Analysis of the Relationship Between College Students' Cyber Violence News and Cyber Violence Behavior in Social Media

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Abstract: *With the advancement of Internet technology, social media has brought convenience to people and greatly changed their lifestyles. With the popularity of social media, cyber violence has also become more and more intense. College students, as the heavy users of social media, are easily influenced by cyber violence news and conduct cyber violence behaviors. This paper captures 7153 microblogs of 71 college students within 90 days, and uses text analysis technology to extract information such as cyber violence news, cyber violence behavior, anxiety, and classmates' opinions. By establishing a moderated mediation analysis, this paper finds that the moderating ability of cyber social support is weaker than that of classmates' opinions. Therefore, when preventing college students' cyber violence incidents in the future, it can be adjusted in terms of classmates' opinions and cyber social support.*

Keywords: *Cyber Violence; College Student; Cyber Social Support; Mediation Analysis*

1. Introduction

The creation of social media has provided great convenience for the publication and dissemination of various information. At the same time, the openness, anonymity and interactivity of the Internet have also caused many negative behaviors. Many Internet users spread rumors by hurling abuses or spreading rumors in social media. Cyber violence has also become a social instability factor. The "micro-language" environment created by various social media platforms has made cyber violence increasingly prominent. Cyber violence behavior ranges from verbal abuse to human flesh search, exposure and theft of personal information. Previous work stated that the total incidence of cyber violence among college students is 59.47% [1]. Cyber violence has a negative impact not only on victims, but also on bystanders and society as a whole. The lack of effective control over cyber violence leads to the indifference of bystanders, which damages cyber civilization and harmony. Therefore, it is necessary to conduct in-depth research on cyber violence to help college administrators identify, prevent and control cyber violence.

Regarding the main discussion of the relationship between the cyber violence news and cyber violence behavior, the following two issues are specifically studied:

1) Does cyber social support affect the anxiety of college students after learning about the news of cyber violence?

2) Do the opinions of classmates affect college students from anxiety to conduct cyber violence behaviors?

2. Literrature Review

The term "Cyber violence" is evolved from the concept of traditional violence. Genyuan defined cyber violence as a malicious harassment that uses information technology to prevent people from effectively protecting themselves, causing physical and mental harm to the victim [2].

Cyber violence behavior refers to the behavior that individuals use some computers, mobile phones, tablets and other tools to cause harm to others through the social media of the Internet [3][4]. This paper believes that cyber violence is the mental harm that netizens use in social media to use language, human flesh search and other methods to harm other netizens. Cyber violence behavior shares some characteristics with traditional violence and has been found to be associated with traditional violence. In addition to relying on electronic devices, cyber violence behavior has unique characteristics such as

anonymity and a wide audience. It can cause victims to experience a variety of negative emotions, such as depressive symptoms, anxiety symptoms, inattention, and various negative social emotions. The impact of cyber violence on the study and life of college students mostly appears in the emotional aspect [5][6].

Cyber violence news was defined by researchers as attracting the attention of Internet users, increasing their own traffic, and reporting details, procedures, and persons involved in illegal incidents such as violence, pornography, and abuse. Some researchers also defined cyber violence news as online media that publishes irritating, imitative, and deeply toxic online news, making it easier for online users to have online deviant behaviors, that is, behaviors that deviate from existing network norms to a certain extent. This paper defines cyber violence news as the detailed reporting of some deeply poisoned information events by online media for their own benefit. These media violence messages may cause netizens to feel insecure and even anxious, which in turn leads to aggressive behavior.

This paper mainly studies the anxiety of college students affected by the cyber violence news. Therefore, this paper defines anxiety as a diffuse emotion of tension, panic, and worry that occurs when an individual faces danger or a bad outcome. Studies have shown that exposure to violent media or violent events can lead to anxiety. In cities with more violent incidents, the probability of adults suffering from anxiety and depression is much higher than in more peaceful cities, and direct exposure to violence or exposure to online or offline news with violent content increases the risk of depression.

The anxiety level of college students can positively predict their online deviant behavior, and some researchers have found that anxiety can play a significant mediating role between interpersonal relationships and aggressive behavior. A study with college students as a sample found that anxiety can significantly predict aggressive behavior, that is, college students who feel more anxiety will have more aggressive behavior.

The concept of social support originated from research on the impact of life stress on physical and mental health, and subsequently formed different understandings, one defined social support as actual and visible support, and the other defined social support as individual subjective felt support. With the rise of the Internet, cyber social support has gradually attracted the attention of researchers. This paper believes that cyber social support is the spiritual or material support that online users obtain through online social platforms, and online social support is an extension of offline social support. The rise of social networking sites has gradually shifted the way people obtain social support from offline to online, forming online social support. People can obtain social support through network interpersonal relationships.

3. Research Method and Hypothesis

In the past, researchers tended to use questionnaires, self-reports or experimental methods when studying cyber violence. While the research has convincing data, many questions remain. In the process of questionnaire survey, the data collected by the questionnaire may have cognitive bias [7]. For example, when researching online deviant behaviors such as cyber crime and cyber violence, if the respondents realize that they are in an observed environment, they may modify their real behaviors due to the influence of social approval [8]. Compared with the traditional questionnaire method, big data is more accurate and targeted by collecting and arranging the online behavior data of college students to analyse their online behavior. Studies have shown that self-reported data is less accurate than behavioral data when studying social networking [9].

This paper takes Weibo social platform media news and college students' original Weibo texts as research objects. In this study, the web crawler crawls the microblog data and processes it. This paper captures 7153 microblogs of 71 college students within 90 days. Then, uses the textual analysis system to analyse the text to obtain the cyber violence index, cyber violence behavior, anxiety and classmates' opinions, etc.

Since when an individual is facing a stressful event, social support can effectively reduce the pressure felt by the individual and reduce the generation of anxiety, cyber social support should also play the same moderating role. Therefore, we propose the following hypothesis:

H1: Cyber support negatively modulates the relationship between cyber violence news and anxiety.

Weibo among college students in a class or a department usually follows each other. College students who are in emotional crisis get the opinion and support of their classmates on the Weibo platform, which

will greatly affect their decisions and behaviors. Hence, we present the second hypothesis:

H2: Classmates' opinions negatively moderate the relationship between anxiety and cyber violence behavior.

4. Analysis Model and Experimental Results

This paper proposes a moderated mediation model to test the two proposed hypotheses H1 and H2 shown by Figure 1.
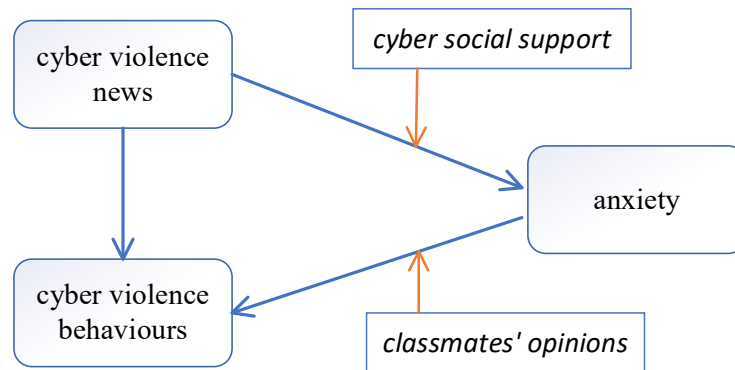

Figure 1: Moderated mediation model diagram.

We compute the correlation coefficients of cyber violence news, anxiety, cyber social support, classmates' opinions and cyber violence behavior. The result is shown by Table 1.

Table 1: The correlation coefficients of variables

CR	cyber violence news	anxiety	cyber social support	classmates' opinions	cyber violence behavior
cyber violence news	1				
anxiety	0.453*	1			
cyber social support	0.412**	-0.142**	1		
classmates' opinions	-0.141	0.113**	0.117	1	
cyber violence behavior	0.225	0.372**	-0.073	-0.301**	1

*Note: * $p < 0.01$, ** $p < 0.05$*

Table 1 shows that the cyber violence news index and anxiety index are significantly positively correlated (CR=0.453, p<0.01). There was a significant positive correlation between the cyber violence news index and cyber social support (CR=0.412, p<0.05). The cyber violence news index and cyber violence were marginally significant (CR=0.225). Anxiety index was significantly negatively correlated with cyber social support (CR=-0.142, p<0.05). There was a significant positive correlation between anxiety index and cyber violence behavior (CR=0.372, p<0.05). Classmates' opinions index was negatively correlated with the cyber violence index (CR=-0.312, p<0.05), but it was more significant than cyber social support on anxiety (CR=-0.142, p<0.05).

In this paper, the model 4 of the SPSS software PROCESS plug-in is used to test the mediation effect, as shown in Table 2. The result shows that cyber violence news has a marginally significant positive predictive effect on cyber violence behavior. After adding anxiety, cyber social support and Classmates' opinions into the model, the study found that anxiety significantly predicted cyber violence behavior and played a complete mediating role. According to the analysis of process model 21, the result indicates that cyber social support can moderate the relationship between cyber violent news and anxiety index, students with high cyber social support will have less anxiety, and students with low cyber social support are more likely to have anxiety. In addition, the result shows that classmates' opinions can moderate the relationship between anxiety index and cyber violent behavior. Students who gain more opinions from their classmates are less likely to engage in cyber violence behavior. In brief, the result shows that the hypothesis H1 and H2 holds.

Table 2: Moderated mediation model checking

outcome variable	predictor variable	Fitting index			Significance index	
		R	R^2	F	β	t
anxiety		0.454	0.206	1.724		
	cyber violent news				0.108	4.325***
	cyber social support				0.032	-2.435**
cyber violence behavior		0.571	0.326	4.293		
	cyber violent news				0.062	1.2
	anxiety				0.602	4.014**
	Classmates' opinions				0.024	-4.513**

Note: $* p < 0.01$, $** p < 0.05$, $*** p < 0.1$

Discussion: Anxiety and social support are closely related, and students with poor cyber social support have significantly higher index of anxiety than those with better cyber social support. Some studies have found that good social support leads to reduced anxiety, which in turn alleviates aggression and reduces the occurrence of aggressive cyber violence.

5. Conclusion

With the development of the Internet, social media has provided great convenience for the publication and dissemination of various information. Many Internet users troll or spread rumors in social media. Cyber violence has become one of the social instability factors. College students are heavy users of new social media and are easily influenced by cyber violence news to commit cyber violence. This paper uses a web crawler to obtain information about college students' Weibo posts, reposts and comments. Text analysis techniques are used to extract important information such as cyber violence news, cyber violence behavior, anxiety, and classmates' opinions. We use the PROCESS plug-in of SPSS software to test the mediation effect. The experimental result shows that the news about cyber violence was significantly and positively correlated with Internet users' anxiety. In addition, cyber social support was found to moderate the relationship between cyber violence news and anxiety index. The result also shows that classmates' opinions can moderate the relationship between anxiety index and cyber violent behavior. Moreover, it has a stronger moderate function than cyber social support. Therefore, we should pay attention to the support of college students on social media from social netizens and classmates to avoid negative emotions caused by cyber violence news, thereby reducing the occurrence of cyber violence.

Acknowledgements

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