## Cyberbullying among University Students: A Study on Sri Lankan Universities

# Inthusha, Kal, Kajananthan, Ra2\*

<sup>a</sup>Department of Commerce, Faculty of Management Studies and Commerce,
University of Jaffna, Sri Lanka

<sup>1</sup>inthusha@univ.jfn.ac.lk, <sup>2</sup>k.r.kaja@univ.jfn.ac.lk\*

\*Corresponding Author

### **ABSTRACT**

Cyberbullying serves as a channel through which individuals who have faced victimization during their university experience can vent their anger and frustration. This study delves into the determinants influencing cyberbullying among university students. We collected and analyzed 150 relevant responses from university students in the Sri Lankan context, employing multiple regression analysis. The findings reveal that social influences, social media usage, internet addiction, social anxiety, and trait anger significantly impact cyberbullying behaviors. However, it is essential to note that this study is confined by its focus on only five variables and a sample limited to Sri Lankan state university students. Despite these constraints, our research enriches the understanding of cyberbullying dynamics, advocates for heightened awareness among students, authorities, government bodies, and other stakeholders, and offers recommendations to promote online safety and combat cyberbullying.

**Keywords**: Cyberbullying; University students; Social media; Internet addiction; Social anxiety; Awareness

# 1. Background of the study

Bullying is a pervasive issue in educational institutions, including schools, colleges, and universities. The problem of university bullying is a significant and cross-cultural concern that has garnered considerable attention in various regional contexts. With the advent of globalization and the widespread use of cell phones, laptops, desktop computers, and tablets, traditional bullying has given way to cyberbullying (Whittaker & Kowalski, 2015). Cyberbullying provides an avenue for students to express their anger and engage in violent behavior as technology and social media platforms are easily accessible. According to Tokunaga (2010), cyberbullying refers to any repeated communication of harmful or derogatory messages through electronic media by individuals or groups to harm or trouble others. Global surveys on mobile phone usage have reported that 49% of school students and 26% of university students have experienced some form of cyberbullying, making them vulnerable to such harassment (Rahman et al., 2021). Various forms of cyberbullying include flaming (sending angry and rude messages via chatrooms), online harassment (aggressive messages aimed at hurting someone), outing (disclosing private information), misinformation (spreading false information about someone), and sexting (sending sexual images or videos) (Whittaker & Kowalski, 2015).

Numerous studies worldwide have established a correlation between victimization by cyberbullying and adverse mental and psychological health outcomes, either as bullies or victims, can have detrimental short-term, medium-term, and long-term effects on their psychological well-being, potentially leading to university dropout, social isolation, depression, and even suicidal tendencies (Lee & Wu, 2018; Reed et al., 2016; Hellfeldt et al., 2020).

The impact of cyberbullying on students goes beyond physical harm, with some cases resulting in suicide. With the widespread acceptance of social networking sites such as Facebook, Messenger, Instagram, Snapchat, Twitter, and Instant Messages (IM) among students, the risk of cyberbullying cannot be ignored. Given the current prevalence of cyberbullying, it has become a pandemic issue causing emotional distress to university students in Sri Lanka and globally (Jennings, Song, Kim, Fenimore & Piquero, 2019).). As online engagement has become an integral part of university students' lives, cyberbullying poses a significant challenge to their educational and emotional well-being (Abaido, 2020). In recent years, the problem of bullying has gained significant public attention in Sri Lanka, with instances of students being bullied within their universities, leading to tragic outcomes for some individuals (Mangaonkar et al., 2022). The increasing rate of technology adoption in Sri Lanka and the popularity of social media platforms among university students have exacerbated the situation, with a significant number of students experiencing cyberbullying (Nazeer & Pathmeswaran, 2017). Technology's global reach and the creation of virtual environments have spawned a new world of bullying without geographical boundaries. Consequently, cyberbullying has emerged as a potent issue in society. By addressing cyberbullying effectively, the findings of this research will contribute to the overall well-being and mental health of Sri Lankan university students. It will help create an inclusive and supportive learning environment where students can thrive academically, emotionally, and socially.

In examining cyberbullying behaviors among university students in Sri Lanka, this study investigates the influence of various factors. It explores whether social influence, social media usage, internet addiction, social anxiety, and trait anger have significant impacts on cyberbullying behavior within this demographic.

- Does social influence impact cyberbullying behavior among university students in Sri Lanka?
- Does social media usage influence cyberbullying behavior among university students in Sri Lanka?
- Does internet addiction influence cyberbullying behavior among university students in Sri Lanka?
- Does social anxiety influence cyberbullying behavior among university students in Sri Lanka?
- Does trait anger influence cyberbullying behavior among university students in Sri Lanka?

## 1.1 Significance of the study

This study on cyberbullying at Sri Lankan universities is significant for various reasons. First, it emphasizes a concern that has drawn attention on a global scale and calls attention to the fact that cyberbullying is an issue, particularly at Sri Lankan institutions. By seeing the need to address cyberbullying in the local academic context and focusing on this group, the study contributes to the growing body of research on this topic. By analyzing the factors that lead to it and its impact on student's well-being, the research also advances our knowledge of the dynamics and effects of cyberbullying. An in-depth understanding of these causes and their impacts is necessary to develop effective preventative and intervention strategies. By highlighting the challenges faced by university students in Sri Lanka, the study offers a nuanced perspective on the issue. At the very least, this study significantly impacts future policy decisions and intervention strategies. The study may assist educational institutions, policymakers, and other vital stakeholders in developing comprehensive anti-cyberbullying policies and initiatives by providing evidence-based recommendations.

Enhancing digital knowledge, raising empathy and respect, and offering assistance to victims of cyberbullying are possible recommendations. Therefore, those who seek to improve the safety and usefulness of universities in Sri Lanka might use the research as a helpful tool. The research also emphasizes the significance of students' physical and mental well-being. The study recommends addressing both the online and offline learning settings for university students at the same time in order to mitigate the harmful effects of cyberbullying. It emphasizes the importance of educating university students about online safety and providing them with the tools to deal with cyberbullying. Lastly, the study emphasizes the value of collaboration and a comprehensive approach to combating cyberbullying. In order to combat this issue, it emphasizes the need for cooperation between universities, higher education authorities, and students' parents. The study hopes to build a long-term infrastructure for cyberbullying prevention and victim support through cooperation and a comprehensive approach. By lowering safety hazards and boosting student support services, this study will help make universities in Sri Lanka a better environment for students to learn. The research aims to assist youngsters by examining the particulars of cyberbullying in this population and proposing remedies that might enhance their well-being, academic achievement, and happiness.

#### 2. Literature Review

### 2.1 General Strain Theory (GST)

According to the General Strain Theory (GST) (Agnew, 1992), people who are under much stress are more prone to become angry and frustrated, which increases their likelihood of participating in deviant behavior, including bullying, cyberbullying, and criminality—instances where people are not treated the same way they would like to be treated by others. Cyberbullying can be seen as a means for individuals who have experienced victimization in university to release their anger and frustration. GST extends strain theories by incorporating the loss of positive stimuli, exposure to harmful stimuli,

and goal blockage as specific strains associated with criminal behavior, including cyberbullying (Paez, 2018).

# 2.2 The General Theory of Crime (GTC)

The General Theory of Crime (GTC) (Hirschi & Gottfredson,1993) is a comprehensive framework that integrates the leading causes of risk and provides a concise theory of crime. The theory suggests that individuals are more likely to engage in crime when their motivations are strong and their constraints are low. Individuals with low self-control are more prone to engage in criminal and antisocial behaviors, including bullying and cyberbullying. Low self-control is seen as a stable personality trait that develops due to deficient socialization during early childhood, resulting in impulsivity, a preference for risky activities, simplistic tasks, physical rather than mental activities, and a quick temper. Constraints, on the other hand, serve as deterrents that discourage individuals from engaging in criminal activities. The GTC also suggests that individuals may be motivated to engage in crime due to internal and external factors that either attract or push them toward criminal behavior, including cyberbullying. Research has shown that low self-control, as well as elements like online activity and relationships with deviant peers, are significant predictors of cyberbullying behavior (De Ridder, Lensvelt-Mulders, Finkenauer, Stok & Baumeister, 2012).

### 2.3 Definition of Cyber Bullying

Cyberbullying is defined as the act of using digital media, such as the internet and mobile devices, to threaten, humiliate, or mock others repeatedly. It involves transmitting or posting offensive messages, derogatory comments, or unflattering images intending to harm or distress the target (US Government, 2020). Various forms of cyberbullying have been identified, including flaming (sending angry and rude messages), online harassment (aggressive messages to hurt someone), outing, misinformation (spreading false information), and sexting. The common thread in all definitions is that cyberbullying occurs through the use of electronic media to inflict harm on others (Landstedt & Persson, 2014).

# 2.4 Social Influences

Social influences play a significant role in shaping individuals' behavior, particularly in the context of social media and online networks. The internet provides both content and opportunities for perpetrators and victims and for direct observation of others' online behavior.

Students are directly or indirectly influenced by their relationships with friends, peers, educators, and other influential individuals. They watch and accept behavioral norms and standards of conduct from older pupils as they develop and socialize through social media., progressing toward societal conformity. Peers, in particular, strongly influence students' attitudes and actions, as students often observe and emulate their peers' behavior (Milem, 1998).

H1: Social influence positively impacts cyberbullying behavior among university students.

#### 2.5 Use of social media

Social media has become a pervasive aspect of student life. It is a popular medium for students to spend time and engage in various activities. Social media platforms offer numerous benefits to students, including communication with classmates, access to information, learning opportunities, staying updated on current events, receiving class updates, and connecting with peers and family members. Social media refers to electronic communication platforms (Alghizzawi et al., 2019).

While social media has its advantages, the increased usage has also led to the widespread issue of cyberbullying, particularly among teenagers and young students. Cyberbullying has emerged as a significant concern, associated with behavioral and mental health problems and an increased risk of suicide. Popular social media sites like Facebook, Twitter, Instagram, and others have become platforms where cyberbullying occurs, partially due to their widespread popularity. Social media has become one of the primary mediums for cyberbullying in today's world (Abaido, 2020).

Research has shown that both excessive and problematic use of social media is associated with increased levels of cyberbullying and cyber victimization among students. Social media platforms allow users to share content and information based on their account settings selectively. This capability gives students unprecedented access to private information and a readily available platform to target and harm others. Unlike traditional forms of bullying, bullying messages on social media can persist and bother users around the clock. The consequences of cyberbullying through social media can be more severe and far-reaching than other forms of bullying (Gönültaş, 2022).

H2: Social media use has an impact on cyberbullying behavior among university students.

#### 2.6 Internet Addiction

With easy access to technology, the Internet has become an integral part of students' lives in various countries, including Sri Lanka. Students rely on the internet to complete assignments, stay updated with class information, and communicate with peers and teachers. While the internet offers numerous benefits, there are also potential problems associated with its use, such as internet addiction and inappropriate usage (Ramani, 2015). Internet addiction refers to an individual's inability to control their internet use, leading to addictive symptoms, functional impairment, and possible comorbidity. However, there is no widely accepted definition or standard. There are no rating systems for internet addiction. Internet dependence falls within the category of behavioral addictions, which includes other forms of addictive behaviors like media addiction, mobile addiction, gambling, eating, and sex. It poses risks of social problems such as social phobia, depression, and cyberbullying (Shaw & Black, 2008).

Studies have shown that students are particularly susceptible to excessive internet use. While there are positive aspects to using the internet, these positive experiences can also encourage individuals to continue using the internet excessively. Some researchers argue

that the functional use of the internet is associated with cognitive control over one's behavior, enabling individuals to end internet use once their tasks or needs are fulfilled. However, the lack of control over personal information online and the uncontrollable use of the internet can lead to addiction and personality disorders and increase the risk of encountering online abuse (Firth et al., 2020; Chen & Nath, 2016).

Internet addiction is a complex issue that requires further research and understanding. Students and individuals, in general, need to maintain a healthy balance in their internet usage, ensuring that it does not interfere with their daily lives and well-being.

H3: Internet addiction has a positive impact on cyberbullying behavior among university students.

## 2.7 Social Anxiety

Social anxiety is a psychological problem that plays a significant role in understanding interpersonal behavior. It encompasses various factors, including the fear of negative evaluation, social distress and avoidance, and discomfort in new social situations. This issue is particularly prevalent among students and children, as socially anxious individuals may struggle to initiate social interactions, gain acceptance within peer groups, and form close friendships (La Greca & Lopez, 1998).

Anxiety is closely linked to cyberbullying in the modern age, often driving students to engage in such behaviors. Anxiety has an impact on students' perpetration of cyberbullying. Individuals who experience poor relationships with their parents or families, leading to unmet needs and desires, may develop insecure attachment systems, negative self-perceptions, negative perceptions of others, and uncertain perceptions of the world. These factors contribute to anxiety, which can subsequently drive students toward cyberbullying. When students feel depressed or anxious and lack someone with whom they can share their feelings, they may resort to cyberbullying as a means of coping (Martínez-Monteagudo et al., 2020).

Research suggests that individuals with high levels of social anxiety and limited social skills in face-to-face interactions may turn to social networks to communicate and make new friends, exposing themselves to increased vulnerability to online victimization (Lai et al., 2023).

H4: Social anxiety has a positive impact on cyberbullying among university students.

### 2.8 Trait Anger

Anger is a powerful emotion common among bullies and victims of various forms of bullying, including cyberbullying. Trait anger is a personality trait that reflects individual differences in the tendency to experience anger as an emotional state. The experience of anger is likely a contributing factor to engagement in cyberbullying. This emotional response may stem from an inherent predisposition characterized by anger (Lonigro et al., 2015).

Trait anger can be understood as a consistent tendency to display anger across different situations and over time, wherein an individual frequently experiences anger in various contexts. Previous research has indicated that anger is a significant predictor of cyberbullying perpetration. Studies have found a positive relationship between high levels of trait anger and engagement in cyberbullying (Veenstra et al., (2018). Lovegrove factors related to bullying and cyberbullying involvement among American middle school children and discovered that heightened levels of anger were associated with a higher likelihood of being part of the bully or bully-victim groups (Ding et al., 2020).

H5: Trait anger has a positive impact on cyberbullying behavior among university students.

# 2.9 Conceptual Framework

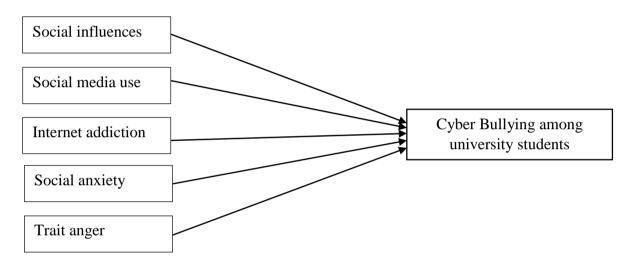


Figure 01: Conceptual Framework of the Study

# 3. Research Methodology

Considering the study's objectives and the existing literature, the research method chosen for this investigation is the survey method. By conducting a literature review, a quantitative study is undertaken to collect, analyze, and interpret data (Hulland et al., 2018). This approach involves using structured questionnaires or surveys to gather information from a large sample of university students. The survey was designed to measure various constructs, such as social influences, social media use, internet addiction, social anxiety, trait anger, and cyberbullying behavior.

The survey was administered over four months to ensure sufficient time for data collection. The survey responses were anonymized to ensure confidentiality and encourage honest and accurate reporting. Quantitative data analysis techniques, such as descriptive and inferential statistics, are employed to analyze the collected data. Descriptive statistics summarizes the participants' characteristics and the prevalence of cyberbullying, The associations between the variables examined, and the study hypotheses tested, using inferential statistics such as correlation analysis and regression analysis.

The findings obtained from the survey are interpreted and discussed in light of the research questions and existing literature. The implications of the results are discussed, and recommendations for addressing cyberbullying among university students are provided based on the study's findings. The demographic of this study includes all state university students in Sri Lanka who utilized the internet and at least encountered cyberbullying. Only Sri Lankan university students, 150 randomly selected, who experience cyberbullying are the subjects of the study.

The respondents who are enrolled in or attending a university in Sri Lanka and have prior experience using social media, the internet, and information gathering were chosen as the study sample. The demographic analysis showed that women comprised 65.3% of responses, while men comprised just 34.7%. This distribution proves that both sexes were represented in the study to a comparable degree. Seventy-five percent of the participants were younger than twenty-five, with those older than twenty-five making up the second biggest group (19.3 percent). People between the ages of 21 and 23 made up just 5.3% of the total sample. These findings suggest that most survey takers were young adults in their early to mid-twenties.

According to the data, 40.7% of the students were in their fourth year of university, while 34.0% were in their first. Only 18.0% of fourth-year students participated, with the lowest turnout coming from second-year students (7.4%). These results suggest a somewhat random pattern of engagement throughout time. A five-point Likert scale with the values [1] for strongly disagreeing and [5], for instance for strongly agreeing, was used to collect data for this investigation. All of the variables in independent variables contain four items, while the dependent variable has five. The information was gathered via a closed-ended online questionnaire. "Google Forms" were constructed to gather and disseminate data to the respondents via various electronic channels. However, this survey received responses from 150 students. The SPSS 26.0 version was used to perform analyses of descriptive statistics and multiple regressions.

### 4. Results

This study predominantly utilizes regression analysis to assess its hypotheses. Additionally, this section addresses descriptive and correlation analyses.

According to Table 1 below, social anxiety has the highest mean of 4.26, whereas cyberbullying behavior has the lowest mean of 3.91. Based on the mean value, all the respondents perceived the factors identified and cyberbullying behavior favorably. The mean values indicate the normal rating range for each variable considered throughout the investigation. The participants' self-reported levels of social influence (4.24), usage of social media (4.20), addiction to the internet (4.19), trait anger (4.25), social anxiety (4.16), and cyberbullying (3.90) were all moderate. When the information is ordered from highest to lowest, the median values indicate the point where the scores are most evenly distributed. The mode shows the value that occurs most often. On the scale of social influence, the most common score was 4, while the most common score for internet

addiction, social anxiety, and trait anger was 5. The quantity of cyberbullying that occurred was 4. These modes display the ratings that respondents mentioned the most often.

Metrics that measure variability show how far off the numbers often are from one another. A typical degree of dispersion is represented by the standard deviation, measured relative to the mean. A more significant standard deviation score indicates the presence of variation within the responses. These variables exhibit a substantial degree of dispersion, as seen by the wide range of possible values for their standard deviations, which range from 0.55 to 0.73. The minimum number represents the lowest possible score, while the maximum represents the highest. One is the lowest possible score on any particular variable, while five is the most excellent. These error margins illustrate the diverse responses that are included in the data.

Table 1 shows Cronbach's alpha, a measure of internal consistency, for various scales, including those that assess social influence, social media usage, internet addiction, social anxiety, trait anger, and cyberbullying behavior. Cronbach's alpha statistic, which assesses how well each item on a scale consistently measures the same underlying notion, may be used to estimate a scale's dependability.

The internal consistency of each scale is shown by an alpha coefficient that ranges from 0.898 to 0.923. In general, a scale's alpha value increases with the degree of consistency and dependability. The scales' dependability for this data collection ranges from rather excellent to extremely high. The social impact scale's items show a respectable internal consistency (alpha = 0.898). With corresponding alpha values, all the variables demonstrate excellent levels of internal consistency. The Cyber Bullying scale has the highest level of internal consistency, with an alpha value of 0.923. This shows how reliable the metrics used to quantify cyberbullying are. The alpha coefficients for each scale may be seen as a gauge of its reliability and consistency. The fact that coefficients in this data collection vary from moderate to high suggests that the scales used to gather the data contain items that accurately measure the underlying variables they were intended to.

The relationship coefficients for social influence, social media usage, internet addiction, social anxiety, trait anger, and cyberbullying are shown in Table 1. These coefficients quantify the strength and direction of a linear relationship between two variables. The research demonstrates that there are strong positive relationships among several variables. Social influence was positively correlated with social media usage (r = .653, p.01), internet addiction (r = .744, p.01), social anxiety (r = .647, p.01), trait anger (r = .714, p.01), and cyberbullying (r = .524, p.01). Social Media Use has strong positive associations with these factors, much like Internet Addiction (r = .683, p.01), Social Anxiety (r = .638, p.01), Trait Anger (r = .638, p.01), and Cyber Bullying (r = .581, p.01). The statistical significance of the relationships between Internet Addiction and other factors has been shown. Social Influence (r = .744, p.01), Social Media Use (r = .683, p.01), Social Anxiety (r = .726, p.01), Trait Anger (r = .836, p.01), and Cyber Bullying (r = .625, p.01) are some of these factors. Social influence (r = .647, p.01), social media usage

(r = .638, p.01), internet addiction (r = .726, p.01), trait anger (r = .792, p.01), cyberbullying (r = .574, p.01), and cyberbullying are some of the factors that have been proven to link with social anxiety positively. It has been demonstrated that there are statistically significant positive relationships between trait anger and other factors (r = .714, p.01) for social influence, r = .638, p.01 for social media use, r = .836, p.01 for internet addiction, r = .792, p.01 for social anxiety, and r = .582, p.01 for cyberbullying).

Table 01: Mean, Standard deviation, and correlations

Variables	M	SD	1	2	3	4	5	6
Social Influence (1)	4.2422	.59940	(0.914)					
Social Media Use (2)	4.2067	.58015	.653**	(0.921)				
Internet Addition (3)	4.1933	.72996	.744**	.683**	(0.901)			
Social Anxiety (4)	4.2533	.62710	.647**	.638**	.726**	(0.908)		
Trait Anger (5)	4.1644	.72738	.714**	.638**	.836**	.792**	(0.898)	
Cyber Bullying (6)	3.9089	.55280	.526**	.473**	.637**	.663**	.714**	(0.923)

<sup>\*\*.</sup> Correlation is significant at the 0.01 level (2-tailed).

Diagonal values in parenthesis represent Cronbach's Alpha.

Source: Authors' own creation

According to regression analysis, 54 percent (Adjusted  $R^2 = 0.523$ ) of the variation has been found at a significant level. This means that cyberbullying behavior among students in higher education institutions is determined or influenced by social anxiety and trait anger. Meantime, social influence, social media use, and internet connection do not significantly contribute to cyberbullying behavior.

Table 02: Results of Regression Analysis

Model		Unstan	dardized	Standardiz	t	Sig.	Collinearity Statistics	
		Coeff	icients	ed				
				Coefficient				
				S				
		В	Std.	Beta			Tolerance	VIF
			Error					
1	(Constant)	1.401	.260		5.400	.000		
	Social	023	.084	025	270	.788	.387	2.587
	Influence							
	Social Media	048	.079	051	610	.543	.461	2.171
	Use							
	Internet	.086	.088	.114	.988	.325	.240	4.175
	Addition							
	Social Anxiety	.233	.086	.264	2.708	.008	.337	2.967
	Trait Anger	.350	.091	.460	3.838	.000	.223	4.488

R=0.734; R Square = 0.539; Adjusted R Square = 0.523; Durbin-Watson = 1.872; F Value = 33.704; Sig. F = .000

Source: Authors' own creation

In conclusion, the results of the regression model indicate that Trait Anger and anxiety are the most significant factors having a significant influence on cyberbullying behavior. H4 and H5 have been accepted based on statistical analysis. However, the whole model has above 50 percent predictive ability.

## 5. Discussion

The findings of this study shed light on the complex interplay of individual characteristics and social dynamics in predicting cyberbullying behavior among university students. Among the hypotheses tested, social anxiety and trait anger emerged as significant predictors of cyberbullying behavior, while hypotheses related to social influence, social media usage, and internet addiction were rejected. These results provide valuable insights into the factors contributing to cyberbullying behaviors in higher education settings and warrant further discussion to elucidate the underlying mechanisms driving these findings.

The acceptance of hypotheses about social anxiety and trait anger underscores the importance of individual psychological factors in influencing cyberbullying behavior among university students. Social anxiety, characterized by fear or discomfort in social situations, may lead individuals to resort to online platforms as a means of communication, where they may engage in cyberbullying behaviors as a way to assert control or alleviate their insecurities. Similarly, trait anger, defined as a stable tendency to experience anger across various situations, can manifest in aggressive behaviors, including cyberbullying, particularly in response to perceived threats or provocations in online interactions. These findings align with previous research highlighting the role of individual psychological traits in shaping aggressive behaviors in digital environments.

Conversely, the rejection of hypotheses related to social influence, social media usage, and internet addiction suggests that these factors may have a limited direct impact on cyberbullying behavior among university students in the context of this study. The influence of peers or social norms may be outweighed by other individual or situational factors in determining cyberbullying behaviors among this population. Similarly, while social media platforms and internet addiction have been implicated in facilitating various forms of online aggression, their direct influence on cyberbullying behavior among university students may be contingent upon specific contextual factors or individual differences not captured in this study.

Several possible reasons can be proposed for rejecting these hypotheses. Firstly, the dynamic nature of online interactions and the diversity of digital platforms may render the influence of social factors and technology usage on cyberbullying behavior more nuanced and context-dependent than initially hypothesized. Additionally, individual differences in coping mechanisms, social support networks, and moral values may moderate the relationship between social influences, technology usage, and cyberbullying behaviors among university students, contributing to the non-significant findings observed in this study.

In conclusion, this study's accepted and rejected hypotheses highlight the importance of considering individual psychological factors and social dynamics in understanding cyberbullying behavior among university students. Future research endeavors should continue to explore the complex interplay of individual traits, social influences, and technological factors in shaping online behaviors to inform targeted interventions and prevention strategies to mitigate cyberbullying in educational settings.

### 6. Implications

The findings suggesting that social anxiety and trait anger significantly influence cyberbullying behavior among university students have important implications for educational institutions. Awareness programs and interventions targeting these individual psychological factors could be implemented to prevent and address cyberbullying incidents on campus. Incorporating strategies to enhance emotional regulation skills and coping mechanisms for students experiencing social anxiety or trait anger may help mitigate the risk of engaging in cyberbullying behaviors. Universities should prioritize the provision of comprehensive student support services that address mental health and wellbeing, including resources specifically tailored to address social anxiety and anger management issues. Counseling services, peer support groups, and mental health awareness campaigns can play a crucial role in promoting a supportive campus environment where students feel empowered to seek help and address underlying psychological concerns that may contribute to cyberbullying behaviors.

Collaborating with external organizations, such as mental health agencies, advocacy groups, and law enforcement agencies, can enhance university efforts' effectiveness in addressing cyberbullying. Partnering with these stakeholders can facilitate access to specialized resources, expertise, and support services for students experiencing social anxiety, anger issues, or cyberbullying victimization, thereby fostering a more holistic and integrated approach to promoting student well-being and safety.

#### 7. Limitations and Direction for Future Research

While this study provides valuable insights into cyberbullying among university students, numerous restrictions must be recognized. First, the study's sample size was relatively small, with only 150 students participating from nineteen universities in Sri Lanka. This limits the generalizability of the findings to a broader population of university students. Future research studies could aim for larger sample sizes and include participants from diverse geographical locations to enhance the study's representativeness.

Secondly, this study focused on a limited set of variables related to cyberbullying, namely social influences, use of social media, internet addiction, social anxiety, and trait anger. There may be additional factors that contribute to university students' experiences of cyberbullying that were not considered in this research. Future studies could explore other variables such as family background, social status, and economic situation to understand the phenomenon comprehensively. Moreover, the demographic information

collected in this study was limited to age, gender, and educational qualification. It is possible that other demographic factors, such as cultural background or socioeconomic status, could influence university students' perceptions and experiences of cyberbullying. Future researchers should consider incorporating a broader range of demographic variables to capture a more nuanced picture of the issue.

Furthermore, this study relied on data collection through Google Forms, which may have limitations regarding response bias and lack of qualitative data. Future researchers could employ alternative data collection methods such as in-depth interviews or focus group discussions to gather more detailed and nuanced insights into the experiences of university students with cyberbullying.

#### 8. Conclusion

In conclusion, this study sheds light on the complex dynamics of cyberbullying among university students, particularly in the Sri Lankan context. By exploring the determinants influencing cyberbullying behavior, we uncovered significant impacts of social influences, social media usage, internet addiction, social anxiety, and trait anger. These findings highlight the role of individual psychological factors and social dynamics in shaping online behaviors among university students. Nevertheless, our findings underscore the importance of heightened awareness and proactive measures to address cyberbullying within university settings. We advocate for collaboration among students, authorities, government bodies, and other stakeholders to implement policies and interventions to promote online safety and combat cyberbullying. By working together, we can create a safer and more supportive online environment for university students, fostering a culture of respect, empathy, and inclusion.

#### References

- Abaido, G. M. (2020). Cyberbullying on social media platforms among university students in the United Arab Emirates. *International Journal of Adolescence and Youth*, 25(1), 407–420.
- Abaido, G. M. (2020). Cyberbullying on social media platforms among university students in the United Arab Emirates. *International Journal of Adolescence and Youth*, 25(1), 407–420.
- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, 30(1), 47–88.
- Alghizzawi, M., Habes, M., Salloum, S. A., Ghani, M. A., Mhamdi, C., & Shaalan, K. (2019). The effect of social media usage on students' e-learning acceptance in higher education: A case study from the United Arab Emirates. *Int. J. Inf. Technol. Lang. Stud*, *3*(3), 13-26.
- Al-Rahmi, W. M., Yahaya, N., Alamri, M. M., Aljarboa, N. A., Kamin, Y. B., & Moafa, F. A. (2018). A model of factors affecting cyberbullying behaviors among university students. *IEEE Access*, 7, 2978-2985.
- Camerini, A. L., Marciano, L., Carrara, A., & Schulz, P. J. (2020). Cyberbullying perpetration and victimization among children and adolescents: A systematic review of longitudinal studies. *Telematics and Informatics*, 49, 101362.

- Chen, L., & Nath, R. (2016). Understanding the underlying factors of Internet addiction across cultures: A comparison study. *Electronic Commerce Research and Applications*, pp. 17, 38–48.
- De Ridder, D. T., Lensvelt-Mulders, G., Finkenauer, C., Stok, F. M., & Baumeister, R. F. (2012). Taking stock of self-control: A meta-analysis of how trait self-control relates to various behaviors. *Personality and Social Psychology Review*, *16*(1), 76-99.
- Ding, Y., Li, D., Li, X., Xiao, J., Zhang, H., & Wang, Y. (2020). Profiles of adolescent traditional and cyberbullying and victimization: The role of demographic, individual, family, school, and peer factors. *Computers in Human Behavior*, p. 111, 106439.
- Erişti, B., & Akbulut, Y. (2019). Reactions to cyberbullying among high school and university students. *The Social Science Journal*, 56(1), 10-20.
- Firth, J. A., Torous, J., & Firth, J. (2020). Exploring the impact of internet use on memory and attention processes. *International Journal of Environmental Research and Public Health*, 17(24), 1–12.
- Gönültaş, M. (2022). Cyberbullying and victimization among university students. *International Journal of Psychology and Educational Studies*, 9(2), 297–307.
- Gunathillake, N. A., & Perera, H. K. (2020). Association among Depression, Social Anxiety, and Aggression caused by Cyberbullying on Facebook among Sri Lankan Adults. *SLIIT Journal of Humanities and Sciences*, *1*(1), 77–87.
- Hirschi, T., & Gottfredson, M. (1993). Commentary: Testing the general theory of crime. *Journal of Research in Crime and Delinquency*, 30(1), 47-54.
- Hulland, J., Baumgartner, H., & Smith, K. M. (2018). Marketing survey research best practices: evidence and recommendations from a review of JAMS articles. *Journal of the Academy of Marketing Science*, 46, 92-108.
- Jennings, W. G., Song, H., Kim, J., Fenimore, D. M., & Piquero, A. R. (2019). An examination of bullying and physical health problems in adolescence among South Korean youth. *Journal of Child and Family Studies*, pp. 28, 2510–2521.
- La Greca, A. M., & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal of Abnormal Child Psychology*, 26, 83-94.
- Lai, F., Wang, L., Zhang, J., Shan, S., Chen, J., & Tian, L. (2023). Relationship between social media use and social anxiety in college students: Mediation effect of communication capacity. *International Journal of Environmental Research and Public Health*, 20(4), 1-14.
- Landstedt, E., & Persson, S. (2014). Bullying, cyberbullying, and mental health in young people. *Scandinavian Journal of Public Health*, 42(4), 393-399.
- Lonigro, A., Schneider, B. H., Laghi, F., Baiocco, R., Pallini, S., & Brunner, T. (2015). Is cyberbullying related to a trait or state of anger? *Child Psychiatry & Human Development*, 46, 445-454.
- Mangaonkar, A., Pawar, R., Chowdhury, N. S., & Raje, R. R. (2022). Enhancing collaborative detection of cyberbullying behavior in Twitter data. *Cluster Computing*, 25(2), 1263–1277.
- Martínez-Monteagudo, M. C., Delgado, B., García-Fernández, J. M., & Ruíz-Esteban, C. (2020). It was cyberbullying in the university setting. Relationship with emotional problems and adaptation to the university. *Frontiers in Psychology*, *10*, 1-9.

- Martínez-Monteagudo, M. C., Delgado, B., Inglés, C. J., & Escortell, R. (2020). Cyberbullying and social anxiety: a latent class analysis among Spanish adolescents. *International Journal of Environmental Research and Public Health*, 17(2), 1-13.
- Milem, J. F. (1998). Attitude change in college students: Examining the effect of peer groups and faculty normative groups. *The Journal of Higher Education*, 69(2), 117–140.
- Nazeer, I. & Pathmeswaran, A. (2017). Cyberbullying among adolescents in Colombo: prevalence, patterns and risk factors. Sri Lanka Medical Association, 130th Anniversary International Medical Congress. 2017, 62-70
- Owen, J. M. (2011). Transdiagnostic cognitive processes in high trait anger. *Clinical Psychology Review*, 31(2), 193–202.
- Paez, G. R. (2018). Cyberbullying among adolescents: A general strain theory perspective. *Journal of School Violence*, 17(1), 74–85.
- Patchin, J. W., & Hinduja, S. (2011). Traditional and nontraditional bullying among youth: A test of general strain theory. *Youth & Society*, 43(2), 727–751.
- Rahman, M., Hasan, M., Hossain, A., & Kabir, Z. (2021). Consequences of bullying on university students in Bangladesh. *Management*, 25(1), 186-208.
- Rahman, T., Hossain, M. M., Bristy, N. N., Hoque, M. Z., & Hossain, M. M. (2023). Influence of cyber-victimization and other factors on depression and anxiety among university students in Bangladesh. *Journal of Health, Population, and Nutrition*, 42(1), 1-10.
- Ramani, S. (2015). The internet and education in the developing world and reality. *Smart Learning Environments*, pp. 2, 1–16.
- Shaw, M., & Black, D. W. (2008). Internet addiction: definition, assessment, epidemiology, and clinical management. *CNS drugs*, pp. 22, 353–365.
- Slonje, R., Smith, P. K., & Frisén, A. (2013). The nature of cyberbullying and strategies for prevention. *Computers in Human Behavior*, 29(1), 26-32.
- Suriyabandara, V. S. (2017). An analysis of the attitude towards cyberbullying and cyber victimization among the university students of Sri Lanka. *World*, 4(2), 18-31.
- Tokunaga, R. S. (2010). Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Computers in Human Behavior*, 26(3), 277-287.
- US Government, 2020. What is Cyberbullying: Stopbullying.gov.
- Veenstra, L., Bushman, B. J., & Koole, S. L. (2018). The facts on the furious: a brief review of the psychology of trait anger. *Current Opinion in Psychology*, pp. 19, 98–103.
- Wang, X., Yang, L., Yang, J., Wang, P., & Lei, L. (2017). Trait anger and cyberbullying among young adults: A moderated mediation model of moral disengagement and moral identity. *Computers in Human Behavior*, 73, 519-526.
- Whittaker, E., & Kowalski, R. M. (2015). Cyberbullying via social media. *Journal of School Violence*, 14(1), 11-29.
- Wilkowski, B. M., & Robinson, M. D. (2008). The cognitive basis of trait anger and reactive aggression: An integrative analysis. *Personality and Social Psychology Review*, 12(1), 3-21.
- Wilkowski, B. M., & Robinson, M. D. (2010). The anatomy of anger: An integrative cognitive model of trait anger and reactive aggression. *Journal of Personality*, 78(1), 9-38.