






# The Severity of Cyberbullying Affects Bystander Intervention Among College Students: The Roles of Feelings of Responsibility and Empathy

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**Background:** Bystander intervention can protect victims from harm in cyberbullying. Previous studies have found that the severity of cyberbullying incidents is one of the important factors affecting decisions to intervene. However, little is known about the mediating and moderating mechanisms underlying this effect.

**Purpose:** The current study explored the effect of the severity of cyberbullying incidents on bystander intention to intervene on social network sites (SNSs) among college students (Experiment 1), the mediating role of feelings of responsibility (Experiment 2) and the moderating role of empathy (Experiment 3).

**Patients and Methods:** We presented cyberbullying incidents with different levels of severity through scenarios including fictive Weibo news reports and comments. Participants were exposed to a fictive cyberbullying incident and asked to complete a questionnaire including measures of the variables of interest.

**Results:** Our results showed that the severity of incidents positively affected bystander intention to intervene through the mediation of feelings of responsibility. Empathy moderated the effect of incident severity on bystander intention to intervene.

**Conclusion:** The results of the current study help to understand the behavior of bystanders in cyberbullying and they provide a practical reference for intervention in cyberbullying incidents.

**Keywords:** cyberbullying, bystander, incident severity, intention to intervene, social network sites

## Introduction

With the rapid advancements in information and communication technologies (ICTs), an increasing number of people are using the internet for work, study, entertainment and other activities. As the most common internet platform, social network sites (SNSs) are popular among college students.<sup>1</sup> Sixty-eight percent of college students spent between 1–6 hours on SNSs on a weekly basis. Unfortunately, SNSs are also the site of a high incidence of cyberbullying.<sup>2</sup> Cyberbullying on SNSs refers to any form of aggressive behavior on SNSs conducted by a group or an individual repeatedly and over time against targets who cannot easily defend themselves.<sup>3</sup> The Annual Bullying Survey 2018 showed the prevalence of cyberbullying on SNSs: 46% of respondents reported being bullied more than once.<sup>4</sup> A survey from China found that 64.32% of college students had experienced cyberbullying on SNSs.<sup>5</sup> An individual's experience with cyberbullying may lead to a series of subsequent harmful effects on cognition (eg, inattention, low self-esteem), mood (eg, anxiety, depression), and behavior (eg, truancy, alcohol and tobacco abuse).<sup>6,7</sup> However, previous studies on cyberbullying on SNSs have focused on children and adolescents.<sup>8,9</sup> Therefore, it is necessary to pay attention to cyberbullying among college students on SNSs.

Previous researchers have found that bystanders play a key role in cyberbullying.<sup>10–12</sup> The intervention of bystanders can provide a timely and effective end to the behavior of bullies and can weaken or alleviate the harm caused to the

victim.<sup>13</sup> Bystanders can tell the bully to stop bullying, try to comfort the victim, or tell someone else to seek help.<sup>14–16</sup> However, most bystanders choose to do nothing in the face of cyberbullying. Studies have found that 91% of American teenagers choose to ignore the situation when they witness cyberbullying on SNSs,<sup>17</sup> while 61% of college students do not take any action.<sup>8</sup> What factors affect bystander intention to intervene? Previous studies have found that the severity of cyberbullying incidents is one of the important factors.<sup>18,19</sup> The higher the severity of incidents, the stronger the intention of bystanders to intervene.<sup>20,21</sup> However, it is not clear how the severity of cyberbullying incidents affects bystander intention to intervene, and few studies have explored the boundary conditions for the effect produced by the severity of incidents. Therefore, the current study investigated how the incident severity of cyberbullying on SNSs affected bystander intention to intervene and the role of bystander empathy in the process of incident severity affecting the intention to intervene.

As the core element of cyberbullying, the severity of the cyberbullying incident will have an impact on bystander intention to intervene. Bystanders tend to evaluate the severity of incidents before intervening,<sup>8</sup> and more severe cyberbullying incidents induce higher intentions of intervention among bystanders.<sup>22,23</sup> Several researchers have shown that incident severity can positively predict bystander intention to intervene.<sup>20–22</sup> Bastiaensens et al experimentally manipulated the severity of cyberbullying incidents by using a Facebook setting.<sup>22</sup> In the more severe condition, the perpetrator put a private photo of the victim on Facebook with a derisive comment, and in the less severe condition, the perpetrator put an offensive comment or insult on the victim's Facebook wall. Participants were instructed to read the scenario and imagine that they encountered the incident on Facebook as bystanders. The results showed that participants had high intentions to help the victim when they were exposed to the more severe incident than when they were exposed to the less severe incident. However, how the severity of an incident affects the bystander intention to intervene remains unknown. According to the bystander intervention model (BIM), bystanders who have noticed the occurrence of bullying need to evaluate the severity of the incident before they perceive a sense of responsibility to help.<sup>24</sup> As a cognitive factor, feelings of responsibility informed the decision of whether bystanders needed to intervene when faced with a cyberbullying incident. Many studies found that feelings of responsibility were essential for bystanders to intervene and that they were a key mechanism in explaining bystander behavior. Feelings of responsibility were also widely considered to be a mediating factor that facilitates the likelihood of intervention.<sup>19</sup> It was shown that the higher the perceived responsibility of bystanders, the higher their intentions to intervene in the face of cyberbullying.<sup>21</sup> The rationale outlined above leads to the following hypotheses:

H1: Bystanders who are confronted with a more severe cyberbullying incident on SNSs will have higher intentions to intervene.

H2: The severity of the cyberbullying incident positively affects bystander intention to intervene and is mediated through an increase in feelings of responsibility.

Bystander intention to intervene can also be influenced by personal factors.<sup>11,19</sup> Therefore, the perception of incident severity may vary from person to person. Empathy is the ability to recognize, understand and share emotional experiences and feelings.<sup>25</sup> As the main source of motivation for prosocial behavior, previous studies have shown that empathy can reduce peer violence, aggression and crime.<sup>26–28</sup> When bystanders witness cyberbullying, individuals with higher empathy are more inclined to help the victim.<sup>29,30</sup> Although the more severe the cyberbullying incident is, the higher the bystander intention to intervene,<sup>22</sup> bystanders with high empathy will have a high intention to intervene regardless of the severity of the incident because they are more able to feel the harm caused by the bully's behavior.<sup>31</sup> Bystanders with low empathy have a weak ability to understand the feelings of others, so only when the incident is severe and the consequences to the victim are severe will they have a high intention to intervene. Therefore, the following hypothesis is raised:

H3: Empathy moderates the effect of incident severity on bystander intention to intervene. For bystanders with low empathy, their intention to intervene is significantly higher in the face of high severity incidents than in the face of low severity incidents. For bystanders with high empathy, regardless of the severity of the incident, they had a high intention to intervene.

Three experiments were included in this study. First, we explored the influence of the severity of cyberbullying incidents on bystander intention to intervene on SNSs. Then, Experiment 2 tested the role of feelings of responsibility in the aforementioned effect. Finally, we examined the moderating role of empathy in the effect of incident severity on bystanders' intention to intervene.

## Experiment 1

In Experiment 1, we used situational materials to present cyberbullying incidents, aiming to explore the effect of the severity of cyberbullying incidents on bystander intention to intervene on SNSs.

## Methods

### Participants

Referring to previous studies,<sup>21</sup> we recruited a total of 88 college students from Ningbo University to participate in this experiment. After excluding the 8 participants who did not complete the experiment seriously, the final sample size was 80 (27 men and 53 women), aged between 18 and 23 years ( $M = 21.91$ ,  $SD = 0.63$ ). All participants were right-handed, had normal or corrected-to-normal vision, belonged to the Han ethnicity (the majority ethnic group in China), and signed the informed consent form. After the end of the experiment, each participant was paid between 3 and 5 yuan. The experiment was approved by the Research Ethics Board of the Department of Psychology at Ningbo University and was performed in accordance with the Declaration of Helsinki.

### Stimuli

Given that Weibo is a type of SNS with a large number of users and a high frequency of cyberbullying in China,<sup>32</sup> we presented a cyberbullying scenario through fictive Weibo news reports and comments. The news was about the government's efforts to regulate the ownership of pet dogs. It depicted a fictitious cyberbullying incident in the comments where Xiaowen (victim) commented: "Strongly support!" Xiaojian (bully) responded to Xiaowen's comments in the following manner: "You are a fool!" (low severity condition) or "You are an imbecile!" (high severity condition, as shown in Figure 1). We ran a pilot experiment to test the difference in the incident severity between the two conditions. The results revealed that there was a significant difference in the perceived severity of the incident between the two conditions,  $t(37) = 8.69$ ,  $p < 0.001$ , Cohen's  $d = 2.78$ .

### Measures

#### Perceived Severity

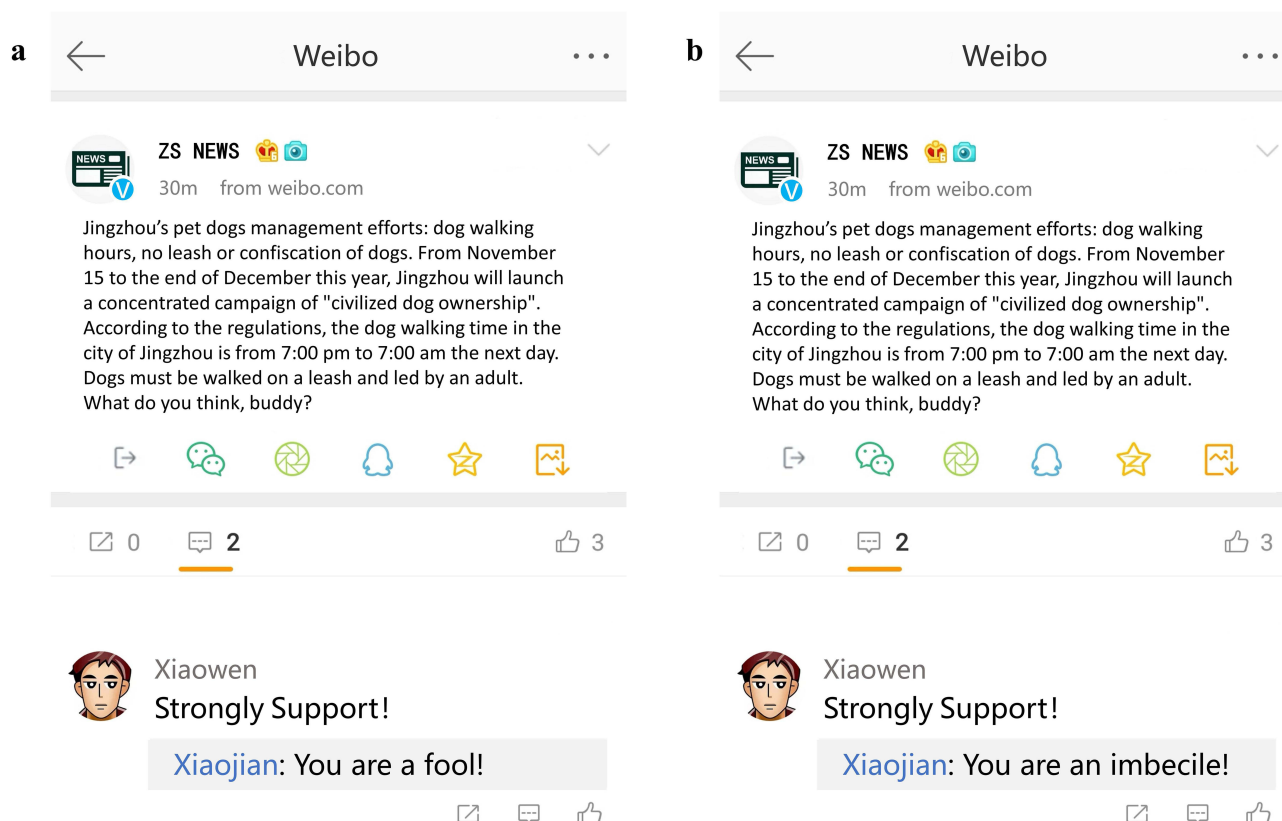
As a manipulation check, participants were asked to evaluate their perceived severity of the incident. A 5-item measure was adapted from Bastiaensens et al<sup>22</sup> and measured on a 7-point Likert scale (Cronbach's  $\alpha = 0.88$ ): "Do you think his comments were hurtful?" "Do you think his comments were severe?" "Do you think his comments were problematic?" "Do you think his comments were amusing?" (reverse coded) "Do you think his comments were funny?" (reverse coded).

#### Intention to Intervene

Seven items adapted from Bastiaensens et al were employed to assess participant intention to intervene.<sup>22</sup> The corresponding items read as follows: "Tell Xiaowen you think that Xiaojian's reply is not OK in a comment on Weibo", "Ask Xiaojian to apologize to Xiaowen for his comments", "Report the cyberbullying incident to a Weibo administrator", "Comfort Xiaowen in a comment", "Give Xiaowen advice on what to do in a comment", "Tell Xiaojian you think his comment is funny", (reverse coded) and "Do something similar" (reverse coded). These items were measured on a 6-point Likert scale, with 1 = "extremely unlikely" and 6 = "extremely likely" (Cronbach's  $\alpha = 0.87$ ).

### Procedure and Design

Participants were randomly allocated to one of the two experimental conditions (39 in the high severity condition and 41 in the low severity condition). They were first presented with a cover story indicating that this experiment intends to



**Figure 1** Sample stimuli of the low severity (a) and high severity (b) conditions.

investigate users' experiences about Weibo. Then, participants watched the fictive Weibo news reports and comments on the computer for at least three minutes. After viewing that, they were asked to immediately complete a questionnaire including manipulation check items, dependent measures, and demographic information. Finally, participants were debriefed about the nature of the experiment.

## Results and Discussion

### Manipulation Check

To check whether our treatment worked adequately, we first tested participants' perceived severity of the incident in the two conditions. The results of an independent sample *t*-test using SPSS 26.0 showed that participants in the high severity condition ( $M = 29.26$ ,  $SD = 6.64$ ) perceived significantly higher severity than participants in the low severity condition ( $M = 25.90$ ,  $SD = 5.62$ ),  $t(78) = 2.44$ ,  $p = 0.017$ , Cohen's  $d = 0.55$ , confirming that the manipulation of the incident severity was successful.

### Effects of the Severity of Incidents on the Intention to Intervene

An independent sample *t*-test was conducted using SPSS 26.0, and the results revealed that participants in the high severity condition ( $M = 27.79$ ,  $SD = 4.54$ ) displayed a higher intention to intervene than those in the low severity condition ( $M = 23.82$ ,  $SD = 4.85$ ),  $t(78) = 3.77$ ,  $p < 0.001$ , Cohen's  $d = 0.84$ .

Hence, we found that the severity of cyberbullying incidents significantly affected bystander intention to intervene on SNSs. The more severe a cyberbullying incident is, the more bystanders intend to intervene.

## Experiment 2

Experiment 1 revealed an effect of incident severity on bystander intention to intervene. On this basis, Experiment 2 used the same material to further explore the role of feelings of responsibility.

## Methods

### Participants

Referring to previous studies,<sup>21</sup> we recruited a different group of 170 college students from Ningbo University to participate in this experiment. After excluding the 5 participants who did not complete the experiment seriously, the final sample size was 165 (65 men and 102 women), aged between 18 and 25 years ( $M = 21.22$ ,  $SD = 0.72$ ). All participants were right-handed, had normal or corrected-to-normal vision, belonged to the Han ethnicity (the majority ethnic group in China), and signed the informed consent form. After the end of the experiment, each participant was paid between 5 and 8 yuan. The experiment was approved by the Research Ethics Board of the Department of Psychology at Ningbo University and was performed in accordance with the Declaration of Helsinki.

### Stimuli

The cyberbullying scenario used in Experiment 2 was identical to Experiment 1.

### Measures

The items of perceived severity and intention to intervene were identical to those in Experiment 1. Four items adapted from Obermaier et al were employed to measure feelings of responsibility to intervene in the cyberbullying incident: “I consider it my duty to help Xiaowen”, “I consider it my duty to tell Xiaojian to stop bullying”, “I feel highly personally obligated to support Xiaowen”, and “It is my obligation to do something about this comment.”<sup>21</sup> All items were measured on 7-point Likert scales (1 = “strongly disagree” to 7 = “strongly agree”), Cronbach’s  $\alpha = 0.80$ .

### Procedure and Design

Participants were randomly allocated to one of the two experimental conditions (84 in the high severity condition and 81 in the low severity condition). The procedure and design were the same as those in Experiment 1, except that participants indicated their feelings of responsibility after completing manipulation check items.

## Results and Discussion

### Manipulation Check

To check whether our treatment worked adequately, we first tested participants’ perceived severity of the incident in the two conditions. The results of an independent sample *t*-test using SPSS 26.0 showed that participants in the high severity condition ( $M = 30.20$ ,  $SD = 5.59$ ) perceived significantly higher severity than participants in the low severity condition ( $M = 26.64$ ,  $SD = 5.48$ ),  $t(163) = 4.13$ ,  $p < 0.001$ , Cohen’s  $d = 0.64$ , confirming that the manipulation of the incident severity was successful.

### Effects of the Severity of Incidents on the Intention to Intervene

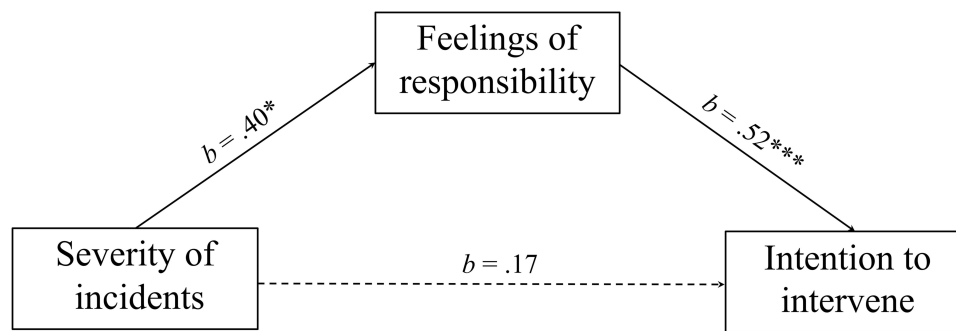
An independent sample *t*-test was conducted using SPSS 26.0, and the results revealed that participants in the high severity condition ( $M = 26.86$ ,  $SD = 4.17$ ) displayed a higher intention to intervene than those in the low severity condition ( $M = 25.04$ ,  $SD = 5.27$ ),  $t(163) = 2.47$ ,  $p = 0.015$ , Cohen’s  $d = 0.38$ .

### Effects of the Severity of Incidents on Feelings of Responsibility

An independent sample *t*-test using SPSS 26.0 was conducted, and the results revealed that participants in the high severity condition ( $M = 18.25$ ,  $SD = 4.23$ ) perceived a higher feeling of responsibility than those in the low severity condition ( $M = 16.47$ ,  $SD = 4.55$ ),  $t(163) = 2.61$ ,  $p = 0.010$ , Cohen’s  $d = 0.41$ .

### The Mediating Role of Feelings of Responsibility

To test the mediating role of feelings of responsibility on the effect of incident severity on bystander intention to intervene, we used Model 4 of the PROCESS macro in SPSS 26.0 with 5000 bootstrap samples and bias-corrected confidence intervals (CIs) of 95%.<sup>33</sup> Participants who witnessed the more severe cyberbullying incident considered themselves more responsible for intervening than those who witnessed the less severe cyberbullying incident ( $b = 0.40$ ,  $t = 2.60$ ,  $p = 0.010$ ). Such feeling of responsibility, in turn, promoted participant intention to intervene ( $b = 0.52$ ,  $t = 7.66$ ,  $p < 0.001$ ). Accordingly, the indirect effect of the severity of incidents on participant intention to intervene as mediated through feelings of responsibility was significant (indirect effect:  $\beta = 0.99$ ,  $b = 0.09$ , 95% CI [0.23, 1.85]). The mediating effect of feelings of responsibility accounted for 54.40% of



**Figure 2** Indirect effects of the severity of incidents on bystander intention to intervene via feelings of responsibility, \* $p < 0.05$ , \*\*\* $p < 0.001$ .

the total effect of the severity of incidents on participant intention to intervene, as illustrated in Figure 2. The results of Experiment 2 showed that feelings of responsibility played a mediating role in the effect of the severity of incidents on bystander intention to intervene. Specifically, compared with low severity incidents, bystanders who were confronted with higher severity incidents perceived a higher feeling of responsibility and thus displayed a higher intention to intervene on SNSs.

## Experiment 3

Experiment 2 revealed that the severity of the cyberbullying incident affected bystander intention to intervene and was mediated through feelings of responsibility. However, there is still a gap in understanding about the boundary conditions of the effect of incident severity. Hence, we examined the moderating role of empathy in the effect of incident severity on bystander intention to intervene.

## Methods

### Participants

Referring to previous studies,<sup>21</sup> we recruited a different group of 155 college students from Ningbo University to participate in this experiment. After excluding the 17 participants who did not complete the experiment seriously, the final sample size was 138 (55 men and 83 women), aged between 19 and 24 years ( $M = 22.11$ ,  $SD = 0.67$ ). All participants were right-handed, had normal or corrected-to-normal vision, belonged to the Han ethnicity (the majority ethnic group in China), and signed the informed consent form. After the end of the experiment, each participant was paid between 5 and 8 yuan. The experiment was approved by the Research Ethics Board of the Department of Psychology at Ningbo University and was performed in accordance with the Declaration of Helsinki.

### Stimuli

The cyberbullying scenario used in Experiment 3 was identical to Experiment 1.

### Measures

The items of perceived severity and intention to intervene were identical to those in Experiment 1. We used the Interpersonal Reactivity Index (Chinese Edition; IRI-C) to evaluate participant empathy.<sup>34,35</sup> The measure consisted of 22 items and included the following four subscales: perspective taking (PT), fantasy force (FS), empathic concern (EC) and personal distress (PD). All items were measured on 5-point Likert scales (0 = “does not describe me well” to 4 = “describes me very well”), Cronbach’s  $\alpha = 0.82$ .

### Procedure and Design

Participants were randomly allocated to the high severity condition ( $n = 78$ ) or the low severity condition ( $n = 60$ ). The procedure was the same as that in Experiment 1, except that participants evaluated their empathy after completing the manipulation check items. We ranked the participants’ empathy scores from highest to lowest and divided the top 50% into the high empathy condition and the bottom 50% into the low empathy condition. Hence, a 2 (severity of incidents: low vs high)  $\times$  2 (empathy: low vs high) between-subjects design was obtained.



## Results and Discussion

### Manipulation Check

To check whether our treatment worked adequately, we first tested participants' perceived severity of the incident in the two conditions. The results of an independent sample *t*-test using SPSS 26.0 showed that participants in the high severity condition ( $M = 29.95$ ,  $SD = 5.67$ ) perceived significantly higher severity than participants in the low severity condition ( $M = 27.13$ ,  $SD = 5.54$ ),  $t(136) = 2.92$ ,  $p = 0.004$ , Cohen's  $d = 0.50$ , confirming that the manipulation of the incident severity was successful.

### The Moderating Role of Empathy

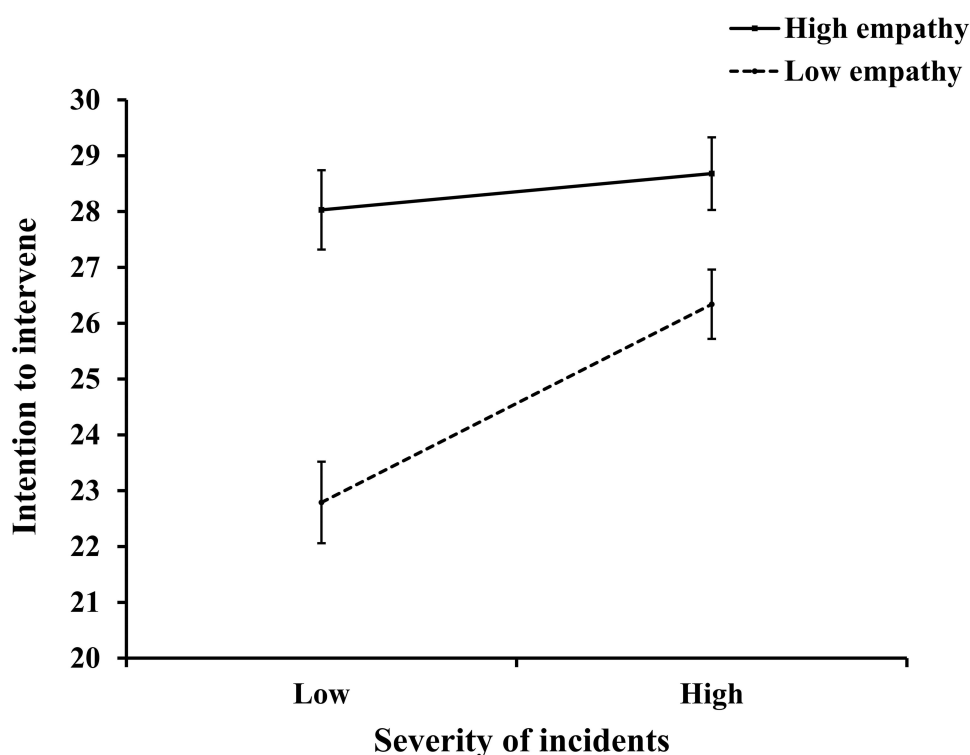
A 2 (severity of incidents: low vs high)  $\times$  2 (empathy: low vs high) ANOVA for bystander intention to intervene was conducted using SPSS 26.0. The main effect of the severity of incidents was ( $F(1, 134) = 9.51$ ,  $p = 0.002$ ,  $\eta_p^2 = 0.07$ ), showing that participants in the high severity condition ( $M = 27.45$ ,  $SD = 3.66$ ) displayed higher intention to intervene than those in the low severity condition ( $M = 25.50$ ,  $SD = 5.17$ ). The main effect of empathy was ( $F(1, 134) = 31.05$ ,  $p < 0.001$ ,  $\eta_p^2 = 0.19$ ), showing that participants with high empathy ( $M = 28.38$ ,  $SD = 4.69$ ) displayed higher intention to intervene than those with low empathy ( $M = 22.79$ ,  $SD = 3.35$ ). Importantly, the interaction effect between the two factors ( $F(1, 134) = 4.57$ ,  $p = 0.034$ ,  $\eta_p^2 = 0.03$ ) was significant. The simple effects analysis revealed that participants with low empathy had a higher intention to intervene when the incident severity was high ( $M = 26.34$ ,  $SD = 2.80$ ) compared with those with low empathy in the low incident severity condition ( $M = 22.79$ ,  $SD = 3.35$ ),  $F(1, 134) = 13.68$ ,  $p < 0.001$ ,  $\eta_p^2 = 0.09$ . For participants with high empathy, there was no significant difference in their intention to intervene between the high incident severity condition ( $M = 28.68$ ,  $SD = 4.13$ ) and the low incident severity condition ( $M = 28.03$ ,  $SD = 5.33$ ),  $F(1, 134) = 0.447$ ,  $p = 0.505$ ,  $\eta_p^2 < 0.01$ , as shown in Figure 3.

The results of Experiment 3 found that empathy moderated the effect of incident severity on bystander intention to intervene on SNSs. Specifically, for bystanders with low empathy, their intention to intervene was significantly higher in the face of high severity incidents than in the face of low severity incidents, whereas for bystanders with high empathy, they had high intention to intervene regardless of the severity of incidents.

## General Discussion

The current research explored the influence of the severity of cyberbullying incidents on bystander intention to intervene on SNSs and the underlying mechanisms and boundary conditions. The results indicate that the severity of incidents affected bystander intention to intervene (Experiment 1). An increase in the severity of the incident increased feelings of responsibility in bystanders, which in turn increased their intention to intervene (Experiment 2). Empathy moderated the effect of incident severity on bystander intention to intervene. For bystanders with low empathy, they were more likely to intervene in high severity incidents than in low severity incidents. For bystanders with high empathy, they had a high intention to intervene regardless of the severity of incidents (Experiment 3). Overall, our findings verify the effect of the severity of cyberbullying incidents on bystander intention to intervene on SNSs. Importantly, the current study showed the underlying mechanism and boundary conditions of the effect of the severity of cyberbullying. That is, the severity of the incident affected bystander intention to intervene by influencing their feelings of responsibility. Empathy was the boundary condition of the effect of the severity of cyberbullying. Cyberbullying severity only affected the intention to intervene for bystanders with low empathy.

The current findings align with previous studies demonstrating that the severity of incidents as a factor has an important impact on bystander intention to intervene.<sup>18,19,23</sup> Compared with traditional bullying, cyberbullying on SNSs has a variety of forms and types, and thus, the severity varies considerably between cyberbullying incidents.<sup>36</sup> Bystanders assess the severity of the incident.<sup>8</sup> For low severity cyberbullying incidents, bystanders may choose not to intervene because they believe the victim is not seriously harmed or can cope on their own. However, for high severity cyberbullying incidents, bystanders may anticipate possible serious consequences from the incident and thus have a high intention to intervene. Nevertheless, due to distance and the invisibility of the bully and the victim of the cyberbullying incident, it is often more difficult to assess the severity of cyberbullying than traditional bullying.<sup>37</sup> Therefore, what characteristics of the incident affect bystander assessments of severity? Are there some key characteristics? Future studies should explore this issue.



**Figure 3** Interaction between severity of incidents and empathy on intention to intervene. Error bars represent standard error.

Our findings revealed the mediating role of feelings of responsibility in the process of incident severity affecting bystander intention to intervene. This result verifies the third stage in the bystander intervention model (BIM) proposed by Latan and Darley and demonstrates that the generation of feelings of responsibility is an essential stage in the process used by bystanders from noticing cyberbullying incidents to finally intervening.<sup>24</sup> This also provides an empirical basis for the applicability of BIM in cyberbullying. Previous studies have also found that the number of bystanders affects the intention of bystanders to intervene through feelings of responsibility,<sup>21</sup> which indicates that feelings of responsibility are an important factor in determining whether bystanders will intervene.<sup>10</sup> However, due to the anonymity of SNSs, bystanders generally have a low sense of responsibility.<sup>21</sup> Therefore, future research should consider how to enhance bystanders' feelings of responsibility and apply the results to practice to enhance bystander intention to intervene.

The current research also found boundary conditions for the effect of the severity of incidents, indicating that the effect on bystander intention to intervene caused by the severity of the incident varied from person to person. For bystanders with high empathy, regardless of the severity of cyberbullying incidents, they have a high intention to intervene. This result has important implications for reducing the negative effects of cyberbullying. Due to the high frequency of cyberbullying, even low severity cyberbullying can cause much distress to victims.<sup>38</sup> Recently, researchers have developed some technical solutions and interventions to combat cyberbullying. However, these solutions, including automatic detection tools and classifiers, have limitations.<sup>30</sup> Bystanders still play an important role in cyberbullying. Therefore, volunteers with high empathy can be recruited on SNSs to patrol comments sections, effectively intervene in low severity cyberbullying incidents and protect victims from harm. Given that situational and personal factors are important influencing factors of bystander intention to intervene, the combined effects of these two factors should be further explored in the future, and the influencing factor model of bystander intention to intervene should be constructed.

Using situational materials, the current study explored the impact of the severity of cyberbullying incidents on bystander intention to intervene, the role of feelings of responsibility on SNSs and the moderating role of empathy in the effect of incident severity on bystander intention to intervene. Our findings enrich the theoretical research on the influencing factors of bystander intention to intervene in cyberbullying. At the same time, it also provides practical



implications for cyberbullying intervention. The results revealed that the severity of incidents was a robust predictor of bystander intervention for cyberbullying. Meanwhile, it illustrates how the severity of the incident affects bystander intention to intervene, which is of great significance for understanding the psychological process in bystander intervention in cyberbullying. We also found that situational factors are moderated by personal factors, which expands our knowledge of factors influencing bystander intention to intervene.

## Limitation

There are still some limitations in this study. First, we used stimulus material, including fictive Weibo news and comments, and the incident types were single. It is not clear whether the conclusion can be generalized to other SNSs and other types of cyberbullying incidents. Second, we only measured bystander intention to intervene, but we could not determine whether bystanders would engage in intervention behavior in reality. Third, the experiment was conducted online. The results may be affected by more extraneous variables. Fourth, we did not set a blank control group. Although we measured participants' daily online time, internet age, categories of used SNSs and interaction frequency on SNSs, none were found to significantly affect bystander intention to intervene. Some differences in the preintervention situation could affect the final results.

## Conclusion

In summary, the severity of cyberbullying incidents affected bystander intention to intervene on SNSs among college students. Feelings of responsibility played a mediating role in the effect of the severity of incidents on bystander intention to intervene. An increase in the severity of the incident increased feelings of responsibility in bystanders, which in turn increased their intention to intervene. Empathy moderated the effect of incident severity on bystander intention to intervene. Bystanders with low empathy were more likely to intervene in high severity incidents than in low severity incidents. Bystanders with high empathy had a high intention to intervene regardless of the incident severity.

## Ethical Approval

The study is in accordance with the Declaration of Helsinki, and this research was approved by the Research Ethics Board of the Department of Psychology at Ningbo University.

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## Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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## Disclosure

The authors report no conflicts of interest in this work.

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