Review

From theory to practice: Cyberbullying theory and its application to intervention

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Christopher P. Barlett

Gettysburg College, Department of Psychology, USA

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ABSTRACT

Cyberbullying perpetration has emerged as a world-wide societal issue; however, the majority of the research testing the predictors of cyberbullying behavior and the interventions that claim to reduce cyberbullying have inadequately applied sound theoretical reasoning. To assist education administrators, intervention specialists, social scientists, and others, we review the postulates of a recently developed theory that is unique to cyberbullying — the Barlett and Gentile Cyberbullying Model (BGCM). Specifically, we delve into the need for such a theory and how other similar theories may be inadequate in predicting cyberbullying above and beyond traditional bullying. Then we describe the learning-based theoretical foundation that helped to build the BGCM before reviewing research that validates such theoretical tenants. Finally, we conclude with how the BGCM can inform intervention efforts to hopefully reduce cyberbullying.

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"He who loves practice without theory is like the sailor who boards ship without a rudder and compass and never knows where he may cast." - Leonardo da Vinci

Theory is the essential focal point of scientific method. Theory guides the derivation of testable hypotheses and, once tested via data collection and results analyzed, theory can be validated, modified, or falsified for future testing — creating a continual scientific loop. Most importantly, valid parsimonious theory is crucial to predict future behaviors, which has implications for interventions aimed at changing behavior. Indeed, if the psychological mechanisms essential to a behavior can be learned and understood with replicated effects to validate theory, then professionals can use this empirical evidence to inform interventions. The use of theory has been paramount for understanding social

phenomena; however, there has been substantially less theory-driven research devoted to the study of cyberbullying perpetration (defined as repeated harmful behavior directed at a person or a group of people via electronic mediums; Tokunaga, 2010) despite the (1) vast amount of published research on cyberbullying effects, (2) the number of recent interventions aimed at reducing cyberbullying, and (3) the societal importance of understanding and reducing cyberbullying. Akin to the da Vinci quote at the beginning of this manuscript, we contest that interventions aimed at reducing cyberbullying can be more successful if theory is used in their derivation. The General Aggression Model, Theory of Planned Behavior, Theory of Reasoned Action, and General Strain Theory have recently been applied to predict cyberbullying behavior; however, Barlett (2016) argued that these theories are not unique to the online world and, thus, offer no explanatory power above and beyond traditional bullying.

To assist researchers, practitioners, school psychologists, and intervention specialists, the current review will focus on and describe one theory used to elucidate the psychological processes involved in cyberbullying: the Barlett and Gentile Cyberbullying Model (BGCM; Barlett & Gentile, 2012). The BGCM is a newly proposed theory that elucidates the psychological mechanisms to predict cyberbullying that are unique to the online world. To our knowledge, the BGCM is the only psychological model that explicitly offers theoretical predictions that are unique to the online world. To elaborate on the BGCM, this review will discuss (1) the need for a theory that uniquely predicts cyberbullying perpetration, (2) the past literature that inspired the creation of the BGCM, (3) the postulates of the BGCM, (4) limitations of the BGCM, and (5) the applied intervention-focused extensions of the BGCM. Overall, by describing the BGCM in sufficient detail with supporting empirical evidence, we hope that intervention specialists will have a clearer picture of how cyberbullying theory can inform curriculum to reduce cyberbullying behavior.

1. The Barlett and Gentile Cyberbullying Model: The need

The BGCM is a learning-based psychological model that explains the psychological processes involved in cyberbullying. The ability to predict cyberbullying perpetration is important to informing interventions aimed at reducing its frequency. To our knowledge, BGCM is the only published theory that is specific to cyberbullying and clearly differentiates cyber from traditional bullying, and highlighting such differences allows intervention specialists to tailor their curriculum to specifically target cyberbullying frequency. Such theoretically driven intervention efforts are desperately needed. For instance, Microsoft (2012) found that 37% of youth aged 8–17 reported being cyber-victimized while 54% indicated being concerned about being cyber-victimized. Further, meta-analytic findings have suggested that being cyber-victimized is related to depression, low self-esteem, anxiety, loneliness, low life satisfaction, increase drug and alcohol use, conduct problems, lower prosocial behavior, stress, and suicide ideation (Kowalski, Giumetti, Schroeder, & Lattanner, 2014). These findings highlight the need for empirical work to inform interventions aimed at reducing cyberbullying.

Unfortunately, much research focused on predicting cyberbullying perpetration has been largely atheoretical. For instance, research has shown simple correlations between cyberbullying perpetration and narcissism (e.g., Goodboy & Martin, 2015), empathy (e.g., Topcu & Erdur-Baker, 2012), trait aggression (e.g., Ang, Huan, & Florell, 2014), and time spent online (e.g., Park, Na, & Kim, 2014) to list a few; however, the causal explanation for the processes detailing why or for whom such relations are likely are absent. Although we believe that this research is important, the lack of theoretical underpinnings does limit their application.

Even though the majority of cyberbullying research has been atheoretical, there are few studies that have applied broader aggression and attitude-based theories to predict cyberbullying behavior. For instance, Doane, Pearson, and Kelley (2014) applied the Theory of Reasoned Action (TRA) and found that positive attitudes towards cyberbullying, empathy towards cyber-victims, and injunctive/descriptive norms regarding cyberbullying predicted one's intention to harm others online, which predicted cyberbullying perpetration. Other studies have found evidence for the application of the Theory of Planned Behavior (e.g., Heirman & Walrave, 2012), General Aggression Model (Kowalski et al., 2014), and General Strain Theory (e.g., Patchin & Hinduja, 2011) to predict cyberbullying. Thus, it appears as though research that purports to predict cyberbullying via existing psychological theories and models is headed in the right direction; however, the tenets of these theories cannot reliably differentiate traditional bullying from cyberbullying perpetration, an important theoretical limitation.

In our opinion, a valid psychological model that predicts cyberbullying must do so in lieu of the high degree of overlap between cyber and traditional bullying. In their meta-analysis, Kowalski et al. (2014) showed that the effect size between traditional and cyber bullying was $r = 0.45$ (95% CI: .41 to .48) — a fairly stable and medium to large effect that was assessed in 70 studies sampling 136,105 individuals. In addition, research has shown that traditional bullies also tend to be classified as cyberbullies (e.g., Wang, Iannotti, & Luk, 2012). Finally, work in the traditional bullying domain has also applied the postulates of Theory of Reasoned Action (e.g., Salmivalli & Voeten, 2004) and General Strain Theory (e.g., Moon, Hwang, & McCluskey, 2011) and found similar psychological processes as the literature from the cyberbullying domain using these theories. Therefore, we argue that an adequate cyberbullying theory should be unique to the online world — a key strength of the BGCM that we return to later.

2. The Barlett and Gentile Cyberbullying Model: The inspiration

The BGCM was inspired by the theoretical underpinnings of two social-cognitive learning theories: distal General Aggression (Anderson & Bushman, 2002) and General Learning Models (Gentile et al., 2009). Both of these models predict that experiences with, or exposure to, any stimulus is a learning trial in which an individual likely pairs cognitive, affective, and arousal-based feelings with the social and behavioral outcomes of said stimulus in the immediate situation. For instance, if a child is provoked and their aggressive retaliation (e.g., pushing) feels good and there are no negative social consequences (e.g., getting pushed back or getting in trouble with adults), then that child likely learns that it is acceptable to push others when provoked. The General Aggression and Learning Models further predict that continued positively reinforced learning with the same, or similar, stimuli will eventually foster the development of several learned outcomes, including positive attitudes towards the behavior, behavioral scripts, and various perceptual and attributional biases. Such learned outcomes will likely become automatic and easily acceptable helping to shape one's personality.

The learning postulates of these aforementioned theories are critical to the BGCM, and Barlett and Gentile (2012) began to delve into the research that examined what individuals likely learn after attacking others online that differs from traditional bullying. In their review, Vanderbosch and Van Cleemput (2008), posited that traditional and cyberbullying differ in the non-physical nature of cyberbullying, but also the (1) irrelevance of one's physical stature that is imperative for the power imbalance in traditional bullying,