

Personality Traits, Parenting Styles and Cyber Aggression among University Students in Johor, Malaysia

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Abstract

Malaysian cyberspace has been the target of cyber aggression in recent years, and similar issue has reportedly occurred in many other nations as well. The emergence of cyberaggressive behaviour has been linked to some personality traits and parenting practises. The objective of this study was to determine the relationship of personality traits, parenting styles and cyber aggression among university students in Johor. A total of 204 undergraduates were participated in this study. The data were collected through a self-administered questionnaire. Big Five Inventory (BFI) by John et al. (1991) was used to determine the personality traits, Egna Minnen Beträffande Uppfostran- Short Form (S-EMBU) from Arrindell et al. (1999) was used to measure parenting style and Cyber-Aggression Scale (CYB-AGS) by Buelga et al (2020) was used to measure cyber aggression. Result shown a moderate level of cyber aggression among respondents. The traits of extraversion ($r=0.237$, $p\leq 0.01$), parenting styles of rejection ($r=0.639$, $p\leq 0.01$), emotional warmth ($r=0.173$, $p\leq 0.05$) and overprotection ($r=0.490$, $p\leq 0.01$) were positively and significantly correlated with cyber aggression. Traits of agreeableness ($r=0.130$, $p\geq 0.05$), conscientiousness ($r=-0.079$, $p\geq 0.05$) and neuroticism ($r=-0.062$, $p\geq 0.05$) were not significant but negatively correlated with cyber aggression. Significant gender difference was found in cyber aggression among the respondents ($t=3.563$, $p\leq 0.001$). Lastly, extraversion traits, and parenting styles of rejection were the significant predictors of cyber aggression among the respondents. This study highlights on the understanding of different personality traits and parenting style that predict how young adults respond to cyber

aggression. **Keywords:** Personalities Traits, Parenting Styles, Cyber Aggression, Higher Learning Institutions

Introduction

In recent years, with the fast improvement of internet information technology, the internet has supplied high-quality comfort for people's lives. The internet is a double-edged sword for kids and adolescents. On the other hand, the internet can assist kids and adolescents meet the desires of looking for knowledge and also communicating with others. Cyber-aggression has climbed sharply in society with the development of technology. Cyber-aggression refers to any conduct aimed toward intentionally harming people or groups of people who perceive such acts as offensive, derogatory, dangerous or unwanted and it is enacted through virtual gadgets which include computers, smartphones, and tablets (Nocera et al., 2022; Zhao & Gao, 2012; Grigg, 2010). Cyber aggression contains a lot of deliberately dangerous behaviours like harassment, threats, spreading false information, insults, sending offensive messages, hacking a person's online accounts, and impersonating someone else to get others to dislike this person (Uddin & Rahman, 2022). These can occur through social media, messaging apps, email, online gaming, and other internet-based platforms. Recently, cyberbullying is a subtype of cyber-aggression that has obtained extensive interest. The distinction among the aggression and bullying is that cyber-aggression may be a one-off state of affairs or observation that the offender does not always recognize is wrong, while cyberbullying is a malicious and focused method in which the offender has a motive to damage the alternative person.

In recent years, cyber aggression has been lurking in Malaysian cyberspace and this problem has been reported happening in many countries around the world. Numerous studies have shown that personality variables influence aggressive and antisocial behaviours, but far less research has focused on the relationship between personality and bullying, particularly cyberbullying. A meta-analysis study by Mitsopoulou and Giovazolias (2015) has examined personality traits in relation to traditional bullying. The results showed that low levels of agreeableness (which means low sensitivity to others and little conciliatory attitude); low levels of conscientiousness (which becomes a challenge to an appropriate behavioural selfcontrol); high neuroticism (which includes difficulty with emotional regulation); and high levels of extraversion (which implies a tendency for excitement- and stimulation-seeking), are all associated with bullying. Some personality variables are taken into consideration as danger elements that could increase the chance of aggression, and other personality variables are taken into consideration as protecting elements that could lower the chance of aggression. Allen, Anderson and Bushman (2018) stated that the General Aggression Model (GAM) is one of the most comprehensive and widely used theories for understanding aggression. One of the major aspects in the GAM is the proximate processes which explains how person factors increase or decrease the likelihood of aggression through their influence on the cognition, affect and arousal. Many person factors have been identified as risk factors for aggression which include high trait anger, certain personality disorders, low self-control, high neuroticism,

low agreeableness, and low conscientiousness. With regards to cyberbullying, past research similarly reported that the perpetrator exhibited higher neuroticism but lower conscientiousness, agreeableness and extraversion (Smith, 2015). Additionally, they exhibit traits like machiavellianism, narcissism, and psychopathy (Goodboy & Martin, 2015).

The GAM also explains that individual aggression is the combined effect of personal factors and situational factors. Situational factors mainly come from environmental stimuli around an individual for example family environment (Kowalski et al., 2014). According to Bronfenbrenner and Morris (2006), an individual's family forms the primary social context throughout development, and studies show that parenting style is carefully related to the emergence of cyber-aggressive behaviour. Arrindell et al. (1999) divided parenting styles into three types, which are rejection, overprotection, and emotional warmth. Different parents use various parenting techniques. Studies have found the negative relationship between warm parenting and children's self-report about aggression or hostility (Khaleque, 2012). In a study by Chen et al. (2020), it was found that emotional warmth has negative correlation with cyberbullying perpetration attitudes among college students. It has also discussed about other studies that suggested similar results where an indulgent parenting style (characterized by the use of reasoning and warmth), authoritative parenting style (supportive and warmth parenting) and the higher level of parental support were correlated with less involvement in cyberbullying perpetration and lower levels of cyberbullying in early adulthood. Warm parenting is a type of positive, active parenting that fosters a safe, educating atmosphere and teaches children how to manage their negative emotions, which reduces aggressive behaviour. Therefore, individuals tend to resolve contradictions and conflicts in cyber social communication in positive ways, thus reducing cyberbullying perpetration attitudes (Chen et al., 2020). In Zhou et al. (2022) it was stated that rejection parenting style was an important factor associated with students' perceived school non-physical bullying which includes cyberbullying. Negative parenting styles (such as rejection and overprotective) may cause students to adopt negative coping styles to deal with problems.

The trends in cyber aggression can vary among different age group. Research on cyber aggression specifically on cyberbully have predominantly targeted children and adolescents (Doane et al., 2013). However, previous research has also shown that those young or emerging adults (ages between 18 and 29) were reported of experiencing cyber aggression at a rate of 40% compare to the older age groups (i.e., age groups older than 29) (Wang et al., 2019; Arnett et al., 2014). This incidence was increasing, especially during the COVID-19 pandemic (Barlett et al., 2021). Heimen and Olenik-Shemesh (2022) have extensively explained about the higher risk among the higher education students (emerging or young adults) of being involved in cyberbully due to their intensive and unsupervised use of Information Communication Technologies (ICT). In addition, emerging adulthood is a period where these young adults will experience profound changes in their lives due to the highest rates of residential changes, a period of identity exploration and formation and a time of instability associated with negative emotions, well-being and life satisfaction. Hence, a study that include emerging or young adults in the higher education sector, who are at a better threat for cyber aggression perpetration, need to be conducted. The purpose of the current study is to investigate the relationships of personality traits and parenting styles on cyber aggression among public university students in Johor, Malaysia. This study plays a pivotal role in shaping future generations by shedding light on the complex interplay of these factors. By exploring on how

individual personality traits can influence one's susceptibility to engage in cyber aggression, will ultimately paving the way for interventions and prevention strategies. In addition, by understanding the impact of different parenting styles on the development of these traits, we gain insights into how parents can positively contribute to the emotional wellbeing and behavioural choices of young adults, fostering a more harmonious and cyberbullyfree campus environment.

Materials and Methods

This is a cross sectional research, which has been conducted using a survey method. A selfadministered questionnaire was used for the data collection. The data have been interpreted using the descriptive and correlational statistical analysis. The study was conducted in Johor, Malaysia. A simple random sampling technique was used to gather the respondents. The sample size was 204 respondents after calculated based on Krejcie and Morgan (1970). Big Five Inventory (BFI) by John et al. (1991) was used to measure personalities traits. The 44item BFI was used to measure the participants' individual differences based on the five-factor personality model. Each item is rated on a 5-point scale that ranges from 1 (disagree strongly) to 5 (agree strongly). Likert Scales was used to measure the various aspects of the Big-five personality (extraversion, agreeableness, conscientiousness, neuroticism and openness). The authors of the BFI provide a scoring schema that groups each of the 44 items into groups that represent the five personality traits. The reliability of the subscales measured by Cronbach's alpha, for this study, was .76 for Extraversion, .70 for Openness to experience, .85 for Conscientiousness, .69 for Agreeableness and .72 for Neuroticism.

The S-EMBU (Swedish for "My memories of upbringing") (Arrindell et. al, 1999) was used to measure parenting styles. It was consisted of 23 items which included three subscales: rejection (7 items), emotional warmth (6 items), overprotection/control (9 items), and 1 unscaled item. Items are replied on a 4-point Likert scale (1=No, 2=Yes, but seldom, 3= Yes, often, 4= Yes, most of the time). Cronbach's alpha coefficient has been found to range from 0.74 to 0.84.

The Cyber-aggressor Scale (CYB-AGS) by Buelga et al. (2020) was used to measure cyber aggression. It was consisted of 18 items rated on 5-point Likert-type scale which ranged from 1 (never) to 5 (always). These items measured the adolescent's experience as a cyberbullying offender in the past 12 months. Cronbach's alpha for the global scale was 0.88.

Results and Discussion

Table 1 shows the background of the respondents who were involved in the study. More than half of the respondents (51%) were in the youngest category of age which was between 21 to 22 years old (104), followed by those whose age was 23 years old with 86 respondents (42.1%). There rest, 14 respondents (6.9%) were at the age of 24 years old and beyond. Most of the participants of this study were female with 134 (65.7%) and male with 70 (34.3%). For race, Chinese respondents were the highest in number, which was 109 (53.4%) followed by Malay respondents with 93 (45.6%), and the rest were of other races (1%). For religion, Buddhists respondents were highest in number, which was 99 (48.5%) followed by Muslim respondents with 94 (46.1%), 10 respondents (4.9%) were Christians and the rest was a Hindu (0.5%). Among respondents, 21 of them (10.3%) were in their second year, 51 respondents (25.0%) were in their third year and the rest, 132 (64.7%) respondents were in their final year of

undergraduate study. For place of study, more than half of the respondents (120) were from Universiti Teknologi Malaysia (UTM) (58.8%). The rest (84) were from Universiti Tun Hussein Onn Malaysia (UTHM) (41.2%).

Table 1**Background of Respondents (n=204)**

Variable	n	%
Age:		
21-22	104	51.0
23	86	42.1
24≥	14	6.9
Total	204	100.0
Mean	22.52	
Sd.	1.116	
Min.	21	
Max.	33	
Gender: Female		
	134	65.7
Male	70	34.3
Total	204	100.0
Race:		
Malay	93	45.6
Chinese	109	53.4
Others	2	1
Total	204	100.0
Religion: Islam		
	94	46.1
Buddhism	99	48.5
Christianity	10	4.9
Others	1	0.5
Total	204	100.0
Year of Study: Year		
2	21	10.3
Year 3	51	25.0
Year 4	132	64.7
Total	204	100.0

Place of Study:					
Universiti (UTM)	Teknologi	Malaysia	120		58.8
Universiti Malaysia (UTHM)	Tun Hussein	Onn	84		41.2
Total			204		100.0

Table 2 describes the levels of respondents' personality traits, parenting styles and cyber aggression. Personalities traits has been measured using the Big Five Inventory (BFI) by John et al. (1991). Result shows that more than half of the respondents scored low on all personality traits i.e. extraversion (M = 20.28, SD = 4.113), agreeableness (M = 37.43, SD = 3.394), conscientiousness (M = 35.47, SD = 3.638), neuroticism (M = 24.88, SD = 2.650), and openness (M = 34.32, SD = 2.636). In addition, Egna Minnen Beträffande Uppfostran- Short Form (S-EMBU) by Arrindell et al. (1999) has been used to assess the level of parenting styles of the respondents' parents. Result in Table 2 also shows that more than half of the respondents perceived their parents as practising low level of all types of parenting styles i.e. rejection (M = 14.03, SD = 2.825), emotional warmth (M = 18.15, SD = 2.382) and overprotection (M = 23.46, SD = 3.414).

Table 2:

Levels of Personality Traits, Parenting Styles and Cyber Aggression of Respondents (n=204)

Variables	n	%	Mean	SD	Min	Max
Personalities Traits:						
a. Extraversion						
High (23-37)	100	49.0	28.28	4.113	13	37
Low (13-22)	104	51.0				
b. Agreeableness						
High (39-44)	86	42.2	37.43	3.394	27	44
Low (27-38)	118	57.8				
c. Conscientiousness						
High (37-42)	97	47.5	35.47	3.638	25	42
Low (25-36)	107	52.5				
d. Neuroticism						
High (26-32)	82	40.2	24.88	2.650	10	32
Low (10-25)	122	59.8				
e. Openness						
High (35-42)	99	48.5	34.32	2.636	26	42
Low (26-34)	105	51.5				
Parenting Styles:						
a. Rejection						
High (15-28)	85	41.7	14.03	2.825	7	28
Low (7-14)	119	58.3				
b. Emotional Warmth						
			18.15	2.382	7	24

High (19-24)	95	46.6				
Low (7-18)	109	53.4				
c. Overprotection			23.46	3.414	9	36
High (25-36)	82	40.2				
Low (9-24)	122	59.8				
Cyber Aggression: High			<u>28.31</u>	<u>8.912</u>	<u>18</u>	<u>90</u>
(31-90)	65	31.9				
Moderate (25-30)	71	34.8				
Low (18-24)	68	33.3				

Note: *Sd.* = Standard Deviation, *Min* = Minimum Value, *Max* = Maximum Value Cyber-Aggression Scale (CYB-AGS) by Buelga et al. (2020) has been used to measure the degree of cyber aggression among the respondents. Result in Table 2 shows that the more than two-thirds of the respondents (68%) scored between low to moderate level of cyber aggression ($M = 28.31$, $SD = 8.912$), while the rest of them reported a high level of cyber aggressive behaviour (32%).

Table 3 explains the relationships between personality traits (extraversion, agreeableness, openness, conscientiousness, and neuroticism) and parenting style (rejection, emotional warmth, and overprotection) with cyber aggression among university students in Johor. The result of the Pearson correlation coefficient shows that there is a significant relationship between extraversion with cyber aggression ($r=0.237$, $p\leq 0.01$). This result is consistent with the previous study by Adamopoulou and Koukia (2020). It was found that extrovert teenagers are more susceptible to perpetrator or cyberbullying events. This finding explained that the higher the level of extraversion personality, the higher cyber aggression. The results of the Pearson correlation coefficient also showed that there were no significant relationships between agreeableness with cyber aggression ($r=-0.130$, $p\geq 0.05$); conscientiousness with cyber aggression ($r=-0.079$, $p\geq 0.05$); neuroticism and cyber aggression ($r=-0.062$, $p\geq 0.05$); and openness with cyber aggression ($r=0.137$, $p\geq 0.05$). Although the results were insignificant, there were negative relationships between agreeableness and conscientiousness with cyber aggression. It has been reported in the previous study by Mitsopoulou and Giovazolias (2015), that people who are high on agreeableness have the tendency to be altruistic and tenderminded. So, the higher the level of agreeableness personality, the lower the cyber aggression. Similarly, in Xu and Zheng (2022) it was found that the higher the level of conscientiousness traits, the lower the cyber aggression. However, this study contradicted the result in Xu and Zheng (2022) with regards to the relationship between openness traits with cyber aggression and the result in Jiang et al. (2022) on neuroticism with cyber aggression.

Table 3:
Relationships between Personality Traits, Parenting Style and Cyber Aggression (n=204)

Variables	Cyber Aggression	
	r	p
Personality Traits		
Extraversion	0.237**	0.001

Agreeableness	-0.130	0.063
Conscientiousness	-0.079	0.262
Neuroticism	-0.062	0.375
Openness	0.137	0.051
Parenting Styles		
Rejection	0.639**	0.000
Emotional Warmth	0.173*	0.013
Overprotection	0.490**	0.000

Note: * $p \leq 0.05$; ** $p \leq 0.01$

The result of the Pearson correlation coefficient also shows that there were significant relationships between all types of parenting styles with cyber aggression, i.e. rejection ($r=0.639$, $p \leq 0.01$), emotional warmth ($r=0.173$, $p \leq 0.05$) and overprotection ($r=0.490$, $p \leq 0.01$). This result is consistent with previous research from Zhou et al. (2022), where it has been explained that rejection in parenting style, is associated with higher cyber aggression. This result is not consistent with previous study from Chen et al. (2020), regarding the negative relationship between emotional warmth and cyber aggression. It was found that parenting with higher emotional warmth was significantly associated with higher cyber aggression. Finally, it was found over protective parents is also associated with higher cyber aggression. This result is consistent with the previous studies from Zhou et al. (2022).

Table 4:

Differences in Personalities Traits, Parenting Styles and Cyber

Aggression among Male And Female

(n=204)

Variables	Mean		t	p	Respondents
	Male	Female			
Personalities Traits:					
Extraversion	31.17	26.78	8.396***	0.000	
Agreeableness	37.46	37.42	0.078	0.938	
Openness	35.33	33.80	4.085***	0.000	
Conscientiousness	34.49	35.98	-3.189**	0.002	
Neuroticism	<u>23.87</u>	25.40	4.066***	0.000	
Parenting Styles: Rejection					
	15.01	13.51	3.711***	0.000	
Emotional Warmth	17.66	18.40	-2.142*	0.033	
Overprotection	24.06	23.14	1.828	0.069	
Cyber Aggression:	31.30	26.75	3.563***	0.000	

Note: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

Table 4 demonstrates the differences of the respondents' personalities traits, parenting styles and cyber aggression by gender. The result of the T-test shows that there were significant differences in four types of personality traits i.e. extraversion ($t = 8.396$, $p \leq 0.001$), openness

($t = 4.085$, $p \leq 0.001$), conscientiousness ($t = -3.189$, $p \leq 0.01$) and neuroticism ($t = -4.066$, $p \leq 0.001$). Male respondents scored higher than the female respondents in regards to extraversion and openness traits, while female respondents scored higher for conscientiousness and neuroticism traits. However, there was no significant difference in agreeableness trait among male and female university students ($t = 0.078$, $p \geq 0.05$). This results are partially consistent with previous research from Weisberg, DeYoung and Hirsh (2011) and Tamban and Maningas (2019).

Furthermore, the results in Table 4 also show that there is a significant difference in rejection parenting style among male and female respondents ($t = 3.711$, $p \leq 0.001$). Male have experienced high rejection parenting styles than female. This finding is consistent with the previous literature from Feng, Zhang and Zhong (2021). The result of the T-test also shows that there is a significant difference in emotional warmth among male and female respondents ($t = -2.142$, $p \leq 0.05$). This result is consistent with the previous literature from Gao et. al (2021). Compared with male, parent showed more emotional warmth and understanding to female. Finally, there is no significant difference in overprotection among male and female respondents ($t = 1.828$, $p \geq 0.05$). This result is inconsistent with previous study by Feng, Zhang and Zhong (2021) where males perceived parental overprotection significantly higher than females. The result of the T-test shows that there is a significant difference in cyber aggression among male and female respondents ($t = 3.563$, $p \leq 0.001$). This result is consistent with the previous studies from Wright (2020), Kowalski et. al, (2014) and Heiman and Olenik-Shemesh (2022). Males were more likely to be perpetrators of cyberbullying and cyber aggression compared to the girls.

Table 5:
Predictors of
Cyber
Aggression
among

	p			
Personality Traits:				
Extraversion	0.337	0.115	0.155	0.004
Parenting Styles:				
Rejection	1.716	0.217	0.544	0.000
Emotional Warmth	0.242	0.249	0.065	0.333
Overprotection	0.306	0.214	0.117	0.155

$F = 41.242$; $sig-F = 0.000$

$R\ square = 0.453$; $Adjusted\ R\ Square = 0.442$

Respondents (n=204)

Variables	Cyber aggression	
	B	SE B β

*Note: * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$*

Table 5 shows that extraversion, rejection, emotional warmth, and overprotection were included in the multiple regression's analysis. R square value of 0.453 showed that these variables could explain about 45.3% of the variance in cyber aggression ($F = 41.242$, $p \leq 0.001$). Only two variables (Extraversion [$\beta = 0.155$, $p = 0.004$] and Rejection [$\beta = 0.544$, $p = 0.000$]) were found to uniquely determine cyber aggression among the university students in Johor. Rejection parenting style was the strongest predictor followed by overprotection. It should be noted that respondents who have high extraversion personality trait and high rejection parenting style tend to involve in cyber aggression.

Conclusion

Overall, the results show that more than two-thirds of the undergraduate students in this study in Johor have involved in low to moderate cyber aggression while the rest have experienced a high cyber aggression. The difference in gender on cyber aggression has also being observed, where it was found that more male students were involved in cyber aggression compared to female students. Other than that, there were positive significant correlations between extraversion traits, all types of parenting styles (rejection, emotional warmth, and overprotection) with cyber aggression. This shows that the higher the extraversion, rejection, emotional warmth and overprotection of an individual, the higher the cyber aggression among the respondents. Multiple regression also discovered that while extraversion, rejection, emotional warmth and overprotection were the unique predictors of cyber aggression, rejection parenting style was the strongest predictor. All results obtained from this study suggested that individual personality and parenting styles are the intrinsic factors that have influence on cyber aggression. It improves our understanding of how different personality traits and parenting styles predict how people respond to cyber aggression.

The finding of this study also has its own implication towards the future study on cyber aggression. Involvement of the respondents in cyber aggression could contribute to the severe level of cyber aggression in the near future particularly for male students. In addition, rejection parenting style was the strongest predictors in the current study. Rejecting parents lack demandingness and responsiveness. So, in line with the past studies, those who experienced a higher rejection from their parents could also lead to a severe cyber aggression behaviour. Some kind of intervention need to be done for both university students and parents to address these issues.

Addressing cyber aggression is an ongoing process that requires commitment of the entire university community. While it is essential to create a culture of respect and empathy, both offline and online, other suitable interventions include cyberbully awareness campaigns, effective university policies on preventing cyber aggression, faculty and staff training on recognizing and addressing cyber aggression, anonymous reporting system on cyber bully incidents and adding a digital citizenship course into the curriculum to teach about ethical decision-making, empathy, and responsible online activity. On the other hand, addressing the issue of rejection parenting style and it's link to cyber aggression in emerging adults (those who still studying in the higher learning institutions) can be more complex. Acknowledging that both parents and children need support and guidance to break the negative patterns and foster healthier relationships, some suitable interventions could be to encourage parents to

seek resources or attend parenting workshops to learn about parenting techniques, communication skills and conflict resolution strategies. Besides, parents should be encouraged to reconnect with their emerging adult children by spending quality time together, setting respectful boundaries, but still monitoring their children's online activities. While parents can offer support and guidance, these children should be responsible for their actions. This study serves as a ray of hope, inspiring the development of effective programs and policies that nurture empathetic, socially responsible, and resilient students, ultimately contributing to a safer and more supportive educational community.

The field of cyber aggression is constantly evolving as technology and online interactions continue to change. Future research in this area can help us better understand the phenomenon, develop effective prevention and intervention strategies, and stay ahead of emerging trends. In the future, it is recommended to conduct research using a qualitative approach to have clear understanding of cyber aggression. Since the location of this study was focused on universities in Johor only, future research could be conducted in other states in Malaysia and involve a larger sample size. Finally, a longitudinal study could also be suggested to have a clear understanding on personalities traits, parenting styles and cyber aggression among university students. Besides, future studies could also focus on cultural variations, mental health outcomes of cyber aggression, legal and ethical implications as well as digital literacy and education. These are essential in our increasingly digital culture to address the difficulties and dangers of online interactions while promoting an atmosphere of greater respect.

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