Combatting Weight-Based Cyberbullying on Facebook with the Dissenter Effect

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Abstract

Weight-based cyberbullying is prevalent among youth and adolescents and can have lasting negative psychological effects on the victims. One way to combat these negative effects is through modeling dissenting behavior. When a bystander challenges the bully or supports the victim, this models dissenting behavior. In this study, 181 participants were exposed to message manipulations posted on a Facebook page aimed at testing the conformity effect,1 the dissenter effect,2 and the bystander effect3 in response to enactment of weight-based bullying. Facebook is a common social media site where cyberbullying is reported.4 Results indicate that in the dissenting condition, participants’ comments were significantly more positive or supporting for the victim, as compared to other conditions. This effect was more pronounced for men than for women. In addition, in the dissenting condition, men were less likely to consider the victim unhealthy than women and men in other conditions. These results support the effectiveness of efforts to model dissenting behavior in the face of bullies and extend them to online contexts. Implications are discussed.

Introduction

Cyberbullying is intense personal harassment deriving from “comments, information or pictures posted online for others to see with the intent to embarrass.”5 Face-to-face and online weight bullying are common forms of bullying that are directed at the victim’s weight.6–8 Weight-based bullying is associated with negative outcomes, including increased risk of depression, anxiety, poor body image, social isolation, and maladaptive eating behaviors.6 Weight-based bullying now commonly occurs online,5,9 that is, weight-based cyberbullying. This study creates a hypothetical weight-based cyberbullying situation on Facebook to test how social support for the victim, via dissenting comments, may affect bystanders’ behaviors.

Cyberbullying

Cyberbullying affects children, adolescents, and adults.10–13 Cyberbullying has negative effects on victims, such as lowering self-esteem, increasing depression, and producing feelings of powerlessness.10,14–17 Cyberbullying can be more devastating than traditional bullying for three reasons. First, cyberbullying is easier to engage in because of increased anonymity and decreased internal censorship.17–18 Second, cyberbullying is more pervasive than traditional bullying,17 partly because perpetrators can use a broad range of platforms, including Web sites, cell phones, e-mail, and instant messaging.19 Third, online comments are often permanently, and repeatedly, visible by peers.19,20 A particularly troubling form of cyberbullying is weight-based cyberbullying.

Weight-based cyberbullying. Weight-based (cyber)bullying is pervasive. Adolescents report that weight-based bullying is the most common form of bullying experienced at school,7–8 and 53% of parents report that “being overweight” is the most common reason for youth bullying.8 Across all demographic categories, weight-based bullying increases in intensity as the victim’s body mass index (BMI) increases.6,7 Cyberbullying is the most common form of weight-based bullying among overweight adolescents; 61% have received mean or embarrassing posts online, and 59% have received mean texts, e-mails, or instant messages.8 Weight-based cyberbullying can be more serious than in-person weight-based bullying because comments have high social visibility and permanence in cyberspace.14,17 Given the prevalence and severity of weight-based cyberbullying, it is crucial to consider methods to reduce or prevent this behavior, such as encouraging bystanders of bullying to defend the victim.21–24

Conformity and dissenter effects

Public situations with easily observed behavior encourage social conformity.1 Conformity occurs when an individual experiences pressure to act normatively.25,26 With cyberbullying, bystanders (observers of the bullying interaction)
may conform through joining the bully or providing tacit support through silence.\textsuperscript{3,18} Challenging a bully is a difficult social behavior because it dissent from the social norm. The bystander is faced with the dilemma of choosing between normative behavior (which offers social approval) or dissenting behavior (which risks social disapproval).\textsuperscript{3,25} Previous research demonstrates that when dissenting behavior was modeled, participants were less likely to conform to normative behavior and more likely to engage in dissenting behavior.\textsuperscript{1,2,27}

For weight-based cyberbullying on Facebook, one or more dissenting comments may produce a dissenter effect whereby a bystander would challenge the bully or defend the victim.

The creation of a “dissenting” condition mimics recent bullying interventions efforts that equip bystanders to enact social support to confront bullies.\textsuperscript{28,29} A recent meta-analysis\textsuperscript{29} showed that this method effectively increased bystander interventions in face-to-face bullying situations. The current study extends those efforts by examining the effects of a bystander intervention online. Specifically, bystander intervention occurs through dissenting comments responding to weight-based bullying on a Facebook page. In this study, participants are exposed to Facebook pages that model conformity (all negative comments), model dissent (some dissenting comments among bullying comments), or provide no behavioral model (i.e., no comments). Then, participants may provide their own comments. The conformity manipulation in this study should produce behavior similar to the control condition because negative weight-based communication is normative in American society.\textsuperscript{30–34} However, comments in the dissent condition should be more positive than in other conditions.

**H1:** Comments posted by participants in the dissenter condition will be more positive than comments posted by participants in the conformity or control conditions.

In addition to affecting participants’ comments toward the victim, exposure to dissenting comments may also affect participants’ empathy toward the victim, and their perceptions of the victims’ health and attractiveness. Thus, the following research question is investigated:

**RQ1:** How will participant empathy, perception of victim health, and perception of victim attractiveness differ by condition?

The effects of gender on cyberbullying have been mixed. While some research has observed that women held more negative attitudes toward bullying than men,\textsuperscript{29} other research has shown that women are more prone to criticize overweight women for their size.\textsuperscript{31–33} This prompts the second research question.

**RQ2:** Will there be an interaction between gender and condition that affects the dependent variables (comment valence, participant empathy for the victim, perception of victim health, and perception of victim attractiveness)?

**Materials and Method**

**Participants and procedures**

All procedures and materials were approved by the institutional review board at a large Midwestern university, and consent was obtained from each participant. A total of 190 students enrolled in three service classes were invited to participate in this study; 181 students (97 men, 84 women) entered the portal link (95% compliance), and all participated in this study. Participants were 18–24 years old ($M=19.38$ years, $SD=1.28$). The majority of participants (66.3%) identified as Caucasian, 13.5% as Asian, 12.4% as African American, 3.4% as Hispanic, and 4.5% as other.

A series of Facebook accounts were created to simulate online interactions. We created a main account and six additional friend accounts. The main account belonged to a person we named “Jessica.” Jessica is a pseudonym for a mildly overweight, moderately attractive, Caucasian, college-aged female. The stimuli for the study were created by capturing a screenshot of a picture posted to Jessica’s page, along with corresponding comments. Posing as Jessica, we posted a picture of Jessica on her page, with the caption “dear roomies, thanks for the junk food celebration for passing my exams, but next time let me know when you’re taking a picture. kthx. ♥ ♥ ♥.” In the picture, Jessica is sitting comfortably in an armchair, looking down and to her left, and eating potato chips, cookies, and candy.\textsuperscript{a}

Participants were randomly assigned to conditions via an online survey built through Survey Gizmo (conformity, $n=71$; dissenter, $n=65$; control, $n=45$). Each condition included enough participants to allow for adequate statistical power in analysis. The dropout rate for the survey was less than 3%. There were no significant differences by condition for age $F(2, 162)=0.61$, $p=0.54$; gender $F(2, 178)=0.26$, $p=0.77$; or race $F(2, 175)=0.50$, $p=0.61$.

In the control condition, participants viewed a screenshot that only showed Jessica’s picture and her own caption. In the conformity condition, participants viewed a screenshot that captured Jessica’s picture, her own caption, and comments from six of her friends (three men, three women).\textsuperscript{b} In the dissenter condition, participants viewed a screenshot that captured Jessica’s picture, her own caption, and comments from six of her friends (three men, three women). In this condition, two conformity comments were replaced with these dissenting comments: (a) “Don’t listen to HATERS! You look good!”; (b) “You guys are SO MEAN! Leave her alone about her weight!” After viewing the screenshot, participants were prompted to post their own comment as though they were posting on this Facebook page; 155 participants provided comments. Participants then completed measures of study variables. Unless otherwise indicated, all variables were measured using 7-point Likert-type scales where higher numbers indicate a greater presence of the variable. Psychometric properties of scales are presented in Table 1.

**Possible covariates**

**Participant body size.** A single item measure asked participants to describe their bodies ($1= “very thin,”$ $7= “obese”; $M=3.71$, $SD=1.13$). In addition, participants also reported their weight and height; we calculated their BMI with the following formula: weight/height$^2$ x 703.\textsuperscript{35} The average BMI score was in the normal range ($M=23.29$, $SD=4.29$), and the majority of participants (58.2%) were in the normal weight category. In addition, 22% of participants were in the overweight category, 9% were in the obese category, and 7% were in the underweight category.

\textsuperscript{a} Participants were shown the picture with consent.

\textsuperscript{b} Participants were randomly assigned to conditions.
**Table 1. Psychometric Properties of Study Variables**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Men</th>
<th>Women</th>
<th>Overall</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body appreciation</td>
<td>5.42 (.18)</td>
<td>4.84 (.32)</td>
<td>5.15 (.18)</td>
<td>.93</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>5.19 (.09)</td>
<td>4.66 (.12)</td>
<td>4.94 (.13)</td>
<td>.82</td>
</tr>
<tr>
<td>Teasing experience</td>
<td>1.57 (.60)</td>
<td>1.48 (.57)</td>
<td>1.53 (.49)</td>
<td>.87</td>
</tr>
<tr>
<td>Empathy</td>
<td>4.68 (.103)</td>
<td>5.42 (.92)</td>
<td>5.03 (1.04)</td>
<td>.87</td>
</tr>
<tr>
<td>Perceived lack of health</td>
<td>4.98 (1.00)</td>
<td>4.99 (1.00)</td>
<td>4.99 (.99)</td>
<td>.84</td>
</tr>
<tr>
<td>Perceived unattractiveness</td>
<td>4.22 (1.17)</td>
<td>3.59 (1.33)</td>
<td>3.93 (1.28)</td>
<td>.88</td>
</tr>
<tr>
<td>Comment valence</td>
<td>3.15 (1.25)</td>
<td>2.99 (1.31)</td>
<td>3.08 (1.28)</td>
<td>—</td>
</tr>
</tbody>
</table>

Note. Teasing experience and comment valence were measured with 5-point scales. All other mean scores are based on 7-point scales.

**Body appreciation.** Participants completed a shortened version of the Body Appreciation Scale. This 7-item scale was unidimensional and reliable (α=0.93). Sample items included “On the whole, I am satisfied with my body” and “Despite its flaws, I accept my body for what it is.”

**Self-esteem.** Participants completed the Short State Self-esteem Scale. This 5-item scale was unidimensional and reliable (α=0.82). Sample items included “I feel good about myself” and “I feel that others respect and admire me.”

**Experience of weight-based teasing.** Participants completed the weight-related teasing subscale of the Perception of Teasing Scale (POTS). The 6-item scale was unidimensional and reliable (α=0.87). Sample items included “People sometimes make jokes about me being too heavy” and “People point at me and laugh because I am overweight.”

**Dependent variables**

**Comment valence.** The valence (i.e., degree of negativity or positivity) of each participant’s comment was evaluated by two trained coders independent from the project, who were blind to the conditions. Coders used a 5-point scale to evaluate comment valence (1 = “negative,” 2 = “somewhat negative,” 3 = “neutral,” 4 = “somewhat positive,” 5 = “positive”). Negative comments made explicit negative remarks about Jessica or her body, for example “are you happy with yourself?” Somewhat negative comments referred to the situation in a negative way but did not personalize it to “Jessica,” for example “Haha hate when I have pictures taken when I’m piggling out!” Neutral comments were directed at other aspects of the situation that did not have to do with Jessica, for example “Those chips look good!” The somewhat positive comments made positive remarks about Jessica that were unrelated to her body or that did not defend Jessica against bullying, for example “Eat up! You deserve it!” Finally, positive comments made explicit positive remarks about Jessica and/or encouraged Jessica in response to bullying, for example “I don’t know what everyone is talking about. You’re wonderful, don’t let them influence you.” Coders reached acceptable intercoder reliability (Cohen’s κ = 0.89).

**Empathy for the victim.** The authors developed a 6-item scale that measured the extent to which participants in the conformity and dissenter conditions felt empathy toward the victim. Sample items included “I was touched by Jessica’s situation of getting negative comments about her size” and “I felt bad for Jessica when I read these comments.” The scale was unidimensional and reliable (α=0.87).

**Perception of victim’s health.** The authors developed a 6-item scale that measured the extent to which participants considered the victim unhealthy as a result of her eating behaviors (as suggested by the photo). Higher scores indicated that participants perceived Jessica as unhealthy due to her eating behaviors. Sample items included “If Jessica keeps on eating like that, she is going to have a heart attack” and “Jessica is killing herself by stuffing food into her mouth.” The scale was unidimensional and reliable (α=0.84).

**Perception of victim’s attractiveness.** The authors developed a 6-item scale that measured the extent to which participants considered the victim physically unattractive due to her weight. Higher scores indicated that participants perceived Jessica as unattractive because of her weight. Sample items included “Jessica’s large size makes her totally unattractive” and “Jessica is really hefty; people probably don’t think she is attractive.” The scale was unidimensional and reliable (α=0.88).

**Results**

The overall distribution of comments (N=155) included 26 (16.8%) negative comments, 22 (14.2%) somewhat negative comments, 41 (26.5%) neutral comments, 46 (29.7%) somewhat positive comments, and 20 (12.9%) positive comments. Twenty-six participants did not provide a comment (3 control, 8 dissent, 15 bullying). See Table 2 for the distribution of response type by condition. Respondents who did not post any comments thought that Jessica was healthier.

**Table 2. Distribution of Comment Valence by Condition**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Negative</th>
<th>Neutral</th>
<th>Positive</th>
<th>No Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>15</td>
<td>15</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Dissent</td>
<td>12</td>
<td>16</td>
<td>29</td>
<td>8</td>
</tr>
<tr>
<td>Conformity</td>
<td>22</td>
<td>17</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Overall</td>
<td>49</td>
<td>48</td>
<td>58</td>
<td>26</td>
</tr>
</tbody>
</table>
Hypothesis 1 predicted that comments would be most positive in the dissenting condition. A one-way analysis of variance (ANOVA) was used to test this hypothesis. This hypothesis was supported. Comments in the dissenting condition ($M = 3.42, SD = 0.21$) were more positive than those in the conformity ($M = 2.80, SD = 1.33$) or control ($M = 2.98, SD = 1.22$) conditions, $F(2, 152) = 3.61, p = 0.03$, partial $\eta^2 = 0.05$.

RQ1 asked whether participants’ empathy toward the victim and perceptions of victim health and attractiveness would differ based on condition. One-way ANOVAs were used to answer this research question. There were no significant differences by condition for empathy toward the victim, $F(1, 136) = 0.43, p = 0.51$, partial $\eta^2 = 0.003$; perceptions of victim health, $F(2, 178) = 2.77, p = 0.07$, partial $\eta^2 = 0.03$; or perceptions of victim appearance, $F(2, 178) = 1.62, p = 0.20$, partial $\eta^2 = 0.02$.

RQ2 asked whether there would be a condition × gender interaction that affected the dependent variables. A series of $3 \times 2$ (condition: control, conformity, dissent × gender: male, female) ANOVAs were used to answer RQ2. For comment valence, comments were most positive among men in the dissent condition, $F(2, 132) = 3.98, p = 0.02$, partial $\eta^2 = 0.05$. Figure 1 displays this finding. For perceived victim health, compared to all other conditions, men in the control condition found the victim to be most unhealthy, whereas men in the dissent condition found the victim the least unhealthy, $F(2, 132) = 3.48, p = 0.03$, partial $\eta^2 = 0.04$. And compared to women in the other conditions, women in the conformity condition found the victim to be significantly unhealthier. Figure 2 displays this finding.

Discussion and Implications

The results of this study indicate that modeling dissenting behavior in weight-based cyberbullying situations can encourage bystanders to provide verbal support to the victim. This finding confirms previous research on the effectiveness of modeling dissenting behavior, which is a form of social support, when faced with a bully and extends it to an online context. In addition, it confirms that without a model for positive communication about bodies, people are far less likely to formulate such messages. The support for the dissenter effect found in this study can serve as a model for cyberbullying prevention efforts. Future interventions should develop dissenting communication models for bystanders to emulate when faced with bullying situations.

The effectiveness of modeling dissenting behavior was particularly pronounced for men. Specifically, men in the dissent condition provided the most positive comments and found the victim the least unhealthy, compared to all other conditions. This finding is significant because, without any behavioral modeling (in the control condition), men provided the most negative comments and found the victim the most unhealthy. Gender differences in weight-based bullying may account for this effect. Male perpetrators of weight-based bullying typically use teasing or direct verbal bullying, whereas women typically use relational forms of victimization like social isolation. In this study, direct verbal bullying was targeted. Future interventions that include models of dissent for verbal and relational forms of bullying may be more effective for both genders.

Women in the control condition rated the victim as less unhealthy than did men; this appears inconsistent with previous research that suggests women are highly critical of other women’s bodies. However, women’s ratings of the victim’s unhealthiness ($M = 4.99$) in that condition were significantly above the midpoint of that scale (3.5), $t(83) = 13.71, p < 0.001$, and women’s evaluations of the victim’s health remained negative across conditions—even though men’s perceptions changed when exposed to peer comments. This stability of women’s negative evaluations of overweight women’s health is consistent with previous research. Future research should continue to examine such gender differences and explore the patterns when the victim is male.

Importantly, 14% of participants ($n = 26$) provided no comments on the Facebook page; they acted as passive bystanders to online weight bullying. Across conditions, silent bystanders had greater empathy for the victim and perceived the victim to be less unhealthy and more attractive than those who posted negative comments. In addition, the bystander

![FIG. 1. Effect of gender × condition interaction on comment valence.](image1)

![FIG. 2. Effect of gender × condition interaction on perception of unhealthiness.](image2)
effect was more common in the bullying condition than in other conditions. This suggests that some passive bystanders appeared not to agree with the bullying. However, they did nothing to intervene or give support to the victim. This kind of response is consistent with claims about diffusion of responsibility related to the bystander effect. Future studies should more fully probe what is experienced by passive bystanders to weight-based cyberbullying.

Limitations of this study must also be considered. First, this study’s dissenting behavior only targets one type of bullying: negative verbal comments directed at the victim’s weight. This limits the generalizability of these findings to interventions that target direct verbal teasing. Second, the victim in this study is a Caucasian female. A male victim may have elicited different comments from participants, and future studies should examine this potential gender effect. Finally, this study was limited by the unrealistic nature of the Facebook page (i.e., a static screenshot, rather than interactive page). Participants were aware that their comments would not be seen by anyone and that they would not be associated with the victim. This may have altered their behavior in unknown ways, reducing the external validity of these results.

In conclusion, this study found support for the dissenter effect in combating weight-based cyberbullying. This effect was particularly pronounced for male participants who provided the most positive comments after exposure to a dissenting model. This study provides additional support for bullying interventions that model dissenting behavior and establishes the usefulness of this method in the case of weight-based cyberbullying.

Notes

a. To select this image, the researchers gathered a range of photos from Google images, all depicting large women eating cake and junk food. Previous research eliciting participant reactions to images of overweight individuals suggested that extreme examples of large body size could potentially be biasing. From several images of large women, two representative images of a moderately obese attractive woman controlling for race were selected. These two images were pretested with 60 participants (males and females) to ascertain that both images were seen as somewhat overweight and more or less attractive to some participants. Both yielded acceptable results, and the better of the two images was selected to represent Jessica.

b. (a) Get off ur ass and onto the Biggest Loser; (b) OMG, ur so unhealthy; (c) This pic makes me sad; (d) Srsly girl, ur such a fat ass tub of lard; (e) Constant eating = obesity; evidence— this picture; (f) Go ahead & stuff your face with junk!

c. Prior to conducting hypothesis tests, we examined the data according to previously established guidelines to determine whether any of the potential covariates should be included in the analyses. No covariates were significantly related to any of the outcome variables, thus none were included in hypothesis tests.

Author Disclosure Statement

No competing financial interests exist.

References


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