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RESEARCH PAPER

Validation of the Model of Instagram Addiction in Pakistan: A Study of University Students

[1]Dr. Qurat-ul-Ain Malik* and [2]Rubab Arshad

1. Assistant Professor, Department of Media and Communication Studies, International Islamic University, Islamabad, Pakistan ORCID: 0000-0003-0312-7632
2. MS Scholar, Department of Media and Communication Studies, International Islamic University, Islamabad, Pakistan

| ***Corresponding Author:** | qurratulann@iiu.edu.pk |

ABSTRACT

The aim of the research was to investigate the levels and existence of Instagram addiction amongst university students in Pakistan. The research was based on the instrument developed by Achmad Sholeh and Ahmad Rusdi called that The Instagram Addiction Scale (TIAS). The study used a quantitative survey approach and a sample of 600 respondents was taken from amongst the male and female students of International Islamic university, Islamabad. Findings of the study revealed that there was a moderate positive correlation between the levels of addiction and Instagram usage. Deeper analysis showed a similar relationship between Instagram usage and each component of addiction including mood-modification, relapse, salience, conflict, tolerance and withdrawal. Findings of the study showed that TIAS is a reliable and valid tool for evaluating the levels of Instagram addiction. Furthermore, contrary to prior literature, gender was not found to be a moderating factor in the levels of Instagram addiction.

| **KEYWORDS** | Addiction, Instagram usage, Youth, University Students |

Introduction

Internet addiction has emerged as a significant area of inquiry within media studies and psychology. Scholars have increasingly recognized that its impact can be as detrimental as substance addiction, with smartphones playing a major role in the rising frequency of internet use. The proliferation of the internet has given rise to a range of social media platforms—such as Instagram, Facebook, Twitter, and Snapchat—that allow users to share multimedia content and connect with large audiences. According to the Pew Research Center (2023), 91% of smartphone owners aged 18–29 use social media applications daily, often without realizing the extent of their screen time (Asghar, et. al., 2025).

Among these platforms, Instagram—owned by Meta and closely linked to Facebook—has gained immense popularity due to its emphasis on visual content. The emergence of the selfie trend and the desire for online visibility have further increased its appeal (Muzaffar, et. al., 2019; Alhabash & Ma, 2017; Ting, et al., 2015; Muzaffar, et. al., 2020). As of 2025, Instagram has approximately 18.8 million users in Pakistan, representing 7.4% of the national population (Kemp, 2025; Salam et. al. 2024). The platform has also become a launchpad for professional careers, with many users seeking fame and recognition through content creation (Kircaburun & Griffiths, 2018). Age remains a significant factor in usage patterns, with younger users spending more time on these platforms than older individuals (Alabi, 2013).

Importantly, the Royal Society for Public Health (2017) in the United Kingdom has identified Instagram as the most harmful social media platform for mental health. Despite growing concern, scholarly research specifically addressing Instagram addiction remains relatively limited. In this context, the present study aims to investigate Instagram addiction among university students in Pakistan, with a particular emphasis on gender-based differences.

Literature Review

This study is grounded in Behavioral Addiction Theory, which provides a comprehensive framework for understanding non-substance-related addictions, including excessive use of social media platforms such as Instagram. Unlike substance addictions that involve chemical dependence, behavioral addictions involve compulsive engagement in rewarding activities, despite the presence of negative consequences. This theory has been extensively applied to activities such as gambling, gaming, and more recently, internet and social media use (Griffiths, 1996; Awan, et. al. 2018).

According to Griffiths (1996), six core components characterize behavioral addiction. The first is Salience which states that the activity becomes the most important part of a person's life, dominating thoughts, emotions, and behavior. The second is Mood Modification which is the behavior induces a mood-altering effect, such as a sense of relief, pleasure, or escape. The third component is Tolerance which is the increasing amounts of the activity are required over time to achieve the same psychological effect. The fourth is the Withdrawal symptom which are unpleasant emotions or physical effects occur when the behavior is discontinued or reduced. The fifth is Conflict which is the behavior that causes internal or interpersonal problems, such as with family, academic responsibilities, or mental well-being. The sixth and last component is Relapse which is the tendency to revert back to the excessive behavior after periods of control or abstinence.

To measure internet addiction, Young developed the Internet Addiction Test (IAT), which later served as the foundation for platform-specific tools such as the Facebook Addiction Scale (Paramboukis, Skues, & Wise, 2016). Following this tradition, Sholeh and Rusdi (2019) developed the Instagram Addiction Scale (TIAS) to assess Instagram-specific addiction, adapting elements from existing social media addiction scales. By applying Behavioral Addiction Theory, this study aims to assess the extent to which Instagram use among Pakistani university students aligns with these behavioral addiction criteria and whether factors such as gender or time spent on the platform influence addiction levels.

Social media has become an essential part of daily life, with individuals often using it while eating, resting, or walking. The widespread availability of smartphones and affordable data packages has made access even easier, especially for university students (Royal Society of Public Health, 2017). Excessive engagement with these platforms has been linked to addictive behaviors. Out of all the social media networking sites which are prevalent today, Instagram has emerged as the most preferred medium amongst the youth primarily for its interactive features and visual aspects which have allowed it to surpass Facebook, Twitter and Snapchat (Aparicio-Martínez et al., 2020; Kircaburun & Griffiths, 2018; Pekpazar et al., 2021; Shane-Simpson et al., 2018).

Instagram is being used for a number of purposes such as entertainment and education but also language learning to some extent. Research by Sheldon and Bryant (2016) has indicated that the student's objective for using Instagram is mainly to learn about the lives of others as well using it as an archive of their memories. Other motivations for using Instagram include the need to appear to be socially desirable as well as developing and showcasing their artistic skills. In a similar research, Lee et al. (2015) was able to identify five primary motivations for using Instagram which were archiving, escapism, self-expression, social interaction and voyeurism. It has been observed that the versatile ability of Instagram to be visual appealing as well as allowing for interaction has made it the vehicle of choice not only for leisure but also personal development

In recent years, researchers worldwide have increasingly focused on internet-based addiction, with growing attention to its psychological and behavioral consequences. Initial studies aimed to determine whether internet addiction was a genuine concern; more recent research has expanded to specific forms such as social media addiction (Nauert, 2010).

Addiction is broadly defined as a compulsive, chronic need for a substance or behavior that causes harm and withdrawal symptoms upon cessation (Merriam-Webster, 2025). It is generally categorized into substance-based and behavioral addictions (Zou et al., 2017).

According to Li and Chung (2006), the internet in itself is not addictive; instead, the social functions, self-expression, communication, and building of personal ties on the Internet are what is addictive. Instagram incorporates all of these features, making it particularly prone to overuse and dependency among users (Dau, 2015). Scholars from psychology and communication studies have increasingly investigated social media platforms, particularly Instagram, as potentially addictive environments (Kircaburun & Griffiths, 2019; Yu & Shek, 2013).

Instagram's impact extends beyond psychological health; it also influences social behavior, identity construction, and even financial choices. Users often exaggerate their lifestyles or alter their appearance through filters and editing tools to gain social validation. This behavior, while providing temporary satisfaction, can result in increased stress, reduced self-esteem, and emotional instability (Sholeh & Rusdi, 2019).

Andreassen and Pallesen highlighted that social media addiction often stems from overuse and poor self-control. Excessive Instagram use can lead to neglect of personal responsibilities, studies, and family life (Nauert, 2010). Its interactive, image-driven format encourages compulsive checking, prolonged engagement, and self-promotion (Amâncio & Doudaki, 2017). In today's digital culture, users—especially youth—strive for recognition and visibility, often by continuously sharing curated aspects of their lives (Kaplan & Haenlein, 2010).

Although facebook has been the most popular social media application during the first decade of the new millennium; it is greatly being replaced by Instagam (Dau, 2015; Nyland, 2007). According to the Pew Research Center, many users have shifted from Facebook to Instagram, prompting concern about the platform's addictive potential. The UK's Royal Society for Public Health (2017) has even identified Instagram as the most harmful platform for mental health. Younger users are particularly vulnerable, forming emotional attachments to online relationships that may negatively affect real-world interactions and self-esteem (Zarenti et a., 2021).

While Instagram has some positive uses, such as networking, creative expression, and learning (Tsitsikashvili & Kremen, 2019), excessive use has been linked to procrastination, impaired academic performance, and reduced social communication (Pekpazar et al., 2021). The constant pursuit of likes and comments fosters a cycle of dependency and validation-seeking, which can distort self-perception and trigger emotional distress (Yeager, Lee & Dahl, 2017).

Gender has been found to be an interesting predictor of social media usage patterns and levels of addiction. Andreassen et al (2012) had observed that females were more likely to develop addictions related to social interaction while males were more prone to develop addictions involving solitary behaviors. It has also been observed that the cultural context has a great influence on the usage of Instagram. In this regard Aksar et al. (2023) observed that in patriarchal societies such as the one in Pakistan, females face a lot of restriction and pressures pertaining to their privacy while using social media. In a similar vein, Aziz (2016) also found that female users limit their self-expression due to their concern about their family's honor as well as the perception of society which inhibit them from using social media more often. This has led to a situation where males are more comfortable in posting online while females are reluctant to reveal their identities by posing personal content. Another interesting observation regarding the usage patterns by females showed that females are more likely to use social media sites like Instagram in order to respond to supportive exchanges and to share their positive emotions. On the other hand, males are

more likely to share their negative emotions and also consider these platforms to be a venue to pour out their unfiltered opinions (Bajri & Lashkar, 2020).

The current study defines Instagram addiction as a behavioral pattern in which university students spend excessive time on Instagram to the extent that it dominates their thoughts and interferes with daily responsibilities. Despite the increasing global concern surrounding social media addiction, limited research has been conducted on Instagram addiction in the Pakistani context. This study seeks to fill that gap by examining the levels and effects of Instagram addiction among university students in Pakistan.

Based on the literature, the following hypothesis were proposed for the purpose of the present research;
H1: Higher Instagram usage is positively correlated with Salience.
H2: Higher Instagram usage is positively correlated with Mood modification.
H3: Higher Instagram usage is positively correlated with Tolerance.
H4: Higher Instagram usage is positively correlated with Withdrawal.
H5: Higher Instagram usage is positively correlated with Conflict.
H6: Higher Instagram usage is positively correlated with Relapse.
H7: Higher Instagram usage is positively correlated with overall Instagram addiction**.**
H8: There is a significant difference in the levels of Instagram addiction between male and female students.

Material and Methods

This study employed a quantitative survey method as the research design to measure Instagram addiction among university students. Young Instagram users in Pakistan made up the target population, and university students between the ages of 18 and 30 met the inclusion requirements. Participants were chosen using a purposive sampling technique, which was thought to be the most effective way to reach the target population. The International Islamic University, Islamabad (IIUI), which has about 30,000 students, is where the sample was taken. From the target population, the researchers chose a sample of 600 students, 300 of whom were male and 300 of whom were female. To gather data, the instrument employed for the research was TIAS (The Instagram Addiction Scale) developed by Achmad Sholeh and Ahmad Rusdi in 2019. The Instagram Addiction Scale (TIAS) included two scales, Instagram Feed Addiction and Instagram Stories Addiction. Instagram Feed Addiction Scale consists of a total of 25 items. Each item represents the addiction component, salience, mood modification, tolerance, withdrawal, conflict, and relapse. The scale used 5-point Likert scale ranged from 1 ((strongly disagree) to 5 (strongly agree).

Results and Discussion

After developing the scale and conducting the reliability test. 700 questionnaires were distributed among students at International Islamic university, Islamabad representing various faculties. to collect the data. Among the participants, 350 were males, while 350 were females. Out of these, 600 responses were deemed to be fit for inclusion in the study. After completing the data collection, the data was entered in the SPSS software for analysis. Following are the details of each variable.

Table 1
Demographic Statistics

Gender	Frequency	Percentage
Males	300	50.0
Females	300	50.0
Age		
18 to 22 years	155	36.8
23 to 26 years	359	48.9

27 to 30 years	86	14.3
Educational Level		
Undergraduate	364	70.7
Graduate	236	29.3

With regard to gender distribution, 300 respondents were male while 300 were female (Table 1). Regarding age distribution, 155 participants were between 18 and 22 years old, 359 were between 23 and 26, and 86 were between 27 and 30. In terms of academic level, 70 % of the respondents were undergraduate students, while 29% were enrolled in graduate programs.

Table 2
Instagram usage patterns

	Frequency	Percent
Time spent on Instagram daily		
Half to 1 hour	153	25.5
2 hours	231	38.5
3 to 4 hours	159	26.5
More than 4 hours	57	9.5
Duration of Instagram usage		
Less than one year	90	15
1-2 years	298	49.7
3-4 years	166	27.7
5-6 years	35	5.8
More than 6 years	11	1.8
Frequency of Instagram usage		
Less than five times	136	22.7
5 to 10 times a day	217	36.2
11 to 15 times a day	131	21.8
16 to 20 times a day	50	8.3
More than 20 times	66	11.0

Approximately 25% of the participants reported spending between 30 minutes to 1 hour on Instagram daily, while 38% used the platform for around 2 hours. About 26% spent 3 to 4 hours, and 9% reported using Instagram for more than 4 hours each day. Regarding the purpose of usage, 3.5% of participants used Instagram for business purposes, 92% for personal reasons, and 4.2% for both. In terms of duration of use, 15% of the respondents had been using Instagram for less than one year, 49% for 1 to 2 years, 27.7% for 3 to 4 years, 5.8% for 5 to 6 years, and 1.8% had been on the platform for more than 6 years. When asked about daily usage frequency, 22% reported opening Instagram fewer than five times a day, 36% accessed it 5 to 10 times, 21% between 11 and 15 times, 8.3% around 16 to 20 times, while 11% indicated accessing Instagram more than 20 times daily—classified as excessive usage.

Table 3
Computations of Variables

	Strongly Disagree	Disagree	Weakly Disagree	Weakly Agree	Agree	Strongly Agree
Salience	0	6.3%	17%	**62.3%**	12.7%	1.7%
Mood Modification	7.2%	17.7%	24%	**30.7%**	17%	3.5%
Relapse	15%	1.5%	19.7%	**21.7%**	10.5%	1.5%
Tolerance	7.2%	20.2%	**36.2%**	22.7%	11.7%	2.2%
Conflict	19.3%	**38.8%**	21.7%	12.3%	6.7%	1.2%
Withdrawal	25.3%	**39%**	21.3%	9.8%	3.2%	1.3%
Instagram Addiction	0.7%	8.7%	**35.2%**	31.9%	18.3%	5.2%

In order to determine the results, all the responses were computed. The six core components were computed in line with the scale developed by Achmad Sholeh and Ahmad Rusdi whereby the respondents were asked a total of 25 statements which were than computed to form the six variables Salience, Tolerance, Mood Modification, Relapse, Withdrawal, Conflict. Lastly, all 25 statements were further computed to form the main variable Instagram addiction.

The data in Table 3 presents the distribution of responses across six behavioral components of Instagram addiction: conflict, mood modification, relapse, salience, tolerance, and withdrawal, along with overall Instagram addiction. The highest agreement was observed with salience, where a significant majority (62.3%) weakly agreed that Instagram plays a central role in their thoughts and daily routine, indicating it dominates users' attention. For mood modification and relapse, approximately 30.7% and 21.7% of participants, respectively, weakly agreed, suggesting that Instagram use may help some individuals manage emotions or cope with negative feelings. However, a relatively large proportion also expressed disagreement across variables like conflict (38.8%), tolerance (36.2%), and withdrawal (39%), implying that while some users experience behavioral addiction symptoms, many do not strongly relate to feelings of compulsion or neglect of responsibilities. Notably, withdrawal had the highest percentage of strong disagreement (25.3%), indicating that most respondents did not report irritability or frustration when unable to use Instagram. Overall, the data suggest a moderate presence of addictive behaviors, with salience being the most prominent, while more severe symptoms like withdrawal and conflict were less commonly reported. Overall, Instagram addiction was moderately endorsed, with a combined 55.2% of respondents either *weakly agreeing* (31.9%), *agreeing* (18.3%), or *strongly agreeing* (5.2%) that their usage reflected addictive tendencies. These findings suggest a moderate presence of Instagram addiction symptoms, with salience and mood modification being the most reported, while withdrawal and conflict appear less prominent.

Table 4
Correlation between sub- variables of Instagram addiction and Instagram Usage

	Time spent on Instagram daily
Conflict	.469**
Mood Modification	.356**
Relapse	.481**
Salience	.513**
Tolerance	.431**
Withdrawal	.437**

N=600, **P<0.01 two tailed

H1: Higher Instagram usage is positively correlated with Conflict.

This hypothesis proposed a positive relationship between the amount of time spent on Instagram and the experience of conflict in daily life. A Pearson correlation analysis revealed a moderate positive correlation, $r = .469$, $p < .01$, indicating that individuals who spend more time on Instagram tend to experience greater conflict, such as neglecting family, academic responsibilities, and hobbies due to excessive use of the platform.

H2: Higher Instagram usage is positively correlated with Mood Modification.

H2 posited that increased Instagram usage is associated with mood modification. The correlation analysis yielded a weak but significant positive correlation, $r = .356$, $p < .01$. This suggests that respondents who use Instagram for longer periods tend to rely on the platform as a coping mechanism to distract themselves from negative emotions, bad moods, or stressful thoughts.

H3: Higher Instagram usage is positively correlated with Relapse.

This hypothesis examined whether individuals who use Instagram more frequently experience relapse, characterized by an inability to reduce usage despite intentions. The results showed a moderate positive correlation, $r = .481$, $p < .01$, suggesting that those who spend more time on Instagram often find it difficult to control or limit their use.

H4: Higher Instagram usage is positively correlated with Salience.

H4 suggested a relationship between Instagram usage and salience—the dominance of Instagram in an individual's thoughts and routines. The findings indicated a moderate to strong positive correlation, *r* = .513, *p* < .01. This implies that heavy Instagram users are more likely to plan their daily activities around the platform and experience mental preoccupation with it.

H5: Higher Instagram usage is positively correlated with Tolerance.

This hypothesis proposed that greater time spent on Instagram is linked with increased tolerance—needing to spend more time on the platform to achieve the same level of satisfaction. The correlation coefficient, *r* = .431, *p* < .01, demonstrated a moderate positive relationship, indicating that regular users gradually require more time on Instagram to feel relaxed or fulfilled.

H6: Higher Instagram usage is positively correlated with Withdrawal.

H6 explored the association between Instagram use and withdrawal symptoms. A moderate positive correlation, *r* = .437, *p* < .01, was found. This suggests that frequent users are more likely to experience mood swings, irritability, or frustration when they are unable to access Instagram.

H7: Higher Instagram usage is positively correlated with overall Instagram addiction.

Table 5
Instagram usage and Instagram addiction

Pearson Correlation	Sig. (2-tailed)
.536**	.000

N=600, **P<0.01 two tailed

To investigate whether increased Instagram usage is associated with higher levels of Instagram addiction, a Pearson correlation analysis was conducted between daily Instagram usage and overall Instagram addiction scores. The results (*r* = .536, *p* < .01), as shown in Table 5, indicate a moderate positive correlation. This suggests that individuals who spend more time on Instagram are more likely to exhibit addictive behaviors associated with the platform.

The findings of this study provide substantial evidence supporting the application of Behavioral Addiction Theory to Instagram usage among university students in Pakistan. The results confirm that higher Instagram usage is positively correlated with several behavioral addiction components, including conflict, mood modification, relapse, salience, tolerance, and withdrawal, all of which are core features of behavioral addiction as identified by Griffiths (1996).

The significant positive correlation between Instagram usage and conflict suggests that excessive use of the platform may interfere with users' ability to fulfill personal, academic, or social obligations. This aligns with previous research indicating that high engagement with social media often leads to neglect of responsibilities and strained interpersonal relationships (Nauert, 2010; Pekpazar et al., 2021).

The correlation between usage and mood modification highlights Instagram's role as a tool for emotional regulation. Participants appear to use the platform to distract themselves from negative emotions or stress, consistent with the idea that social media can serve as a temporary coping mechanism, although such reliance may evolve into maladaptive behavior over time. Sholeh and Rusdi, (2019) had also observed that Instagram

provides temporary satisfaction and often leads to increased stress, reduced self-esteem, and emotional instability.

Additionally, a strong correlation between Instagram use and relapse was discovered, suggesting that users struggle to limit or manage their use of the app, even when they want to. This compulsive behavior emphasizes Instagram's potential for addiction. Salience showed the strongest correlation with Instagram usage out of all the components. This implies that Instagram has ingrained itself deeply into the daily routines and mental processes of many students, frequently displacing other activities. This is consistent with earlier research that found Instagram's interactive, image-based format promotes prolonged engagement and compulsive checking (Amâncio & Doudaki, 2017). The results also confirm the existence of tolerance, a hallmark of behavioral addiction, as users spend more time on the platform in order to obtain the same degree of satisfaction.

The study also discovered a moderate association between Instagram use and withdrawal symptoms, such as mood swings and irritability when access to the platform is restricted. The notion that Instagram can cause dependence-like behavior patterns akin to those observed in other behavioral addictions is supported by these findings. Yeager, Lee, and Dahl (2017) found that the constant chase of likes and comments creates a cycle of dependency and validation-seeking, which can cause emotional distress and skew one's perception of oneself.

All things considered, the relationship between Instagram use and addiction demonstrates that regular and extended use of the app is strongly linked to a wide range of addictive behaviors. This demonstrates how well the Instagram Addiction Scale (TIAS) measures these trends.

H8: There is a significant difference in the levels of Instagram addiction between male and female students.

Table 6
Gender and Instagram Addiction

	N	Mean	SD	t	df	Sig.
Male	300	3.6633	.96597			
Female	299	3.8194	1.10861	-1.837	585.495	.067

N=600, **P<0.01 two tailed

An independent samples *t*-test was conducted to examine whether gender differences exist in Instagram addiction levels. The results revealed no statistically significant difference between male (M = 3.66, SD = 0.96) and female students (M = 3.80, SD = 1.10); *t*(585.495) = -1.837, *p* = .067. Although female students had slightly higher mean scores, the difference was not significant at the conventional 0.05 level. Therefore, the hypothesis was not supported, indicating that gender does not significantly influence Instagram addiction among university students in Pakistan.

There was no evidence to support the hypothesis that Instagram addiction differs by gender. The mean scores of female students were marginally higher, but this difference was not statistically significant. This finding implies that Instagram addiction in this sample is not significantly moderated by gender, suggesting that both male and female students are equally vulnerable. This contrasts with earlier studies (Andreassen et al., 2012; Bajri & Lashkar, 2020) that found that although females are more likely to develop behavioral addictions concerning social interaction,

The study demonstrates a strong correlation between behavioral addiction components and excessive Instagram use among college students. These results highlight

the need for educational interventions, digital well-being initiatives, and awareness campaigns to encourage young people in Pakistan to use social media in a healthier way.

Conclusion

The purpose of this study was to investigate the phenomenon of Instagram addiction among Pakistani university students. Its three main goals were to determine the gender differences in addiction levels, investigate the relationship between Instagram usage and Instagram addiction, and validate the use of the Instagram Addiction Scale (TIAS) in the Pakistani context. Increased Instagram use is strongly linked to addictive patterns like salience, mood modification, relapse, tolerance, conflict, and withdrawal, according to the findings, which showed a moderately positive correlation between Instagram usage and several behavioral aspects of addiction. This supports the first objective and affirms that excessive engagement with Instagram can mimic behavioral addiction symptoms.

Regarding the second goal, the findings showed no statistically significant difference in the degree of addiction between male and female students, indicating that gender has no discernible impact on the degree of Instagram addiction in this sample.

Lastly, the study offered empirical evidence in favor of the validity of the Instagram Addiction Scale (TIAS), which successfully measured the multifaceted nature of Instagram addiction among students at the nearby university. The TIAS was a valuable instrument for evaluating addictive behaviors associated with Instagram use, confirming its relevance for further study in the Pakistani setting.

Recommendations

The findings of the research suggest the urgent need for incorporating digital literacy programs in the academic settings as well as initiating mental health awareness campaigns to help the students in managing their social media addictive behaviors. The presence of specific symptoms associated with addiction such as mood modification, conflict and withdrawal suggest the urgent need for introducing counseling services for the youth to help with their emotional regulation as well as self-control. Academic institutions particularly universities should campaign to promote healthy digital habits amongst the students. Lastly, the long-term effects of such addictive behaviors also need to be monitored and longitudinal research exploring such phenomenon needs to be initiated.

References

AbdAziz, A. & AbdAziz, A. (2020). The Influence of Gender Differences on Instagram Usage Among Higher Institution Students. *International Journal of Modern Trends In Social Sciences (IJMTSS)*. 3(14). 78-83 DOI 10.35631/IJMTSS.314007

Aksar IA, Firdaus A, Gong J, Anwar Pasha S. (2023). Examining the impacts of social media on the psychological well-being in a patriarchal culture: A Study of Women in Pakistan. *Online Information Review*. https://doi.org/10.1108/ OIR-01-2022-0057

Alabi, O.F. (2013). A Survey of Facebook Addiction Level among Selected Nigerian University Undergraduates. *New Media and Mass Communication.* 10, 70 – 80

Alhabash, S., & Ma, M. (2017). A Tale of Four Platforms: Motivations and Uses of Facebook, Twitter, Instagram, and Snapchat Among College Students. *Social Media + Society,* https://doi.org/10.1177/2056305117691544 3(1

Amâncio, M. & Doudaki, V. (2017)*. 'Put It In Your Story': Digital Storytelling in Instagram and Snapchat Stories*, Master's Thesis, Uppsala University.

Andreassen, C. & Pallesen, S. (2014). Social Network Site Addiction - An Overview. *Current Pharmacutical Design.* 20(25), 4053–4061

Aparicio-Martínez, P., Ruiz-Rubio, M., Perea-Moreno, A. J., Martínez-Jiménez, M. P., Pagliari, C., Redel-Macías, M. D., & Vaquero-Abellán, M. (2020). Gender differences in the addiction to social networks in the Southern Spanish university students. *Telematics and Informatics, 46*, 101304.

Asghar, N., Cheema, A. T., & Muzaffar, M. (2025). The Impact of Media Coverage on Political Behavior among Pakistani Students: A Case Study of GC Women University Sialkot. *Journal of Development and Social Sciences*, *6*(2), 266–279.

Awan, F. A., Alvi, A. S., Shabbir, O., Munir, R., Asif, R., & Ashraf, S. (2018). Role of Media as a Counter Narrative to Indian Propaganda: An Analysis of PTV Current Affairs Program. *Journal of Indian Studies*, *4*(02), 239-251.

Bajri, I.A. & Lashkar, N.A. (2020) Saudi Gender Emotional Expressions in Using Instagram, *English Language Teaching*. 13(5). 94-100

Dau, B. (2015). Social Computing: A Study Assessing the Impacts of Social Network Addiction among the Students in Northern Nigeria. *International Journal of Humanities and Management Sciences (IJHMS)*. 3(1).

Griffiths, M. D. (1996). Nicotine, Tobacco and Addiction. *Nature*, 384, 18

Kaplan, A.M. & Haenlein, M. (2010). Users of The world, Unite! The Challenges and Opportunities of Social Media. *Business Horizons*, 53(1). 59–68,

Kemp, S. (2025). Digital 2025: Pakistan. *DataReportal*

Kircaburun, K. & Griffiths, M.D., (2018). Instagram addiction and the big five of personality: The mediating role of self-liking. *Journal of Behavioral Addictions*, 7(1), 158–70

Kircaburun, K. & Griffiths, M.D., (2019). Problematic Instagram use: The role of perceived feeling of presence and escapism. *International Journal of Mental Health and Addiction,* 17(4). 909–21. https://doi.org/10.1007/s11469-018-9895-7.

Lee, E., Lee, J. A., Moon, J. H., & Sung, Y. (2015). Pictures speak louder than words: Motivations for using Instagram. *Cyberpsychology, behavior, and social networking*, 18(9), 552-556.

Li, S. M. & Chung, T. M. (2006). Internet function and Internet Addictive Behavior. *Computers in Human Behavior*, 22(6). 1067–1071.

Muzaffar, M., Chohdhry, S., & Afzal, N. (2019). Social Media and Political Awareness in Pakistan: A Case Study of Youth, *Pakistan Social Sciences Review*, 3 (II), 1-13

Muzaffar, M., Yaseen, Z. & Safdar, S. (2020). Role of Social Media in Political Campaigns in Pakistan: A Case of Study of 2018 Elections*, Journal of Political Studies, 27* (2), 141-151

Nauert, R. (2010). College Students 'Addicted' to Social Media. *LiveScience*.

Nyland, R. C. (2007). The Gratification Niches of Internet Social Networking, E-mail and Face-to-Face Communication. *IT & Society*, 1(4).

Paramboukis,O., Skues, J. & Wise, L. (2016). An Exploratory Study of the Relationships between Narcissism, Self-Esteem and Instagram Use*. Social Networks* 5. 82–92.

Pekpazar, A., Aydın, G.K., Aydın, U., Beyhan, H. & Arı, E. (2021). Role of Instagram Addiction on Academic Performance among Turkish University Students: Mediating Effect of Procrastination. *Computers and Education Open*, 2 (100049). 1-10.

Pew Research Center (2023). *Teens, Social Media and Technology 2023*

Royal Society of Public Health (2017). *Status of Mind: Social Media and Young People's Mental Health and Wellbeing*

Salam, Z., Jamil, M., & Muzaffar, M. (2024). The Role of Social Media in Political Awareness and Engagement among University Students: A Quantitative Study. *Journal of Development and Social Sciences*, *5*(4), 691–702. https://doi.org/10.47205/jdss.2024(5-IV)61

Shane-Simpson, C., Manago, A., Gaggi, N., & Gillespie- Lynch, K. (2018). Why do college students prefer Facebook, Twitter, or Instagram? Site affordances, tensions between privacy and self-expression, and implications forsocial capital. *Computers in Human Behavior, 86*, 276- 288.

Sheldon, P., & Bryant, K. (2016). Instagram: Motives for its use and relationship to narcissism and contextual age. *Computers in Human Behavior, 58,* 89-97.

Sholeh A. & Rusdi A. (2019). A new measurement of Instagram Addiction: Psychometric properties of The Instagram Addiction Scale (TIAS), *Proceedings of the 11th CISAK,*

Ting, H., Ming, W. P. W., de Run, E. C., & Lau, S. Y. C. (2015). Beliefs about the use of Instagram: An exploratory study. *International Journal of Business and Innovation*, *2*(2), 15–31

Tsitsikashvili, K.P. & Kremen, S.A. (2019). Instagram addiction in school students as a factor of social dis-adaptation. *Herzen Readings: Psychological Research in Education*. 89(2). 715-723

Yeager, D.S., Lee H.Y. & Dahl R.E. (2017). Competence and motivation during adolescence In Elliot AJ, Dweck CS, & Yeager DS (Eds.), *Handbook of Competence and Motivation: Theory and Application*, 431–448.

Yu, L. & Shek, D. T. L. (2013). Internet Addiction in Hong Kong Adolescents: A three-Year Longitudinal Study. *Journal* of *Pediatric* and *Adolescent Gynecology.* 26(3).

Zarenti, M., Bacopoulou, F., Michou, M., Kokka, I., Vlachakis, D., Chrousos, G.P. & Darvir, C. (2021). Validation of the Instagram Addiction Scale in Greek Youth. *EMBnet journal.* 26, http://dx.doi.org/10.14806/ej.26.1.973

Zou, Z., Wang, H., Uquillas, F.D.O., Wang, X., Ding, J. & Chen, H. (2017). Definition of substance and non-substance addiction. *Substance and Non-substance Addiction.* Singapore: Springer. 21–41