

PERSONALITY TRAITS AND CYBERBULLYING: THE MODERATING EFFECT OF CLASS LEVEL AMONG IN-SCHOOL ADOLESCENTS IN NIGERIA

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DOI: 10.2478/eras-2025-0008

Abstract

Using a cross-sectional survey approach, this study examined the moderating role of class level in the connection between personality traits and cyberbullying among adolescents enrolled in school. The participants (N = 356) were selected from four secondary schools in Osun state, Southwestern Nigeria, and ranged in age from 11 to 30. The results of the regression-based path analysis indicated that cyberbullying was directly positively associated with honesty (estimate = .25; 95% CI [.05,.45]; $p < .01$), extraversion (estimate = .34; 95% CI [-.06, -.75]; $p < .05$), and openness to experience (estimate = .39; 95% CI [.00,.78]; $p < .05$). Also, interaction of class level and honesty on cyberbullying was negatively significant (estimate = -.14, 95% CI [-.24, -.03]; $p < .01$). Furthermore, class level moderated the relationship between extraversion and cyberbullying (estimate = -.23, 95% CI [-.43, -.03]; $p < .01$). In addition, class level significantly moderated the relationship between openness to experience trait and cyberbullying (estimate = -.20, 95% CI [-.40, -.00]; $p < .01$). These results imply that while designing programs aimed at lowering cyberbullying among teenagers enrolled in school, psychologists should take personality attributes and class level into account.

Keywords

cyberbullying victimization, class level, personality traits, in-school adolescents

Introduction

Cyberbullying represents one of the most pervasive issues faced by adolescents, because they are very common situations that have huge consequences for current and adjustment in later life (Favini et al., 2023). Increasing data indicate that victims of cyberbullying have psychological issues, including depressive symptoms, loneliness, dissatisfaction, unhappiness, suicidal ideation, and diminished academic performance (Chu et al., 2018; Pengpid & Peltzer, 2019). Hinduja and Patchin (2009) describe cyberbullying as a deliberate, hostile act perpetrated by a person or group via electronic communication, occurring frequently over time against victims who are unable to readily defend themselves. Furthermore, Adesola and Adebayo (2016) define cyberbullying as any aggressive behavior that involves the use of electronic devices or technology to transmit humiliating information to an individual or groups.

Although some classifications have recently been put up in the literature, researchers (e.g. Kokkinos et al., 2014) have shown that there is no unambiguous consensus concerning

the different kinds and forms of cyberbullying. They made suggestions on the action's nature or the methods employed. According to Riebel et al. (2009), cyberbullying may take many different forms, including direct ones, like name-calling, threats, and insults, as well as indirect ones like identity theft, expulsion from social media sites, and impersonation. Cyberbullies have used a variety of methods in targeting their victims, which include sending abusive messages, sharing offensive photos and videos, and sharing rumor or lies about a thing or person.

Recently, the advances in the world of Information Communication Technology (ICT) have enhanced social interactions among adolescents globally and locally (Escortell et al., 2020). The innovations and prompt rise in the use of electronic devices have made it easier for adolescents to have easy accessibilities to numerous social networking sites. Also, the Information age has helped in advancing knowledge and foster communication across distance in the society. However, the increased usages of the electronic devices such as smartphones, laptops and computers have led to increased incidence of cyberbullying across the globe (Mesch, 2009).

The prevalence rates of cyberbullying vary greatly over the world, according to published data. For instance, in England, a prevalence rate of 17.9% was found among adolescents (Cyberbullying HBSC Survey, 2022). In Turkey, cyberbullying prevalence rates of 17% were reported among study participants (Eyuboglu et al., 2021). According to a Saudi Arabian survey, 42.8% of pupils between the ages of 12 and 18 reported experiencing cyberbullying (Gohal et al., 2023). With 51% of South African teens reporting having been the victim of cyberbullying, the country has the highest rate of cyberbullying in Africa (Masiphephe Network, 2023). Although Fenny and Falola (2020) found an average incidence of 59.9% of being victimized by cyberbullying among Nigerian secondary school students, the actual incidence rate of cyberbullying in Nigeria is yet unknown.

In light of the aforementioned, it is imperative to examine the degree to which the personality traits of adolescents may indicate a susceptibility to turning into cyberbullies or cyber victims. Nevertheless, the majority of research (Escortell et al, 2020) has concentrated on associations with individual personality dimensions rather than the holistic aspects of personality traits). The relationship between personality and cyberbullying has been shown to be moderated by gender, age, and culture, according to the research (Xu et al., 2024). However, research on the moderating influence of class level and personality traits on cyberbullying among teenagers is few and poorly studied (Escortell et al, 2020).

Theoretical Underpinnings

The Inventory according to Ashton and Lee (2007) is a self-and observer-report tool that measures how modest and unpretentious a person is compared to those who act arrogantly and dishonestly. Secondly, Emotionality (E) is a dimension used to characterize people's personal features concerning their experience and expression of emotions, as well as their capacity to regulate them. The aspects include fearfulness, anxiety, reliance, and sentimentality. Third, Extraversion (X) pertains to an individual's propensity for gregarious activity. It encompasses social self-esteem, social audacity, sociability, and vivacity of a person. Fourth, Agreeableness (A) signifies cooperative conduct characterized by compassion and understanding towards others. Fifth, Conscientiousness (C) denotes an individual's capacity for dependability, responsibility, and discipline, while Openness to Experience (O) is often defined as imaginative, enquiring, and open-minded. The personality factors in this research such as Honesty, Extraversion, Agreeableness, Conscientiousness and Openness to Experience are expected to significantly impact cyberbullying among teenagers in school.

Character Traits and Cyberbullying

Personality is described as a distinctive collection of individual traits that uniquely influence a person's conduct across many contexts and temporal situations (Luthans, 2005). Existing research has investigated the correlation between personality factors and cyberbullying. Favini et al. (2023) used the Big Five Model to identify traits profiles in a sample of 426 early adolescents from Italy. These profiles were compared to positions in conventional bullying and cyberbullying (detached, those harmed, bullies, and both). According to their research, three profiles emerged, each of which had a unique relationship to responsibilities in (cyber)bullying: resilient (showing high marks in every category) yet typically disengaged. In both offline and online settings, those who were classified as under controlled (having low conscientiousness, average-to-high extraversion, and average to low emotional stability and openness) were more likely to be bullies as well as victims.

Class level and cyberbullying

Numerous studies have demonstrated that bullying occurrences in school classrooms vary greatly, with some classes having a strong bullying culture while others do not (e.g., Roland & Galloway, 2002). Furthermore, Heirman et al. (2024) showed that individual-level characteristics might be responsible for some of the differences in bullying frequency between classes. This result necessitates a reexamination of the moderating function of class level in the association between cyberbullying and personality factors in school-age kids. According to research, the number of cyberbullying incidents that occur among students in the same classroom is greatly influenced by the size of the class (Heirman et al., 2024).

Purpose and Research Hypotheses

The impact of personality and the moderating role of class level on cyberbullying among adolescents enrolled in school have not been investigated in a single study, despite the fact that numerous studies have looked at different aspects of cyberbullying victimization (Olenik-Shemesh & Heiman, 2017; Fousiani, Dimitropoulou, Michaelides & Petegem, 2016). Consequently, this research seeks to address this deficiency in the literature. Furthermore, given that cyberbullying continues to pose a serious threat to youth in school settings around the globe, it is imperative that this range of concerns be examined.

This study examined the moderating effect of class level on the association between personality factors and cyberbullying among Nigerian teenagers enrolled in school. The following theories were put forth:

1. Personality traits will be significantly correlated with cyberbullying.
2. The association between cyberbullying and personality traits will be considerably moderated by class level.

Research Design and Method

This study used a cross-sectional survey approach. The participants were selected from four distinct secondary schools located in Osun State, Southwestern Nigeria. Cyberbullying is the dependent variable, while personality characteristics were the predictor factors. The study's moderating variable was class level.

Participants

356 secondary school students (n = 160 males; 196 females) were selected to participate in the study from four different secondary schools in Osun State, Nigeria. The age ranges from 11-30 years with a mean age of 14.77 years and a SD of 2.12. Respondents'

gender revealed that 44.9% were males, while 55.1% were female. In terms of ethnicity, 55.3% were from Yoruba, 5.0% were from Igbo, 18.1% were from Hausa, while 13.1% were from other ethnic group. In term of average hours spend on internet, 90.2% have spent between 1-10 hours, 5.9% have spent between 11-20 hours, while 3.9% have spent between 21-30 hours per week. In term of religion, (85.1%) practiced Christianity, (12.6%) practiced Islam, while (2.3%) practiced traditional religion. Their class level shows that 36.8% were in SS1, 43.0% were in SS2 and 20.2% were in SS3.

Sampling technique

Purposive sampling was used to choose four secondary schools, including two private ones: OAU International School and Adventist Secondary School. Furthermore, two public secondary schools were selected: Adventist Grammar School and Moremi High School. A convenience sample approach was used to choose participants from the four universities in light of the study's objectives.

Measures

In the present study, all participants completed a standardized Scale that included the Cyberbullying Behavior Scale (CBS) (Garaigordobil, 2015), the Brief HEZACO Inventory (BHI) (De Vries, 2013) and a Personal Information section that elicited participants' age, gender ethnicity, average hours spent on the internet, religious affiliation and class level.

Cyberbullying Behavior Scale (CBS)

A 15-item Cyberbullying Behavior Scale developed by Garaigordobil (2015) was used to measure cyberbullying. The scale displays information on four indices: aggressive cyber victimization, cyber aggressiveness, cyber observation, and victimization. The victimization of cyberbullying was evaluated using the sum of the four criteria. A scale from 0 to 3 is used to rate responses, with 0 denoting never, 1 occasionally, 2 frequently, and 3 constantly. A higher score indicates greater degree of cyberbullying victimization, whereas a lower score corresponds to fewer experiences with cyberbullying victimization. The reliability coefficient, as reported by the scale's creator, was .79; however, this investigation found that the scale's Cronbach's alpha was .91.

Brief HEXACO Inventory (BHI)

Personality was assessed using the Brief HEXACO Inventory, a 24-item tool developed by De Vries (2013). There are five personality domains in the test. The concerns are rated on a five-point scale from strongly disagree to strongly agree. De Vries (2013) claims that the composite score of the scale has a reliability value of .81. The validity of the HEXACO scale in Nigeria was confirmed by Ilevbare et al. (2021), who found a reliability coefficient of .84 among commercial drivers in Lagos. Ilevbare et al. (2021) showed that the Cronbach alphas for each domain were .51, .58, .61, and .54, respectively. A composite dependability of 0.93 was obtained in this study.

Procedure

The Obafemi Awolowo University's Health Research Ethical Committee in Ile-Ife, Osun State, Nigeria, was consulted in order to get ethical approval. The researcher made sure that the relevant authorities at different secondary schools were consulted in order to obtain the required authorization and approval. Prior to data collection, the researchers made sure that each respondent received a brief explanation of the study's goals and advantages in order to get their verbal informed permission. On behalf of the pupils, the researcher also secured

instructors' informed permission. Respondents were not at danger from the research. 356 of the questionnaires were returned filled out.

Results

Demographic Characteristics and Correlation of the Study Variables

Table 1. Sample Characteristics of Respondents (N = 356)

Variables	Frequency	Percentage (%)	Mean (SD)
Age	11-30		14.77 years
	years		(2.12)
Gender			
Male	160	44.9	
Female	196	55.1	
Ethnicity			
Yoruba	110	55.3	
Igbo	10	5.0	
Hausa	36	18.1	
Other	26	13.1	
Average hours spend on internet			
1-10 hours	321	90.2	
11-20 hours	20	5.9	
21-30 hours	15	3.9	
Religion			
Christianity	303	85.1	
Islam	45	12.6	
Traditional	8	2.3	
Class level			
Senior Secondary school			
S.S.S 1	131	36.8	
S.S.S 2	158	43.0	
S.S.S 3	67	20.2	

In **Table 2** we show that class correlates with cyberbullying ($r = -.03$, $p < .05$); honesty had a significant negative relationship with cyberbullying ($r = -.06$, $p < .05$). There was significant relationship between extraversion and cyberbullying ($r = -.07$, $p < .05$).

Table 2. Pearson's Correlations of Class Level, Personality Traits and Cyberbullying

Variables	Mean	SD	1	2	3	4	5	6	7
1. Class level	-	-	-						
2. Honesty	21.50	.73	.08	-					
3. Extraversion	10.23	7.38	.06	.80**	-				
4. Agreeableness	10.23	3.71	.08	.81**	.77**	-			
5. Conscientiousness	10.67	3.75	.05	.75**	.77**	.75**	-		
6. Openness to experience	10.92	3.81	.07	.77**	.76**	.71**	.78**	-	
7. Cyberbullying	31.80	3.86	-.03*	-.05*	-.06*	.01	.02	.07*	-

Notes: ** $p < .01$. * $p < .05$. Class level (0 = SS1, 1 = SS2; 3=SS3)

Direct and Indirect Effects:

The direct and indirect effects were analyzed to indicate that the mediator in the study was hypothesized (see **Table 3** and **Figures 1 to 3** below).

The results in **Table 3** from regression-based path analysis show that honesty (estimate = .25; 95% CI [.05, .45]; $p < .01$), extraversion (estimate = .34; 95% CI [-.06, -.75]; $p < .05$) and openness to experience (estimate = .39; 95% CI [.00, .78]; $p < .05$) had a direct positive association with cyberbullying, which supported H1.

Table 3. Regression-Based Path Analysis of the Study Variables

Pathway	β	SE	p	BC 95% CI	
				Lower	Upper
Direct Effect					
Honesty → cyberbullying	.25	.10	.01	.05	.45
Extraversion → cyberbullying	.34	.20	.09	-.06	-.75
Agreeableness → cyberbullying	.37	.21	.07	-.03	.79
Conscientiousness → cyberbullying	.29	.20	.14	-.09	.69
Openness to experience → cyberbullying	.39	1.96	.05	.00	.78
Indirect effect					
Honesty → class level → cyberbullying	-.14	.05	.01	-.24	-.03
Extraversion → class level → cyberbullying	-.23	.10	.02	-.43	-.03
Agreeableness → class level → cyberbullying	-.19	.10	.60	-.39	.00
Conscientiousness→ class level → cyberbullying	-.14	.10	.15	-.34	.05
Openness to experience → class level → cyberbullying	-.20	.09	.04	-.40	-.00

The interaction of class level and honesty on cyberbullying was negatively significant (estimate = -.14, 95% CI [-.24, -.03]; $p < .01$), indicating that class level moderated the relationship between honesty and cyberbullying. The slope of the interaction (see **figure 1**) showed that honesty trait was negatively linked to cyberbullying for in-school adolescents in SS1 than other class level.

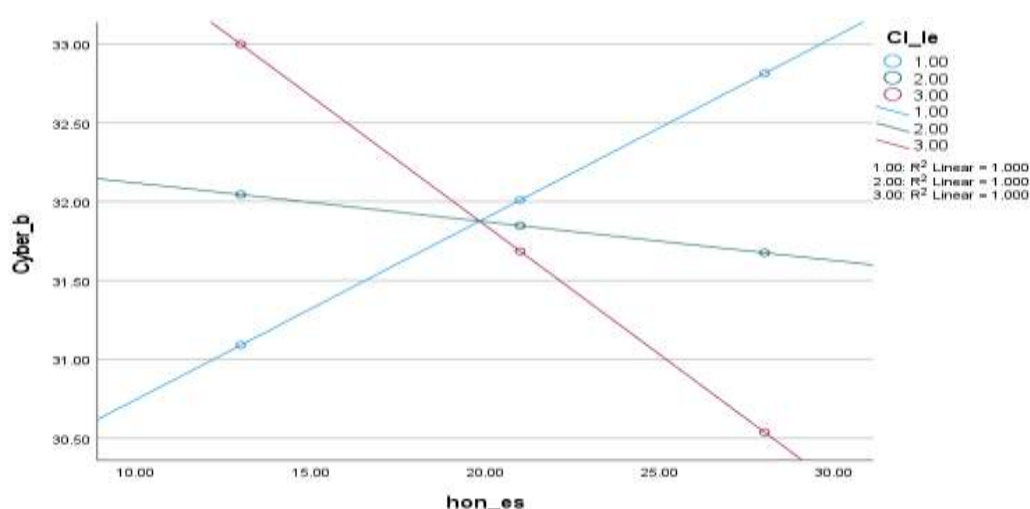


Figure 1. Slope of moderating role of class level on relationship between honesty trait and cyberbullying (source: IBM-SPSS Version 27.0)

Furthermore, class level moderated the relationship between extraversion and cyberbullying (estimate = $-.23$, 95% CI $[-.43, -.03]$; $p < .01$). The slope of the interaction (see **figure 2**) showed that extraversion trait was negatively linked to cyberbullying for in-school adolescents in SS1 than other class level. Also, class level significantly moderated the relationship between openness to experience trait and cyberbullying (estimate = $-.20$, 95% CI $[-.40, -.00]$; $p < .01$).

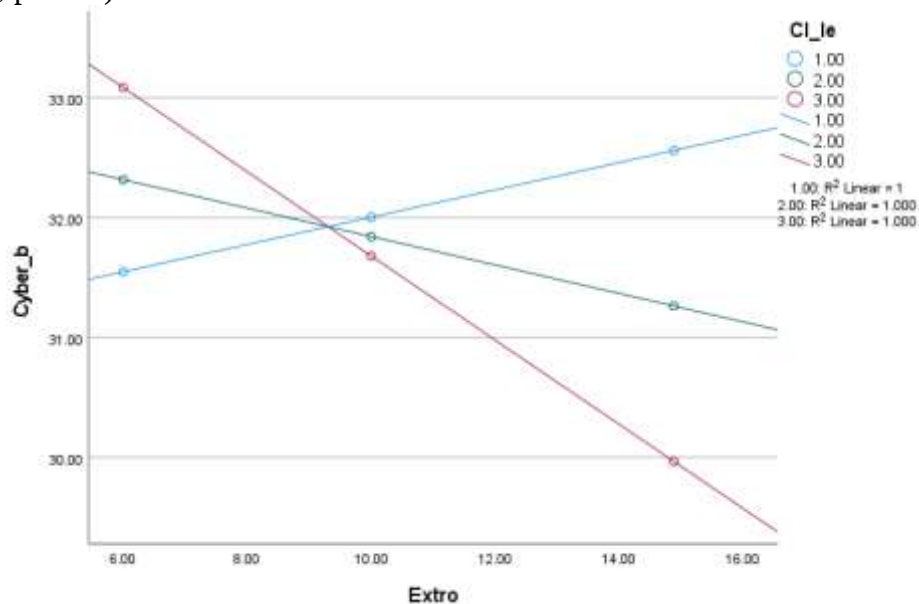


Figure 2. Slope of moderating role of class level on relationship between extraversion trait and cyberbullying (source: IBM-SPSS Version 27.0)

The interaction graph (see **figure 3**) revealed that openness to experience trait was negatively linked to cyberbullying for in-school adolescents in SS1 than other class level. This supported H2.

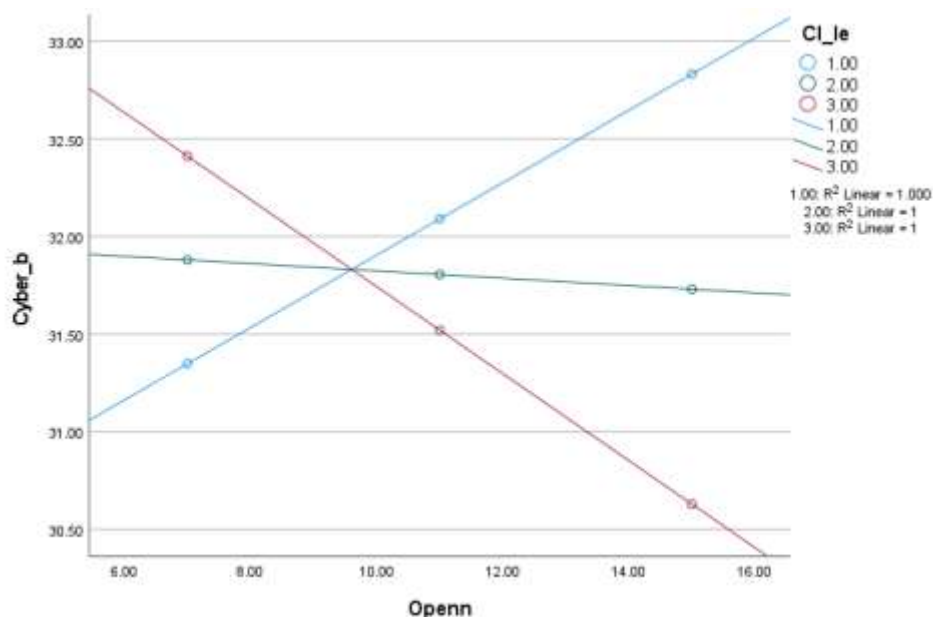


Figure 3. Slope of moderating role of class level on relationship between openness to experience trait and cyberbullying (source: IBM-SPSS Version 27.0)

Discussion

Research has indicated that gender, age, and culture have a mitigating effect on the association between cyberbullying and personality (Xu et al., 2024). Little is known, though, regarding how class levels could lessen the correlation between teen cyberbullying and personality traits. This study examined the impact of class levels on the association between personality traits and teenage cyberbullying that occurs in schools. According to regression-based path analysis, among teenagers enrolled in school, cyberbullying was directly positively correlated with honesty, extraversion, and openness to new experiences. We found a correlation between that class and cyberbullying. Cyberbullying was significantly correlated with honesty. Additionally, there was a strong correlation between cyberbullying and extraversion. The study's findings regarding the positive correlation between personality traits and cyberbullying seem to support earlier research by Favini et al. (2023), providing more empirical support for the critical role that personality traits—such as honesty, extraversion, and openness to new experiences—play in incidents of cyberbullying among teenagers enrolled in school. Thus, it becomes imperative for psychologist and policy-makers to identify and consider these personality attributes and categorization when developing an intervention program that is targeted towards this set of youth in order to reduce cyberbullying victimization in schools.

Our finding that interaction of class level and honesty on cyberbullying was negatively significant, indicating that class level moderated the relationship between honesty and cyberbullying is quite novel. The slope of the interaction showed that honesty trait was negatively linked to cyberbullying for in-school adolescents in Senior Secondary School one (SS1) than other class level. Also, findings revealed that class level significantly moderated the relationship between openness to experience trait and cyberbullying. The interaction graph (see **figure 3**) revealed that openness to experience trait was negatively linked to cyberbullying for in-school adolescents in SS1 than other class level, which supported the second hypothesis formulated for this present study. This finding supported previous studies (Heirman et al., 2024) that found out that class size and categorization have a profound influence on the number of cyberbullying incidents taking place between pupils in the same class. In the Nigerian educational system, SS1 to SS3 are the categorization of classes enrolled by in-school adolescents before their admission into universities, polytechnics and colleges of education.

Conclusions

The study found that among teenagers enrolled in school, cyberbullying was directly positively correlated with honesty, extraversion, and openness to new experiences. Nonetheless, the results showed a strong inverse link between cyberbullying and honesty. Additionally, among teenagers enrolled in school, there was a strong correlation between cyberbullying and extraversion. Lastly, among teenagers enrolled in school, the association between honesty and cyberbullying was mediated by class level.

The study has implication for practice, since the findings identified class level as mediator and significant predictor of cyberbullying in the study area. It therefore becomes imperative for any cyberbullying prevention and intervention program to consider the role of class level variables due to the fact that higher victimization of cyberbullying is likely to be found in large class size than smaller classes. Also, personality profiling of in-school adolescents should be taken into consideration in the developing cyberbullying reduction program in schools.

Limitations

A few limitations could be taken into consideration while interpreting the study's results. First, the study was cross-sectional, and the statistics used to examine the connections between cyberbullying and personality characteristics, as well as the moderating influence of class level, do not prove causality. Second, even though this study is confidential, underreporting of cyberbullying may occur due to the desire to seem acceptable. Third, while the study was carried out in Osun State in southwest Nigeria, its conclusions may be applied to other adolescents enrolled in school in other geopolitical zones of Nigeria. The qualitative approach can also be used in future research to enhance the data collection process.

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