



DO BIG FIVE PERSONALITY TRAITS AND NARCISSISM INFLUENCE CYBERBULLYING: EXAMINING GENDER DIFFERENCES AMONG STUDENTS OF PUBLIC SECTOR UNIVERSITIES OF PAKISTAN

Syeda Sidra Taveel¹, Dr. Naveed Iqbal², Dr. Muhammad Waseem³

¹Research Scholar, COMSATS University, Islamabad, Abbottabad Campus, Abbottabad, Pakistan,

Email: ask4rosehussain@gmail.com

²Assistant Professor, COMSATS University, Islamabad, Abbottabad Campus, Abbottabad, Pakistan,

Email: Naveed@cuiatd.edu.pk

³Associate Professor, Department of Public Policy and Administration Hazara University Mansehra.

Email: mwaseem@hu.edu.pk

KEYWORDS	ABSTRACT
Gender, Cyberbullying, Facebook, Big Five, Personality traits, Narcissism	The most recent reviews highlighted that cyberbullying is an emerging public issue in Asian countries. Personality traits and the way adolescent use Facebook influence cyberbullying. Therefore, the study investigates the role of big five (Extraversion, Agreeableness, Openness to Experience, Neuroticism and Conscientiousness) and Narcissism as personality predictors for shaping cyberbullying. This cross-sectional study used survey based quantitative approach to collect data through structured questionnaire by random sample of undergraduate students at public sector universities of Pakistan. Through cross-gender analysis, this study analyzed big five and narcissism as personality predictors of cyberbullying via Facebook through descriptive statistics, ANOVA, partial eta squares, correlation and regression analysis. Narcissist students, irrespective of their gender, is recognized as a key common cyberbullying perpetrator among undergraduate students. There is varying degree of association between big five personality trait with cyberbullying among male and female students. This study contributes to literature by providing tantalizing evidence about the relationship between personality traits and cyberbullying behavior to suggest intervention and prevention for cyberbullying for south Asian university students.
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Correspondence	Dr. Naveed Iqbal
Email:	Naveed@cuiatd.edu.pk
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Introduction

Cyberbullying has been increasingly acknowledged as a social violence in recent years. Information and communication technologies (ICTs) enabled communication and interaction, such as the social network platforms, have greatly influence young people's behavior (Kokkinos & Antoniadou, 2019; Barlett et al., 2021). Despite of the fact that Facebook and other social platform provide numerous personal and educational benefits to undergraduate students, it also have a negative impact on adolescents including depression, social neglect leading to cyberbullying (Kowalski et al., 2014; Zhu et al., 2021). Cyberbullying is referred as a type of bullying emerges from World Wide Web (WWW) technologies and social media platform such as Facebook to ridicule, insult, offended and hurt the feelings of the other person. (Abaido, 2020; Kowalski et al., 2014).

The contemporary literature has witnessed that there is growing interest of researcher for investigating cyberbullying behaviors, however, there is limited empirical evidence regarding cyberbullying behavior of university students in South Asian developing countries such as Pakistan. Pakistan has 44.61 million internet user with average 22 percent internet penetration. Information and communication technology (ICT) provide numerous opportunities to the university students to communicate with their peers. More than 50 % of Facebook users are young people i.e from 18-34 years. Facebook is the largest social media platform with 2.49 bn active users (Hong and Oh, 2020). Edison (2019) observed 20% decline in facebook users from 2017 to 2019 and cyberbullying is one of the main reasons. Due to increased interest in cyberbullying, scholars pay attention to personality and contextual factors associated with cyberbullying behavior (Shemesh et al., 2017; Song and Oh, 2018).

It suggested that major victims of cyberbullying is young undergraduate students, however, it is still unclear to what extent cyberbullying influence the lives of young university students. It is essential to identify cyberbullying behavior at young age so that appropriate prevention strategies for cyberbullying can be suggested. In this context knowledge about predictors of cyberbullying behavior is very important to develop a mechanism that impede such aggressive behaviour. Very few studies have focused on personality predictors of cyberbullying. Therefore, the objective of this study is to examine how personality factors influence cyberbullying behavior among undergraduate university students.

Prevalence of cyber-bullying tend to be considerably differed as a function of variation in personality traits across countries to identify cyber bullies (Pozzoli and Gini, 2020). The existing literature has demonstrated conflicting findings about personality traits (e.g openness to experiences) and cyberbullying. Zhou et al (2019) found that there is no relationship between openness and cyberbullying. Research findings regarding cyber bullying perpetration among males and females are contradictory. Some studies (e.g Lee, 2017; Zhou et al., 2013) observed that male are more cyber bullies as compare to their female counter partner. While authors such as Roch et al. (2017) found that female are more likely experience cyberbullying. Studying cyberbullying

in context of Pakistan is important where rigid-cultural script remain strong to interact with peers. The impact of individual personality factors and demographics such as gender on cyberbullying is different from west. The most recent cyber bullying review highlighted the importance of context specific intervention for cyberbullying based on research that takes into account in specific Asian culture (Park et al., 2021).

Literature Review

The big five Personality Model

Personality is found to be linked with individual's mode of interactions as well as maintaining the social relations. Differences in individual personality greatly impact online behaviors such as cyberbullying. General strain theory (Paez, 2018) and theory of planned behavior (Pabian and Vandebosch, 2014) have been suggested as a theoretical framework for explaining cyberbullying behavior. However, these theoretical perspective failed to explain the role of personality differences for cyberbullying behaviour. To overcome this theoretical challenge, the big-five model has been employed as theoretical framework for examining the role of personality traits as key predictors of individual cyber bullying behavior. This model epitomizes the central concept of Personality hierarchy that suggests that personality traits exist at uppermost hierarchical levels and constitute the whole realm of personality. It exhibits that individual's behavior vary in term of Extraversion (E), Agreeableness (A), Openness to Experience (O) , Neuroticism (N) and Conscientiousness (C). Openness to Experience (O) is characterized by an individual being imaginative, searching for novel experiences taking interest in cultural activities. Such individuals are emotionally sensitive, tolerant, have self-control of and high supporters of equity and liberalism (Amichai-Hamburger & Vinitzky, 2010; Munir et al., 2021). Openness tends to be linked to social media for experiencing innovation, creativity and cultural interest (Butt & Phillips, 2008; Moore & McElroy, 2012). People with greater level of Openness share personal experiences frequently, therefor, such personalities is recognized as active Facebook users to a greater extent. Openness has a negative relationship with cyberbullying and there is limited evidence to suggest that openness of college students is linked with cyberbullying through Facebook in south Asian context. Therefore, the following hypothesis was formulated

H1: High openness to experience has a negative relationship with cyberbullying among university students

Conscientiousness individuals have interpersonal orientation and usually engage in constructive and optimistic social conducts (Roberts et al., 2009). Students with high Conscientiousness are known as disciplined, persistent and goal oriented (Zare and Flinchbaugh, 2019). These attributes make them more responsible and force them to challenge the status quo as they like to have high performance standards. On the other hand people with low level of conscientiousness was more likely to experience negative affect during peer conflict (Harris, and Milich, 2006). Low conscientious students are known as disgruntled individual and they try to find different ways for their satisfaction (Sun and Chai, 2009). Therefore, Conscientiousness is viewed to be related to more

guilt and remorse regarding inapt Facebook post (Moore & McElroy, 2012). Cyber perpetrators having low Conscientiousness levels tend to have high groove of psychoticism which is characterized as violent and aggressive behaviour having no empathetic leading to cyberbullying (Ybarra & Mitchell, 2007; Aricak, 2009; Thomas et al., 2014; Diepenhorst, 2014; Kokkinos & Antoniadou, 2019).

H2: High conscientiousness has a negative relation with cyberbullying via facebook among university students.

Agreeableness is described as a tendency of individual to be supportive, cooperative, curious, creative and trustworthy (Fong et al., 2021; Mitsopoulou & Giovazolias, 2015). Altruistic attitude of such personalities hinder them from involving in risky and aggressive online behaviour such as cyberbullying (Mitsopoulou & Giovazolias, 2015; Van Geel et al., 2017). People with low level of agreeableness levels is recognized as confrontational and unfriendly individual that are less focused on societal expectation and, hence, is related to higher levels of cyberbullying (Kokkinos & Antoniadou, 2019; Sholihat et al., 2020). Some negative relationship between low agreeableness and high cyberbullying has been identified in the west. Agreeableness is an important predictor of cyberbullying. People having agreeableness traits prefers conflict avoidance strategies by liking and confirming the other's recommendations rather raise their voice on certain issue (Lepine and Dyne, 2001). Due to lack of trust and tendency to share online may increase the chances of cyberbullying among students with low level of agreeableness. Highly agreeableness peoples are less likely involve in cyberbullying. Therefore, this study postulates that there is negative association between high agreeableness and cyberbullying.

H3: high agreeableness has negative relationship with cyberbullying through Facebook

Extraversion are emotional sensitive peoples and is characterized by extroverts, social, outgoing, gregarious (Zare & Flinchbaugh, 2019). Individual with extraversion traits tend to uphold communication and interaction with many individuals via Facebook. Facebook offers the opportunity to undergraduate students to extend their social network. People having extraversion traits share more personal information related to their lives, their feelings and emotions as depicted in their posts (Olenik-Shemesh et al., 2015). Cyber perpetrators having lower extraversion score are introverts, isolated, cynical and have low self-respect (Mishna et al., 2010). In contrast cyber perpetrators having high extraversion levels tend to be strong-minded, self-centered and confident students (Baldasare et al., 2012). Therefore, university students possessing higher level of extraversion tend to be less involve in cyberbullying as compare to other personalities (Webber, 2013; Whittaker & Kowalski, 2015). Based on above argument, high extraversion may be negatively associated with cyberbullying among undergraduate students.

H4: Higher extraversion has a negative relationship with Facebook cyberbullying

People having Neurotic trait are more likely to have anxiousness and low self-confidence (McCrae & Costa Jr., 2008). Higher neurotic students are more vulnerable to cyberbullying due to inability

to regulate their emotions. They tend to exhibit negative attitude, distress and displeasure (Karl et al., 2010). Cyber perpetrators having such traits are irritated and stressed beings having lower self-respect and pessimistic emotional sensitivity about their social life and probably behaves violently in cyber world leading to cyberbullying (Mishna et al., 2010; Sontag et al., 2011). Therefore, this study hypothesizes that high neuroticism positively related with cyberbullying.

H5: High neuroticism has a positive association with cyberbullying via Facebook

Narcissism

Narcissism is a normative personality trait has been referred as inflated self-concept that may exert negative influence on interpersonal relationship and as a result contribute to development of cyberbullying (Schade et al., 2021). Narcissism has become a salient aspect of university students that has been described as aggressive and self-entitled (Leung et al., 2016). Contemporary literature has reveal the utility of Narcissism to predict cyberbullying (Fan et al., 2016). Social networking sites such as Facebook provide fertile ground to nourish Narcissism (Buffardi & Campbell, 2008). High narcissistic personalities tend to update their Facebook profile most often and share more stimulating pictures and related stuff. Self-promotion is associated with exhibiting grandiosity that is key characteristics of narcissism (Carpenter, 2012; Lopes & Yu, 2017). Individual having narcissism traits utilize facebook for self-promotion to get attention from huge crowds. Narcissists show more aggression in case they get less validation in the form of comments and likes. In this context, many attributes of narcissism are likely to support development of cyberbullying. Social networking sites such as Facebook is one of the spreader of narcissism-epidemic. When narcissistic students found little social support from their associates or faces negative comments on their Facebook contents, retaliate against negative observation by exhibiting hostile behavior such as cyber behavior (Ferenczi et al., 2017).

H6: High Narcissism is positive related with cyberbullying through Facebook

Gender Differences in Cyberbullying

Numerous studies has probed the association between gender and cyberbullying (Olenik-Shemesh et al., 2015). Cyberbullying may be conceptualized as gender and culture oriented phenomena that varies across countries. Studies (such as Slonje et al., 2013) found that Female-students from European countries such as Sweden are more engaged in cyberbullying as compared to male-students).Theory of gender socialization support such argument by suggesting that females are more devoted to norms and rules than men. Involving in cyberbullying behavior might lead to the violation of individual and social ethical norms and values. Thus, women are least likely to be cyber perpetrators than men (Miller et al., 2011). Several studies from non-westernized context found that men are tend to be more cyberbullies then women (Sun et al., 2016). Connell et al., (2013) also acknowledged gender differences as a predictors of cyberbullying. In contrast, North American samples found no gender differences in cyberbullying. Cassidy et al. (2016) suggested that it is not clear whether gender is an important predictors of cyberbullying. Contrary to traditional bullying,

gender differences in cyberbullying has shown inconsistent results (Wong et al., 2015). The mixed findings may be transcribed to differences in culture and type of population employed for cyberbullying studies. Understanding gender differences for personality-predictors is imperative to develop quality cyberbullying intervention program. Therefore following hypothesis was formulated

H7: Male students in Pakistan are tend to be more cyberbullies then are female students.

Method

Participants and Procedures

The cross-sectional data was collected through stratified random sampling from 366 under graduates of public sector universities of Pakistan aged between 18-30 years. 65.2% of the respondents were males and only 34.8% were females as the topic is highly sensitive to female students in Pakistan and they were reluctant to participate in the study. Surveys were distributed among various distinct departments grouped into four strata's to complete this study. Questionnaire has been used as a key instrument for collecting data to examine predictors of the cyberbullying behavior. The questionnaire has three sections. The first part of the questionnaire was used to collect demographic information of the respondents. The second part used the NEO-FFI scale to collect data related to bi five personality traits. The third section involves "Narcissistic Personality Inventory" (NPI-16) scale for capturing Narcissism personality traits.

Measures

Big Five Personality Traits:

The big five personality inventory including Neuroticism, openness, Extraversion, Agreeableness, and conscientiousness was measured through 60 items NEO-FFI scale ranged from strongly disagree to strongly agree. The Big Five Personality Factors seems to be greatly reliable as α for all big five factors are greater than 0.60 (Neuroticism N has a value of $\alpha(0.726)$, Extraversion E has a value of $\alpha(0.692)$, Openness O has a value of $\alpha(0.655)$, Agreeableness A has a value of $\alpha(0.746)$, Conscientiousness has a value of $\alpha(0.730)$).

Narcissism

The narcissism dimension of personality was measured through "Narcissistic Personality Inventory" (NPI-16) scale. Responses were captured in 0 and 1 form (i.e 1 indicates that narcissism is present while 0 demonstrate non-narcissism). Narcissism is a uni-dimensional construct indicating that high value is the sign of larger narcissism. Narcissism N is internally valid construct as value of Cronchbach's α is 0.774.

Facebook Bullying:

Cyber bullying experience scale (Antoniadou et al., 2016) was used to measure the frequency to which Pakistani university students are engaged in Facebook bullying. The items were recorded on 5-point likert scale ranging from “1=never” to “5=every day” involve in Facebook bullying. The value for Facebook bullying is 0.959 that scale is highly reliable. Overall reliability was also checked for whole questionnaire in order to draw valid causal inferences. The overall reliability ($\alpha = 0.877$) indicated high reliability of the questionnaire.

In order to test the proposed hypothesized relationship, multivariate analysis was performed through IBM SPSS

Results

Descriptive Statistics:

Table 1: Descriptive Statistics

Constructs	Scale	N	Minimum	Maximum	Mean	Standard Deviations
FB Bullying	Kwan & Skoric (2013)	250	1.00	5.00	1.817	0.9823
Neuroticism	NEO-FFI	250	1.0	5.00	2.949	0.6199
Extraversion		250	1.0	5.00	3.148	0.5158
Openness		250	1.00	5.00	3.212	0.5346
Agreeableness		250	1.00	5.00	3.206	0.6221
Conscientiousness	NPI-16	250	1.00	5.00	3.367	0.5858
Narcissism		250	0.00	1.00	0.449	0.2344
PCIKS		250	1.00	5.00	3.560	1.0029
PCIUF	Kokkinos et al. (2016)	250	1.00	5.00	4.078	1.0349
Time spent on FB	Ellison et al.(2007)	250	1.00	5.00	2.816	1.4855
Attitudes towards FB		250	1.00	5.00	2.838	0.9997

Note: FB= Facebook bullying; PCIKS= Personal computer and internet knowledge skills; PCIUF= Personal computer and internet Usage frequency

Mean value of Facebook bullying (1.817) shows that participants at least 1-2 times were involve in FB bullying. Agreeableness, Conscientiousness and Openness were key personality traits among university students in Pakistan. Table 1 demonstrates that respondents of the study possessed high narcissist trait. PCIUF has a mean value of 4.078 demonstrates that respondents use internet frequently. The moderate score in PCIKS (3.560) exhibit fairly good internet knowledge and skills. Participants spent on average 30-60 minutes on Facebook. University students shows positive attitude towards Facebook.

Gender Differences

Analysis of variance, commonly known as ANOVA, was performed to analyze difference in cyberbullying among male and female students. Table 2 demonstrates that cyberbullying behavior among male and female undergraduate students is not identical. Male students are more likely involve in Facebook bullying as compared to female students (Males=2.112; Female=1.266). After confirming that there is significant differences in Facebook bullying with respect to gender among undergraduate university students of Pakistan, partial eta square (η^2) is employed to assess the differential impact of personality traits on cyberbullying behavior. The effect size (η^2) indicates that Narcissism traits has larger ($\eta^2=0.323$) while big five personality has moderate ($\eta^2= 0.178-0.238$) impact on Facebook bullying among students of south Asian countries such as Pakistan. Such moderate to larger effect size illustrates that addition of other factors has no considerable effect on Facebook bullying. In order to improve the robustness of the study, effect size for technological factors was estimated. The η^2 value of 0.036 indicates that technological factor has very small effect on Facebook bullying.

The personality predictors of cyberbullying via Facebook varies across gender. This study exhibits that cyberbullying score of females score is much higher than males students for big five personality factors (N = Females 3.069, Males; 2.885), (E = Males; 3.136, Females; 3.170), (O = Males; 3.191, Females; 3.251), (A = Males; 3.162, Females; 3.287), (C = Males; 3.327, Females; 3.44). on the other hand, Narcissist male students are more likely to be involve in cyberbullying than female counter part in Pakistan (Narcissist Males= 0.504, Narcissist Females; 0.346) as shown in Table 2.

Table 2: ANOVA for Gender differences

	Male		Female		F	P	η^2
	Mean	SD	Mean	SD			
Neuroticism	2.885	0.613	3.069	.6178	1.533	0.036	0.200
Extraversion	3.136	0.536	3.170	0.476	1.494	0.055	0.170
Openness	3.191	0.525	3.251	0.552	1.608	0.026	0.192
Agreeableness	3.162	0.654	3.287	0.550	1.336	0.109	0.184
Conscientiousness	3.327	0.567	3.44	0.615	2.046	0.001	0.238
Narcissism	0.504	0.229	0.3463	0.208	6.958	0.000	0.323
PCIKS	3.584	1.027	3.5134	.960	1.599	0.093	0.075
PCIUF	4.092	1.041	4.051	1.02	1.273	0.264	0.036

Correlation Analysis

Correlation Analysis was performed for whole sample and split-sample by gender to identify the predictors of Facebook bulling behavior among Pakistani students. Table 3 represents the

correlation between personality traits and CB through Facebook. Findings of the study suggested Agreeableness, Conscientiousness, Openness, Extraversion and Narcissism as personality predictors of CB through Facebook. Gender wise correlation was performed to assess the relationship between exogenous and endogenous variables across gender

Table 3: Correlation Analysis

Entire Sample	1	2	3	4	5	6
Neuroticism	~					
Extraversion	0.141*	~				
Openness	0.139*	0.470**	~			
Agreeableness	0.317**	0.289**	0.480**	~	~	
Conscientiousness)	0.107	0.390**	0.519**	0.573**	~	
Narcissism	0.054	-0.014	-0.089	-0.070	-0.164**	~
Facebook Bullying	0.084	0.170**	0.239**	-0.162*	0.235**	0.520**
Female Sample						
Neuroticism	~					
Extraversion	0.238*	~				
Openness	0.145	0.546**	~			
Agreeableness	0.223*	0.489**	0.637**	~		
Conscientiousness)	0.158	0.544**	0.519**	0.618**	~	
Narcissism	0.038	0.097	-0.059	-0.124	-0.144	~
Facebook Bullying	0.245*	-0.147	-0.081	-0.042	-0.305**	0.389**
Male sample						
Neuroticism	~					
Extraversion	0.106	~				
Openness	0.125	0.433**	~			
Agreeableness	0.348**	0.207**	0.407**	~		
Conscientiousness)	0.060	0.312**	0.516**	0.552**	~	
Narcissism	0.139	-0.048	-0.085	-0.008	-0.143	~
Facebook Bullying	0.140	-0.183*	-0.297**	-0.160*	-0.205**	0.479**

Regression Analysis

In order to improve the robustness of the study, stepwise multiple regression was employed to evaluate the predictive utility of personality predictors of Facebook bullying for female and male sample separately. Table 4.2 demonstrates that the Cyberbullying in females is predicted by high Narcissism (β , 0.982; p , 0.000), low conscientiousness (β , -0.205; p , 0.036), High Neuroticism (β , 0.229; p , 0.006) as well as low Extraversions (β , -280; p , 0.039). These factors accounts for 36 percent variance (R^2 0.368) in cyberbullying through Facebook. On the other hand Facebook

cyberbullying in males is predicted by high Narcissism (β , 1.783; p , 0.000) and Low Openness (β ; -0.291, p ; 0.000).

Table 4 Regression Analysis Female Sample

Constructs	Female Sample		
	β	t	P
Narcissism	.982	4.109	0.000
Conscientiousness	-.205	-2.130	.036
Neuroticism	.229	2.820	.006
Extraversion	-.280	-2.102	.039
F value	9.448		
R square	0.368		
Adj. R Square	0.329		

Table 5: Regression Analysis Male Sample

Constructs	Male Sample		
	β	t	P
Narcissism	1.783	6.136	0.000
Openness	-.575	-4.604	0.000
F value	32.123		
R square	0.377		
Adj. R Square	0.366		

Discussion

The current research study examined cyberbullying on a particular social networking platform, Facebook, which is significantly prevalent in the young generations including the university undergraduates. This study investigated the cyberbullying through Facebook in relation to the Big five Personality traits (Neuroticisms, Extraversion, Openness to Experience, Agreeableness, Conscientiousness) and Narcissism.

Hypothesis 1 is accepted that postulates negative relationship between Openness and cyberbullying among university students. These findings are consistent with the previous studies which indicated that Openness is mostly linked with positive social behaviors and less concerned with Facebook Cyberbullying (Buckels et al., 2014; Butt & Phillips, 2008). Conscientiousness attribute of university adolescents is found to be correlated negatively with Facebook cyberbullying both for male and female samples, therefore, H2 is accepted. These findings accords with the research of cyber perpetrators having low Conscientiousness levels tend to have high

groove of psychoticism which is characterized as violent and aggressive behavior having no empathetic aspect (Aricak, 2009). Hypothesis 7 pertains the relationship between agreeableness and cyberbullying. The table 3 exhibits that students having high agreeableness characteristic are less involve in cyberbullying, thus H3 is accepted. Extraversion is found to be negatively correlated with Facebook cyberbullying for whole sample as well as for male students. Therefore, H4 is accepted. Cyber perpetrators having lower extraversion score are introverts, isolated, cynical and have low self -respect. They are emotionally unstable and weak so they use social media to demonstrate their aggression and violence (Mishna et al., 2010).

Hypothesis 5 pertains high Neuroticism with cyberbullying. The relationship between Neuroticism and cyberbullying is insignificant in context of male students. On the other hand, Neurotic female students is involved in cyberbullying through Facebook that was supported by previous research studies that shows individuals with high neurotic character tend to behave inappropriately and inauspiciously on social media (Karl et al., 2010). Therefore, hypothesis 5 is partially accepted. Cyber perpetrators having such traits are irritated and stressed beings having lower self- respect, preeminent depression, pessimistic emotional sensitivity about their social life and probably behaves violently in cyber-world (Mishna et al., 2010; McCrae & Costa Jr., 2008; Sontag et al., 2011). The findings of the study illustrates that Narcissism is positively associated with Facebook cyberbullying. Hence, it leads to the acceptance of hypothesis 6 that was supported by contemporary literature that Narcissist individuals are more likely behave antisocially and mischievously online (Campbell & Foster, 2007).

The prevalence of Facebook bullying is higher among male students in Pakistan as compare to female students in Pakistan as depicted in Table 2. These findings accord with the studies done previously which propose that males are more likely to conduct antisocial and aggressive behaviors online (İçellioglu & Özden, 2014). On the other hand, females are less likely to behave aggressively online. Therefore, hypothesis 7 is accepted. Table 3 also demonstrates that predictor of cyberbullying behavior varies across gender. In context of Female sample, Neuroticism has a significant while extraversion insignificant relationship with cyberbullying. Therefore, predictive ability of predictors of cyberbullying via Facebook was also assessed separate for male and female students. Table 4 illustrates that cyberbullying through Facebook is predicted by high Narcissism and low openness. In Females, Facebook cyberbullying is predicted by lower Conscientiousness, higher Narcissism, lower Extraversion and high Neuroticism.

Contribution of the study

University students are the major population of Facebook users due to their dependency on technology. Facebook cyberbullying is prevalent among university undergraduates and it is neither uncommon nor unknown among university students. Their aggressive behavior such as Facebook bullying influence by their individual personality traits. Cyberbullying via Facebook is studied scarcely among university undergraduates. The most recent cyberbullying review such as Park et al. (2021) identified that Asia context specific factors of cyberbullying need to be

investigated. In order to address this research gap, the findings of the study suggests that Narcissism is the only common predictors of the cyberbullying via Facebook among university students in South Asian countries such as Pakistan. Facebook users are differing in case of specific personality traits. The existing cyber bullying literature largely focused on motives and characteristics of cyber bullies as a whole. Cross-gender investigation for cyberbullying is limited. This study contribute to literature that cyberbullying among male students caused by high Narcissism and low openness. However, Narcissist, extravert, conscientious and Neurotic Female students are recognized as Facebook bullying perpetrators. The big five personality traits, narcissism and gender differences have not been studies in a single study especially in south Asia context. Therefore, this study illustrates that big five personality factors and Narcissism has greater effect on cyber bullying than technological factors in Pakistan. Facebook cyber perpetration is mostly occurring in high narcissist male students of Pakistani university. The finding of the study illustrates that Narcissist students are more vulnerable to cyberbullying in context of Pakistan. Such students can have highest risk to develop psychological and social problems consequently that will influence and hinders their education learning capacity negatively.

Implication of Cyberbullying through Facebook

Cyberbullying among university students is now a major problem, especially, in the context of Covid 19 pandemic where most of the academic activities are conducted through online platform that further exposes students to cyberbullying. This study provide value insight by identifying individual having certain personality traits at early stage to prevent from cyberbullying through Facebook. Therefore, interventions should be applied and implemented at university level keeping in view the current scenarios to prevent and tackle the cyberbullying through Facebook. Facebook user should use the platform with a mindful and sensible conduct like “thinking before posting” a conduct where conscious mind should be involved considering the negative effects of antisocial behavior of cyberbullying like not be friending the strangers on Facebook and not sharing sensitive, personal information and not posting offensive material on Facebook. The university administration should implement anti-Cyberbullying policy and programs to aware and protect the students from cyberbullying.

Data Availability:

The datasets generated during during the current study are available from the corresponding author on reasonable request.

Declarations

Conflict of interest None

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