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Brief Report: Teen Sexting and Psychosocial Health

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Abstract

The current study examines whether adolescents who report sexting exhibit more psychosocial health problems, compared to their non-sexting counterparts. Participants included 937 ethnically diverse male and female adolescents recruited and assessed from multiple high schools in southeast Texas. Measures included self-report of sexting, impulsivity, alcohol and drug use, and depression and anxiety symptoms. Teen sexting was significantly associated with symptoms of depression, impulsivity, and substance use. When adjusted for prior sexual behavior, age, gender, race/ethnicity, and parent education, sexting was only related to impulsivity and substance use. While teen sexting appears to correlate with impulsive and high-risk behaviors (substance use), we did not find sexting to be a marker of mental health.

Keywords

Teen sexting; adolescents; mental health; substance use; impulsivity

Teen sexting (defined herein as electronically sending sexually explicit images from one adolescent to another) is beginning to receive attention in the empirical literature. Although the reported prevalence of teen sexting varies widely (Dowdell, Burgess, & Flores, 2011; Lenhart, 2009; Mitchell, Finkelhor, Jones, & Wolak, 2012; Peskin et al., 2013; Rice et al., 2012; Strassberg, McKinnon, Sustaita, & Rullo, 2013; Temple et al., 2012), research using ethnically and socioeconomically diverse samples of older adolescents indicates that between 15% and 28% of teenagers have sent a sext (Rice et al., 2012; Temple et al., 2012).

Despite the commonness of teen sexting, we have yet to understand its role in the spectrum of adolescent health behaviors. Consistent with research linking teen sexting to actual sexual behavior (Rice et al., 2012; Temple et al., 2012), it is possible that sexting is an extension of adolescents' offline lives. As recent evidence suggests, it may also be that teens, especially adolescent girls, feel pressured to send a sext (Walker, Sanci, Temple-Smith, 2013), which could be influenced by their psychosocial health. Alternatively, teen sexting may function as

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a high-risk or impulsive behavior expected to cluster with other risky behaviors such as substance use; and, like these other behaviors, may be associated with poorer psychological health. The limited research on young adult samples has shown a relationship between sexting and substance use (Benotsch, Snipes, Martin, & Bull, 2013), but not between sexting and psychological wellbeing (Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2013). Similar research has not been conducted with adolescents, which is surprising given that this is the developmental period during which sexual identity formation occurs. Further, the transient nature of teen relationships may increase the likelihood of sexted images being disseminated beyond the intended audience, potentially resulting in subsequent psychological distress (Lenhart, 2009).

To address this gap in knowledge, we examine whether adolescents who report sexting are more likely to be impulsive, use alcohol or drugs, and exhibit symptoms of depression or anxiety, compared to adolescents who have not sexted.

Methods

Current data are from Time 2 of *Dating it Safe*, an ongoing longitudinal study of teen dating behaviors. Participants at Time 1 (Spring 2010) included 1042 students recruited from 7 public high schools in Southeast Texas (see Temple, Shorey, Fite, Stuart, & Le (2013) for a detailed review of sample recruitment and characteristics). A total of 964 participants (93%) were retained for Time 2 and assessed in the spring of 2011 (Temple et al., 2012). Only participants who responded to relevant variables were included in the present analyses (N=937). Study participants included slightly more females (57%), were between the ages of 14 and 18 (mean=16.05), and consisted of primarily African-American (27%), Caucasian (31%), and Hispanic (31%) adolescents. Parental permission and student assent were obtained. A university-based institutional review board approved the study.

Measures

Sexting was assessed with the following yes/no question: "Have you ever sent naked pictures of yourself to another through text or e-mail?". Due to the novelty of the topic, questions were developed for this study based on a review of relevant literature (eg, Lenhart, 2009), and in consultation with adolescent health professionals.

Validated and reliable measures assessed depression and anxiety symptoms, impulsivity, and substance use. *Depression symptoms* were measured with the 10-item Center for Epidemiologic Studies Depression Scale (Andresen, Malmgren, Carter, & Patrick, 1994). *Anxiety symptoms* were measured with the 9-item Generalized Anxiety Disorder subscale of the Screen for Child Anxiety Related Emotional Disorders (Birmaher et al., 1997). *Impulsivity* was measured with the 4-item Impulsiveness Scale from the Teen Conflict Survey (Bosworth & Espelage, 1995). Because sample norms and clinical cutpoints were not identified for our measure of impulsivity, we treated this variable as continuous.

For *substance use*, participants indicated whether or not (yes/no) they had ever used alcohol, marijuana, or other illicit substances (cocaine, amphetamines, inhalants, ecstasy, non-prescribed prescription drugs). Finally, participants were asked whether they had had sex (intercourse).

Data Analysis

Logistic regressions assessed the relationship between sexting and psychosocial health, while controlling for prior sexual behavior, age, gender, race/ethnicity, and parent education. Because interactions by gender and psychosocial health were not significant, analyses were

not stratified by gender. Results are presented using odds ratios and 95% confidence intervals.

Results

The prevalence of psychosocial health variables are presented in Table 1. The unadjusted model revealed that sexting was significantly associated with symptoms of depression, impulsivity, and substance use (Table 2). However, when adjusted for prior sexual behavior, age, gender, race/ethnicity, and parent education, sexting was no longer related to depression, and the association to impulsivity and substance use was slightly attenuated. For example, in the adjusted model, adolescents who reported sending a sext had over 2 times the odds of having used substances as those who had not sexted.

Discussion

In this large school-based sample of ethnically diverse adolescents, teen sexting was associated with impulsivity and substance use, but not mental health. The modest association observed between teen sexting and depression symptoms in the unadjusted model was reduced to non-significance once we accounted for prior sexual behavior and important demographic variables. These findings are consistent with the limited research on young adult sexting. Specifically, Benotch and colleagues (2013) found that sexting was related to alcohol and drug use among university students, whereas Gordon-Messer and colleagues (2013) failed to find a relationship between sexting and psychological wellbeing among a national web-based sample of young adults. Coupled with research demonstrating a link between teen sexting and high risk sexual behavior (Rice et al., 2012; Temple et al., 2012), these findings suggests that this relatively new phenomenon may be conceptualized as a modern day risky behavior expected to correlate with established risky behaviors (e.g., substance use). However, we did not find evidence that teen sexting was a marker of mental health. Thus, for the time being, tween-focused and teen-focused health care providers may consider sexting as a risk marker for other risky behaviors, but not necessarily as an indicator of poor psychological health.

It is possible that the relationship between teen sexting and substance use is spurious, possibly due to a shared underlying variable such as poor parental monitoring or associating with delinquent peers. It could also be that both behaviors are linked by their association to impulsivity. While the cross-sectional nature of the current study prevents us from testing this latter hypothesis, it does suggest a line of inquiry for future longitudinal research. Another explanation for the current findings is that youth under the influence of alcohol and drugs have reduced inhibitions and thus may be more vulnerable to sexting under these circumstances. Future research using event-level data or a qualitative approach is needed to explore this possibility. In addition to the cross-sectional nature of this study, limitations include the use of self-report, use of an un-validated measure of sexting, and a reliance on youth residing in the same geographic region of the US.

Despite these limitations, the current study is among the first to examine the relationship between teen sexting and psychosocial health in a racially and ethnically diverse school-based sample, and to demonstrate a link between sexting, impulsivity, and substance use.

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Table 1

Prevalence of psychosocial variables for those who have sent a sext and those who have never sent a sext

Mental health variables	Sent sext n(%)	Never sext n(%)
Depression symptoms*	113 (45.2%)	242 (37.5%)
Anxiety symptoms	113 (44.3%)	308 (45.8%)
Substance use*	201 (78.8%)	375 (55.9%)
Impulsivity*	M: 6.03 (SD: 3.64)	M: 5.14 (SD: 3.31)

*Significant difference identified ($p<.05$) between those who have and have not sexted

Note:

1. Based on clinical cutoff scores identified in the literature, depression symptoms were dichotomized with a score of ≥10 indicating depression [8], and anxiety symptoms were dichotomized with a score of ≥9 indicating anxiety [9].
2. Impulsivity was measured using a 5 point scaled anchored by 0 and 4, with a total possible score of 16; higher scores = more impulsive.

Table 2

Unadjusted and adjusted associations between sexting and psychosocial health

Sexting	Unadjusted OR (CI)	Adjusted† OR (CI)
Depression symptoms	1.38 (1.03–1.85)*	1.44 (.99–2.11)
Anxiety symptoms	.94 (.71–1.26)	1.30 (.89–1.89)
Impulsivity	1.08 (1.03–1.12)***	1.07 (1.01–1.13)*
Substance use	2.94 (2.10–4.12)***	2.14 (1.38–3.31)***

* $p < .05$,

** $p < .01$,

*** $p < .001$

† Adjusted for prior sexual behavior, age, gender, race/ethnicity, and parent education.