MedCrave
Step into the World of Research

Journal of Psychology and Clinical Psychiatry

Mini Review

Open Access

Cyberbullying on social networking sites and witness response: avenues for empirical research

Volume 10 Issue 3 - 2019

Verena E Pritchard

Institute for Learning Sciences and Teacher Education (ILTSE), Australian Catholic University, Australia

Correspondence: Verena Pritchard, Institute for Learning Sciences and Teacher Education, Australian Catholic University, 229 Elizabeth St, Brisbane QLD 4000. Australia, Tel +61 7 3861 6138, Email Verena.Pritchad@acu.edu.au

Received: June 03, 2019 | **Published:** June 12, 2019

Introduction

One of the key accelerates of bullying is deindividuation or the psychological state of decreased self-evaluation.[1] Determining if the factors known to influence witness responses to acts of bullying in "real-world" situations extend to incidents in virtual environments is important given that cyberbullying as a public health issue is growing.[2] Social media websites are characterized by user-generated content and a collective communication style[3] and online communities such as these are likely to provide a heightened sense of deindividuation due to visual anonymity and social identification (i.e., identifying with a salient social group).[4] Disinhibition effects relating to the absence of nonverbal cues and social feedback have also been found to desensitize individuals involved in cyberbullying, either as perpetrators or witnesses, and may serve to foster further aggressive or reinforcing behaviors.[5]

Increasing numbers of online users are experiencing cyberbullying on social networking sites either as a victim or observer,[2,6,7] with reports suggesting that 62-78% of users are witnesses to online bullying.[8] Broadly defined as the intentional act of aggression, harassment or defaming of others carried out through electronic mediums,[9–11] electronic forms of bullying offer perpetrators anonymity and 24/7 access to victims. Although the adverse short- and long-term psychological effects of online victimization are well documented,[7,12] the impacts on witnesses are less well known.

With cyberbullying largely conceptualized as a group phenomenon,[13] there has been increased focus on the role of bystanders and the psychological and cognitive factors informing witness response.[13–15] In this short paper, two potential avenues for empirical research aimed at investigating the behavioral and cognitive effects of witness exposure to cyberbullying content are presented along with supporting theoretical frameworks. This is done with a view towards promoting research in the identification of factors distinguishing bystanders acting to reinforce the online aggressor from those that engage in combative actions. The empirical study of witness responses to cyberbullying acts and associated predictors is important in the sense that it may help to identify individuals most at risk of hostile thoughts and behavior post exposure. In turn, an increased understanding of individual differences in witness response may help with efforts to combat bullying behavior via awareness raising initiatives.[16]

Social networking sites: Identification of bystanders to cyberbullying acts and the factors influencing behavioral response

Factors such as age, gender, personal experiences, self-esteem, reactive aggressive tendency, cognitive and affective empathy, and the number of people involved in a cyberbullying act are all factors that have been found to predict involvement in cyberbullying acts as well as victim response.[17–21] It is plausible that these may also influence witness response. Passivity among members of groups targeting an individual online,[19,21] for example, has been shown to relate to the number of people behind or involved in a cyberbullying act; with bystander effects typically restricted to cyberbullying groups of larger size.[22,23] The respective influences of person and situation factors on online witness response may be important to document in order to characterize those persons most likely to combat versus fuel further cyberbullying acts. To date, few studies have examined the effects of context, personality traits/experiences on witness response or the psychological and cognitive repercussions of witnessing cyberbullying incidents online.

Cyberbullying groups: key research initiatives

Cyberbullying groups can be defined as those targeting an individual either directly or indirectly through a public or semi-public audience via digital media either directly or indirectly. Conceptualizing member roles (e.g., perpetrators vs. victim defenders vs. passive assistants) should be the first port of call when seeking to identify the number of members likely to respond in a passive or pathetic manner.[16] Bullying predominates at a number of levels on social network sites, with cyberbullying groups where members post and comment on their victims highlighted as a serious issue.[13] Given the plethora of ways that bullying can occur online, it is a serious issue. Moreover, this effect is magnified as these groups are often open access, allowing the content to be viewed by any member of the social networking site. Also, dependent on privacy settings, individuals can also be added involuntarily by other members to these groups. Therefore the potential to be exposed to cyberbullying acts as a group member or incidental bystander is high.

Thus, for any intervention and awareness raising initiatives to be effective, investigation must first seek to identify systematically the proportions of group members engaging in or observing antagonist behaviors online in order to document the extent of apathy that typically exists in this online community. One of the few, if only, studies to attempt this in any empirical sense used latent-class modelling to profile member roles based on self-reported behavioral intentions in cyberbullying situations for a sample of adolescents (N=897; 11-to 17-years-old).[16] Five classes of membership were extracted: Communicating outsiders (i.e., low probability of endorsing any involvement type in cyberbullying; class 1; 28.4%, n=241), aggressive

defenders (i.e., high probability of confronting the bully; class 2; 9.5%, *n*=81), bully-victims i.e., likely to tell peers about cyberbullying incidents and are more likely to endorse antisocial behaviors like making fun of the victim and passing messages or other material on to others, class 3; 7.1%, *n*=60), "prosocial" defenders (i.e., highest probability of telling adults about cyberbullying and comforting the victim; class 4; 52.2%, *n*=443), and assistants (i.e., most likely not to intervene and most likely to be willing to join in cyberbullying; class 5; 2.8%, *n*=24). The prevalence of defender behavior is encouraging as it suggests that people are willing to intervene in occurrences of cyberbullying. In contrast, Schultze-Krumbholz et al.[16] noted that, although small in number (*n*=2.8%), individuals classified as 'assistants' were 100% likely to report doing nothing in cyberbullying situations. The findings of this survey are informative in identifying the multiple roles inherent in cyberbullying, yet the number of individuals identifying as "defenders" may be artificially inflated due to social desirability. Adopting a quasi-experimental approach may provide a more ecologically valid perspective on bystander rates. This is further accentuated as participant response concerning bystander behavior in Schultze-Krumbholz et al.'s[16] study was based on hypothetical scenarios, rather than true observations.

The use of a quasi-experimental approach in documenting membership types via a systematic search online may help to secure ways of accurately recording decreases or increases in rates of both passive and combative type behaviors over time. Thus the preliminary research aims here should be:

1. To identify cyberbullying groups online over a pre-specified time period using systematic search terms (e.g., those used by Ponsford[24,25] included gendered (e.g., 'is a bitch', 'tool', 'dick'), non-gendered racist and sexist terms, and derogatory remarks on physical and personality characteristics (e.g., 'join if u hate X'; 'X is ugly')). Search results could then be limited to those groups who have the search term within their title.
2. Establish the basic demographics of these groups where possible (i.e., gender, age, number of members).
3. Develop content analysis tools to identify the proposition of posts falling into the five types of behavior classes identified by Schultze-Krumbholz et al.[16]

This tool can subsequently be used to identify the proportion of individuals within each group. Once this information has been documented it should be possible to

1. Determine the extent and type of member involvement in online bullying incidents,
2. The demographics of the respective membership classes, and
3. The demographics of the groups most at risk of engaging in passivity, perpetrating, and antagonist behaviors.

This informative can then be tracked over time and used to examine the effectiveness of any intervention or awareness raising initiatives.

Bystanders may play a pivotal role in initiating combative or antagonist behavior online, with their feelings and reactions to the situation serving to fuel or dissipate the situation. Given this potentially integral role, it is important to identify the physical and/or psychological effects of witnessing online harassment. To identify the effects on the witnesses, an experimental situation using screenshots of actual posted content controlling for the time frame of exposure and number of experiences may be helpful. Specifically, which person factors are most likely to account for aggressive versus passive response? This may help to identify the factors predictive of different member roles. For example, in "real-world" or offline bullying situations, witnessing or experiencing bullying in some form can lead to higher levels of reactive aggression.[26] Thus, further research aims should be to determine: 1) whether exposure to cyberbullying content increase state hostility; and 2) which person factors (e.g., trait hostility, personal experiences, age, and gender, affective and cognitive empathy) most influence the level of arousal.

Determining potential cognitive responses to cyberbullying acts

The cognitive ramifications of witnessing cyberbullying acts are undocumented. Here, it may be useful for research to determine the influence of exposure to cyberbullying material on people's interpretation of later presented material. That is, are persons exposed to cyberbullying content (either as a group member or incidental observer) more likely to misinterpret later content as aggressive even if it is neutral or ambiguous in theme? Furthermore, does this result in later antagonistic behaviors? This can be studied in an experimental sense by adopting a priming based approach (see Anderson,[27] for information on priming). Priming, whereby primed concepts make the cognitions or behaviors linked to them more likely, and its influence on response has not yet been studied in relation to bullying witnessed on social networking sites. Thus it is unknown the extent to which cyberbullying content may implicitly activate aggressive or hostile cognitions among observers and, subsequently, influence their interpretation of later presented information is not known.

Exposure effects on memory for posted content: key research initiatives

Heightened aggressive response to violence depicted via electronic mediums such as television, film, and gaming technologies has been found among individuals high in trait hostility.[28,29] Although the relation between aggressive behavior and media violence has not yet been extended to include social media, there is some evidence to suggest that persons exposed to insult words (i.e., those similar to insult words appearing in cyberbullying posts) are more likely to interpret later presented ambiguously themed information as hostile compared to people not exposed.[30] Interestingly, this effect was found to occur regardless of individual differences in trait hostility suggesting that exposure to hostile information may prime related concepts in memory. This raises the possibility that associative processes in memory can also provoke aggressive responses following exposure to media depicted violence.[31–33]

In one of the only studies to have assessed the effect of exposure to insult words on recall for later presented information, Takarangi et al.[30] found that participants who had been exposed to a list of nine insult words (e.g., *idiot, loser, clown, cheat*) prior to studying an ambiguous word-list were more likely to form false memories of a hostile nature during the recall phase of the ambiguous list than participants who had not been exposed. In their study, a 2 (trait aggression: high and low) x 2 (priming: primed and not primed) between subjects design was employed to determine whether people predisposed to aggression and/or exposed to aggression-inducing cues falsely remember hostile information when encountering ambiguously themed items. To

Citation: Pritchard VE. Cyberbullying on social networking sites and witness response: avenues for empirical research. *J Psychol Clin Psychiatry.* 2019;10(3):124–127. DOI: 10.15406/jpcpy.2019.10.00640

achieve this, the Deese-Roediger-McDermott paradigm[34] was used to test rates of false memories occurring for Roediger and McDermott's *needle*, *chair*, and *sleep* word lists as well as for an ambiguous word list. This latter list contained nine items that could be interpreted as either aggressively themed or kitchen-related (e.g., cut, whip, mug, knife, beat). Participants in Takarangi et al.'s study first completed the encoding and recall phases for the *needle, chair,* and *sleep* word lists. Prior to being shown the ambiguous word list, however, half of the participants were exposed to a list of nine insult words while the other half read nine words from Roediger and McDermott's[34] neutral *mountain* list. Following this, all participants completed the study and recall phases for the ambiguous word list. Higher rates of false memories of a hostile nature (non-studied lures) were found in the participants exposed to the insult list. Importantly these effects were independent of trait hostility, with no trait x priming interaction evident.

Takarangi et al.[30] took their findings to indicate that holding a hostile schema in mind biases memory for schema consistent information. That is, encoding an item falling under one category (i.e., hostile words) may activate other related words in the sematic network to a degree that they continue to influence memory for later information, particularly if the new information is unambiguous or of a neutral theme. This intriguing result is not only deserving of replication but the empirical approach behind it offers a novel way by which to study memory distortions occurring post exposure to cyberbullying content. If such effects are documented, establishing what cognitive processes make individuals more susceptible to this memory bias than others may reveal differences in the retrieval styles of passive versus antagonistic versus combative bystander types.

Concluding remarks

Collectively, the research endeavors outlined here offer some potential ways of documenting change in the membership structure of cyberbullying groups (most relevantly, bystander roles) over time and establishing the psychological and cognitive factors behind them and the various witness response types. As witness reaction will likely be key in combating cyberbullying, identifying response types and their associated factors is an important step for intervention efforts geared to improve witness response.[35,36]

Acknowledgments

None.

Conflicts of interest

The author declares that there is no conflict of interest.

References

1. Lowry PB, Zhang J, Wang C, et al. Why Do Adults Engage in Cyberbullying on Social Media? An Integration of Online Disinhibition and Deindividuation Effects with the Social Structure and Social Learning (SSSL) Model. *Information Systems Research (ISR).* 2016;27(4):962–986.
2. Garett R, Lord LR, Young SD. Associations between social media and cyberbullying: a review of the literature. *Mhealth.* 2016;2:46.
3. Kaplan AM, Haenlein M. Users of the world, unite! The challenges and opportunities of social media. *Business Horizon.* 2010;53(1)59−68.
4. Spears R, Lee M. Social influence and the influence of the 'social' in computer-mediated communication. In: Lea M, editor. *Contexts of computer-mediated communication*. The online disinhibition effect. *Cyberpsychology Behavior.* 1992;7(3):321−326.
5. Fahy E, Stansfeld SA, Smuk M, et al. Longitudinal associations between cyberbullying involvement and adolescent mental health. *J Adolesc Health.* 2016;59(2016):502−509.
6. Dehue F. Cyberbullying research: New perspectives and alternative methodologies: Introduction to the special Issue. *Journal of Community & Applied Social Psychology*. 2013;23(1):1−6.
7. Vaillancourt T, Faris R, Mishna F. Cyberbullying in Children and Youth: Implications for Health and Clinical Practice. *Canadian Journal of Psychiatry.* 2017;62(6):368−373.
8. Angus C. Cyberbullying of children. NSW Parliamentary Research Service e-briefAustralian Communications and Media Authority (2013). Like, post, share: Young Australians' experience of social media. 2016.
9. Fawzi N. Cyber-Mobbing. Ursachen und Auswirkungen von Mobbing im Internet. Baden-Baden: Nomos; 2009.
10. Patchin JW, Hinduja S. Cyberbullying: An exploratory analysis of factorsrelated to offending and victimization. *Deviant Behavior.* 2008;29(2):129–156.
11. Smith PK, Mahdavi J, Carvalho M, et al. Cyberbullying: its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry.* 2008;49(4):376−385.
12. John A, Glendenning AC, Marchant A, et al. Self-harm, suicidal behaviors, and cyberbullying in children and young people: systematic review. *Journal of Medical Internet Research.* 2018;20(4):e129.
13. Allison KR, Bussey K. Cyber-bystanding in context: A review of the literature on witnesses' responses to Cyberbullying. *Children and Youth Services Review*. 2016;65:183−65194.
14. Kowalski RM, Guimetti GW, Schroeder AN, et al. Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin.* 2014;140(4):1073−1137.
15. Domínguez-Hernández F, Bonell L, Martínez-González A. A systematic literature review of factors that moderate bystanders' actions in cyberbullying. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace.* 2018;12(4).
16. Schultze-Krumbholz A, Hess M, Pfetsch J, et al. Who is involved in cyberbullying? Latent class analysis of cyberbullying roles and their associations with aggression, self-esteem, and empathy. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace.* 2008;12(4).
17. Barlett C, Coyne SM. A meta-analysis of sex differences in cyber-bullying behavior: The moderating role of age. *Aggressive Behavior.* 2014;40:474−488.
18. Kowalski RM, Limber SP. Psychological, physical, and academic correlates of cyberbullying and traditional bullying. *Journal of Adolescent Health.* 2013;53:S13–S20.
19. Lenhart A, Madden M, Smith A, et al. Teens, kindness and cruelty on social network sites: How American teens navigate the new world of "digital citizenship". Washington, DC, US: Pew Research Center's Internet & American Life Project. 2011.
20. Patchin JW, Hinduja S. Bullies move beyond the schoolyard: A preliminary look at cyberbullying. *Youth Violence and Juvenile Justice.* 2006;4(2):148−169.
21. Van Cleemput K, Vandebosch H, Pabian S. Personal characteristics and contextual factors that determine "Helping," "Joining In," and "Doing Nothing" when witnessing cyberbullying. *Aggressive Behavior.* 2014;40(5):383−396.

22. Brody N, Vangelisti AL. Bystander intervention in cyberbullying. *Communication Monographs*. 2016.
23. Obermaier M, Fawzi N, Koch T. By standing or standing by? How the number of bystanders affects the intention to intervene in cyberbullying. *New Media & Society*. 2016;18(8):1491−1507.
24. Pritchard VE, Issaacson A, Steward J. Cyberbullying groups on social media: composition, member intervention and effects of content exposure on bystander aggression. *Journal of Computer-Mediated Communication*. 2018;23(3):146−162.
25. Neff, A. Cyberbullying on Facebook: Group composition and effects of content exposure on bystander state hostility (unpublished Master's thesis, University of Canterbury, Christchurch, New Zealand). 2013.
26. Salmivalli C, Nieminen E. Proactive and reactive aggression among school bullies, victims, and bully-victims. *Aggressive behavior*. 2001;28(1):30−44.
27. Anderson CA, Berkowitz L. The influence of media violence on youth. *Psychological Science in the Public Interest.* 2003;4(3):81−110.
28. Anderson, CA, Bushman BJ. Human aggression. *Annual Review of Psychology.* 2002;53:27−51.
29. Anderson CA, Bushman BJ. Media violence and the general aggression model. *Journal of Social Issues.* 2018;74(2):386−413.
30. Takarangi M, Polaschek D, Hignett A, et al. Chronic and temporary aggression causes hostile false memories for ambiguous information. *Applied Cognitive Psychology.* 2008;22(1):39−49.
31. Bushman BJ, Huesmann LR. Short-term and long-term effects of violent media on aggression in children and adults. *Archives of Pediatrics & Adolescent Medicine.* 2006;160(4):348−352.
32. Huesmann LR. The impact of electronic media violence: Scientific theory and research. *J Adolesc Health.* 2007;41(6):S6-S13.
33. Huesmann LR, Kirwil L. Why observing violence increases the risk of violent behavior in the observer. In: Flannery D, editor. *The Cambridge Handbook of Violent Behavior and Aggression*. Cambridge, United Kingdom, Cambridge University Press;2007:545−570.
34. Roediger H, McDermott K. Creating false memories: Remembering words not presented in lists. *Journal of Experimental Psychology*: *Learning, Memory, and Cognition.* 1995;21(4):803–814.
35. Guo S. A meta-analysis of the predictors of cyberbullying perpetration and victimization. *Psychology in the Schools.* 2016;53(4):432−453.
36. Pabian S, Vandebosch H, Poels K, et al. Exposure to cyberbullying as a bystander: An investigation of desensitization effects among early adolescents. *Computers in Human Behavior.* 2016;62:480−487.

Citation: Pritchard VE. Cyberbullying on social networking sites and witness response: avenues for empirical research. *J Psychol Clin Psychiatry.* 2019;10(3):124–127. DOI: 10.15406/jpcpy.2019.10.00640