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RESEARCH ARTICLE

Unveiling The Shadows: The Influence of Anonymity and Fake Accounts on Cyberbully Intention in Social Media

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ABSTRACT

Cyberbullying has arisen as a prevalent and worrying issue in the digital age, substantially influencing the well-being and mental health of social media users. Previous studies have identified several factors and theories of cyberbullying. Still more in-depth research is required to understand the key factors influencing cyberbullying intention in social media. This study aims to identify the factors influencing cyberbullying intention in social media and examine the moderating effect of fake accounts on cyberbullying intention. An extensive literature review has been conducted to examine the gaps in existing studies on cyberbullying intention. As a result, this study uses the Theory of Planned Behavior (TPB) as a basis of the proposed Cyberbully Intention Model (CIM), with the addition of Anonymity and Fake Account, respectively, as external exogenous and moderating variables. This study is conducted based on a quantitative survey of 273 social media users. It assessed respondents' experiences with cyberbullying by considering various perceptions of behavioral control, subjective norms, attitudes, anonymity, fake accounts, and their intentions toward committing cyberbullying on social media platforms. Data was analyzed using the Partial Least Square Structural Equation Modeling (PLS-SEM) in SmartPLS 4 software. The results reveal that Attitude ($p = 0.008$) and Subjective Norms ($p = 0.014$) are key factors in Cyberbully Intention. On the other hand, Fake Account is seen as having a medium moderating effect on the relationship between Perceived Behavioral Control and Cyberbully Intention ($p = 0.046$). Fake Account also moderate the relationship between Anonymity and Cyberbully Intention ($p = 0.041$). The output from this study is multi-faceted and holds implications for various stakeholders, including social media platforms, educational institutions, policymakers, organizations, and individuals. The theoretical contribution of this study by introducing the concept of fake accounts as medium effect moderating anonymity to become a cyberbully intention. The findings of this study give implications to digital platform administrators and policy makers who aim to curb cyberbullying incidents. Educating users about the possible consequences of leveraging fake accounts for malicious purposes can contribute to fostering more responsible and empathetic digital interactions.

Keywords: Cyberbully, Anonymity, Fake account, Social media

1. Introduction

Technology has undergone various stages of innovation, development, and adaptation to fulfill the

demands of every person in our digital age. Positive change has made it simpler for us to accomplish numerous tasks that were previously challenging. Social media has become a more effective venue for

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public communication as technology develops. New applications focused on connecting individuals, such as Facebook, WhatsApp, TikTok, Twitter, Instagram, and many other downloadable applications from diverse sources, have accelerated the adoption of social media technologies. Users can enjoy this growing communication network technology, but some hurt users directly or indirectly emotionally and psychologically by using this social media. However, today, society's infatuation with social media leads to destructive behaviors such as cyberbullying [1].

Cyberbullying is the use of electronic communication to intimidate, harass, or hurt others, such as social media, messaging applications, or online forums. It can take many forms, such as spreading rumors, posting objectionable content, making disparaging remarks, or engaging in online stalking. According to [2], concerns have been expressed on social media regarding a misunderstanding of "free speech," which can lead to social attacks and cyberbullying. Despite local and worldwide warnings and limits, this is a major issue that demands additional attention. It addresses societal topics such as personal security and privacy, international operations, public opinion polling, and criminal organization groupings [3]. Furthermore, cyberbullying can create results similar to traditional bullying, such as psychological troubles, sleep disorders, loneliness, sadness, and stress [4].

The usage of anonymous accounts is also prevalent in the use of social media. Because of the anonymity provided by social media platforms and the availability of fake accounts, the problem has been compounded by allowing individuals to engage in cyberbullying with less responsibility. The anonymity provided by online platforms and the prevalence of fake accounts have further complicated the issue, as they create an environment where individuals can engage in harmful behavior with reduced accountability. An anonymous social media platform allowing anonymous contact is more likely to support cyberbullying than social media using genuine identity [5].

Furthermore, creating and using fake accounts adds another layer of complication to the problem. Fake accounts are intended to conceal the user's genuine identity, making it difficult to track down the source of cyberbullying occurrences and hold persons accountable for their acts. They do this by creating false accounts with duplicated or fake information about people. Regardless of the basic purpose of the individuals who created this fake account, its use tends to affect public opinion in some way [6].

According to [7], from 2011 to 2018, Malaysia had the ten highest percentage of parents reporting

their child had been a victim of cyberbullying. It is even more concerning when [8] states that according to the United Nations Children's Fund (UNICEF), Malaysia is ranked second in Asia regarding youth cyberbullying. Researchers, educators, and politicians are concerned about the frequency of cyberbullying and its negative impact on the public. However, there is a notable research gap in understanding the specific influence of anonymity and fake accounts on cyberbully intention in social media. To improve the situation, researchers will identify the characteristics that influence cyberbully intention in social media and investigate the moderating effect of fake accounts on cyberbully intention.

Therefore, the current study aims to identify the elements that influence the intention of cyberbullying in social media and answer the following research questions (RQ) to determine the influence of fake account moderation on community cyberbullying intention:

- RQ1. What are the key factors that influence cyberbully intention in social media?
- RQ2. How fake account moderating the factor on cyberbully intention?

2. Literature review

2.1. Cyberbullying in social media

According to [9], around 5.38 billion people worldwide are connected to the Internet, with Asia accounting for 2.916 billion. Globally, approximately 4.26 billion people use social media, with that amount predicted to climb to over six billion by 2027 [10]. Cyberbullying is most often done through social media sites and is the act of persecuting, intimidating or harming another person using electronic communication devices such as social media platforms, smartphones or computers [5]. It involves the deliberate and repetitive targeting of individuals through various forms of aggressive behavior, such as harassment means sending threatening or offensive messages, emails, or comments to the victim with the intention of causing distress or fear [11].

Harassment, flaming, cyberstalking, trolling, denigration, exclusion, masquerade, flooding, and outing are some examples of cyberbullying [12]. According to [13], intention, repetition, and an imbalance of power are elements of bullying. Without realizing that public shaming, which is sharing embarrassing or compromising content, such as private photos or videos, without the individual's consent to humiliate or degrade them publicly, is also a type of cyberbullying [14].

Furthermore, denigration, which means posting or spreading negative and derogatory comments about the victim, often aimed at demeaning their character, appearance, or abilities, is a common action among colleagues or friends without realizing it is an element of cyberbullying that can have an impact on the victim [15]. Threats and hate speech: Sending explicit threats, indulging in hate speech, or instigating violence or injury against the victim based on their race, gender, religion, sexual orientation, or other personal traits are all prohibited [16].

2.2. People involved in cyberbullying

Basically, cyberbullying is formed when there is an offender and a victim. As we already know, cyberbullying can be triggered due to several circumstances. Those who are popular and social misfits are more likely to bully [12]. Teenagers may attract the attention of others to allow them to be more popular and influential. Next, those who are less skilled in socializing may bully to get rid of their low self-esteem.

Cyberbullying often happens to those who have been bullied. Next, the anonymous bully can cause people to bully online. This is because they can remain anonymous and make them brave because they cannot be detected. Social pressure may arise when they accept their actions as something normal and acceptable to society even though they are not. According to researcher [12] digital forensics analysis, cyberbullying in Malaysia is a worrying trend. Bullies target many people, yet some are conscious while others are not.

2.3. Impact of cyberbullying on individuals

First, impact to emotional and psychological consequences; cyberbullying can cause significant emotional distress, leading to anxiety, depression, loneliness, and low self-esteem [17]. Victims may experience increased levels of stress, fear, and helplessness. Academic and Performance Decline: The constant harassment and negative online experiences can interfere with a victim's ability to concentrate, focus on studies, and perform well academically. This can result in decreased school attendance, lower grades, and hindered educational and career opportunities.

According to [18], some other impacts are about the physical health issues of the victims. The stress and emotional toll of cyberbullying can manifest in physical health problems such as headaches, sleep disturbances, appetite changes, and even psychosomatic symptoms. Victims of cyberbullying may retreat from social engagements, both online and offline, owing to fear, shame, or a lack of confidence in

others. They may isolate themselves, reducing their sense of belonging and social support [19].

2.4. The underpinning theories

Several studies have been done using several theories that predict cyberbully intention and behavior with many factors to consider [20]. Therefore, many researchers are trying to predict behavior through several theories and this study tries to relate to cyberbully intentions before it becomes cyberbully behavior.

Table 1 shows the review of cyberbullying factors and theories used to investigate cyberbullying in social media.

2.5. Mapping the factors of theory of planned behavior (tpb) to measure cyberbully intention

According to [20], The Theory of Planned Behavior (TPB) is very suitable and can be used to understand the intentions of cyberbullying. This is due to focusing on the factors influencing a person's intent to engage in certain behaviors. The Theory of Planned Behavior (TPB) shown in Fig. 1 explains that behavioral intention is a key component and can be defined as an individual's subjective assessment or readiness to perform a particular behavior. It reflects the individual's motivation and inclination to engage in that behavior. Behavioral intention is considered a proximal predictor of actual behavior, as it influences an individual's decision to perform or abstain from specific behavior.

Moreover, the subjective norm is the most critical predictor of cyber intentions [25]. Attitudes towards perceived behavioral control and cyberbullying

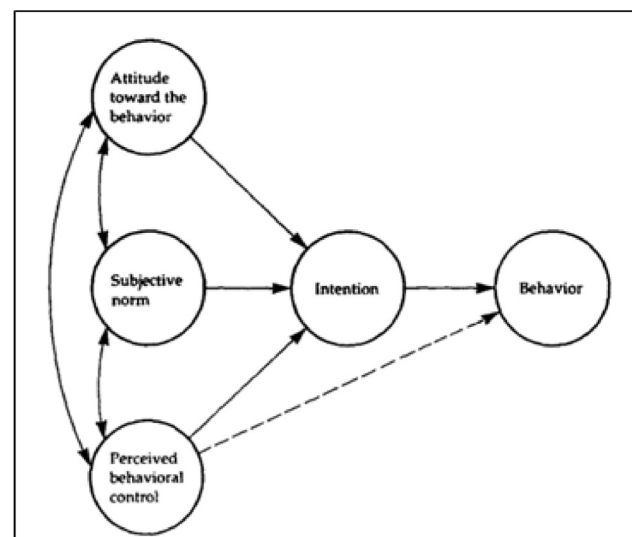


Fig. 1. Theory of planned behavior.

Table 1. Review base model of Cyberbully.

No.	Reference	Method	Base Model/Theory	Factors Used
1.	[15]	Survey	-Model Outline of Research -Model Case Study	-Define the questionnaire for the survey with four parts (General, Cyber Victim, Cyber Bully, Cyber Bystander and Institutional support)
2.	[21]	Online Experiment and Survey	-Model Effect on Non-Permanency on Cyber Bullying Intention	- Cyber Bullying Intentions. -Perceived Anonymity -Perceived Consequences of Anonymous Cyber Bullying -Normative Beliefs
3.	[22]	Review	-Theory of Reasoned Action -General Strain Theory	-Identity and social aspects
4.	[23]	Review	The Barlett and Gentile Cyberbullying Model	-Perceived Anonymity -Belief in the Irrelevance of Muscularity for Online Behaviour -Positive Attitudes towards Cyberbully -Cyberbullying Perpetration
5.	[2]	Case Study	Cyberbully Detection Framework	-Keywords cyberbully
6.	[20]	Survey	'Theory of Planned Behavior and 'Social Cognitive Theory	-Cyberbullying Awareness -Personality -Aggression -Anti-social Behaviour -Self-esteem -Cyberbully Attitude -Subjective Norms -Perceived Behaviour Control -Cyberbullying behavior -social media usage -Cyberbully Intention
7.	[24]	Review and Develop framework	Social cognitive theory	-personal factors, -environmental, -events, and -behavioral patterns
8.	[25]	Literature Review and Survey	Theory of Planned Behaviour (TPB)	-Attitude, -Subjective norms, -Perceived Behavioural Control
9.	[26]	Survey	Theory of Reasoned Action (TRA)	-behavioral beliefs (attitude), -normative beliefs (subjective norm) and -control beliefs (perceived behavioral control)
10.	[27]	Review	databases of CINAHL and PubMed	-Intent -Repetition -Harm -Power differential -Anonymity -Ubiquitous nature of the Internet
11.	[28]	Survey	1. Fake name 2. Fake age	-Fake name -Fake age
12.	[29]	Survey	Theory of Planned Behaviour (TPB)	-Attitude -Intention -Moral Obligation -Overall Gain -Perceived behavioral control. -Perceived Threat of Legal Punishment -Subjective Norms
13.	[30]	Survey	Theory of Planned Behaviour (TPB)	-Attitude -Intention -Moral Obligation -Overall Gain -Perceived behavioral control. -Perceived Threat of Legal Punishment -Subjective Norms

(continued on next page)

Table 1. Continued.

No.	Reference	Method	Base Model/Theory	Factors Used
14.	[31]	Review	-Theory of planned behavior (TBP) -Theory of Weiner	-Awareness -Attitude -Subjective Norm -Perceived Behavioural Control -Experience in Cyberbullying -Self-Efficacy -Felt Responsibility
15.	[32]	The framework of digital citizenship proposed by Ribble	-Theory of planned behavior (TBP) -Theory of Weiner	-Anonymity Perception -Cyberbullying Attitudes -Cyberbully Perpetration
16.	[33]	Survey	The framework of digital citizenship proposed by Ribble	-Network Anonymity. Network Moral -Cyberbullying behavior -Self Control
17.	[3]	A systematic review	PRISMA flow	-Risk Factors -Age -Gender -Online Behaviour -Race -Health Condition Protective Factors -Empathy and emotional intelligence -Personal Factors (Perpetration) - Gender -Online Behaviour -Past Experience of victimization -Impulsiveness
18.	[34]	Survey	Quality research	-Social media -Anonymity -Human behavior -self-esteem, suicidal ideation, anger, frustration, and a variety of other emotional and psychological problems
19.	[35]	Review	user-activities-content (UAC) triangular view	-User, Activity
20.	[36]	Review and Survey	cyberbullying perpetration (CBP) and cyberbullying victimization (CBV)	-CBP-Cyberbullying Perpetration -CBV-Cyberbullying Victimization

followed this. It defines behavioral intents as a direct result of perceived behavioral control, subjective norms, and personal attitudes. Attitudes describe a person's overall assessment or view of the behavior. Subjective norms define social pressure or its influence on others by considering beliefs about what others think or anticipate. Perceived behavioral control relates to an individual's perception of the difficulty or ease of performing a behavior and the perceived control they feel. Again, author [30] supports author [25] that subjective norms significantly affect cyberbully intention.

Likewise, the association between three independent variables on the mediator variable and the purpose of cyberbullying behavior as a dependent variable are presented. A review of the literature on Attitudes, Hypothesized Subjective Norms, and Perceptual Behavioral Control (PBC) research found a

positive relationship between perceived behavioral control, attitudes, and personal norms and the intention to engage in cyberbullying behavior on social media [26].

2.6. Attitude and cyberbully intention

Attitudes refer to an individual's overall evaluation or perception of a specific behavior. It involves the beliefs about the consequences of performing the behavior and the overall judgment of whether it is positive or negative. Positive attitudes toward a behavior are more likely to result in a positive intention to engage in that behavior. When a person's behavior results in a negative consequence, they will have a negative attitude towards the behavior, influencing the intention to perform the behavior [37]. Likewise, students' attitudes will indicate their intention

to engage in cyberbullying behaviors [38]. However, according to [31], cyberbullying did not substantially predict either desire to intervene or intervening behavior in the path analysis model. The results of the prior study were mixed. Hence the author would like to hypothesize that.

H1. *There is a positive and significant relationship between attitude and cyberbully intention.*

2.7. Subjective norm and cyberbully intention

Subjective norms are societal constraints or normative ideas about specific behavior. It includes the individual's perspective of what significant others think about the behavior, such as family, friends, or classmates [37]. According to [25], the findings of his study, subjective norms were the most important predictors of intentions to engage in cyberbullying behavior, followed by attitudes against cyberbullying and PBC. Subjective norms (SN) have the most significant direct impact on cyberbullying intentions and behaviors [29]. The subjective norm is influenced by others' perceived expectations and motivation to meet those expectations. In applying the Theory of Planned Behavior study's findings, the influence of subjective norms on the intention to cyberbully was highly significant (p-value 0.01) [30]. Likewise, the result of a previous study shows the intention to cyberbully was significantly affected by subjective norms at a very high level (p-value 0.01) [30]. Therefore, the authors would like to hypothesize that.

H2. *There is a positive and significant relationship between subjective norms and cyberbully intention.*

2.8. Perceived behavioral control and cyberbully intention

According to [29], Perceived behavioral control refers to a person's belief in their capacity to perform the behavior and form the research with route coefficients, PBC and SN showed a positive effect on the intention to perform cyberbullying behaviors. Perceived Behavioral Control considers aspects such as talents, resources, opportunities, and constraints that may influence the likelihood of the behavior. A stronger intention to undertake the behavior is associated with more perceived behavioral control. The correlational analysis of interfering in cyberbullying among Chinese Cyber-Bystanders revealed that perceived behavioral control over the intervention was positively connected with the intention to intervene in cyberbullying [31]. Meanwhile, a previous study, such as a study by [21], revealed that per-

ceived behavioral control does not affect Malaysian students' intention to build cyberspace. Nevertheless, the author [37] hypothesized a substantial association between beliefs underlying perceived behavioral control (ICT characteristics and ICT expertise) and cyberbullying intention. As a result, the authors would like to propose that.

H3. *There is a positive and significant relationship between perceived behavioral control and cyberbully intention.*

2.9. Anonymity and cyberbully intention

Anonymity plays a significant role in cyberbullying, as it provides individuals with a sense of protection and reduced accountability for their actions. When perpetrators can conceal their identity online, they feel more empowered to engage in aggressive and harmful behaviors [5]. Based on a study by they may feel less inhibited and more likely to target others with hurtful and offensive content.

Social media can help minimize cyberbullying, but anonymity, or apparent anonymity, must be reduced [5]. Social media and the Internet can provide people with anonymity [13]. It was hypothesized that perceptions regarding the negative effects of anonymous cyberbullying were influenced by a person's perception of anonymity, which in turn affected normative beliefs and, ultimately, the intentions of cyberbullies [21]. Given the above, it is hypothesized that:

H4. *There is a positive and significant relationship between anonymity and cyberbully intention.*

2.10. Fake account as moderator of cyberbully intention

A study [39] discovered a link between cyberbullying and fake accounts, and the author emphasizes that digital profiles should be respected during adolescence, which minimizes the occurrence of cyberbullying. Likewise, a fake account on social media is often used to attack psychological cyber information and manipulate social opinion during warfare [6]. Again, because of technological advancements, anyone can easily create fake accounts for derogatory remarks and bullying actions on social media. The consequences are severe, particularly for victims or targets. [14]. Again, fake accounts on Facebook, Instagram, and Twitter also provide the chance to carry out cyberbullying in an anonymous manner [40]. According to [41], future studies will investigate if the Theory of Planned Behavior (TPB) model enhances the prediction of actual faking behavior and faking

intention. This study has looked at the usefulness of the TPB model in connection with the intent to fake in psychological testing. As a result, in the current case of cyberbullying, the author decided to use a fake account as a moderator to facilitate the relationship between attitude, subjective norm, perceived behavioral control, and the goal of cyberbullying. Therefore, it is hypothesized that:

H5. *Fake account usage will positively moderate the relationship between attitude and cyberbully intention.*

H6. *Fake account usage will positively moderate the relationship between subjective norms and cyberbully intention.*

H7. *Fake account usage will positively moderate the relationship between perceived behavioral control and cyberbully intention.*

H8. *Fake account usage will positively moderate the relationship between anonymity and cyberbully intention.*

3. Research methodology

3.1. Research design

A descriptive survey study was used to fulfill the study's objectives. According to [38], a quantitative

correlational research design is the best for studying relationship variance questions since it allows for the statistical analysis of quantitative data to look at relationships between variables. In accordance with this study, a survey will be undertaken to gather data on varying perceived behavioral control, subjective norms, attitudes, anonymity, and cyberbullying intentions.

3.2. Measurement instrument

The survey instrument contains three main sections, starting with four items on user demographics and one item about social media use. The third component has 28 items that are intended to investigate six variables: perceived behavioral control, attitude, subjective norms, anonymity, cyberbully intention, and fake accounts as moderators influencing cyberbullying. Answers to the items in this survey will be given on a 7-point Likert scale such that 1 corresponds to "strongly disagree" and 7 to "strongly agree."

3.3. Measurement instrument

As indicated in Fig. 2, the item measure for each construct has been upgraded from prior research with the addition of anonymity and fake account as external variables. The combination between the Theory of Planned Behavior (TPB) and the element of anonymity and fake account is used as a model in

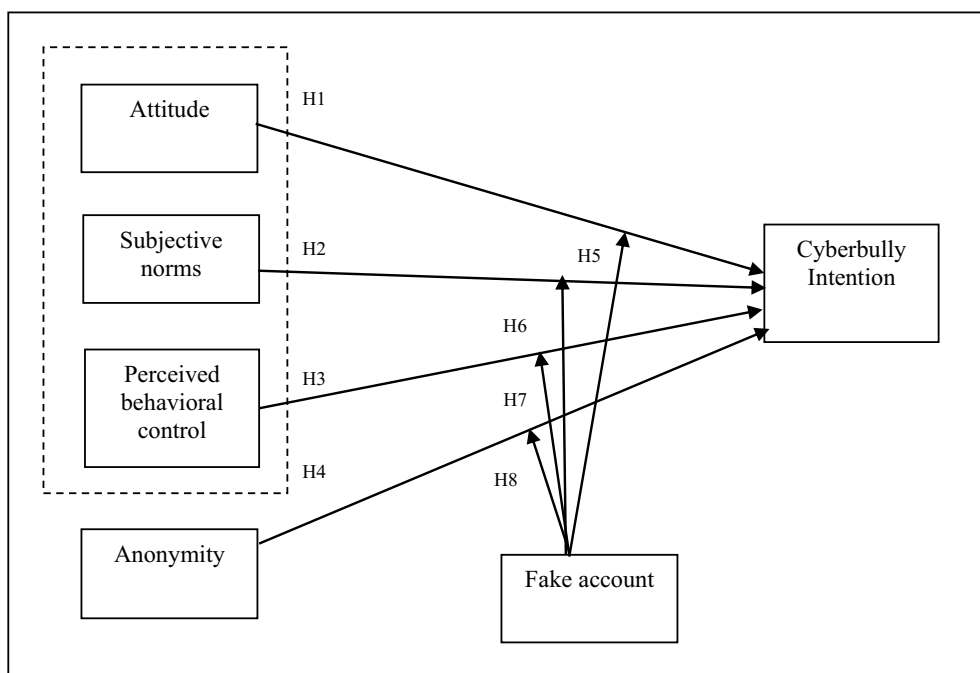


Fig. 2. Cyberbully intention model.

this study. Behavior for the Theory of Planned Behavior was excluded because the study only focused on cyberbully intention. There are five independent variables namely attitude (AT), subjective norm (SN), perceived behavioral control (PBC) and anonymity (AN). One dependent variable is a cyberbully intention that will be used in this study.

There are five independent variables: attitude, subjective norm, perceived behavioral control and anonymity. One dependent variable is the cyberbully intention that was used in this study.

3.4. Data collection

The questionnaire has been shared and disseminated on Facebook, Instagram, Twitter, and WhatsApp Group platforms. Respondents in this study are open to social media users of Malaysian society. This questionnaire instrument was constructed in English languages and was collected for 20 days from June 19, 2023, to July 8, 2023. Following that, 305 people completed the questionnaire.

This study collected data on social media users through Google Forms and Microsoft Excel. The recommendation for this data analysis is to use SPSS Statistics and Smart PLS 4 data analysis software. Smart PLS 4 was also used to assess the hypotheses made for this investigation.

Descriptive statistics and assessment of both structural and measurement were used in this work to meet the two research issues. The first research question went deeper into each of the four predictor variables, attempting to determine whether and to what extent a relationship exists between social media users' intention to engage in cyberspace bullying and their attitudes, anonymity, fake account, subjective norms, and perceived behavioral control. Next, the dataset was used to examine the moderating effect of fake accounts on cyberbully intentions.

The data is analyzed through two stages, namely, measurement model assessment and structural model assessment.

4. Data analysis and results

4.1. Measurement model analysis

The minimum and maximum values are reviewed first in the data cleaning process. This analysis found no missing data, and outliers and extreme outliers were removed using SPSS software. Z score is a method used to detect data outliers [42]. The result of the Z-Scores method is 273 of the total 305 data used in this study. Thirty-two data had to be removed because of high outlier values. Table 2 shows re-

Table 2. Demographics.

Demographic features	No. of Respondents	Percentage (%)
<i>Gender</i>		
Male	96	35.2
Female	177	64.8
<i>Ethnicity</i>		
Malay	221	81.0
Chinese	78	10.3
Indian	18	6.6
Others	6	2.2
<i>Age Group</i>		
15 to 25 years old	98	35.9
26 to 35 years old	45	16.5
36 to 45 years old	90	33.0
46 to 55 years old	35	12.8
56 to 65 years old	5	1.8
<i>Employment Status</i>		
Full-time employment	149	54.6
Housewife	12	4.4
Part-time employment	5	1.8
Retired	1	0.4
Self-employed	14	5.1
Student	84	30.8
Unemployed	8	2.9
<i>Status of Social Media User</i>		
Frequent use	190	69.6
Random use	83	30.4

spondents' demographics which contain information related to gender, ethnicity, age, employment status, and frequency of using social media.

Data analysis of the respondent's demographics shows that most respondents are female (64.8%) and Malay ethnicity (81.0%). The percentage of Malay respondents is high in accordance with the Malaysian population data. Most of the respondents were in the age group of 15 to 25 years (35.9%), followed by 36 to 45 years (33.0%). Mean-while, 54.6% of the respondents are full-time workers, followed by those who hold the title of student at 30.8%, Self-employed at 5.1%, and the rest are those with other statuses. Most respondents are those who frequently use social media (69.6%).

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Smart PLS software determined reliability and construct validity by applying factor loading, Average Variance Extracted (AVE), Cronbach alpha and

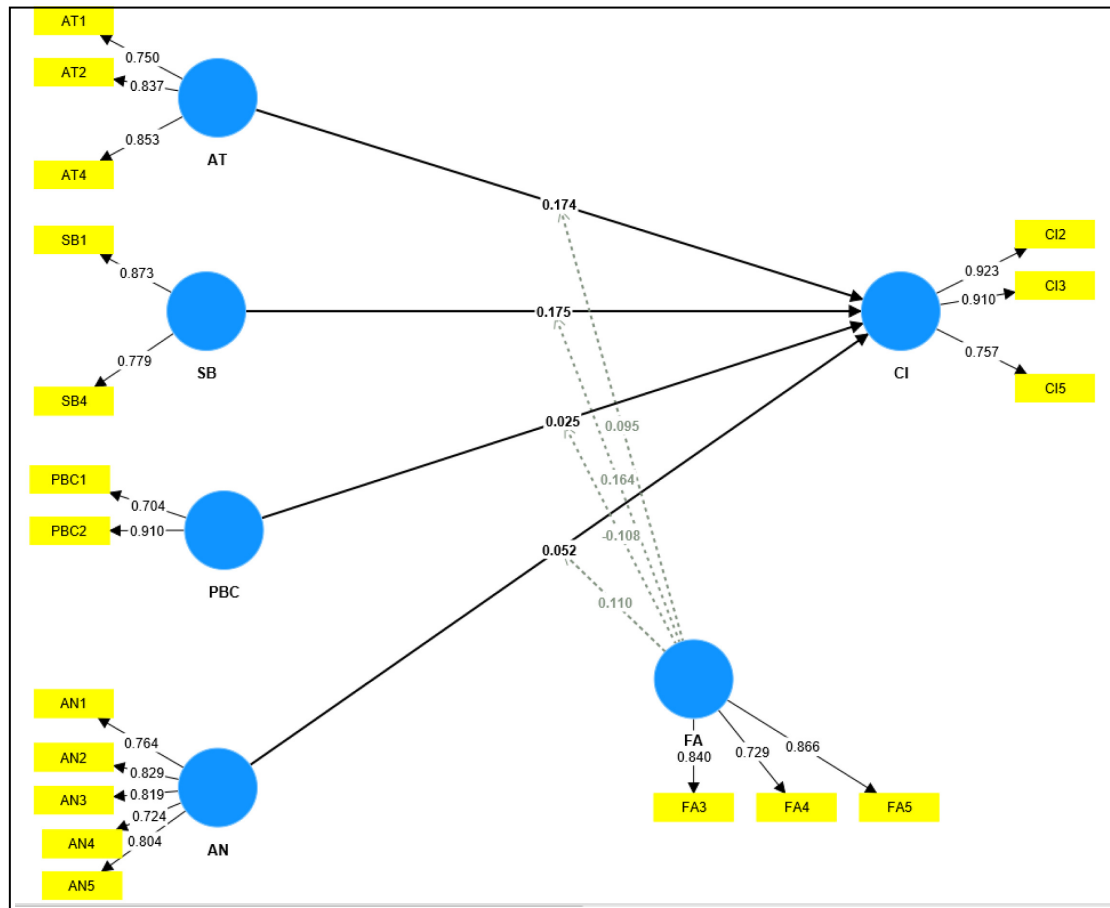


Fig. 3. Measurement model of the study.

Composite reliability (CR). Further, from the value that has been obtained, one reflective indicator from 'Attitude,' two reflective indicators from 'Subjective Norm,' two reflective indicators from 'Perceived Behavioral Control,' two reflective indicators from 'Face Account' and three reflective indicators from 'Cyberbully Intention' were removed, respectively.

The outer loading of an indicator on a latent construct is the standardized regression weight that shows how well the indicator measures the underlying construct. It assesses the extent to which the variance in the indicator can be explained by the concept it represents. The outer loadings test was used to assess an item's precise contribution to its assigned construct [21]. Each item's outer loading is depicted in Fig. 3.

The outcomes of Cronbach alpha, Composite reliability (CR) and Average Variance Extracted (AVE) are displayed in Table 3. The proposed Cronbach's alpha and Construct Reliability value is greater than 0.7, and the Average Variance Extracted (AVE) value is greater than 0.5. However, it is seen that there are two constructs, namely Subjective Norm and Per-

ceived Behavioral Control, which have a Cronbach's alpha value below 0.7 but reach the level of Composite reliability (rho_c) and Average variance extracted (AVE).

Based on these two metrics, the concept appears to have strong convergent validity and construct reliability. The AVE of more than 0.5 shows that the concept explains most variation in each indicator, and the CR greater than 0.7 indicates strong internal consistency among the indicators. However, Cronbach's alpha below 0.7 may still raise concerns about the internal consistency of the indicators. It's worth noting that Cronbach's alpha is sensitive to the number of items in the construct and may underestimate its reliability, especially when it consists of a small number of items.

Discriminant validity investigates if a construct measures a distinct notion that is not substantially associated with other constructs in the model. A relatively recent approach for testing discriminant validity in PLS-SEM is the Heterotrait-Monotrait (HTMT) correlation ratio. It provides a basic and readily interpretable method for assessing the uniqueness of

Table 3. Result of Cronbach's Alpha, Composite Reliability, and Composite Reliability.

Construct	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance extracted (AVE)
Anonymity (AN)	0.853	0.875	0.892	0.623
Attitude (AT)	0.749	0.771	0.855	0.664
Cyberbully Intention (CI)	0.831	0.851	0.9	0.751
Face Account (FA)	0.748	0.788	0.854	0.662
Perceived Behavioral Control (PBC)	0.515	0.612	0.794	0.662
Subjective Norm (SB)	0.546	0.568	0.813	0.685

Note: Cronbach's alpha > 0.7; Composite reliability (rho_a) > 0.7; Composite reliability (rho_c) > 0.7. Average variance extracted (AVE) > 0.5.

Table 4. Discriminant Validity Heterotrait-Monotrait Ratio of Correlations (HTMT).

	AN	AT	CI	FA	PBC	SB	FA x PBC	FA x SB	FA x AN	FA x AT
AN										
AT	0.261									
CI	0.236	0.551								
FA	0.245	0.303	0.457							
PBC	0.468	0.437	0.348	0.353						
SB	0.414	0.861	0.69	0.502	0.644					
FA x PBC	0.078	0.158	0.109	0.291	0.149	0.133				
FA x SB	0.063	0.388	0.479	0.231	0.098	0.51	0.348			
FA x AN	0.046	0.115	0.24	0.022	0.065	0.091	0.096	0.285		
FA x AT	0.08	0.384	0.453	0.205	0.155	0.436	0.334	0.716	0.342	

Note: Heterotrait-Monotrait (HTMT) < 0.9; AN = Anonymity; AT = Attitude; CI = Cyberbully Intention; FA = Fake Account; PBC = Perceived Behavioral Control; SB = Subjective Norm.

conceptions. The HTMT criteria compare correlations across constructs to correlations within the same construct. If the HTMT score is less than 0.90, discriminant validity between two reflective notions has been established. Table 4 shows the results.

The Fornell-Larcker criteria are based on the Average Variance Extracted (AVE) and the construct correlation matrix. Researchers examine the square of the correlation between two constructs with the AVE of each component to see whether discriminant validity is attained [43]. Table 5 shows The Fornell-Larcker for each variable.

One of the extensively used measures of a research model's quality of fit is the standardized root mean square residual (SRMR) [20]. A research model is considered to have the best goodness of fit when

the SRMR score is less than 0.08. The results are displayed in Table 6.

4.2. Structure model

The structural model is the component of the analysis that looks at the links between the theoretical model's latent constructs (also known as factors). The intensity and direction of these associations are represented by the structural model coefficients, also known as path coefficients or regression weights [44]. Bootstrapping is a statistical resampling technique to estimate a statistic's sampling distribution [20]. A total of 5000 resampling experiments were performed to determine the standard error and significance of the parameter estimations.

Hypotheses for this study have been tested through the significance of the path coefficients and the results are shown in Table 7. The influence of anonymity and fake accounts on cyberbully intention in social media, where hypotheses H1, H2, H7, and H8 were supported, where hypotheses H3, H4, H5, and H6 were not supported, respectively.

Table 5. The Fornell-Larcker of each variable.

	AN	AT	CI	FA	PBC	SB
AN	0.789					
AT	0.218	0.815				
CI	0.216	0.444	0.867			
FA	0.193	0.244	0.373	0.814		
PBC	0.321	0.273	0.233	0.23	0.814	
SB	0.296	0.566	0.473	0.327	0.335	0.828

Note: The square root of the average variance extracted (AVE) is shown by the diagonal elements (bold). Correlations between constructs are considered off-diagonal elements.

Table 6. Model fitness.

	R-square	R-square adjusted
CI	0.401	0.381

Table 7. Hypothesis results.

Hypothesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Decision
H1: AT -> CI	0.174	0.177	0.065	2.66	0.008	Supported
H2: SB -> CI	0.175	0.173	0.071	2.462	0.014	Supported
H3: PBC -> CI	0.025	0.027	0.046	0.54	0.589	Not Supported
H4: AN -> CI	0.052	0.057	0.038	1.353	0.176	Not Supported
H5: FA x AT -> CI	0.095	0.102	0.078	1.216	0.224	Not Supported
H6: FA x SB -> CI	0.164	0.149	0.091	1.794	0.073	Not Supported
H7: FA x PBC -> CI	-0.108	-0.106	0.054	1.997	0.046	Supported
H8: FA x AN -> CI	0.11	0.108	0.054	2.046	0.041	Supported
FA -> CI	0.223	0.227	0.055	4.074	0.000	Supported

Note: P value < 0.05; AN = Anonymity; AT = Attitude; CI = Cyberbully Intention; FA = Fake Account; PBC = Perceived Behavioral Control; SB = Subjective Norm.

RQ1: The Factors that influence cyberbully intention in social media.

H1 is related to the relationship between attitudes and cyberbully intentions, which results show a significant relationship with (O = 0.174, T statistics = 2.66, P values = 0.008). H2 depicts the relationship between subjective norms and cyberbully intent. The result is significant with a value of (O = 0.175, T statistics = 2.46, P values = 0.014). H3 examines the relationships between perceived behavioral control and cyberbully intention and finds a non-significant relationship (O = 0.025, T statistics = 0.54, P values = 0.589). H4 investigates the relationship between anonymity and cyberbully intention, yielding non-significant results (O = 0.052, T statistics = 1.353, P values = 0.176).

RQ2: The fake account moderating the factor on cyberbully intention.

H5 depicts the moderating influence of fake account with attitude and cyberbully intention with a value (O = 0.095, T statistics = 1.216, P values = 0.224). The results suggest that there is no successful moderating effect on cyberbully intention. H6 is about the moderating effect of a fake account with subjective norms and cyberbully intention with supporting value (O = 0.164, T statistics = 1.794, P values = 0.073), and the results reveal that the moderating role is not successful. H7 shows the moderating effect of fake account with the perceived behavioral control and cyberbully intention with value (O = -0.108, T statistics = 1.997, P values = 0.046). It has a negative value of significant result and has a successful moderating effect on the cyberbully intention.

H8 shows a moderating effect of fake accounts and anonymity with cyberbullying intentions, with a positive result value (O = 0.110, T statistic = 2.046, P value = 0.041). The findings indicate that there is a successful moderating effect on cyberbully intention.

Overall, H7 is accepted; fake account significantly moderates the influence of perceived behavioral control on cyberbully intention with path coefficient moderation (-0.108) and p values (0.046 < 0.05) because this negative path coefficient (-0.108) means that it weakens the factor of perception of behavioral control against cyberbullying intentions.

H8 is accepted; Fake Account significantly moderates the influence of anonymity on cyberbullying intentions with the moderation of the path coefficient (0.110) and P value (0.041 < 0.05). Because the path coefficient (0.110) is positive, this can increase the anonymity factor on cyberbullying intentions.

Next, the Effect size of the moderation influence using the F square effect size measure with the F square criterion (0.005 small, 0.001 medium, 0.025 large) [45]. Table 8 shows F Square for each variable.

The influence of fake accounts in moderating the influence of perceived behavioral control on cyberbully intention has a moderating effect at medium effect size (f square = 0.014) and the influence of fake accounts in moderating the influence of anonymity on cyberbully intention also has a moderating effect at medium effect size (f square = 0.017). Fig. 4 depicts the moderating influence of fake account use perceived behavioral control and cyberbully intention, while Fig. 5 show the moderating role of fake account with anonymity and cyberbully intention.

Table 8. The f-square of each variable.

	f-square
AN -> CI	0.004
AT -> CI	0.032
FA -> CI	0.067
PBC -> CI	0.001
SB -> CI	0.029
FA x PBC -> CI	0.014
FA x SB -> CI	0.025
FA x AN -> CI	0.017
FA x AT -> CI	0.01

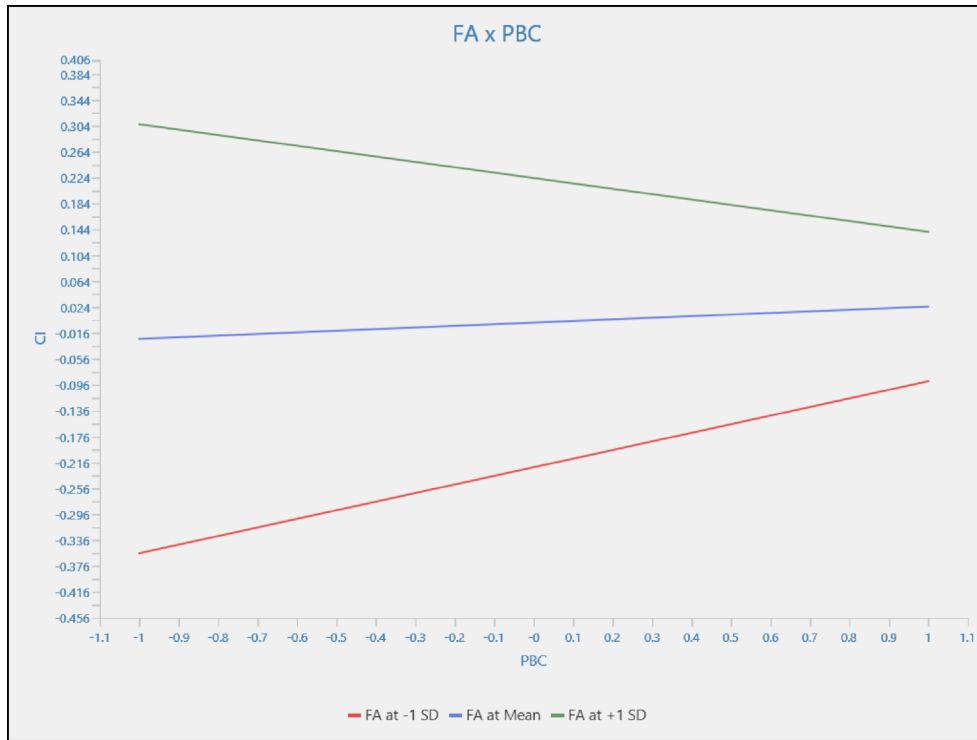


Fig. 4. Moderating role of fake account with perceived behavioral control and cyberbully intention.



Fig. 5. Moderating role of fake account with anonymity and cyberbully intention.

5. Discussion

The results presented show that there are factors that influence cyberbullying intentions, including fake accounts as moderate factors that influence some of these cyberbullying factors. According to the purpose of the Cyberbully Intention Model, the current research findings reveal that attitude and subjective normative elements have significant associations with the development of cyberbully intention. The PLS-SEM results suggest that half of the hypothesized relationships are significant. However, the findings show that perceived behavioral control and anonymity have no significant link with cyberbully intention.

The results of this study show that attitudes have a significant relationship with cyberbullying intentions. This is further strengthened by previous studies of [37] revealing a positive and significant relationship between these two variables. However, the results show that fake accounts are not a factor in the moderating effect of attitudes and cyberbullying.

Subjective norms are significant with cyberbully intention and not significant with a fake account as a moderator of the relationship. Subjective norms are not significant, with false accounts mitigating the relationship: This shows that the effect of subjective norms on cyberbullying intention is weaker with fake accounts. In other words, even if a person feels that their social circle disapproves of cyberbullying, this does not appear to mitigate or affect their chance of engaging in cyberbullying using fake accounts.

These studies find a non-significant relationship between perceived behavioral control and cyberbullying intention. There are significant findings from some past studies and non-significant ones, such as studies by [20]. On the other hand, fake accounts have a significant moderating effect on perceived behavioral control and cyberbullying. The existence of fake accounts can change the dynamics of perceived control and its influence on cyberbullying intentions.

The results showed that anonymity was not significant with cyberbullying intentions. Although a previous study shows a significant relationship between anonymity and cyberbully intention, a study of [32] states that most accounts are anonymous because it gives individuals a sense of protection. However, anonymity and fake account cannot be separated when the results show moderate fake accounts anonymity and cyberbully intention.

Although there are factors that do not get significant results with this cyberbully intention, a small amount still has a relationship. This construct can

be used with a large and extensive collection for future studies. Because fake accounts affect perceived behavior and anonymity with cyberbully intention, social media platforms need to control the existence of fake accounts more strictly on social media. The cybersecurity landscape also plays a role so that identifying fake accounts is easy to spot and reduce. Even the awareness of this fake account needs to be revealed to social media users.

While conducting this study, few studies used fake accounts to moderate cyberbully intention. The subsequent study can use the proposed model by adding more question instruments. Perhaps this study can be expanded, especially regarding the sentiment of the word towards cyberbully intention from fake account posting on social media.

6. Conclusion

The current study sheds light on the association between cyberbullying intention and the usage of fake social media profiles. Furthermore, the study findings that attitudes and subjective norms are key factors to cyberbullying intentions. Fake accounts are seen as medium effect moderating anonymity and perceived behavioral control to become a cyberbully intention. However, the study's limitations must be acknowledged, and future research should seek to solve these limitations by using more diverse samples and investigating other characteristics that may contribute to cyberbullying intention and false account usage on social media.

Ultimately, this study adds to the expanding body of information on cyberbullying. It emphasizes the need for effective treatments and legislation to foster a safer and more respectful digital environment for all users. We can create a more positive online experience for everyone if we grasp the nuances of cyberbully intent and the function of fake accounts.

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Conflicts of interest

The authors declare no conflict of interest.

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