

Examining Intimate Partner Violence, Stress and Technology Use Among Young Adults



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Intimate partner violence is a problem among young adults and may be exacerbated through the use of technology. Scant research exists examining the influence of technology on intimate partner violence in young adults. Furthermore, young adult couples on university campuses experience additional stressors associated with coursework that may influence their risk of partner violence. We surveyed 138 young adults (ages 18–25) at a large university and examined the relationships between stress, intimate partner violence and technology. Results indicated that those who use technology less frequently are more likely to report inequality in the relationship, thus suggesting a higher risk for partner violence. An exception applies to those who use technology to argue or monitor partner whereabouts. Implications for counseling young adult couples are discussed.

Keywords: intimate partner violence, stress, young adults, technology, couples

Intimate partner violence (IPV) occurs among young adults (ages 18–24) at a comparable rate with the general population. IPV in the general population occurs among 25%–33% of both men and women (National Intimate Partner and Sexual Violence Survey, 2010), with studies estimating the prevalence of physical violence among college students to be between 20% and 30% (Fass, Benson, & Leggett, 2008; Shook, Gerrity, Jurich, & Segrist, 2000; Spencer & Bryant, 2000). Additionally, IPV is regularly underreported due to the embarrassment and shame victims may feel (Bureau of Justice Statistics, 2003). While causes of IPV are not completely understood, its prevalence among both victims and victimizers has been linked to those who witnessed parental violence as children (Straus, Gelles, & Smith, 1995). However, the increase in college student IPV could be provoked by stress associated with the demands of academics (Mason & Smithey, 2012). IPV victims are more likely to experience symptoms of depression and anxiety, with male victims expressing more shame related to the victimization (Shorey et al., 2011).

In the late 1980s and 1990s, researchers identified types of partner violence within adult relationships (e.g., Gottman et al., 1995; Holtzworth-Munroe & Stuart, 1994; Johnson, 1995). Researchers coined these differences as IPV typologies, which helped researchers and practitioners understand that partner violence is heterogeneous, and thus treatment should be tailored to meet the specific needs of the couple (Carlson & Jones, 2010). This perspective differed from the traditional practice of treating all relationship violence as homogeneous, presuming it to be the result of power and control. Additionally, traditional perspectives on IPV assumed that perpetrators were men trying to assert dominance. Typology researchers refuted this perspective, stating that although some violence is male-on-female, the majority is gender mutual and may have more to do with conflict

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resolution skills than with asserting control. IPV typology research has gained traction due to its potential treatment implications. However, there is a dearth of research examining IPV typologies among young adults and its relationship to the increased use of technology among this population.

IPV Typologies

Traditionally, relationship violence was more popularly termed *domestic violence* and deemed homogenous among couple relationships. Thus, all violence was thought to originate from a batterer's attempt to establish or maintain power and control over a victim. Such violence typically occurred with men as the batterers and women as the victims (in heterosexual relationships). This philosophy gained traction with most practitioners, who assumed that all relationship violence resulted from power and control.

Over the past 15 to 20 years, researchers identified types of relationship violence (e.g., Gottman et al., 1995; Holtzworth-Munroe & Stuart, 1994; Johnson, 1995; & Johnson & Ferraro, 2000). Researchers utilized studies indicating that violence is likely to vary in severity, and often the motive is not to establish power and control over one's partner. As such, relationship violence was deemed heterogeneous among couples. Therefore, researchers began using the term *intimate partner violence* as a broader term for describing the variances in violence that occur within relationships, as well as the notion that the violence can be gender mutual in some typologies, meaning that violence is just as likely to be female-on-male as male-on-female in heterosexual relationships. Examples of some of Johnson's (1995) IPV typologies include the following: (a) situational couple violence, marked by violence that is gender mutual and has lower levels of severity; (b) intimate terrorist, marked by violence that is typically male-on-female, the result of one partner establishing power and control over another, and includes higher levels of lethality (e.g., choking); and (c) violent resistance, when the victim attempts to fight back. Other researchers have established typologies (e.g., Gottman et al., 1995; Holtzworth-Munroe & Stuart, 1994); however, Johnson's appear to be the most recognized.

Carlson and Jones (2010) developed the continuum of conflict and control to synthesize violence typology research. They asserted that violence typologies could be conceptualized through variances in the type and severity of violence, characteristics of the victimizer, and perceptions of the victim. Assessing information across those three domains can help determine the nature and severity of the violence, and have potential treatment implications. For example, some researchers have examined the effectiveness of relationship interventions when couples present with lower levels of severity in relationship violence (e.g., Bradley, Friend, & Gottman, 2011; Braithwaite & Fincham, 2014; Simpson, Atkins, Gattis, & Christensen, 2008). However, such interventions require counselors to make informed and intentional treatment decisions that consider the safety of the couple.

Counselors may not typically screen for partner violence or make treatment decisions based on the safety of a victim (Schacht, Dimidjian, George, & Berns, 2009). Partner violence screening protocols are beyond the scope of this paper; however, readers are referred to Daire, Carlson, Barden, and Jacobson (2014). Counselors who become aware of partner violence typically refer their clients, with the assumption that treatment is contraindicated. However, couples counseling and other relationship interventions, such as relationship education, appear to reduce overall levels of relationship violence and increase relationship satisfaction (Bradley et al., 2011; Simpson et al., 2008). Couples who participated in this research were identified as having low levels of aggression, and as not attempting to establish power and control over their respective partners. Our review of

the literature did not yield any research discussing how IPV typologies translate to young adult relationships, and what effect technology might have on the types of violence. Thus, it is not clear what evidence exists supporting best practice guidelines for counselors who work with young adults experiencing IPV in their relationships.

Dating Violence

The Centers for Disease Control and Prevention (CDC) has defined dating violence as the consistent act of physical and/or sexual violence, as well as the possible emotional or psychological distress perpetrated by a current or previous dating partner (CDC, 2014). Additionally, the CDC has reported that dating violence contributes to health risks including, but not limited to, injury, heavy drinking, suicidal ideation, promiscuity, substance use, issues with self-esteem and perpetuating the act of violence in future relationships. When violence is enacted toward adolescents, healthy development of intimacy, identity and sexuality is hindered (Foshee & Reyes, 2009).

Draucker, Martsof, and Stephenson (2012) studied the history of dating violence among the adolescent population and found that the risk factors correlating with later dating violence include parenting issues, such as inconsistent parental supervision, discipline and warmth. In addition to identifying factors that contribute to violence (e.g., exposure to violence at a young age, experiencing varying styles of parenting), Stephenson, Martsof, and Draucker (2012) recognized the role of peers in exacerbating dating violence in young adulthood. Adelman and Kil (2007) purported that peers are directly and indirectly involved in adolescent dating violence, including assisting in the confrontation of a friend's partner or helping a friend make his or her partner jealous. According to Banister and Jakubec (2004), females often feel isolated by their peers in adolescent dating violence, as many of their friends may not approve of the relationship. Thus, it is possible they may not disclose the nature of the violence within the relationship.

Technology and Conflict Resolution

Cyber aggression has been more thoroughly researched in child and adolescent populations than in young adult populations. Among children and adolescents, technology offers young people an additional medium for aggression, but does not appear to contribute directly to the development of cyber aggression among those who are not aggressive in non-cyber roles (Burton, Florell, & Wygant, 2013; Dempsey, Sulkowski, Dempsey, & Storch, 2011; Werner, Bumpus, & Rock, 2010). Werner et al. (2010) demonstrated that among sixth, seventh and eighth graders, higher rates of relational aggression approval predicted higher rates of Internet aggression. Peer attachment, however, is negatively correlated with both cyber aggression and non-cyber aggression (Burton et al., 2013). In addition to correlations between user beliefs and use of technology, Draucker and Martsof (2010) found that many individuals who experienced dating violence as adolescents described technology as a medium for violence. Among 56 emerging adults who were interviewed about their adolescent dating violence experiences, participants reported technology use for arguing (6), perpetrating verbal or emotional aggression (30), monitoring or controlling (30), and limiting a partner's access to self (e.g., avoiding partner; 29). It is unclear whether these same patterns hold true for young adults' dating experiences, as the members of this sample were asked to reflect on their experiences as adolescents.

In addition to studies focused on children and adolescents, research demonstrates a link between individual beliefs about aggression and the use of technology in a way that is consistent with those

beliefs among emerging adults. Thompson and Morrison (2013) studied the relationships between several individual-, social- and community-level predictors of technology-based sexually coercive behavior (TBC) among college students. Thompson and Morrison's (2013) findings suggest that rape-supportive beliefs and peer approval of forced sex were significant predictors of TBC. However, women who are more assertive in the relationship appear to mitigate cyber aggression (Schnurr, Mahatmya, & Basche, 2013).

Technology use has been identified as a key component in conflict resolution strategies and romantic relationship mediation among young adults as well. Weisskirch and Delevi (2013) found that college students who had positive feelings about conflict resolution were more likely to use technology, specifically text messaging, to terminate relationships. Text messaging was the most commonly cited use of technology for the purpose of initiating or receiving a relationship-ending message. In a study of 1,039 adults aged 17 and older, Coyne, Stockdale, Busby, Iverson, and Grant (2011) found that younger participants were more likely to use technology in communicating with their romantic partner, and that technology was used to communicate in a variety of ways within the romantic relationship, including the expression of affection (75%), discussion of serious issues (25%), apologizing (12%) and hurting their partner (3%). Given the extent to which young adults use technology as a medium for relationship communication, and the prevalence of dating violence, more research is needed to understand how technology use may be correlated with risks of partner violence.

Research Questions

Despite researchers' attempts to understand IPV among college-aged students, as well as to identify primary prevention interventions, IPV typologies have not been determined among the college student population. Further, the emergence of social media has provided a new mechanism for IPV implementation. Schnurr et al. (2013) found that cyber aggression mitigates physical IPV for men. However, few studies have examined the prevalence of cyber aggression in college students or considered the role of cyber aggression within the IPV typology framework. Thus, the current study aims to explore college students' perceptions of how technology is used in their relationships, as well as the influence of technology, stress and attitudes toward violence on overall risk for IPV. As such, we examined the following research questions: (a) What relationship exists between young adults' perceptions of partners' technology use in relationships, risk for partner violence, acceptance of couple violence and perceived stress?; (b) Can perceptions of partners' technology use, acceptance of couple violence or perceived stress be considered predictors of risk for partner violence? If so, which exerts the most influence on risk for partner violence?; and (c) What differences exist between individual responses (i.e., yes/no) regarding perceptions of partners' use of technology in relationships and outcomes (i.e., risk for violence, perceived stress, acceptance of violence)?

Method

Participants

Data collection occurred at a large university in the Southeast region of the United States. We invited undergraduate and graduate students aged 18–25 who were currently in a relationship or had recently been in a relationship to participate. We utilized a convenience sampling approach and recruited participants through both active and passive methods (Yancey, Ortega, & Kumanyika, 2006). Active methods included acquiring instructor permission and speaking briefly to students during class about the study. Passive methods comprised posting study flyers around campus, as

well as contacting various departments and programs requesting that they send study information to students on their e-mail listserv. All eligible students were invited to complete the assessment packet online using Survey Monkey. Students began the survey by reading the study information form, which included a warning about the sensitive nature of the questions. At the conclusion of the survey, we provided all participants with a list of domestic violence resources.

Recruitment efforts resulted in 155 students attempting to complete the survey. However, we removed 17 participants, 11 of whom indicated an age of 26 or older (making them ineligible) and six of whom did not complete any of the survey questions. We did not offer any incentives for survey completion as participation was voluntary, but it is possible that instructors provided incentives of their own accord. Instructor-initiated incentives could explain the six participants who did not answer any questions. Therefore, the total sample for the study was 138 participants.

Eighty-six participants (62%) indicated currently being in a relationship, with relationships lasting an average of 30 months. Others were recently in a relationship ($n = 49$; three participants did not indicate relationship status), reporting an average of 20 months since their last relationship. Women ($n = 119$; 87%) comprised the majority of the sample. The sample included mostly heterosexual participants ($n = 127$), with some same-sex participants ($n = 10$; one person did not report). Participants ranged in grade level; most were graduate students ($n = 48$; 35%), followed by seniors ($n = 42$; 30%), juniors ($n = 28$; 20%), sophomores ($n = 17$; 12%) and freshmen ($n = 3$; 2%). See Table 1 for additional demographic information and descriptive statistics for constructs of interest.

Table 1

Descriptive Statistics for Study Constructs

Constructs	<i>M</i>	<i>SD</i>	<i>Range</i>
Age	21.45	1.53	18–25
Credit hours	14.67	3.04	3–23
Perceived stress (PSS)	6.31	2.77	1–13
Intimate justice (IJS)	26.97	10.96	15–64
Acceptance of violence (ACV)	5.61	1.22	5–12
Use of technology (UTR)	8.96	1.15	5–10

Note. *M* = mean; *SD* = standard deviation; PSS = Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983; Cohen & Williamson, 1988); IJS = Intimate Justice Scale (Jory, 2004); ACV = Acceptance of Couple Violence (Foshee, Fothergill, & Stuart, 1992); UTR = Use of Technology in Relationships (Draucker & Martsof, 2010; Schnurr et al., 2013).

Instruments

Demographic information. The demographic information form consisted of 13 questions and asked participants about basic information such as age, gender, grade, current relationship status, length of relationship (if current) and length of previous relationship (as well as length of time since previous relationship). Participants completed the demographic information form prior to completing the other study assessments.

Perceived Stress Scale. The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983; Cohen & Williamson, 1988) is a 10-item measure assessing the perception of stress. We incorporated the PSS to examine the relationship of respondents' perceived stress to relationship violence (or risk of violent behaviors). Respondents indicate on a five-point Likert scale (0 = Never, 1 = Almost Never, 2 = Sometimes, 3 = Fairly Often and 4 = Very Often) the extent to which situations in life are deemed stressful. The PSS asks general questions, such as "In the last month, how often have you been upset because of something that happened unexpectedly?" The PSS is scored by summing the item responses. The factor structure of the PSS has been supported in a sample of community participants as well as college students (Cohen et al., 1983; Roberti, Harrington, & Storch, 2006). There are several versions of the PSS (each consisting of 14, 10 or four items). The short four-item scale comprises items 2, 4, 5 and 10 of the PSS and has shown support in use with data collected during telephone interviews. We utilized the short form in the current study to reduce the overall number of questions asked of each participant. Cohen et al. (1983) reported an alpha coefficient in their study of .84 for the PSS with 14 items. They examined the test-retest reliability utilizing 65 college students and identified an alpha of .85. The PSS 10-item instrument has demonstrated sound reliability in a sample of college students as well (Dehle, Larsen, & Landers, 2001). Cronbach's alpha was low (.58) for participants in the current study. However, the PSS short form demonstrated better reliability (.72) in the study conducted by Cohen et al. (1983).

Acceptance of Couple Violence. We incorporated the Acceptance of Couple Violence (ACV; Foshee, Fothergill, & Stuart, 1992) questionnaire to assess for attitudes toward violence in couple relationships. Participants received an adapted version of the ACV to include same-sex relationships. The adapted ACV contains 17 items and comprises five subscales (acceptance of male-on-female violence, acceptance of female-on-male violence, acceptance of male-on-male violence, acceptance of female-on-female violence and acceptance of general dating violence). Scores are summed across responses to calculate a total score within each subscale. We used only acceptance of general dating violence for the current analyses. Cronbach's alpha reliability for participant scores in the current study was .67.

Use of Technology in Relationships. We used questions adapted by Schnurr et al. (2013) from Draucker and Martzolf (2010) to examine how participants perceived their partners' use of technology in their relationships (UTR). As such, participants were asked whether their partners used technology in the following ways: (a) to embarrass them, (b) to make them feel bad, (c) to control them, (d) to monitor them and (e) to argue with them. Participants responded by indicating either "yes" (1) or "no" (0) and the responses were summed to acquire a total score. Reliability was low ($\alpha = .54$) in the current study. However, Schnurr et al. (2013) reported internal consistencies of .76 for men and .71 for women in their sample of dating, emerging adult couples.

Intimate Justice Scale. The Intimate Justice Scale (IJS; Jory, 2004) is a 15-item instrument designed for use in clinical practice to screen for psychological abuse and physical violence. The purpose of the instrument is to aid clinicians in identifying violations of intimate justices (e.g., equity, fairness) that are believed to contribute to relationship violence so that appropriate treatment decisions can be rendered. Participants respond to items on a Likert scale of 1–5, with 1 indicating "I do not agree at all" and 5 indicating "I strongly agree." Scores are summed across responses, with a minimum possible score of 15 and a maximum possible score of 75. Higher scores indicate violations of intimate justice and a likelihood of relationship abuse. Jory (2004) provided the following guidelines when interpreting total IJS scores: "Scores 15 to 29 may suggest little risk of violence, scores between 30 and 45 may indicate a likelihood of minor violence, and scores > 45 may be a predictor of severe violence"

(p. 39). To our knowledge, no assessment currently exists to classify specific IPV typologies. Other popular assessments of IPV exist, such as the Revised Conflict Tactics Scale (CTS; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), but the CTS results do not classify types of IPV behavior with considerations for the victim or the victimizer. The IJS has potential to distinguish between degrees of violence severity, and has been used in studies to differentiate between lower levels and higher levels of violence aggression (e.g., Friend, Bradley, Thatcher, & Gottman, 2011). Scores in the current study ranged from 15–64 ($M = 27.02$). Alpha reliabilities for participants in the current study were .92.

Results

Preliminary Analysis

Prior to data analyses, we conducted preliminary analyses to test for assumptions, outliers and missing data. The ACV, IJS, and UTR did not meet the assumption of normality, with K-S p values falling below .001. The ACV and IJS resulted in a positive skew, while the UTR resulted in a negative skew. The distributions indicated that most respondents did not report favorable attitudes toward violence, the overall existence of relationship inequality (risk for IPV) or perceptions of partners using technology in an unhealthy manner. This finding is consistent with the mean IJS score (27.02), indicating minimal risk of violence in the sample. Thus, we did not implement any transformation procedures. Potential outliers existed for the ACV and IJS scores. However, examination of the 5% trimmed mean indicated minimal influence on the mean score. Furthermore, these scores represented participants reporting different attitudes and experiences with IPV.

Sixteen participants had missing data points. We created a dummy variable to compare some demographics for those who had complete data versus those who did not. No differences existed between those with and without missing data on age and credit hours taken during the semester of survey administration. We determined that the data were likely missing at random, although it is possible data were missing due to some variable not measured. We used hot deck imputation to address the missing variables (Andridge & Little, 2010; Myers, 2011). Hot deck imputation calculates an average score on an identified outcome variable by matching the score to like variables in the sample (i.e., donor variables). We used participants' gender, grade level and current relationship status as the donor variables. SPSS averaged the score for matching participants and imputed. Matches existed for 13 of the 16 missing scores. Hot deck imputation provides less bias than mean imputation, and is deemed a better overall solution than the oft-used listwise deletion (Andridge & Little, 2010; Myers, 2011).

Primary Analysis

To begin testing the research questions, we conducted Pearson correlations to examine the relationships between demographics and other constructs of interest (i.e., PSS, IJS, ACV and UTR). Pearson correlation indicated (a) a significant positive correlation between gender and IJS scores, (b) a significant negative correlation between gender and UTR scores, (c) a significant positive correlation between PSS scores and IJS scores, (d) a significant positive correlation between the ACV and IJS scores and (e) a significant negative correlation between UTR scores and IJS scores (See Table 2 for correlations). A scatterplot matrix indicated that (a) increases in stress correlate to increases in intimate justice scores, (b) more favorable attitudes toward couple violence correlate to increases in intimate justice scores; and (c) lower perceived use of technology (i.e., more responses of "no") correlates with higher intimate justice scores.

Table 2*Correlations Between Constructs of Interest*

	1	2	3	4	5
1. Gender	1	.02	.22*	.13	-.17*
2. Perceived stress (PSS)		1	.19*	.05	-.04
3. Intimate justice (IJS)			1	.26**	-.05**
4. Acceptance of violence (ACV)				1	-.05
5. Use of technology (UTR)					1

Note. PSS = Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983; Cohen & Williamson, 1988); IJS = Intimate Justice Scale (Jory, 2004); ACV = Acceptance of Couple Violence (Foshee, Fothergill, & Stuart, 1992); UTR = Use of Technology in Relationships (Draucker & Martzolf, 2010; Schnurr et al., 2013).

* $p < .05$. ** $p < .001$.

The significant correlations supported a hierarchical linear regression analysis to examine the predictive relationships between variables. The IJS served as the dependent variable, while PSS, ACV and UTR scores served as independent variables. The model included three steps, adding predictor variables one step at a time to examine the contribution of each variable. Model one included ACV scores, contributing 6.8% of the variance and demonstrating statistical significance; $F(1, 133) = 9.70$, $p = .002$. Model two included UTR scores, adding 18.9% of the variance and achieving significance; $F(1, 132) = 33.65$, $p < .001$. Finally, model three added PSS, contributing 2.5% of variance and also achieving significance; $F(1, 131) = 4.54$, $p = .035$ (See Table 3). The model as a whole contributed to 26.6% of the variance, although UTR contributed the most variance to IJS scores.

Table 3*Predictors of Partner Violence Risk (Intimate Justice)*

Variable	ΔR^2	β	p
Model 1: ACV	.068	.261	.002
Model 2: UTR	.189	-.435	< .001
Model 3: PSS	.025	.158	.035

Note. ACV = Acceptance of Couple Violence (Foshee, Fothergill, & Stuart, 1992); UTR = Use of Technology in Relationships (Draucker & Martzolf, 2010; Schnurr et al., 2013); PSS = Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983; Cohen & Williamson, 1988).

Next, we examined differences between individuals' responses (i.e., yes/no) regarding perceptions of their partners' use of technology in the relationships (UTR) and outcome variables (i.e., IJS, ACV and PSS scores). Table 4 presents the frequency of responses for each of the five items on the UTR. A MANOVA indicated that the only significant differences between responses on all five UTR questions and outcomes existed for question four ("Has your partner ever used technology to monitor you?"), $F(1, 112) = 4.08, p = .04, \eta^2 = .04$, and question five ("Has your partner ever used technology to argue with you?"), $F(1, 112) = 5.12, p = .03, \eta^2 = .04$. Simple effects revealed that respondents who indicated "yes" to UTR question four had significantly higher IJS scores ($M = 33.38, SD = 11.09$) than those who indicated "no" ($M = 24.71, SD = 9.81$); $F(1, 129) = 19.81, p < .001, \eta^2 = .13$. Participants who indicated "yes" to UTR question five had significantly higher IJS scores ($M = 30.79, SD = 11.13$) than those who indicated "no" ($M = 24.14, SD = 9.78$); $F(1, 129) = 13.24, p < .001, \eta^2 = .09$. Therefore, use of technology to argue with a partner and monitor a partner's location appear associated with increases in relationship inequality, and place the young couples in our sample at a higher risk of experiencing partner violence.

Table 4

Frequency of Responses to Questions Regarding Use of Technology

Question (Has partner used technology to . . .)	% "Yes"	% "No"
1. Embarrass you?	6.5	89.1
2. Make you feel bad?	15.2	15.9
3. Control you?	5.1	94.7
4. Monitor you?	28.3	67.4
5. Argue with you?	44.9	50.7

Discussion

The purpose of this study was to understand the influence of young adults' use of technology in intimate relationships and examine relationships among stress, attitudes toward violence and overall risk for IPV. First, we examined the relationships among the variables, then we used a regression analysis to understand the contribution of each variable to risk for partner violence. Finally, we explored differences between responses regarding partners' perceptions of technology use and other outcomes.

Results indicate positive correlations between participants' stress scores and intimate justice scores, suggesting that as stress increases, so too does risk for partner violence. This finding is similar to the conclusions of Mason and Smithey (2012), who utilized Merton's Classical Strain Theory as the foundation for testing the influence of life strain on IPV among college students. Their results indicated that some forms of strain increased dating violence among college students. However, the results of our study do not suggest the existence of any relationship between technology use and stress. A potential explanation is that increases in IPV-related behaviors associated with increases in stress may present during face-to-face interactions.

We also found that participants who reported perceptions that partners used technology (e.g., to monitor, argue, embarrass, control, make them feel bad) less frequently were associated with increased intimate justice scores, or risk for partner violence. Although initially surprising, this result appears somewhat consistent with the findings of Coyne et al. (2011) indicating that younger participants are more likely to use technology to communicate in a variety of ways. In fact, it could be that communication via technology is an expectation in young adult relationships, and when that expectation is not met, tension arises. However, further research is needed to explore this conclusion.

Perceived stress (PSS: 2.4% of variance), acceptance of violence (ACV: 6.8% of variance) and use of technology (UTR: 18.9% of variance) were all significant predictors of risk for partner violence (IJS), with UTR contributing the most variance in IJS. This finding is consistent with the correlation and appears to support the notion that a lack of communication via technology may contribute to problems in young adult relationships. In fact, 45% of our sample indicated that their current or past partner used technology to argue with them. Again, this finding could support the notion that conflict resolution via technology is normal or expected in young adult relationships. However, results indicate that participants who perceived their partners as using technology as a means of arguing and monitoring them had higher risk for partner violence (i.e., IJS). The IPV typology literature has identified various characteristics associated with types of violence in couple relationships. A more controlling type, such as Johnson's (1995) intimate terrorist, may exhibit nonviolent control tactics such as monitoring his or her partner's location. Thus, it is possible that this behavior is more indicative of controlling IPV typologies. However, more research is needed to understand the influence of using technology to monitor a partner on overall risk for IPV.

Implications for Practice

According to Bergdall et al. (2012), emerging adults frequently use technology to establish relationships with others. Conversely, technology use has been a common medium for sustaining and terminating romantic or intimate relationships. Young adults between the ages of 18 and 29 typically use social media, cell phones and the Internet to communicate (Coyne et al., 2011). Although Bergdall et al. (2012) confirmed that young adults rely heavily on technology to form and dissolve relationships, the authors did not factor in the effect technology may have on psychosocial development, sexual behavior or dating violence.

The findings from our study, as well as from others, indicate that technology is frequently used in young adult relationships. Therefore, when screening for IPV, counselors should consider questions related to how partners use technology in their relationship (e.g., for communicating, announcing the relationship, resolving conflict). Daire et al. (2014) described an IPV protocol for community agencies and practitioners that includes screening clients. Such a protocol also should include technology and consider its overall influence on the functioning of the couple.

Continued research in this area may reveal the ways in which young adults communicate with each other via technology. Individuals who have grown up amidst advances in technology have adapted to a lifestyle in which the ability to communicate with friends and gain entry into one's personal life is readily available. Due to this factor, the ability to communicate with, gain access to or monitor a partner has increased. Draucker and Martsolf (2010) indicated that technology has changed the course of relationship quality and communication because boundaries have shifted. Counselors can incorporate healthy technology communication into their treatment plans. Bergdall et al. (2012) reported that technology does close the social gap between all people, but if utilized in efforts to

educate young adults about healthy and safe ways to communicate with each other, it may have a positive effect on intimate relationships and the potential to reduce violence.

Limitations

This study's findings should be considered with caution because there are limitations to consider. We did not incorporate a random sampling method, as there were no large student lists or databases for generating random samples. We were unable to calculate a response rate due to the nature of our convenience sampling approach. Thus, the study results might not be representative of the young adult population at all colleges and universities. Additionally, the majority of the sample was comprised of white, heterosexual females.

Another limitation is that two of the assessments we used revealed low Cronbach's alpha scores (PSS and UTR), while the ACV had a Cronbach's alpha just below the accepted cutoff. Cronbach's alpha is not a measure of the overall assessment's internal consistency as much as it is a measure of the sample's consistent responses to items (Helms, Henze, Sass, & Mifsud, 2006; Lance, Butts, & Michels, 2006). Thus, the low Cronbach's alpha suggests diversity in responses to items among the study sample. However, the low Cronbach's alpha scores may indicate higher measurement error, and results should be considered with caution.

This study also is limited because it incorporated self-report measures, with some participants reflecting on past relationships. Self-report, especially when thinking about a relationship that did not work out, may not provide accurate information. Additionally, we did not collect data from both members of a couple. Finally, there were missing data because participants skipped items, marked two items instead of one or skipped enough items that their results were not interpretable. We used a data imputation method with reduced bias, but there is no certainty in the accuracy of the imputed responses.

Conclusion

Recent research has contributed to the formation of IPV typologies and has challenged traditional models, yet much remains unknown about partner violence among young adults. The use of technology in relationship communication and conflict resolution is an expanding area of research due to technology's increased use in daily living. Given the need for more information about both IPV and the use of technology in relationship communication, this study looked at technology use as a risk factor for IPV among young adults. Our study both confirmed prior results and contributed new results. Results suggest that emerging adults may expect technology to be an important means of relationship communication. Those counseling college-aged couples should consider discussing healthy avenues for incorporating technology. Furthermore, technology use should be considered when counselors screen couples for risk factors associated with IPV. However, more research is warranted regarding the use of technology in young adult relationships.

Conflict of Interest and Funding Disclosure

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