Technology-Delivered Dating Aggression: Risk and Promotive Factors and Patterns of Associations Across Violence Types Among High-Risk Youth

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Abstract

Increasingly, technology (text, e-mail, and social media) is being used in dating relationships to stalk, control, threaten, and harass dating partners. This study examines risk and promotive factors associated with technology-delivered dating aggression (TDA) and relations between types of violence (physical dating/nondating, community violence, and TDA). Participants (14–20 years old) self-administered a computerized survey as part of a larger study at an urban emergency department. The study includes 210 youth who reported having a dating partner in the past 2 months. About 48.1% of participants reported TDA in the past 2 months. Mindfulness was negatively associated with TDA. Youth reporting TDA were more likely to report physical dating violence and community violence exposure. TDA is not an isolated occurrence and is positively associated with in-person violence among adolescents. Associations between TDA, risk and promotive factors, and other forms of violence can help identify avenues for targeting interventions.

Introduction

DATING VIOLENCE is a significant public health concern among youth that is associated with mental health problems, injury, and future involvement in adult intimate partner violence (Archer 2000; Gomez 2011; Vazquez et al. 2012). Researchers have reported clear evidence that youth are increasingly using technology (e.g., text, e-mail, and social media) to express aggressive and controlling messages toward dating partners (Draucker and Martsolf 2010; Madlock and Westerman 2011; Zweig et al. 2013).

Although the literature on technology-delivered violence is growing, few researchers focus on technology-delivered dating aggression (TDA; i.e., perpetration). Also, most studies focus on risk factors resulting in limited information using a resiliency framework, particularly among racial minority groups (Garmezy et al. 1984).

The purpose of this study is to explore the associations between gender, TDA, and specific risk and promotive factors among a sample of high-risk, primarily African American, urban youth, and to explore associations between types of violence (physical dating, physical nondating, community

violence exposure, and technology-delivered dating violence). Hypotheses include (1) that risk factors would be positively associated with TDA, (2) that promotive factors would be negatively associated with TDA, and (3) that TDA would be associated with higher levels of physical dating violence, physical nondating violence, and community violence exposure.

Materials and Methods

Study design and setting

This study presents preliminary baseline data from an ongoing study examining violent experiences among urban youth. Patients residing in one of two urban neighborhoods (aged 14–20) presenting to the emergency department for any reason were eligible to be in the study. After determining eligibility, participants provided written assent/consent (and parental consent if aged 14–17) and self-administered a ~25-minute computerized survey on a tablet. All aspects of the study were administered privately; patients' families and friends could not hear or see the survey. Any patients

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presenting without a parent/guardian (if under 18) or unable to give informed consent were excluded from recruitment. Any patients with a chief complaint of suicidal ideation/attempt or suspected child abuse were not eligible for the study. All study procedures were approved by the institutional review boards of the University of Michigan and the Trauma Center, and a CDC Certificate of Confidentiality was obtained.

Measures used in this study included demographics, substance use, violence involvement (physical dating/nondating, community violence exposure, and technology-delivered dating violence; victimization and/or aggression), and promotive factors (mentors, religious support, self-esteem, and mindfulness). All risk and promotive factors assessed for the 2 months before their emergency department visit.

Data analysis

Data were analyzed using SAS 9.2.1 software. Analytic strategy included descriptive statistics and an examination of TDA, promotive and risk factors, and violence type using hierarchical negative binomial regression models (Osgood 2000). Incidence-rate ratios (IRR) and their 95% confidence intervals were estimated while controlling for potentially confounding factors (see Table 1).

Results

The sample included 210 youth who reported having a dating partner in the past 2 months. Youth were recruited as part of a larger study in an urban emergency department; 66.2% of youth were female and 87.6% were African American. Descriptively, females reported more dating violence (aggression and victimization). There were no gender differences in nondating violence or community violence exposure.

Among youth, 48.1% reported TDA, 44.3% reported physical dating violence (aggression or victimization), 55.2% reported physical nondating violence (i.e., with someone other than dating partner), and 95.7% reported community violence exposure. See Figure 1 for a breakdown of violence types by gender.

The IRRs presented in Table 1 indicate that more alcohol use was associated with more TDA; however, once other types of violence were included in the model, the effects of alcohol were no longer significant. As expected, more mindfulness was associated with less TDA. In the full model, mindfulness remained negatively associated with TDA, while physical dating violence and community violence exposure were positively associated with more TDA. In fact, a one-unit increase in physical dating violence frequency was associated with 20% more TDA, and a one-unit increase in community violence exposure frequency was associated with 18% more TDA. *Post-hoc* analyses of gender $\times$ risk and promotive factors and risk $\times$ promotive factors found no significant interactions.

Discussion

Our results show relatively few gender differences in terms of types of violence. Overall, the patterns of TDA, physical violence, and community violence exposure were similar across gender. This suggests that it is equally important to address different types of violence with males and females, especially given that both reported similar rates of victimization. To date, no researchers have examined both risk and promotive factors for technology-delivered dating violence among high-risk urban youth, particularly a primarily African American sample. Similar to previous studies with primarily Caucasian samples, we found that TDA was associated with physical dating violence (Zweig et al. 2013). This study adds

TABLE 1. NEGATIVE BINOMIAL REGRESSIONS EXAMINING RISK AND PROMOTIVE FACTORS RELATED TO FREQUENCY OF TECHNOLOGY-DELIVERED DATING AGGRESSION

	Model 1 IRR (95% CI)	Model 2 IRR (95% CI)	Model 3 IRR (95% CI)
Age	0.93 (0.77, 1.13)	1.09 (0.91, 1.32)	1.14 (0.96, 1.36)
Gender	1.93 (0.94, 3.96)	1.51 (0.71, 3.21)	1.74 (0.83, 3.65)
Race	1.7 (0.63, 4.60)	1.41 (0.50, 3.96)	1.43 (0.53, 3.87)
Public assistance	0.7 (0.29, 1.65)	0.62 (0.25, 1.51)	0.67 (0.29, 1.54)
Risk factors			
Alcohol use frequency		1.11 (1.01, 1.22)*	1.01 (0.92, 1.10)
Marijuana use frequency		1.02 (0.97, 1.08)	1.00 (0.96, 1.05)
Promotive factors			
Mindfulness		0.93 (0.96, 0.89)**	0.96 (0.99, 0.92)*
Religious support		0.86 (1.00, 0.74)	0.92 (1.08, 0.79)
Positive mentor ^a		0.80 (1.68, 0.38)	0.59 (1.27, 0.27)
Positive and negative mentor		0.55 (1.92, 0.16)	0.56 (1.94, 0.16)
Self-esteem		0.97 (1.04, 0.90)	1.02 (1.10, 0.94)
Other violence involvement			
Partner physical violence			1.20 (1.08, 1.33)***
Nonpartner violence			1.14 (0.98, 1.33)
Community violence			1.18 (1.06, 1.32)**

^aProsocial mentors exhibited positive characteristics only, as reported by the participant (e.g., help other people); prosocial and antisocial mentors reported both types of behaviors (e.g., help other people and get into fights with other people). No participant reported only antisocial mentors.

* $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$

95% CI, 95% confidence interval; IRR, incident-rate ratio.

FIG. 1. Gender breakdown by violence type.

new information to the literature in that TDA is also associated with community violence exposure. Moreover, rates of all types of violence in this sample appear relatively high given the brief 2-month assessment period. Although TDA may appear less serious at first glance, perhaps even normative for youth today, our study shows that it is strongly associated with physical dating violence, which can lead to serious injury and mortality.

This is the first study to examine specific promotive factors in relation to TDA. The consistent negative association between mindfulness and TDA suggests that dating violence interventions that also address TDA may be most effective if they consider strategies to increase mindfulness.

Although this study is among the first to examine risk and promotive factors related to TDA, several limitations require attention. First, the sample size is relatively small, which limits generalizability. Second, this secondary data analysis of cross-sectional data results in limits to the constructs examined and causal conclusions. Nevertheless, this study contributes important information regarding the potential prevalence and seriousness of technology-delivered dating violence given its association with physical dating violence, as well as provides potential strategies to incorporate into future dating violence interventions.

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Disclaimer

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