

Validity and Reliability of Cyber Bullying Prevention Education Questionnaire among Teenagers in Malaysia

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ABSTRACT

Malaysia is the second highest country in Asia in the problem of cyberbullying for teenagers as reported by the Children's Fund of the United Nations (UNICEF). This polemic is indirectly caused by the prevalence and habit of using technology tools, the internet and social media in the daily life of teenagers. The purpose of this study is to identify the validity and reliability related to the questionnaire of cyberbullying prevention education among adolescent students (age range 13-18) in Malaysia. The questionnaire focuses on the factors including the individual/student, the counselor/Guidance and Counseling unit, the teacher, the peer, the school management and the family. Study was conducted in two phases to assess the reliability and validity of the questionnaire. The first phase, the questionnaire was designed with theoretical review and results from the phenomenological study, the validation phase, was carried out by giving questionnaires to three experts, namely guidance and counseling experts and psychologists with an overall expert validation score above 80%. After getting expert comments and validation, all the comments given were improved and revised. The second phase of the study was to assess the reliability of the questionnaire with survey design, which was conducted among (N=500) high school students with a convenient sampling procedure, from 4 zones of Malaysia, including Perak, Pulau Pinang, Kedah, Selangor, Melaka, Johor and Pahang in this study. The findings show that all items have high reliability and the Cronbach's Alpha value of the questionnaire obtained is $\alpha = 0.96$. The research study findings indicated that the questionnaire is a valid and reliable tool to administer to school students to increase awareness and prevent cyberbullying. This tool effectively aids educators and counselors in the healthy management and prevention of Cyberbullying.

Keywords: Questionnaire, Education Prevention, Cyberbullying, School Student, Validity, Reliability.

INTRODUCTION

The United Nations Children's Fund (UNICEF) has reported that Malaysia is the second highest country in Asia for cyberbullying cases among school teenagers (Kumar & Bhatia, 2022). The advancement of information and communication technology is growing rapidly among teenagers as evidenced through interactions and relationships through text messages, the use of smartphones, laptops and social media sites. The development of globalization technology is now creating many applications and platforms to make it easier for teenagers to establish relationships and communicate in cyberspace. Among them through some famous applications in the current era namely Tik Tok, Instagram, Twitter, Facebook, Whatsapp and so on. Unconsciously, this has opened up the latest space and methods for teenagers to easily interact and communicate and the scenario has been stated by DePaolis & Williford (2019) and Kumar and Bhatia. (2022) it is not only able to bring benefits to teenagers but it is also able to create negative implications for teenagers such as cyber-crimes or known as cyber bullying.

Accordingly, cyberbullying statistics around the world have revealed alarming facts about cyberbullying disorders and their effects on school youth. A cross-sectional study conducted by Kunwar et. al. (2024), which explore the prevalence and factors associated with cyberbullying among high school adolescents and male students in a secondary school showed that more likely experiencing cyber bullying incidents compared to female students, outside of school and that it also had an impact at school. Malaysia is also said to be ranked second in the world in the category of cyber bullying and the first in Asia as the 'bullying foot' in cyberspace or in other words in the cyber world and this was reported by the United Nations (UNICEF) in 2020 (Daily News Online, 2022). This shows that the issue of cyber bullying is now an increasingly serious problem in Malaysia as stated by the Ministry of Communications and Digital by

Bernama (2019). The indicator that differentiates traditional bullying and cyber bullying is that cyber bullying has no physical boundaries as Macaulay (2022) said cyber bullying is the use of technology-based communication including telephone, cellular, email, instant messages and social networks that aim to cause disruption or threats against individuals through messages or expressions online.

Problem Statement

Reports and statistics on cyberbullying worldwide have revealed disturbing facts about the rise of cyberbullying disorders among high school teenagers on various social media platforms, including Instagram, TikTok, Twitter, Facebook, and WhatsApp. (UNICEF, 2019). Moreover, Malaysia ranks as the second highest Asian country in terms of cyberbullying, with teenagers being among the most involved groups in this issue. (Samsudin et al., 2023) There is no doubt that various efforts by the government and schools have been made to help high school students deal with the problem of cyberbullying. However, there is still a gap in the in-depth survey studies on cyberbullying prevention education among high school students in Malaysia, resulting in the issue becoming increasingly common. (Chicote-Beato, 2024). Hence, the objective of this study is to identify the validity and reliability of the cyberbullying prevention education questionnaire among high school students. Therefore, the research question that was studied is what is the validity and reliability of the educational questionnaire for the prevention of cyberbullying among high school students.

LITERATURE REVIEW

The National Security Council (2021) has stated that cyber bullying is an act of humiliating, frightening, harassing, threatening, insulting repeatedly with the aim of causing anger by a person through digital technology communication facilities such as text, chat, email, social websites, mobile phones and internet games. While Akta 588 Akta Komunikasi dan Multimedia (1998) under section 211 is closely related to the concept of cyberbullying itself, which is the prohibition against providing inappropriate, obscene, false, threatening or ugly content with the intention of disturbing, abusing, threatening or harassing others, and section 233 Improper use of network facilities or network services. Patchin and Hinduja (2022) have conducted a research on cyberbullying incidents that increase among adolescents nowadays. This study was conducted to examine the experience of cyberbullying crime of Asian Americans start in 2019 until 2021. A quantitative approach has been used as a research method by involving teens aged from 13 until 17 respondents who have experience in general cyberbullying whether as perpetrator or prey. The findings of the study show that more youth have experienced cyberbullying since the beginning of the COVID-19 pandemic in 2019 until current year due to adolescents continue to spend more time online.

A study that has been carried out by Peker et al. (2021) on cyberbullying behavior that can be reduced through self-efficacy aspects involving 340 respondents among students aged 14 to 18 years in four secondary schools in Erzurum, Turkey. This survey uses the Cyber Bullying and Internet Aggression Survey Scale and the Self- Efficacy Scale as research tools. Findings show that there is a negative correlation between the variables of self-efficacy and cyber bullying. A total of 42% of study respondents have been exposed to cyber bullying while 35% of students have been involved in cyber bullying. This research has also shown that low self-efficacy in teenagers will make them more likely to be involved in cyberbullying symptoms.

Furthermore, the prevalence of cyberbullying among teenagers in Malaysia is undeniable, as evidenced by numerous news reports. For instance, Bernama (2022) reported through My Metro Online that incidents of cyberbullying among Malaysian youth are on the rise. This concern is compounded by a statement from UNICEF indicating that Malaysia ranked second in Asia for escalating severity of the issue within the country.

Moreover, Berita Harian Online, as reported by Siti Aishah (2023), highlighted a tragic incident wherein a TikToker took their own life as a result of cyberbullying. Among the proposals addressed to the Minister of Communications and Digital are measures aimed at preventing cyberbullying and misuse of social media platforms, particularly in light of reported instances of suicide linked to cyberbullying on TikTok. With cyberbullying on the rise in Malaysia (Ministry of Communications, 2023), Lt. Col. (B) Mustaffa Ahmad, Senior Vice President of Outreach and Capacity Development at Malaysian CyberSecurity, stated the government's intention to introduce specific legislation addressing this issue (Bernama, 2020a).

Types of Cyberbully behavior

According to Ighaede-Edwards et al. (2023) there are several types of bullying including physical bullying, verbal bullying, social bullying and cyber bullying which is bullying which is the topic of debate in this study. The rapid current of communication technology has now given bad implications to school teenagers

such as cyber bullying, in addition to good implications due to the increase in the use of the internet which is growing every day (Kollo et. al., 2024). The negative effects of this cyber bullying have threatened individuals online, especially high school students because it can cause harm in aspects of their mental well-being (Macaulay (2022). This is confirmed by Tao et al., (2024) who said that cyber bullying is something acts of bullying that affect mental well-being and are done repeatedly (Macaulay, 2020) by using digital technology.

The table 1 below showed that types of cyberbullying (Macaulay et. al., 2022; Hemtanon et. al., 2023).

Harassment

Continuous or repeated acts of harassment such as repeatedly sending messages that are rude, insulting, mischievous, hurtful, using abusive words, messages in the form of disrespectful and cruel and embarrassing behavior.

Denigration

Sharing embarrassing information and images online with the aim of revealing personal information to humiliate and embarrass the victim. This is also stated as the act of influencing or deceiving an individual to reveal his personal information that will be spread to others by the cyber bully without the victim's knowledge. The intended information includes the background of the victim, pictures and videos related to the individual who is the target of the cyberbullying.

Flaming

Spreading provocative and contentious news online by sending and uploading messages using angry language. This kind of behavior is done to offend the victim by inflaming it. This situation can cause conflicts and fights.

Outing &Trickery

Sharing embarrassing information and images online with the aim of revealing personal information to humiliate and embarrass the victim. This is also stated as the act of influencing or deceiving an individual to reveal his personal information that will be spread to others by the cyber bully without the victim's knowledge. The intended information includes the background of the victim, pictures and videos related to the individual who is the target of the cyberbullying.

Impersonation

The act of a bully who acts to impersonate another individual by hacking and breaking into email or social media accounts. It is also said by publishing materials that embarrass the target to harm, embarrass and cause problems for the victim.

Exclusion

A form of removal which is an act done with malicious intent to remove someone from any online group such as Whatsapp, Facebook and Instagram. The deliberate removal or exclusion of individuals from certain communities on social media is intended to hurt the feelings of the victim of cyberbullying at the same time as being embarrassed.

RESEARCH METHODOLOGY

This study is a survey study conducted on high school students around the 4 main zones in Malaysia, namely the North Zone, South Zone, East Zone and West Zone. Cohen, Manion and Morrison (2018) assert that a sample number of more than 30 people is appropriate for studies that use statistical analysis. This quantitative study was carried out in Peninsular Malaysia covering the North Zone (Kedah and Perak), the South Zone (Johor and Melaka), the East Zone (Pahang and Kelantan) and the West Zone (Selangor and the Federal Territory). Random sampling was used to obtain respondents based on the sample size stated by Cohen (1977). The respondents involved are 500 secondary school students for each zone (North Zone, South Zone, East Zone and West Zone). The study respondents of each zone consist of secondary school students in form 1, 2, 3, 4 and form 5. The breakdown of respondents is

100 students in form 1, 100 students in form 2, 100

students in form 3, 100 students in form 4 and 100 students in form 5. Research data will be collected through a set of research questionnaires that will be drafted by the researcher to answer the research objectives. Basically, this questionnaire will have three parts, namely, Part A: Demographics of Respondents, Part B: Problems of bullying education and cyberbullying prevention among secondary school students in Malaysia.

Instrument

In the first phase, a set of research questionnaires drafted by the researcher will be used to collect data on the subject of the study. A questionnaire instrument on physical activity constraints in preschool has been developed and has been formed based on the findings from the literature review and the objectives of the study. After the questionnaire was constructed according to the research objectives and language suitability, the questionnaire was sent to a content expert to obtain validity. This questionnaire consists of 2 sections that is, Section A: Demographic and Section B: Problem of Prevention Education of Cyberbullying among Secondary School in Malaysia. Table 1 shows the factors and items of cyberbullying prevention educational problems with six domains factors.

Table 1: Factors And Items Of Cyberbullying Prevention Educational Problems

Factors	Item
Individual	1. I care about the issue of cyberbullying 2. I realize I am a victim of cyber bullying 3. I get involved in cyberbullying prevention education programs 4. I gained a lot of knowledge from the cyberbullying prevention education program 5. I enjoy participating in cyberbullying prevention education programs 6. I can understand the importance of cyberbullying prevention education 7. I believe that people who suffer from cyber bullying need to be helped 8. I believe cyberbullying prevention education programs are important 9. I help people with cyberbullying issues 10. I can understand cyberbullying behavior
Counselor	11. School counselors are skilled in imparting knowledge about cyber bullying 12. Counselors care about the problem of cyber bullying at school 13. The Guidance and Counseling Unit is active in creating cyberbullying prevention education programs 14. The cyberbullying prevention education program by the counselor helped me 15. The cyberbullying prevention education program organized by the Guidance and Counseling Unit successfully attracted my interest 16. The Guidance and Counseling Unit made an interesting cyber bullying education promotion 17. The Guidance and Counseling Unit has a calendar of cyberbullying prevention education programs 18. The cyber bullying education program by the Guidance and Counseling Unit is effective for students 19. I found that external parties cooperate with the Guidance and Counseling Unit in running the cyber bullying program 20. The Guidance and Counseling Unit has sufficient skills in helping cases related to cyber bullying
Teacher	21. The teacher is concerned about the cyber bullying problem that happened to me 22. Teachers put the issue of cyber bullying as a big issue 23. The teacher emphasizes the importance of cyberbullying prevention in the classroom 24. Teachers are aware of the problem of cyber bullying that occurs among students 25. Teachers understand students who suffer from cyber bullying 26. Teachers support the Cyber Bullying Prevention Education Program run by the school 27. Teachers show individual characteristics that prevent the issue of cyber bullying at school 28. Teachers have knowledge about the problem of cyber bullying 29. Teachers cooperate with school counselors in running the Program of Cyber Bullying Prevention Education 30. Teachers create an environment that can prevent cyber bullying

Peers	<p>31. Peers think individuals suffering from cyber bullying need help</p> <p>32. Peers have the knowledge to help individuals with cyberbullying problems</p> <p>33. Peers give encouragement in following the Cyber Bullying Prevention Program at school</p> <p>34. Peers often help individuals experiencing cyberbullying issues</p> <p>35. Peers guide individuals who are stuck with the problem of cyber bullying</p> <p>36. Peers refer friends with cyberbullying problems to counselors</p> <p>37. Peers are concerned about the issue of cyber bullying of their other friends</p> <p>38. Peers take appropriate action when dealing with a friend experiencing cyber bullying</p> <p>39. Peers maintain a good relationship with other friends to prevent cyber bullying</p> <p>40. Peers are the cause of cyber bullying</p>
School Administration	<p>41. School management supports the Cyber Bullying Prevention Education Program</p> <p>42. The school management is concerned about the issue of cyber bullying that occurs among students</p> <p>43. School management promotes programs related to the prevention of cyber bullying</p> <p>44. School management discriminates against students who experience cyber bullying</p> <p>45. The school management takes appropriate action to help students who experience cyber bullying</p> <p>46. School management cooperates with external parties in dealing with the issue of cyber bullying</p> <p>47. The school management takes strict action against students who are involved in cyber bullying</p> <p>48. The school management considers the issue of cyber bullying that happens to students needs to be helped by the school</p> <p>49. School management cares about the problem of cyber bullying at school</p> <p>50. To prevent a cyber bullying environment in schools, school management supports activities and programs related to cyber bullying</p>
Family	<p>51. My family is aware of cyber bullying</p> <p>52. My family encouraged me to get involved in a cyberbullying prevention program</p> <p>53. My family considers the issue of cyber bullying to be a big issue</p> <p>54. My family advises me not to get involved with cyber bullying issues</p> <p>55. My family supervises me using the internet</p> <p>56. My family knows what to do if one of the family members is involved in cyber bullying</p> <p>57. My family refers family members with cyberbullying problems to skilled outsiders</p> <p>58. My family helps my family members with cyberbullying problems</p> <p>59. My family is aware of cyberbullying behavior</p> <p>60. My family provides an environment that prevents cyberbullying</p>

To answer the questionnaire, the sample is required to express their level of agreement based on a five-point likert scale as shown in Table 2 below:

Table 2: Level of Agreement

Level	Agreement
1	Strongly Disagree
2	Disagree
3	Agree
4	Strongly Agree

Research Procedure

In order to get feedback from preschool teachers regarding the constraints of physical activity in this preschool, several procedures have been followed. The questionnaire was evaluated and validated by content experts and language experts. After getting validation from the experts, the researcher modified the revised questionnaire based on the expert's opinion. A pilot study was carried out because a pilot study can overcome any negative risks, the structure of the questionnaire as well as grammatical errors can be reduced and the researcher is able to gain meaningful experience (Fraenkel & Wallen, 2006; Leedy & Ormrod, 2001; Gay & Airasian, 2000). Cohen, Manion and Morrison (2018) assert that a sample number of 30 and more is appropriate for studies that use statistical analysis. Therefore, the questionnaire was distributed to 75 preschool teachers for pilot purposes and to obtain Cronbach's Alpha values using SPSS 23.0 software. The procedure for the study carried out is as shown in Figure 1.

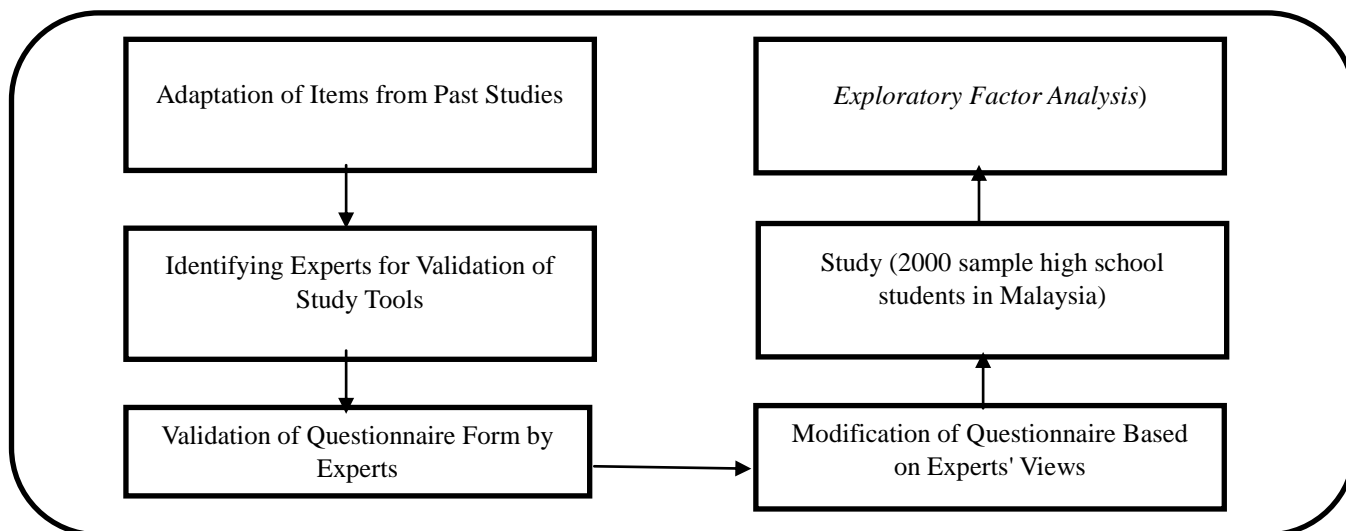


Figure 1: Study Procedure

Questionnaire Validation Procedure

This questionnaire was validated before being distributed to the study sample to ensure that each item contained in this questionnaire was clear and did not confuse the sample involved. Therefore, this questionnaire has been reviewed by several content experts including experienced lecturers and counselors. In the context of this study, 5 experts were selected. This is in line with the study that has been carried out by Siti Farhah and Saedah (2015) where several criteria must be met by an expert which are (i) the individual has extensive knowledge as well as background or experience in the field related to the study; (ii) willingness and time appropriateness to participate; (iii) have good communication skills; and (iv) have more than 5 years of experience (Mohd Ridhuan, 2016). After getting recommendations and feedback from experts, the questionnaire was refined before being distributed to the sample. Table 3 shows the background information of the experts involved in the validity of this questionnaire.

Table 3: Expert Background Information

Expert	Approval	Expertise	Experience	Validity Score (Polit & Beck, 2006) and Polit et. al. (2007)
P1	Doctor of Philosophy	Guidance and Counseling Specialist Public University Senior Lecturer	12 Years or more of Service	1

P2	Doctor Philosophy	of	Specialist in Educational Psychology Public University Senior Lecturer	8 to 12 Years of Service	1
P3	Doctor Philosophy	of	Guidance and Counseling Specialist Counseling in Perspective of Islam Module Development Public University Lecturer	20 Years of Service and above	1
P4	Doctor Philosophy	of	Malay Language Specialist Public University Lecturer	8 to 12 Years of Service	1
P5	Master		Guidance and Counseling Specialist Excellent Guidance and Counseling Teacher	4 to 6 Years of Service	1

Content Validity Index (CVI)

Content Validity refers to the extent to which the questionnaire measurement tool in a study represents the construct being measured and it is considered as important evidence to support the validity of the measurement tool (Ghazali & Sufean, 2021). Yusoff (2019) stated that the validity of this content is encouraged to go through the Content Validity Index (CVI) process systematically based on evidence from past studies and best practices used in a research. Therefore, as a result of the comments and responses of the referring experts, the researcher obtained the value of the content validity index through the Content Validity Index (CVI) - CVI: I-CVI (accepted = >0.78, Lynn, 1998), S-CVI/UA and S-CVI/Ave (accepted = >0.8 and >0.9) modified from the Kappa (K*) statistic. Lynn (1986) and Polit et. al. (2007) put the accepted I-CVI value >0.78. Davis (1992), Grant & Davis (1997) and also Polit & Beck (2004) accepted S-CVI values >0.80. However, in this study has taken the view of Polit and Beck (2006) and Polit et. al. (2007), the value of CVI =1 by taking three to five experts to assess the validity of the questionnaire (Yusoff, 2019).

Exploratory Factor Analysis (EFA)

Factor Analysis (FA) is an item reduction technique that is used to reduce the amount of larger variables to a set of smaller variables, suitability or compatibility or summarize the important information found in the variables (Coakes, Steed & Ong, 2009). Ghazali and Sufean (2021) further elucidated that factor analysis serves not only to assess the appropriateness of instruments in establishing construct validity but also to identify factors influencing independent or dependent variables.

Factor analysis is frequently employed as an exploratory technique by researchers seeking to delineate the underlying structure of a set of variables (Ghazali & Sufean, 2021). The validity of questionnaires in quantitative studies can be assessed using two primary techniques: exploratory factor analysis and confirmatory factor analysis (Ghazali & Sufean, 2021). In this study, exploratory factor analysis (EFA) was used to estimate or extract factors (items) to determine how many factors to retain or discard. The factor analysis in this study uses a pilot test (Ghazali & Sufean, 2021) of 500 high school students to test the construct validity of the questionnaire items.

In this study, the results of the Kaiser-Meyer-Olkin (KMO) and Bartlett tests for all items were significant, yielding a KMO value of 0.839 ($p < .001$). According to Kaiser and Rice (1974) a value of 0.9 or above is impressive, 0.8 is good and 0.7 is sufficient. The value found by this questionnaire is 0.942 and this shows that the factor analysis can be continued. Table 4 below shows the results of Kaiser-Meyer-Olkin (KMO) and Bartlett Test.

Table 4: Kaiser-Meyer-Olkin (KMO) and Bartlett Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.942
Bartlett's Test of Sphericity	Approx. Chi Square	14404.834
	Df	1770
	Sig.	.000

The results of the analysis show that the value of Kaiser-Meyer Olkin (KMO) is .94 above the value of .50 as suggested by Black and Babin (2019), that is, factor analysis should be carried out if the value of KMO is greater than 0.50. The KMO test is used to identify whether the items are suitable or not to implement the factor analysis method. Table 5 above shows the results of Bartlett's Test and Kaiser Meyer-Olkin with KMO values for the developed questionnaire. The KMO value obtained is $r = .942$ and Bartlett's Test of Sphericity is significant ($p = .000$). Moreover, according to Kaiser and Rice (1974) a value of 0.9 or above is impressive, 0.8 is good and 0.7 is sufficient. The value found by this questionnaire is 0.942 and this shows that the factor analysis can be continued. Based on the KMO value, it is clear that this test is suitable for using factor analysis techniques.

Table 5: Total Variance Results

Construct Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
Individual	5.680	9.467	9.467
Counsellor/Guidance and Counselling Unit	5.438	9.063	18.529
Teacher	5.406	9.009	27.539
Peers	4.329	7.214	34.753
School Administration	4.219	7.032	41.785
Family	4.003	6.671	48.456

Next, in order to maintain the six components of the construct - namely, the individual/school student, counselor/guidance and counseling unit, teacher, peers, school administration, and family - the researcher utilized the varimax rotation method to reduce the number of items in the questionnaire instrument. Table 5 presents the results from the rotation of the six components of the construct using the varimax rotation method. The findings of the individual/school student construct showed a variance of 9.467 percent, the Counselor/Guidance and Counseling Unit construct showed 9.063 percent variance, the teacher construct showed 9.009 percent variance, the peer construct showed 7.214 percent variance, the school management construct showed 7.032 percent variance, and the family environment construct showed 6.671 percent variance. The total amount of variance explained by the six constructs is 48.456 percent. These findings clearly demonstrate that the six components of the domain utilized can be accepted as constructs in this study.

Furthermore, construct validity is of paramount importance in instrument development. Therefore, this study also conducted a construct validity analysis. Table 6 below illustrates that all items within the constructs exhibit strong loadings, thus confirming the construct validity of the developed instrument. This is evidenced by the correlation values of the items in the Individual or School Student component, ranging from $r = .56$ to $r = .73$. Similarly, the correlation values of the items in the Counselor or Guidance and Counseling Unit component range from $r = .52$ to $r = .72$. For the Teacher component, the correlation values range from $r = .51$ to $r = .66$. Likewise, the correlation values for the Peer component range from $r = .52$ to $r = .67$, while those for the School Management component range from $r = .50$ to $r = .64$. Finally, the correlation values for the Family component range from $r = .52$ to $r = .62$. These findings indicate that the constructed items have been appropriately grouped into their respective components. The following are the findings for the construct validity analysis as presented in Table 6 below.

Table 6: Construct Validity in Concepts for Matrix Rotation Components

Rotated Component Matrix ^a						
	Construct Components					
	Individual	Counsellor/ Guidance and Counselling Unit	Teacher	Peers	School Administration	Family
S34	.738					
S35	.736					
S37	.713					
S38	.699					
S32	.699					
S33	.674					

S36	.666					
S31	.631					
S39	.566					
S58		.725				
S56		.724				
S60		.724				
S59		.657				
S55		.618				
S51		.613				
S57		.604				
S53		.593				
S52		.567				
S54		.525				
S46			.668			
S48			.652			
S26			.579			
S41			.566			
S50			.544			
S29			.529			
S42			.524			
S45			.519			
S49			.513			
S6				.679		
S7				.661		
S4				.625		
S3				.582		
S8				.567		
S5				.523		
S24					.646	
S25					.643	
S23					.553	
S22					.522	
S28					.517	
S21					.503	
S16						.622
S17						.618
S13						.595
S15						.562
S18						.548
S14						.528
Extraction Method: Principal Component Analysis.						
Rotation Method: Varimax with Kaiser Normalization. ^a						
a. Rotation converged in 8 iterations.						

However, 14 questionnaire items were dropped from the analysis as they did not meet the correlation coefficient matrix level of $r = .50$. The dropped items were identified as items S1, S2, S9, S10, S11, S12, S19, S20, S27, S30, S40, S43, S44, and S47. This decision was based on the criteria set forth by Pallant (2011), which considers only factor loading values exceeding the correlation coefficient threshold (i.e., $r = .50$) as suitable questionnaire items for each component. Factor loading values below this threshold do not demonstrate a significant relationship between the questionnaire items and the components. Consequently, out of the initial 60 questionnaire items in the developed instrument, only 46 items exhibited factor loading values exceeding the correlation coefficient value of $r = .50$. Table 7 presents the 46 items that have been validated based on item validity through factor analysis techniques.

Table 7: Factor Analysis Result Questionnaire Items

Component	Actual Items of Questionnaire	Items of Analysis Factor
Individual/ School Student	S1, S2, S3, S4, S5, S6, S7, S8, S9,	S34, S35, S37, S38, S32, S33, S36,

	S10	S31, S39
Counsellor/ Guidance and Counselling Unit	S11, S12, S13, S14, S15, S16, S17, S18, S19, S20	S58, S56, S60, S59, S55, S51, S57, S53, S52, S54
Teacher	S21, S22, S23, S24, S25, S26, S27, S28, S29, S30	S46, S48, S26, S41, S50, S29, S42, S45, S49
Peers	S31, S32, S33, S34, S35, S36, S37, S38, S39, S40	S6, S7, S4, S3, S8, S5
School Administration	S41, S42, S43, S44, S45, S46, S47, S48, S49, S50	S24, S25, S23, S22, S28, S21
Family	S51, S52, S53, S54, S55, S56, S57, S58, S59, S60	S16, S17, S13, S15, S18, S14

Based on Table 7, it is evident that there have been changes in the allocation of items across construct components. In the original instrument (prior to factor analysis), the Individual/School Student component consisted of items S1, S2, S3, S4, S5, S6, S7, S8, S9, and S10. However, following factor analysis, the Individual/School Student component now comprises items S34, S35, S37, S38, S32, S33, S36, S31, and S39.

Additionally, the components of the Counselor/Guidance and Counseling Unit were analyzed. Prior to factor analysis, the original items in this component were identified as S11, S12, S13, S14, S15, S16, S17, S18, S19, and S20. After factor analysis, however, there were changes in the Counselor/Guidance and Counseling Unit component, with items S58, S56, S60, S59, S55, S51, S57, S53, S52, and S54 being included. Moving on to the third component, Teacher, the original items prior to factor analysis were S21, S22, S23, S24, S25, S26, S27, S28, S29, and S30. Subsequent to the factor analysis process, the items summarized within this component are now S46, S48, S26, S41, S50, S29, S42, S45, and S49. The next component is the Peer component. In the original instrument, the listed items are S31, S32, S33, S34, S35, S36, S37, S38, S39, and S40. However, after undergoing the factor analysis process, they are identified as S6, S7, S4, S3, S8, and S5. Regarding the original School Administration components, the items listed were S41, S42, S43, S44, S45, S46, S47, S48, S49, and S50. After undergoing factor analysis, the items summarized are S24, S25, S23, S22, S28, and S21. Moving on to the Family component, before factor analysis, the items grouped in this component were S51, S52, S53, S54, S55, S56, S57, S58, S59, and S60. However, after undergoing the factor analysis component, the items summarized are S16, S17, S13, S15, S18, and S14. Table 9 serves as evidence that the 46 developed items have been accurately placed within the correct construct components and demonstrate construct validity through factor analysis techniques.

Reliability Procedures

The next analysis involves the computation of the Cronbach's Alpha coefficient, a method used to determine the level of reliability regarding the internal consistency of the educational questionnaire instrument for the prevention of cyberbullying among high school students in Malaysia. This analysis was conducted using the Statistical Package for the Social Sciences (SPSS) 27.0 application to obtain the Cronbach's Alpha value. Table 8 provides the interpretation of Cronbach's Alpha values, which can be evaluated through classification.

Table 8: Interpretation of Cronbach's Alpha Value

Cronbach's Alpha Coefficient Value Range	
<0.6	Weak
0.6 to <0.7	Satisfactory
<0.7 to <0.8	Good
<0.8 to <0.9	Very Good
0.9	Excellent

Findings

Cronbach's Alpha Value Reliability

There are various methods for determining reliability values. The most widely used evaluation method to determine reliability is to find the value of Cronbach's Alpha (U. Sekaran & R. Bougie, 2010). Therefore, the value of Cronbach's Alpha is between 0 to 1 and a high value of Cronbach's Alpha indicates a factor that has the most excellent reliability.

The collected data was analyzed using SPSS 27 to identify the Cronbach's Alpha value. Table 9 shows that each factor obtained a Cronbach's Alpha value above 0.70. The overall Cronbach's Alpha value obtained is $\alpha = 0.96$. Therefore, every factor of Cyberbullying Prevention Education Problems among Secondary School Students in Malaysia found in the questionnaire is accepted.

Table 9: Cronbach's Alpha Value Based on Factors

Factors/Constructs	Cronbach's Alpha Value
Individuals/High School Students	0.8
Guidance and Counseling Unit/Counselor	0.87
Teacher	0.87
Peers	0.85
School Administration	0.86
Family	0.87

DISCUSSION

This study aims to assess the validity and reliability of a cyberbullying prevention education questionnaire among secondary school students in Malaysia. It seeks to gauge students' awareness, knowledge, and support regarding filling out activities and participating in cyberbullying prevention programs. The research endeavors to develop a new instrument aimed at ensuring the validity and reliability of the items within the questionnaire. Through factor analysis of the construct validity of each newly constructed item, it becomes feasible to clearly group them within the concept of cyberbullying prevention education. Despite the exclusion of 14 items, all remaining factors still uphold the characteristics of cyberbullying prevention education factors studied in this research, based on literature highlights and expert opinions. The Cronbach's alpha internal consistency reliability analysis demonstrates that the constructed instrument exhibits a high degree of reliability. With a Cronbach's alpha value of 0.96, the newly developed instrument proves suitable for data collection, consistent with Mohd. Majid Konting's (1993) explanation that a Cronbach's alpha value ranging from 0.79 to 0.99 represents the highest level of item reliability. Additionally, according to Ariffin and Ahmad (2010), for newly developed instruments, a Cronbach's alpha value above 0.60 is acceptable for data collection purposes.

Although previous studies by Noh & Ibrahim (2014) and Sudin, Saper, and Rozubi (2023) have examined cyberbullying among high school students, the questionnaire items utilized in these studies may not be suitable for the present investigation. This is because our study aims to assess cyberbullying prevention education, encompassing support, knowledge, and awareness across six main factors: individual/high school students, counselors/guidance and counseling units, teachers, peers, school management, and families. The questionnaires employed in the studies by Noh & Ibrahim (2024) and Sudin et al. (2023) solely focused on cyberbullying symptoms among high school students, rather than addressing prevention education for the cyberbullying issue itself. In line with the concept of validity, which pertains to the extent to which items in the instrument represent the test aspect, it is imperative to construct a new instrument to ensure the validity of the tool used in this study (Chan & Idris, 2017).

A review of past studies has been conducted and the questionnaire developed is based on past studies that look at the factors of the individual/student himself, the counseling teacher/Guidance and Counseling Unit, teachers, peers, school management and family. All six factors obtained a high and acceptable reliability value. Therefore, in order to face the problems in cyberbullying prevention education among high school students, aspects of awareness and knowledge of school students (Yosep et. al., 2023), Guidance and Counseling units, teachers, school management (Huff, 2020; Vassiliadis, 2024), peers (Karsodikromo, 2022) and family (Yosep et. al., 2023) play a major role. This is because each of these factors plays a role in reducing the problem of cyber bullying while increasing awareness and knowledge about the dangers of cyber bullying. Through each party's support for cyberbullying prevention education that reveals about cyberbullying, how to prevent cyberbullying and how to use the internet well (Thumronglaohapun, et al. (2022), it is able to overcome the problem of cyberbullying. When students schools, guidance and counseling units, school teachers, school management, peers and families are aware of the importance of cyberbullying prevention education, they will be aware and sensitive to join, support and participate in the completion of cyberbullying prevention programs or activities as an effort to curb the issue of cyber bullying which is becoming more and more troubling nowadays as suggested by DePaolis & Williford (2019), Mokhlis (2019) and Karsodikromo et. al (2022). In addition, Huff's study (2020) found that the role of school management, guidance and counseling units and teachers in schools in intensifying activities and programs to effectively prevent cyber bullying. This is because, it will be able to reduce the issue of cyber bullying which is becoming more and more common and dares to be done by

high school students themselves. Therefore, all factors including individuals or high school students, school management, guidance and counseling units, teachers, peers and families need to be taken into account in an effort to ensure that cyberbullying prevention education is implemented effectively in schools as well as overcome the symptoms of crime or behavior cyberbullying by high school teenagers.

CONCLUSION

This study has reported on the validity and reliability of the cyberbullying prevention education questionnaire among teenagers in Malaysia. In the meantime, high school students, school administration, guidance and counseling units, teachers, peers and families play an important role to ensure that cyberbullying prevention education can be carried out effectively. This is because cyberbullying prevention education can curb and reduce the problem of cyberbullying that is becoming more prevalent among today's teenagers. Furthermore, through programs and activities in cyberbullying prevention education, it is possible to achieve student development, which is to produce students with knowledge, skills, noble character, responsibility and the ability to achieve personal well-being found in the Standard Kualiti Pendidikan Gelombang 2 (SKPMG2) 2017. The conclusion, this study has proven that this questionnaire can be used to see the factors that become a problem in cyberbullying prevention education among teenagers in Malaysia.

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