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Social Networking Addiction and Self-esteem among University Students

Arif Nadeem[1] , **Saniya Siddiquee[2]** , **Naila Liaqat[3]**

[1]Assistant Professor, Department of Applied Psychology, Government College University, Faisalabad, Pakistan.
[2]MS Scholar, Department of Applied Psychology, Government College University, Faisalabad, Pakistan.
[3]MS Scholar, Department of Applied Psychology, Government College University, Faisalabad, Pakistan.
Correspondence: arifnadeem@gcuf.edu.pk[1]

ABSTRACT

Aim of the Study: The current study aimed to determine the association between social networking addiction and self-esteem in Pakistani university students as there is a dearth of indigenous empirical literature on the issue.

Methodology: A cross-sectional research design was used in the current study. Using the stratified random sampling technique, 300 university students (i.e., BS & MS) were selected from a university in Faisalabad city, Pakistan. The Social Networking Addiction Scale (Shahnawaz & Rehman, 2020) and the Rosenberg Self-Esteem Scale (Rosenberg, 1965) were used to assess the social networking addiction and self-esteem of university students respectively. The Pearson product-moment correlation and regression analysis were carried out using Statistical Package for Social Sciences (SPSS v-23) for data analysis.

Findings: The findings of the study revealed a significant negative correlation (-.39**, $p<.01$) between social networking addiction and the self-esteem of the participants. Moreover, social networking addiction was found to be a significant predictor ($p<.001$) of lower levels of self-esteem in the participants.

Conclusion: The study concluded that the community should take some remedial measures targeting the excessive use of social media which is identified as a risk factor to develop low self-esteem in the youth.

Keywords: Excessive use of Social Media, Social Media Addiction, Social Networking Addiction, Self-esteem, Youth, University Students.

Introduction

The networking sites were launched in the last decade of the 20th century but in 2003 these became a worldwide phenomenon. These sites evolved from profile creation to micro-blogging, with 90 million tweets per day sent by 145 million Twitter users (Kietzmann et al., 2011). Facebook is the most popular site worldwide with 1.23 million users (Sedghi, 2014). According to Statista (2018), 1.6 billion people worldwide have active social media accounts (one or more), which equates to a total of around 2.7 billion active accounts per month. Therefore, in today's world, the power of social media and its role in our lives is inevitable as a source of connection with one another. Communication tools particularly, mobile phones are being intensively used in every region and have become widespread wherein social networking

applications are frequently used as fast and easy media platforms. Such platforms allow users to establish online profiles and share them with friends and the wider public. So, these days, it is safe to assume that the way individuals engage with one another has been transformed by social media (Boyd & Ellison, 2007).

However, excessive use of social networking sites or social media can lead to the development of a non-chemical addiction labeled as "social networking addiction" or "social media addiction" interchangeably used in the literature – refers to having an excessive amount of concern about it, having a strong urge or motivation to log on or use social media, and spending an excessive amount of time and effort on social networking sites to the point where it interferes with other aspects of a person's life, such as social activities, academics, or employment, relationships with others, their mental health, and their overall well-being (Andreassen & Pallesen, 2014). For a long, there has been debate on the appropriate classification of the internet or social networking addiction. Researchers have labeled it as an addictive disorder (Griffiths, 1995), excessive online reliance (Schere, 1997), internet addiction (Black et al., 1999), the problem of impulse control (Shapira et al., 2000), pathological usage of internet (Davis, 2001), problematic usage of internet (Caplan, 2003), and obsessive-compulsive disorder (Sussman, 2005).

Social media addiction is a psychological issue that can have a variety of detrimental effects on a person's everyday life and interpersonal connections. It has negative effects on our social lives becoming a part of our daily lives. This kind of addiction can be viewed as a psychological disorder that arises from cognitive, affective, and behavioral processes. It causes issues with occupation, mood regulation, relapse, and conflict in various aspects of everyday life, such as social, professional, and academic domains (Tutgun-Ünal, 2020). Therefore, in recent years, researchers have shifted their attention towards psychological investigation, noting that excessive usage of social media causes various issues and interferes with people's everyday lives. The researchers point out the negative effects of how social media directly influences the daily life of individuals such as their sleep quality, excessive mental occupation, failure in repeated attempts to control their thoughts about the internet, failure to prevent the desire they have for access, and the desire they felt when they are not connected (Andreassen et al., 2012; Dewald et al., 2010; Kuss & Griffiths, 2011).

Understanding the effect of social media usage on the psychological health of teenagers and young adults has become a concern due to the concomitant rise in mental health issues (Kim, 2017). Existing literature suggests that social media usage is negatively associated with the mental health of adolescents, including emotional problems, life satisfaction, and happiness (Merelle et al., 2017; Twenge et al., 2018), and an increased dependency on social networking results in decreased sleep quality and increased everyday cognitive failures (Xanidis & Brignell, 2016). Furthermore, social networking sites are a contributing factor in internalizing issues including anxiety, depression, psychotic illness, and poor self-esteem (Pantic, 2014). In this regard, on a sample of 13929 participants, Marino et al. (2018) found a positive correlation between problematic Facebook usage and psychological distress perception and a negative correlation between Facebook use and mental health. Likewise, in 23532 Norwegian participants, Andreassen et al. (2017) found that social networking addiction was positively associated with narcissistic personality, whereas negatively associated with self-esteem. Similarly, Alonzo et al. (2021) analyzed the findings of 36 cross-sectional studies and 6 cohort studies and found a substantial relationship between social networking addiction and poor mental health.

Other consequences of excessive use of social media include reduced life satisfaction, increased depressive symptoms (Kelly et al., 2018), sleeplessness, melancholy, anxiety, and tension (Younes et al., 2016), vividly demonstrated that increased use of social media will lower a person's self-esteem (Jan et al., 2017). Thus, considering self-esteem particularly, findings of various other studies reveal that addiction to social media is significantly correlated negatively with self-esteem (Awobamise et al., 2022; Bachnio et al., 2017; Chen & Lee, 2013; Clerkin et al., 2013; Course-Choi & Hammond, 2021; Gonzales & Hancock, 2011; Jan et al., 2017; Malik & Khan, 2015; Purnama et al., 2021; Steinfield et al., 2008; Wood & Scott, 2016; Saiphoo et al., 2020). Furthermore, Kalpidou et al. (2011) found that individuals

who used social media excessively were more socially constrained than non-users and, therefore, tended to have lower self-esteem as around half of the study participants were experiencing a significant decline in self-esteem. This conclusion is consistent with other studies that found that low self-esteem may also be caused by social media addiction (Thadani & Cheung, 2011; Yldrm, 2016).

Therefore, a study looked at the direct and indirect relationships between depression, self-esteem, and social media addiction among 1130 teenagers. The study's findings demonstrated an indirect correlation between social media addiction, grief, and self-worth, but also a strong positive direct association between social media addiction and sadness. Further findings showed that excessive usage of social media contributes to depression in 28% of teenagers (Krcaburun, 2016). The association between social media addiction, self-esteem, and life happiness was examined in another sample of 364 university students. Self-esteem and social media addiction were significantly correlated negatively, while self-esteem and university students' life happiness were significantly correlated positively. (Hawi & Samaha, 2017). A recent study looking into the connections between depressed symptoms, internet use, and self-esteem also revealed that adolescents who use the internet inappropriately have negative effects on their self-esteem and exhibit depressive symptoms. Moreover, the findings demonstrated a substantial within-time relationship between inappropriate internet use, low self-esteem, and depressive symptoms (Lai et al., 2022). Besides the role of social media usage as a predictor of self-esteem, it has also been found to be a consequence of variations in self-esteem. In a cross-sectional study conducted on a sample of 952 adults, Koçak et al. (2021) found that having high levels of self-esteem and a high degree of education increased the likelihood of life happiness and reduced social media addiction.

Examining the reason behind this association between social media usage and self-esteem, it is found that personal profiles that are visible to the public and friends allow people to express thoughts and provide feedback through comments, ensuring that the user is aware of their views on their private lives (Boyd & Ellison, 2007). As a result, these comments and viewpoints of others have a significant impact on one's self-esteem as negative feedback negatively affects self-esteem however, positive feedback significantly raises it (Valkenburg et al., 2006). However, gender also predicts how people use social media and how confident they feel about themselves. According to Andreassen et al. (2016), women who exhibit high levels of narcissism and low self-esteem are more likely to find the addictive nature of social media use to be the case. Köse and Doan (2019) also found gender differences as women were more likely than men to get addicted to social media not only in terms of their mood modifications but also keeping them busy on social media most of the time. Other studies have also shown that a person's self-esteem is predicted by a number of demographic factors, including age, income, occupation, and mental health issues (e.g., McMullin & Cairney, 2004; Bleidorn et al., 2023).

Nonetheless, the literature also reveals some inconsistent findings about the relationship between social media use and self-esteem. Thus, Köse and Doan (2019) looked into the relationship between university students' use of social media and self-esteem. It was discovered that, in contrast to the majority of earlier research, there was a marginally negative correlation between participants' self-esteem and their use of social media. The most recent study on the relationship between teenage social media use and self-esteem was conducted by Valkenburg (2021), who looked at the conflicting and/or inconsistent findings from eighteen earlier studies and came to the conclusion that each person's experience with social media is unique and has a different impact on self-esteem. In a three-week experience sampling study including 387 teenagers (46% boys and 54% girls), it was discovered that 88% of the participants saw very little to no impact from social media use on their self-esteem, while 8% saw negative impacts. Remarkably, 4% of teenagers reported that using social media improved their sense of self. As a result, it was determined that going forward, theories and research cannot overlook the consequences of social media usage on an individual basis.

Along with new and cherished experiences, university life also appears challenging for university students (Nadeem et al., 2018). Thus, they manage their expanding demands by establishing responsibilities, close relationships, and new skills (Christie & Viner, 2005). On the other hand, University students are much

more likely to experience mental health issues because of a notable shift in their bio-psycho-social development at this age (Bibi et al., 2021; Nadeem et al., 2022). The use of the Internet in educational institutions is dramatically increased in past years (Goswami & Singh 2016), and research shows a strong correlation between mental health issues and excessive social media use. (e.g., Alonzo et al., 2021) and a negative correlation between social media addiction and self-esteem in adolescents and young adults (e.g., Awobamise et al., 2022), however, some inconsistent results regarding the association between social media usage and self-esteem were also evident (e.g., Valkenburg, 2021). Consequently, the current study was planned to reexamine the phenomenon with the following goals: (1) to look into the relationship between social networking addiction and self-esteem, and (2) to ascertain the predictive role of social networking addiction in determining Pakistani university students' self-esteem levels.

Method

Participants

The study's population consisted of all male and female students enrolled in bachelor's and master's degree programs at the public sector university in Faisalabad, Pakistan, which was chosen at random. A stratified sampling method was used to choose a sample of 300 pupils. The 1st year (BS 1st and 2nd semester), 2nd year (BS 3rd and 4th semester), 3rd year (BS 5th and 6th semester), 4th year (BS 7th and 8th semester), 5th year (MS 1st and 2nd semester), and 6th year (MS 3rd and 4th semester) were the six strata into which the sample was divided. Fifty students were chosen at random from each stratum (i.e., 200 from BS and 100 from MS degree programs). Men and women, however, had an equal chance of being chosen for the sample.

Instruments

Social Networking Addiction Scale (SNAS): The SNAS (Shahnawaz & Rehman, 2020) is a valid and reliable seven-point Likert scale for evaluating social media and networking addiction. This 21-item measure is divided into six sub-measures: salience, mood modulation, withdrawal, conflict, tolerance, and relapse. Scores range from 1 to 7 for each question (i.e., 1 for "strongly disagree," and 7 for "strongly agree"). This measure showed a good test-retest reliability of .88 across a 25-day period.

Rosenberg Self-Esteem Scale (RSE): A self-report tool for determining one's self-worth is the 10-item Rosenberg (1965) self-worth evaluation. Each item on this 4-point Likert scale has a value between 0 and 3, which corresponds to "strongly disagree" and "strongly agree." Confirmatory factor analysis has shown that the scale has good factorial validity (Makhubela & Mashegoane, 2019).

Procedure

First and foremost, the relevant authorities provided all the necessary statutory authorization for the data collection. After being contacted and told about the nature and goals of the study, the volunteers chosen using the previously described methods were asked for their signed informed consent. The participants were given the opportunity to have a requisite establishment of rapport with the researchers and were assured of their anonymity, confidentiality, and right to privacy. They were also informed that they could withdraw from the study at any moment if they felt uncomfortable. Ten to fifteen participants at a time were given the instruments and the demographic sheet. When the data collection process was complete, the participants were duly acknowledged. The statistical package for social sciences (SPSS-23) was used to analyze the data.

Results

Table 1: *Internal Consistency of the Instruments Used in the Study (N=300)*

Instrument	No. of items	*A*
Social Networking Addiction Scale	21	.92
Rosenberg Self-esteem Scale	10	.77

The data presented in Table 1 depicts a high internal consistency of the instruments used in the current study i.e., Social Networking Addiction Scale (α=.92), and Rosenberg Self-esteem Scale (α=.77).

Table 2: *Summary of Inter-correlations, Means, and Standard Deviations for Scores on the Total and Sub-scales of the Social Networking Addiction Scale and Rosenberg Self-esteem Scale (N=300)*

Variable	1	2	3	4	5	6	7	8
1. Salience	-	.50***	.55***	51***	.44**	.47**	.75***	-.27**
2. Mood Mod.	-	-	.45**	.51***	.41**	.40**	.69***	-.16*
3. Tolerance	-	-	-	.56***	.53***	.58***	.78***	-.34**
4. Withdrawal	-	-	-	-	.59***	.54***	.82***	-.36**
5. Conflict	-	-	-	-	-	.60***	.77***	-.33**
6. Relapse	-	-	-	-	-	-	.79***	-.31**
7. SNAS-T	-	-	-	-	-	-	-	-.39**
8. RSS	-	-	-	-	-	-	-	-
M	18.83	4.38	12.71	15.04	10.51	15.37	86.86	18.66
SD	5.25	4.18	4.23	5.82	4.43	5.91	23.10	4.60

*p<.05, **p<.01, ***p<.001

Note. Mood Mod.=Mood Modification; SNAS-T=Social Networking Addiction Scale-Total; RSS= Rosenberg Self-esteem Scale.

The data given in Table 2 depict that all the sub-scales of the Social Networking Addiction Scale (SNAST) have significant negative associations i.e., Salience (-.27**, $p<.01$), Mood Modification (-.16*, $p<.05$), Tolerance (-.34**, $p<.01$), Withdrawal (-.36**, $p<.01$), Conflict (-.33**, $p<.01$), and Relapse (-.31**, $p<.01$) with self-esteem in the participants. Moreover, the total of SNAST is also negatively correlated (-.39**, $p<.01$) with self-esteem indicating that social networking addiction/excessive use of social media increases the likelihood of low self-esteem in university students.

Table 3: *Hierarchical Regression Analysis Indicating the Predictors of Self-esteem in University Students (N=300)*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	β	t	Sig.
1	Step 1(R=.09, ΔR^2=.009)	22.13	2.69		8.21	.000
	Age	-.18	.11	-.08	-1.53	.126
	Gender	.27	.53	.03	.51	.605
2	Step 2(R=.14, ΔR^2=.02)	23.48	3.00		7.80	.000
	Age	-.16	.12	-.08	-1.41	.159
	Gender	.03	.56	.00	.06	.949
	Family system	-.62	.60	-.06	-1.04	.298
	Family Monthly Income	5.33	.000	.09	1.54	.047
3	Step 3(R=.44, ΔR^2=.19)	34.74	3.16		10.97	.000
	Age	-.25	.11	-.12	-2.29	.023
	Gender	-.88	.53	-.09	-1.65	.098
	Family system	-.55	.54	-.05	-1.01	.310
	Family Monthly Income	6.09	.000	.10	1.93	.041
	SNAST	-.06	.01	-.33	-5.17	.000

**p<.01, *p<. 05, step 1: F=1.31, df=2; step 2: F=1.65, df=4; step 3: F=11.91, df=6.

Note. SNAST= Total of Social Networking Addiction Scale

As the existing literature revealed the excessive use of social media as a predictor of poor self-esteem, therefore, to explore the predictor of self-esteem in the participants of the current study, hierarchical regression was carried out. In step 1, personal characteristics of the participants (i.e., age and gender), in step 2, family-related characteristics (i.e., family system and monthly family income), whereas in step 3, total scores of SNAST as an indicator of excessive use of social media were added. All three steps appeared to be significant ($p<.001$) depicting that age and monthly family income are significant positive predictors ($p<.05$) while excessive use of social media is a significant negative predictor ($p<.001$) of self-esteem. It indicated that with the growing age as well as an increase in the monthly family income the self-esteem of the participants is likely to be increased whereas, the more use of social media the lower will be the self-esteem of the participants.

Discussion

Since billions of people worldwide have active social media accounts (Statista, 2018) and excessive use of social media is found to have a variety of detrimental effects on a person's everyday life in the social, occupational, and academic spheres (e.g., Tutgun-Ünal, 2020) and having a negative association with the self-esteem of the university students particularly around the globe (e.g., Hawi & Samaha, 2017. Therefore, the current study aimed to investigate the association between social networking addiction and self-esteem in university students in Faisalabad City, Pakistan. The data were collected from a sample of 300 students selected using a stratified sampling technique using the Social Networking Addiction Scale (Shahnawaz & Rehman, 2020) and the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

The first objective of the study was to investigate the association between social networking addiction and self-esteem in university students. The results of this study revealed that social networking addiction is negatively correlated (-.39**, $p<.01$) with self-esteem indicating that social networking addiction/excessive use of social media increases the likelihood of low self-esteem in university students. Moreover, all the sub-scales of the Social Networking Addiction Scale (SNAST) also appeared to have significant negative associations i.e., Salience (-.27**, $p<.01$), Mood Modification (-.16*, $p<.05$), Tolerance (-.34**, $p<.01$), Withdrawal (-.36**, $p<.01$), Conflict (-.33**, $p<.01$), and Relapse (-.31**, $p<.01$) with self-esteem in the participants. These findings are in line with the existing literature (e.g., Andreassen et al., 2017; Awobamise et al., 2022; Purnama et al., 2021)

A negative impact of social networking addiction on the psychological health of individuals especially adolescents and young adults has already been established (Kim, 2017). Social networking sites are a contributing factor in internalizing issues including; anxiety and depression, the excessive use of social media might result in poor self-esteem (Lai et al., 2022; Pantic, 2014). Furthermore, an increased dependency on social networking results in decreased sleep quality and increased everyday cognitive failures (Xanidis & Brignell, 2015) and lead to other mental health issues and emotional problems in adolescents and young adults (Merelle et al., 2018; Twenge et al., 2018) that might ultimately lead to the lowered self-esteem. Therefore, comparative studies (e.g., Kalpidou et al., 2011) revealed that the individuals who used social media excessively tended to have lower self-esteem and were more socially constrained than the non-users.

Determining the role of social networking addiction as a predictor of university students' self-esteem was the study's second objective. Hierarchical regression analysis revealed that while social networking addiction is a significant negative predictor ($p<.001$), age and monthly family income are significant positive predictors ($p<.05$) of self-esteem indicating that with the growing age as well as an increase in the monthly family income the self-esteem of the participants is likely to be increased whereas, the more use of social media the lower will be the self-esteem of the participants. The existing literature also suggests excessive use of social media as a significant predictor of self-esteem (e.g., Yldrm, 2016; Thadani & Cheung, 2011) which supports the current findings.

Previous studies have demonstrated that certain demographic characteristics like; age, salary, occupational status, as well as mental health conditions predict the self-esteem of individuals (e.g.,

McMullin & Cairney, 2004; Bleidorn et al., 2023). On the other hand, it is found that there is not only a negative relationship between social media usage and levels of self-esteem (e.g., Valkenburg et al., 2006) but increased usage of social media also predicts lower levels of self-esteem in individuals (e.g., Augner & Hacker, 2012; Bianchi & Phillips, 2005; Clerkin et al., 2013; Course-Choi & Hammond, 2021; Hawi & Samaha, 2017; Saiphoo et al., 2020; Valkenburg et al., 2021).

Examining the reason behind this association and the predictive role of social media usage in self-esteem of the individuals, as one of the possible reasons, it is found that personal profiles that are visible to the public and friends allow people to express thoughts and provide feedback through comments, ensuring that the user is aware of their views on their private lives (Boyd & Ellison, 2007). As a result, these comments and viewpoints of others have a significant impact on one's self-esteem. A negative feedback negatively affects self-esteem, while positive feedback significantly raises it (Valkenburg et al., 2006).

Conclusion

On the basis of the findings of the current study, it can be asserted with an adequate level of authenticity that social networking addiction/excessive use of social media increases the likelihood of low self-esteem in university students. Moreover, with the growing age as well as an increase in the monthly family income the self-esteem of the individuals is likely to be increased.

Implications of the Study

Since the findings of the current study reveal a link between social networking addiction and self-esteem among university students as students with social media addiction are likely to have lower levels of self-esteem, future research can be conducted on other correlates of social networking addiction in the students. The relevant authorities ought to create programs for prevention and treatment that focus on these risk factors for the development of social networking addiction. The results of this study also highlight how crucial it is for educational institutions to have counseling facilities in order to create risk-factor-addressing programs that effectively prevent social media addiction and its negative effects, like low self-esteem.

Limitations and Recommendations

- The sample of this study was drawn primarily from one university in Faisalabad, Pakistan. For future research to be generalizable, the sample should be drawn from diverse populations and different cities in Pakistan.

- The data was collected exclusively from young adults, so the findings' generalizability is limited. Future research should include other age groups as well.

- One of the possible predictors of self-esteem i.e., social networking addiction was determined in this study. Future research should look into other possible predictors of self-esteem in university students.

ORCID iDs

Arif Nadeem [1] https://orcid.org/0000-0003-0004-0224
Saniya Siddiquee [2] https://orcid.org/0009-0001-4846-0343
Naila Liaqat [3] https://orcid.org/0009-0001-2088-104X

References

Alonzo, R., Hussain, J., Stranges, S., & Anderson, K. K. (2021). Interplay between social media use, sleep quality, and mental health in youth: A systematic review. *Sleep Medicine Reviews*, *56*, 101414.

Andreassen, C. S., Billieux, J., Griffiths, M. D., Kuss, D. J., Demetrovics, Z., Mazzoni, E., & Pallesen, S. (2016). The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: A large-scale cross-sectional study. *Psychology of Addictive Behaviors*, *30*(2), 252.

Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behaviors*, *64*, 287-293.

Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a Facebook addiction scale. *Psychological Reports*, *110*(2), 501-517.

Andreassen, C., & Pallesen, S. (2014). Social network site addiction-an overview. *Current Pharmaceutical Design, 20*(25), 4053-4061.

Augner, C., & Hacker, G. W. (2012). Associations between problematic mobile phone use and psychological parameters in young adults. *International Journal of Public Health, 57*(2), 437-441.

Awobamise, A., Jarrar, Y., & Nweke, G. E. (2022). Social communication apprehension, self-esteem and facebook addiction among university students in Uganda. *Contemporary Educational Technology, 14*(2), 354.

Bachnio, A., Przepiorka, A., Senol-Durak, E., Durak, M., & Sherstyuk, L. (2017). The role of personality traits in Facebook and Internet addictions. *Computers in Human Behavior*, *68*(C), 269-275.

Bianchi, A., & Phillips, J. G. (2005). Psychological predictors of problem mobile phone use. *Cyberpsychology & Behavior*, *8*(1), 39-51.

Bibi, A., Blackwell, S. E., & Margraf, J. (2021). Mental health, suicidal ideation, and experience of bullying among university students in Pakistan. *Journal of Health Psychology*, *26*(8), 1185-1196.

Błachnio, A., Przepiórka, A., & Hawi, N. (2016). The more you use Facebook, the more you risk becoming addicted to it? A study report. *Neuropsychiatry, 6*(3), 80-84.

Black, D. W., Belsare, G., & Schlosser, S. (1999). Clinical features, psychiatric comorbidity, and health-related quality of life in persons reporting compulsive computer use behavior. *The Journal of Clinical Psychiatry*, *60*(12), 2775.

Bleidorn, W., Kretzschmar, A., Rauthmann, J. F., Orth, U., Denissen, J. J., & Hopwood, C. J. (2023). Self-esteem and income over time. *Psychological Science, 34*(10), 1163-1172.

Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-mediated Communication*, *13*(1), 210-230.

Caplan, S. E. (2003). Preference for online social interaction: A theory of problematic Internet use and psychosocial well-being. *Communication Research*, *30*(6), 625-648.

Chen, W., & Lee, K. H. (2013). Sharing, liking, commenting, and distressed? The pathway between Facebook interaction and psychological distress. *Cyberpsychology, Behavior, and Social Networking*, *16*(10), 728-734.

Christie, D., & Viner, R. (2005). Adolescent development. Bmj, 330(7486), 301-304.

Clerkin, E. M., Smith, A. R., & Hames, J. L. (2013). The interpersonal effects of Facebook reassurance seeking. *Journal of Affective Disorders, 151*(2), 525-530.

Course-Choi, J., & Hammond, L. (2021). Social media use and adolescent well-being: A narrative review of longitudinal studies. *Cyberpsychology, Behavior, and Social Networking, 24*(4), 223-236.

Davis, R. A. (2001). A cognitive-behavioral model of pathological Internet use. *Computers in Human Behavior*, *17*(2), 187-195.

Dewald, J. F., Meijer, A. M., Oort, F. J., Kerkhof, G. A., & Bögels, S. M. (2010). The influence of sleep quality, sleep duration and sleepiness on school performance in children and adolescents: A meta-analytic review. *Sleep Medicine Reviews*, *14*(3), 179-189.

Gonzales, A. L., & Hancock, J. T. (2011). Mirror, mirror on my Facebook wall: Effects of exposure to Facebook on self-esteem. *Cyberpsychology, Behavior, and Social Networking, 14*(2), 79-83.

Goswami, V., & Singh, D. R. (2016). İnternet addiction among adolescents: A review of the research. *The International Journal of Indian Psychology*, *3*(3), 37-44.

Griffiths, M. (1995). Adolescent gambling. *Encyclopedia of Adolescence, (3)*. 11-20

Hassan, S.A.U., Safdar, G. (2022). Relationship between Self-Esteem and Problematic Use of Facebook among University Students. *Annals of Social Sciences and Perspective, 3*(1), 199-217.

Hawi, N. S., & Samaha, M. (2017). The relations among social media addiction, self-esteem, and life satisfaction in university students. *Social Science Computer Review*, *35*(5), 576-586.

Jan, M., Soomro, S., & Ahmad, N. (2017). Impact of social media on self-esteem. *European Scientific Journal*, *13*(23), 329-341.

Kalpidou, M., Costin, D., & Morris, J. (2011). The relationship between Facebook and the well-being of undergraduate college students. *CyberPsychology, Behavior, and Social Networking, 14*(4), 183-189.

Kelly, Y., Zilanawala, A., Booker, C., & Sacker, A. (2018). Social media use and adolescent mental health: Findings from the UK Millennium Cohort Study. *E-Clinical Medicine*, *6*, 59-68.

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons*, *54*(3), 241-251.

Kim, H. H. S. (2017). The impact of online social networking on adolescent psychological well-being (WB): a population-level analysis of Korean school-aged children. *International Journal of Adolescence and Youth*, *22*(3), 364-376.

Koçak, O., İlme, E., & Younis, M. Z. (2021). Mediating role of satisfaction with life in the effect of self-esteem and education on social media addiction in Turkey. *Sustainability*, *13*(16), 9097.

Köse, Ö. B., & Doğan, A. (2019). The relationship between social media addiction and self-esteem among Turkish university students. *Addicta: The Turkish Journal on Addictions, 6*, 175-190.

Kuss, D. J., & Griffiths, M. D. (2011). Online social networking and addiction-a review of the psychological literature. *International Journal of Environmental Research and Public Health, 8*(9), 3528-3552.

Lai, W., Wang, W., Li, X., Wang, H., Lu, C., & Guo, L. (2022). Longitudinal associations between problematic Internet use, self-esteem, and depressive symptoms among Chinese adolescents. *European Child & Adolescent Psychiatry*, 1-11.

Lee, H. R., Lee, H. E., Choi, J., Kim, J. H., & Han, H. L. (2014). Social media use, body image, and psychological well-being: A cross-cultural comparison of Korea and the United States. *Journal of Health Communication*, *19*(12), 1343-1358.

Makhubela, M., & Mashegoane, S. (2019). *Establishing factorial validity of the Rosenberg self-esteem scale. Transforming research methods in the social sciences: Case studies from South Africa*. London: Sage Publications.

Malik, S., & Khan, M. (2015). Impact of Facebook addiction on narcissistic behavior and self-esteem among students. *Journal of Pakistan Medical Association, 65*(3), 260-263.

Marino, C., Gini, G., Vieno, A., & Spada, M. M. (2018). The associations between problematic Facebook use, psychological distress and well-being among adolescents and young adults: A systematic review and meta-analysis. *Journal of Affective Disorders*, *226*, 274-281.

McMullin, J. A., & Cairney, J. (2004). Self-esteem and the intersection of age, class, and gender. *Journal of Aging Studies, 18*(1), 75-90.

Mérelle, S. Y., Kleiboer, A. M., Schotanus, M., Cluitmans, T. L., Waardenburg, C. M., Kramer, D., ... & van Rooij, T. (2017). Which health-related problems are associated with problematic video-gaming or social media use in adolescents? A large-scale cross-sectional public health study. *Clinical Neuropsychiatry*, *14*(1), 11-19.

Nadeem, A., Mahmood, Z., & Saleem, S. (2018). Personality traits as predictors of interpersonal difficulties in university students in Pakistan. *Pakistan Journal of Social and Clinical Psychology*, *16*(1), 3-9.

Nadeem, A., Saleem, M., & Khan, A. A. (2022). Perceived parental practices and mental health problems of university students in the cultural context of Pakistan. *Human Nature Journal of Social Sciences*, *3*(3), 263-275.

Orth, U., Robins, R. W., & Widaman, K. F. (2012). Life-span development of self-esteem and its effects on important life outcomes. *Journal of Personality and Social Psychology*, *102*(6), 1271.

Pantic, I. (2014). Online social networking and mental health. *Cyberpsychology, Behavior, and Social Networking*, *17*(10), 652-657.

Purnama, H., Darmawati, I., & Mulyatin, W. (2021). Social media addiction and the association with self-esteem among adolescents in rural areas of Indonesia. *KnE Life Sciences*, 671-679.

Rosenberg, M. (1965). Rosenberg self-esteem scale (RSE). *Acceptance and commitment therapy. Measures Package*, *61*(52), 61-62.

Saiphoo, A. N., Halevi, L. D., & Vahedi, Z. (2020). Social networking site use and self-esteem: A meta-analytic review. *Personality and Individual Differences, 153*, 109639.

Shahnawaz, M. G., & Rehman, U. (2020). Social networking addiction scale. *Cogent Psychology, 7*(1), 1832032.

Shahnawaz, M. G., & Rehman, U. (2020). Social networking addiction scale. *Cogent Psychology, 7*(1), 1832032.

Shapira, N. A., Goldsmith, T. D., Keck Jr, P. E., Khosla, U. M., & McElroy, S. L. (2000). Psychiatric features of individuals with problematic internet use. *Journal of Affective Disorders*, *57*(1-3), 267-272.

Sherer, K. (1997). College life online: Healthy and unhealthy Internet use. *Journal of College Student Development*.

Sokol, J. T. (2009). Identity development throughout the lifetime: An examination of Eriksonian theory. *Graduate Journal of Counseling Psychology, 1*(2), 14.

Statista, (2018). Most famous social network sites worldwide as of January 2018, ranked by number of active users (in millions). Retrieved from https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/.

Steinfield, C., Ellison, N. B., & Lampe, C. (2008). Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. *Journal of Applied Developmental Psychology, 29*(6), 434-445.

Sussman, N. (2005). Session with Eric Hollander, M.D. Interview, New York City. Retrieved from: http:// www.primarypsychiatry.com/aspx?article_260

Thadani, D., & Cheung, C. (2011). Exploring the role of online social network dependency in habit formation.

Tutgun-Ünal, A. (2020). Social media addiction of new media and journalism students. *Turkish Online Journal of Educational Technology-TOJET, 19*(2), 1-12.

Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2018). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among US adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science*, *6*(1), 3-17.

Valkenburg, P. M., Peter, J., & Schouten, A. P. (2006). Friend networking sites and their relationship to adolescents' well-being and social self-esteem. *Cyber-Psychology & Behavior, 9*(5), 584-590.

Valkenburg, P., Beyens, I., Pouwels, J. L., van Driel, I. I., & Keijsers, L. (2021). Social media use and adolescents' self-esteem: Heading for a person-specific media effects paradigm. *Journal of Communication*, *71*(1), 56-78.

Xanidis, N., & Brignell, C. M. (2016). The association between the uses of social network sites, sleep quality, and cognitive function during the day. *Computers in Human Behavior*, *55*, 121-126.

Yıldırım, M. S. (2016). Ergenlerde internet bağımlılığının obezite ve benlik saygısı ile ilişkisinin incelenmesi (Master's thesis, İstanbul Gelişim Üniversitesi Sosyal Bilimler Enstitüsü).

Younes, F., Halawi, G., Jabbour, H., El Osta, N., Karam, L., Hajj, A., & Rabbaa Khabbaz, L. (2016). Internet addiction and relationships with insomnia, anxiety, depression, stress and self-esteem in university students: A cross-sectional designed study. *PloS One*, *11*(9). e0161126.