

Analysis of Bystander Intervention Behavior in Chinese Adolescents' Cyberbullying in Post-epidemic Era

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Abstract: This paper analyzed the bystander intervention behavior of Chinese adolescents' cyberbullying in the post-epidemic period. In cyberbullying incidents, bystander inaction often exacerbates the adverse effects of cyberbullying on victims. However, bystanders can intervene in behaviors to prevent cyberbullying or provide support to victims. In this study, questionnaires were distributed on social media platforms utilizing questionnaires, and the relationship between variables was explained based on Theory of Planned Behavior (TPB) theory. The results showed that in the post-epidemic era when adolescents were exposed to violent content on the Internet, their attitude towards cyberbullying intervention behavior, their subjective norms of cyberbullying intervention behavior, and their perceived behavioral control of cyberbullying intervention behavior were positively correlated with cyberbullying intervention behavior. However, the experiences of cyberbullying and bystander intervention were not significantly related among teenagers. Therefore, this analysis asserted that in the post-epidemic era, under the effect of COVID-19, views, norms, and sense of agency around cyberbullying among teenagers Cyberbullying bystander intervention behavior was favorably affected by bystander intervention. This can enrich the theoretical results of TPB and provide academic support for subsequent scholars' analysis.

Keywords: Cyberbullying, Adolescents, Bystander intervention behavior, TPB

1. Introduction

1.1. Research Background

In the computerized age, social media is becoming more and more developed, and more and more people choose the Internet to socialize, which leads to contradictions and conflicts between offline people will directly appear on the Internet, and the Internet space will also because of their different viewpoints, interests, etc., they have become a place of conflict, and a new social problem in the digital age, cyberbullying, has emerged [1, 2].

Cyberbullying is the act of someone bullying or harassing another person through electronic messages on the Internet and other digital media, often an extension of existing traditional bullying practices [3].

Typical forms of cyberbullying include cell phone bullying (bullying via online calls, messages, pictures, and audio) or applying the Internet (Bullying via web chat, online community, dating apps, etc.) [4]. Cyberbullying used to occur on social media, online violent games and inappropriate videos, and even in the process of searching for information online [4].

Several studies have identified the severe consequences of being victimized by cyberbullying. Although its effects vary, cyberbullying has a higher degree of detrimental impact on adolescents than on adults because adolescents are at a stage of physical and mental growth and they are more vulnerable to suffering. With the upgrading of digital media technology, cyberbullying is no longer an isolated case among adolescents [4]. If adolescent cyberbullying is not explored and effective measures are taken, children will feel lonelier and more depressed, their eating and sleeping patterns will also change significantly, and they will lose interest in normal activities, affecting their growth [5].

In the U.S., researchers generally say that cyberbullying is different from individual aggressive behavior, and the U.S. has tried to legislate against cyberbullying [6]. However, in mainland China, there has not been sufficient academic attention to cyberbullying.

Hoff and Mitchell applied a quantitative design to investigate the causes, effects, and consequences of adolescent cyberbullying in schools and educational preventive measures in schools [7]. AKRIM analyzed the causes of cyberbullying by asking students about their views on cyberbullying on social media [8]. Zhu et al. analyzed the current status of cyberbullying, risk factors, and how to prevent it, which provided a worldwide summary for the academic analysis of cyberbullying [9]. Gobert et al. analyzed the psychological impact of cyberbullying on students in two multi-ethnic high schools in Hawaii [10].

Safari explored the psychological effects of cyberbullying on adolescents after documenting the effects of cyberbullying on Indonesian adolescents [11]. Wiederhold and Riva explored behavioral determinants for adolescent intervention in cyberbullying events [12]. Brody and Vangelisti applied the bystander effect and other analyses of bystander behavior to understand and anticipate communication in cyberbullying events [13].

1.2. Research Gap

Cyberbullying among middle and high school students and their personal experiences have been analyzed before, this analysis is in the context of the COVID-19 era, where online learning at home for teens has become a norm [14]. Adolescents' application to the Internet has become more frequent, and with it, the frequency of violent content forced upon them during their use of the Internet has increased, and the likelihood of exposure to cyberbullying incidents has become greater. Exposure to violent content online is associated with reduced empathy for victims of violence in the real world, with research showing that the more people embrace violent content online, the more likely they are to behave at high levels of active aggression when provoked [15]. This analysis is therefore dedicated to exploring what factors facilitate the bystander intervention behavior of adolescents who apply the Internet frequently in cyberbullying during the contemporary epidemic.

1.3. Fill the Gap

This analysis utilized the TPB model theory and a questionnaire to explore the influence of adolescents' attitudes toward bystander intervention, subjective norms, and perceived behavioral control on whether they would engage in intervention behavior in cyberbullying. In addition, this

analysis added the variable of "adolescents' previous cyberbullying experience" to the analysis to determine whether it promoted their intervention behavior. These analyses can enrich the application of TPB theory and provide new directions and theoretical support for bystander interventions in cyberbullying.

In summary, this analysis focuses on exploring: do adolescents' Attitudes toward cyberbullying interventions influence Bystander Intervention Behavior? Do adolescents' Subjective Norms about cyberbullying bystander intervention behavior influences their Bystander Intervention Behavior? Do adolescents' Perceived Behavioral Control of cyberbullying bystander intervention behavior influence their Bystander Intervention Behavior? Do adolescents' Past Experiences with cyberbullying influence their Bystander Intervention Behavior?

2. Literature Review

2.1. Definition & Development

From a psychological and media communication perspective, intervening in a person's behavior is considered to be a more difficult job. At present, the more influential theories of psychological intervention include self-efficacy, social cognition theory, stage of change theory, and planned behavior theory. Ajzen's 1985 theory of planned behavior (TPB) is one of the most popular frameworks for doing so [16]. Figure 1 below is a schematic diagram of the theory.

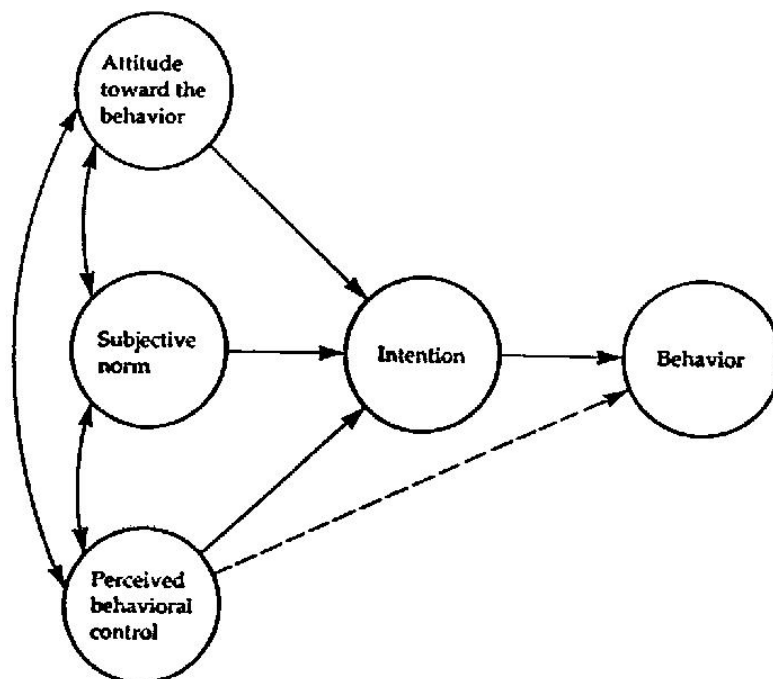


Figure 1: Theory of planned behavior from I. Ajzen [18]

In recent years, researchers have frequently focused on the bystander, who accounts for a relatively large proportion of cyberbullying, and studies have discovered that this group is also affected by cyberbullying events.

In the analysis of Van et al., the possible bystander intervention behavior exhibited by bystanders in cyberbullying was divided into three categories: 'joining in the violence' or 'helping the victim' [17]. Furthermore, researchers have discovered that in cyberbullying, attitudes toward cyberbullying also forecasted whether the bystander would later participate in cyberbullying, and

that bystander attitudes towards intervention and behaviors of intervention can also play a role in the phenomenon. Bullying can be effectively stopped if bystanders can intervene, such as directly asking the perpetrator to stop in comments or indirectly reporting the incident to the webmaster as a tactic.

Because for the perpetrators, the lockdown caused by COVID-19 has helped them to cover up their violence perfectly. This has a major impact on children. As they spend more time online, the result is a dramatic increase in child sexual abuse crimes online. Combined with the report NETCLEAN REPORT COVID-19 IMPACT 2020, there is a direct correlation between the increase in child sexual abuse crimes online and the increase in screen time due to lockdowns and social restrictions during the pandemic. The psychological impact of isolated, less structured communities and addiction to their devices by adults and children exacerbates this situation [18].

2.2. Important Results

However, while research on cyberbullying is extensive, there has not been an in-depth analysis of this group of adolescents from the perspective of bystander intervention in the context of the novel coronavirus era. Therefore, to better understand the current situation of adolescents' exposure to cyberbullying in the current epidemic era, this paper measures the intervention scale of adolescents against cyberbullying based on the TPB theory and analyses the four factors of Attitude (Att), Subjective Norm (SN), Perceived Behavior control (PBC), and Past Experience (PE). relationship between predictors. It is worth exploring whether adolescents with insufficient physical and mental development, due to their long-term exposure to violent media messages, will empathize with the victims and even change their attitudes towards cyberbullying under the control of emotions such as anxiety and fear, and then intervene. This analysis concluded that these issues are particularly important because teens are under much more stress than the public expected during the current pandemic.

2.3. Summary

Therefore, this study's hypotheses:

H1: Attitudes toward cyberbullying bystander intervention behavior are positively related to cyberbullying intervention intention.

H2: Subjective Norm toward cyberbullying bystander intervention behavior is positively related to cyberbullying intervention intention.

H3: Perceived Behavioral Control toward cyberbullying bystander intervention behavior is positively related to cyberbullying intervention intention.

H4: Past Experience of being cyberbullied was positively correlated with the intervention behavior.

3. Method

3.1. Research Design

This analysis applied a questionnaire survey method. Because this analysis method can describe and explain the distribution and basic characteristics of cyberbullying intervention behavior through random sampling. The results of the sample analysis reflect the overall level and trend of this behavior.

3.2. Data Collection

This analysis is based on Icek Ajzen's TPB and examined "adolescents' attitudes and willingness to intervene in cyberbullying"[18]. The screening was carried out after the pre-investigation and was modified in advance to ensure the smooth running of the investigation. Based on the "Questionnaire Star" platform, 800 electronic formal questionnaires were distributed, and the questionnaires were distributed to WeChat Moments and communities. To ensure the validity and scientific nature of the questionnaire. The first draft of this analysis explains the content and purpose of the questionnaire and informs respondents about the anonymity and voluntary principles of the questionnaire. Compared with the shortcomings of paper questionnaires, which are easy to miss, electronic questionnaires can avoid this problem. Therefore, after the data collection is completed, only the questionnaires whose age does not match the age of the analyzed subjects need to be eliminated.

The collection time of this questionnaire is from 10:00 on August 1, 2022, to 23:59 on August 3, 2022. 800 questionnaires were distributed and 642 valid questionnaires were recovered.

3.3. Data Analysis

The statistical software applied in this analysis was SPSS 25.0. The valid questionnaires were retained after screening the data. KMO and Bartlett tests were applied for validity verification, and SPSS was utilized.

4. Results

The reliability coefficient of Att. is 0.940, SN is 0.944, and PBC is 0.915, PE is 0.733. Thus, the reliable quality of the analyzed data is high.

Then KMO and Bartlett's test was applied to verify the validity. From the table below (Table 1), it can be concluded that The KMO score of 0.938 indicates that the data is particularly amenable to information extraction, and a KMO value of more than 0.8 indicates that the data may be used to reflect the validity of the study.

Table 1: KMO and Bartlett's Test.

KMO		0.938
Bartlett's Test of Sphericity	Chi-Square	21664.939
	df	351
	p	0.000

The data obtained from the following table (Table 2) indicate that correlation analysis was utilized to analyze the correlation between DV (Intervention Behavior) and a total of four variables, and were all significant, and the correlation coefficient values were 0.404, 0.423, 0.457, and 0.468, and the correlation coefficient values are all greater than 0. This shows that Intervention Behavior is positively impacted by Att., SN, PBC, and PE.

Table 2: Pearson Correlation

	Mean	Std. Deviation	DV_Interven tion Behavior	Attitude	Subjectiv e Norms	Perceived Behavioral Control	Past Experience
DV_Inter vention Behavior	4.591	1.219	1				
Attitude	5.089	1.524	0.404**	1			
Subjectiv e Norms	5.053	1.551	0.423**	0.335**	1		
Perceive d Behavior al Control	5.035	1.32	0.457**	0.469**	0.814**	1	
Past Experien ce	5.064	1.337	0.468**	0.844**	0.646**	0.681**	1
* p<0.05 ** p<0.01							

The model equation is:

$$DV = 1.946 + 0.177*Att + 0.131*SN + 0.171*PBC + 0.043*PE \quad (1)$$

Table 3 shows that the model's R^2 is 0.267, meaning that changes in IV1, IV2, IV3, and IV4 account for 26.7% of the variance in DV. The regression coefficients for IV1, IV2, IV3, and IV4 are 0.177, 0.131, 0.171, and 0.043, respectively. Which is to say that IV1, IV2, and IV3 all significantly boosted DV, whereas IV4 had no discernible impact.

Table 3: Parameter Estimates (n=642)

	Unstandardized Coefficients		Standardized Coefficients	t	p	VIF	R2	Adj R2	F
	B	Std. Error	Beta						
Constant	1.946	0.179	-	10.845	0.000**	-			
IV1_Attitude	0.177	0.059	0.222	2.984	0.003**	4.799			
IV2_Subjective Norms	0.131	0.053	0.167	2.471	0.014*	3.978			
IV3_Perceived Behavioral Control	0.171	0.058	0.185	2.951	0.003**	3.424	0.267	0.262	F (4,637) =58.031, p=0.000
IV4_Past Experience	0.043	0.083	0.047	0.515	0.607	7.254			
Dependent Variable: DV_Bystander Intervention Behavior									
D-W: 1.913									
* p<0.05 ** p<0.01									

5. Discussion

The regression coefficient analysis of these four factors shows that Att., SN, and PBC have a significant positive effect on Bystander Intervention Behavior, but Past Experience and Bystander Intervention Behavior have no relationship. Therefore, it can be concluded that the H1-H3 were all established, but H4 was not established. Therefore, the more important the attitude of adolescents to cyberbullying intervention, the more willing they are to intervene; the more supportive the people around them are to intervene in cyberbullying, the stronger their willingness to intervene in the incident; the more capabilities and means they have, the more willing they are to intervene. This is reasonable and important. However, inconsistent with the hypothesis, post-analyze findings were not detected to have a positive or negative impact on the intervention behavior of this study, whether or not the subjects participated in or experienced cyberbullying in their past lives. That said, for adolescents who have participated in cyberbullying (whether they are the bully or the victim), it is currently impossible to analyze whether they are more willing to intervene in the post-pandemic era. This may be because those who have been involved in cyberbullying are more afraid to intervene, or are more willing to engage in aggressive interventional behaviors to protect new bullies. After all, they have been bullied before, the reasons for which are worth exploring in the future.

In addition, it was observed that the highest percentage of people had an attitude of wanting to intervene as a bystander in cyberbullying, with a mean score of 5.089 out of 7, compared to slightly lower scores for Subjective Norms and the lowest score of 5.035 for Perceived Behavioral Control. That is, the vast majority of adolescents already have the attitude to actively intervene in the cyberbullying phenomenon, and perhaps in the future, when they have more intervention skills and intervention strategies, they will be more likely to intervene in cyberbullying as bystanders.

6. Conclusion

To sum up, this analysis analyzed the attitude and willingness of Chinese adolescents to cyberbullying intervention using a questionnaire survey base on the TPB theoretical model. The conclusion is that the first three hypotheses are valid, and the latter hypothesis is not valid, that is, adolescents' Attitudes toward cyberbullying intervention were positively correlated with cyberbullying intervention intention, and the Subjective Norm of cyberbullying intervention behavior was positively correlated with cyberbullying intervention intention. Furthermore, Perceived Behavioral Control over cyberbullying intervention behavior was positively correlated with cyberbullying intervention intention. But teens' past experiences of being cyberbullied had nothing to do with their intentions for the cyberbullying intervention.

This paper has several limitations. First, this paper applied cross-sectional data. While it was useful for analyzing correlations, it was not provided insight into adolescents' attitudes and willingness to cyberbullying interventions under the influence of COVID-19. Second, this analysis demonstrated that online violence increases the frequency of cyberbullying among adolescents, but was not investigate the impact of media coverage on adolescents.

Therefore, to increase the frequency of bystander intervention behavior in cyberbullying, the mass media must take measures to improve adolescents' attitudes toward bystander intervention behavior, increase environmental edification, and guide adolescents to promote themselves. For example, strengthen moral education culture and social positive energy dissemination, cultivate empathy, carry out effective anti-bullying education, help young people to correctly evaluate the potential consequences of their behavior, and gradually improve the intervention ability to cyberbully. In conclusion, future analyses can explore how to intervene in adolescents' negative bystander attitudes towards cyberbullying from a media perspective.

References

- [1] Straus L.B., *Cyberbullying: Which 3 social networks are the worst?* (2016) <http://www.momsteam.com/health-safety/cyberbullying-which-3-social-networks-are-worst>, (Accessed on 20 Oct 2016).
- [2] Zhang S., Leidner D., *From improper to acceptable: How perpetrators neutralize workplace bullying behaviors in the cyber world*, *Information & Management*. 55 (7) (2018)850-865.
- [3] Waasdorp, T. E., & Bradshaw, C. P. (2015). *The overlap between cyberbullying and traditional bullying*. *Journal of adolescent health*, 56(5), 483-488.
- [4] Smith PK, Mahdavi J, Carvalho M, Fisher S, Russell S, Tippett N. *Cyberbullying: its nature and impact in secondary school pupils*. *J Child Psychol Psychiatry*. 2008 Apr;49(4):376–85.
- [5] Nixon, C. L. (2014). *Current perspectives: the impact of cyberbullying on adolescent health*. *Adolescent health, medicine and therapeutics*, 5, 143.
- [6] Mehari, K. R., Farrell, A. D., & Le, A. T. H. (2014). *Cyberbullying among adolescents: Measures in search of a construct*. *Psychology of Violence*, 4(4), 399.
- [7] Hoff, D. L., & Mitchell, S. N. (2009). *Cyberbullying: Causes, effects, and remedies*. *Journal of Educational Administration*.
- [8] AKRIM, A. (2022). *Student perception of cyberbullying in social media*. *Aksaqila Jabfung*.
- [9] Zhu, C., Huang, S., Evans, R., & Zhang, W. (2021). *Cyberbullying among adolescents and children: a comprehensive review of the global situation, risk factors, and preventive measures*. *Frontiers in public health*, 9, 634909.

- [10] Goebert, D., Else, I., Matsu, C., Chung-Do, J., & Chang, J. Y. (2011). *The impact of cyberbullying on substance uses and mental health in a multiethnic sample*. *Maternal and child health journal*, 15(8), 1282-1286.
- [11] Safaria, T. (2016). *Prevalence and impact of cyberbullying in a sample of indonesian junior high school students*. *Turkish Online Journal of Educational Technology-TOJET*, 15(1), 82-91.
- [12] Wiederhold, B. K., & Riva, G. (Eds.). (2012). *Annual Review of Cybertherapy and Telemedicine 2012: Advanced Technologies in the Behavioral, Social and Neurosciences*.
- [13] Brody, N., & Vangelisti, A. L. (2016). *Bystander intervention in cyberbullying*. *Communication Monographs*, 83(1), 94-119.
- [14] Mishna, F., Cook, C., Gadalla, T., Daciuk, J., & Solomon, S. (2010). *Cyber bullying behaviors among middle and high school students*. *American journal of orthopsychiatry*, 80(3), 362-374.
- [15] Han, L., Xiao, M., Jou, M., Hu, L., Sun, R., & Zhou, Z. (2020). *The long-term effect of media violence exposure on aggression of youngsters*. *Computers in human behavior*, 106, 106257.
- [16] Ajzen, I. (1991). *The theory of planned behavior*. *Organizational behavior and human decision processes*, 50(2), 179-211.
- [17] Kozubal, M., Szuster, A., & Barlińska, J. (2019). *Cyberbystanders, affective empathy and social norms*. *Studia Psychologica*, 61(2), 120-131.
- [18] Borgström, A. (n.d.). *NETCLEAN REPORT COVID-19 IMPACT 2020*. Netclean.