | | |

** $p < 0.01$

The t-test results in Table 6 show that there were no significant differences in the self-esteem levels of the participants in terms of their gender [$t(526) = 1.30, p = 0.195$]. This means that the self-esteem levels did not differ significantly between the male and the female respondents.

The findings in Table 6 also show that the self-esteem levels of the participants did differ significantly according to marital status [$t(408.57) = -2.85, p = 0.005, d = 0.26$] and working status [$t(241.37) = -4.55, p < .001$]. This means that the self-esteem mean scores of the married adults (Mean = 31.54, SD = 4.71) and the working adults (Mean = 31.71, SD = 4.63) were significantly higher than those of single adults (Mean = 30.22, SD = 5.57) and non-working adults (Mean = 29.33, SD = 5.81). These findings mean that the self-esteem levels of married and working adults were significantly higher than those of single and non-working adults.

Findings regarding correlations between the participants' self-esteem and their social media and internet addictions

The findings from the Pearson Correlation analyses applied to investigate the relationships between self-esteem, internet addiction and social media addiction and its sub-dimensions are given in Table 7.

Table 7. Results of the Pearson Correlation analyses of the relationships between the participants' levels of self-esteem and their internet and social media addiction

| | <i>RSET</i> | <i>SMATA</i> | <i>Virtual tolerance</i> | <i>Virtual communication</i> | <i>YİAT</i> |
|------------------------------|-------------|--------------|--------------------------|------------------------------|-------------|
| <i>RSET</i> | - | | | | |
| <i>SMATA</i> | 0.36** | - | | | 0.62** |
| <i>Virtual tolerance</i> | 0.41** | 0.91** | - | | 0.62** |
| <i>Virtual communication</i> | 0.24** | 0.89** | 0.62** | - | 0.49** |
| <i>YİAT</i> | 0.46** | | | | - |

** p<0.01

The results set out in Table 7 show that there were significantly negative relationships between the participants' self-esteem mean scores and those of their social media addiction ($r = -0.36$, $p < 0.01$), and between their self-esteem mean scores and those of the social media addiction virtual tolerance sub-dimension ($r = -0.41$, $p < 0.01$), and also between their self-esteem mean scores and those of the virtual communication sub-dimension ($r = -0.24$, $p < 0.01$). These findings show that as their levels of self-esteem increased, their levels of addiction to social media and the virtual tolerance and virtual communication sub-dimensions both decreased.

The results set out in Table 7 show that there was a significantly negative relationship between the participants' mean scores of self-esteem and their mean scores of internet addiction ($r = -0.46$, $p < 0.01$). This means that when their self-esteem level increased, their internet addiction level decreased.

The findings in Table 7 also show that the means of the participants' internet addiction and their social media addiction total scores ($r = 0.62$, $p < 0.01$); the mean of their internet addiction and their social media addiction virtual tolerance sub-dimension ($r = 0.62$, $p < 0.01$) and their means of internet addiction and social media addiction virtual communication sub-dimension ($r = 0.49$, $p < 0.01$) were significantly and positively correlated. Accordingly, these findings indicate that as the participants' levels of addiction to the internet increased, their levels of addiction to social media and their levels of the virtual tolerance and virtual communication sub-dimensions also increased.

DISCUSSION

The findings showed that the participants' levels of internet addiction and of social media addiction were low. This supports the findings of several studies in the literature which had concluded that adult individuals' internet addiction is low (Aslan, 2011; Avsar, 2020; Aydın & Sulak, 2015; Servidio, 2019; Yılmaz et al., 2022) and that their social media addiction levels are low (Aktan, 2018; Sagar, 2019). However, studies which have shown that adult individuals have high internet addiction are also noteworthy (Batigun & Kilic, 2011; Cheng & Li, 2014; Chia et al., 2020). It is thought that these results are related to the fact that adults reach a particular level of awareness as they get older.

The findings showed that the participants' levels of self-esteem were higher than the average of their self-esteem scores. Since the research sample consisted entirely of adults, it is thought that adults have reached a particular level of consciousness. In relation to this, it can be said that this result is expected. It was observed in the literature review that individuals' self-esteem levels have not been studied separately but have often been examined together with another variable. For instance, the correlations between self-esteem and narcissistic personality (Doganer, 2014; Sahin & Kumcagiz 2017), social appearance anxiety (Kılıc & Karakus, 2016) and substance abuse awareness (Bekircan et al., 2022) have been previously analysed. In the explanations regarding the application of the self-esteem scale, a score limit for high and low self-esteem levels was not specified. For this reason, discussion was made by considering the average values of the participants' scores.

The findings showed that the ages of the participants were significantly and negatively related to their levels of internet addiction. This finding indicates that as the age of adults increases, their internet addiction levels decrease. Hassan et al. (2020) reported similar results. However, several studies have reported that there is no significant relationship between adults' internet addiction levels and their age (Babaarslan, 2021;

Eryilmaz et al., 2020; Tel & Koksalan, 2009). It is thought that the differences between these results are related to the increase in awareness and control over behavior of each person as their age progresses.

The findings showed that there were no significant differences regarding the internet addiction levels between male and female participants. This supports the results of several studies reported in the literature (Babaarslan, 2021; Cao et al., 2020; Cevik Saldıran 2021; Telkok-Sen, 2015; Tran et al., 2017). However, there are other studies (Akdag et al., 2014; Canan et al., 2014; Sahin 2016) which reported that adults showed significant differences in their level of internet addiction according to gender. For example, Tasliyan et al. (2018) found that the males' internet addiction levels were higher than those of females, whereas Kafalat-Cat et al. (2021) reported that females' internet addiction levels were higher than those of males.

The findings showed that the participants' levels of internet addiction were significantly different with regard to their marital status, and that single adults' levels of internet addiction were significantly higher than those of married people. Several studies in the literature have reported similar results (Bolukbas, 2003; Sancar, 2017). However, Aslan and Aylaz, (2014) stated that there was no significant difference regarding adult individuals' level of internet addiction with regard to their marital status.

The findings showed that the non-working participants' levels of internet addiction were significantly higher than those of working people. It can be said that these findings are related to the fact that individuals who do not work in any job have more spare time and might use the internet excessively because of their spare time. Several studies in the literature have reported similar results (Kim et al., 2017; Park et al., 2017).

The findings of this study indicated that the ages of adults are significantly and negatively correlated with their social media addiction levels, and with the virtual tolerance and virtual communication of the social media addiction sub-dimensions. This finding shows that as the age of adult individuals increases, their levels of social media addiction decrease. Similar results have been reported by Aksu and Karadag, (2021), Uslu, (2021) and Yukay-Yüksel et al., (2020). These findings can be related to the fact that social media are used more by younger adults. Since the age variable was not grouped while collecting the data, the analysis was performed as a continuous variable instead of a categorical variable. For this reason, no comparisons were made between age groups.

The findings showed that the male participants' levels of social media addiction were not significantly different from those of the female participants. Similar results were seen in the literature review (Aksu & Karadag, 2021; Balcı et al., 2020; Duman, 2021; Guney & Tastepe, 2020; Yilmazsoy & Kahraman, 2017). On the other hand, several previous studies found that males' level of social media addiction was higher than that of females (Shaw & Black, 2008; Uslu, 2021). These different findings could be related to the use of social media by males and females for different reasons.

The findings of the current study indicated that meaningful differences exist regarding the levels of social media addiction and its virtual tolerance sub-dimension in terms of marital status, but there was no significant difference with their virtual communication sub-dimension. Accordingly, the virtual tolerance levels of single adults compared to married adults were found to be significantly higher. Studies reported in the literature have reached similar results (Duman, 2021; Uslu, 2021; Yukay-Yuksel et al., 2020). This finding could be associated with the fact that single people compared with married people have fewer responsibilities in terms of family life.

The findings showed that the participants' levels of social media addiction and its virtual tolerance and virtual communication sub-dimensions were significantly different with regard to their working status, and that the social media addiction levels of non-working adults were significantly higher than those of the working adults. Studies in the literature have reported similar results (Aydın et al., 2021; Duman, 2021; Uslu, 2021). This finding could be due to the fact that unemployed adults have more spare time to engage in social media than working adults.

The findings showed that the participants' age and their levels of self-esteem were positively and significantly correlated. This means that as the ages of the participants increased, their self-esteem levels decreased. Similar results were reported by Katra (2021), but it was reported in several studies that adults' age and their levels of self-esteem were negatively and significantly correlated (Aslan, 2021; Dogucu & Baser, 2021; Gorkem, 2020; Katra, 2021; Yazicioglu & Ulagli, 2020).

With regard to the results obtained in the current study, the levels of self-esteem did not show any significant difference between males and females. In the literature, there are studies (Choi et al., 2019; Yazicioglu & Ulagli, 2020; Yukay Yuksel et al., 2020) which reported results which support this finding, but

several studies found that there were significant gender differences regarding individuals' levels of self-esteem. For instance, Nadaletti et al. (2019) found that female adults can develop a lower level of self-esteem than male adults. On the other hand, Kim et al. (2020) found that males had lower self-esteem than females.

It was found in the current study that the self-esteem levels of married adults were significantly higher than those of single adults. Similar results were reported by several studies (Guler & Sezgin, 2020; Ilter & Ovayolu, 2022; Katra, 2021). This finding could be associated with the fact that self-esteem is formed as result of internal experiences rather than external sources. However, there are studies in the literature (Yazicioglu & Ulagli, 2020) which found no significant differences in adults' level of self-esteem with regard to marital status.

It was found in the current study that working people had higher levels of self-esteem than non-working adults. A similar finding was reported by Nadaletti et al. (2019). This result could be due to the higher economic income of employed people compared with non-working adults.

The findings showed that the participants' levels of self-esteem were negatively and significantly related to addiction to social media and that as the adults' levels of self-esteem increased, their level of addiction to social media decreased. This supports similar findings in previous studies (Błachnio et al., 2016; Hawi & Samaha, 2017; Zhao et al., 2022). Also, this result seems consistent with that of Andreassen et al. (2017) that high self-esteem levels are to be protective factor against addictive behaviors.

The current study has shown that the participants' levels of addiction to the internet were significantly and positively correlated with their addiction to social media, and that as their internet addiction levels increase, their social media addiction levels also increase. Considering that it is necessary to have an internet connection to be able to access social media applications, it can be said that a positive correlation between adults' levels of addiction to the internet and to social media is an expected result. It was explained earlier that previous studies have not examined the levels of internet addiction and social media addiction together, but mostly separately with other variables. Due to this fact, this current study result can make a contribution to the literature.

It was found in the current study that the participants' levels of internet addiction were positively and significantly correlated to their levels of addiction to social media and that as their levels of internet addiction increase, their addiction levels to social media decrease. Moreover, there were significantly positive relationships between the participants' levels of addiction to the internet and their levels of virtual communication and virtual tolerance, which are sub-dimensions of social media addiction.

In addition, it can be seen that the use of the internet and social media has been increasing around the world recently as an effect of the Covid-19 pandemic. Moreover, it is undeniable that uncontrolled internet and social media use will have negative effects on individuals of all age groups in every aspect of their lives. For these reasons, there is a need for more studies on the effect of this rapid digitalization on people in different age groups, including adult individuals. Considering that adult individuals are being used as a model for younger people and adolescents, this rapid digitalization might be a risky situation for younger people and adolescents by causing health problems and internet and social media addiction.

As has been reported and discussed above, there was a significant relationship between the level of internet addiction and the level of social media addiction of adult individuals and self-esteem. Examining the factors affecting the internet and social media addiction levels of adults who are thought to be in the risk group of internet addiction and social media addiction in the light of scientific research can contribute to preventive and developmental intervention services for adults with high levels of internet and social media addiction. Moreover, self-esteem development and psycho-education programs and training for adults could empower them against problematic usage of the internet and social media.

CONCLUSION and SUGGESTIONS

It was determined in the current study that adults have low levels of internet addiction and social media addiction, virtual communication and virtual tolerance, and high self-esteem levels, and these three variables did not show differences with regard to gender, and as adults grow older, their levels of addiction to the internet and to social media decrease and their levels of self-esteem increase. In addition, compared with married people, single adults have higher levels of addiction levels to the internet and to social media and lower levels of self-esteem. It was also found that non-working adults had higher levels of internet and social media addiction and lower levels of self-esteem than participants who stated that they were working. In

addition, it was found that levels of addiction to the internet and to social media were positively and significantly correlated; participants' addiction to the internet and to social media and their levels of self-esteem were negatively and significantly correlated. Furthermore, it was found that internet addiction and social media addiction's sub-dimensions of virtual tolerance and virtual communication had low-level significant effects on the self-esteem level of the participants and explained 24% of the total variance in self-esteem.

It is suggested that as the current study has shown that internet and social media addictions decrease as people's ages increase, preventative activities could be carried out through psycho-educational practices and seminars by psychological counselors and other mental health professionals individually and in groups in order to raise the awareness of younger adults about the correct use and negative consequences related to social media and the internet. Moreover, because adults' level of self-esteem was found to have a negative and significant relationship with the level of addiction to social media, and because of the changes caused by the Covid-19 pandemic (such as distance education, remote working and online services), conferences, seminars and training sessions could be organized to raise awareness about appropriate internet use by implementing counseling and guidance activities (Balci, 2018; 2023) in order for this increase not to turn into addiction. Additionally, future studies could be performed to increase the self-esteem levels of adults who use social media excessively. In addition, as another research suggestion, since the studies reported in the literature into the variables included in current research have mostly been focused on adolescents and university students, it could be possible to make comparisons between the different life periods of adult individuals and with more participants, regarding the causes of addiction to social media and the internet. It is important to mention the limitations of the current study. This study was conducted using the non-random convenience sampling technique by applying three tools remotely during the global Covid-19 coronavirus pandemic with a limited number of participants, so it is difficult to apply or to generalize the results of the study to other people in other times.

Declarations

Conflict of Interest

No potential conflicts of interest were disclosed by the author(s) with respect to the research, authorship, or publication of this article.

Ethics Approval

The formal ethics approval was granted by the Social and Human Sciences Research and Publication Ethics Committee of Kırıkkale University (Approval Number/ID: 16/08/2021-08). We conducted the study in accordance with the Helsinki Declaration in 1975.

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Research and Publication Ethics Statement

The study was approved by the research team's university ethics committee of the Kırıkkale University (Approval Number/ID: 16/08/2021-08). Hereby, we as the authors consciously assure that for the manuscript "Self-Esteem, Social Media and Internet Addiction Regarding Adult Individuals" the following is fulfilled:

- This material is the authors' own original work, which has not been previously published elsewhere.
- The paper reflects the authors' own research and analysis in a truthful and complete manner.
- The results are appropriately placed in the context of prior and existing research.
- All sources used are properly disclosed.

Contribution Rates of Authors to the Article

The authors provide equal contribution to this work.

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