

# The Correlation between Aggression, Self-esteem and Cyberbullying among Undergraduates in Malaysia

## *Hubungan Antara Agresi, Harga-diri dan Perbuatan Buli Siber dalam Kalangan Pelajar Sarjana Muda di Malaysia*

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**Abstract:** The prevalence of cyberbullying cases has been increasing over the years and it causes detrimental effects on one's mental health and psychological well-being. This cross-sectional research aims to determine the significant relationship between proactive aggression, reactive aggression and self-esteem on cyberbullying among undergraduates in Malaysia. 255 participants were recruited through purposive sampling. Questionnaires were distributed online via social media platforms such as Facebook, Instagram, WhatsApp, and Twitter. Three validated and reliable self-report measures were used to gather responses for this including Reactive-Proactive Aggression Questionnaire (RPQ), Rosenberg Self-esteem Scale (RSES) and Cyberbullying Test (CT). RPQ consists of 23 items followed by RSES with 10 items and lastly, CT consists of 45 items. All measures yielded a high reliability ranging from .84 to .95. The present study has found that proactive and reactive aggressions have a significant positive relationship with cyberbullying perpetration. However, proactive aggression has a stronger relationship as compared to reactive ones. Those with high proactive aggressions tend to involve more in cyberbullying as compared to reactive aggression. Moreover, it also found a negative but non-significant relationship between self-esteem and cyberbullying perpetration among undergraduates in Malaysia. It shows that those with high self-esteem tend to be cyberbullying victims but not perpetrators due to their frequent usage of social media. This study implies that it could be useful to tackle those involved in proactive aggressions as compared to reactive aggression and those with high self-esteem. Healthy ways to channel proactive aggression in which perpetrator seeks reward or dominance should be identified rather than focusing on those who reacts aggressively to a threat or provocation.

**Keywords:** proactive aggression, reactive aggression, self-esteem, cyberbullying, cyberbullying perpetration

**Abstrak:** Kes buli siber yang semakin meningkat dan menyebabkan kesan buruk terhadap kesihatan mental dan kesejahteraan psikologi seseorang. Penyelidikan secara rentas ini bertujuan untuk menentukan hubungan yang signifikan antara agresi proaktif, agresi reaktif dan harga diri terhadap buli siber dalam kalangan pelajar sarjana muda di Malaysia. 255 peserta sebagai responden melalui persampelan bertujuan. Soal selidik diedarkan secara dalam talian melalui platform media sosial seperti Facebook, Instagram, WhatsApp, dan Twitter. Tiga laporan sendiri yang disahkan dan dipercayai digunakan untuk mengumpulkan respons termasuk Reactive-Proactive Aggression Questionnaire (RPQ), Rosenberg Self-esteem Scale (RSES) dan Cyberbullying Test (CT). RPQ terdiri daripada 23 item, RSES dengan 10 item dan CT terdiri daripada 45 item. Semua ukuran menghasilkan kebolehpercayaan yang tinggi antara 0.84 hingga 0.95. Kajian ini mendapati bahawa tindakan agresif proaktif

dan reaktif mempunyai hubungan positif yang signifikan dengan perilaku buli siber. Walau bagaimanapun, tindakan agresif proaktif mempunyai hubungan yang lebih kuat berbanding dengan agresi reaktif. Mereka yang mempunyai agresi proaktif yang tinggi cenderung lebih banyak terlibat dalam buli siber berbanding dengan agresi reaktif. Kajian ini juga menemukan hubungan negatif tetapi tidak signifikan antara harga diri dan tindakan buli siber di kalangan pelajar sarjana muda di Malaysia. Ini menunjukkan bahawa mereka yang mempunyai harga diri yang tinggi cenderung menjadi mangsa buli siber tetapi bukan pelaku kerana sering menggunakan media sosial. Kajian ini menunjukkan bahawa sangat berguna untuk mengatasi mereka yang terlibat dalam agresi proaktif berbanding dengan agresi reaktif dan mereka yang mempunyai harga diri yang tinggi. Adalah amat baik sekiranya menyalurkan agresi proaktif di mana pelaku mencari ganjaran atau penguasaan harus dikenal pasti daripada memfokuskan terhadap individu yang bertindak agresif terhadap ancaman atau provokasi.

**Kata Kunci:** agresi proaktif, agresi reaktif, harga diri, buli siber, perlakuan buli siber

## Introduction

The present digital era motivates the society to depend on technologies, which indirectly caused high prevalence of cyberbullying across the internet worldwide (Poushter, 2016). Cyberbullying is defined by sending malicious and hateful messages to another person via email, social media platforms, instant messaging or mobile phones is often rampant, humiliating, and spreading rumors, both verbal and pictorial (Kowalski, Giumetti, Schroeder, & Lattanner, 2014). According to Bernama (2017, September 12), the Digital News Report in year 2017, Facebook was well liked among Malaysians, with 58% of usage, followed by WhatsApp with 51%, and Instagram accounted for 13%. Cyberbullying is found prevalent among all age groups (Barlett & Chamberlin, 2017). For instance, university students involved in high cyberbullying engagement were due to the high frequency of social media usage (Adebayo, Ninggal, & Ajiboye, 2019).

According to Krashen (1982), anxiety is one of the variables that increases students' affective filter which in return hinders comprehensible learning input from happening. In order to reduce the filter, students should be trained to speak in a non-provoking environment as to make them feel less anxious. Asking the students to give oral presentations and impromptu speeches in front of class are not the best practice to train students to be great speakers (Zheng, 2008). Putting them in such situation will make them even more anxious as they are unprepared and have much higher tendency to make mistakes, which they fear of most.

Cyberbullying causes adverse effects to arise, as it can be damaging on its victims such as suicidal ideation, isolation and mental illness (Deschamps & McNutt, 2016). The aggressive nature in cyberbullying is linked to high reactive aggression, but higher proactive aggression (Schultze-Krumbholz, Hess,

Pfetsch, & Scheithauer, 2018). According to Ang, Huan, and Florell, (2014), proactive aggression is defined as instrumental aggression in the absence of any provocations and is motivated by rewards from performing aggressive acts. Conversely, reactive aggression is defined as a hostile response that serves as retaliation to risks in the surrounding (Ang et al., 2014).

As cyberbullying is generally an aggressive act, it is linked to high reactive aggression, but higher proactive aggression (Schultze-Krumbholz, Hess, Pfetsch, & Scheithauer, 2018). Individuals with low self-esteem are easily victimized, while those with higher self-esteem were frequently reported to exhibit cyberbullying behaviours (Balakrishnan, 2018). High self-esteem is often associated with people who are more confident, happy, and self-respecting while people with low self-esteem will be anxious, lacking self-confidence and self-criticism.

Past researchers often link mental disorders and suicidal behaviors as the negative outcomes of cyberbullying (Varghese & Pistole, 2017). Western countries reported the adverse impacts of cyberbullying among youngsters, yet there are very few studies conducted in Malaysia given that the cyberbullying prevalence rate is on the rise in Malaysia (See Yusuf et al., 2018). Hence, the main objective of this research is to examine the correlation between proactive aggression, reactive aggression and self-esteem on cyberbullying among undergraduates in Malaysia. This present study will redound to the benefit of the young adults and to increase the public awareness regarding the negative impact of cyberbullying. Thus, the individuals will know of the importance of managing their aggression level and to cultivate positive self-esteem as a buffer against cyberbullying. This is the first study to recruit participants of the three largest ethnic group in Malaysia, which are the Malay, Chinese, and Indian to increase the generalizability across populations in the Malaysian

context.

## Literature Review

### *Proactive Aggression, Reactive Aggression and Cyberbullying*

Drummelsmith (2016) researched on proactive aggression and reactive aggression, alongside interpersonal competence and school identification involving cyberbully, cyberbully-victim and cyber victim or witness. The findings of the study evidently showed that aggression style differed significantly among cyberbullies, victims and cyberbully-victim. Similarly, Burton, Florell, and Gore (2013) investigated cyberbully-victims scored highest in both proactive and reactive aggression. This is because individuals who are the cyberbullies tend to be provocative in nature; whereas cyber victims who have been bullied tend to retaliate in the face of being provoked for self-protection (Schultze-Krumbholz, Hess, Pfetsch, & Scheithauer, 2018).

This was supported by Camodeca, Goossens, Terwogt and Schuengel (2002) as they have found that cyberbully victims show more traits of reactive than proactive aggression as compared to perpetrators. This study relates to the links between bullying and victimization on the one hand and reactive and proactive aggression on the other. It also investigated stability and incidence of bullying and victimization. Two hundred and fifteen children (114 girls and 101 boys) were present at both time points of the research. The results showed that bullies and bully/victims were both reactively and proactively aggressive, while victims were only reactively aggressive.

### *Self-esteem and Cyberbullying*

Based on a recent study by Šincek, Duvnjak, and Milić (2017) examined the cyberbullying experience among victims and perpetrators located in rural and urban areas. The findings of the study showed perpetrators and victims had a lower level of self-esteem in comparison to those who have not been involved.

In contrast, Poole (2017) reported that high self-esteem individuals are more prone to cyber victimization. Results found a significant positive correlation between cyberbullying victimization and self-esteem, in which, individuals with higher self-esteem tend to report greater experiences of victimization compared to their low self-esteem peer counterparts. The study explained that cyberbullies of high self-esteem often uses social media, hence increasing the susceptibility to be cyberbullied. However, Bayraktar, Machackova, Dedkova, Cerna, and Ševčíková (2015)

study reported cyberbullies had significantly higher self-esteem scores than cyber victims. This could be explained as cyberbullies impose authority on weaker peers to feel superior to intimidate others, thus increasing their self-esteem.

### *Theoretical Framework*

The General Aggression Model (GAM) developed by Anderson and Bushman (2002) was utilized in present study to explain the occurrence of cyberbullying activities. GAM describes inputs (i.e. person factors and situation factors); inputs affect one's internal state via particular routes (i.e. cognition, affect, and arousal), where it leads to an outcome, which influences one's decision whether to perform aggressive or nonaggressive behavior.

The underlying mechanisms are characterized as two stages which are input and outcome. Input is the person factor (proactive aggression and self-esteem) or situation factor (reactive aggression) leads to cyberbullying tendencies. For example, individuals with high aggressiveness (a person factor) tend to hurt others to obtain instrumental feelings of superiority (Lee, 2014). Similarly, cyberbully victims' aggression arousal is greater when provoked under media violence (a situational factor), thus, these victims tend to retaliate by imposing aggression. For example, victims will then express their aggression by cyberbullying others.

The following hypotheses were derived for the purpose of fulfilling the main objective of current study:

- H1: There is a significant positive relationship between proactive aggression and cyberbullying perpetration among undergraduates in Malaysia.
- H2: There is a significant positive relationship between reactive aggression and cyberbullying perpetration among undergraduates in Malaysia.
- H3: There is a significant negative relationship between self-esteem and cyberbullying perpetration among undergraduates in Malaysia.

## Methodology

### *Research Design*

In this study, the researchers recruited 255 undergraduates consists Malay, Chinese, and Indian participants. All the participants are from the range from 18 – 29 years old. The data collected were proceeded for IBM Statistical Package of Social Science Version 25 (SPSS-25). Spearman rho correlation was used to determine the relationship and the strength of association between proactive aggression, reactive aggression and self-esteem on cyberbullying perpetration. In order to calculate the sample size, G\* power version 3.1.9.4 was

used to calculate the minimum number of respondents required to run spearman correlation. The data was obtained using an online survey questionnaire conducted in an anonymous manner to measure various variables, which comprised of the demographic variables and the self-report scales during a single time period (Christensen et al., 2014). Five different validated instruments were adopted in the present study and all displayed high range of reliability as shown in Table 3.0.

Table 3.0  
*Reliability of the Instruments*

Variable	No. of Items	Cronbach's Alpha
Reactive-Proactive Aggression Questionnaire	23	.905
Proactive Aggression Questionnaire	12	.857
Reactive Aggression Questionnaire	11	.864
Rosenberg Self-esteem Scale	10	.843
Cyberbullying Test	15	.952
Cyberbullying Perpetration		

## Results

### *Descriptive Analysis*

#### **Background of Respondents**

255 participants aged 18 to 29 years old (M = 21.83, SD = 1.55), gender (M = 1.58, SD = .49) and race (M = 2.23, SD = .72) participated in this study as shown in Table 1.1. The highest percentage was accounted for those who aged 22 years old (38.0%), followed by 23.9%, 11.8%, 9.8%, 5.5%, 4.7%, 3.1%, 1.2% and 0.8% for 21, 23, 20, 24, 19, 25, 26, and 18 years old respectively. Besides, those who aged 27, 28 and 29 were about 0.4% respectively. More than half of the participants were females which is equivalent to 58.4% (n = 149) whereas, the rest were males which is nearly 41.6% (n = 106). 60.0% of the participants of this study were Chinese (n = 153), followed by 23.1% of Indians (n = 59), 11.4% of Malays (n = 29) and 5.5% of other ethnic groups (n = 14).

#### **Frequency Distribution**

The mean score for all variables was shown in Table 4.2. The mean score for total proactive aggression for the participants in this study is 1.89 (SD = 3.06). The mean scores for total scores of reactive aggression and total scores of self-esteem are 6.62 (SD = 4.14) and 26.79 (SD = 4.77) respectively.

#### **Spearman Rho Correlation**

Present study shows a moderate and statistically

significant positive relationship between proactive aggression and cyberbullying perpetration ( $r = .469$ ,  $n = 255$ ,  $p < .001$ ). Besides, there was a low and statistically significant positive relationship between reactive aggression and cyberbullying perpetration ( $r = .300$ ,  $n = 255$ ,  $p < .001$ ). Lastly, there was a negative but non-significant relationship between self-esteem and cyberbullying perpetration ( $r = -.062$ ,  $n = 255$ ,  $p = .321$ ).

### *Summary of Findings*

Table 4.2

#### *Summary of Results*

Hypotheses	<i>rs</i>	<i>p</i>	Decision
H1: There is a significant positive relationship between proactive aggression and cyberbullying perpetration among undergraduates in Malaysia.	.469	.000	Supported
H2: There is a significant positive relationship between reactive aggression and cyberbullying perpetration among undergraduates in Malaysia.	.300	.000	Supported
H3: There is a significant negative relationship between self-esteem and cyberbullying perpetration among undergraduates in Malaysia.	-.062	.321	Not Supported

## Discussion and Conclusion

Proactive aggression was found to have a moderately significant positive relationship with cyberbullying perpetration. Individuals with higher proactive aggressive traits tend to involve in extreme negative behaviors to compensate and readjust their cognitive, physiological and psychological states (Song et al., 2019). Undergraduates in the current context are display more proactive aggression traits and it is parallel to the increase of cyberbullying perpetration. This finding is aligned with past findings as some have also supported that cyberbullying perpetration is highly associated with proactive aggression Schultze-Krumbholz et al. (2018), Renati, Berrone, & Zanetti (2012). Furthermore, these findings also implied that perpetrators are those who portray proactive aggression whereas cyber victims portray more of a reactive aggression.

Besides, the current study also found a statistically significant positive relationship between reactive aggression and cyberbullying perpetration.

Although significant, the strength of the relationship was still lower than proactive aggression. This significant finding corroborates that perpetrators who portray reactive aggression tends to unleash their pent up negative emotions, frustration or anger towards other users of internet through cyberbullying (Patchin & Hinduja, 2011). Reactive aggression happens as a result of provocation or it is also explained as justified aggression. It occurs as a result of perceived threat or negative situations. In the current context, undergraduates tend to could involve less in reactive aggression due to less provocation. However, the significance of this finding shows that they still involve in cyberbullying due to reactive aggression. On the other hand, research has found that cyberbully victims show more traits of reactive than proactive aggression as compared to perpetrators (Camodeca, Goossens, Terwogt, & Schuengel, 2002). This could be one of the reasons why the strength of this relationship is lower than proactive aggression and cyberbullying.

Jacobs, Dehue, Völlink, and Lechner (2014) have stated that individuals' self-esteem fluctuates as they go through different age phases transitioning from young adolescent to adulthood. Thus, it is important to research on self-esteem across different age groups and its relationship with other elements. Current study has initially focused on identifying the significant relationship between self-esteem and cyberbullying perpetration. Nonetheless, it discovered an insignificant negative relationship between both variables in the current context. The undergraduates in the current sample were found to have a mean of 26.79 which indicates a high level of self-esteem (Rosenberg, 2015).

The results show that high self-esteem is related to low cyberbullying perpetration among undergraduates in Malaysia. According to a past research, individuals with high self-esteem form better relationships and have very satisfying social lives (Keefe & Berndt, 1996). They reported feeling comfortable with themselves and this generalizes to their relationships with other people. Therefore, they do not feel the urge to victimize or threaten others. The negative relationship found through this research is not a significant one and past research has also supported this inconsistency. Most of the self-esteem studies found mixed findings thus current finding is of no surprise (Poole, 2017). Contrarily, Poole (2017) has found that individuals with high self-esteem are more prone to cyber victimization but not perpetration. This may be a possible factor for insignificant relationship between self-esteem and cyberbullying perpetration among the current sample. Apart from insignificance, this finding still implies that high self-esteem plays a role in reducing cyberbullying perpetration due to the way students perceive themselves as worthy.

This study also has few limitations just like any other studies. Firstly, the use of self-report questionnaire which inhibited accuracy of response. Secondly, social desirability bias was also a potential limitation as it influences the truthfulness of given responses. Thus, it would be better if researchers are able to use mixed methods such as face to face interview which would yield true data. Lastly, the use of non-probability sampling has hindered equal chance of participation of targeted group. Thus, the generalizability of these findings are questionable. Therefore, it is highly recommended to use the random sampling method in any related upcoming studies.

Last but not least, current findings suggest that relevant authorities may benefit in terms of designing relevant programs or other solutions with regards to cyberbullying perpetration. It aids in raising awareness and preventing cyberbully cases among youngsters in Malaysia. These findings show that it is crucial to identify the types of aggression portrayed and strength of its effect on cyberbullying. University authorities, parents, counselors or other authorities should now be aware of the negative impacts that entails cyberbullying and offer programs that focuses on managing aggressive behaviors, counselling and coping skills to eradicate cyberbullying perpetrator tendencies.

## Conclusion

In conclusion, the current study has achieved the objectives to determine the relationship between proactive, reactive aggression and self-esteem on cyberbullying perpetration among Malaysian undergraduates. The findings in this study indicated a significant positive relationship between proactive aggression and reactive aggression on cyberbullying perpetration, whereas there is a significant negative relationship between self-esteem and cyberbullying perpetration. It is pivotal to shed light on this issue since cyber perpetration behaviors impact another individual emotionally and mentally. Thus, this study can be utilized as a guide or reference to help to pave way for a healthier and more positive usage of the internet. Not only that, this study will open up a new dimension to future scholars to conduct similar research in different settings, besides educational setting extended to organizational settings that can broaden and test different variables if applicable in other aspects (Privitera, 2018).

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