

Comparing Machiavellianism, Narcissism, and Psychopathy in Predicting Cyberbullying Behaviour among Malaysian Secondary School Students

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ABSTRACT

Cyberbullying has become a growing concern among adolescents due to the increasing use of digital technologies and social media platforms. Previous studies have indicated that Dark Triad personality traits, namely Machiavellianism, Narcissism, and Psychopathy, are associated with aggressive online behaviours. However, limited studies have compared the relative influence of these traits on cyberbullying behaviour among Malaysian secondary school students. Therefore, this study aimed to examine the effects of Machiavellianism, Narcissism, and Psychopathy on cyberbullying behaviour and to identify the strongest predictor among these personality traits. A quantitative cross-sectional survey design was employed involving 389 secondary school students selected through random sampling. Data were collected using standardised instruments and analysed using Pearson correlation and multiple linear regression analyses. The findings revealed that all three Dark Triad personality traits were positively and significantly associated with cyberbullying behaviour. Furthermore, all three traits significantly predicted cyberbullying behaviour, with psychopathy emerging as the strongest predictor, followed by Machiavellianism and Narcissism. The regression model explained 58.1% of the variance in cyberbullying behaviour ($R^2 = .581$), with psychopathy emerging as the strongest predictor ($\beta = .520$), followed by Machiavellianism ($\beta = .265$) and narcissism ($\beta = .200$). The findings highlight the importance of Dark Triad personality traits, particularly psychopathy, in understanding cyberbullying behaviour among adolescents and provide useful insights for developing effective prevention and intervention programmes in schools.

Keywords: Cyberbullying, Dark Triad, Machiavellianism, Narcissism, Psychopathy, Adolescents, Malaysia.

INTRODUCTION

Cyberbullying among Malaysian secondary school students

Cyberbullying has become one of the major challenges faced by adolescents in recent years, particularly with the advancement of Information and Communication Technology (ICT) and the rapid growth of social media use. Over the past decade, bullying has gradually shifted from traditional physical settings to online environments, allowing adolescents to communicate and interact without geographical or time limitations (Zhu et al., 2021). The widespread use of digital technologies has created more opportunities for online engagement. Still, it has also increased the risk of harmful behaviours, such as threatening, insulting, embarrassing, and spreading offensive content. This issue became even more apparent during the COVID-19 pandemic, when adolescents relied heavily on digital technologies for learning, communication, and social interaction (Muhammed & Samak, 2025).

Previous studies have also shown that individuals who engage in cyberbullying often share several characteristics, such as being male, having low-income family support, experiencing personal risk factors, achieving lower academic performance, and displaying deviant behaviours (Khan et al., 2020). Therefore, cyberbullying has become a serious social issue because it can negatively affect students' emotional well-being, academic performance, and social relationships. Victims of cyberbullying often experience a range of adverse psychological outcomes, including anxiety, depression, self-harm, substance abuse, and suicidal ideation. Several factors have been associated with cyberbullying behaviour, including anonymity, easy access to

technology, and inadequate awareness of the consequences of online behaviour. Furthermore, previous studies have reported that cyberbullying is more prevalent among individuals exhibiting Dark Triad personality traits, namely Machiavellianism, Narcissism, and Psychopathy (Ray et al., 2024).

In Malaysia, the increasing use of digital technology and social media among young people has raised concerns about cyberbullying. Many adolescents use online platforms daily for communication, learning, and entertainment. However, many of them are still unaware of the seriousness of cyberbullying and its potential consequences, causing many incidents to go unreported. As a result, cyberbullying has been described as a “silent epidemic” because it often occurs without receiving sufficient attention from society (Mardhiah & Salehuddin, 2024)

The prevalence of cyberbullying in Malaysia has increased rapidly in recent years. During 2020, cyberbullying cases increased from 31.6% to 73.7% within three months, indicating a worrying trend among young people (Sivabalan et al., 2020). Malaysia was also reported as one of the countries with the highest cyberbullying rates globally, with 71% of respondents experiencing cyberbullying (Zuckerman, 2020). By 2022, Malaysia ranked as the second-highest country in Asia for cyberbullying, behind India (The Star, 2022). Data from CyberSecurity Malaysia further showed that reported cases increased from 356 in 2018 to 417 in 2020, demonstrating that cyberbullying has become an increasingly serious issue in the country (MyCERT, 2021).

Given its negative consequences, there is an urgent need to identify the factors that contribute to cyberbullying behaviour among adolescents. Understanding these factors is important for developing effective prevention strategies, particularly within school and family environments. In recent years, researchers have increasingly focused on the role of individual characteristics in explaining cyberbullying behaviour. Among these, Dark Triad personality traits, namely Machiavellianism, Narcissism, and Psychopathy, have received considerable attention because these traits are associated with manipulative, self-centred, and callous behaviours that may increase an individual's tendency to engage in cyberbullying.

According to Ray et al. (2024), cyberbullying has been found to be highly prevalent among individuals displaying Machiavellian, psychopathic, and narcissistic personality traits. Although previous studies have reported associations between Dark Triad personality traits and cyberbullying, limited research has compared the relative influence of Machiavellianism, Narcissism, and Psychopathy within a single framework, particularly among Malaysian secondary school students. Therefore, this study aims to compare the predictive effects of these three personality traits on cyberbullying behaviour in order to identify which trait is the strongest predictor.

Dark Triad Personality and Cyberbullying

Dark Triad personality traits consist of Machiavellianism, Narcissism, and Psychopathy, as originally introduced by Paulhus and Williams (2002). In recent years, these personality traits have attracted increasing attention because they have been associated with various forms of antisocial behaviours, including aggression, violence, bullying perpetration, delinquency, and conduct disorders (Duradoni et al., 2023). Therefore, Dark Triad personality traits may help explain why some adolescents are more likely to engage in cyberbullying behaviour. The online environment may further increase the tendency to engage in cyberbullying because it offers anonymity and reduces direct accountability (Goodboy & Martin, 2015). Previous studies have shown that individuals with higher levels of Dark Triad traits are more likely to participate in online aggression and harassment due to characteristics such as manipulation, self-centredness, and a lack of empathy (Leite et al., 2023). However, the relationship between Dark Triad personality traits and online behaviour may vary depending on the social context and the nature of online interactions.

Although these three personality traits are related, each trait has distinct characteristics (Furnham et al., 2013; Paulhus & Williams, 2002). Machiavellianism refers to a tendency to manipulate and deceive others to achieve personal goals and gain advantages (Jones & Paulhus, 2014). Narcissism is characterised by a strong sense of superiority, entitlement, arrogance, and a desire for admiration from others (Jones & Paulhus, 2014). Psychopathy, on the other hand, is associated with low empathy, impulsive behaviour, irresponsibility, and poor self-control (Jones & Paulhus, 2014; Veselka et al., 2012).

Previous studies have linked Dark Triad personality traits to several forms of online deviant behaviour, including online fraud, cyberstalking, technology-facilitated sexual violence, online antisocial behaviour, and cyberbullying (Gunnio et al., 2024; Kircaburun et al., 2018). These behaviours may become more visible in digital environments because online platforms provide opportunities for individuals to act without immediate consequences.

For example, individuals with high levels of Machiavellianism may use social media to manipulate and control others while hiding their identities (Xu et al., 2024). Individuals with high levels of narcissism may engage in cyberbullying to gain attention, seek admiration, and maintain a sense of superiority through online interactions such as likes and comments (Fan et al., 2019; Duradoni et al., 2023). Meanwhile, individuals with high levels of psychopathy may use online platforms to harass others because the online environment allows them to act without empathy and seek excitement by harming others (Orue & Calvete, 2019; Xu et al., 2024).

Overall, previous studies suggest that Dark Triad personality traits may increase an individual's likelihood of engaging in cyberbullying behaviour. However, limited studies have compared the relative influence of Machiavellianism, Narcissism, and Psychopathy within a single framework, particularly among Malaysian secondary school students. Therefore, this study aims to compare the predictive effects of these three personality traits on cyberbullying behaviour.

Research Gap

Although previous studies have examined cyberbullying among adolescents, several research gaps remain. First, many studies have focused on the relationship between cyberbullying and psychosocial factors such as substance use, social media addiction, emotional well-being, and cyber victimisation rather than examining personality traits as predictors of cyberbullying behaviour (Richardson et al., 2026; Torun et al., 2026).

Second, although Dark Triad personality traits have been associated with antisocial and aggressive behaviours, limited studies have directly compared the relative influence of Machiavellianism, Narcissism, and Psychopathy within a single analytical framework to determine which trait exerts the strongest influence on cyberbullying behaviour. Third, previous studies have primarily focused on identifying factors associated with cyberbullying behaviour rather than comparing the predictive strength of individual personality traits (Yang et al., 2026). Therefore, there remains a need to investigate and compare the predictive effects of Machiavellianism, Narcissism, and Psychopathy on cyberbullying behaviour among secondary school students.

Research Objectives

- a) To examine the effect of Machiavellianism on cyberbullying behaviour.
- b) To examine the effect of narcissism on cyberbullying behaviour.
- c) To examine the effect of psychopathy on cyberbullying behaviour.
- d) To compare the predictive strengths of Machiavellianism, Narcissism, and Psychopathy on cyberbullying behaviour.

LITERATURE REVIEW

Definition

Cyberbullying refers to a form of bullying that occurs through digital technologies and online platforms such as social media, messaging applications, online forums, and gaming communities. Unlike traditional bullying, cyberbullying can occur at any time and from any location, allowing perpetrators to repeatedly target victims through digital communication (Seth et al., 2026). The widespread use of smartphones and internet technologies has increased opportunities for cyberbullying, making it a growing concern among adolescents and young adults.

Cyberbullying involves intentional and repeated aggressive behaviour carried out through electronic devices with the aim of causing harm to others (Tokunaga, 2010). According to Olweus and Limber (2018), the

measurement of cyberbullying may vary across studies because researchers often use different definitions, time frames, and measurement instruments. Nevertheless, cyberbullying is generally understood as a harmful online behaviour that includes sending threatening messages, spreading false information, posting offensive comments, impersonating another person, and intentionally excluding individuals from online groups or communities (Seth et al., 2026).

Types of Cyberbullying

Flaming

Flaming refers to the exchange of hostile, offensive, or insulting messages between individuals in online environments. This form of cyberbullying is often impulsive and occurs in public forums, social networking sites, or chat rooms, where perpetrators use aggressive language to attack or humiliate others (Willard, 2007; Tokunaga, 2010).

Harassment

Harassment involves repeatedly sending offensive, threatening, or abusive messages to a victim through digital communication platforms. The repetitive nature of the behaviour distinguishes harassment from isolated incidents of online conflict and may cause significant psychological distress to the victim (Hinduja & Patchin, 2019).

Cyberstalking

Cyberstalking is characterised by persistent monitoring, intimidation, or threatening behaviour conducted through digital technologies. Perpetrators may repeatedly contact, track, or surveil victims online, creating fear and anxiety for the targeted individual (Kowalski et al., 2014).

Trolling

Trolling refers to the deliberate posting of provocative, inflammatory, or misleading content with the intention of eliciting emotional reactions, disrupting discussions, or creating conflict within online communities. Research suggests that trolling behaviour is often associated with antisocial personality traits (Buckels et al., 2019).

Denigration

Denigration involves spreading false information, rumours, or malicious statements about a person online to damage their reputation, relationships, or social standing. This behaviour can occur through social media posts, comments, or other forms of digital communication (Willard, 2007; Menesini & Nocentini, 2009).

Outing

Outing occurs when an individual publicly discloses another person's private, sensitive, or confidential information without consent through digital platforms. Such actions may expose victims to embarrassment, humiliation, or social exclusion (Hinduja & Patchin, 2019).

Exclusion

Exclusion refers to the intentional exclusion or isolation of an individual from online groups, communities, or social interactions. This relational form of cyberbullying can negatively affect a person's sense of belonging and social well-being (Kowalski et al., 2014).

Masquerade (Impersonation)

Masquerade, also known as impersonation, occurs when a perpetrator assumes another person's identity online and posts harmful, embarrassing, or misleading content on their behalf. This behaviour can damage the victim's reputation and interpersonal relationships (Willard, 2007).

Frapping

Frapping involves gaining unauthorised access to a victim's social media account and posting inappropriate, embarrassing, or offensive content while pretending to be the account owner. This form of cyberbullying exploits trust and may lead to reputational harm (Hinduja & Patchin, 2019).

Concluding Paragraph

Cyberbullying encompasses various forms of aggressive behaviours that can be broadly categorised into direct and indirect online aggression. While direct forms such as flaming, harassment, cyberstalking, and trolling involve overt attacks against victims, indirect forms, including Denigration, outing, exclusion, masquerading, and frapping, focus on damaging social relationships, reputation, and psychological well-being. The diversity of cyberbullying behaviours highlights the complexity of online aggression and underscores the need for comprehensive prevention and intervention strategies among adolescents.

Machiavellianism and Cyberbullying Behaviour

Machiavellianism refers to a personality trait characterised by a competitive worldview and a tendency to manipulate and exploit others for personal gain (Peterson & Densley, 2017; Blötner & Bergold, 2023a). Individuals high in Machiavellianism have also been associated with lower levels of empathy (Berger et al., 2015; Wai & Tiliopoulos, 2020). Previous studies have consistently reported a positive association between Machiavellianism and cyberbullying behavior. Wright et al. (2020) found that Machiavellianism was significantly associated with cyberbullying involvement among adolescents, while Yuan et al. (2020a) reported that Machiavellianism increased cyberbullying behavior, with empathy partially mediating this relationship. Similarly, Goodboy and Martin (2015), Panatik et al. (2022), and Javed et al. (2025) identified Machiavellianism as a significant predictor of cyberbullying behavior. However, some inconsistent findings have also been reported. Alavi et al. (2023a) found no significant relationship between Machiavellianism and cyberbullying, whereas Blötner and Bergold (2023b) reported that the manipulative aspect of Machiavellianism predicted traditional bullying rather than cyberbullying. Overall, the majority of studies support the role of Machiavellianism as a risk factor for cyberbullying behavior. However, variations in findings may be influenced by differences in context, population, and measurement approaches.

H1 : Machiavellianism has a significant relationship with cyberbullying behavior among adolescents in Malaysia.

Narcissism and Cyberbullying Behaviour

Narcissism is a personality trait characterised by grandiosity, a strong need for admiration, and a tendency to view oneself as superior to others (Morf & Rhodewalt, 2001; Paulhus & Williams, 2002). Individuals with high levels of narcissism often seek social recognition and positive evaluations, and may respond aggressively when their self-image or social status is threatened. Such characteristics can increase the likelihood of engaging in behaviors that disregard the feelings and well-being of others.

Previous studies have reported a significant positive relationship between narcissism and cyberbullying behavior. A meta-analysis by Xu et al. (2024) found that narcissism was positively associated with cyberbullying, although the relationship was weaker than that of psychopathy. Similarly, Alavi et al. (2025) reported that narcissistic traits significantly predicted cyberbullying among Malaysian youth. Other studies have shown that individuals with higher levels of narcissism, particularly covert narcissism, are more likely to engage in cyberbullying due to their heightened sensitivity to criticism and social rejection (Fan et al., 2023). These findings suggest that the need for admiration, self-enhancement, and social validation may increase individuals' involvement in cyberbullying behavior (Buckels et al., 2014; Craker & March, 2016; Kircaburun et al., 2020).

H2 : Narcissism has a significant relationship with cyberbullying behavior among adolescents in Malaysia.

Psychopathy and Cyberbullying Behaviour

Psychopathy is a personality trait characterised by low empathy, shallow emotions, impulsivity, irresponsibility, and a lack of guilt or remorse (Cooke & Michie, 2001; Skeem et al., 2011). Individuals with psychopathic tendencies are often associated with manipulative, antisocial, and aggressive behaviors that may harm others (Sörman et al., 2023). According to Cooke and Michie (2001), psychopathy comprises interpersonal manipulation, affective deficits, and impulsive behavioral tendencies, all of which may contribute to aggressive conduct in online environments.

Previous research consistently identifies psychopathy as one of the strongest predictors of cyberbullying behavior. A meta-analysis by Xu et al. (2024) found that psychopathy exhibited a stronger association with cyberbullying than other Dark Triad traits. Similarly, studies by Hoareau et al. (2019), Alavi et al. (2023b, 2025), and Perenc (2022) reported that individuals with higher levels of psychopathy were more likely to engage in cyberbullying, cybertrolling, and other forms of online antisocial behavior. These findings suggest that characteristics such as low empathy, impulsivity, and a lack of remorse increase the likelihood of involvement in cyberbullying behavior.

H3 : Psychopathy has a significant relationship with cyberbullying behavior among adolescents in Malaysia.

Comparative Influence of Dark Triad Traits on Cyberbullying Behaviour.

Although previous studies have established significant relationships between Dark Triad personality traits and cyberbullying behaviour, findings regarding the relative influence of each trait remain inconsistent. Xu et al. (2024) reported that psychopathy exhibited the strongest association with cyberbullying compared to Machiavellianism and narcissism. Similarly, Goodboy and Martin (2015) found that psychopathic tendencies emerged as the most influential predictor of online aggression. However, other studies have suggested that Machiavellianism may exert a substantial influence due to its manipulative and strategic nature (Wright et al., 2020; Javed et al., 2025). These inconsistencies indicate the need to compare the predictive strengths of Machiavellianism, Narcissism, and Psychopathy within a single analytical framework, particularly among Malaysian adolescents.

H4: Psychopathy is expected to emerge as the strongest predictor of cyberbullying behaviour compared with Machiavellianism and Narcissism among Malaysian adolescents.

Theoretical Foundation

Within the framework of Social Cognitive Theory, Dark Triad traits can be conceptualised as personal factors that shape behavioural tendencies. The present findings, therefore, provide support for the role of individual-level characteristics in explaining cyberbullying behaviour. However, environmental and reciprocal behavioural influences proposed by SCT were not directly examined in this study.

Conceptual Framework

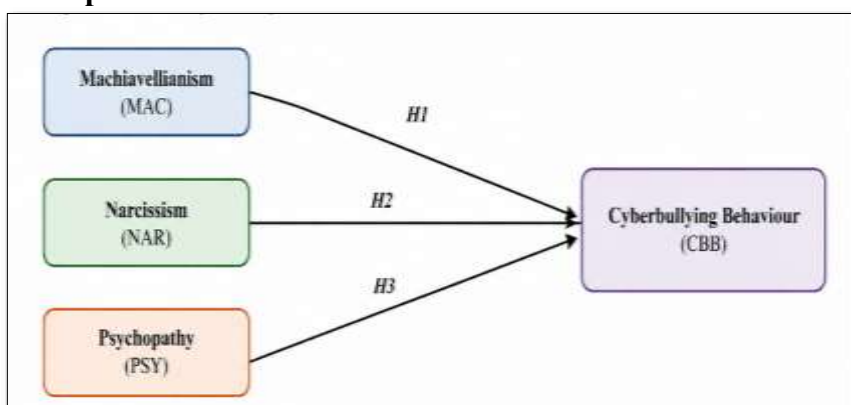


Figure 1. Conceptual Framework of the Study

Figure 1 illustrates the conceptual framework of this study, which examines the relationships between Dark Triad personality traits and cyberbullying behaviour among Malaysian secondary school students. The framework proposes that three independent variables, namely Machiavellianism, Narcissism, and Psychopathy, directly influence cyberbullying behaviour. Machiavellianism refers to manipulative and deceptive tendencies used to achieve personal goals, narcissism is characterised by a sense of superiority and a strong need for admiration. At the same time, psychopathy is associated with low empathy, impulsivity, and poor self-control. Based on the proposed framework, three hypotheses (H1, H2, and H3) are developed to examine the predictive effects of each personality trait on cyberbullying behaviour. The study also aims to compare the relative influence of these three Dark Triad traits in determining which trait is the strongest predictor of cyberbullying behaviour among Malaysian secondary school students. In addition to examining the direct effects of Machiavellianism, Narcissism, and Psychopathy on cyberbullying behaviour, this study also compares the relative predictive strengths of the three Dark Triad personality traits to determine the most influential predictor of cyberbullying behaviour among Malaysian secondary school students(H4).

Hypotheses

H1: Machiavellianism significantly predicts cyberbullying behaviour among Malaysian adolescents.

H2 : Narcissism significantly predicts cyberbullying behaviour among Malaysian adolescents.

H3 : Psychopathy significantly predicts cyberbullying behaviour among Malaysian adolescents.

H4: Psychopathy is expected to emerge as the strongest predictor of cyberbullying behaviour compared with Machiavellianism and Narcissism among Malaysian adolescents.

METHODOLOGY

Population

The target population of this study consisted of Malaysian secondary school students enrolled in schools under the Ministry of Education (MOE). Secondary school students were selected because adolescents are among the groups most vulnerable to engaging in and experiencing cyberbullying due to their frequent use of social media and online communication platforms.

Sampling

A quantitative cross-sectional survey design was employed in this study. Respondents were selected using a random sampling technique to ensure adequate representation of students from different secondary school levels.

Sample Size

The required sample size was determined using the Krejcie and Morgan (1970) sample size table. A minimum sample size of 384 respondents was required. However, a total of 389 valid responses were obtained and used for data analysis.

Instruments

Data were collected using a structured questionnaire consisting of five sections. Machiavellianism was measured using the Machiavellian Personality Scale (MPS), narcissism was measured using the Narcissistic Personality Inventory-16 (NPI-16), psychopathy was measured using the Youth Psychopathic Traits Inventory (YPI), and cyberbullying behaviour was measured using the E-Bullying Scale (E-BS). The questionnaire employed a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), except for the Narcissism scale, which used a dichotomous response format.

Data Collection

Data were collected through a self-administered questionnaire distributed to secondary school students. Prior to

data collection, permission was obtained from the relevant authorities and school administrators. Respondents were informed about the purpose of the study, and their participation was voluntary.

Ethical Considerations

Ethical considerations were taken into account throughout the study. Respondents were informed that their participation was voluntary and that they could withdraw from the study at any time without penalty. The anonymity and confidentiality of all respondents were maintained, and the data collected were used solely for research purposes.

Data Analysis

The collected data were analysed using the Statistical Package for the Social Sciences (SPSS) version 26.0. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to describe the respondents' demographic profiles and study variables. Reliability analysis was performed using Cronbach's alpha. Pearson correlation analysis was conducted to examine the relationships among the variables. In contrast, multiple linear regression analysis was used to determine the predictive effects of Machiavellianism, Narcissism, and Psychopathy on cyberbullying behaviour among Malaysian secondary school students.

RESULTS

Demographic Profile of Respondents

A total of 389 secondary school students participated in this study. In terms of gender, 197 respondents (50.6%) were female, while 192 respondents (49.4%) were male. Regarding the form level, most respondents were Form 3 students, representing 35.7% ($n = 139$), followed by Form 4 students at 33.9% ($n = 132$). Form 2 students accounted for 17.0% ($n = 66$), while Form 1 students represented 13.4% ($n = 52$). These findings indicate that the respondents were fairly distributed across different secondary school levels, with a slightly higher representation from Form 3 and Form 4 students.

6.2 Correlation Analysis

The results of the correlation analysis indicated that Machiavellianism was positively and significantly associated with cyberbullying behaviour among Malaysian secondary school students ($r = .635$, $p < .001$). This finding suggests that students with higher levels of Machiavellianism are more likely to engage in cyberbullying behaviour. In other words, an increase in Machiavellian traits is associated with an increased tendency to participate in cyberbullying activities.

The results of the correlation analysis indicated that psychopathy was positively and significantly associated with cyberbullying behaviour among Malaysian secondary school students ($r = .725$, $p < .001$).

This finding suggests that students with higher levels of psychopathy are more likely to engage in cyberbullying behaviour. In other words, an increase in psychopathic traits is associated with an increased tendency to participate in cyberbullying activities. Furthermore, the correlation coefficient ($r = .725$) indicates a strong positive relationship between psychopathy and cyberbullying behaviour.

The results of the correlation analysis indicated that narcissism was positively and significantly associated with cyberbullying behaviour among Malaysian secondary school students ($r = .177$, $p < .001$).

This finding suggests that students with higher levels of narcissism are more likely to engage in cyberbullying behaviour. In other words, an increase in narcissistic traits is associated with an increased tendency to participate in cyberbullying activities. However, the correlation coefficient ($r = .177$) indicates a weak positive relationship between narcissism and cyberbullying behaviour.

Table 1. Results of the Pearson correlation analysis between Dark Triad personality traits and cyberbullying behaviour.

Variables	r	p-value	Strength
Machiavellianism	.635	< .001	Strong
Psychopathy	.725	< .001	Strong
Narcissism	.177	< .001	Weak

Note. r = Pearson correlation coefficient; $p < .001$.

Table 1 presents the results of the Pearson correlation analysis between Dark Triad personality traits and cyberbullying behaviour. The findings showed that all three personality traits were positively and significantly associated with cyberbullying behaviour. Psychopathy demonstrated the strongest relationship with cyberbullying behaviour ($r = .725$, $p < .001$), followed by Machiavellianism ($r = .635$, $p < .001$). In contrast, narcissism showed a weaker but still significant positive relationship with cyberbullying behaviour ($r = .177$, $p < .001$). These findings suggest that adolescents with higher levels of Dark Triad personality traits are more likely to engage in cyberbullying behaviour, with psychopathy showing the strongest association among the three traits.

Multiple Linear Regression Analysis

A multiple linear regression analysis was conducted to examine the predictive effects of Machiavellianism, Narcissism, and Psychopathy on cyberbullying behaviour among Malaysian secondary school students. The findings indicated that the regression model was statistically significant, $F(3, 385) = 177.691$, $p < .001$. The model explained 58.1% of the variance in cyberbullying behaviour ($R^2 = .581$), with an adjusted R^2 value of .577. This suggests that Machiavellianism, Narcissism, and Psychopathy collectively contributed substantially to predicting cyberbullying behaviour among Malaysian secondary school students.

Among the three Dark Triad personality traits, psychopathy emerged as the strongest predictor of cyberbullying behaviour ($\beta = .520$, $t = 10.117$, $p < .001$), followed by Machiavellianism ($\beta = .265$, $t = 5.120$, $p < .001$) and narcissism ($\beta = .200$, $t = 5.918$, $p < .001$). These findings indicate that students with higher levels of psychopathic traits are more likely to engage in cyberbullying behaviour compared to those with higher levels of Machiavellianism and Narcissism. Furthermore, all three personality traits significantly predicted cyberbullying behaviour.

Table 2. Multiple Linear Regression Analysis

Variables	B	β	t	p-value	VIF
Machiavellianism	.212	.265	5.120	< .001	2.464
Psychopathy	.454	.520	10.117	< .001	2.426
Narcissism	.781	.200	5.918	< .001	1.048

Table 3. Regression Model Summary

Statistic	Value
R	.762

R ²	.581
Adjusted R ²	.577
F	177.691
p-value	< .001

Comparative Analysis

The comparative analysis revealed that psychopathy was the most influential Dark Triad personality trait in predicting cyberbullying behaviour among Malaysian secondary school students, followed by Machiavellianism and Narcissism. Psychopathy recorded the highest standardised beta coefficient ($\beta = .520$), indicating that it had the strongest contribution to cyberbullying behaviour. Machiavellianism was identified as the second strongest predictor ($\beta = .265$). In contrast, narcissism had the weakest predictive effect ($\beta = .200$). These findings suggest that adolescents who display characteristics associated with low empathy, impulsivity, and poor self-control are more likely to engage in cyberbullying behaviour.

Table 4. Comparative Predictive Strengths of Dark Triad Personality Traits

Personality Trait	β	Rank
Psychopathy	.520	1
Machiavellianism	.265	2
Narcissism	.200	3

The comparative findings suggest that psychopathic traits contribute more strongly to cyberbullying behaviour than Machiavellian and narcissistic traits. This indicates that characteristics such as low empathy, impulsivity, and lack of remorse may play a more prominent role in explaining cyberbullying behaviour among adolescents.

DISCUSSION

Machiavellianism and Cyberbullying Behaviour

The findings revealed that Machiavellianism was positively and significantly associated with cyberbullying behaviour among Malaysian secondary school students. This finding supports H1 and is consistent with previous studies that identified Machiavellianism as a significant predictor of cyberbullying behaviour (Goodboy & Martin, 2015; Yuan et al., 2020a; Panatik et al., 2022; Javed et al., 2025). Individuals high in Machiavellianism tend to manipulate and exploit others for personal gain, making them more likely to engage in cyberbullying activities. From the perspective of Social Cognitive Theory, such individuals may perceive cyberbullying as an effective strategy for achieving social dominance or personal objectives within online environments.

Narcissism and Cyberbullying Behaviour

The results also showed that narcissism was positively and significantly associated with cyberbullying behaviour, supporting H2. This finding is consistent with previous studies suggesting that narcissistic individuals are more likely to engage in cyberbullying due to their need for admiration, social recognition, and self-enhancement (Fan et al., 2019; Alavi et al., 2025). However, the relationship between narcissism and cyberbullying behaviour was weaker compared to Machiavellianism and Psychopathy. This may indicate that narcissistic adolescents engage in cyberbullying primarily when their self-image, social status, or ego is threatened.

Psychopathy and Cyberbullying Behaviour

The findings indicated that psychopathy was positively and significantly associated with cyberbullying behaviour, supporting H3. This result is consistent with previous studies that identified psychopathy as one of the strongest predictors of cyberbullying behaviour (Hoareau et al., 2019; Orue & Calvete, 2019; Xu et al., 2024). Adolescents with psychopathic tendencies often display low empathy, impulsivity, and a lack of remorse, which may increase their likelihood of engaging in aggressive online behaviours. In line with Social Cognitive Theory, these individuals may be less concerned about the consequences of their actions and more likely to justify harmful online behaviour.

Comparative Influence of Dark Triad Traits

The comparative analysis revealed that psychopathy was the strongest predictor of cyberbullying behaviour, followed by Machiavellianism and Narcissism. These findings support H4 and suggest that psychopathic characteristics, particularly low empathy, impulsivity, and lack of guilt, exert a stronger influence on cyberbullying behaviour than manipulative or self-enhancing tendencies. The findings are consistent with Xu et al. (2024), who reported that psychopathy demonstrated the strongest association with cyberbullying among the Dark Triad personality traits. Therefore, interventions aimed at reducing cyberbullying should pay particular attention to adolescents who exhibit psychopathic tendencies, while also addressing manipulative and narcissistic characteristics.

Practical Implications

The findings of this study provide several practical implications for educators, school counsellors, parents, and policymakers. First, the results indicate that Dark Triad personality traits, particularly Psychopathy and Machiavellianism, significantly predict cyberbullying behaviour among Malaysian secondary school students. Therefore, schools should strengthen early identification and intervention programmes targeting students who display manipulative, impulsive, and low-empathy characteristics.

Second, school counsellors may utilise personality-based screening and counselling interventions to identify students who are at greater risk of engaging in cyberbullying behaviour. Programmes focusing on empathy development, emotional regulation, and prosocial behaviour may help reduce cyberbullying tendencies among adolescents.

Third, the Ministry of Education Malaysia (MOE) may incorporate cyberbullying awareness and digital citizenship education into existing character-building programmes. Such initiatives help students develop responsible online behaviour and increase awareness of the consequences of cyberbullying.

Finally, parents should be encouraged to monitor adolescents' online activities and maintain open communication regarding responsible social media use. Increased parental involvement may reduce opportunities for cyberbullying behaviour and promote healthier online interactions among adolescents.

Limitations and Future Research

This study has several limitations. First, the cross-sectional design restricts causal interpretation between Dark Triad personality traits and cyberbullying behaviour. Second, the data were collected through self-report questionnaires, which may be influenced by social desirability bias and respondents' subjective perceptions. Third, the sample was limited to Malaysian secondary school students; therefore, the findings may not be generalisable to other age groups or educational contexts. Future studies should employ longitudinal designs, utilise multiple sources of data, and include additional psychological variables alongside Dark Triad personality traits to provide a more comprehensive understanding of cyberbullying behaviour.

CONCLUSION

This study examined the predictive effects of Machiavellianism, Narcissism, and Psychopathy on cyberbullying behaviour among Malaysian secondary school students. The findings revealed that all three Dark Triad

personality traits significantly predicted cyberbullying behaviour, with psychopathy emerging as the strongest predictor, followed by Machiavellianism and Narcissism. These findings highlight the importance of personality factors in understanding cyberbullying behaviour and provide useful insights for the development of prevention and intervention strategies among adolescents.

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