COPING STRATEGY MODEL OF CYBERBULLY VICTIMS AMONG UNIVERSITY STUDENTS

MOHAMMAD AMINUL HAQ BIN MOHD GHAZALI

MASTER OF SCIENCE (COMPUTER SCIENCE)

UNIVERSITI PERTAHANAN NASIONAL MALAYSIA

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Thesis submitted to the Centre for Graduate Studies, Universiti Pertahanan Nasional Malaysia, in fulfilment of the requirements for the degree of **Master of Science** (**Computer Science**)

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ABSTRACT

Several studies on cyberbullying have been conducted by scholars including in Malaysia to understand and evaluate the trend of cyberbullying phenomenon among college university students. Most of the articles on cyberbullying come from psychological and counselling researchers, but there is a need to look at it from the information technology side as it will provide a holistic view on this matter. Being able to create cross disciplines between various fields of knowledge will probably provide better understanding and could hopefully formulate solutions in coping with the situation. The ICT has become the main medium in communication among the students, which is among the factors of increased cyberbullying cases in universities. Besides, the inability of students to react to cyberbullying activities from lack of knowledge, inability to manipulate ICT functions to prevent them from being cyberbullied, and lack of coping strategy model are the main problems to be solved. Therefore, the objectives of this thesis are (1) to identify the appropriate coping strategy for cyberbully-victims; (2) to propose an effective coping strategy model for cyberbully-victim; and (3) to access the students' knowledge on technological prevention action in coping with cyberbullying. This study was conducted at NDUM, Kuala Lumpur using the Approach-avoidance Coping Strategy Model comprises the following constructs: (1) Approach Coping including distal advice; close support; helplessness; retaliation; and technical coping; and (2) Avoidance Coping including assertiveness; and active ignoring. The regression analysis using multinomial logistic regression results identified only two variables that were significantly associated with the coping action, namely Distal Advice (t=4.857, p<0.05); and Technical Coping (t=4.519, p<0.05). This research evidenced that almost all the students are aware of the cyberbullying phenomenon caused by technological usage and applied the preventive approach of distal advice and technical coping. Even though they possess the knowledge of coping actions, there is still a percentage of those who do not. There is a need for guidelines of practices that universities must provide for students if they are being cyberbullied. Therefore, this study proposed the coping strategy of cyberbullying guidelines for university students.

ABSTRAK

Beberapa kajian mengenai buli siber dijalankan sarjana termasuk di Malaysia untuk memahami dan menilai trend fenomena buli siber dalam kalangan pelajar universiti. Kebanyakan artikel mengenai buli siber berasal dari penyelidik psikologi dan kaunseling. Namun, ia perlu dilihat dari sisi teknologi maklumat kerana ia akan memberikan pandangan holistik mengenai perkara ini. Ini mungkin mampu mewujudkan disiplin silang antara pelbagai bidang ilmu yang akan memberikan pemahaman yang lebih baik dan diharapkan dapat merumuskan penyelesaian dalam menghadapi situasi tersebut. ICT kini menjadi medium komunikasi utama para pelajar, yang mana ia merupakan salah satu faktor peningkatan kes buli siber di universiti. Selain itu, ketidakupayaan pelajar untuk bertindak balas terhadap aktiviti buli siber kerana kurang pengetahuan, ketidakupayaan untuk memanipulasi fungsi ICT untuk mengelakkan mereka daripada menjadi mangsa pembuli siber dan kekurangan model strategi daya tindak merupakan masalah utama yang perlu diselesaikan. Oleh itu, objektif tesis ini adalah (1) untuk mengenal pasti strategi yang sesuai untuk mengatasi dari menjadi mangsa buli siber; (2) untuk mencadangkan model strategi mengatasi yang berkesan untuk mangsa buli siber; dan (3) untuk mengakses pengetahuan pelajar tentang tindakan pencegahan teknologi dalam menangani buli siber. Kajian ini dijalankan di UPNM, Kuala Lumpur menggunakan Model Strategi Daya Tahan Pendekatan-penghindaran terdiri daripada konstruk berikut: (1) Pendekatan Mengatasi termasuk nasihat distal; sokongan rapat; ketidakberdayaan; pembalasan; dan daya tahan teknikal; serta (2) Mengatasi Penghindaran termasuk ketegasan dan aktif mengabaikan. Analisis regresi menggunakan hasil regresi logistik multinomial hanya mengenalpasti dua pembolehubah yang mempunyai hubungan yang signifikan dengan tindakan daya tindak iaitu Nasihat Distal (t=4.857, p<0.05); dan Daya Tahan Teknikal (t=4.519, p<0.05). Kajian ini membuktikan bahawa hampir semua pelajar sedar tentang fenomena buli siber yang disebabkan penggunaan teknologi dan menggunakan pendekatan pencegahan nasihat distal dan penanggulangan teknikal. Walaupun mereka mempunyai pengetahuan dalam mengatasi masalah ini, masih terdapat segelintir antara mereka yang tidak. Terdapat keperluan garis panduan amalan yang mesti disediakan universiti untuk pelajar jika mereka dibuli siber. Oleh itu, kajian ini mencadangkan garis panduan menangani buli siber untuk pelajar universiti.

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APPROVAL

The Examination Committee has met on **18 May 2022** to conduct the final examination of **Mohammad Aminul Haq bin Mohd Ghazali** on his degree thesis entitled **Coping Strategy Model of Cyberbully Victims Among University Students**

The committee recommends that the student be awarded the of Master of Degree (Computer Science).

Members of the Examination Committee were as follows.

Associate Prof Dr. Mohd Fahmi Bin Mohamad Amran
Faculty of Science and Defence Technology
Universiti Pertahanan Nasional Malaysia
(Chairman)

Dr Muslihah Binti Wook
Faculty of Science and Defence Technology
Universiti Pertahanan Nasional Malaysia
(Internal Examiner)

Associate Prof. Dr. Fariza Hanis Binti Abdul Razak
Faculty Computer Science and Mathematics
Universiti Teknologi MARA
(External Examiner)

APPROVAL

This thesis was submitted to the Senate of Universiti Pertahanan Nasional Malaysia and has been accepted as fulfilment of the requirements for the degree of **Master of Science (Computer Science)**. The members of the Supervisory Committee were as follows.

Ts. Dr. Nor Asiakin Binti Hasbullah
Computer Science Department
Faculty of Defence Science and Technology
Universiti Pertahanan Nasional Malaysia
(Main Supervisor)

Prof. Madya Ts. Dr. Suzaimah Binti Ramli
Computer Science Department
Faculty of Defence Science and Technology
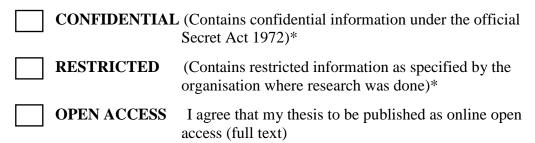Universiti Pertahanan Nasional Malaysia
(Co-Supervisor)

UNIVERSITI PERTAHANAN NASIONAL MALAYSIA

DECLARATION OF THESIS

Student's full name   : **Mohammad Aminul Haq bin Mohd Ghazali**

Date of birth   : 13 April 1989

Title   : A Coping Strategy Model of Cyberbully Victims Among

                              University Students.

Academic session   : 2017/2018

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LIST OF ABBREVIATIONS

ANN   -   Artificial Neural Network

GA   -   Genetic Algorithm

PSO   -   Particle Swarm Optimization

MTS   -   Mahalanobis Taguchi System

MD   -   Mahalanobis Distance

TM   -   Taguchi Method

UTM   -   Universiti Teknologi Malaysia

XML   -   Extensible Markup Language

ANN   -   Artificial Neural Network

GA   -   Genetic Algorithm

PSO   -   Particle Swarm Optimization

LIST OF SYMBOLS

δ -   Minimal error

D, d -   Diameter

F -   Force

v -   Velocity

p -   Pressure

I -   Moment of Inersia

r -   Radius

Re   -   Reynold Number

LIST OF APPENDICES

CHAPTER 1

INTRODUCTION

1.1   Introduction

This chapter discusses the overview of this study by focusing on the research background, problem statement, research objectives, research scope, as well as the significance and limitation of this research. Cyberbully become a trend among university students nowadays. Research done by Lai, Mohaffyza, Lee, & Salleh (2017) evidenced that 66% of 712 respondents from public and private universities reported that they have been cyberbullied. The results of their findings are tabulated in Table 1.1.

Table 1.1:   Cyberbully-victims (Lai, Lee, & Salleh, 2017)

	Was Cyberbullied	Not Cyberbullied
Number of respondents	470 (66.0%)	242 (34.0%)
Male	206 (56.2%)	104 (43.0%)
Female	264 (43.8%)	138 (57.0%)
Malays	278 (74.3%)	96 (25.7%)
Chinese	27 (43.8%)	36 (56.2%)
Indian	57 (52.3%)	52 (47.7%)
Borneo native tribes	105 (65.6%)	55 (34.4%)
Other	2 (40.0%)	3 (60.0%)

1.2   Research Background

Managing cyberbullying in an organisation requires a comprehensive approach including process, procedure and facilities of ICT to ensure the technology can be optimised as a tool to develop organisation performance rather than demolish the good culture into disaster. ICT is not the factor of the cyberbullying phenomenon, but rather youngsters decide to manipulate ICT devices in an anti-social way that foster their mental development and wellbeing tremendously in a negative manner (Heirman and Walrave, 2012). More individuals are using the ICT (Walrave & Heirman, 2011), high level of computer and Internet skills (Vandebosch & Van Cleemput, 2009) as well as patterns of risky Internet usage for long hours (Erdur-Baker, 2010), which impact cyberbullying perpetration attitudes. Smartphones have significantly changed human social interaction and have been used for a variety of purposes. Served as the Internet-enabled device, it offers vast utilisation purposes such as exchanging, exposing, gaining, and exploring information. It also enables information exposure publicly with the existence of social media. Social media has become a means for connecting people at anytime and anywhere but on certain occasions being misused as a tool to humiliate, harass and flame other people. These acts may sometimes be interpreted as jokes, but making fun of other people publicly are considered a bully in cyberspace. There are a lot more abusive acts that social networking could offer. Cyberbullying or harassment is considered the third dangerous threat in Malaysia (Rashid, 2017). Cyberbullying normally gives a negative impact on the victims and most of its cases lead to undesirable outcomes. It is essential to identify what drives the offenders to be cyberbullies and the platform they use, as it will help to understand their behaviour. Understanding cyberbullying

behaviour will give some ideas on how to tackle these situations (Hua et al., 2019).
Other aspects to be looked into are the coping actions taken by the victims and the
platform in which they are being bullied to find the best practice and understand the
consequences of using the social media platform as interactive tools to share most of
our activities.

Cyberbullying is defined as intentional misconduct performed by an
individual or a group of people using electronic forms of contact communication
repeatedly and overtime against undefended victims (Sticca et al., 2015; Smith, et al.,
2008). According to Garett et. al. (2016), the use of social media is the cause of the
increasing number of cyberbullying cases. They also stressed the impact of
cyberbullying on public health as it could lead to mental and behavioural health
issues including the risk of suicide attempts by the victims (Bottino et.al, 2015).

Table 1.2   Previous Research on Cyberbully among Undergraduate Students

Author and population	Number of Sample	Had been cyberbullied	Knew someone who had been cyberbullied	Had cyberbullied others
Finn (2004) – University of New Hampshire	339	10-15%	-	-
MacDonald and Roberts-Pittman (2010) – College students	439	21.9%	38%	8.6%
Kraft & Wang (2010) – Public Liberal Art College	471	9%	-	-
Pena (2011) – Indiana State University	-	22%	42%	-

The percentage of previous research on the prevalence of cyberbullying among undergraduate students by Johnson et al. (2016) is simplified in Table 1.1. The purpose of the research done by Johnson et al. (2016) was to explore the college students' experience of cyberbullying through social media.

The ASEAN Post published on September 21, 2020, reported that the United Nations Children's Fund (UNICEF) had done a poll in 2019 for violence against children in 30 countries. According to the report, three in 10 young people in Malaysia admitted that they have been bullied in cyberspace. Meanwhile, another study conducted by the market research firm (IPSOS) in 2018 revealed that one in four Malaysian children had experienced cyberbullying according to their parents. The tabulation of IPSOS findings is tabled in Table 1.2.

Table 1.3   Cyberbullying in Malaysia from IPSOS

		Malaysia (%)	Global Average(%)
Platform used for Cyberbullying	Social Media	71	65
	Mobile	57	45
	Online Messaging	33	38
	Online Chatroom	31	34
Cyberbullies (Types)	Classmate	53	51
	Young Person, Stranger	39	30
	Adult, Stranger	36	28

Source: IPSOS, 2018

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1.3   Problem Statement

The emerging technology revolution provides a new platform for the bullying phenomenon in the community, especially for adolescents. With the advent and popularity of the internet, other electronic gadgets and systematic electronic classrooms (e-learning), a new form of bullying called cyberbullying has emerged (Runions et al., 2017). An example, E-learning allows broader social context including inter-region and could expand to a new form of complex social relations that shape the cyberbullying phenomenon among the community (Mason, 2008). Previous studies have highlighted that there is a need for family members to play their role in preventing students from becoming cyberbullies or cyberbully victims (Mason, 2008; Killer et al., 2019; Wang, Iannotti & Nansel, 2009). Community involvement will be important in shaping the students in using the ICT skills with good behaviour since wrongly used skills were identified as the key in cyberbullying perpetration and victimisation (Li, 2010; Runions et al., 2017; Walrave and Heirman, 2011).

1.3.1   Lack of Coping Strategies for Cyberbully.

The coping strategies were the actions that can be taken by the cyberbully victims. Thus, the management needs to provide assessable supportive personnel that can be relied on by students as well as effective and adequate tools in dealing with the cyberbullying phenomenon. Previous scholars identified that most of the cyber-victims recognised their cyber-bullies; hence, it is important to educate these

people on technological awareness and protection (Mazni, Zeti and Aini, 2016). For instance, online privacy protection and anonymous reporting can be used to promote more proactive measures, especially for bystanders who fear retaliation (Balakrishnan, 2018).

1.3.2 Need of guidelines for cyberbully coping strategies

Previous research on cyberbullying evidenced that the incidents in higher learning institutions in Malaysia have reached an alarming level (Figure 1.3); their findings also indicated that the cyberbully-victims have experienced mental and physical issues such as they would likely experience depression, anxiety, and low self-esteem (Nixon, 2014; Lai, Mohaffyza, Lee, & Salleh, 2017). Thus, there is a need for effective coping actions guidelines for cyberbully victims to identify the actions they can take. Guidelines have yet to be provided for university students on coping actions when they experience cyberbullies (I. Nor Faizah, personal communication, December 14, 2021). Nonetheless, the victims will be assisted and guided on what actions they could take if being cyberbullied they should seek psychological advice. Most of the time, cyberbully victims only choose their coping actions according to their instinct during that time and do not report the incidents.

1.3.3 Problem about Technologies Awareness for Preventing Cyberbully

Several studies on cyberbullying have been conducted by scholars including in Malaysia to understand and evaluate the trend of cyberbullying among college

university students (Faryadi, 2011; Noh & Ibrahim, 2014; Rashid et. al., 2017). For example, Ghazali et. al. (2017) conducted a qualitative to evaluate the perception of cyberbullying among Malaysian youth; Mazni, Zeti and Aini (2016) examined the cybercrime awareness among the active internet users related to the law of communication; and Golbeck et al. (2017) studied the online comments and other social media posts about the harassment or threatening element as tools to be analysed. Most of the articles on cyberbullying come from psychological and counselling researchers, but there is a need to look at it from the information technology side as it will provide a holistic view on the matter. Being able to create cross disciplines between various fields of knowledge will probably provide better understanding and hopefully formulate solutions in coping with the situation.

1.4   Research Question

Based on the problem statement discussed above, it is necessary to formulate a model through coping strategies for cyberbullying in assisting the victims. The research questions addressed for the above problem statements are:

a.   What is the coping strategy that the cyberbully victim should adopt?

b.   What is the effective model in coping with cyberbullying?

c.   How to prevent being cyberbullied through technological practices?

1.5   Research Objective

This research aims to propose an effective coping strategy for cyberbully victims as a reactive and preventive action. Based on the above research question, the research objectives are described as follow:

    a.   To build the appropriate coping strategy for cyberbully victims.

    b.   To validate an effective coping strategy model for cyberbullying.

    c.   To identify the students' knowledge on technological prevention action in coping with cyberbullying.

1.6   Research Scope

As a university student, the social media environment has become a primary platform in developing the relationship between peers and is used to coordinate social activities. This study focuses on cyberbully coping strategies for university students with the following scopes:

    a.   Even though this research is meant for university students, this study was done to the students of the National Defence University of Malaysia (NDUM) located at Sungai Besi Camp, Kuala Lumpur due to data accessibility.

    b.   Due to the Covid-19 pandemic, the research could only be done on the officer cadet as they are available on the campus. The selection of