International Journal of Instruction e-ISSN: 1308-1470 • www.e-iji.net



April 2021 • Vol.14, No.2 p-ISSN: 1694-609X pp. 67-82

Article submission code: 20200127084403

Received: 27/01/2020 Revision: 25/08/2020 Accepted: 19/09/2020 OnlineFirst: 11/01/2021

Cyber Aggression between Intentions and Cyber Wellness of Students: An application of TPB Models

Mardianto

Malang State University, Indonesia, mardianto.1701139@students.um.ac.id

Fattah Hanurawan

Malang State University, Indonesia, fattah.hanurawan.fppsi@um.ac.id

Tutut Chusniyah

Malang State University, Indonesia, tutut.chusniyah.fppsi@um.ac.id

Hetti Rahmawati

Malang State University, Indonesia, hetti.rahmawati.fppsi@um.ac.id

Fonny Dameaty Hutagalung

Universiti of Malaya, Malaysia, fonny@um.edu.my

This exploratory study aims to broaden students' models of cyber-aggression behavior, with the Theory of Planned Behavior (TPB) by including additional constructs, namely cyber health, to predict youth cyber-aggression actions. The self-administered questionnaire was used to collect data from 291 students intentionally, aged 15 to 21 at secondary schools in the city of Padang in Indonesia, and then analyzed using covariance-based structural equation modeling (SEM). Data analysis was performed using WarpPLS software version 4.0. Structural equation modeling is used to test whether the overall model theory of planned behavior (TPB) helps predict self-reported actions by adolescents in cyber aggression. We found a strong positive relationship between adolescent attitudes towards cyber aggression and their behavioral intentions to do so, followed by perceived behavioral control variables which were also significant although relatively less important predictors of adolescent intentions for cyber aggression, while subjective norms were not significant in determining adolescent intentions for cyber aggression. Meanwhile, cyber wellness, which is predicted as a moderator variable in the development of the model, is not proven and has the same status as other exogenous variables. Overall, this study provides strong support for the theoretical utility of TPB in the research of students of cyber aggression.

Keywords: cyber aggression, cyber wellness, theory of planned behaviour, youth, secondary schools

Citation: Mardianto., Hanurawan, F. Chusniyah, T., Rahmawati, H., & Hutagalung, F. D. (2021). Cyber Aggression between Intentions and Cyber Wellness of Students: An application of TPB Models. *International Journal of Instruction*, 14(2), 67-82. https://doi.org/10.29333/iji.2021.1425a

INTRODUCTION

The use of internet technology as a medium of communication is now an inseparable part of human life, including adolescents. Its presence has become a basic need that is sometimes very binding and makes individuals dependent on their existence. However, we also cannot close our eyes that many of the negative impacts of the development of ICTs, especially on children and adolescents, especially on socio-emotional development, especially those related to the use of social media. Eichhorn (Williams & Pearson, 2016) in his research, explained how the online environment opened up the possibility for more rapid and radical re-contextualization of hate speech. Bushman & Huesmann's research (in Ueberall, 2016) shows that exposure to violent media can increase aggressive behavior, thinking, and emotions in adults and children. Social media exacerbates aggressive behavior by making violent content easily accessible, thus further strengthening the existence of aggressive behavior committed by adolescents in the real world.

In the last few years, there have been many studies on cyberbullying that focus on the subject of research on teenagers and students, especially high school students, both as perpetrators and victims. This is done for a number of fundamental reasons, that youth groups or students are very relevant in analyzing acts and victims of violence through the internet because all cyberbullying actions require the use of information and communication technology (ICT), and compared to adults they are more media literate and more intensive use it in everyday behavior. In addition, aggressive or deviant behavior often appears or appears during adolescence because it is associated with stages of development (Romera Eva M et al., 2017).

This study uses a different concept from research on student cyberbullying behavior that has been done by several previous studies, such as; Heirman & Walrave, (2012), Casas, Del, & Ortega-ruiz, (2013) and Cross et al. (2016), who use the term cyberbullying. According to researchers, the term cyberbullying is considered inappropriate because it often includes general criteria for bullying behavior such as; intentions to hurt, repetition or repetitive behavior, and occur due to an imbalance of power imbalance (Corcoran et al., 2015). Thus, the term cyber aggression is a more appropriate term than cyberbullying to explain the behavior of attacks on social media. Because cyber aggression is broader than cyberbullying based on the characteristics of behavior and victims.

Cyber aggression is another form of verbal aggression, attacks in cyberspace are carried out through status, links in the form of; insulting, derogatory, threatening, terrorizing, revealing personal information, abusive language, harassment, public humiliation through unwanted posts, through pictures, and video recordings and so on that harms the victim (Bennett et al., 2011; Corcoran et al., 2015; Álvarez-garcía et al., 2016; Watkins et al., 2016; Álvarez-garcía et al., 2017).

The involvement of educational institutions in controlling hate speech behavior on social media or online hate speech at the international level has been done by assisting students or adolescents. This movement has become a UNESCO program by publishing

series books relating to student behavior and internet or cyberspace freedom. One approach offered in the book to control online hate speech behavior is citizenship education or what is called citizenship education and digital citizenship (Gagliardone et al., 2015). In some cases, this program also developed the ability of argumentation and practical communication skills in students who are needed to convey their personal beliefs and opinions critically and in an honorable way. UNESCO programs that have been developed to develop online behavior or cyberspace behavior of students to be more psychologically healthy and socially responsible, such as programs; partners against hate (PAH), anti-defamation League (ADL), cyber wellness and digital literacy (Bada & Sasse, 2014; Gagliardone et al., 2015; Wintersteiner et al., 2015; Reynolds & Scott, 2016; Cross, Thomas, & Barnes, 2016).

Cyber Wellness (CW) refers to the positive welfare of internet users. This involves an understanding of online behavior and awareness of how to protect oneself in cyberspace (Mary, 2016; Sumarno & Wibawa, 2018). The focus of cyber wellness (CW) is about the ability of students to become responsible digital learners. When navigating cyberspace, students must show respect for themselves and others and practice safe and responsible use. Students must also be a positive peer influence by utilizing technology for collaboration, learning and productivity, and advocating the positive use of technology for the good of society.

We have been considerations in applying a Theory of Planned Behavior to the context of students' role as the perpetrator in cyber aggression, because social factors, such as peer influence and bystander roles, are essential. The TPB incorporates this social factor using the concept of the subjective norm. The reason other is that by closely examining how the three TPB-antecedents affect adolescents' behavioral intention to cyber aggression, we get valuable information on which prevention programs and intervention strategies are appropriate in tackling cyber aggression of students (Heirman & Walrave, 2012). Therefore, the authors are interested in researching how the intentions and behavior of adolescent cyberspace aggression, based on the role of attitudes, subjective norm values, and behavioral control and the extent of their cyber wellness abilities in developing positive behavior when using social media to prevent the behavior of hate speech online to the teenager on social media.

This is in line with the opinion of Yzer (2012) which states that integrative model predicts that people act on their intentions when they have the necessary skills and when environmental factors do not impede behavioral performance. In addition to the extent to which one possesses the necessary skills, a wide range of contextual factors can also either facilitate or impede behavioral performance. These are referred to as environmental constrains in the integrative model. In brief, without the necessary skills and resources, intentions will not predict behaviour (see Figure 1).



Figure 1

The intention–behavior relationship in theory of planned behavior (TPB) and integrated behavioral model (IBM) (Fishbein & Ajzen, 2010)

This research is intentionally carried out to explain the behavior of cyber aggression students using the theory model planed of behavior. According to this theory, the behavior of cyber aggression is caused by the intention to carry out an attack. The intention to carry out attacks is influenced by three factors, namely subjective norms, attitudes, and perceived behavioral control. Furthermore, this study also provides an overview of the role of adolescent cyber wellness skills in the occurrence of cyber aggression behavior that is not based on the intention to carry out attacks online.

This study aims to find a theoretical model of factors that influence students' online aggression behavior. This theoretical model can be used to design intervention modules to reduce online aggression behavior among adolescents. The findings of this study can be used as a basis for modifying adolescent online aggression behavior by controlling for significant factors in influencing the emergence of these behaviors. Based on the theoretical framework, this study aims to answer the research problem formulation:

- 1. Do attitudes, subjective norms, behavioral control and intentions assumed as predictors of TPB and cyber wellness affect student cyber behaviour?
- 2. Are the theoretical models arranged fit the conditions in the field in explaining the behavior of students' cyber aggression?

METHOD

Participants

Of the (n=291) total samplings of students females, 211 (72.5%) and males, 80 (27.5%) age range 15-21 years in high school students of Padang city Indonesia. The population in this study was high school students in the city of Padang, who actively use social media. The sampling technique used to get participants was purposive sampling, which is the method of selecting subjects based on criteria established by researchers.

Measures

The data collection method is using a 1-4 Likert scale. All data collected is processed using WarpPLS 6.0 software. Instrument testing is needed before data analysis is carried out, instrument testing is carried out with validity and reliability tests (Souza, Alexandre, & Guirardello, 2017). We developed a questionnaire containing scales, validated in previous research, testing TPB in other contexts and applied these measures to adolescent cyber aggression perpetration. The variables included in the questionnaire were operationalized, as recommended by Ajzen (2005). All of the TPB-items were assessed using 4-point Likert-scales with item responses ranging from 1 (Strongly disagree) to 4 (Strongly agree), consists of a scale of Attitude towards cyber aggression, subjective norm, perceived behavioral control and intention of cyber aggression behavior. In our sample, approximately (77.1%) respondents held a negative attitude towards cyber aggression and the average attitude of adolescents towards cyberbullying was negative (M= 2.27; SD= 1.12). The scale was reliable (alpha= 0.607).

Subjective norm on cyber aggression consists of seven items by 30.2% of respondents agree that in general, they have seen their friends fighting each other on social media. The item average of 3.16 indicates that most respondents stated neutral that in general, they had seen their friends fight with each other on social media. The scale was reliable (alpha = .82) with (M = 2.27; SD = 1.12). The questionnaire contained four items that measured perceived behavioral control. Based on the results of descriptive analysis, it was informed that out of 291 social media users, a maximum of 32.0% of respondents agreed that according to them, the behavior of berating people on social media was easy to do because people could have used fake identities. The scale was reliable. Cronbach's alpha was. 0.616. and (M= 2.8984; SD= 1.4485). Intention to cyber aggression, the questionnaire included five items that measured behavioral intention. The mean scores of the items are presented in Table 1. (M= 2.3402; SD= 1.0308), and Cronbach's alpha was. 0.843.

The cyber aggression scale of students in this study is a modification of the Cyber-Aggression Typology Questionnaire (CATQ) from Runions et al. (2016) and the Cyber-aggression Questionnaire for Adolescents (CYBA) from Alvarez-García (2016). This scale consists of 48 items divided into two favorable and unfavorable patterns using a Likert scale approach that is self-reporting to measure the behavior of respondents with alternative answers using a scale of 1 to 4. The scale was reliable (alpha= 0.95) with (M= 1.49; SD= 0.90).

The cyber wellness scale of students in this study was developed based on three indicators of cyber well-being, Respect for Self and Others, Safe and Responsible Use, Positive Peer Influence from Mary (2016) dan Solms (2019) by using a Likert scale approach that is self-reporting (self-report) to measure the behavior of respondents with alternative answers using a scale of 1 to 4. The scale was reliable (alpha= 0.83.) with (M= 3.43; SD= 1.05).

Validity testing is done by calculating convergent validity and discriminant validity. Convergent validity is known as through-loading factors. An instrument is said to meet the convergent validity test if it has a loading factor above 0.6. Discriminant validity can also be calculated using cross-loading with the criteria if the value of the loading factor is higher than the correlation between the indicator with other variables, then the indicator is declared valid in measuring the corresponding variable.

Based on the measurement of cross loading in the above table, it can be seen that overall, the indicators that measure the variables of attitudes, norms, behavior, intuition, cyber aggression, and cyber wellness produce a more significant loading factor compared to cross-loading on other variables. Thus indicators that measure the variables of attitudes, norms, behavior, intuition, cyber aggression, and cyber wellness can be declared valid. Calculations that can be used to test construct reliability are composite reliability. Test criteria state that if composite reliability is more significant than 0.7, the construct is declared reliable. The results of the calculation of composite reliability can be seen through the summary presented in the following table:

Table 1

Descriptives the reliability of variables

zesempares and remaching	of fullactes
Variable Laten	Composite Reliability
Attitude	0.753
Subjective norm	0.886
Perceived behavior	al 0.777
control	
Intention	0.872
Cyber-aggression	0.957
Cyber wellness	0.870

Based on the table above, it can be seen that the composite reliability value on the variables of attitudes, norms, behavior, intuition, cyber aggression, and cyber wellness is more significant than 0.7. Thus, based on the calculation of composite reliability of all the indicators that measure variables of attitudes, norms, behavior, intuition, cyber aggression, and cyber wellness, are declared reliable.

Data analysis

Structural equation modeling (SEM) is applied to investigate the hypothesized relationship between TPB constructions, on data collected using WarpPLS 6.0 (Kock, 2018). Data were analyzed using a two-step approach, namely, first, the measurement model was tested to check whether the observed variables reliably reflected the latent variables hypothesized in the research model (Muthén & Muthén, 2012). In the second phase, the structural path in the research model is tested to assess the adequacy by which the research model predicts the behavioral intentions of adolescents towards cyber aggression and the actions of cyber aggression and self-reported cyber aggression behavior are included as endogenous variables in the model. Because self-reported cyber-aggression actions are categorical dependent variables that are not normally distributed, WarpPLS is used as a stable and abnormal estimator in SEM analysis(Kock, 2014).

FINDINGS

Hypothesis Testing Direct Effects

Testing the direct influence hypothesis is used to test whether there is a direct influence of exogenous variables on endogenous variables. The test criteria state that if the p-value \leq level of significance (alpha = 5%), then the significant influence of exogenous variables on endogenous variables is stated. The effect of attitude on intuition produces a path coefficient of 0.422 with a p-value of <0.001. The test results indicate that the value of the p-value <level of significance (alpha = 5%). This means that there is a significant influence on attitudes towards intuition.

The influence of norms on intuition produces a path coefficient of 0.092 with a p-value of 0.057. The test results indicate that the value of p value> level of significance (alpha = 5%). This means that there is no significant effect of norms on intuition. The influence of behavior on intuition produces a path coefficient of 0.180 with a p-value of <0.001. The test results indicate that the value of the p-value <level of significance (alpha = 5%). This means that there is a significant influence of behavior on intuition.

The influence of wellness on cyber aggression produces a path coefficient of -0.269 with a p-value of <0.001. The test results indicate that the value of the p-value <level of significance (alpha = 5%). This means there is a significant effect of wellness on cyber aggression. The influence of aggression on cyber aggression produces a path coefficient of 0.305 with a p-value of <0.001. The test results indicate that the value of the p-value <level of significance (alpha = 5%). This means that there is a significant influence of intuition on cyber aggression. The results of hypothesis testing can be known through the following table:

Direct influence of exogenous variables on endogenous variables					
Eksogen	Endogen	Path coefficients	SE	P values	
Attitude	Intention	0.422	0.055	< 0.001	
Subjective norm	Intention	0.092	0.058	0.057	
Perceived behavioral control	Intention	0.180	0.057	< 0.001	
Intention	Cyber-aggression	0.305	0.056	< 0.001	
Cyber wellness	Cyber-aggression	-0.269	0.056	< 0.001	

Table 2 Direct influence of exogenous variables on endogenous variables

Hypothesis Testing Indirect Effects

Hypothesis testing of indirect effects is carried out to test whether there is an indirect effect of exogenous variables on endogenous variables through intervening variables. The test criteria state that if the value of t statistics \geq T table (1.96), then it is stated that there is a significant influence of exogenous variables on endogenous variables through intervening variables. Based on the tests listed in the above table, it can be seen that the influence of attitudes towards cyber aggression through intuition produces a path coefficient of 0.129 with at statistics of 4.441. The test results show that the value of the t statistics \geq T table (1.96). This means that there is a significant influence on attitudes towards cyber aggression through intuition.

The influence of norms on cyber aggression through intuition produces a path coefficient of 0.028 with t statistics value of 1.523. The test results show that the value of t statistics <T table (1.96). This means that there is an insignificant influence of norms on cyber aggression through intuition. The influence of behavior on cyber aggression through intuition produces a path coefficient of 0.055 with a t statistics value of 2.573. The test results show that the value of the t statistics \geq T table (1.96). This means that there is a significant influence of behavior on cyber aggression through intuition produces a path coefficient of 0.055 with a t statistics value of 2.573. The test results show that the value of the t statistics \geq T table (1.96). This means that there is a significant influence of behavior on cyber aggression through intuition. The results of hypothesis testing can be known through the following table:

Table 3

Indirect effect of exogenous variables on endogenous variables through intervening variables

Intervening	Endogen	Indirect Coefficients	SE	T Statistics
Intention	Cyber-aggression	0.129	0.029	4.441
Intention	Cyber-aggression	0.028	0.018	1.523
l Intention	Cyber-aggression	0.055	0.020	2.732
	Intervening Intention Intention	InterveningEndogenIntentionCyber-aggressionIntentionCyber-aggressionI IntentionCyber-aggression	Intervening Endogen Indirect Coefficients Intention Cyber-aggression 0.129 Intention Cyber-aggression 0.028 I Intention Cyber-aggression 0.055	InterveningEndogenIndirect CoefficientsSEIntentionCyber-aggression0.1290.029IntentionCyber-aggression0.0280.018I IntentionCyber-aggression0.0550.020

Moderation Testing

The moderation test is used to test the effect of moderation variables on the influence of exogenous variables directly on endogenous variables. Test criteria state that the value of the p-value \leq level of significance (alpha = 5%) then the moderating variable can moderate the influence of exogenous variables on endogenous variables.

The effect of interaction between intense and wellness on cyber aggression produced a p-value of 0.267. This shows that p value> level of significance (alpha = 5%). Therefore, it can be interpreted that Wellness does not moderate the influence of the intuition on cyber aggression. The results of testing the effect of wellness on the influence of the aggression on cyber aggression are known that the path coefficient of the wellness effect on cyber aggression is stated to be significant, while the coefficient of the interaction effect between the intestine and wellness on cyber aggression is declared insignificant. Thus, it can be concluded that wellness only acts as an exogenous variable. The results of hypothesis testing can be known through the following table:

Table 4

Interaction between intense and wellness on cyber aggression

Eksogen	Endogen	Coefficient	SE	P values
Intesi * Wellnes	Cyber Agresi	-0.036	0.058	0.267

Conversion of Path Diagrams into Structural Models

This research model consists of six latent variables, including attitudes, norms, behavior, intuition, cyber aggression, and cyber wellness. Evaluation of the measurement model is a step to test the validity and reliability of a latent variable. The Goodness of fit model is used to determine the magnitude of the ability of an exogenous variable to explain the diversity of endogenous variables, or in other words to determine the magnitude of the contribution of exogenous variables to endogenous variables. The goodness of fit Model

in PLS analysis is performed using the coefficient of determination (R-Square) and Q-Square predictive relevance (Q2).

R-square intuition is valued at 0.275 or 27.5%. This can indicate that attitudes, norms can explain the diversity of intentions, and behavior by 27.5%, or in other words the contribution of attitudes, norms, and behaviors to the intestine by 27.5%, while the remaining 72.5% is contributed by other factors not discussed in this research. Then the variable Q-square intuition is 0.274. This shows that attitudes, norms, and behaviors have considerable predictive power on intuition. Next R-square cyber aggression is worth 0.240 or 24.0%. This can indicate that the diversity of cyber aggression can be explained by intense, wellness, and interactions between intense and wellness by 24.0%, or in other words the contribution of intense, wellness, and the interaction between intense with wellness towards cyber aggression by 24.0%, while the rest is equal 76.0% is the contribution of other factors not discussed in this study. Then the Q-square variable of cyber aggression is 0.240. This shows that the intention, wellness, and interaction between intense, and wellness have considerable predictive power towards cyber aggression.



Figure 2

TPB applied to student's perpetration in cyber aggression

The conversion of the path diagram in the measurement model is intended to predict the effect of exogenous variables on endogenous variables as presented in the following table:

Table 5		
Correlations	between	latent constructs

Eksogen	Intervening	Endogen	Direct	Indirect
		-	Coefficients	Coefficients
Attitude		Intention CA	0.422*	
Subjective norm		Intention CA	0.092	
Perceived behavioral control		Intention CA	0.180*	
Attitude	Intention CA	Cyber aggression		0.129*
Subjective norm	Intention CA	Cyber aggression		0.028
Perceived behavioral control	Intention CA	Cyber aggression		0.055*
Intention		Cyber aggression	0.305*	
Cyber wellness		Cyber aggression	-0.269*	
Intention * Cyber wellness		Cyber aggression	-0.036	

Description: * (Significant)

Based on the table above, it can be seen that the structural model formed is there are two equations. First equation 1: Z = 0.422 X1 + 0.092 X2 + 0.180 X3, it can be informed that:

- 1) The coefficient of a direct effect on attitudes towards an intuition of 0.422 states that attitudes have a positive and significant effect on intention. This means that the better the attitude, the more likely it is to increase intuition.
- 2) The coefficient of the direct effect of norms on the intestine of 0.092 states that the norm has a positive and not significant effect on the intestine. This means that the better the norm, the more likely it is to increase intuition. Although the increase is not significant
- 3) The direct effect coefficient of behavior on the intestine of 0.180 states that the behavior has a positive and significant effect on the intestine. This means that the better the behavior, the more likely it is to increase intuition.

While for the second equation: Y = 0.305 Z - 0.269 M - 0.036 ZM, it can be informed that

- 1) The coefficient of a direct effect of the introgression on cyber aggression of 0.305 states that the Intention has a positive and significant effect on cyber aggression. This means that the higher the Intention, the more likely it is to increase cyber aggression.
- 2) The coefficient of direct effect wellness on cyber aggression of -0.269 states that wellness has a negative and significant effect on cyber aggression. This means that the higher the wellness, the less it can reduce cyber aggression.
- 3) The coefficient of indirect effect on attitudes towards cyber aggression through the intuition of 0.129 states that attitudes have a positive and significant effect on cyber aggression through aggression. This means that a better attitude causes the increase in intuition, it tends to increase cyber aggression.

International Journal of Instruction, April 2021 • Vol.14, No.2

Table 5

- 4) The indirect coefficient effect of norms on cyber aggression through the intuition of 0.028 states that the norm has a positive and insignificant effect on cyber aggression through aggression. This means that a better norm causes the increase in intuition, so it tends to increase cyber aggression, although the increase is not significant.
- 5) The coefficient of indirect effect on the behavior of cyber aggression through intuition is 0.055, which states that the behavior has a positive and significant effect on cyber aggression through aggression. This means that the increase in intuition caused by better behavior then tends to increase cyber aggression.

Exogenous variables that have a dominant influence on endogenous variables can be identified through the most significant total effect without regard to positive or negative coefficient signs. The results of the analysis inform the variables that have the most significant total effect on intuition are attitudes with a total effect of 0.422. Thus attitude is the variable that has the most dominant influence on intuition. Then the variable that has the most significant total effect on cyber aggression is the intuition with a total effect of 0.305. Thus intuition is the variable that has the most dominant influence on cyber aggression.

DISCUSSION

This research sub-focus explains students' cyber aggression behavior using a theory planed model of behavior. According to the theory of planned behavior, cyber aggression, or hate speech on the internet is caused by an intention within an individual to carry out attack behavior. The intention is influenced by three factors, namely subjective norms, attitudes, and behavioral control perceptions. Social norms theory explains in the socio-emotional development of adolescents are often trapped in problematic behavior in interpersonal relationships, such as; delinquency, prejudice between individuals and groups that give rise to conflicts such as mass fighting/intimidation, intimidation, violence, and other aggressive behavior, or bullying, related to their abilities such as; attitudes, empathy, social interest, emotional self-regulation, and lower social competence (see, Lesure-Lester, 2000; Ang & Goh, 2010; Wright & Li, 2013; Ueberall, 2016; Romera Eva M et al., 2017).

The results of this study indicate that attitudes, perceived behavioral control, intention, and cyber wellness can effectively predict student cyber-aggression actions. This is in accordance with the explanation Fishbein & Ajzen (2010) direct determinants of individuals' behavioral intention are their attitude toward performing the behavior and their subjective norm associated with the behavior. TPB adds perceived control over the behavior, taking into account situations where one may not have complete volitional control over a behavior. This is also in line with the research of Heirman & Walrave (2012) who found a strong positive relationship between adolescent attitudes towards cyberbullying and their behavioral intentions to do, he explained that adolescent attitudes are the most important predictors of deeds, requiring that prevention and intervention strategies It should aim to reduce the perception of cyberbullying acceptance among adolescents by converting neutral or positive attitudes toward antisocial behavior into negative evaluations.

The TPB suggests that intention is the best single predictor of behavior but that it is also important to take skills and abilities as well as environmental factors (i.e., behavioral control) into account. At the low- est level of explanation, therefore, people are said to perform a behavior because they intend to do so, they have the requisite skills and abilities, and there are no environmental constraints to prevent them from carrying out their intentions (Kasprzyk & Montano, 2012; Montaño & Kasprzyk, 2015).

The next step is to target the construction of the theory of planned behavior and the ability of cyber wellness in cyber suppression prevention/intervention programs to reduce cyber oppression intentions and behaviors. Given that attitudes toward cyber aggression are the strongest predictors for all forms of cyber aggression behavior under study, prevention/intervention efforts may be most effective if they focus primarily on reducing positive attitudes toward online violence.

The results of this study indicate that attitudes, perceived behavioral control, intention, and cyber wellness can effectively predict student cyber-aggression actions. The next step is to target the construction of the theory of planned behavior and the ability of cyber wellness in cyber suppression prevention/intervention programs to reduce cyber oppression intentions and behaviors (Notar et al., 2013; Antoniadou & Kokkinos, 2015). Given that attitudes toward cyber aggression are the strongest predictors for all forms of cyber aggression behavior under study, prevention/intervention efforts may be most effective if they focus primarily on reducing positive attitudes toward online violence. Furthermore, it increases empathy and respect for self and others as well as being responsible and having a positive influence when students use social media (Pfetsch, 2017; Wang et al., 2017). In turn, it can reduce their intentions and involvement in cyber aggression behavior.

Research Casas et al. (2013) explain that contextual predictive factors, such as social support, school climate, or peer group norms, are common to both phenomena of cyber aggression namely traditional aggression in the real world and cyber aggression in cyberspace (Papatraianou, et all., 2014; Kowalski et al., 2014). However, the results of this study were found the subjective norm variable on the intense produces an insignificant effect, as well as the effect on cyber aggression through the intense, produces a path coefficient indicating that the value of t statistics <T table (1.96). This means that the insignificant influence between subjective norms on cyber aggression through intuition. This is because in general based on self-report, the cyber behavior is low, but out of 291 social media users, 28.5% of respondents stated that almost every day they see people mocking and insulting each other on social media and 23.0% of respondents stated that almost every day they read posts that harass certain groups on social media, and 30.2% of respondents agreed that in general, they have seen their friends fighting each other on social media. In this study, it seems that external factors, such as subjective group norms do not significantly affect students' cyber aggression behavior. However, internal factors or personal attributes such as attitudes and perceptions of behavioral control, as well as the cyber wellness ability of students proved to influence the behavior of students of cyber aggression significantly.

This can be the basis for the intervention of student cyber-aggression behavior by developing training programs that provide excellent, and psychologically sound use of social media skills to students. Until now, several programs to overcome cyber aggression have been developed and tested empirically such as; Cyber Friendly Schools (CFS) by Cross et al. (2016), prevention programs and cyberbullying/online aggression interventions from Asegúrate, (2018), the Cyber Wellness curriculum program in schools from Keat (2012) and Mary (2016) and Digital Citizenship Education from Reynolds & Scott (2016) and other school-based cyber aggression prevention programs.

Cyber Wellness (CW) is about the ability of students to become responsible digital learners. When navigating cyberspace, students must show respect for themselves and others and practice safe and responsible use. Students must also be a positive peer influence by utilizing technology for collaboration, learning and productivity, and advocating the positive use of technology for the good of society.

CONCLUSION

The use of ICT has many benefits for students, but it also poses significant problems with cyber aggression which results in interpersonal relations problems. Research is needed to explore the predictors that influence cyber aggression of students with attention to their cyber wellness skills. The results of this study overall provide strong support for the theoretical utility of TPB in the research of students of cyber aggression and can be taken into consideration for intervening in educational institutions. Education for students about communicating with others online with respect and responsibility can reduce some incidents of cyber aggression. School is well situated to assume the lead in addressing this phenomenon and in promoting student safety and wellbeing in an online context.

REFERENCES

Ajzen, I. (2005). *Attitudes, personality and behaviour* (Second). England: Open University Press.

Álvarez-garcía, D., Barreiro-collazo, A., Carlos, J., & Dobarro, A. (2016). Validity and reliability of the Cyber-aggression Questionnaire for Adolescents (CYBA). *The European Journal of Psychology Applied to Legal Context*, 8, 69–77.

Álvarez-garcía, D., Barreiro-collazo, A., & Núñez, J. (2017). Cyberaggression among Adolescents : *Comunicar*, *XXV*(50), 89–97.

Ang, R. P., & Goh, D. H. (2010). Cyberbullying among adolescents: The role of affective and cognitive empathy, and gender. *Child Psychiatry and Human Development*, *41*(4), 387–397. https://doi.org/10.1007/s10578-010-0176-3

Antoniadou, N., & Kokkinos, C. M. (2015). Cyber and school bullying: Same or different phenomena? *Aggression and Violent Behavior*, *25*, 363–372. Retrieved from http://dx.doi.org/10.1016/j.avb.2015.09.013

Asegúrate, P. (2018). "Asegúrate " Program : Effects on cyber-aggression and its risk factors. *Comunicar*, 56(XXVI), 39–48.

Bada, M., & Sasse, A. (2014). *Cyber security awareness campaigns: Why do they fail to change behaviour?* (July 2014). *Proceedings of the International Conference on Cyber Security for Sustainable Society.* London: Global Cyber Security capacity Center.

Bennett, D. C., Guran, E. L., Ramos, M. C., & Margolin, G. (2011). College Students' Electronic Victimization in Friendships and Dating Relationships: Anticipated Distress and Associations With Risky Behaviors. *Violence and Victims*, 26(4), 410–429. https://doi.org/10.1891/0886-6708.26.4.410

Casas, J. A., Del, R., & Ortega-ruiz, R. (2013). Bullying and cyberbullying : Convergent and divergent predictor variables. *Computers in Human Behavior*, 29, 580–587.

Corcoran, L., Guckin, C. M., & Prentice, G. (2015). Cyberbullying or Cyber Aggression?: A Review of Existing Definitions of Cyber-Based Peer-to-Peer Aggression, (July). https://doi.org/10.3390/soc5020245

Cross, D., Thomas, L., & Barnes, A. (2016). Longitudinal Impact of the Cyber Friendly Schools Program on Adolescents ' Cyberbullying Behavior r e. *Aggresive Behavior*, *42*(July 2015), 166–180.

Fishbein, M., & Ajzen, I. (2010). *Predicting and Changing Behavior : The reasoned action approach*. New York: Psychology Press Taylor & Francis Group.

Gagliardone, I., Gal, D., Alves, T., & Martinez, G. (2015). *Countering Online Hate Speech* (UNESCO Ser). Paris 07 SP, France: United Nations Educational, Scientific and Cultural Organization UNESCO.

Heirman, W., & Walrave, M. (2012). Predicting adolescent perpetration in cyberbullying: An application of the theory of planned behavior. *Psicothema*, 24(1994), 614–620.

Kasprzyk, D., & Montano, D. E. (2012). Application of an integrated behavioral model to understand hiv prevention behavior of high-risk men in rural zimbabwe. In *Prediction and Change of Health Behavior: Applying the Reasoned Action Approach* (pp. 149–172). https://doi.org/10.4324/9780203937082

Keat, H. S. (2012). Student Development Curiculum Division Ministry Of Education, Singapore. Ministry of Education Singapure. Singapore.

Kock, N. (2014). Advanced Mediating Effects Tests, Multi-Group Analyses, and Measurement Model Assessments in PLS-Based SEM. *International Journal of E-Collaboration*, 10(1), 1–13. https://doi.org/10.4018/ijec.2014010101

Kock, N. (2018). *WarpPLS User Manual : Version 6 . 0. ScriptWarp Systems*. Laredo, Texas: ScriptWarp Systems.

Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., Lattanner, M. R., Kowalski, R. M., Giumetti, G. W., ... Lattanner, M. R. (2014). Psychological Bulletin Bullying in the

Digital Age: A Critical Review and Meta-Analysis of Cyberbullying Research Among Youth Bullying in the Digital Age: A Critical Review and Meta-Analysis of Cyberbullying Research Among Youth.

Lesure-Lester, G. E. (2000). Relation between empathy and aggression and behavior compliance among abused group home youth. *Child Psychiatry and Human Development*, *31*(2), 153–161. https://doi.org/10.1023/A:1001900727156

Mary, F. A. (2016). Social Media and Cyber Wellness. *International Research Journal of Computer Science*, *3*(12), 9–13.

Montaño, D. E., & Kasprzyk, D. (2015). Reasoned Action, Planned Behavior, and the Integrated Behavioral Model. In *Health Behavior and Health Education* (pp. 67–96).

Muthén, L. K., & Muthén, B. O. (2012). *MPlus Statistical Analysis With Latent Variables User's Guide. Los Angeles, CA: Muthen and Muthen* (Seventh). Los Angeles, CA: Muthén & Muthén.

Notar; Charles, Sharon, P., & Jessica, R. (2013). Cyberbullying: Resources for Intervention and Prevention. *Universal Journal of Educational Research*, 1(3), 133–145. Retrieved from http://files.eric.ed.gov/fulltext/EJ1053892.pdf

Papatraianou, L. H., Levine, D., & West, D. (2014). Resilience in the face of cyberbullying: an ecological perspective on young people's experiences of online adversity. *Pastoral Care in Education*, *32*(4), 264–283. Retrieved from http://www.tandfonline.com/action/journalInformation?journalCode=rped20%0Ahttps:// doi.org/10.1080/02643944.2014.974661

Pfetsch, J. S. (2017). Empathic Skills and Cyberbullying: Relationship of Different Measures of Empathy to Cyberbullying in Comparison to Offline Bullying Among Young Adults Empathic Skills and Cyberbullying: Relationship of Different Measures of Empathy to Cyberbullying in C, *1325*(September). Retrieved from http://dx.doi.org/10.1080/00221325.2016.1256155

Reynolds, L., & Scott, R. (2016). *Digital Citizens: Countering Extremism Online* (First). London: Demos. Some rights reserved.

Romera Eva M, Herrera-López, M., Casas, J. A., Ortega-Ruiz, R., & Gómez-ortiz, O. (2017). Multidimensional Social Competence, Motivation, and Cyberbullying: A Cultural Approach With Colombian and Spanish Adolescents. *Journal of Cross-Cultural Psychology*, *48*(8), 1183–1197. https://doi.org/10.1177/0022022116687854

Souza, A. C. de, Alexandre, N. M. C., & Guirardello, E. de B. (2017). Psychometric properties in instruments evaluation of reliability and validity. *Epidemiol. Serv. Saude, Brasilia, 26*(3), 649–659. https://doi.org/10.5123/S1679-49742017000300022

Sumarno, A., & Wibawa, S. C. (2018). Cyberwellness Learning Resources (CLR) Access Content Filter As Dangerous and Learning Network On the Internet Cyberwellness Learning Resources (CLR) Access Content Filter As Dangerous and

Learning Network On the Internet. In *The 2nd Annual Applied Science and Engineering Conference (AASEC 2017)* (pp. 0–6).

Ueberall, R. liggett & S. (2016). *social-media-impacts-behavior-norms.pdf*. Citizens Crime Commission. Retrieved from www.nycrimecommission.org

Wang, X., Lei, L., Yang, J., Gao, L., & Zhao, F. (2017). Moral Disengagement as Mediator and Moderator of the Relation Between Empathy and Aggression Among Chinese Male Juvenile Delinquents. *Child Psychiatry and Human Development*, 48(2), 316–326.

Watkins, L. E., Maldonado, R. C., & Dilillo, D. (2016). The Cyber Aggression in Relationships Scale : A New Multidimensional Measure of Technology-Based Intimate Partner Aggression The Cyber Aggression in Relationships Scale : A New Multidimensional Measure of Technology-Based Intimate Partner. *sagepub.com/journalsPermissions.nav*, (1–19).

Williams, M., & Pearson, O. (2016). *Hate Crime and Bullying in the Age of Social Media Conference Report*. Welsh: Crown.

Wintersteiner, W., Grobbauer, H., Diendorfer, G., & Reitmair-Juarez, S. (2015). *Global Citizenship Education: Citizenship Education for Globalizing Societies* (In coopera). Klagenfurt, Salzburg, Vienna: druck.at.

Wright, M. F., & Li, Y. (2013). Normative Beliefs About Aggression and Cyber Aggression Among Young Adults : A Longitudinal Investigation. *Aggresive Behavior*, 39(February), 161–170.

Yzer, M. (2012). The Integrative model of Behavioral Prediction as a tool for Designing Health Messages. In *Health communication message design: Theory and practice* (pp. 21–40). Retrieved from http://www.sagepub.com/upm-data/43568_2.pdf.