

# Aggression and Social Media Addiction: Digital Platforms and their Effect on University Students

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**ABSTRACT:** This study investigates the relationship between social media addiction (SMA) and aggressive attitudes among Pakistani university students. As digital platforms become increasingly embedded in student life, understanding their psychological impacts is crucial, particularly in Pakistan, where research on this topic remains limited. Using a qualitative, cross-sectional design, data were collected from 310 students (aged 17-28) across universities in Rawalpindi and Islamabad. Three validated scales were employed: The Social Media Addiction Scale-Student Form (SMAS-SF) and the Aggression Scale. The study implemented rigorous sampling to ensure diverse representation while maintaining ethical standards. The foundations of the study were guided by Social Learning Theory and the General Aggression Model. The research aimed to assess the prevalence of social media addiction, to analyze its correlation with aggression or aggressive attitudes, and to explore gender differences in the manifestation of social media addiction and aggressive attitudes. Methodological care included cultural adaptation of instruments, pilot testing, and advanced statistical analyses controlling for socioeconomic and academic factors. The findings offer valuable insights for developing culturally appropriate interventions to promote healthier digital habits among students. The study bridges important research gaps while providing a foundation for future longitudinal investigations into these behavioral dynamics.

**KEYWORDS:** Social Media Addiction, Aggressive Attitudes, University Students, Pakistan, Digital Behavior, Mental Health

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## Introduction

The introduction of social media has majorly transformed the means of communication and connection, specifically among university students who are frequent users of digital platforms such as Facebook, Instagram, X (formerly known as Twitter, and TikTok. Even though these platforms offer various avenues and countless opportunities for connection, interaction, and unfiltered sharing of information, concerns have rapidly increased over time regarding the possibility of it fostering aggressive attitudes. Aggression is defined by behaviors and actions that are exhibited with the intention to harm, scare, or intimidate other individuals. It can manifest through various ways, including verbal abuse, physical hostility, and even cyberbullying when taken under the context of online engagement. Understanding the dynamic relation between addiction to

social media and aggressive behaviors is absolutely crucial, especially when focusing on Pakistani university students, where we can see that digital engagement is rapidly growing as time passes.

The current trends among Pakistani university students indicate an increasing prevalence of social media addiction, linked with the heightened aggressive attitudes and growing signs of social avoidance and distress.

This study holds significant value in analyzing the behavioral and psychological consequences of social media addiction among university students in Pakistan, specifically within the twin cities, i.e., Rawalpindi and Islamabad. By investigating the direct dynamic relationship between SMA and aggressive attitudes, this research contributes to a greater understanding of how digital behaviors and tendencies impact the emotional and interpersonal functioning of an individual.

Adding onto that, by measuring the prevalence rates, differences based on gender, and health consequences, the findings of this research aim towards supporting educators, counsellors, and policymakers in designing frameworks of evidence-based mental health initiatives, media policing, digital literacy programs and gender-specific intervention strategies that promote healthier patterns on online interaction and reduce the overall risk of aggression and distress in students.

## Research Objectives

- i. To measure the prevalence and severity of social media addiction among university students in the twin cities of Pakistan.
- ii. To examine the correlation between social media addiction and aggressive attitudes, identifying the patterns of verbal hostility, physical violence, and anger in association with excessive social media use.
- iii. To explore the emotional and physical health consequences of social media addiction, including emotional distress (e.g., frustration) and physical symptoms (such as fatigue, sleep disturbances, etc.)
- iv. To analyze gender differences in social media addiction and its relationship with aggressive behaviors, distinguishing between the internal aggressive tendencies (e.g., self-criticism, frustration) among female university students and the external aggressive tendencies (e.g., confrontational behavior, physical aggression) in male university students.

## Research Questions

- ▶ Increased levels of social media addiction are associated with higher levels of aggressive attitudes among university students.
- ▶ Students who show higher levels of social media addiction experience greater levels of physical problems and emotional distress.
- ▶ Female university students in the twin cities of Pakistan, ages 17-28, exhibit a higher tendency of social media addiction associated with higher levels of internal aggressive attitudes as compared to male university students.
- ▶ Male university students in the twin cities of Pakistan, ages 17-28, exhibit a higher tendency of social media addiction associated with higher levels of external aggressive attitudes as compared to female university students.
- ▶ There will be a significant link between social media addiction and aggressive attitudes.

## Literature Review

Social media addiction, also known as SMA, is recognized as a major behavioral concern among university students. Andreassen et al. (2012) define social media addiction as being heavily preoccupied with social platforms to such a great extent that it causes disruption in the other important areas of one's life, such as work, academics, and relationships. This behavioral addiction is composed of uncontrolled overuse, modifications in mood, tolerance, withdrawal, and relapse that are similar to substance-related disorders. Moreover, Griffiths (2000) highlights that addictions associated with behavior, including those of internet or social media usage nature, involve a repetitive pattern of behaviors being exhibited despite their negative consequences, often followed by an increase in loss of control.

Theoretical frameworks provide a basis for understanding how social media addiction may cause the development and reinforcement of aggressive attitudes. According to Bandura's (1977) Social Learning Theory, individuals use observation and imitation of others to learn behaviors, especially when these behaviors are backed up by rewards or social acceptance. On social media platforms, users are regularly exposed to abusive language, hostile memes, and confrontational interactions, which may normalize and encourage the replication of such behaviors, particularly among young adults. Linking to this, the General Aggression Model (Anderson & Bushman, 2002) suggests that prolonged and repetitive exposure to aggressive stimuli results in an increase in aggressive thoughts, feelings, and behaviors over time. Social media, with an influx of such violent content, cyberbullying, and emotionally charged debates, may serve as a persistent stimulus that reinforces hostile behavior. All in all, these theories suggest that not only does this excessive engagement with social media lead to an addiction, but also results in heightened levels of aggression through learned behaviors and cognitive conditioning.

Social media addiction has continued to raise significant concern in contemporary psychological and behavioral research, particularly among university students. Andreassen et al. (2012) were among the initial few to develop a reliable and valid measure for analyzing this phenomenon called the Bergen Facebook Addiction Scale, which identified six core addiction components, including salience, mood modification, and withdrawal. Building on this, studied how social media addiction negatively influences mental health and academic performance, specifically in college students, and highlighted self-esteem as a crucial mediating factor. Similarly, Lin et al. (2016) investigated a solid connection between excessive social media use and increased depressive symptoms among American young adults, suggesting that greater levels of screen time might negatively affect emotional well-being. Furthermore, the study scope was expanded by conducting a review, which found that the overuse of social media is highly linked to depression, anxiety, and psychological distress, specifically within adolescents. A detailed examination of the various research trends in social media addiction, identifying distress associated with disruptive usage patterns, and highlighting emerging areas, such as interventions, as the major focus.

Conclusively, these studies show the multi-layered nature of social media addiction and therefore, reinforce the importance of continuing further empirical research and intervention strategies that are culturally sensitive and responsive.

In Pakistan, there is an increasing adoption of social media among university students that has resulted in major concerns about the associated psychological and physical impacts. Recent studies highlight how the

excessive use of digital platforms such as Facebook, Instagram, and TikTok can be linked to higher levels of depression, anxiety, and disruptive sleeping patterns in the student demographic. The major gaps in awareness among users regarding healthy digital habits and the lack of support from institutions in society add to this rising dependency on social media content and applications.

Aggressive attitudes consist of behaviors that are intended to harm others physically or psychologically, and they are increasingly being recognized as a significant behavioral issue in the context of social media usage (Lin et al., 2024). In the contemporary digital era, social media platforms have emerged as significant arenas for aggressive behaviors, which Anderson and Bushman (2002) define as any conduct intended to inflict harm on another individual. Such aggression online primarily manifests as cyberbullying, various forms of online harassment, and verbal assaults. Given that social media users are predominantly young adults, they are regularly exposed to a wide array of hostile interactions and potentially violent content, experiences that can profoundly influence their perceptions and propensity for aggression (Jiang, 2024). Significantly, these online environments offer a sense of safety through anonymity, a factor that may inadvertently encourage and normalize the exhibition of aggressive behaviors among their users.

The development of aggressive attitudes on social media can be understood through several theoretical lenses, notably the "Frustration-Aggression Theory" (Dollard et al., 1939). This framework recommends that aggression serves as a direct response to frustration, which individuals experience when their goals or needs are perceived as being obstructed or threatened by others. Within these social media contexts, such frustration can then arise from various sources, including receiving negative feedback or being excluded from online groups, and even engaging in heated ideological clashes with other users. Crucially, these frustrations can also translate into aggressive behaviors, especially when individuals feel empowered by online anonymity to express hostility without fear of real-life consequences.

Another relevant framework, the Cognitive Neoassociation Model (Berkowitz, 1989), suggests that unpleasant events or stimuli can trigger negative emotions, ultimately leading to aggressive thoughts and behaviors. Social media interactions frequently expose users to such unpleasant experiences, including trolling, online bullying, and hostile political debates. Eventually, with time, this constant exposure to negative stimuli can compel individuals to respond aggressively themselves, thereby reinforcing a pattern of hostile attitudes in their daily lives. For example, frequent exposure to cyberbullying can desensitize individuals to the harm caused by their actions due to the lack of immediate consequences online.

Empirical evidence supports the notion that consumers with excessive social media exposure, most of the time, contribute significantly to developing and showing aggressive attitudes. For instance, a seminal study meticulously established that prolonged engagement with aggressive interactions on social media platforms profoundly influences individuals' own aggressive behaviors. Their findings indicated that participants, after extended exposure to hostile online content, displayed notably higher levels of aggression not only within subsequent online interactions but also in their real-world and offline encounters. This suggests a concerning spill-over effect from the digital realm into daily life.

Additionally, reinforcing this perspective, research further established this intricate link between individuals who frequently engaged in intense online arguments because they were consistently exposed to hostile content. Youth exposed to aggressive comments or violent imagery were often more likely to exhibit

overt aggression even in their personal lives and face-to-face interactions. These compelling studies collectively underscore a critical point: the frequent and prolonged exposure to aggressive stimuli prevalent on social media platforms can lead to a significant and concerning escalation in aggressive attitudes and behaviors among users. This also highlights the requirement for a deeper understanding and awareness of the impact of digital environments on psychological well-being.

Similarly, the facilitating role of online anonymity in fostering aggressive attitudes has been well-documented by many researchers. Individuals interacting anonymously online were more liable to engage in hostile behaviors than their counterparts in face-to-face settings. This anonymity strips away the typical social and emotional repercussions of the aggressive actions, leading to increased user aggression as no one can identify the culprit. Moreover, due to the privacy available on social media platforms, and also because of the non-availability of instant accountability, aggressive behaviors frequently escalate, particularly among adolescents.

Online aggressive behavior, which includes harassment and cyberbullying, is increasing even among Pakistani students because of the extreme usage of social media. Research by Siddiqui & Kazimi (2021) highlights how this aggression, particularly in political and social discourse, negatively impacts users' mental health and academic performance. As there is no regulatory authority in Pakistan regarding digital literacy, it cannot be easily monitored. Also, the understanding of cultural and social factors driving online aggression on Pakistani platforms is crucial for developing effective interventions to curb these harmful behaviors.

With each passing day, the use of social media among university students is increasing in Pakistan. This heightened number of users is becoming a concern as the negative effects of continuous use of these platforms are creating mental and emotional health problems among its users. Although social media offers a range of opportunities for connection and networking on a global scale, its excessive usage can cause a lot of issues regarding aggression, social avoidance, and emotional distress, especially among youth. Therefore, this research plays a crucial part in exploring the social media usage and its connection with aggression.

Given the limited research available on this topic in Pakistan, especially among university students in the twin cities of Rawalpindi and Islamabad, this study aims to fill the gap in the research that will provide significant insights into how social media addiction influences student behavior and emotional well-being, and how certain aspects of gender differences may impact these outcomes. By exploring these specific factors, this study intends to provide valuable insights for developing effective institutional and personal interventions, as well as policy recommendations, to address the mental health challenges stemming from social media addiction in Pakistani students.

## Research Methodology

Defined as the overwhelming and unmanageable use of social networking platforms, social media addiction significantly interferes with daily activities, personal relationships, and mental health (Andreassen, 2015). Key indicators include an intense compulsion to check social media, emotional discomfort when offline, and persistent use despite adverse consequences. This phenomenon is quantifiable using the 29-item Social Media Addiction Scale-Student Form (SMAS-SF); higher scores on this scale denote more severe addiction, while lower scores indicate less or no addiction (Şahin, 2018).

Aggressive attitudes are the cognitive and emotional tendencies that support intimidating or violent behaviors toward others. These attitudes can develop due to frustration, provocation, or exposure to aggressive models such as violent media or social conflicts (Anderson & Bushman, 2002). This is measured using the Aggression Scale 11 self-report item scale, with higher scores indicating greater tendencies of aggressive attitudes and lower scores indicating lower or minimal tendencies of aggressive attitudes. (Orpinas & Frankowski, 2001).

## Conceptual Model



## Research Design

This study follows a qualitative, cross-sectional approach, applying psychometrically validated scales to measure the connection between social media addiction, aggression, and social avoidance and distress as mediating and moderating variables, respectively. A convenient sampling technique is used to collect data from NUST Islamabad, FAST NUCES Islamabad, COMSATS Islamabad, Bahria University Islamabad, NUML Rawalpindi, and Fauji Foundation Rawalpindi campuses, comprising both males and females from various socioeconomic backgrounds as well as different levels of educational enrollment.

### Step 1: Finalization and the permission of the instruments

The first step involves choosing and finalizing the study instruments to measure the key variables of the study. The Social Media Addiction Scale - Student Form (SMAS-SF) (Şahin, 2018) will assess problematic social media use, including compulsive behavior, symptoms of withdrawal, and social disturbance in an individual. The Aggression Scale (Orpinas & Frankowski, 2001) will measure the verbal and physical aggression, violence, and anger. Additionally, the Social Avoidance and Distress Scale (SADS) (Watson & Friend, 1969) will also be used to measure social avoidance and social distress as mediating variables and moderating variables, respectively, focusing on social avoidance, discomfort, and distress involved in situations including social interactions.

To ensure cultural suitability, the instruments will be reviewed for clarity, bias, and linguistic accuracy (Cruchinho et al., 2024). If required, minor revisions will be made to ensure the relevance of the instruments to make them applicable to the Pakistani university student population. Furthermore, a formal approval will be sought from the authors of the scales that are confirmed to be used to ensure no violation of copyrights or intellectual property. After finalization, the validated scales will be collected into a survey for efficient data collection.

### Step 2: Pretesting of the Instruments

Before full-scale data collection was conducted, a pretest was done to evaluate the reliability, validity, and clarity of the selected instruments for the course of the study. A small sample of 5-10 university students completed the Social Media Addiction Scale-Student Form (SMAS-SF) and The Aggression Scale to assess their ease of understanding, as well as the accuracy of their responses to contribute towards the formal study.

The reliability of the SMAS-SF is well-established with a Cronbach's alpha of 0.93, which indicates high internal consistency. Whereas, the Aggression Scale has Cronbach's alpha values ranging between 0.85 and 0.88, which confirms strong internal consistency.

Based on findings, minor revisions or clarifications will be implemented if considered necessary. This step ensures that the instruments are well-suited for the target population before proceeding with the full study.

### Step 3: Pilot Study

A pilot study was conducted to test the research procedure as well as to approximate the practicability of the main study. A sample of 20 university students (representative of the target population for the study) completed the SMAS-SF and the Aggression Scale online. The main objectives of this pilot study included assessing the participant response patterns and the time they required for completion to refine the length and clarity of the survey, thus, evaluating the achievability of target data collection. Furthermore, this aided in finding any procedural issues that may have affected the overall administration of the scales. Lastly, it also aimed to estimate the required sample size for the main study using effective size calculations to ensure that an accurate analysis is conducted.

### Step 4: Main Study

The main study examined the relationship between social media addiction and aggressive attitudes among university students in Pakistan. A sample of 250-300 17 to 28-year-old university students was used for the main study, ensuring representation across genders and socio-economic backgrounds. Participants were then required to complete the survey incorporating the Social Media Addiction Scale-Student Form (SMAS-SF) and the Aggression Scale. The study, in this way, aimed primarily to study how social media addiction shows a relationship with aggressive behaviors.

Data was analyzed using both descriptive and inferential statistical methods. Descriptive statistics such as mean and standard deviation will provide an outline of social media addiction and aggression levels among students. Pearson's correlation analysis was conducted to examine the strength and direction of the relationships between these variables. Regression scale analysis was then used to determine whether there is a relationship between social media addiction and the tendencies of aggressive attitudes amongst individuals or whether there is no relation at all, and whether social media addiction can predict characteristics of aggressive behavior.

Next, a gender-based comparative analysis was performed by using the independent samples t-tests to explore whether male and female university students exhibit different aggression patterns associated with social media addiction.

### Sample

#### Characteristic Demographic

Varaible	Categories	Frequency <i>f</i>	Percentage %
Gender	Male		
	Female		

Variable	Categories	Frequency <i>f</i>	Percentage %
Age	17-20		
	21-24		
	25-28		
Socioeconomic Status	Upper Economic Class		
	Middle Economic Class		
	Lower Economic Class		
Education Level	Bachelor's/Undergraduate		
	Master's		
	MPhil/MS		
	PhD		
Living Accommodation	Hostel (Alone)		
	Hostel (Romemate)		
	Close Relatives		
	Distant Relatives		
	With Immediate Family		
Parental Education	Under Matriculation		
	Matriculate (10 <sup>th</sup> )		
	Intermediate		
	Bachelor's/undergraduate/master's		
	MS/MPhil/PhD		
	No Formal Education		

## Instruments

The study employs validated psychometric instruments to measure these constructs: The Aggression Scale (Orpinas & Frankowski, 2001) and The Social Media Addiction Scale-Student Form (SMAS-SF) (Şahin, 2018). The study developed a questionnaire to ensure accessibility, confidentiality, and anonymity for the participants.

## The Social Media Addiction Scale

Designed for active student users, the Social Media Addiction Scale - Student Form (SMAS-SF) measures the extent of social media addiction. This instrument uses a 29-item, 5-point Likert scale, yielding total scores between 29 and 145. It evaluates four key dimensions of dependence: tolerance, communication, behavioral problems, and information-seeking behaviors. Although no definitive cutoff score is provided, higher scores consistently point to more severe addiction, while lower scores suggest less or no addiction. With a strong psychometric foundation, the SMAS-SF is a robust tool for evaluating problematic social media use and its effects on students' psychological well-being. Its reliability is well-established, demonstrating high internal consistency (Cronbach's alpha = 0.93) and exceptional stability over time (test-retest reliability = 0.94). The instrument's validity is further supported by a clear four-factor structure, identified through factor analysis, which explains 53.16% of the scale's total variance (Şahin, 2018).

## The Aggression Scale (Orpinas & Frankowski, 2001)

The Aggression Scale is a self-report instrument developed specifically to assess different forms of aggressive behavior that include areas of physical aggression, verbal aggression, anger, and hostility.

The scale demonstrates its high reliability with the Cronbach's alpha values ranging between 0.85 and 0.88, confirming a strong internal consistency. Additionally, its test-retest reliability has been established through one-year and two-year follow-up studies, which reinforces the stability of the aggression-related behaviors over time. This is a self-report item scale where the participants are required to rate the frequency of aggressive behaviors on a scale from 0 to 6+ times over the last 7 days of the testing week period. The scores range from the lowest score of 0 to the highest score of 66, where the higher scores indicate greater tendencies of aggressive attitudes and lower scores indicate lower or minimal tendencies of aggressive attitudes among humans.

Given its effectiveness in assessing aggression in adolescents and young adults, this instrument is extremely well-suited for investigating the overall relationship between social media addiction and aggressive tendencies. (Orpinas & Frankowski, 2001).

By integrating these two validated scales, this study ensures an overall comprehensive and methodologically sound approach to understanding how social media addiction can influence aggression among social media platforms. The combination of these instruments determines the way for definite data collection and meaningful statistical analysis that helps in strengthening the reliability and applicability of the research findings.

## Demographics

The study sample included participants who were taken from both genders across three age groups: 17–20, 21–24, and 25–28 years. They play the part of representatives from various socioeconomic backgrounds, including upper, middle, and lower economic classes. Educational levels ranged from undergraduate and bachelor's degrees to master's, MPhil/MS, and PhD qualifications to minimize differences and maintain the demographic balance. Participants who were selected resided in different living accommodations, such as hostels (alone or with roommates), with close or distant relatives, or with their immediate families. Additionally, their parental education levels varied from no formal education to advanced degrees like MS, MPhil, or PhD to further aid in achieving equal representation.

## Procedure

This study utilized a qualitative research design with a survey method to examine the relationship between social media addiction and aggressive attitudes among youth in Pakistan. The survey for this study was designed to collect data on social media usage patterns, the associated addictive behaviors, and aggression levels using standardized psychometric scales.

The questionnaire consisted of 68 items, integrating the Social Media Addiction Scale - Student Form (SMAS-SF) to assess problematic social media use and the Aggression Scale to measure aggressive tendencies. This research was conducted after obtaining formal approval from the university's ethical review committee after which, the survey was developed with the assurance of ease of access and participation for respondents.

A deliberative sampling technique was employed to recruit university students aged 17 to 28 years, classified as young adults according to the World Health Organization (2023), ensuring relevance to the target demographic. A total number of 300 participants were selected from different educational background and

socio-economic statuses, who represent both male and female students, which depict diversity allowed for a deeper and a more comprehensive understanding of potential variations in social media addiction and its association with aggression across different groups within the Pakistani youth, as the dependency on virtual interactive platforms increases.

Before the survey, the participants were instructed with complete study instructions to get the best possible answers. The participants were also notified that their participation in this research is voluntary, consented and that their answers would be anonymous and confidential throughout and after the study so that they can respond freely and honestly in the survey. Anonymity also serves reliability and unbiased responses to collect more reliable data for research. This use of strategy also leads to more free, honest, and valid data for the research.

The collected data were then analyzed by descriptive statistics. The correlation of analysis and regression modeling to assess the relationship between SMA and aggressive behaviors was performed. The findings of this research aim to contribute towards examining and understanding the relationship between extreme usage of social media platforms and their influence, enabling aggressive attitudes so as to safeguard the emotional wellbeing of university students.

### Discussion

In this research, 310 university students from Pakistan participated. This study mainly aimed at examining the relationship between social media addiction and aggressive attitudes among youth. The sample was gathered from the twin cities of Pakistan. The sample was between the ages of 17 and 28 years, and it consisted of both genders in an equal ratio. The tools used in this research are quantitative to measure the level of social media usage and aggression linked with this usage. The relationship between the two variables was then analyzed statistically to understand and determine their strength and nature.

Table 1

*Which Social Media Platform are you most active on?*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Instagram/ Facebook	162	52.3	52.3	52.3
	Twitter (x)/ Threads	33	10.6	10.6	62.9
	Snapchat/Tiktok	65	21.0	21.0	83.9
	Reddit/Tumblr	27	8.7	8.7	92.6
	Other	23	7.4	7.4	100.0
	Total	310	100.0	100.0	

At the beginning of the survey, participants were asked about the social media platform they used actively by contributing most weekly hours to it during their screentime. The analysis revealed that a majority of respondents (52.3%) identified Instagram and Facebook as their most frequently used platforms, making them the dominant choices for social engagement among the university population. This was followed by Snapchat and TikTok, which were used most frequently by 21% of the students. These platforms are known for their visual and short-form video content, indicating a strong preference for interactive and fast-paced social media experiences among young adults. Twitter (X) and Threads were selected by 10.6% of the participants, reflecting a smaller group that prefers more text-based or discourse-oriented platforms.

Additionally, 7.4% of the participants indicated Reddit or Tumblr as their most used platforms, while the remainder selected Other platforms. These usage patterns suggest that most students engage with highly visual and interactive social platforms, which may contribute to more prolonged and frequent use, which is a factor relevant to the concept of social media addiction.

**Table 2***Descriptive*

			Statistic	Std. Error
SOCIALMEDIA	Mean		97.0290	1.10082
	95% Confidence Interval for	Lower Bound	94.8630	
	Mean	Upper Bound	99.1951	
	5% Trimmed Mean		97.9283	
	Median		98.0000	
	Variance		375.659	
	Std. Deviation		19.38193	
	Minimum		29.00	
	Maximum		142.00	
	Range		113.00	
	Interquartile Range		25.00	
	Skewness		-.627	.138
	Kurtosis		.506	.276
AGS	Mean		25.2194	.88221
	95% Confidence Interval for	Lower Bound	23.4835	
	Mean	Upper Bound	26.9553	
	5% Trimmed Mean		24.7939	
	Median		26.0000	
	Variance		241.272	
	Std. Deviation		15.53294	
	Minimum		.00	
	Maximum		64.00	
	Range		64.00	
	Interquartile Range		23.00	
	Skewness		.286	.138
	Kurtosis		-.731	.276

Descriptive statistics were calculated to determine the general levels of social media addiction and aggressive attitudes among participants. Scores for social media addiction ranged from 29 to 142, with a mean of 97.03 and a standard deviation of 19.38, indicating a moderately high level of use within the sample. For aggressive attitudes, scores ranged from 0 to 64, with a mean of 25.22 and a standard deviation of 15.53, suggesting that participants, on average, demonstrated moderate levels of aggression. These results suggest that social media addiction is relatively prevalent in the sample, while aggression levels vary widely. The high range in both variables indicates individual differences in behavior. The moderate means suggest that neither extreme addiction nor aggression dominates the sample overall. This provides a foundation for examining any potential relationship between the two variables.

**Table 3***Tests of Normality*

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SOCIALMEDIA	.071	310	.001	.972	310	.000
AGS	.079	310	.000	.969	310	.000

a. Lilliefors Significance Correction

The study utilized the Kolmogorov-Smirnov and Shapiro-Wilk tests to assess the normality of the data distribution for the variables of social media addiction and aggressive attitudes. Results indicated that both variables significantly deviated from a normal distribution ( $p < .05$ ). Despite this, the study proceeded with Pearson's correlation and simple linear regression analyses, as these parametric tests are recognized for their robustness against moderate violations of normality, particularly in large samples. Given the sample size of  $N = 310$ , the statistical procedures employed were considered appropriate, and the results remain valid and interpretable.

**Table 4***Correlations*

		SOCIALMEDIA	AGS
SOCIALMEDIA	Pearson Correlation	1	.430**
	Sig. (2-tailed)		.000
	N	310	310
AGS	Pearson Correlation	.430**	1
	Sig. (2-tailed)	.000	
	N	310	310

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

The study utilized correlation analysis to examine the relationship between social media addiction and aggressive attitudes. Results demonstrated a statistically significant positive association, with a Pearson correlation coefficient of  $r = .430$  ( $p < .01$ ). This finding suggests that higher levels of reported social media use were moderately associated with increased aggressive tendencies among students. While the strength of the correlation is not indicative of a causal or deterministic relationship, it reflects a meaningful connection that merits further investigation within behavioral and psychological contexts.

**Table 5***Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	f1	f2	Sig. F Change	
1	.430 <sup>a</sup>	.185	.182	14.04598	.185	69.887	1	308	.000	1.578

a. Predictors: (Constant), SOCIALMEDIA

b. Dependent Variable: AGS

To further understand the relationship, a simple linear regression was performed to test whether social media addiction could significantly predict aggressive attitudes. The model was statistically significant,  $F(1, 308) = 69.89$ ,  $p < .001$ , and explained approximately 18.5% of the variance in aggression scores ( $R^2 = .185$ ). The regression coefficient was  $B = 0.345$  ( $p < .001$ ), which indicates that for every one-point increase in social media addiction, aggression scores increased by about 0.35 points. The Durbin-Watson statistic was 1.578, suggesting no serious issues with autocorrelation in the residuals. This means that social media addiction is not just related to aggression, but it can also be used to predict it to some extent. Although it does not explain all the reasons why students might have aggressive attitudes, it does account for a meaningful part of the behavior. In simple terms, as students spend more time or become more dependent on social media, their chances of showing aggression may also increase. The results suggest a real and measurable link between the two variables, which should be considered in mental health and education settings.

**Table 6**  
*Independent Samples Test*

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Differen ce	Std. Error Differenc e	95% Confidence Interval of the Difference	
									Lower	Upper
SOCIAL MEDIA	Equal variances assumed	.485	.487	-2.595	308	.010	-5.66430	2.18314	-9.96005	-1.36856
	Equal variances not assumed.			-2.584	298.330	.010	-5.66430	2.19187	-9.97779	-1.35082
AGS	Equal variances assumed	3.804	.052	-.707	308	.480	-1.24941	1.76718	-4.72667	2.22786
	Equal variances not assumed.			-.704	297.428	.482	-1.24941	1.77484	-4.74224	2.24342

Gender-wise comparisons were also conducted to assess differences in social media use and aggression between male and female students. The independent samples t-test was conducted to examine gender differences in Social Media Addiction and Aggression among 320 participants (149 males and 161 females). Results revealed a significant difference in Social Media Addiction scores between males and females,  $t(308) = -2.595$ ,  $p = .010$ , with females ( $M = 99.75$ ,  $SD = 18.23$ ) scoring significantly higher than males ( $M = 94.09$ ,  $SD = 20.21$ ). The mean difference was -5.66 (95% CI: -9.96 to -1.37), indicating that females exhibit higher levels of social media addiction. In contrast, no significant gender difference was found in Aggression scores,  $t(308) = -0.707$ ,  $p = .480$ , with males ( $M = 24.57$ ,  $SD = 16.42$ ) and females ( $M = 25.82$ ,  $SD = 14.69$ ) showing comparable levels of aggression. These results suggest that while gender appears to influence social media use patterns, it does not significantly affect aggression levels in this sample.

**In terms of RQ**

**RQ 1:** which stated that increased levels of social media addiction are associated with higher levels of aggressive attitudes among university students, was supported ( $r = .430$ ,  $p < .01$ ). The significant positive correlation between the two variables confirmed this relationship.

**RQ 2:** proposed that students who report higher social media addiction would also experience more physical problems and emotional distress. Although no separate statistical analysis was conducted on these aspects, the social media addiction scale included items addressing such symptoms, for example, *"I have physical problems because of social media use"* and *"I feel unhappy when I am not on social media."* These suggest a potential link, although the research question is only partially supported, as it was not directly tested.

**RQ 3:** predicted that female students aged 17–28 in the twin cities would report higher social media addiction and higher internal aggression than males ( $p = .010$ ). The data partially supported this research question. While females did have significantly higher social media addiction scores, there was no significant difference in aggression. Furthermore, the aggression scale did not differentiate between internal and external types, limiting a full evaluation.

**RQ 4:** claimed that male students would exhibit higher social media addiction and external aggressive behaviors compared to females. This research question was not supported. Males reported lower social media addiction on average, and aggression scores did not significantly differ by gender. Moreover, the aggression scale did not separately measure external forms such as physical aggression in a way that allowed direct comparison.

**RQ 5:** which broadly stated that there would be a significant link between social media addiction and aggressive attitudes, was strongly supported. Both the correlation and regression analyses confirmed that social media addiction is a meaningful and statistically significant predictor of aggressive behavior in university students.

## Conclusion

In conclusion, the findings highlight a clear and statistically significant connection between high levels of social media use and elevated aggressive attitudes in university students. While some gender-based hypotheses were partially supported, the overall results emphasize the importance of understanding how social media behaviors may influence emotional and behavioral outcomes among youth. These findings have important implications for educators, mental health professionals, and policy-makers who aim to address the psychological impact of excessive digital engagement.

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