

Social Media Addiction: The usage of Social Media Platforms and its Relationship with Self-Esteem and Depression

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Abstract

Social media is widely used by people of all ages across the globe. It serves as a powerful medium for communication and interaction, offering accessibility at any time and with anyone. While its usage provides several benefits, it also poses notable risks, particularly in relation to mental health. In light of this, the present research was designed to investigate the relationship between social media usage, self-esteem, and depression. A quantitative survey-based approach was employed, involving $N = 202$ participants aged 19–24 years, recruited through convenience sampling from various universities in Karachi, Pakistan. The sample size was calculated using scientific calculator (A-Priori). Standardized self-esteem and depression measures were used to collect data which was then analyzed through descriptive and inferential statistics using SPSS version 23. Findings revealed an insignificant gender difference between social media usage with Instagram to be the most frequently used platform among both genders. Moreover, there seemed to be significant positive relationship between social media usage and depression ($p < .001$), and an inverse relationship between social media usage and self-esteem ($p < .001$). The findings suggest implementation of targeted interventions including psychoeducation, digital hygiene training, and counseling services to reduce associated risk of psychological disturbances such as depression and concerns related to self-esteem among young population.

Keywords: Mental health, social media, Self-esteem, Depression, Psychological issues score analysis.

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1. INTRODUCTION

Social media usage has become an integral part of today's society, influencing the way people connect, share information and construct their identities. Increasing consumption of social media websites such as Instagram, Facebook, Snapchat, and others have largely impacted the way people think, perceive and make opinions regarding themselves and the world around. Despite of its countless benefits, excessive social media usage has become a risk factor for depression and low self-esteem particularly among young population Metwally et al. (2025).

Social media has undergone substantial transformation in a very little time, evolving from a digital data transmission to a virtual world, e-commerce portal, and crucial 21st-century marketing tool. In the current social media ecosystem, a number of services fights for the consideration of the nearly five billion consumers of mobile devices around the globe (Silver, 2019). With the rise of social networking mobile devices such as phones, users can now take their connections with them wherever and whenever they travel. With the emergence of mobile, social networking services were eliminated from desktop computers. The first iPhone, which Steve Jobs unveiled in 2007, helped shift the focus of online platform growth to phones. Facebook, Twitter, Snapchat, Instagram, TikTok, and other social media channels were thriving in the mobile app industry. Owing to technical improvements, notably great mobile cameras, business technologies now predominantly focus on video and images. Along with textual communications, consumers may now directly broadcast using these outlets. Instagram has become the social networking platform of preference for users who are drawn to attractive topics like trips, art, and clothing, among others. To express themselves visually, teenage individuals rely on social media, posting their personal images and videos as well as reacting to those posted by others. Regrettably, when teenagers exhibit themselves primarily through images, physical beauty might increase, which can cause unsettling sentiments and self-esteem troubles. Since almost all teens actively engage in social media, it is important to know how it harms youngsters. Heavy consumption of social media can culminate in severe mental health problems such as challenges with body image, and online harassment. By and large, it has become critical to establish communication with adolescent and make sure they're secure on social media (Zubair et al, 2023).

Over the past ten years, technology has made astounding strides and is now extensively used globally. Whether using cellphones, PCs, tablets, or laptops, a huge portion of the population has instant access to the Internet. More media exposure comes with increased access, which can have positive and negative effects. The media may provide a wealth of information on global happenings and can keep one abreast of current affairs. It could also be used as a resource for the

students' learning. The media, however, has a number of drawbacks. People are subject to body image difficulties as a result of admiring superstars with flawless bodies and dazzling appearances, which is a major drawback of the social media. Recent studies show that frequent upward social comparison on social media undermines subjective well-being by increasing negative affect, with low self-concept clarity further mediating this effect. Participants with less clarity about their self-concept experienced heightened negative emotions and lower well-being overall (BPS, 2024). In February 2004, Mark Zuckerberg introduced The Facebook at Harvard University. After a few days, 650 pupils had created accounts. There are currently almost two billion people who log on every day. With this rapid growth of social media young people's mental health has become subject of concern. From 2000-2007, the number of suicides with those aged 10 to 24 remained constant, but from 2007-2017, it jumped by 57%. Access to Facebook was initially only available to those having a Harvard email address. The website had been expanded to include Columbia, Stanford, and Yale less than a month later (Walsh, 2022). This gradual extension persisted until September 2006, at which point anyone above the age of 13 was permitted to establish an account.

In the following years, the uplift of mental health risks were observed to rise particularly in the college population. The level of depression and anxiety elevated from 7% to 20%, respectively. A larger percentage of the most susceptible pupils also sought treatment in the form of counseling or medications (Walsh, 2022).

In a similar study, it was observed that youngsters who spend more than three hours each day on social media were far more susceptible to suffer from psychological issues than their peers. They are more vulnerable to mental health problems including isolation, thoughts of suicide, anxiety, depression, and feelings of hopelessness. According to research, folks who use social media less routinely seem to be calmer compared to those who do not. Furthermore, research indicates that accessing social media can make users feel a range of unpleasant emotions, which might worsen or exacerbate depression (Mougharbel et al. 2023).

Tamm et al. (2024) highlighted the development of self-concept with age. Early adolescents describe themselves as having more concrete, objective traits which become abstract and psychologically sophisticated as they grow older by late adolescents.

A meta-analytical study conducted by Avci et al. (2025) highlighted strong connection between active social media consumption which includes frequent posting and interaction was significantly related to identity exploration, whereas, authentic presentation of one's self was seemed to be directly linked to clear self-

concept. The idea was further emphasized by (Pérez, 2024) explaining one sided connections or parasocialism with influencers on networking sites strongly impact young people's minds, their perceptions related to gender roles, culture and values etc. seemed to be redefined as a result of identification with them

Social networking sites are designed to be irresistible, justifying why using them may be accompanied by feelings of despair and worry. Engaging in social media causes dopamine rush leading to mood fluctuation. Regular social media users utilize it to obtain validation, which may ultimately replace significant physical connections. It is crucial to remember that social media usage particularly at the younger age has a high correlation with mental health concerns especially in females compared to males. Research from 2015 revealed that roughly half of a sample of mentally ill patients used social media, with younger people using it more often (Trefflich, 2015). While 79% of those with schizophrenia, low self-esteem and depression were using social media at regular bases (Miller, 2015). Projections predict that 5% of people particularly women than men globally suffer from depression which may lead to self-harm. Overall, 280 million people experience depression. Approximately 700,000 individuals kill themselves annually. Suicide is the fourth most likely method of death for those between the ages of 15 and 29 (WHO, 2021). There is mounting evidence connecting social media use to depression. According to several researches, teen consumers who devoted the most time on Instagram, Facebook, and other platforms were significantly more likely to experience depression rather than those who did not from 13 to 66 percent (Miller, 2022). Among the biggest differences between today's teens and youth and prior generations is the increased time they to use with their virtual friends, particularly via social media. Several experts claim that the increase in depressive illnesses is an indication that social networking connections available on the internet are a little less emotionally satisfying and cause people to feel social alienated. Another explanation for the rise in depression is the fall in self-esteem spurred along by unfavorable compares to artfully produced images of people who seems to be beautiful, slimmer, greater renowned, and richer than themselves, especially in young females. By contrast, studies reveal the photos on Instagram is the platform where young people increasingly complain feeling depressed, anxious, and self-conscious about their appearance (Miller, 2022).

Between 2010 and 2015, the proportion of children experiencing horrible depressive signs increased by 33%. During that period, there was a 65% increase in the suicide rate among young girls (Miller, 2022). In 2015, 92% of adolescents and young individuals owned cell phones, which were originally introduced in 2007. In another study a spike in depressive signs over that time period matches with cellphone uptake (Miller, 2022).

Throughout that era, there were significantly more occurrences of students who are pursuing counseling at schools and universities, typically for depression and anxiety. Visits rose by 30% between 2010 and 2015, and since the outbreak of the virus, it has continued to rise. 60% Social media, Self-esteem and Depression 14 of students use their phones mostly in hours before bed, as per studies, and they get an hour less sleep every night than their colleagues (Newsome, 2025).

Apart from other factors, social media also seems to provide spark for self-defeating thoughts as reported by Biernesser (2020). They compare themselves with their peers which may inculcate low self-esteem (Child Mind Institute, 2022). Social media websites, which are presently accessed by more than 50% of the global total, continually disseminate news, the majority of which is negative. As per 2018 Lancet research, those who access Facebook during the night are far more prone to feel depressed and unhappy (Lyall, 2018). According to a study, those who felt envious on Facebook were more likely to experience depressive symptoms later in (Tandoc, 2015). In another study individuals who used Facebook right before night had a 6% higher risk of severe depressive illness and reported their happiness as being 9% worse (Tandoc et al. 2015).

Based on the significant findings this study further highlighted the significant association among these variables in the local setup. The objective of this study was to analyze if there is a relationship between social media usage and mental health concerns with main focus on self-esteem and depression. Additionally, whether social media addiction can lead to poor self-esteem and depression.

2. LITERATURE REVIEW

The current technologically advanced era is becoming more innovative and modernized by the passing time. This has open up a new horizon for the digital world as well. It has provided new opportunities and diversified the available resources attracting millions of consumers on regular basis particularly the younger population who is the most exposed and digitalized ones (Andreassen et al. 2017)

A recent survey conducted by Gallup Pakistan (2024) reported approximately 40% of the adult population particularly under 30 years of age is consuming social media. A substantial body of evidences highlight the relationship between excessive social media usage and mental health concerns such as anxiety, depression, self-esteem issues and loneliness (Wood & Scott, 2016; Stronge et. al., 2019). Similar findings were highlighted in a meta-analytical study where problematic social media consumption was found to be positively predicting depression and related emotional concerns (Cunningham, et. al., 2021). Related studies have reported beneficial effects simultaneously (Nabi & Prestin, 2013;

Local researches have reported younger Pakistani population to be heavily indulges in social media leading to compromised mental health, self-esteem and identity related concerns (Metwally, 2025). Similar findings were revealed by Hussain et al. (2024) observing significant relationship between excessive social media usage and depression among nursing students in Pakistani universities.

With respect to gender wise comparison females university students were found to be consuming social media excessively compared to their male counterparts. Moreover, the level of mental health concerns including depression, low self-esteem and reduced life satisfaction were also elevated in females concurrently Siraj & Ali, (2023). Problematic social media usage and its impact on student's GPA as well as psychological wellbeing was investigated in universities of the province of Sindh, Pakistan. The results highlighted males to be more effected compared to females

Elevated social media usage was observed to be linked with sleep disturbance along with other concerns such as anxiety, low mood, and low self-esteem in young population (Iqbal et al. 2024).

Adolescents between the ages of 14 to 18 years who were consuming social media platform to an appropriate level reported improved self- esteem and perceived social support. However, elevated consumption was linked with inhibiting sleep cycle and academic performance Chaudhary et al. (2024).

The positive impact of Social media ignoring its unrestrainable usage is far reaching and undeniable. It has profound effect on mental health and in augmenting social-emotional wellbeing of community. The role is not confined to psycho- social domains only, it has played a significant role in the educational field as well as community development Goldman, (2024).

2.1 Hypothesis

- H1:** There will be a significant difference between males and females on their level of social media usage.
- H2:** There will be a significant correlation between social media and depression.
- H3:** There will be a significant relationship between social media and self-esteem
- H4:** There will be a significant distinction between social media platforms and their usage.

3. METHODOLOGY

3.1 Sample and Sampling method

202 participants both male and female aged 19- 24 years participated in this study with the mean age of 21.85. A minimum of 200 sample with medium effect size (Cohen's $d = 0.5$) was specified by A-Priori power analysis. It was suggested to be adequate for statistical analysis as well as for correlational studies (Mason, 2010). The participants were enrolled in undergraduate program in different Universities in Karachi, Pakistan. Convenience sampling technique was used to collect data for this research.

3.2 Variables & Measures

This research investigated excessive social media consumption as an independent variable which was measured using Bergen Social media addiction scale (Andreassen et al. 2012). The scale demonstrated good internal consistency ($\alpha = .83$) and satisfactory test-retest reliability ($r = .75$). Subsequent studies have replicated these findings with Cronbach's alpha values ranging from .80 to .88 across different populations.

Self-esteem and depression in participants were considered as the dependent variables impacted by increased social media usage. The levels of self-esteem was assessed by the Rosenberg self-esteem scale (Rosenberg, 1965). The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) demonstrates good internal consistency ($\alpha = .77-.88$) and adequate test-retest reliability ($r = .82$).

For assessing levels of depression Patient health questionnaire was utilized (PHQ-9) (Kroenke, 2001). The scale demonstrates excellent internal consistency ($\alpha \approx .89$) and good test-retest reliability ($r = .84$).

3.3 Procedure

After receiving approval from the respective authors, the Survey questionnaires Bergen Social Media Addiction Scale, Patient Health Questionnaire (PHQ-9) and Rosenberg self-esteem Scale were administered individually by the participants, to determine social media addiction, self-esteem and depression. The survey has initial demographic questions including questions regarding time spent on social networking sites, frequently used networking sites, and their feelings of despair and depression etc. following the administration of measures, the data collected was then screened and analyzed via SPSS software 23.

3.4 Research design

This study utilizes quantitative, correlational survey-based approach as a research design.

3.5 Data Analysis

Quantitative approach was adopted in this study. Correlation and regression analysis was done to examine the data and derive conclusions that were in line with the goals and rationale of the study.

4. RESULTS

N= 202 undergraduate students both male and females age between 19-24 years participated in the research. The participants were approached from different universities of Karachi, Pakistan. Below are the findings of responses that were collected and analyzed to find correlation between variables.

Table 4.1: Demographic Characteristics of Participants (N=202)

Characteristics	F	%	M	SD
Gender				
male	96	47.5		
female	106	52.5		
Total	202	100		
Age			21.85	1.27
19.00	26	12.9		
22.00	152	75.2		
24.00	24	11.9		
Hours used on social media daily				
0-2 hour	5	2.5		
2-4 hours	15	7.4		
4-6 hours	97	48.0		
6-8 hours	67	33.2		
8-10 hours	18	8.9		
Most Used Social Media App				

Facebook	21	10.3
Instagram	142	69.6
Snapchat	9	4.4
TikTok	13	6.4
Twitter	4	2.0
YouTube	13	6.4
Self-comparison with others		
No	21	10.4
sometimes	26	12.9
yes	155	76.7

Table 4.1 shows the descriptive statistics of the study variables gender, age, and daily social media usage in hours, most used apps and self-comparison with others. For the current study 106 (52.5%) females and 96 (47.5%) males participated with the Mean of Age 21.85 and Standard Deviation is 1.27. The analysis depicted that the total amount of time spent on social media did not differ significantly by gender. However, women scored slightly higher than men for using social media. Women contributing a percentage of 52.5% and men 47.5%. Furthermore, Participants' aged 22 years use social media apps more, making up 75.2% of total audience. With respect to the number of hours on social media usage varied i.e. 48% respondents use social media apps for 4-6 hours, 33.2% respondents use it for 6-8 hours. 10% of participants are users of Facebook; 69.6% are Instagram users. The other three social media networks followed are Snapchat (4.4%), Twitter (6.4%), and Instagram being the most used social media platform by 142 respondents. The respondents were asked whether they compare themselves with other people and their pictures while using social media or not, 76.7% of them chose "Yes" as their answer and 12.9% chose sometimes.

Assumption 1

The first assumption investigates the difference between males and females on their level of social media usage. Table 2 displays the results.

Table 4. 2: Gender wise frequency and percentage of social media usage (N=202)

		F	%
Valid	Female	106	52.5
	Male	96	47.5
	Total	202	100.0

The level of total social media usage does not differ significantly by gender. However, women scored relatively higher than men for using social media. Women contributing a percentage of 52.5% and men 47.5%.

Assumption 2

The second assumption investigates the possible relationship between social media usage and depression. Results are displayed in the table below.

Table 4.3: Correlation between Social Media and Depression. (N=202)

		Social Media	Depression
Social media	Pearson Correlation	1	.711
Depression	Sig.(2-tailed)		.000**

****Correlation is significant at the .001 level (2-tailed).**

Social media was found to have significant positive correlation with depression as revealed by the Pearson Correlation ($p < .001$) and that the relationship between the two variables appeared to be statistically significant approving the second hypothesis.

Table 4.4: Simple linear regression between social media and depression (N=202)

Model	R	R ²	Adj R ²	Std. Error of the Estimate
1	.711	.505	.503	.499

Tables 4.4 show the impact of social media usage and the possible causes of depression. The R² value of .505 revealed that the predictors explained 50% variance in the outcome variable.

Table 4.5: Simple linear regression between social media and depression (N=202)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	50.993	1	50.993	204.291	.000
	Residual	49.922	200	.250		
	Total	100.915	201			

Tables 4.5. The regression model was statistically significant, $F(1, 200) = 204$, $p < .001$, indicating that the predictor variable explained a significant proportion of variance in the outcome. This suggests that social media use is a strong and reliable predictor of depression.

Table 4.6: Regression coefficients of level of social media on depression (N=202)

variables	<i>B</i>	<i>SE</i> β	<i>t</i>	<i>p</i>
Constant	-.100	.157	-.639	.523
depression	.562	.039	14.293	.000
		.711		

Table 4.6 displays the standardized regression coefficient from the analysis displaying that the social media usage does predict depression ($\beta=.711$, $p<.001$). A value of .711 denotes that there is a strong positive relationship between the predictor (social media use) and the outcome variable (depression). For every 1 standard deviation increase in the predictor, the outcome increases by .711 standard deviations. Therefore, the predictor explains a large effect on the outcome.

Assumption 3

The third assumption investigates the possible relationship between social media usage and self-esteem. Results are displayed in the table below.

Table 4.7: Correlation between social media and self-esteem. (N=202)

		Social Media	Self esteem
Social media	Pearson	-.690**	1
	Correlation		
Self esteem	Sig.(2-tailed)		.000**

****Correlation is significant at the .01 level (2-tailed).**

Social media was found to have significant negative correlation with self-esteem as revealed by the Pearson Correlation ($p<.001$) and that the relationship between the two variables appeared to be statistically significant approving the third hypothesis.

Table 4.8: Simple linear regression between social media and self-esteem (N=202)

Model	<i>R</i>	<i>R</i> ²	Adj <i>R</i> ²	Std. Error of the Estimate
1	.690	.477	.474	.519

Tables 4.8 show the impact of social media usage on self-esteem. The R^2 value of .477 revealed that the predictors explained 47% variance in the outcome variable.

Table 4.9: Simple linear regression between social media and self-esteem (N=202)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.092	1	49.092	182.253	.000
	Residual	53.872	200	269		
	Total	102.965	201			

Table 4.9 displays a statistically significant relationship between the variables as $F(1, 200) = 182.253$, $p < .001$ with minimum chance effect.

Table 4.10: Regression coefficients of level of social media on self-esteem (N=202)

variables	<i>B</i>	<i>SE</i> β	<i>t</i>	<i>p</i>
Constant	3.194	.163	19.614	.000
depression	-.552	.041	-13.500	.000
		.690		

Tables 4.10 revealed that the social media usage does impact self-esteem. The predictor (social media) was a strong negative predictor of the outcome (self-esteem) ($\beta = -.690$, $p < .001$), indicating that higher levels of the predictor are associated with lower levels of the outcome, and this effect is highly significant.

Assumption 4

The fourth assumption investigates possible distinction between social media platforms and their usage. Results are displayed in the table below.

Table 4.11: Frequency and percentage of social media usage among population sample (N=202)

		F	%
Valid	Facebook	21	10.3
	Instagram	142	69.6
	Snapchat	9	4.4
	TikTok	13	6.4
	Twitter	4	2.0
	Youtube	13	6.4
	Total	202	100.0

The analysis reveals that 10% of participants are users of Facebook; 69.6% are Instagram users. The other three social media networks followed are Snapchat 4.4%, TikTok 6.4%, and Twitter 2% and YouTube 6.4% depicting Instagram being the most used social media platform by 142 respondents.

5. DISCUSSION

Considering how the internet has changed life, young people now spend several hours online each day. Technology advancement undoubtedly has certain advantages, such as the ability to communicate through social media, but it may also have negative effects on young people's development and wellbeing. Use of social media is a crucial component to take into account since mental health issues appear to be more prevalent among younger people. The results of research provide support for a potential link between youth mental health issues and social media use. This comprehensive review adds significantly to the body of research since it demonstrates a statistically significant relationship between social media use and self-esteem in the general population as well as depressive symptoms. In the first part of the study, respondents were asked how frequently they use social media on a daily basis and if they compare themselves to others on the platform or not. The second part of the questionnaire examined each person's level of self-esteem. A questionnaire to evaluate depression was included in the third and final segment. According to the findings, 12.9% of respondents stated sometimes and 76.7% said they Yes, they make social comparisons on social media. According to participants' responses, everyone between the ages of 18 and 25 utilizes social media, with most users 69.9% using Instagram. There are 52.5% more women than men who use social media, according to the study's participants. The questionnaire's results have been gathered and examined. The results of this study point to a significant connection between social media use, low self-esteem, and depression among people. As demonstrated in table 6, there is a negative correlation between social media use and self-esteem, indicating people's self-esteem would decline as their use of social media increased. Social media usage and depression are positively correlated as shown in Table 10. Increase in social media usage would cause an increase in depression. This study unequivocally demonstrates how social media harms people's self-esteem. Self-esteem is a combination of two factors: an individual's regard for themselves and their level of confidence. As users spend more time on social media, they check other users' accounts and begin to feel envious of particular people they perceive to be better than them. These people evaluate others in contrast. They consequently begin to feel unworthy, and resentful. Individuals' self-esteem is directly impacted by these unfavorable emotions (Walter, 2016). Social comparisons conducted on platforms like Facebook and Instagram make people feel worse about their life and have a detrimental impact on their mental wellbeing (Steers et al. 2014). Depression can harm a person's connections with others, their quality of life, and other social functions (Steger & Kashdan, 2009). It can even cause suicide in some cases. In addition, the prevalence of depression among young people is significant (Cairns et al. 2014). Greater awareness and worry about young people's mental health issues may be fueling fears about the detrimental impacts of internet usage.

To enable early identification of young people who are vulnerable and improved access to support and treatment, the UK government's policy has committed significant investment in child and adolescent mental health services (England, & Mughal, 2019). Social media provides enormous potential for engagement that is limited by the boundaries of in-person interactions, but they can have antisocial applications. Online bullying and harassment are examples of how the internet mirrors society but also how it may amplify its darker aspects. Numerous research conducted in this area has found stronger associations between social media use and depression symptoms in young individuals (Nagata et al. 2025). One aspect could be the difficulty in finding reliable help in offline relations. Young individuals with depressive mood were less likely to connect in person and preferred to communicate with online friends. This may be partly caused by the symptoms of depressive mood, which can include lethargy and a loss of interest in regular social activities. People may prefer socializing online to conversing in person, which may require more work and involve travel (McCrae, 2017).

5.1 CONCLUSION

Social media has a very strong impact on the self-esteem and depression of individuals. These social networking services are utilized by people for informational purposes, communication, and the development and maintenance of connections. However, the majority of individuals eventually compare themselves to others. People who compare themselves to others' lifestyles and circumstances feel less obligated and appreciative of their blessings because of the comparisons. As a result, these individuals' self-esteem suffers, which also fuels their depressive symptoms. The use of social media is rapidly expanding in practically every nation on earth. Therefore, it is hard to keep individuals, particularly young people who regularly use these applications, away from social media for an extended period of time. The findings of research show that social media addiction is negatively correlated to self-esteem and positively correlated to depression which means with more social media usage self-esteem decreases and depression increases. Here, parents, guardians, and educators should take an active part in helping students develop their sense of awareness of oneself, and confidence in themselves. Additionally, parents should restrict their children's access to these websites and educate them about the dangers of being addicted to social media.

Conflict of Interest

The authors declare no conflict of interest.

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