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Comparing the Differences in the Main Factors Influencing High School and College Students' Involvement in Cyberbullying Behaviour - Based on Bandura's Social Cognitive Theory

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Abstract: The rapid development of communication technology and the economy has made it easy for everyone to access the internet to disseminate and receive information. In such a situation, people naturally express their opinions about the information they receive. Because everyone has different opinions about the received informations, which can lead to arguments, in more serious cases, cyberbullying has emerged as a natural consequence of this process. High school and university students account for a significant proportion of the occurrence of and involvement in cyberbullying. Therefore, this study collects and analyses data to compare the factors of high school and university students' involvement in cyberbullying. This study used Social Cognitive Theory (SCT) to investigate the factors that influence participation in cyberbullying, in terms of personal expectations of the outcome of violence and social norms. Questionnaire analysis was then used to obtain 420 valid responses as the data required for the study. It was found that the main factors influencing high school and college students' involvement in cyberbullying did not differ significantly.

Keywords: Cyberbullying; college students; high school students; SCT; Pearson linear correlation

1. Introduction

With the rapid development of communication technology and the growth in population's economic income, social media gradually spread to people's daily life. Anyone has access to a large variety of information on the internet through social media, and people are no longer merely limited to understanding and receiving information, they also began to publish or spread all kinds of received information, so the connection between the internet and real life has become increasingly close [1]. In this context, the internet has naturally given rise to many negative and harmful behaviours, for example, cyberbullying, specific to individuals or groups. Cyberbullying may be a trivial comment or proof of love for an idol to the perpetrator, it is a violation of the reputation, honour, personality and privacy of the victim of cyberbullying. It can be broadly divided into behavioral and verbal bullying. Behavioral bullying, generally manifested as cyber manhunt; and verbal bullying, can involve wantonly bad-mouthing someone who wants to commit suicide on the internet. According

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to Ipsos' 2018 Cyberbullying Report, the percentage of people who have experienced cyberbullying has increased globally since 2011, with 1 in 3 parents worldwide knowing that a child in their community has been cyberbullied, South Africa has the highest prevalence of cyberbullying, with 54% of South African parents knowing that a child in their community has been a victim of cyberbullying, up 24 percentage points from 2011. This is an increase of 24 percentage points from 2011, with Japan (5%) and Russia (8%) having the lowest rates. Worldwide, 17% of respondents said their child had experienced cyberbullying, and this figure is still rising, particularly in South Africa (25%, up from 10% in 2011) and Turkey (19%, up from 5% in 2011). Among that, 27% of US households surveyed said their child had experienced cyberbullying, a significant increase from 2011 (15%). Geographically, cyberbullying is highest on social media platforms in Latin America (76%) and lowest in the Asia Pacific (53%). 51% of those surveyed said that cyberbullying was perpetrated by fellow students, with the highest figure in North America (65%) and the lowest in the Middle East/Africa (39%). The majority of adults (76%) consider cyberbullying to be a different type of bullying that requires special attention from parents and schools [2,3]. The seriousness of cyberbullying is demonstrated by the fact that it is extremely likely to cause mass incidents and disrupt the status quo of a stable and orderly society. There is also the fact that in the process of spreading online rumours and some untrue statements, the internet can create a defence of public opinion in a short period of time, misleading the general public and incurring serious social problems [1].

The powerful timeliness of social media and the growth of economic income have led to many tragedies. Nowadays, even high school and college students are able to participate in the reception and dissemination of information. However, they do not yet have the mental capacity to distinguish between right and wrong, and are therefore prone to posting overly emotional messages, which can lead to cyberbullying. The reason for comparing high school students with university students is that though they are both students, but university students are already adults and have a relatively formed view of the world. Whereas high school students are in a period of transition from childish to mature. Meanwhile, high school students have more similarities with college students than junior high school students, and they are more likely to engage in cyberbullying because they have stronger and deeper emotions than junior high school students [4]. Consequently, this study will compare and contrast the main factors that lead to the formation and perpetration of cyberbullying among university students and high school students respectively. This study will use Social Cognitive Theory (SCT), which uses the Triadic Interaction Model to demonstrate that individual behaviour is determined by the interaction between individual cognition, personal representations and the external environment in which the individual is placed. In this study, the Triadic Interaction Model will also be applied to analyse how cyberbullying happen and the emergence of cyberbullying behavior, then further compare the main factors involved in cyberbullying between college and high school students. By studying high school and college students in groups to verify whether they personally have expectations of the outcome of violence, whether current online norms influence the perpetration of cyberbullying, and to contrast the main factors influencing their involvement through a questionnaire method of data collection.

2. Literature Review

2.1. Social Cognitive Theory

The Social Cognitive Theory (SCT) used in this study was first proposed by Bandura in 1963 and subsequently refined in 1977 and 1986, and is basically defined as a theory in which human activity is determined by the interaction of three factors: individual actions, individual perceptions, and the external environment in which the individual lives. Moreover, their influence on each other is not

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immediate, but rather the two-way influence within each of these factors comes into play gradually over time. Using this theory as a starting point, it can be concluded that people are both shapers and products of their environment. Current social norms use the social norms theory, which refers to norms of behaviour generally accepted by all members of a collective in a particular environment. Social norms are the subject of multidisciplinary research in philosophy, sociology and psychology, and can be divided into descriptive and prescriptive norms. Behaviour that deviates from social norms is known as deviant or transgressive behaviour. The system of social norms influences the social behaviour of each individual, maintains the social order, and places social activities on a certain track, which has a profound significance for the existence and development of each individual and society.

Bandura wrote The Sociological Department and Personality Development with Walters in 1963, in which he expanded social learning theory with the principles of observational learning and substitution reinforcement. And in his subsequent research in 1977, Bandura further introduced individual psychology and cognition into his theory as a third variable, arguing in 1986 that not only does the environment trigger people's behavioural consequences, behaviour can also shape the environment, and referred to this process as interactive determinism. The result is a theoretical framework in which individual action, individual cognition and personal representations, and the external environment in which the individual lives together determine human action [5,6].

2.2. Cyberbullying

Cyberbullying was introduced in 2008 by Peter K Smith, who identified cyberbullying as a new form of bullying that uses modern technological devices to attack others directly verbally or indirectly through third parties, relationally by undermining peer relationships and socially by undermining their social status or self-esteem [7]. The causes of cyberbullying, according to the French social psychologist Gustave Le Bon in his book The Ubiquitous: A Study of Popular Psychology, are that a common characteristic of groups is their susceptibility to suggestion, which in the case of agglomerative behaviour is closer to hypnosis. In addition, the participant is usually in an agitated state of mind, which causes him to lose his ability to analyse and criticise the information around him, and to behave as a blind believer and follower [8]. Recently, most research on cyberbullying has focused on the impact of cyberbullying on a country or a region, or has provided an overview of the global impact caused by cyberbullying [9]. Moreover, it has focused singularly on the correlation between cyberbullying and well-being for multiple subjects using social media [10]. Nevertheless, research on the causes behind the involvement of different age groups in online violence is still needed to explain such behaviour. Therefore, this study will examine whether there are differences in the factors that influence college students as adults and high school students as minors to engage in cyberbullying. And then, the findings may inform the determination of whether SCT theory can explore whether there are differences between the main factors of students' involvement in cyberbullying across age groups.

2.3. Background Information for This Study

In this study, the element of whether or not there is a personal expectation of the outcome of the violence is used as the element of individual action in social cognitive theory, while the element of the external environment in which the individual lives is used as a parallel element instead, in order to investigate whether or not it has an impact on participation in the act of cyberbullying. For example, individual action. Nowadays, with the development of technology, it has given a great impetus to social development and cultural progress, thus allowing people to express their opinions on the internet at will [11]. The subjects of this study, university students and high school students,

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as the post-00s, have the ability and awareness to survive online [12], which is closely related to their participation in cyberbullying. The expectation of the outcome of the violence is chosen as a variable because cyberbullies often take the moral high ground and gain pleasure and moral superiority by violating and humiliating the personality of the victim [8]. The reason for choosing social norms as a parallel variable to the influence of the social environment on individuals is that the current society has unique norms for cyberbullying itself. This means people may spontaneously choose to participate or resist cyberbullying due to its highly inflammatory nature, which contributes to the continuation and development of cyberbullying. However, at present many internet users have a cognitive misconception about such information, which makes them recklessly display a variety of extremely irresponsible behaviours on the internet [13]. These phenomena have led to an increasingly hostile online society, and cyberbullying has become increasingly prevalent. As a result, with everyone having easy access to the internet, this perverse network norm might let people unconsciously make excessive comments or even engage in cyberbullying, and then revert to violence as a result of the bullying to satisfy their violent psychology. While recent research on cyberbullying has focused on the effects of cyberbullying on one or more subjects, this study will examine whether there are differences between the main factors that influence college and high school students to engage in cyberbullying by collecting and comparing data from high school and college students respectively.

3. Research Methodology

3.1. Questionnaire Design

This study mainly used the questionnaire method for data collection. The questionnaire was designed through the Questionnaire Star platform and sent to current university students and high school students for testing to collect data. A total of 432 questionnaires were distributed and a total of 420 valid questionnaires were returned, with an effective rate of 97.2%.

3.2. Data Analysis Methods

The questionnaire was administered by asking subjects about their perceptions of cyberbullying, the behavioural purpose of those involved in cyberbullying and the influence of their associates on their willingness to engage in cyberbullying. The questionnaire contains 26 questions, one on perceptions of cyberbullying, six on the behavioural purpose of those involved in cyberbullying and 18 on the influence of their associates on their willingness to engage in cyberbullying. As shown in Table 1, the scale on cyberbullying perceptions was drawn from the study by Ybarra, Diener-West, and Leaf (2007) et al. The questions on behavioral purpose reviewed the study by Ybarra et al. and the study by Dennis S.W. Wong (2014) et al. to constitute the questions, and the scale on cyber social norms was drawn from the 2014 study by Svensson M et al.

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Table 1: Questionnaire design table.

Variables	Variable definitions and descriptions
EO1 Making rude or mean comments about someone on social media, video games or social platforms	1=never, 2=rarely, 3=sometimes, 4=often, 5=always
EO2 spreading rumours about someone on social media, video games or social platforms, whether they are true or false	1=never, 2=rarely, 3=sometimes, 4=often, 5=always
EO3 making offensive or dangerous comments about someone on social media, video games or social platforms	1=never, 2=rarely, 3=sometimes, 4=often, 5=always
EO4 participates in a group chat or discussion group for the purpose of teasing or humiliating someone on the Internet	1=never, 2=rarely, 3=sometimes, 4=often, 5=always
EO5 The use of multimedia such as photographs or videos for the purpose of insulting, teasing, socially isolating or making fun of others.	1=never, 2=rarely, 3=sometimes, 4=often, 5=always
EO6 Posting photographs or other private information about another person on the internet for the purpose of humiliating, teasing or making fun of them	1=never, 2=rarely, 3=sometimes, 4=often, 5=always
SC1 To what extent do you think the following people mind you making offensive comments about someone on the internet. (your mother, your father, other members of your immediate family, your partner (girlfriend, boyfriend, etc.), your friends, your online friends, your teachers, your neighbours, people you happen to know)	1 = don't mind, 2 = don't mind too much, 3 = don't care, 4 = mind somewhat 5 = mind, X = they are not relevant to my situation
SC2 When choosing whether to make offensive comments about someone, how important do you think the opinions of the following people about your behaviour are (your mother, your father, other members of your immediate family, your partner (girlfriend, boyfriend, etc.), your friends, your online friends, your teachers, your neighbours, people you happen to know)	1=no effect, 2=not much effect, 3=doesn't matter, 4=some effect, 5=effect, X=they are not relevant to my situation

3.3. Analysis Methods

The data collected from the questionnaires were analysed using SPSS, and after confirming the statistical significance of the selected variables by means of reliability and validity tests, the data were regressed to draw relevant conclusions.

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4. Results

4.1. Descriptive Statistical Analysis

According to the results of the data analysis, the data statistics showed that 45.5% of the high school students and 54.5% of the university students were in line with the original intention of the study; 50.7% of the respondents had been involved in cyberbullying, accounting for more than half of the sample, as opposed to 49.3% of the respondents who had not been involved in cyberbullying. The results of the analysis are shown in Table 2 below.

Table 2: Descriptive statistical analysis table.

1. What is your current occupation?					
		Frequency	Percentage	Effective percentage	Cumulative percentage
Effective	A. High School Students	191	45.5	45.5	45.5
	B. University students	229	54.5	54.5	100
	Total	420	100	100	
2. Have you ever done any of the above?					
	Frequency	Percentage	Effective percentage	Cumulative percentage	
Effective	Yes	213	50.7	50.7	50.7
	No	207	49.3	49.3	100
	Total	420	100	100	

4.2. TaConfidence Test

In order to confirm the internal consistency of the variables used in this study, reliability tests were conducted on the selected variables, with Cronbach's alpha value for cyberbullying being 0.985 after a bivariate analysis of the questions to exclude non-useful variables, and Cronbach's alpha

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values for the expectation of outcome and social norm being 0.987 and 0.995 respectively. The Cronbach's alpha values for the expectation of outcome and social norm were 0.987 and 0.995, respectively, which have a considerable degree of reliability and also prove their reliability to be high. The details are shown in Table 3.1,3.2 below.

Table 3.1: Cyberbullying correlation analysis table.

	Made aggressive comments	Spread rumours	Made impolite comments
Made aggressive comments	1		
Spread rumours	.459**	1	
Made impolite comments	.490**	-0.046	1
** Significant correlation at 0.01 level (one-tailed).			

Table 3.2: Confidence analysis table.

Expectation of outcome reliability statistics		Social norm reliability statistics		Cyberbullying reliability statistics	
Cronbach Alpha	Number of items	Cronbach Alpha	Number of items	Cronbach Alpha	Number of items
.987	6	.995	18	. 985	3

4.3. Regressivity Analysis

In this study, a linear regression analysis was conducted for college students and high school students respectively based on the relationship that existed between the variables, and the results of the analysis are shown in Tables 4.1, 4.2 below.

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Table 4.1: Table of regression analysis for high school students.

		B	Standard errors	Beta	t	Significance
1	(Constant)	0.75	0.064		11.799	0
	Are you involved in cyberbullying	0.044	0.041	0.076	1.051	0.295
2	(Constant)	2.13	0.37		5.756	0
	Are you involved in cyberbullying	-0.827	0.241	-1.447	-3.428	0.001
	expectation	0.093	0.041	0.996	2.254	0.025
	SocialNorm	-0.213	0.04	-2.542	-5.391	0
a Dependent variable: cyberbullying						

Table 4.2: Regression analysis table for university students.

		B	Standard errors	Beta	t	Significance
1	(Constant)	0.833	0.062		13.441	0
	Are you involved in cyberbullying	-0.019	0.039	-0.032	-0.484	0.629
2	(Constant)	1.663	0.412		4.039	0
	Are you involved in cyberbullying	-0.553	0.268	-0.952	-2.063	0.04
	expectation	-0.002	0.03	-0.016	-0.052	0.959
	SocialNorm	-0.078	0.032	-0.918	-2.413	0.017
a Dependent variable: cyberbullying						

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Tables 4.1 and 4.2, based on linear regressions, show that high school students' expectations of cyberbullying outcomes and social norms were both significantly associated with their involvement in cyberbullying. The expectation of the outcome of violence was positively correlated and social norms were negatively correlated, while the expectation of the outcome of cyberbullying was not significantly correlated with participation in cyberbullying and social norms were significantly correlated with participation in cyberbullying among college students, with both the expectation of the outcome of violence and social norms being negatively correlated with participation in cyberbullying among college students.

5. Discussion

In this study, it was found that high school students' expectations of the outcome of violence and social norms were positively and negatively related to their involvement in cyberbullying, while the relationship between college students' expectations of the outcome of violence and their involvement in cyberbullying was not significant, and social norms were negatively related to their involvement in cyberbullying. According to SCT theory, individual cognition, individual behavior, and individual external environment influence each other, and in this study, expectations of violence outcomes and social norms correspond to individual cognition and external environment, respectively, so it is reasonable that the factors associated with cyberbullying are significantly related to high school students.

In Zheng Yanju et al.'s study in 2021, a different conclusion was reached from the present study on college students' participation in cyberbullying, as it concluded that cyberbullying was mainly related to the social environment and one's own perceptions, and it did not take the subject's occupation into consideration. This difference is largely due to the fact that this study's selection of the variable of college students' expectations of the outcome of violence is not perfect and needs to be revised.

In terms of expectation of the outcome of the violence, the purpose of the violence was an important factor in whether or not the violence was committed, and it is clear that the high school students had high expectations of the outcome when they engaged in the violence. In contrast to the high school students, the data analysis showed that the university students were not involved in cyberbullying with the expectation of the outcome of the violence, which was in contrast to the high school students. In general, the higher the expectation of the outcome, the more likely high school students were to engage in cyberbullying, while college students' involvement in cyberbullying was not significantly related to their expectation of the outcome.

As for social norms, they are the opposite of what is expected as a result of violence; the people who care about the college and high school students more mind their involvement in cyberbullying, the more college and high school students will go on to engage in cyberbullying. This may have something to do with the internal rebelliousness of high school and college students.

6. Conclusion

This study focuses on the factors involved in cyberbullying and compares the main factors and differences between college and high school students' involvement in cyberbullying. By using SCT theory and a questionnaire, it is concluded that the main factors involved in cyberbullying are the expectation of the outcome of the violence and the influence of social norms on the participants themselves, while the main factors that influence college and high school students' involvement do not differ significantly. This finding once again demonstrates the validity of SCT theory regarding the area of cyberbullying. This study also replaces the social environment in SCT theory with social norms as a parallel variable and draws relevant and valid conclusions. This study will be useful for

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organisations that want to combat cyberbullying or for parents who want to prevent their children from participating in cyberbullying.

The main shortcomings of this study are as follows: 1. the use of questionnaires makes the data may be subjective, which needs to be corroborated and confirmed; 2. The range of respondents in this study is small and the results are not generalizable; 3. the application of SCT theory in this study is only limited to the basics, which can be further analysed.

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