

DOI: 10.53555/ks.v12i5.3297

The Mediating Function Of Personal Disposition In The Association Between Psychological Factors And Addictive Behavior

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Abstract

In the dynamic world of social media, this study explores the complex interactions among psychosocial variables, individual characteristics, and Facebook addiction, especially as they relate to Pakistani youth. The survey included a sample of 355 students from different Peshawar University faculties. In the links between psychosocial characteristics (depression, anxiety, stress, life satisfaction), and Facebook addiction, the research examines the mediation effect of personal disposition (aggression, passion (harmonious and obsessive), and sadistic inclinations). The study applies statistical analyses to decipher the complex associations using a variety of validated instruments, such as the Bergen Facebook Addiction Scale, The Passion Scale, Buss and Perry Brief Aggression Questionnaire, DASS-21, Sadistic Attitudes and Behaviors Scale, and Satisfaction with Life. Results show a strong relationship between Facebook addiction, violent actions, life satisfaction, and psychological suffering. Furthermore, the results showed that 62% of the diversity in Facebook addiction can be explained by psychological characteristics as well as personal dispositions. The study emphasizes the need for tailored interventions sensitive to cultural differences in the Pakistani setting. In addition to adding to the body of knowledge on digital addiction, the study establishes the groundwork for valuable tactics to cater to the difficulties encountered by young people in Pakistan.

Keywords: Psychological Distress; sadistic tendencies; Passion; Facebook Addiction; Life Satisfaction

INTRODUCTION

Social media is everywhere in the modern era and has a significant impact on young people's lives worldwide. Facebook is a key player among these platforms, influencing communication, fostering identity expression, and serving as a central repository of information. According to Smith (2020), these platforms—Facebook included—offer youth instantaneous connectivity, allowing them to maintain relationships and stay up to date on local and global happenings. The startling data, indicating that in 2019, social media users worldwide spent an estimated 144 minutes a day on social media, with the United States averaging 76 minutes, of which 38 minutes were spent on Facebook, highlights this connectedness (Clement, 2019; Clark, 2019; Clement, 2020; Clement, 2021). The epidemic of 2020–2021 caused these numbers to spike, emphasizing the need to comprehend the effects of excessive social media use, especially on Facebook (Mander, Buckle, Moran, 2020). Facebook is crucial for Pakistani youth, serving as a platform for communication, identity expression, and information exchange. However, its significance is intertwined with concerns about addictive behaviors (Ahmed et al., 2021). Although psychological factors such as depression, anxiety, stress, and life satisfaction have been thoroughly studied concerning different addictive behaviors, there is still a lack of clarity regarding the complex interactions between individual personality traits and Facebook addiction (Griffiths, Kuss, & Demetrovics, 2014). Our research aims to fill the gap in understanding how personal disposition mediates the complex link between psychosocial characteristics and addictive behaviors on Facebook (Sun, Zhang, & Li, 2023). This study focuses on three essential personal dispositions: aggression, passion (both harmonious and obsessive), and the less-studied sadistic tendencies, seeking to shed light on the particular subtleties of these linkages through a thorough analysis of the body of literature and empirical data, contributing to a more comprehensive understanding of youth Facebook addiction.

1. **Psychosocial factors (independent variable):** comprise a wide range of components that combine social and psychological aspects. We focus on two important psychosocial aspects in this study: *Psychological Distress*: a state of emotional pain or discomfort known as psychological distress is frequently accompanied by signs of anxiety, depression,

and other mental health issues. It includes a variety of unfavorable feelings and events that affect a person's general wellbeing. Emotions such as melancholy, anxiety, tension, or unease can all be signs of psychological distress, which can make it difficult to deal with day-to-day pressures (Kessler, Andrews, Colpe, Hiripi, Mroczek, Normand, Walters, & Zaslavsky, 2002). *Life satisfaction* A person's total level of fulfillment and contentment with their life as a whole is measured subjectively and globally by life satisfaction. People engage in it by assessing and considering several facets of their lives, including relationships, employment, well-being, and individual accomplishments. A crucial element of subjective well-being, life satisfaction expresses a person's assessment of the caliber of their existence (Diener, Emmons, Larsen, & Griffin, 1985).

2. **Facebook addiction (dependent variable):** Facebook addiction is the inability of a person to manage their usage of the social media platform causes them to become addicted, which has negative consequences on their personal, social, and professional lives. It entails an overwhelming desire to view, interact with, or check Facebook content, which frequently leads to relationships and obligations in the real world being neglected (Kuss & Griffiths, 2011).
3. **Personal Disposition (mediator):** includes distinct facets that significantly contribute to an individual's behavioral patterns. This study investigates four key dimensions:
 - (i) *Aggression* refers to behavior that is intended to cause harm or injury to another person, either physically or psychologically. It entails the display of animosity, rage, or an aggressive inclination. A person may be aggressive verbally (e.g., insulting someone), physically (e.g., beating someone), or relationally (e.g., socially isolating someone) (Buss & Perry, 1992).
 - (ii) *Harmonious Passion* also known as voluntary internalization, is an internalized type of positive passion for a task or endeavor. It entails doing something voluntarily and consciously, without letting the action become one's personality. While keeping a good balance with other elements of their lives, those who have a harmonic passion find joy and fulfillment in what they do (Vallerand, Mageau, Elliot, Dumais, Demers, & Rousseau, 2008).
 - (iii) *Obsessive Passion*, (controlled internalization) is a less adaptable type of passion marked by an insatiable need to do something. People who have an obsessive passion may feel driven to pursue it, and it may interfere with other areas of their lives and have unfavorable effects (Vallerand & Houliort, 2003).
 - (iv). *Sadistic tendencies* involve taking delight in inflicting pain, suffering, or harm on other people. People who have sadistic inclinations may be violent, cruel, or empathetically deficient. These impulses can manifest in a variety of ways, such as physical damage or psychological manipulation (Buckels, Jones, & Paulhus, 2013).

Literature Review:

Research on Psychological Distress and Personal Disposition: Scholarly literature has extensively documented the established association between psychological discomfort and aggression. Studies reveal that those who are experiencing psychological distress, which encompasses disorders like anxiety and depression, could display elevated levels of violence. Increased impulsivity and irritation as a result of this suffering eventually show themselves as violent behaviors (Bushman, 2002).

Psychological discomfort affects passion in addition to violence. Distress has the potential to exacerbate obsessive passion while also harming harmonious passion. Harmonious passion is a positive and controlled involvement with an activity, whereas excessive passion is characterized by an uncontrollable drive. Understanding how anxiety impacts these different types of passions is crucial for academic discourse (Vallerand et al., 2003). Examining psychological suffering in connection to people's compulsive social media use has become more popular in psychology studies. Harmonious passion is typified by intrinsic and well-integrated participation, while obsessive passion is characterized by an overwhelming and forced drive (Curran, T., Hill, A. P., Appleton, P. R., Vallerand, R. J., & Standage, M. (2015).

Recent studies have investigated the relationship between these passion-related elements and psychological distress concerning social media use. For instance, Andreassen et al. (2017) investigated the impact of a harmonious and compulsive interest in social media on people's psychological well-being²⁰. The findings suggested a potential link between various types of passion and psychological impacts, as harmonious passion and well-being showed a positive association while obsessive passion showed a negative correlation. Furthermore, Koc & Gulyagci (2013) examined the role that psychological discomfort plays as a mediator in the relationship between an individual's enjoyment of social media use and the results of their mental health. According to the research, compulsive passion was associated with higher levels of psychological distress, which could worsen the negative consequences on mental health. The origin of sadistic tendencies may be impacted by psychological distress. People who are experiencing emotional turmoil may resort to risky behaviors and develop sadistic inclinations as a maladaptive coping mechanism (Buckels et al., 2013). This intersection highlights the intricate relationship between some personality traits and mental health.

Life Satisfaction and Personal Disposition: Studies reveal an unfavorable relationship between aggressiveness and life satisfaction. People who are happy with their lives usually have lower levels of aggression because life satisfaction may act as a buffer against negative emotional states that can instigate violent actions (Diener et al., 1999). Obsessive passion is negatively correlated with life satisfaction, but harmonious passion is positively correlated. High life satisfaction individuals usually harmonically engage with things, finding fulfillment without allowing it to take over their lives. Conversely, a deficiency in life satisfaction could result in obsessive and detrimental behavior (Vallerand et al., 2003). There is a dearth of research in the literature on the connection between sadistic tendencies and life satisfaction. Future studies could examine if sadistic tendencies prevent the development of higher levels of life satisfaction or if having sadistic tendencies makes life satisfaction worse overall (Blachnio et al., 2016; Wegmann et al., 2015).

Personal Disposition and Facebook Addiction

Facebook addiction is linked to animosity. Research indicates that individuals with greater levels of violence may also have obsessive and excessive Facebook use (Blachnio et al., 2016). Anderson and Bushman (2002) suggest that online disputes, cyberbullying, and the urge to control social interactions might fuel Facebook violence. The General Aggression Model (GAM) links Facebook addiction to aggression. Specific triggers, personality traits, and environmental factors can cause aggression, according to the GAM. Aggressive people can fight, cyber bully, and dominate on Facebook. Research suggests a positive link between Facebook addiction and aggression (Blachnio et al., 2016; Marino et al., 2018). Balanced and compulsive passion might cause Facebook addiction. Self-Determination Theory (SDT) illuminates Facebook's addiction and passion. Autonomy and intrinsic motivation motivate people, according to SDT. Harmonious passion and intrinsic motivation promote a positive Facebook friendship. However, external factors can produce obsessive passion and addiction (Deci & Ryan, 2000). Harmonious passion can also protect and promote healthy interactions. Problematic Facebook use can develop into addiction due to obsessive passion (Forest et al., 2012). More research is needed on sadistic tendencies and Facebook addiction. Studies on sadism and online activities suggest a link between The Dark Tetrad's sadism, narcissism, Machiavellianism, and psychopathy, albeit the current material may not address this. According to Buckels, Jones, and Paulhus (2014), persons with high scores on these qualities may participate in dangerous online activities that lead to social media addiction. These linkages illuminate Facebook addiction's complex psychological and personal factors. More research in these areas will improve theoretical frameworks and assist in developing practical solutions for Facebook users with different levels of passion, violence, and possibly sadism. In conclusion, psychological factors and individual dispositions cause and maintain Facebook addiction. Understanding these connections is crucial to effective interventions and online behavior change.

Rational of study

"We know how crucial it is to illuminate cultural differences that affect addictive behaviors on popular platforms like Facebook. The Internet revolution has changed Pakistani youth, who balance tradition and modernity. The sociocultural backdrop of Pakistani youth's online interactions is crucial to understanding this issue because social media—especially Facebook—permeates their daily lives. Pakistani culture prioritizes connectivity; therefore, Facebook serves as a digital continuation of family and community bonds. When its cultural significance is recognized, Facebook can be utilized for family communication, collective expression, and identity negotiation in a collectivist framework. Growing Facebook addiction among Pakistani youngsters raises concerns beyond personal repercussions. Addictions occur in the unusual environment of ancient beliefs and fast technology adoption. Thus, to address Pakistani adolescents' digital age difficulties, Facebook addiction must be studied in its cultural context. I cannot express how harmful Facebook addiction is to Pakistani mental health.

I cannot express how harmful Facebook addiction is to Pakistani mental health. Digital connectivity's attractiveness, family duties, and cultural expectations may aggravate psychological anguish. We hypothesize that examining the mediation role of personality traits including aggression, passion, and sadistic tendencies is essential to understanding the intricate interplay between cultural influences and addictive behaviors (H1). This study extends beyond academic research to address the need for culturally conscious solutions. Understanding the relationship between psychological factors and individual temperament in Pakistani culture helps tailor solutions to its principles and challenges. In line with our assumptions (H2), this study seeks to enhance Facebook addiction scholarship and develop solutions that take into account Pakistani young culture. We think our investigation would reveal a more complex picture of Facebook addiction among young Pakistanis. Our study promotes a cross-disciplinary conversation to engage with the complexity of their digital experiences, boosting academic research and Pakistani adolescent welfare in the digital age."

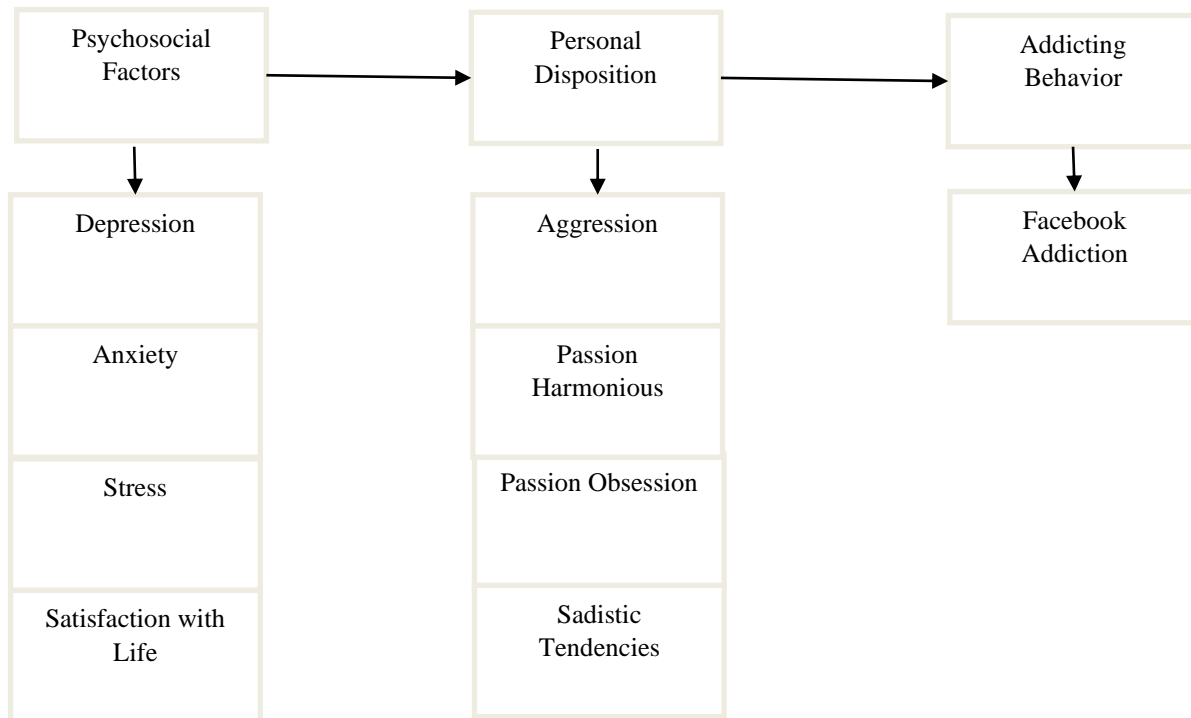


Figure 2. Conceptual model of the study

Hypotheses

H1: There will be a significant correlation between depression, anxiety, stress, life satisfaction, aggression, harmonious passion, obsessive passion, sadistic tendencies, and Facebook addiction.

H2: Depression, anxiety, stress, and satisfaction with life will cause Facebook addiction by mediating aggression, passion, and sadistic tendencies.

MATERIALS AND METHODS

Participants

The sample comprised 355 Peshawar University students from various faculties and departments, selected through purposive sampling. Participants were treated ethically, ensuring anonymity, obtaining informed consent, and maintaining confidentiality.

Instruments

1. **Bergen Facebook Addiction Scale (BFAS):** The BFAS (Andreassen et al., 2012) assesses Facebook addiction through a self-reporting scale. Scores range from 6 to 30, with higher scores indicating greater addiction. A score of 3 or more on four of the six items is indicative of addiction.
2. **The Passion Scale** (Vallerand et al., 2003) uses a Likert scale to assess many aspects of passion. There are twelve elements total: six for Obsessive Passion and Harmonious Passion, and five more that gauge how well the activity fits the notion of passion.
3. **Aggression (Buss et al.1992):** The physical aggression and rage subscales of the Buss and Perry Brief Aggression Questionnaire (BAQ) are used to measure aggressiveness. The device has proven to be trustworthy in a variety of cultural contexts.
4. **Depression, Anxiety, and Stress Scale (DASS-21):** This questionnaire evaluates a person's levels of stress, anxiety, and depression. Each subscale has seven items, and responses are graded on a four-point Likert scale (Lovibond & Lovibond , 1995).
5. **Sadistic Tendencies:** The degree of sadistic tendencies is measured by the Sadistic Attitudes and Behaviour Scale (SABS). A condensed version, the 10-item Short Sadistic Impulse Scale (SSIS), is designed to be administered quickly and effectively (O'Meara, Davies, & Barnes-Holmes,2004).
6. **Satisfaction with Life Scale (SWL):** Diener et al. (1985) developed this scale to measure life satisfaction. Five self-report items are scored on a 7-point Likert scale.

Procedure

Before data collection, necessary permissions were obtained, and purposive sampling was employed to approach students. Participants were informed about the voluntary nature of their participation and the absence of rewards. Questionnaires, taking 15–20 minutes to complete, were administered during class. Subsequently, questionnaire scores were entered into SPSS and AMOS for computation.

Data Availability

Data will be provided based on the request.

RESULTS**Table 1 - Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Age	355	18.00	34.00	20.3662	2.86928	2.954	.129	10.222	.258
Region	355	1.00	2.00	1.6113	.48815	-.458	.129	-1.800	.258
Gender	355	1.00	2.00	1.4225	.49466	.315	.129	-1.912	.258
Daily Hours	355	.00	9.00	3.2028	1.45497	1.403	.129	4.001	.258
Valid (listwise)	N355								

Table 2 - Evaluation Table of Correlation among Variables of the study model

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
Facebook Addiction	20.43	6.88	--	--	--	--	--	--	--	--	--
Depression	13.25	5.00	.553**	--	--	--	--	--	--	--	--
Anxiety	13.43	4.76	.509**	.830**	--	--	--	--	--	--	--
Stress	13.70	4.66	.482**	.811**	.803**	--	--	--	--	--	--
Satisfaction	13.51	5.50	-.027	-.101	-.702	-.051	--	--	--	--	--
Aggressive Behavior	37.42	15.39	.720**	.629**	.572**	.570**	-.056	--	--	--	--
Passion	28.61	7.72	.504**	.361**	.299**	.290**	-.390**	.433**	--	--	--
Harmonious Passion	23.72	6.54	.701**	.584**	.561**	.506**	-.195**	.685**	.696**	--	--
Obsession	61.18	9.74	.270**	.171**	.166**	.134*	-.221**	.248**	.265**	.245**	--
Sadistic Tendencies											

$p < .001$ *. Correlation is significant at the 0.05 level (2-tailed).

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

Note. It is revealed that there is a significant correlation between psychological distress, satisfaction with life, worry, perceived stress, physical aggression, verbal aggression, aggression anger, aggression hostility, sadistic tendencies, and Facebook addiction .

Table 3 - Means, standard deviations, and t-value of the Male and Female students (N=355)

Variables	Male (n=205)		Female (n=150)		T	p	95% CI		Cohen's d
	M	S.D	M	S.D			LL	UL	
Facebook Addiction	19.80	7.13	21.30	6.44	-2.02	.044	-2.93	-.041	0.220
Depression	12.91	5.18	13.70	4.73	-1.47	.143	-1.846	.267	0.159
Anxiety	13.10	4.59	13.88	4.96	-1.51	.131	-1.777	.231	0.163
Stress	13.59	4.67	13.86	4.65	-.538	.591	-1.256	.716	0.057
Satisfaction	13.31	5.58	13.78	5.40	-.782	.435	-1.627	.701	0.085
Aggressive Behavior	36.59	15.91	38.56	14.62	-1.19	.234	-5.222	1.278	0.128
Passion Harmonious	28.43	8.08	28.85	7.24	-.498	.619	-2.049	1.220	0.054
Passion Obsession	23.39	7.06	24.17	5.76	-1.10	.269	-2.161	.604	0.121
Sadistic Tendencies	60.70	10.17	61.84	9.11	-1.082	.254	-3.191	.926	0.117

$p < .001$

Table 3 revealed that there is no significant difference in gender basis in the study's variables.

Path Model of the Study

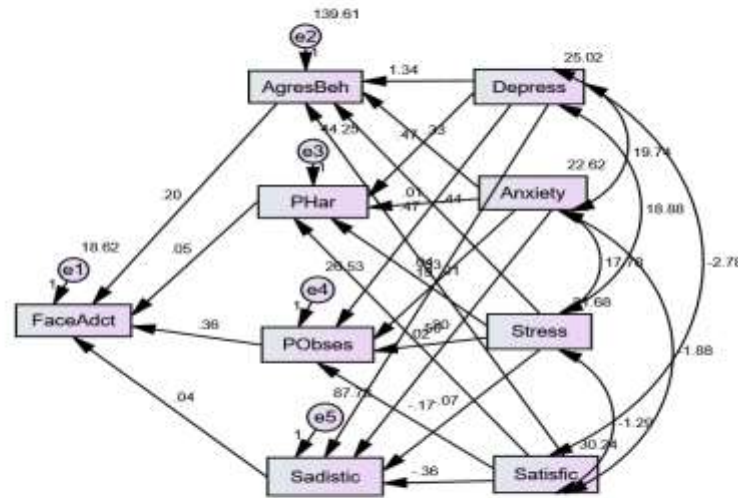


Table 4 - Regression Analysis for Mediation of Personal Disposition between Psychological Factors and Internet Gaming Disorder

Variable	B	95%CI	SE B	β	R ²	ΔR ²
Step 1						
Constant	9.040	[6.54, 11.53]	1.26		.32	.32***
Depression	.553	[-.314, .792]	.121	.401***		
Anxiety	.210	[-.036, .455]	.125	.145**		
Stress	.060	[-.180, .299]	.122	.040		
Satisfaction	.033	[-.077, .142]	.056	.026		
Step 2						
Constant	-3.877	[-7.72, -.022]	4.14		.62	.31***
Depression	.107	[-.079, .293]	.047	.078		
Anxiety	.034	[-.153, .221]	.087	.024		
Stress	-.026	[-.206, .154]	.079	-.018		
Satisfaction	.159	[.069, .250]	.143	.127**		
Passion Harmonious	.109	[.021, .197]	.129	.123**		
Passion Obsession	.314	[.190, .439]	.155	.299***		
Aggressive Behavior	.178	[.134, .222]	.134	.398***		
Sadistic Tendencies	.056	[.007, .105]	.052	.025**		

Note. CI = Confidence Interval
***P<.001.

The table shows the impact of psychological factors (depression, anxiety, stress, and satisfaction with life), personal dispositions (harmonious passion, passion obsession, aggressive behavior, and sadistic tendencies), and addiction behavior (Facebook addiction) on undergraduate students. In step 1, the R² value of (.32) revealed that psychological factors (depression, anxiety, stress, and satisfaction with life) explained a 32% variance in the behavior addiction of university students with $F(4, 350) = 40.23, p < .001$. The findings revealed that psychological factors positively predicted behavior addiction (Facebook addiction). In step 2, the R² value of (.62) revealed that psychological factors (psychological distress, perceived stress, and satisfaction with life) and personal dispositions (harmonious passion, passion obsession, aggressive behavior, and sadistic tendencies) showed a 62% variance in the addiction behavior of university students with $F(8, 346) = 71.24, p < .001$.

DISCUSSION

To provide insight into the mediating function of personal disposition, the study set out to explore the complex interactions between psychosocial factors and addictive behaviors, with a particular focus on Facebook addiction. Three hundred fifty-five students from Peshawar University made up the heterogeneous sample, offering a nuanced look into the digital experiences of Pakistani youth. Descriptive statistics and reliability evaluations from the preliminary studies provided a solid framework for the discussion that followed (Table 1).

The first hypothesis, which proposed a strong relationship between life satisfaction, aggression, passion, sadistic inclinations, and psychological suffering as well as Facebook addiction, was supported by empirical data. Table 2 presents the correlation analysis, which highlights complex links between important variables in the study's model and provides insight into the dynamics of Facebook addiction in young Pakistanis. First, Facebook addiction was found to have a significant positive connection with psychological distress, including stress, anxiety, and depression ($r = 0.553, p < 0.01$; $r = 0.509, p < 0.01$; $r = 0.482, p < 0.01$, respectively). This finding is consistent with previous research that suggests a negative correlation exists between mental health issues and increased usage of social media (Primack et al., 2017; Andreassen et al., 2017; Koc & Gulyagci, 2013).

The second finding highlighted the possible connection between online violence and Facebook addictive patterns: a notable positive association ($r = 0.720, p < 0.01$) was found between Facebook addiction and aggressive behavior. Through the theoretical lens of the Uses and Gratifications Theory, people who exhibit high levels of aggression may resort to Facebook as a means of expression, which can lead to problematic usage of social media (Katz et al., 1973). Furthermore, the positive connections found between Facebook Addiction and Passion Obsession ($r = 0.701, p < 0.01$) and Passion Harmonious ($r = 0.504, p < 0.01$) highlight the influence of passion on online activities. According to the application of the Investment Model, obsessive passion is linked to higher Facebook addiction scores, whereas harmonious passion may reduce the risk of addiction (Rusbult & Van Lange, 2003).

Finally, a positive association ($r = 0.270, p < 0.01$) was found between Facebook addiction and sadistic tendencies, suggesting a possible link between personality traits and hazardous online activities. Though weaker, this supports the Dark Tetrad paradigm, which shows sadistic traits may contribute to problematic online engagement (Buckels et al., 2013). Our results show how psychosocial determinants and natural tendencies affect young Pakistanis' digital device use, adding to the theoretical understanding of Facebook addiction in Pakistan's unique cultural setting. More empirical research is needed to confirm and improve these links and understand Pakistanis' digital experiences.

Table 3 shows gender differences in the study's primary factors, including Facebook addiction, life satisfaction, aggression, psychological distress, obsessive and harmonious desire, and sadistic inclinations. Facebook Addiction scores varied, and female students ($M=21.30$) scored higher than male students ($M=19.80$). Andreassen et al. (2016) found that men and women utilize social media differently³⁷. These findings support a larger body of research showing that women use social media differently than men (Dhir et al., 2018).

Pakistani cultural values and societal expectations may explain the gender gap in Facebook addiction. Pakistan, where gender conventions and expectations persist, may use social media differently by gender. The Facebook Addiction ratings of male and female students are influenced by cultural norms that demand varying degrees of self-disclosure, social interaction styles, and social media motivations. For instance, society no. Trends in this study may be impacted by gender differences in expectations for social interactions, validation seeking, and online behavior. The way that male and female students utilize social media may also be influenced by cultural norms surrounding relationships, privacy, and modesty. Social norms may dictate that women spend more time online than men do, which raises their Facebook Addiction scores. Cultural impacts on digital activity include things like joining online networks, staying in touch with friends and family and seeking validation (Pookulangara, S., & Koesler, K. (2011).

In conclusion, differences in Facebook addiction between genders highlight the significance of cultural and socioeconomic background in understanding the online behavior of young Pakistanis. These results show how important it is to address these problems in Pakistani digital well-being interventions and discussions, and they also shed light on the complex interplay between social media use, gender, and cultural expectations.

The second hypothesis—that life satisfaction, stress, anxiety, and despair regulate passion, aggression, and sadistic tendencies to cause Facebook addiction—was validated by regression analysis. This is consistent with studies (Kardefelt-Winther, 2014; Vallerand et al., 2003; Buckels, 2014; Sun, Zhang, & Li 2023; Primack et al., 2017) that demonstrate the influence of personality on online activity. Pookulangara, and Koesler, (2011) suggest that Pakistan's cultural emphasis on social cohesion, particularly Facebook approval, may exacerbate psychological and individual tendencies. People in Pakistan may turn to violence or sadism on Facebook as a means of escape from the tension between modernity and tradition in their community (Buckels et al., 2013).

According to Andreassen et al. (2016), tech-savvy youths create an online dynamic that influences relationships and may be a factor in Facebook addiction because of their personal preferences. To sum up, the theoretical frameworks employed in this study aid in the explanation of how psychological factors, personal traits, and Facebook addiction interact within Pakistan's distinct cultural context. The findings broaden our understanding of addiction in academia and set the stage for treatments that are sensitive to cultural differences and the variety of problems that young Pakistanis encounter in the digital era. This indicates that to effectively treat and lower the dangers of young Facebook addiction, consideration must be given to Pakistani cultural subtleties, societal standards, and personal features.

Limitations and suggestion

1. The study's cross-sectional design makes it challenging to determine causal relationships. To understand the temporal dynamics of psychosocial factors, individual dispositions, and Facebook addiction across time, future studies should make use of longitudinal techniques. This would provide further insight into the directionality of these relationships.
2. Response bias is a concern when self-report measures are used. Including objective measurements, like behavioral observations or physiological evaluations, in addition to self-report information would strengthen the validity of subsequent studies. By using a mixed-method approach, potential biases related to self-reported habits would be reduced.
3. The majority of the study's sample comprises undergraduate students, which restricts the study's generalizability. Subsequent research endeavors ought to strive for a more heterogeneous sample concerning age, socioeconomic standing, and cultural heritage within the Pakistani populace. This would improve the study's external validity and enable a thorough investigation of the variables driving addictive behaviors.
4. Although the study takes into account the Pakistani setting, its conclusions could not apply fully to other cultural contexts. Future studies should examine Pakistani cultural quirks and include cultural sensitivity training in Facebook addiction treatments. Comprehending distinct cultural elements will augment the efficacy of prophylactic tactics and assistance systems.
5. A narrow focus on Facebook addiction can miss the range of social media usage among young Pakistanis. Subsequent research endeavors may expand the purview to encompass a thorough analysis of various social media networks. Understanding the relative effects of various platforms on psychological variables and individual characteristics will help us grasp the intricacies of digital engagement on a more sophisticated level. Future research can build based on the current study and further contribute to the knowledge and amelioration of Facebook addiction within the context of Pakistani culture and youth by addressing these limitations and adopting these ideas.

Implications:

1. According to the study, specific interventions targeting the psychosocial variables and innate tendencies contributing to Facebook addiction are crucial. Recognizing Pakistan's distinct sociocultural terrain, the insights obtained can guide the creation of digital well-being solutions adaptable in various cultural contexts.
2. Results highlight the universality of some relationships between psychological variables, individual characteristics, and addictive behaviors, contributing to our understanding of cross-cultural relations. It is essential to have this understanding to build globally applicable interventions and acknowledge the specific needs of the Pakistani environment.
3. The implications highlight the interdependence of mental health variables and go beyond addiction. Future interventions should address the broader landscape of mental health by using a comprehensive strategy that takes into account individual inclinations as well as psychological well-being.
4. The study promotes cooperation between technology specialists, sociologists, and psychologists. To develop effective preventative interventions, addressing digital addiction requires a comprehensive strategy incorporating insights from multiple disciplines. This approach is essential in Pakistani and worldwide contexts.
5. Considering Pakistan's unique sociocultural environment, initiatives should align with regional norms and values. Mental health programs for young Pakistanis will be more effective and acceptable with cultural sensitivity.
6. Education and awareness programs for young people in Pakistan are crucial due to the rising prevalence of Facebook addiction. These programs can educate young people about the risks of excessive social media use and promote healthy digital habits.
7. Utilize Pakistani culture's emphasis on family relationships to involve communities and families in initiatives. Support networks in close-knit social systems can reduce psychological pressures in society.
8. Pakistani educational institutions and policymakers should incorporate digital literacy courses that address the psychological impact of internet use. This proactive method can help young people navigate the digital world in line with mental health and digital well-being. The study can inform evidence-based guidelines for digital addiction treatment.
9. Through the partnership, academics and policymakers can get a deeper knowledge of addictive behaviors in Pakistan and beyond.
10. Increasing mental health resources in communities and schools is crucial to address the impact of psychosocial stressors on mental health. This helps create a complete mental health care system by providing counseling and reducing the stigma of seeking help.

Conclusion:

This study illuminates the complicated relationship between psychosocial factors and individual characteristics in Pakistani youth Facebook addiction. The significant links show the need to consider individual traits and mental health variables when understanding and treating digital addiction. Gender differences in Facebook addiction underscore the need for sociocultural sensitive therapies. This research has practical implications for mental health clinicians, educators, and policymakers in the digital era. Community involvement, education, and culturally relevant interventions can reduce addictive behaviors. We can design effective, contextually appropriate techniques to foster good digital connections and improve Pakistani adolescents' well-being by respecting Pakistan's sociocultural landscape and embracing interdisciplinary teamwork. This study illuminates the complicated relationship between psychosocial factors and individual characteristics in Pakistani youth Facebook addiction. The significant links show the need to consider individual traits and mental health variables when understanding and treating digital addiction. Gender differences in Facebook addiction underscore the need for sociocultural sensitive

therapies. This research has practical implications for mental health clinicians, educators, and policymakers in the digital era. Community involvement, education, and culturally relevant interventions can reduce addictive behaviors. We can design effective, contextually appropriate techniques to foster good digital connections and improve Pakistani adolescents' well-being by respecting Pakistan's sociocultural landscape and embracing interdisciplinary teamwork.

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