ORIGINAL ARTICLE

The Perils of Technology: Social Networking Addiction and Anxiety

ROOMANA ZEB¹, SAIMA ARZEEN², MOMINA MUMTAZ³, MAIMOONA HAROON⁴ 1,2,3,4 Department of Psychology, University of Peshawar Correspondence to: Roomana Zeb, Email: roomazeb@uop.edu.pk

ABSTRACT

Objective: After the invention of smart phone with many social networking sites, young generation specially seems likely to be affected with its excessive use. Along with the benefits brought by changes in technology, some negative repercussions can also result. Keeping this in mind the aim of this study was to explore the association between anxiety and social networking addiction in young adults.

Method: For the said purpose a convenience sample of 200 young adults from Peshawar with an equal distribution of males (n=100) and females (n=100) participated in the study. Correlational research design was used to conduct the research. Social Networking Addiction Scale (SNAS; Mumtaz, 2014) and the Beck Anxiety Inventory (BAI; Beck & Steer, 1990) were applied on the sample.

Findings: Results revealed a significant positive correlation between social networking addiction and anxiety among university students. Additionally, one-way ANOVA indicated significant differences in anxiety levels between addicted and non-addicted social media users, while no significant differences were found between excessive and addicted users. The findings also suggested a higher prevalence of social networking addiction among females as compared to males.

Conclusion: On the basis of the results it is concluded that excessive use of social networking sites can put individuals at risk of developing anxiety. Hence, the software developers should program the sites such that it should turn off after a due time. Similarly, parents of young children should control the screen time of their offspring.

Keywords: Social networking addiction, anxiety, young adults, internet, gender differences.

INTRODUCTION

Does our existence depend on being visible on Facebook? This perception has taken hold among a significant portion of today's society. With the advancement of technology, social networking plays an increasingly prominent role in our lives. Since its emergence in the early 1990s, the internet has become a global phenomenon 1. In the United States alone, there are over 100 million users ²(p. 134). This has enabled people from around the world to share information with vast audiences through various mediums such as videos, photos, and personal blogs, which are believed to shape online identities 3. Although the ability to communicate with diverse global audiences via the internet is not a new concept, Social Networking Sites (SNS) like Facebook, Myspace, and Bebo have experienced significant popularity in recent years ⁴ The number of social network users continues to grow steadily. According to the study "Global Digital Insights: Essential Insights into Internet, Social Media, Mobile, and Ecommerce Use around the World" conducted by Global Web Index (2021), internet and social network usage in different countries has seen a year-on-year increase of 13.13%, reaching 4.48 billion active social media users worldwide. In 2020, the number of users stood at 3.69 billion, indicating a remarkable 115.59% increase in just six years since 2015 when there were only 2.07 billion users 5.

The widespread adoption of social networks has raised questions about the reasons behind their popularity, the demographics of their primary users, and their impact on individuals. One area of concern is the addictive nature of social networking sites, leading to numerous studies comparing Internet addiction with addiction specifically related to social networking. This study focuses on social networking addiction as a specialized subset of Internet addiction, assuming that factors contributing to Internet addiction may also apply to addiction related to social networking. In this study, individuals who excessively use the Internet for social networking will be referred to as social networking addicts. Similarly, According to Griffiths, social networking addicts can be defined as individuals who excessively engage in social networking activities, such as using social media platforms, to the extent that it negatively affects their daily lives and overall well-being. These individuals exhibit compulsive behaviour, dedicating significant amounts of time to social networking sites, often neglecting other important activities or responsibilities

Psychologists have conducted extensive research on Internet addiction, describing it as a phenomenon that is both uncontrollable and harmful ⁷.In a study by Kuss, Griffiths, and Pontes, five distinct types of Internet addiction were identified,

including computer addiction, information overload, net compulsions, cyber sexual addiction, and cyber-relationship addiction. It is worth noting that social networking sites fall within the category of cyber-relationship addiction, as their primary purpose is to establish and maintain connections with others⁸. Additionally, Hampton, Goulet, Rainie, and Purcell found that social networking platforms have positive effects, such as facilitating closer relationship maintenance, expanding social circles, and increasing social support. Their study also revealed a connection between social media usage and higher engagement in community activities and political participation ⁹.

Researchers have suggested that young individuals may be particularly vulnerable to the excessive use of new technologies, such as computers and social networking sites, due to their addictive nature ¹⁰. In an experiment investigating individuals' cravings for internet use, it was discovered that people may struggle more to control their desire to engage in social networking compared to their cravings for cigarettes and alcohol ¹¹. Consequently, it can be inferred that resisting social networking addiction might be more challenging than resisting substance addiction due to the easy accessibility and lower cost associated with social media platforms.

Regular involvement with social networking sites can contribute to various psychological issues. One of the most concerning consequences of internet addiction is the development of anxiety, stress, and depression 12. Anxiety involves emotional and/or physiological responses to known or unknown triggers, ranging from a normal reaction to severe dysfunction ¹³. Research indicates a positive and significant correlation between anxiety levels and social networking addiction 12. Furthermore, social anxiety disorder can act as a risk factor for the development of problematic internet use or internet addiction. Excessive use of social networking sites exacerbates social fears and avoidance of face-to-face interactions 14. Additionally, there is a noteworthy association between anxiety and depression during childhood, which can contribute to the onset of social networking addiction in adolescence 15. Similarly, some researchers propose argue that individuals who use social networking sites may actually experience social fear and, therefore, turn to the internet as a lowrisk means of social interaction. They view it as an opportunity to practice social behaviors and improve their communication skills. which can subsequently benefit their real-life interactions that require face-to-face communication 16. This reasoning can be in line with Uses and Gratifications Theory which suggests that individuals actively choose to engage in social networking to fulfill

specific needs and desires. Social networking sites provide various gratifications, such as social interaction, entertainment, and self-presentation. Individuals may develop addictive behaviors when these gratifications are excessively pursued ¹⁷.

Similarly, Self-Determination Theory also explains the above phenomenon that individuals have innate psychological needs for autonomy, competence, and relatedness. Social networking platforms may fulfill these needs by offering opportunities for self-expression, social connection, and validation. Excessive use and addiction may arise when these needs are not sufficiently met in offline contexts ^{18.}

According to Lidbetter's analysis, the majority of social media users expressed that networking sites (Facebook, Twitter) have brought about changes in their lives. Among them, 51% reported that these changes have not been for the better. Additionally, 45% of the respondents mentioned feeling "worried or uncomfortable" when they cannot access email or Facebook. Similarly, 60% of the participants stated that they felt the need to take breaks from technology by switching off their phones and computers. In other words, it is not being on social networks that causes anxiety, but rather the absence of them that can be distressing. These findings indicate the importance of individuals establishing control over the technology they use, rather than being controlled by it ¹⁹.

The relationship between social media and anxiety is not fully understood. It remains uncertain whether social media itself directly causes increased anxiety or if individuals with pre-existing anxiety tendencies are more likely to use social media. However, studies indicate a positive correlation between anxiety and addiction to social networking sites (SNS). For example, Andreassen found that excessive Facebook users exhibit higher levels of anxiety and social insecurity. Similar results have been observed by other researchers, including Abadi and Yellowlees and Marks, who explored the connection between social networking addiction and mental health. Their findings revealed that individuals addicted to social networks tend to have lower levels of mental well-being compared to non-addicted individuals ¹², ²⁰, 8.21

Lin, Sidani, Shensa, Radovic, Miller, Colditz, and Primack conducted a study that explores the connection between social media use, including social networking, and depression among young adults. Their findings demonstrate a positive correlation between social media use and depressive symptoms, suggesting that excessive engagement in social media may contribute to mental health issues²². In a comprehensive article by Kuss and Griffiths, various research studies on social networking addiction and its impact on mental health are reviewed. These studies consistently indicate a positive association between social networking addiction and mental health problems such as depression, anxiety, loneliness, and low self-esteem 23. Similarly, Shakya and Christakis conducted a longitudinal study to investigate the association between Facebook use and well-being, including mental health indicators. The results suggest that increased Facebook use is linked to declines in overall well-being, including measures of depressive symptoms and self-reported mental health²⁴. Franchina, Vanden, and Van Rooij conducted a study examining the relationship between personality traits (Big Five and Dark Triad traits) and social networking addiction, along with the mediating role of mental health symptoms. The findings indicate that social networking addiction is associated with higher levels of depression, anxiety, and stress. These studies contribute to the growing body of research that highlights the link between social networking addiction and various mental health outcomes. However, it is important to note that further research is necessary to gain a better understanding of the complex relationship between social networking addiction and mental health, considering individual differences and underlying mechanisms²⁵.

The research findings on the impact of gender on internet addiction present a varied perspective. While certain studies indicate no disparity between genders, others have identified the influence of gender in computer usage and internet addiction.

Media reports have suggested a higher susceptibility of women to developing addictions to Social Networking Sites $^{26,\ 27,28}.$ Similarly, studies also indicate a greater prevalence of social networking addiction among girls compared to boys $^{22,\ 29,\ 30\ 831}.$

In Pakistan, the rapid development of technological infrastructure, such as DSL, Wi-Fi, and 3G, has made the internet easily accessible to the younger generation. While the positive and negative impacts of internet addiction have been extensively explored in Western countries, its understanding and implications in a third-world country like Pakistan remain relatively unexplored. This study aims to address this gap by investigating the relationship between social networking addiction and anxiety among young adults in Pakistan, while also examining potential gender-based differences in social networking addiction. By focusing on the younger population, this study acknowledges that Pakistani youth possess greater proficiency in understanding and engaging with new technologies compared to older adults. As digital natives, young adults are more likely to have a stronger connection to and reliance on social networking platforms. Therefore, studying the relationship between social networking addiction and anxiety in this demographic can offer valuable insights into the unique challenges and implications faced by the young generation in Pakistan's evolving technological landscape. By shedding light on the specific dynamics of social networking addiction and its correlation with anxiety, this study aims to contribute to the existing knowledge on the impact of internet usage in Pakistan. Understanding the complexities of this relationship and potential gender differences can provide guidance to policymakers, educators, and mental health professionals in developing interventions and strategies to promote healthy and responsible internet usage among the youth, thus mitigating the negative consequences associated with excessive social networking addiction.

Objectives: To find out the relationship between social networking addiction and anxiety level among young adults.

Hypotheses:

Hypothesis 1: Individuals scoring high on Social Networking Addiction Scale will also score high on Beck Anxiety Inventory.

Hypothesis 2: There will be a significant mean difference on Beck Anxiety Scale among normal users, addicted and severely addicted social network users.

Hypothesis 3: Females will score high on Social Networking Addiction Scale as compared to males.

METHOD

Population: The target population of the present study was young adults studying in university of Peshawar. There are roughly 16000 students studying in University of Peshawar presently.

Sampling: To access the target population convenience sampling technique was used. Sample: 200 students (100 males and 100 females) were selected from different departments of Peshawar University. The age range of the sample was 18-25 (M=21.2, S.D=2.1) years. Inclusion criteria required participants to be over eighteen and have an account in any of the social networking sites. Instruments: The Social Networking Addiction Scale was developed by Mumtaz (2014). It consists of 22 items and is utilized to examine addiction to social networking sites among young adults. This questionnaire utilizes a 5-point scale, ranging from 1 to 5, for scoring. The total score for this questionnaire ranges from 22 to 110, with higher scores indicating a greater dependence on social networking sites. The Cronbach's alpha coefficient for this scale was determined to be 0.75. Additionally, the validity coefficient between the Social Networking Addiction Scale (SNAS) and the Internet Addiction Test (IAT) was calculated to be 0.90 32. The Beck Anxiety Inventory (BAI) is a self-report questionnaire consisting of 21 items that assess symptoms of anxiety. Respondents are asked to rate how much each symptom has bothered them in the past week. The symptoms are rated on a four-point scale, ranging from 'not at all' (0) to 'severely' (3). This

instrument demonstrates excellent internal consistency (alpha = 0.92) and high test-retest reliability $(r = 0.75)^{33}$.

Procedure: Participants were contacted at their respective institutes, including departments and academies, and were given a formal introduction to the study. They were then asked to complete the questionnaires voluntarily. The participants who agreed to take part in the study were provided with the necessary questionnaires and were given clear instructions to honestly respond to the questions. Throughout the entire process, strict measures were implemented to ensure the privacy and confidentiality of the participants. Their personal information and responses were treated with utmost care and kept confidential. After the participants finished filling out the questionnaires, they were sincerely thanked for their valuable cooperation and contribution to the study. For those participants who expressed interest, a debriefing session was conducted to provide them with information about the objectives and purpose of the study. This debriefing aimed to enhance their understanding of the research they had participated in and provided an opportunity for them to seek clarification or ask any questions they may have had. By following these procedures, the study adhered to ethical guidelines, safeguarded participant privacy, and demonstrated gratitude for the participants' involvement.

RESULTS

Table 1: Reliability of Social Networking Addiction Scale and Beck Anxiety Inventory

Scales	No. of items	Alpha coefficient
SNAS	22	93
BAI	21	91

In Table 1, the reliability of the two scales utilized in the study is displayed. Both scales demonstrate a high reliability coefficient.

Table 2: Interscale Correlation of SNAS and BAI (n=200)

Scales	SNAS	I RAI
		D/11
SNAS	BAI	19
	O . I M . I . A I P . C	0 1 541 5 1 4 1 1 1

Note. SNAS= Social Networking Addiction Scale, BAI= Beck Anxiety Inventory; ***=p<.002

Table 2 presents correlation between SNAS and BAI. The correlation coefficients between the two scales is supporting the research hypothesis i.e social networking addiction and anxiety is positively and significantly related with each other.

Table 3: One-way ANOVA showing differences in anxiety among low, moderate and high

COOLA TICKWOTK GOOTS					
Variable	SS	Df	MS	F	р
Among	2573.53	2	1286.76	5.91	.003
Within	42878.78	197	217.65		
Total	45452.32	199			

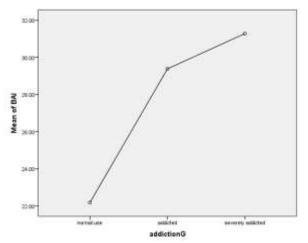


Figure 1: Means plot showing differences in anxiety among low, moderate and high social network users

Note: The cut off points for normal, addicted and severely addicted social network users are based on the cut off points of the scale mentioned in the instrument section.

Table 4: Mean, Standard Deviation and t values for Male and Female adults on social networking addiction (n=200)

ı	Male (n=100)			Female (n=100)			95% CI		Cohen's	
		M	SD	M	SD	T (198)	Р	LL	U	D
	S.N.A	54.26	19.83	66.88	16.1 7	4.93	.000	17.6 6	7. 57	0. 69

Table 4 presents the mean, standard deviation, and t-values for male and female students regarding social networking addiction and anxiety. The results reveal a significant difference in mean scores for social networking addiction [t (198) = -4.93, p < .002]. Specifically, the mean score for social networking addiction among females (M = 66.88) is higher than that of males (M = 54.26).

DISCUSSION

The objective of this study was to examine the correlation between social networking addiction and anxiety. Based on previous research findings, it was anticipated that young adults who excessively use social networking sites would exhibit high levels of both social networking addiction and anxiety. The results confirmed hypothesis no. 1, indicating a significant positive correlation between social network addiction and anxiety (r = 0.19, p < 0.01). This finding aligns with similar studies that have identified a positive relationship between anxiety and social networking addiction³⁴. Additionally, a longitudinal study conducted by Shakya and Christakis explored the link between Facebook usage and well-being, including mental health indicators. The findings revealed a negative correlation between Facebook use and well-being, which included higher levels of depressive symptoms and self-reported mental health issues that encompass anxiety³⁵. Similarly, Vannucci, Flannery, and Ohannessian suggested a positive association between social media use and anxiety, implying that increased social media usage may contribute to heightened anxiety levels ³⁶.

Many reasons can be given to explain the positive correlation between the two variables. Social network use may make people more "public self-aware", that is, how one appears to others. This appearance may be in the form of looks or impression one is creating on others 36. Sharing the selfies on the social network sites can be one of its examples. It is possible that the more one uses these cites the more one gets conscious of one's looks and is constantly in need of approval from others which may make a person anxious. According to the self-consciousness approach, being ignored by others can create anxiety in us 37. A culturally relevant reason for this finding can be having opposite gender friendships through these sites. In our culture which is dominated by religious values, intermingling of sexes is forbidden in both physical and online context. At a younger age one has more attraction toward the opposite gender and as the study sample is composed of university students which makes it prone to such attraction. It is likely that online they may be using fake ids to fulfil that purpose but keeping such friendships secret without the knowledge of parents can make one guilty which may lead to anxiety 38.

The nature of certain cites in itself predisposes people to get anxious. For example in face book one gets notifications in terms of comments people leave on your posts or the likes you get on your posts. It leaves people waiting for the response from others whenever one logs on to them, as compared to our normal routine meetings with people. We don't expect at every encounter or thought we share with others to get some feedback from others on that. It is evident that machine assisted interactions cannot equate with our everyday socializing patterns. Similarly we are motivated to protect our social identities. It is also probable that we may get certain negative comments on social networking site which also generates negative feelings in us and makes us uncomfortable.

The one who is operating a blog or some group in face book may not always think of all group members as pleasant people. Some group members may have very different and unacceptable views which are hard to tolerate, but one has to see them and either to ignore them or respond to those deviant ideas. In a face to face interaction, if one does not wish to meet such people one can simply avoid them. These forced social encounters can create more of an anxiety in people too. According to Schlenker and Leary social anxiety arises when one is motivated to make a positive impression on others but is not getting successful in it 38. It can also be stated the other way round, that is, it may be an inherent anxiety in people which makes them a social network user . Kandell reported that there are a number of emotional factors which may be related to college students' social networking addiction. Among these factors the most remarkable are depression, anxiety, and stress³⁹.

It is possible that individuals who already experience anxiety may be inclined to use social networking sites as a preference for technology-mediated interactions over face-to-face encounters. The Uses and Gratifications Theory suggests that individuals engage in social networking to fulfill specific unmet needs and desires. For instance, for individuals with lower confidence levels, rejecting an unwelcome friend request is easier to do through a computer or device rather than in person. Similar findings have been reported by Egger and Rauterberg and Hillary, highlighting that individuals who experience anxiety and stress often struggle with effective communication and meaningful interactions, which can predispose them to social networking addiction 40.41.

Shepherd and Edelmann conducted a study involving 169 students, which indicated that individuals with social anxiety find it more comfortable to communicate online than through direct contact, often citing the possibility of anonymity as a contributing factor⁴². Likewise, Rice and Markey examined a sample of 80 women with an average age of 18.8 and concluded that individuals with high introversion and psychoneurotic traits experience less anxiety when communicating through social networking platforms compared to direct interactions. It can be argued that anxious individuals utilize the internet as a means to cope with their anxiety, escape from distressing thoughts that trigger anxiety, and replace their turbulent thoughts with the attractions and amusements found on social networking sites⁴³.

Additionally, Hussain, Griffiths, and Sheffield explored the relationship between problematic smartphone use and individual traits such as narcissism, anxiety, and personality factors. Their findings shed light on the potential influence of these psychological factors in contributing to problematic smartphone use ⁴⁴-Self-Determination Theory can explain the above mentioned findings, that is, people have innate needs for autonomy, competence, and relatedness, exceptional use of social media can result in the absence of sufficient offline contexts to meet these needs ¹⁸.These studies collectively provide insights into the relationship between social network addiction, smartphone use, anxiety, psychological implications, and academic performance .

Our second research hypothesis about an increase in anxiety due to the amount of internet addiction is also proved {F(2, 197) = 5. 91, p< .01}. The Means Plot (see figure 1) reveals that there was a significant mean difference between low and addicted SNS users and a non-significant difference between addicted and severely addicted social network users. A linear increase in anxiety can still be seen in the means plot. Although there were individuals in the data who scored as severely anxious but by consulting the mean, the result demonstrates that the social network addicts scored in the moderate range of anxiety, not in the excessive region. As the data was gathered from general public, there were few people who scored towards the extreme on Beck Anxiety Inventory. The result may seem alarming but experts have pointed out that anxiety or depression has only been linked to pathological use of the Social networking sites, not with the average, everyday use. It is also evident from the result of the present study that those who were occasionally using social networking were less

likely to be affected by its negative consequences as compared to moderate to heavy users. Crossing the boundary of the normal use makes people more prone to experience anxiety; further moving on in intensity does not increase a significant amount of distress people will experience. It is also evident that Social networking addiction contributes to moderate level of anxiety in individual's life. Its controlled use can easily lower down the anxiety level. As compared to the real stressors of life which predispose a person to excessive amount of anxiety, which will need therapeutic Research on social networking assistance to overcome it. addiction and anxiety demonstrated that the overuse of the social networking sites, results in a disruption of the normal lives of individuals and the people around them, which is associated with an increase in the frequency of anxiety 45. As excessive internet use displace the time people can spend with family and friends, it leads to smaller social circles and high loneliness and stress 46. Still another explanation can be that pathological social network users get less sleep because they're pathologically using the Social networking sites. They're also not eating right; neither are they connecting in a healthy way to people (face to face), in socially appropriate way. Instead of it they're lost in gaming and fantasy on the Internet, which creates relationship problems for them and hence makes them more anxious.

Hunt, Marx, Lipson, and Young conducted a study to examine the impact of limiting social media use on loneliness and depression. Through an experiment, participants were randomly assigned to either limit their social media use or continue using it as usual. The findings indicated that those who restricted their social media use experienced reduced levels of loneliness and depression compared to the control group⁴⁷. Similarly, Sadig investigated the psychological implications of excessive use of social networking sites among university students in Lahore, Pakistan. The researcher conducted a survey-based study to explore the effects of social networking site addiction on various psychological factors, including self-esteem, self-efficacy, loneliness, depression, and anxiety. By collecting data from a sample of university students, the study provided insights into the potential negative psychological consequences associated with excessive use of social networking sites⁴⁸.

Zafar, Saleem, Waqas, Ijaz, and Ali examined the impact of excessive smartphone and social media use on mental health, specifically anxiety, depression, and stress. The findings suggested potential adverse effects of excessive smartphone and social media use on the mental well-being of university students in Pakistan⁴⁹.

As part of our research, we also aimed to investigate whether there are gender differences in social networking site addiction. The study revealed that female students (M = 66.88) exhibited a higher prevalence of social networking addiction compared to male students (M = 54.26). The effect size, measured by Cohen's d. was found to be 0.69, indicating a large effect. This result is consistent with previous research by Jalalinejad (2012), which also reported a higher addiction rate among female students compared to male students. Additionally, Pew Research data from August 2010 showed that women spend more time on social networking sites compared to men, both in terms of overall usage and mobile usage⁵⁰. Furthermore, research on gender differences in the structure of the human brain suggests that females tend to be more talkative and oriented towards care, which may contribute to their increased time spent on social networks. In the cultural context, societal restrictions on females' socializing opportunities may drive them to fulfill their social needs through social networks^{51,52}.

Previous studies also support the findings regarding gender differences in social networking addiction tendencies among adults. Yildirim and Sumuer provided insights into gender-based patterns of social networking addiction²⁹, while Kircaburun, Alhabash, Tosuntaş, and Griffiths explored problematic social media use and its relationship with personality traits, social media platforms, and usage motives, confirming gender differences

among university students³¹. Alabi, Ayeni, and Olatokun also confirmed gender differences in social media addiction among university students in Nigeria. Although these studies may not focus exclusively on social networking addiction among adults, they offer valuable information on gender differences in social networking behaviors and related aspects³⁰.

CONCLUSION

The rapid advancement of technology has revolutionized the way we live and interact with the world. It has undoubtedly brought numerous conveniences and efficiencies to our daily lives. However, it is essential to recognize that excessive reliance on technology, particularly social networking sites, can have adverse effects on our well-being and social dynamics. While these platforms offer connectivity and opportunities for communication, they can also lead to addictive behaviors and detachment from face-to-face interactions.

In order to maintain a healthy balance, it is crucial for individuals to establish control over their technology usage rather than allowing themselves to be controlled by it. This means being mindful of the time spent on social networking sites and consciously engaging in real-life interactions. By finding a balance between virtual and physical social connections, we can preserve our natural ways of interacting, fostering stronger relationships and overall well-being. It is essential to harness technology as a tool that enhances our lives rather than allowing it to dominate and dictate our behaviors. By exercising control and being mindful of our technology usage, we can fully leverage its benefits while preserving our social connections and overall quality of life.

Limitations and suggestions: Regarding the limitations of this study, it is important to note that only two variables were considered. It is crucial to acknowledge that excessive use of social networking sites can have negative impacts on physical health, such as eyesight and digestion, as well as academic achievements and social withdrawal. Therefore, future studies are recommended to incorporate a wider range of variables to provide a more comprehensive understanding. Furthermore, it is worth mentioning that the participants in this study were young adults. To establish a more robust association among the constructs examined, it is advisable to replicate this study with diverse populations. By targeting different groups, a more solid relationship can be established between self-presentation, self-awareness, and social networking. The present study has raised intriguing questions concerning the connection between self-presentation, self-awareness, and social networking. Therefore, it is suggested that future studies thoroughly explore the relationship between self and social networking addiction to gain deeper insights into this area of research.

REFERENCES

- Streilein A. ISPRS on the Social Networking-Presence and Prospects. Department of Geodetic Engineering: The Netherlands. 2000 [cited 2023 Jul 11]. Available from: http://www.isprs.org/proceedings/XXXIII/congress/part6/31_XXXIII-
- Macionis JJ, Plummer K. Social Networking and Online Identities. In: Society: The Basics. 7th ed. Pearson; 2005. p. 134.
- Mehdizadeh S. Self-presentation 2.0: Narcissism and self-esteem on 3. Facebook. Cyberpsychology, Behavior, and Social Networking. 2010:13(4):357-364. PMID: 20712493.
- Gosling SD, Augustine A, Vazire S, Holtzman N, Gaddis S. Manifestations of personality in online social networks: Self-reported Facebook-related behaviors and observable profile information. Cyberpsychology, Behavior & Social Networking. 2011;14(9):483-
- 5. Global Web Index. Global Digital Insights: Essential Insights into Internet, Social Media, Mobile, and E-commerce Use around the World . 2021 [cited 2023 Jul 11].
- 6. Griffiths MD. Social networking addiction: Emerging themes and issues. Journal of Addiction Research & Therapy. 2013;4(5):1-2.
- 7. Sally LPM. Prediction of internet addiction for undergraduates in Hog Kong. (Bachelors Thesis). Hong Kong Baptist University; 2006.

- Kuss DJ, Griffiths MD, Pontes HM. Chaos and confusion in DSM-5 diagnosis of Internet Gaming Disorder: Issues, concerns, and recommendations for clarity in the field. Journal of Behavioral Addictions. 2017;6(2):103-109.
- Hampton K, Goulet LS, Rainie L, Purcell K. Social networking sites and our lives: How people's trust, personal relationships, and civic and political involvement are connected to their use of social networking sites. Pew Research Center; 2011.
- Smith A, Anderson M. Teens, social media & technology 2018. Pew Research Center. [Internet]. 2018 May 31 [cited 2023 Jul 11]. Available https://www.pewresearch.org/internet/2018/05/31/teens-social-mediatechnology-2018/
- Liu Q, Sheng L, Liu J, Chen Z, Wei W. Prevalence and correlates of video and internet gaming addiction among college students: Comparison across the United States and China. Frontiers in Psychology. 2016;7:11.
- Andreassen CS. Online social network site addiction: A comprehensive review. Current Addiction Reports. 2015;2(2):175-
- American Psychiatric Association. Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing: 2013.
- Andreassen CS, Pallesen S, Griffiths MD. The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. Addictive Behaviors. 2017;64:287-293.
- Marino C, Gini G, Vieno A, Spada MM. The associations between problematic Facebook use, psychological distress, and well-being among adolescents and young adults: A systematic review and metaanalysis. Journal of Affective Disorders. 2018;226:274-281.
- Valkenburg PM, Peter J, Schouten AP. Friend networking sites and their relationship to adolescents' well-being and social self-esteem. CyberPsychology & Behavior. 2016;9(5):584-590.
 Papacharissi Z, Rubin AM. Predictors of Internet use. Journal of
- Broadcasting & Electronic Media. 2000;44(2):175-196.
- Ryan RM, Deci EL. Intrinsic and extrinsic motivations: Classic definitions and new directions. Contemporary Educational Psychology. 2000;25(1):54-67.
- Lidbetter E. Social media and mental health: How changes in Facebook usage relate to changes in mental health [Internet]. London School of Economics and Political Science; 2011 [cited 2023 Jul 11].
- Alabi OJ, Ayeni BA, Olatokun WM. Gender differences in social 20. media addiction. [2021].
- Yellowlees PM, Marks S. Problematic Internet use or internet addiction? Computer in Human Behavior. 2005;23:1447-1453.
- Lin LY, Sidani JE, Shensa A, Radovic A, Miller E, Colditz JB, et al. Association between social media use and depression among U.S. young adults. Depression and Anxiety. 2016;33(4):323-331.
- Kuss DJ, Griffiths MD. Social networking sites and addiction: Ten 23. lessons learned. International Journal of Environmental Research and Public Health. 2017;14(3):311.
- 24. Shakya HB, Christakis NA. Association of Facebook use with compromised well-being: A longitudinal study. American Journal of Epidemiology. 2017;185(3):203-211.
- Franchina V, Vanden Abeele MMP, van Rooij AJ. The big five, the dark triad, and social networking addiction. Journal of Behavioral Addictions. 2018;7(3):683-692.
- 26. Al-Menayes J. Gender and cultural differences in internet use: A study of Kuwait. Computers in Human Behavior [Internet]. 2015 [cited 2023 Jul 11];51:249-56.
- 27. López-Fernández O, Kuss DJ, Romo L, Morvan Y, Kern L, Graziani P, et al. Self-reported dependence on mobile phones in young adults: A European cross-cultural empirical survey. Journal of Behavioral Addictions. 2017;6(2):168-177.
- Revoir P. Facebook to Blame for "Friendship Addiction". Associated Newspapers Ltd: London; 2008 [cited 2023 Jul 11]. Retrieved from http://www.dailymail.co.uk/sciencetech/article-1079633/Facebookblame-friendship-addiction-women.html
- Yildirim C, Sumuer E. Social networking sites usage and gender: A systematic review. Educational Technology 2018;21(1):195-211.
- Xu XP, Liu QQ, Li ZH, Yang WX. The mediating role of loneliness and the moderating role of gender between peer phubbing and adolescent mobile social media addiction. International Journal of Public Health. Environmental Research and 2021 17;19(16):10176.
- Kircaburun K, Alhabash S, Tosuntaş ŞB, Griffiths MD. Uses and gratifications of problematic social media use among university students: A simultaneous examination of the Big Five of personality traits, social media platforms, and social media use motives.

- International Journal of Mental Health and Addiction. 2018;16(4):959-974.
- Mumtaz M. Development and validation of social networking addiction scale. (Masters Research report). University of Peshawar; 2014
- Beck AT, Steer RA. Manual for the Beck Anxiety Inventory. San Antonio, TX: Psychological Corporation; 1990.
- Vannucci A, Flannery KM, Ohannessian CM. The relationship between online social networking and depression: A systematic review of quantitative studies. Cyberpsychology, Behavior, and Social Networking. 2017;20(11):709-719.
- Baumeister RF. Public self and private self. New York: Springer-Verlag; 1986.
- 36. Buss (1980). Self-Consciousness and social anxiety. San Francisco: W. H Freeman & Company.
- Schlenker BR, Leary MR. Social anxiety and self-presentation: A conceptualization and model. Psychological Bulletin. 1982;92:641-660
- Kandell JJ. Internet addiction on campus: The vulnerability of college students. Cyber Psychology & Behavior. 1998;1:11-17.
- Egger O, Rauterberg M. Internet behavior and addiction (Master's Thesis). Swiss Federal Institute of Technology, Zurich; 1996.
- Hillary R. Adaptation and validation of the internet addiction test (IAT) in British adults [Internet]. University of Nottingham; 2013
- Shepherd MR, Edelmann J, R. Reasons for social networking use and social anxiety. Personality and Individual Differences. 2005;39:949-958.
- Rice L, Markey MP. The role of extraversion and neuroticism in influencing anxiety following computer mediated interactions. Personality and Individual Differences. 2008;46:35-39.
- Hussain Z, Griffiths MD, Sheffield D. An investigation into problematic smartphone use: The role of narcissism, anxiety, and personality factors. Journal of Behavioral Addictions. 2017;6(3):378-386.

- McKenna KYA, Bargh JA. Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. Personality and Social Psychology Review. 2000;4:57-75.
- Nie NH, Hillygus DS, Erbring L. Internet use, interpersonal relations, and sociability: A time diary study. In: Wellman B, Haythornthwaite C, editors. The Internet in Everyday Life. Oxford: Blackwell; 2002. p. 215-243.
- Hunt MG, Marx R, Lipson C, Young J. No more FOMO: Limiting social media decreases loneliness and depression. Journal of Social and Clinical Psychology. 2018;37(10):751-768.
- Sadiq S. A study of psychological implications of excessive use of social networking sites among university students: With reference to Lahore, Pakistan. Journal of Education and Educational Development. 2017;4(1):159-178.
- Zafar M, Saleem F, Waqas A, Ijaz A, Ali A. Effect of excessive use of smartphone and social media on mental health: A study of university students in Pakistan. Pakistan Journal of Medical Sciences. 2019;35(2):501-505
- Jalalinejad R. The relationship between internet addiction and anxiety. Interdisciplinary Journal of Contemporary Research in Business. 2012;4(1):167-192.
- 50. Jantz GL. Brain differences between gender: Do you ever wonder why men and women think so different? [Web log post]. 2014 Feb 27 [cited 2023 Jul 11]. Retrieved from https://www.psychologytoday.com/blog/hoperelationships/201402/brain-differences-between-genders
- Murphy N. Science explains why women talk more than men, [Web log post]. 2015 Sep 20 [cited 2023 Jul 11]. Retrieved from www.cheatsheet.com/health-fitness/science-explains-why-womentalk-more-than-men.html/?a=viewall
- Shukla S, Soni K, Rathi S. Social networking sites addiction and associated psychological problems among young adults: A study from India. International Journal of Medical Science and Public Health. 2018;7(12):1013-1018.