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Stalking in College Student Dating Relationships: A Descriptive Investigation

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Abstract Violence in college student dating relationships is a prevalent problem. However, little research has examined stalking, behaviors that have most commonly been examined after relationship termination, not within intact relationships. The purpose of the present study was to descriptively examine the prevalence and frequency of various stalking behaviors among male and female college students in a current dating relationship (N=650). Results demonstrated that the prevalence of some stalking behaviors were as high as 38 % in the previous 6 months. Additionally, out of 15 potential stalking behaviors, men and women only differed on the frequency of one stalking behavior (leaving unwanted items for a partner). Findings demonstrate that stalking behaviors are relatively common among college students in dating relationships.

Keywords Stalking · Dating violence · Aggression · College

The past 20 years has seen an abundance of research on the prevalence, frequency, and risk factors for dating violence among college students (Shorey et al. 2008). This research has demonstrated that psychological and physical aggression occur at alarmingly high rates, with the past year prevalence being 80 % and 20–30 % for psychological and physical

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² Psychology Department, Grand Valley State University, Allendale, MI, USA aggression, respectively (Bell and Naugle 2007; Shorey et al. 2008). In addition, research suggests that men and women are equally likely to perpetrate psychological and physical aggression, and some research suggesting that women are more likely to perpetrate these two forms of aggression (Archer 2000; Straus 2008). Moreover, male and female victims of dating violence evidence increased mental health symptoms, including, but not limited to, depression, anxiety, somatic complaints, posttraumatic stress symptoms, and increased substance use (e.g., Prospero 2007; Shorey et al. 2011c, 2012). Thus, it is clear that psychological and physical dating violence perpetration and victimization are significant problems.

In contrast to this growing body of research on psychological and physical aggression, little attention has been placed on stalking behaviors in college students' current dating relationships, despite research demonstrating stalking to be prevalent among former romantic partners and detrimental to victims (e.g., Basile et al. 2006; Blaauw et al. 2002). Therefore, the purpose of the present study was to descriptively examine various stalking behaviors in male and female college students current dating relationships, to examine potential gender differences in the prevalence and frequency of stalking-related behaviors, and to examine the relationship between stalking, psychological, and physical aggression.

Stalking: Definitions and Prevalence

While it is well recognized that stalking behaviors occur in some intimate relationships (Duntley and Buss 2010), among researchers, there is no agreed upon definition, set of criteria, or behaviors that constitute stalking (Duntley and Buss 2010; Johnson and Kercher 2009), and it is outside the scope of this paper to detail the debate in the literature of what constitutes

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stalking (see Duntley and Buss 2010). Because of this lack of definitional agreement, researchers often follow legal definitions of stalking. Legal definitions of stalking include: the willful, malicious, and repeated following and harassing of another person that threatens his or her safety (Meloy and Gothard 1995, p. 258) and "a course of conduct directed at a specific person that involves repeated visual or physical proximity, non-consensual communication, or verbal, written, or implied threats or a combination thereof, that would cause a reasonable person fear" (The National Criminal Justice Association 1993, pp. 43–44). Thus, legal definitions of stalking within the United States require a repeated pattern of behaviors that produce fear in victims.

Additionally, several constructs that are similar to stalking have been empirically investigated, such as unwanted pursuit behaviors (i.e., ongoing and unwanted pursuit of a romantic relationship among individuals not currently involved or broken up; Langhinrichsen-Rohling et al. 2000) and obsessive relational intrusion (i.e., engaging in unwanted and persistent attempts to achieve a relationship that the other individual does not accept; Cupach and Spitzberg 2004). It should also be noted that research has recently demonstrated that stalking routinely occurs through electronic media (e.g., text messages, emails), which has been termed cyberstalking. Therefore, in the context of current dating relationships, it is plausible that stalking behaviors may be broad in topography, may or may not meet the legal standard for stalking, and may occur through a range of behaviors, including online engagement. Thus, in the current study we adopt a broad conceptualization of stalking, including both the legal and non-legal definitions provided above.

It is important to differentiate stalking behaviors from other forms of aggression, particularly psychological aggression. On the one hand, stalking often does not consist of behaviors that occur during couples' interactions; rather, one partner engages in stalking behaviors that are outside the awareness of the victim. On the other hand, psychological aggression consists of behaviors that occur during interactions between partners and are often directly observable. For instance, Lawrence et al. (2009) define psychological aggression as "behaviors such as ridiculing, verbal threats, isolating one's partner from family and friends, and attempting to control one's partner, and are intended to degrade one's partner and attack his or her self-worth by making him or her feel guilty, upset, or inadequate" (p. 20). Thus, while there is conceptual overlap between some stalking behaviors and psychological aggression (e.g., verbal threats), they are distinct types of aggression that can occur in the context of current or previous intimate relationships.

The prevalence of stalking varies depending on the population under investigation and the definition used to define stalking. For instance, findings from the National Violence Against Women survey (NVAW), which employed legal definitions of stalking to assess these behaviors, found that the lifetime prevalence of stalking victimization was 8 % and 2 % for women and men, respectively (Tjaden and Thoennes 1998). The NVAW utilized a representative sample of the U.S. population in their survey. However, more recent research, which has not followed legal definitions (e.g., have not required fear on the part of the victim), has demonstrated much higher prevalence rates of stalking. For instance, a metaanalysis of stalking research across populations (e.g., general population, college students) found prevalence rates of 26 and 10 % for stalking victimization for women and men, respectively (Cupach and Spitzberg 2004). Estimates of cyberstalking is also high, with estimates of 20 % for past year prevalence (Amar 2006). Moreover, the majority of research suggests that females are more likely to be victims of stalking relative to males (Spitzberg and Cupach 2007). It should be noted that the majority of stalking research has investigated stalking by former romantic partners or strangers (Leisring 2009; Spitzberg and Cupach 2007).

In addition to other samples, it is clear that college students are also a population at risk for stalking. Although there exists variability in prevalence rates for college students, it is estimated that between 6 and 27 % of college students report victimization of stalking, either by strangers, acquaintances, or intimate partners (Jordan et al. 2007). Consistent with the general population, females report higher prevalence rates of stalking victimization in college than males (e.g., Fremouw et al. 1997). Amar (2006) found that approximately 20 % of college students reported receiving unsolicited or harassing emails (cyberstalking), and research suggests that males and females do not differ on the prevalence of cyberstalking behaviors (Finn 2004). Moreover, stalking victimization rates appear to be higher in college-aged samples than the general population (Jordan et al. 2007).

Consistent with research on stalking in other samples, the majority of research has documented the problem of stalking by former intimate partners (Buhi et al. 2009; Jordan et al. 2007). This may be due to the erroneous belief that stalking is typically, if not only, perpetrated by individuals who are no longer in a relationship or have never been in a relationship, and that stalking-behaviors by a current partner may be viewed as only attempts to control ones partner. Although it is outside the scope of this paper to discuss the conceptual similarities and distinctions between stalking and controlling behaviors, we believe it is warranted to investigate stalking by a current dating partner, given the very high levels of dating violence evidenced in these relationships and some researchers' acknowledgment that this is an understudied and important topic (e.g., Davis et al. 2012). It will also be important for research to examine whether stalking behaviors are associated with other forms of violence, including psychological and physical aggression.

Current Study

In the present study, we expanded the previous literature by investigating stalking perpetration and victimization in currently dating college students' relationships. Moreover, given that the majority of previous research has examined female stalking victimization and/or male stalking perpetration, we examined both male and female stalking perpetration and victimization. Knowledge of the prevalence and frequency of stalking behaviors within current dating relationships has the potential to advance our theoretical and practical understanding of violence that occurs between partners, and may even influence intervention and prevention programs for dating violence. Consistent with the broader literature on stalking, we hypothesized that women would report higher frequency and prevalence of stalking victimization and men would report higher frequency and prevalence of stalking perpetration. We additionally hypothesized that stalking would be positively associated with psychological and physical dating violence.

Method

Participants

The sample for the current study was composed of undergraduate students from a large Midwestern university who were in a current dating relationship and were at least 18 years old (N=650). There was no minimum relationship length needed in order to participate. The majority of the sample was female (n=504). The average age of participants was 18.97 years (SD=2.56), with a mean of 1.27 years of college completed (SD=.75). Most of the sample identified as heterosexual (94.5 %). Most students also were not living with their current partner at the time of the study (92.5 %) and had been dating their partner for an average of 16.62 months (SD=15.72). Representative of the ethnic distribution at the university where this study was conducted, the sample was 89.1 % Caucasian, 5.1 % African American, 2.8 % Hispanic, 1.2 % Asian, and .8 % Native American.

Measures

Dating Violence The Revised Conflict Tactics Scales (Straus et al. 1996) was used to assess dating violence perpetration and victimization in the prior 6 months. Although the entire 78item measure was administered, for the current study we only utilized the physical assault (12 items) and psychological aggression (9 items) subscales (perpetration and victimization). Students indicated on a 7-point scale (0= "never"; 6= "more than 20 times") the number of times each act of aggression occurred in their current dating relationship during the previous 6 months. Scores for each subscale are obtained by taking the midpoint for each item (e.g., "4" for a response of "3 to 5 times") and then adding the frequency of each of the behaviors for each subscale. Scores for each item could range from 0 to 25 and higher scores are reflective of more frequent aggression perpetration/victimization (Straus et al. 2003). For the current study, internal consistencies were .68 for psychological aggression perpetration, .66 for psychological victimization, .73 for physical aggression perpetration.

Stalking We utilized existing items that previous researchers have used to assess stalking in intimate relationships, including stalking in college relationships (i.e., Amar 2006; Basile et al. 2006; Bjerregaard 2000; Chaulk and Jones 2011; Coleman 1997; Finn 2004; Jordan et al. 2007; Kraft and Wang 2010; Menard and Pincus 2012; Tjaden and Thoennes 1998), as no agreed upon measure for stalking behaviors in college student dating relationships has been developed. In order to ensure appropriate measurement of a range of behaviors, we chose items that assessed stalking behaviors that occurred electronically (e.g., "You sent pornographic images to your partner even though your partner did not want them") and behaviors that do not occur electronically (e.g., "You followed you partner without his/her knowledge"). This resulted in 15 items that have been commonly utilized in previous research. These items are displayed in Table 1.

We also included one item assessing how fearful participants were due to being stalked, as the majority of legal definitions of stalking in the United States require fear from the victim as a definitional component. For each item, participants were asked to indicate how often it occurred to them and how often they engaged in each act against their current dating partner in the previous 6 months using a 7-item scale (0 = never; 6 = morethan twenty times). Items were then recoded by taking the midpoint for each item (e.g., a score of "3" for the response option "4 to 5 times"), consistent with scoring for the CTS2. Total scores for stalking perpetration and victimization were created by summing all items. Because we were interested in stalking behaviors, participants were informed that the questions asked about their experiences of stalking in their current dating relationship and were provided with a definition of stalking ("the willful, malicious and repeated following and/or harassing of another person that threatens his/her safety and causes the victim to feel frightened, threatened, or intimidated") prior to completing the measure. The internal consistencies in the current study were .65 (perpetration) and .63 (victimization).

Procedure

College students were recruited for the current study through undergraduate psychology courses at a large mid-western university. Students were eligible to participate if they were 18 years of age or older and received partial course credit in

Table 1 Prevalence and frequency of stalking behaviors

| | Total Prevalence (%) | Men M (SD) | Women M (SD) | t test |
|--|----------------------|------------------------|-------------------------|-------------|
| 1. You called your partner when he/she didn't want you to. | 34.8 | 1.92 (4.85) | 1.39 (3.59) | 1.43 |
| 2. Your partner did this to you. | 36.0 | 2.00 (4.85) | 1.86 (4.50) | .32 |
| 3. You followed you partner without his/her knowledge. | 4.5 | .10 (.53) | .14 (1.59) | .34 |
| 4. Your partner did this to you. | 4.8 | .13 (.75) | .13 (1.23) | .08 |
| 5. You went to your partner's house even though he/she did not want you to. | 7.5 | .19 (.85) | .13 (.62) | 1.05 |
| 6. Your partner did this to you. | 7.1 | .20 (1.42) | .23 (1.36) | .22 |
| You showed up at places where your partner was without your partner wanting you there. Your partner did this to you. | 5.8 5.8 | .19 (.97) .19 (.90) | .09 (.56) .17 (1.31) | 1.55 .13 |
| | | | | |
| You sent gifts to your partner despite your partner not wanting/asking for them. Your partner did bis to your | 30.8 28.2 | 1.39 (3.40) | .93 (2.63) | 1.71 .23 |
| 10. Your partner did this to you. | | .91 (2.72) | .97 (2.64) | |
| 11. You left unwanted items for your partner to find. | 4.3 | .45 (2.57) | .03 (.21) | 3.70** |
| 12. Your partner did this to you. | 3.8 | .30 (2.21) | .07 (.57) | 2.10* |
| 13. You spied on your partner. | 9.8 | .09 (.37) | .21 (.97) | 1.46 |
| 14. Your partner did this to you. | 7.5 | .15 (.79) | .14 (.63) | .02 |
| 15. You sent your partner unwanted letters or written correspondence. | 2.6 | .02 (.14) | .04 (.31) | 1.01 |
| 16. Your partner did this to you. | 2.5 | .02 (.18) | .07 (.74) | .91 |
| 17. You tried to monitor or find out about your partner's behavior and/or activities. | 28.0 | .76 (2.41) | 1.11 (3.24) | 1.22 |
| 18. Your partner did this to you. | 23.5 | .71 (2.40) | .92 (2.90) | .76 |
| 19. You tried to obtain information about your partner without his/her knowledge (e.g., listening to messages, reading emails, etc.)20. Vocumentary diddle to come. | 34.9 | .91 (2.22) | 1.47 (3.98) | 1.64 |
| 20. Your partner did this to you. | 28.2 | 1.39 (3.70) | 1.25 (3.81) | .41 |
| 21. You sent pornographic images to your partner even though your partner did not want them. | 0.9 | .04 (.34) | .01 (.26) | .78 |
| 22. Your partner did this to you. | 1.5 | .06 (.47) | .02 (.23) | 1.32 |
| 23. You left unwanted message for your partner on Facebook/ Myspace, or another social networking site. | 4.2 | .04 (.35) | .15 (1.35) | .90 |
| 24. Your partner did this to you. | 5.2 | .15 (.66) | .14 (1.33) | .12 |
| 25. You tried to monitor or find out about your partner's behavior and/or activities by checking his/her | 38.2 | 1.37 (4.10) | 1.84 (4.47) | 1.14 |
| Facebook/Myspace or another social networking site. | 21.1 | 1 (0 (1 2 0 | 1.50 (4.22) | 22 |
| 26. Your partner did this to you. | 31.1 | 1.60 (4.34) | 1.50 (4.33) | .23 |
| 27. You spread false rumors about your partner through Facebook/ Myspace or another social networking site.28. Your partner did this to you. | 0.6 1.5 | .00 (.00) .01 (.08) | .05 (1.12) .03 (.33) | .64 1.10 |
| | | | | |
| 29. You sent your partner unwanted text messages.30. Your partner did this to you | 10.2 | .53 (2.67) | .40 (2.20) | .58 |
| 30. Your partner did this to you.31. How often was your partner fearful of you because you left him/her | 10.9 | .45 (2.35) | .46 (2.08) | .04 |
| unwanted messages, followed him/her, spied on him/her, or left your partner unwanted gifts? | 1.1 | .04 (.28) | .02 (.37) | .51 |
| 32. How often were you fearful of your partner because he/she left you unwanted messages, followed you, spied on you, or left you unwanted gifts? | 2.3 | .04 (.34) | .04 (.35) | .13 |

p*<.05, *p*<.001

return for their research participation. Students completed all surveys using SurveyMonkey.com, where they also completed informed consent. Upon completion of the surveys, students were provided with local counseling and domestic violence resources and their course credit. All study procedures were approved by the institutional review board.

Results

All analyses were conducted using SPSS version 21.0. We first examined the frequency of each act of stalking in the past 6 months among men and women (Table 1). Results demonstrated that the most frequent acts were calling a partner when

he/she did not want to be called, attempting to monitor your partner's behavior and/or activities by checking his/her social networking sites, and attempting to obtain information about one's partner without his/her knowledge. Independent samples *t* tests were utilized to determine whether men and women differed in the frequency of each act of stalking in the past 6 months. Results demonstrated that men and women differed on the item "you left unwanted items for your partner to find," (e.g., leaving a note or gift), *t* (648)=3.71, *p*<.05 (perpetration) and *t* (648)=2.11, *p*<.05 (victimization), such that men reported more frequent perpetration and victimization of this behavior.

Next, we examined the past 6 month prevalence of each act of stalking. We dummy coded each act of stalking, such that individuals who reported engaging in an act at least one time were coded a "1" and individuals who reported not engaging in an act were coded a "0." This was done for each item and for perpetration and victimization separately. These results are displayed in Table 1. The most prevalent acts of stalking perpetration were calling your partner when he/she didn't want you to (34.8 %), sending gifts to your partner despite your partner not wanting/asking for them (30.8 %), attempting to obtain information about your partner without his/her knowledge (34.9 %), and attempting to monitor or find out about your partner's behavior and/or activities by checking his/her social networking sites (38.2 %). Similar prevalence rates were found for stalking victimization.

We next examined relations between stalking perpetration and victimization and physical and psychological aggression. For these analyses, frequency scores for all variables were employed, and all variables were log-transformed prior to analyses to reduce positive skew and kurtosis. Bivariate correlations among study variables are presented in Table 2 for each gender separately. As displayed, stalking perpetration and victimization were positively and significantly associated with physical and psychological dating violence perpetration and victimization for women. Stalking perpetration and victimization were unrelated to male physical aggression perpetration, but were positively and significantly associated with physical victimization and psychological aggression perpetration, but were positively and significantly associated with physical victimization and psychological aggression perpetration/victimization.

Lastly, we examined whether the correlations for men and women significantly differed using Fisher's *r*-to-*z* transformation with a 2-tailed *p* value (Preacher 2002). Difference testing demonstrated that the correlations between stalking perpetration and stalking victimization (Z=1.94, p=.05), stalking perpetration and physical aggression perpetration (Z=2.85, p<.01), and stalking perpetration and psychological aggression perpetration (Z=2.27, p<.05) were all significantly stronger for women than men. Women and men did not significantly differ on any other association.

Discussion

Our results demonstrated varying prevalence of stalking behaviors depending on the specific acts investigated. For instance, over 30 % of students reported previously engaging in behaviors that were designed to monitor their partner's behavior and/or activities; a similar percentage engaged in unwanted or repeated phone calls to their partners, attempted to gain information about their partners without their knowledge, or sent/left unwanted gifts for their partners. Moreover, approximately 10 % of students reported that they had spied on their partner in the previous 6 months. Although results demonstrated that the frequency of these behaviors were not, overall, very high, a number of behaviors were endorsed at frequency levels comparable to physical violence in dating relationships (e.g., monitoring partner's behavior). Thus, stalking behaviors in male and female college students' current dating relationships appears to be a prevalent and frequent problem and dating violence prevention programs should begin to target reduced stalking behaviors among intact relationships.

Contrary to our hypothesis, results largely demonstrated that men and women did not differ on the frequency of stalking behaviors. However, there was one exception, with men reporting a greater frequency of leaving unwanted items for their partner to find. Generally speaking, stalking perpetration and victimization in current dating relationships appears to be a gender neutral problem. This is in contrast to research that has demonstrated women are more likely to be victimized by former relationship partners in dating relationships (Davis et al. 2012). Thus, although women may be more likely to become stalking victims after relationship termination, our preliminary research suggests that both men and women are equally likely to be victims during intact relationships.

Finally, our results provide preliminary evidence that stalking behaviors are associated with psychological and physical dating violence. Findings also demonstrated that the relationship between stalking perpetration and the perpetration of physical and psychological aggression was stronger for women than men. It will be important for future research to replicate our findings in additional samples and determine why stalking perpetration may be more strongly related to additional forms of dating violence for women than men. In addition, these preliminary results suggest that stalking is another form of aggression that should be considered when examining and conceptualizing dating violence. These findings, if replicated, might suggest that dating violence interventions should also target stalking in their programs. It will also be important for future research to disentangle the similarities between certain stalking behaviors (e.g., monitoring partner's behavior) and psychological aggression, as both types of aggression may be intended, at times, to control

 Table 2
 Bivariate Correlations, Means, and Standard Deviations among Study Variables

| | .1 | .2 | .3 | .4 | .5 | .6 |
|--------------------------------|-------|--------|--------|--------|--------|--------|
| Females $(n=504)$ | | | | | | |
| 1. Stalking Victimization | | .82*** | .30*** | .51*** | .28*** | .49*** |
| 2. Stalking Perpetration | | _ | .28*** | .48*** | .31*** | .49*** |
| 3. Physical Victimization | | | _ | .44*** | .81*** | .46*** |
| 4. Psychological Victimization | | | | _ | .45*** | .90*** |
| 5. Physical Perpetration | | | | | _ | .53*** |
| 6. Psychological Perpetration | | | | | | |
| Males (<i>n</i> =146) | | | | | | |
| 1. Stalking Victimization | — | .75*** | .25** | .39*** | .13 | .42*** |
| 2. Stalking Perpetration | | — | .16* | .33*** | .05 | .31*** |
| 3. Physical Victimization | | | _ | .38*** | .84*** | .41*** |
| 4. Psychological Victimization | | | | | .29*** | .89*** |
| 5. Physical Perpetration | | | | | | .35*** |
| 6. Psychological Perpetration | | | | | | _ |
| Females | | | | | | |
| Μ | 8.04 | 8.08 | 1.67 | 8.20 | 2.04 | 9.86 |
| SD | 14.25 | 14.46 | 7.27 | 13.80 | 8.18 | 15.25 |
| Males | | | | | | |
| M | 8.33 | 8.06 | 2.12 | 9.15 | 1.25 | 8.31 |
| SD | 14.13 | 13.31 | 5.74 | 13.75 | 4.70 | 12.85 |

Raw scores were used to compute means and standard deviations; log-transformed scores were used to compute bivariate correlations *p < .05, **p < .01, ***p < .001

a partner and their behavior and share some conceptual similarities.

Directions for Future Research

Certainly one of the most important areas for future research on stalking among college students is the development of standard and agreed upon definitions and discrimination among constructs. That is, research is necessary to clarify and discriminate between behaviors that are considered stalking, obsessive relational intrusion, and unwanted pursuit. There are clear overlaps among these constructs (Davis et al. 2012), and at this time it appears that one of the only defining characteristics that distinguishes constructs is the fear that may or may not be produced by stalking. An additional construct that may overlap with some stalking behaviors, particularly stalking behaviors that are intended to monitor a partner, is mate retention tactics, which can include tactics such as vigilance, violence, and emotional manipulation (Buss et al. 2008). Understanding whether there are discernible differences among these behaviors, which could be aided by factor analyses between and amongst the various self-report measures for these constructs, will allow for a more thorough investigation of stalking.

Another area for future research is to examine what factors are associated with the perpetration of stalking behaviors among college students. For instance, research on psychological and physical aggression has demonstrated a number of risk factors for perpetration, including trait and state anger (Elkins et al. 2013; Parrott and Zeichner 2003), difficulties with emotion regulation (Shorey et al. 2011a), mental health symptoms (e.g., PTSD symptoms; Taft et al. 2010), witnessing violence in childhood (Carr and Vandeusen 2002), Cluster B personality traits (Hines 2007), and alcohol use (Shorey et al. 2011d). It is plausible that these same factors are associated with the perpetration of stalking behaviors. Indeed, one recent study demonstrated that childhood sexual maltreatment, alcohol expectancies, and narcissistic traits were associated with stalking among college men and women, including cyberstalking (Menard and Pincus 2012). Moreover, research should examine whether different risk factors are present for various types of stalking behaviors (e.g., electronic stalking vs. inperson stalking) and whether risk factors for stalking perpetration vary across men and women.

Future research on stalking among college students should also utilize longitudinal designs. Aside from providing information about the prevalence and frequency of stalking behaviors across time, longitudinal research will allow for the examination of whether risk and protective factors for stalking change across time. Moreover, longitudinal research will allow investigators to determine whether stalking behaviors precede the initiation of other forms of dating violence or whether it occurs after other forms of violence (e.g., psychological aggression) are already established in the relationship. Longitudinal research would also allow for the investigation of whether stalking that occurs in intact relationships persists after relationship termination.

Limitations

Our study has a number of limitations that should be considered when interpreting findings. The cross-sectional design of the current study hinders our ability to determine whether stalking behaviors persist across time, including after relationship termination. Our findings are also not generalizable to more diverse college student populations, as the majority of our sample was comprised of individuals with a non-Hispanic Caucasian ethnic background and were approximately 19 years of age. Additional research that utilizes diverse samples is needed. The relatively small sample of men, although larger than many studies on dating violence, may have precluded the detection of significant gender differences. Future research should employ larger samples of men. Our study also did not examine what factors influence the perpetration of stalking behaviors (e.g., personality characteristics, relationship characteristics), and research is needed in this area. Research has also demonstrated that social desirability may impact reports of dating violence (Bell and Naugle 2007; Shorey et al. 2011b), and it is also possible this impacts disclosure of stalking behaviors. Future research should examine how social desirability impacts findings. The CTS2 and stalking measure assessed the previous 6 months, and some relationships may not have been 6 months in duration, which limited the timeframe for reporting for some participants. We also did not ask participants whether each specific stalking behavior caused them to be fearful and future research should determine the specific stalking behaviors that cause fear. Finally, our reliance on self-report for stalking behaviors, although common in the field, limits the information obtained. In-depth interviews that assess the context surrounding stalking behaviors are needed.

Conclusion

In summary, the current study expanded upon previous research by examining stalking behaviors in college student dating relationships, a notable limitation to the existing literature. Results demonstrated that stalking behaviors are prevalent among college students, with varying degrees of frequency. Moreover, men and women were largely similar in the frequency of stalking behaviors. Furthermore, stalking was associated with psychological and physical dating violence. These findings further contribute to our knowledge of the pervasiveness of dating violence on college campuses, highlighting the need for researchers and clinicians to consider stalking behaviors when assessing for, and conceptualizing, dating violence. Moreover, our findings highlight the need for continued efforts from researchers to better understand these harmful behaviors, risk and protective factors for engaging in stalking behaviors, and ways in which intervention and prevention programs can effectively target and reduce stalking, in addition to other forms of dating violence. Indeed, to date we are unaware of any intervention for dating violence among college students that includes stalking as part of its focus and it is now time for dating violence intervention and prevention programs to address the wide range of violent behaviors that can occur.

References

- Amar, A. F. (2006). College women's experience of stalking: mental health symptoms and changes in routines. *Archives of Psychiatric Nursing*, 20(3), 108–166. doi:10.1016/j.apnu.2005.10.003.
- Archer, J. (2000). Sex differences in aggression between heterosexual partners: a meta-analytic review. *Psychological Bulletin*, 126, 651– 680. doi:10.1037/0033-2909.126.5.651.
- Basile, K. C., Swahn, M. H., Chen, J., & Saltzman, L. E. (2006). Stalking in the United States: recent national prevalence estimates. *American Journal of Preventative Medicine*, 31(2), 172–175. doi:10.1016/j. amepre.2006.03.028.
- Bell, K. M., & Naugle, A. E. (2007). Effects of social desirability on students' self-reporting of partner abuse perpetration and victimization. *Violence and Victims*, 22, 243–256.
- Bjerregaard, B. (2000). An empirical study of stalking victimization. Violence and Victims, 15(4), 389–406. Retrieved from http:// search.proquest.com.ezproxy.gvsu.edu/docview/619568743? accountid=39473.
- Blaauw, E., Winkel, F. W., Arensman, E., Sheridan, L., & Freeve, A. (2002). The toll of stalking: the relationship between features of stalking and psychopathology of victims. *Journal of Interpersonal Violence*, *17*(1), 50–63. doi:10.1177/0886260502017001004.
- Buhi, E. R., Clayton, H., & Hepler-Surrency, H. (2009). Stalking victimization among college women and subsequent help-seeking behaviors. *Journal of American College Health*, 57(4), 419–426.
- Buss, D. M., Shackelford, T. K., & McKibbin, W. F. (2008). The mate retention inventory-short form (MRI-SF). *Personality and Individual Differences*, 44(1), 322–334. doi:10.1016/j.paid.2007. 08.013.
- Carr, J. L., & Vandeusen, K. M. (2002). The relationship between family of origin violence and dating violence in college men. *Journal of Interpersonal Violence*, 17(6), 630–646. doi:10.1177/ 0886260502017006003.
- Chaulk, K., & Jones, T. (2011). Online obsessive relational intrusion: further concerns about Facebook. *Journal of Family Violence*, 26(4), 245–254. doi:10.1007/s10896-011-9360-x.

- Coleman, F. L. (1997). Stalking behavior and the cycle of domestic violence. *Journal of Interpersonal Violence*, 12(3), 420–432. doi:10. 1177/088626097012003007.
- Cupach, W. R., & Spitzberg, B. H. (2004). *The dark side of relationship pursuit: From attraction to obsession and stalking*. Mahwah: Routledge.
- Davis, K. E., Swan, S. C., & Gambone, L. J. (2012). Why doesn't he just leave me alone? Persistant pursuit: a critical review of theories and evidence. *Sex Roles*, 66(5), 328–339. doi:10.1007/s11199-010-9882-3.
- Duntley, J. D., & Buss, D. M. (2010). The evolution of stalking. Sex Roles, 66(5), 311–327. doi:10.1007/s11199-010-9832-0.
- Elkins, S. R., Moore, T. M., McNulty, J. K., Kivisto, A. J., & Handsel, V. A. (2013). Electronic diary assessment of the temporal association between proximal anger and intimate partner violence perpetration. *Psychology of Violence*, 3, 100–113. doi:10.1037/a0029927.
- Finn, J. (2004). A survey of online harassment at a university campus. Journal of Interpersonal Violence, 19(4), 468–483. doi:10.1177/ 0886260503262083.
- Fremouw, W. J., Westrup, D., & Pennypacker, J. (1997). Stalking on campus: the prevalence and strategies for coping with stalking. *Journal of Forensic Sciences*, 42(4), 666–669.
- Hines, D. A. (2007). Posttraumatic stress symptoms among men who sustain partner violence: an international multisite study of university students. *Psychology of Men and Masculinity*, 8(4), 223–239. doi:10.1037/1524-9220.8.4.225.
- Johnson, M. C., & Kercher, G. A. (2009). Identifying predictors of negative psychological reactions to stalking victimization. *Journal of Interpersonal Violence*, 24(5), 866–882. doi:10.1177/ 0886260508317195.
- Jordan, C. E., Wilcox, P., & Pritchard, A. J. (2007). Stalking acknowledgment and reporting among college women experiencing intrusive behaviors: implications for the emergence of a "classic stalking case". *Journal of Criminal Justice*, 35(5), 556–569. doi:10.1016/j. jcrimjus.2007.07.008.
- Kraft, E., & Wang, J. (2010). An exploratory study of the cyberbullying and cyberstalking experiences and factors related to victimization of students at a public liberal arts college. *International Journal of Technoethics*, 1(4), 74–91. doi:10. 4018/jte.2010100106.
- Langhinrichsen-Rohling, J., Palarea, R. E., Cohen, J., & Rohling, M. L. (2000). Breaking up is hard to do: unwanted pursuit behaviors following the dissolution of a romantic relationships. *Violence and Victims*, 15(1), 73–90.
- Lawrence, E., Yoon, J., Langer, A., & Ro, E. (2009). Is psychological aggression as detrimental that physical aggression? The independent effects of psychological aggression on depression and anxiety symptoms. *Violence and Victims*, 24, 20–35.
- Leisring, P. A. (2009). Stalking made easy: how information and communication technologies are influencing the way people monitor and harass one another (pp. 230–244). In S. Kleinman (Ed.), *The culture* of efficiency: Technology in every life. New York, NY: Peter Lang Publishing.
- Meloy, J. R., & Gothard, S. (1995). Demographic and clinical comparison of obsessional followers and offenders with mental disorders. *American Journal of Psychiatry*, 152(2), 258.
- Menard, K. S., & Pincus, A. L. (2012). Predicting overt and cyber stalking perpetration by male and female students. *Journal of Interpersonal Violence*, 27(11), 2183–2207. doi:10.1177/ 0886260511432144.

- National Criminal Justice Association. (1993). Project to develop a model anti-stalking code for states. (NCJ 144477). Washington, DC: U. S. Department of Justice, National Institute.
- Parrott, D. J., & Zeichner, A. (2003). Effects of trait anger and negative attitudes towards women on physical assault in dating relationships. *Journal of Family Violence*, 18(5), 301–307.
- Preacher, K. J. (2002, May). Calculation for the test of the difference between two independent correlation coefficients [Computer software]. Available from http://quantpsy.org. Accessed 24 April 2015
- Prospero, M. (2007). Mental health symptoms among male victims of partner violence. *American Journal of Men's Health*, 1(4), 269–277. doi:10.1177/1557988306297794.
- Shorey, R. C., Brasfield, H., Febres, J., & Stuart, G. L. (2011a). The association between impulsivity, trait anger, and the perpetration of intimate partner and general violence among women arrested for domestic violence. *Journal of Interpersonal Violence*, 26(13), 2681–2697. doi:10.1177/0886260510388289.
- Shorey, R. C., Cornelius, T. L., & Bell, K. M. (2008). A critical review if theoretical frameworks for dating violence: comparing the dating and marital fields. *Aggression and Violent Behavior*, 13, 185–194. doi:10.1007/s10896-010-9305-9.
- Shorey, R. C., Cornelius, T. L., & Bell, K. M. (2011b). Reactions to participating in dating violence research: are our questions distressing participants? *Journal of Interpersonal Violence*, 26, 2890–2907. doi:10.1177/0886260510390956.
- Shorey, R. C., Febres, J., Brasfield, H., & Stuart, G. L. (2012). Male dating violence victimization and adjustment: the moderating role of coping. *American Journal of Men's Health*, 6(3), 218–228. doi: 10.1177/1557988311429194.
- Shorey, R. C., Sherman, A. E., Kivisto, A. J., Elkins, S. R., Rhatigan, D. L., & Moore, T. M. (2011c). Gender differences in depression and anxiety among victims of intimate partner violence: the moderating effect of shame-proneness. *Journal of Interpersonal Violence, 26*, 1834–1850. doi:10.1177/0886260510372949.
- Shorey, R. C., Stuart, G. L., & Cornelius, T. L. (2011d). Dating violence and substance use in college students: a review of the literature. *Aggression and Violent Behavior*, 16(6), 541–550. doi:10.1016/j. avb.2011.08.003.
- Spitzberg, B. H., & Cupach, W. R. (2007). The state of the art stalking: taking stock of the emerging literature. *Aggression and Violent Behavior*, 12(10), 64–86. doi:10.1016/j.avb.2006.05.001.
- Straus, M. A. (2008). Dominance and symmetry in partner violence by male and female university students in 32 nations. *Children and Youth Services Review*, 30(3), 252–27. doi:10.1016/j.childyouth. 2007.10.004.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised conflict tactics scales (CTS2): development and preliminary psychometric data. *Journal of Family Issues*, 17, 283–316. doi:10.1177/019251396017003001.
- Straus, M. A., Hamby, S. L., & Warren, W. L. (2003). *The conflict tactics scales handbook*. Los Angeles: Western Psychological Services.
- Taft, C. T., Schumm, J., Orazem, R. J., Meis, L., & Pinto, L. A. (2010). Examining the link between posttraumatic stress disorders symptoms and dating aggression perpetration. *Violence and Victims*, 25(4), 456–469. doi:10.1891/0886-6708.25.4.456.
- Tjaden, P. G., & Thoennes, N. (1998). Stalking in America: Findings from the national violence against women survey. Washington, DC: National Institute of Justice and Centers for Disease Control and Prevention.