Published in final edited form as:

J Interpers Violence. 2013 July ; 28(10): 2068–2087. doi:10.1177/0886260512471082.

Age Got to Do With It? Partner Age Difference, Power, Intimate Partner Violence, and Sexual Risk in Urban Adolescents

Ellen M. Volpe¹, Thomas L. Hardie^{2,3}, Catherine Cerulli⁴, Marilynn S. Sommers², and Dianne Morrison-Beedy⁵

¹University of Buffalo, School of Nursing, Buffalo, NY, USA

²University of Pennsylvania, School of Nursing, Philadelphia, PA, USA

³Drexel University, Philadelphia, PA, USA

⁴University of Rochester Medical Center, Rochester, NY, USA

⁵University of South Florida, Tampa, FL, USA

Abstract

Adolescent girls with older male main partners are at greater risk for adverse sexual health outcomes than other adolescent girls. One explanation for this finding is that low relationship power occurs with partner age difference. Using a cross-sectional, descriptive design, we investigated the effect of partner age difference between an adolescent girl and her male partner on sexual risk behavior through the mediators of sexual relationship power, and physical intimate partner violence (IPV), and psychological IPV severity. We chose Blanc's framework to guide this study as it depicts the links among demographic, social, economic, relationship, family and community characteristics, and reproductive health outcomes with gender-based relationship power and violence. Urban adolescent girls ($N = 155$) completed an anonymous computer-assisted self-interview survey to examine partner and relationship factors' effect on consistent condom use. Our sample had an average age of 16.1 years with a mean partner age of 17.8 years. Partners were predominantly African American (75%), non-Hispanic (74%), and low-income (81%); 24% of participants reported consistent condom use in the last 3 months. Descriptive, correlation, and multiple mediation analyses were conducted. Partner age difference was negatively associated with consistent condom use ($-.4292, p < .01$); however, the indirect effects through three proposed mediators (relationship power, physical IPV, or psychological IPV severity) were not statistically significant. Further studies are needed to explore alternative rationale explaining the relationship between partner age differences and sexual risk factors within adolescent sexual relationships. Nonetheless, for clinicians and researchers, these findings underscore the heightened risk associated with partner age differences and impact of relationship dynamics on sexual risk behavior.

Keywords

dating violence; domestic violence; sexuality; youth violence

© The Author(s) 2013

Corresponding Author: Ellen M. Volpe, University of Buffalo, School of Nursing, Wende Hall, room 325. 3435 Main St. Buffalo, NY, 14214, USA. emvolpe@buffalo.edu.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Reprints and permission: sagepub.com/journalsPermissions.nav

Sexual and reproductive health is inextricably linked to adolescent girls' sexual partners. A growing body of knowledge highlights a key component of sexual health: partner age differences. When the age difference as small as 2 years exists between a male and younger female partner, investigators have found links to risky sexual partners (i.e., recent jail time, concurrent partner, recent sexually transmitted infection [STI], or intravenous drug use) (Seth, Raiford, Robinson, Wingood, & DiClemente, 2010). Compared with their peers partnered with similar-aged males, adolescent girls with older male partners have sex more frequently, are less likely to use condoms, and are more likely to have multiple partners (DiClemente et al., 2002; Langille, Hughes, Delaney, & Rigby, 2007; Ompad et al., 2006). They are also more likely to report a high-risk partner, including those recently released from jail or injection drug users (Begley, Crosby, DiClemente, Wingood, & Rose, 2003; Seth et al., 2010). Consequently, adolescent girls with older male partners have higher rates of STIs during their adolescence and young adulthood (Ryan, Franzetta, Manlove, & Schelar, 2008; Senn & Carey, 2011).

One possible explanation for the differential effects of having an older partner is low relationship power (DiClemente et al., 2002; Teitelman, Tennille, Bohinski, Jemmott, & Jemmott, 2011). Relationship power is the degree to which one can act independently of a partner's control, influence a partner's actions, and dominate decision-making; it includes domains of relationship control and decision-making dominance (Pulerwitz, Gortmaker, & DeJong, 2000). In adolescent girls, low relationship power has been linked to intimate partner violence (IPV) and unprotected sex (Kaestle & Halpern, 2005; Teitelman, Ratcliffe, Morales-Aleman, & Sullivan, 2008). Despite IPV links with sexual health and relationship power, published evidence of the links between older partners and IPV is limited and inconsistent (Gowen, Feldman, Diaz, & Yisrael, 2004; Harner, 2004; Seth et al., 2010).

The purpose of this study was to examine a proposed model, *partner age difference as a predictor of relationship power, IPV, and condom use in adolescent girls*. We estimated the direct effects of partner age difference on consistent condom use and indirect effects of mediators (relationship power, physical IPV, and psychological IPV severity).

Background

Gender-based power in sexual relationships is a central theoretical construct explaining women's substandard health worldwide (Amaro, 1995; Blanc, 2001; Connell, 1987). This study was informed by Blanc's (2001) framework (Figure 1), which depicts the associations among the following: (1) individual, relationship, family, and community characteristics; (2) gender-based sexual power, (3) health services, (4) violence, and (5) reproductive health outcomes. Gender-based power and violence are important links between individual and partner characteristics and health outcomes. In this study, we applied Blanc's (2001) theoretical constructs to adolescent girls at high risk for STIs. We examined a relationship characteristic, partner age differences, to determine if it was associated with reproductive health domains, consistent condom use, through relationship power and violence. Despite high rates of HIV/STIs and inconsistent condom use within adolescents, there has been insufficient research exploring these important dynamics of relationship power and IPV (Blanc, 2001), particularly in light of partner age differences.

In adolescent girls, older partners or partner age differences are associated with increased sexual risk behaviors and STIs (e.g., DiClemente et al., 2002; Langille et al., 2007; Manlove, Terry-Humen, & Ikramullah, 2006; Ompad et al., 2006; Seth et al., 2010). Adolescent girls dating older male partners are thought to be among those at highest risk for low relationship power (Bralock & Koniak-Griffin, 2007; Teitelman et al., 2011). They are more likely to report fear of negative reaction to condom negotiation than girls with similar-

aged partners (DiClemente et al., 2002). While older partner has been used as a proxy measure of decreased relationship power, relationship power has not been directly evaluated (Harper, Minnis, & Padian, 2003; Raiford, Wingood, & DiClemente, 2007b). Nor has relationship power been used to discriminate contributions of partner age differences to associated sexual risk or health.

A limited body of research has specifically addressed partner age differences and IPV. However, studies have not supported a direct association between older male partners and IPV, particularly with adolescent mothers (Agurcia, Rickert, Berenson, Volk, & Wiemann, 2001; Harner, 2004; Raiford et al., 2007b). Nonetheless, other studies have suggested an indirect relationship between partner age difference and IPV, including findings that link older partners to fear of violence and controlling behavior (Catallozzi, Simon, Davidson, Breitbart, & Rickert, 2011; Magnus, Schillinger, Fortenberry, Berman, & Kissinger, 2006).

In women, low relationship power has been linked to sexual risk (Harris, Grant, Pitter, & Brodie, 2009; Knudsen et al., 2008). However, in adolescents and young adults, results have been mixed. Some studies have shown a correlation between relationship power and condom use or STIs (Buelna, Ulloa, & Ulibarri, 2009; Royce, Krauss, & Silverman, 2010), while other studies did not (Bralock & Koniak-Griffin, 2007; Teitelman et al., 2008). In addition, other investigators reported that high relationship power based on emotional intimacy was related to condom use but not power-based decision-making (Tschann, Adler, Millstein, Gurvey, & Ellen, 2002).

Low relationship power and dissatisfaction with relationship power has been associated with IPV in adult women (Buelna et al., 2009; Kaura & Allen, 2004; Pulerwitz et al., 2000). Furthermore, IPV prevention programs have focused on increasing relationship power as a strategy to decrease IPV (Cornelius & Resseguie, 2007). Surprisingly though, limited studies have demonstrated direct measures of relationship power and IPV in adolescent girls. In one sample of 56 adolescent girls, there was an inverse association between relationship power and emotional abuse but not physical violence (Teitelman, Bohinski, & Boente, 2009).

The literature consistently supports the link between IPV and sexual risk behavior in adolescents. IPV is more common in adolescent romantic relationships that include sex as compared to those that do not and is associated with increased number of partners (Halpern, Spriggs, Martin, & Kupper, 2009; Kaestle & Halpern, 2005). Additionally, IPV is associated with risky sexual partners, inconsistent condom use, and STIs (R. L. Collins, Ellickson, Orlando, & Klein, 2005; Decker, Silverman, & Raj, 2005; Howard, Wang, & Yan, 2007; Seth et al., 2010).

In summary, the literature illustrates pressing public health issues, HIV/ STI exposure and IPV, and their links with low relationship power and older partners. However, mechanisms explaining these relationships are unknown, leaving gaps in our ability to develop effective intervention strategies. By elucidating several constructs depicted in Blanc's (2001) framework, we aimed to describe the associations among partner age difference, relationship power, IPV severity, and consistent condom use through examination of following proposed model, *partner age difference as a predictor of relationship power, IPV, and condom use in adolescent girls* (Figure 2). We hypothesized that (1) partner age differences would have a significant direct inverse effect on consistent condom use and (2) these negative effects would occur indirectly through low relationship power and increased physical and psychological IPV severity.

Method

Design and Participants

We used a cross-sectional, descriptive design to examine the proposed model in a sample ($N = 155$) of adolescent girls from a school-based health center (SBHC) located within a large, public high school (generally Grades 9 through 12, ages 14 to 18 years of age) in a midsize U.S. Northeastern city. This school has a 45% graduation rate, among the lowest in the state (The New York State Education Department, 2012). We based our sample size calculation on the anticipated medium effect size ($r^2 = .10$) found between condom use and partner age differences, with a two-tailed alpha of .05, a power of .80, and expected ineligible survey rate of 10%, resulting in a goal sample size of 150. The study's inclusion criteria were as follows: (a) female participants 14 to 18 years of age, (b) participants were sexually active (vaginal or anal intercourse) with main male partner within the past 3 months, and (c) participants were able to read English at a sixth-grade elementary level (ages 11 to 12 years of age) after assessing comprehension with the screening tool. The exclusion criterion was a self-reported pregnancy.

Procedure

This study was approved by the university's Institutional Review Board (IRB). The SBHC staff asked female patients if they would like to take part in a survey. For those deemed eligible, the principal investigator explained the procedure, emphasized protections, and conducted study assent (consent for those over age 18). Parental/guardian consent would have compromised the adolescents' right to confidential reproductive health care received at the SBHC and therefore was waived by the IRB. The participants completed an anonymous, computer-assisted self-interview survey (CASI). Because of the data's sensitive nature, we used the CASI, which improves self-reporting, decreases missing data and transcription error, and reduces participant burden (Jones, 2003; Morrison-Beedy, Carey, & Tu, 2006). The adapted software CASI program, Promote Health (Rhodes, Lauderdale, He, Howes, & Levinson, 2002), generated a local health resource information based upon participant response and risk. The participant was instructed to respond to the questions based on her relationship with her main partner. After survey completion, participants were thanked for their time and given a \$15 gift card.

Measures

Demographic variables included participant age, race, and socioeconomic status (SES). The participant was asked if she had ever taken part in the free lunch program, a proxy measure of SES (Morrison-Beedy, Carey, Crean, & Jones, 2010). The predictor variable was partner age difference, calculated as the years difference between the participant's and her partner's age.

Mediator variables included physical and psychological IPV severity and relationship power. Physical and psychological IPV severity was measured using a modified Conflict Tactics Scale–Short Form (CTS) (Straus & Douglas, 2004). Physical and psychological IPV severity classifies important differences among ordinal violence categories, capturing the important distinctions between minor and severe violence (Straus & Douglas, 2004). Participants reported victimization in the past 3 months to account for typical adolescent relationship duration (W. A. Collins, Welsh, & Furman, 2009). Participants were categorized as having no physical violence, minor-only physical violence (slaps, pushes, and shoving), or severe physical violence (any incidence of punching, beating up, and kicking). Participants were also categorized as having no psychological violence, minor-only psychological violence (swearing, shouting, or insulting), or severe psychological violence (any incidents of destroying something of value or threatening statements). The scale,

written at a sixth grade reading level (ages 11 to 12 years), demonstrated concurrent validity (0.77 to 0.89) with the full CTS (Straus & Douglas, 2004).

Relationship power was calculated using the 19-item, modified Sexual Relationship Power Scale (SRPSm), which factors into two subscales—Relationships Control (RCm) (12 items) and Decision-Making Dominance (DMDm) (7 items) (Pulerwitz et al., 2000). The RCm presented statements about who had relationship control (e.g., “Most of the time, we do what my partner wants to do”). The response set was a 4-point Likert-type scale: *strongly agree* to *strongly disagree*. The DMDm prompted the participant to select who had more to say in certain circumstances (e.g., “Who usually has more say about whose friends to go out with?”). Response choices were “my partner,” “both of us equally,” or “you.” Each subscale scores’ means were calculated, reweighted from 1 to 4 (low to high power), and combined for a total SRPSm score (Pulerwitz et al., 2000). In this sample, the SRPSm, the RCm, and the DMDm had internal reliabilities of 0.78, 0.77, and 0.77, respectively. Construct validity of the SRPS was demonstrated through correlations with relationship satisfaction, IPV, and the Sexual Pressure Scale (Jones & Gulick, 2009; Pulerwitz et al., 2000).

The main outcome variable was consistent condom use (self-reported condom use during each vaginal or anal sexual encounter) within the previous 3 months (Crosby, DiClemente, Wingood, Lang, & Harrington, 2003; Jemmott, Jemmott, Fong, & Morales, 2010). A dichotomous measure operationalized adolescent sexual risk (0 = *consistent condom use*; 1 = *inconsistent condom use*). Absolute counts of condom use were not used since they are highly skewed, curvilinear, or bimodal and do not meet assumptions of parametric statistics (Raiford, Wingood, & DiClemente, 2007a).

Data Analysis

We conducted descriptive statistics to characterize the sample. Participant age was retained in the final model; however, race, ethnicity, and SES were not retained due to lack of variability and nonsignificant outcome correlations. Major variable correlations were conducted to understand the relationships between individual constructs. We used Preacher and Hayes’s (2008) asymptotic and resampling strategies for assessing indirect effects because it is more powerful and accurate in small samples than commonly used mediation-testing methods. We estimated the direct effects of predictor variable (partner age difference) on the outcome variable (consistent condom use). It estimated the indirect effect through the three proposed mediator variables (relationship power, physical IPV severity, and psychological IPV severity) through percentile-based, bias-corrected, and accelerated bootstrap confidence intervals.

Results

Our sample had an average age of 16.1 years, with a mean partner age of 17.8 years (see Table 1). Participants were predominantly African American (75%), non-Hispanic (74%), and low-income (81%). In the last 3 months, 24% of participants reported consistent condom use. The mean SRPSm was 2.9 ($SD = 0.5$). An equal number of participants reported minor physical IPV and severe physical IPV (18% each). Almost half of the sample (47%) reported minor psychological IPV, and over one third (35%) reported severe psychological violence.

The RCm was inversely correlated with physical IPV severity ($-.462, p < .001$) and psychological IPV severity ($-.344, p < .001$), yet DMDm was not significantly correlated with IPV severity. Conversely, DMDm was positively correlated with consistent condom use ($.177, p < .05$), yet RCm was not significantly correlated with consistent condom use.

Consistent condom use was inversely correlated with physical IPV severity ($-.117, p < .05$) and psychological IPV severity ($-.168, p < .05$) (see Table 2 for detailed correlations).

The final model is presented in Table 3 and Figure 2. The total effect of partner age difference was statistically significant ($-.4292, p < .01$). However, the multivariate model analysis did not support an indirect effect of partner age difference on consistent condom use through any of the mediators (relationship power, physical IPV, or psychological IPV severity).

Discussion

Replicating previous findings (DiClemente et al., 2002; Ryan et al., 2008), our study supported that partner age difference was negatively associated with consistent condom use in a sample of low-income, urban adolescent girls. This negative association strengthens the evidence that even relatively small partner age differences in adolescence remain an important indicator of inconsistent condom use. However, contrary to proposed explanations, we found that neither low relationship power nor IPV severity accounted for this inverse relationship. Notably, the sample's mean partner age difference was smaller than anticipated (1.6 years); previous works in other samples have reported that 46% to 62% of adolescent girls had partners who were at least 2 to 3 years older (Magnus et al., 2006). Therefore, although relationship power difference may explain inconsistent condom use in relationships with greater partner age differences, alternative explanations of inconsistent condom use must be sought for smaller partner age differences.

Although neither relationship power nor IPV were related to inconsistent condom use, fear of negative reaction or violence from an older partner could influence decisions to use condoms, as suggested by previous findings (DiClemente et al., 2002). Therefore, emotional manipulation by slightly older male partners may be subtle and not reflected in relationship power or psychological violence. Yet such emotional manipulation may explain inconsistent condom use (Teitelman et al., 2011). Partner negative reactions that may suggest emotional manipulation could include relationship withdrawal, social ridicule, or withholding intimacy. Fears of such negative reactions from an older partner are particularly pertinent to social and individual development of adolescents and need to be explored conceptually and empirically as relevant explanations for inconsistent condom use.

Alternatively, the choice to date older partners may be explained as part of adolescent female risk behavior clustering (Jessor & Jessor, 1977). Associations among older partners, inconsistent condom use, and increased substance use among adolescent girls lend support to this theory (Langille et al., 2007; Young & d'Arcy, 2005). Another explanation may be that adolescent girls dating older male partners perceive their relationship as more committed, exclusive, or serious, which negatively influences condom use (Brady, Tschann, Ellen, & Flores, 2009; Magnus et al., 2006). These are important alternative explanations that need further study as mediators of the relationship between older partners and consistent condom use. If these explanations (i.e., behavior clustering, perceived commitment, or trust) are found to influence condom use in adolescent girls dating older partners, they could be targeted in interventions.

Finally, desires to use condoms are likely more complex than previously understood. There is not enough evidence to support that adolescent girls with high relationship power would chose to use condoms with main partners. Although some studies have found that adolescent girls report a greater desire for condom use than their male peers (Teitelman et al., 2011; Tschann et al., 2002), others studies have had different findings. Bralock and Koniak-Griffin (2007) found that although relationship power reported by adolescent girls was related to

condom use efficacy (the self-confidence in one's ability to use condoms), relationship power was not related to either condom use intention or frequency. Therefore, the associations between condom use and relationship power in adolescents need further explication prior to intervention development since condom use efficacy may not translate to consistent condom use in urban adolescent girls.

This study's findings also explicate the discreet constructs of relationship power through the subscales measuring relationship control and decision-making power. We replicated Teitelman et al.'s (2008) findings that relationship control was inversely correlated with IPV. Thus, low relationship control for adolescent girls (e.g., boyfriends telling the girlfriend what to wear or dictating time together) may indicate issues of IPV. Behavioral interventions may include incorporating relationship skills to identify, prevent, and cope with controlling behaviors. Conversely, the decision-making dominance was inversely correlated with consistent condom use. Therefore, to promote condom use, it may be important to identify patterns of relationship decision-making and explore which skills may increase this dimension of relationship power.

Finally, an important finding in this study was the prevalence of physical and psychological IPV severity regardless of partner age differences. Over a third of the sample reported physical IPV and half of this violence included severe physical IPV; three-quarters of the sample reported psychological IPV and one-quarter reported severe physical violence. Furthermore, IPV had a small but significant inverse correlation with consistent condom use, a finding replicated from other studies (Ellickson, Collins, Bogart, Klein, & Taylor, 2005; Silverman, Raj, & Clements, 2004). Both physical and psychological IPV in adolescents are significant public health priorities that need to be addressed in terms of physical and mental harm as well as exposure to STIs and unintended pregnancies.

This study's findings must be interpreted in light of limitations. The narrow age difference and constricted variability in relationship power may have limited the findings, particularly with respect to IPV severity and consistent condom use. In spite of this limitation, partner age difference was related to consistent condom use, and therefore, this study contributes important findings. Additionally, this study was a cross-sectional survey, which limits the predictive faculty of partner age differences, relationship power, IPV, and condom use. However, directionality of these constructs was theoretically supported and also demonstrated important correspondence in variance that strengthens cross-sectional studies claims to causality (Rindfleisch, Malter, Ganesan, & Moorman, 2008). Furthermore, Schafer (1996) discussed the criticism of the CTS's inability to capture breath of violence; however, the CTS remains the most commonly used instrument in IPV research, and it provides a mechanism to compare findings across studies.

This study has important research implications. Since partner age differences were inversely related to consistent condom use, investigators should explore proposed alternative explanations specific to adolescent dating norms and developmental stage. Some factors to be examined include risk behavior clusters and perceived relationship commitment. Furthermore, the degree of partner age differences that predicts low relationship power needs elucidation. Additional theoretical development is needed to explicate the interaction of relationship power and IPV (Lerner, Fisher, & Weinberg, 2000; Reis, Collins, & Berscheid, 2000).

In this sample, IPV frequency and severity and their relationship to consistent condom use are important. These findings reinforce the need to illuminate contextual information around IPV and to increase our understanding of adolescent IPV, including relationship or cultural factors or situations that predict IPV severity (Dichter, Cederbaum, & Teitelman, 2010;

Kaestle & Halpern, 2005). Mixed-methods research with more sensitive and expansive IPV measures will uncover the meanings and motivations of adolescent IPV, although this strategy presents challenges to investigators because of the protection of minors and understanding of mandatory criminal reporting. Measurement challenges exist as well. Relationship power and IPV are often measured as a subjective, individual self-report. This strategy fails to capture the more complex dyadic nature of relationship power and IPV. Increasing longitudinal and dyadic measurement strategies will better explain the construction of relationship power and IPV.

It remains important that clinicians ask about partner age differences and that the legal implications of disclosure about partner age difference with minors are clearly understood to protect adolescents and health clinicians. Ideally, it is important to be able to identify associated risk behaviors, including older partners, to target adolescent health promotion. When clinicians ask specific questions about relationship-controlling behaviors associated with IPV or about how relationship decisions are made, they might provide anticipatory guidance to improve consistent condom use. This information can also guide interventions according to development stages or specific to cultural or peer norms.

In summary, among adolescent girls, partner age differences decrease likelihood of consistent condom use. The indirect effects through three proposed mediators (relationship power, physical IPV, or psychological abuse) were not significantly associated. Further studies are needed to explore alternative explanations about the relationship between partner age differences and sexual risk factors within adolescent sexual relationships. These findings underscore the heightened risk associated with partner age differences and impact of relationship dynamics on sexual risk behavior. Clinicians need to screen for partner age differences and recognize the possible association between partner age differences and IPV.

Acknowledgments

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

References

- Agurcia CA, Rickert VI, Berenson AB, Volk RJ, Wiemann CM. The behavioral risks and life circumstances of adolescent mothers involved with older adult partners. *Archives of Pediatrics & Adolescent Medicine*. 2001; 155(7):822–830. [PubMed: 11434851]
- Amaro H. Love, sex, and power. Considering women's realities in HIV prevention. *American Psychologist*. 1995; 50(6):437–447. [PubMed: 7598292]
- Begley E, Crosby RA, DiClemente RJ, Wingood GM, Rose E. Older partners and STD prevalence among pregnant African American teens. *Sexually Transmitted Diseases*. 2003; 30(3):211–213. [PubMed: 12616137]
- Blanc AK. The effect of power in sexual relationships on sexual and reproductive health: An examination of the evidence. *Studies in Family Planning*. 2001; 32(3):189–213. [PubMed: 11677692]
- Brady SS, Tschann JM, Ellen JM, Flores E. Infidelity, trust, and condom use among Latino youth in dating relationships. *Sexually Transmitted Diseases*. 2009; 36(4):227–231. [PubMed: 19265741]
- Bralock AR, Koniak-Griffin D. Relationship, power, and other influences on self-protective sexual behaviors of African American female adolescents. *Health Care for Women International*. 2007; 28(3):247–267. [PubMed: 17364984]
- Buelna C, Ulloa EC, Ulibarri MD. Sexual relationship power as a mediator between dating violence and sexually transmitted infections among college women. *Journal of Interpersonal Violence*. 2009; 24(8):1338–1357. [PubMed: 18718880]

- Catallozzi M, Simon PJ, Davidson LL, Breitbart V, Rickert VI. Understanding control in adolescent and young adult relationships. *Archives of Pediatrics & Adolescent Medicine*. 2011; 165(4):313–319. [PubMed: 21464379]
- Collins RL, Ellickson PL, Orlando M, Klein DJ. Isolating the nexus of substance use, violence and sexual risk for HIV infection among young adults in the united states. *Aids and Behavior*. 2005; 9(1):73–87. [PubMed: 15812615]
- Collins WA, Welsh DP, Furman W. Adolescent romantic relationships. *Annual Review of Psychology*. 2009; 60:631–652.
- Connell, RW. Gender and power. 1. Stanford, CA: Standford University Press; 1987.
- Cornelius TL, Resseguie N. Primary and secondary prevention programs for dating violence: A review of the literature. *Aggression and Violent Behavior*. 2007; 12(3):364–375.
- Crosby RA, DiClemente RJ, Wingood GM, Lang D, Harrington KF. Value of consistent condom use: A study of sexually transmitted disease prevention among African American adolescent females. *American Journal of Public Health*. 2003; 93:901–902. [PubMed: 12773349]
- Decker MR, Silverman JG, Raj A. Dating violence and sexually transmitted disease/HIV testing and diagnosis among adolescent females. *Pediatrics*. 2005; 116:272–276.
- Dichter, ME.; Cederbaum, JA.; Teitelman, AM. The gendering of violence in intimate relationships. In: Chesney-Lind, M.; Jones, N., editors. *Fighting for girls: New perspectives on gender and violence*. Albany: State University of New York Press; 2010. p. 83–106.
- DiClemente RJ, Wingood GM, Crosby RA, Sionean C, Cobb BK, Harrington K, Davies SL, Hook EW III, Oh MK. Sexual risk behaviors associated with having older sex partners: A study of black adolescent females. *Sexually Transmitted Diseases*. 2002; 29(1):20–24. [PubMed: 11773874]
- Ellickson PL, Collins RL, Bogart LM, Klein DJ, Taylor SL. Scope of HIV risk and co-occurring psychosocial health problems among young adults: Violence, victimization, and substance use. *Journal of Adolescent Health*. 2005; 36(5):401–409. [PubMed: 15837344]
- Gowen L, Feldman S, Diaz R, Yisrael D. A comparison of the sexual behaviors and attitudes of adolescent girls with older vs. similar-aged boyfriends. *Journal of Youth and Adolescence*. 2004; 33(2):167.
- Halpern CT, Spriggs AL, Martin SL, Kupper LL. Patterns of intimate partner violence victimization from adolescence to young adulthood in a nationally representative sample. *Journal of Adolescent Health*. 2009; 45(5):508–516. [PubMed: 19837358]
- Harner HM. Domestic violence and trauma care in teenage pregnancy: Does paternal age make a difference? *Journal of Obstetric, Gynecologic, and Neonatal Nursing*. 2004; 33(3):312–319.
- Harper CC, Minnis AM, Padian NS. Sexual partners and use of emergency contraception. *American Journal of Obstetrics and Gynecology*. 2003; 189(4):1093–1099. [PubMed: 14586361]
- Harris KA, Grant LM, Pitter R, Brodie DA. Associations between HIV risk, unmitigated communion, and relationship power among African American women. *Journal of HIV/AIDS & Social Services*. 2009; 8(4):331–351.
- Howard DE, Wang MQ, Yan F. Psychosocial factors associated with reports of physical dating violence among U.S. adolescent females. *Adolescence*. 2007; 42(166):311–324. [PubMed: 17849938]
- Jemmott JB III, Jemmott LS, Fong GT, Morales KH. Effectiveness of an HIV/STD risk-reduction intervention for adolescents when implemented by community-based organizations: A cluster-randomized controlled trial. *American Journal of Public Health*. 2010; 100(4):720–726. [PubMed: 20167903]
- Jessor, R.; Jessor, S. Problem behavior and psychosocial development: A longitudinal study of youth. New York: Academic Press; 1977.
- Jones R. Survey data collection using audio computer assisted self-interview. *Western Journal of Nursing Research*. 2003; 25(3):349–358. [PubMed: 12705116]
- Jones R, Gulick E. Reliability and validity of the Sexual Pressure Scale for Women–Revised. *Research in Nursing & Health*. 2009; 32(1):71–85. [PubMed: 18666222]
- Kaestle CE, Halpern CT. Sexual intercourse precedes partner violence in adolescent romantic relationships. *Journal of Adolescent Health*. 2005; 36(5):386–392. [PubMed: 15837342]

- Kaura SA, Allen CM. Dissatisfaction with relationship power and dating violence perpetration by men and women. *Journal of Interpersonal Violence*. 2004; 19(5):576–588. [PubMed: 15104862]
- Knudsen HK, Leukefeld CG, Havens JR, Duvall JL, Oser CB, Staton-Tindall M, Inciardi JA. Partner relationships and HIV risk behaviors among women offenders. *Journal of Psychoactive Drugs*. 2008; 40(4):471–481. [PubMed: 19283951]
- Langille DB, Hughes JR, Delaney ME, Rigby JA. Older male sexual partner as a marker for sexual risk-taking in adolescent females in Nova Scotia. *Canadian Journal of Public Health, Revue Canadienne de Sante Publique*. 2007; 98(2):86–90.
- Lerner RM, Fisher CB, Weinberg RA. Toward a science for and of the people: Promoting civil society through the application of developmental science. *Child Development*. 2000; 71(1):11–20. [PubMed: 10836553]
- Magnus M, Schillinger JA, Fortenberry JD, Berman SM, Kissinger P. Partner age not associated with recurrent Chlamydia trachomatis infection, condom use, or partner treatment and referral among adolescent women. *Journal of Adolescent Health*. 2006; 39(3):396–403. [PubMed: 16919802]
- Manlove J, Terry-Humen E, Ikramullah E. Young teenagers and older sexual partners: Correlates and consequences for males and females. *Perspectives on Sexual & Reproductive Health*. 2006; 38(4):197–207. [PubMed: 17162312]
- Morrison-Beedy D, Carey MP, Crean HF, Jones SH. Determinants of adolescent female attendance at an HIV risk reduction program. *Journal of the Association of Nurses in AIDS Care*. 2010; 21(2):153–161. [PubMed: 20116296]
- Morrison-Beedy D, Carey MP, Tu X. Accuracy of audio computer-assisted self-interviewing (ACASI) and self-administered questionnaires for the assessment of sexual behavior. *AIDS & Behavior*. 2006; 10(5):541–552. [PubMed: 16721506]
- The New York State Education Department. New York State Report Card. Albany: New York State Education Department; 2012. The New York State school report card accountability and overview report 2010–11; p. 24
- Ompad DC, Strathdee SA, Celentano DD, Latkin C, Poduska JM, Kellam SG, Ialongo NS. Predictors of early initiation of vaginal and oral sex among urban young adults in Baltimore, Maryland. *Archives of Sexual Behavior*. 2006; 35(1):53–65. [PubMed: 16502153]
- Preacher KJ, Hayes AF. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*. 2008; 40(3):879–891. [PubMed: 18697684]
- Pulerwitz J, Gortmaker SL, DeJong W. Measuring sexual relationship power in HIV/STD research. *Sex Roles*. 2000; 42(7):637–660.
- Raiford JL, Wingood GM, DiClemente RJ. Correlates of consistent condom use among HIV-positive African American women. *Women & Health*. 2007a; 46(2–3):41–58.
- Raiford JL, Wingood GM, DiClemente RJ. Prevalence, incidence, and predictors of dating violence: A longitudinal study of African American female adolescents. *Journal of Women's Health*. 2007b; 16(6):822–832.
- Reis HT, Collins WA, Berscheid E. The relationship context of human behavior and development. *Psychological Bulletin*. 2000; 126(6):844–872. [PubMed: 11107879]
- Rhodes KV, Lauderdale DS, He T, Howes DS, Levinson W. “Between me and the computer”: Increased detection of intimate partner violence using a computer questionnaire. *Annals of Emergency Medicine*. 2002; 40(5):476–484. [PubMed: 12399790]
- Rindfleisch A, Malter AJ, Ganesan S, Moorman C. Cross-sectional versus longitudinal survey research: Concepts, findings, and guidelines. *Journal of Marketing Research*. 2008; 45(3):261–279.
- Roye CF, Krauss BJ, Silverman PL. Prevalence and correlates of heterosexual anal intercourse among Black and Latina female adolescents. *Journal of the Association of Nurses in AIDS Care*. 2010; 21(4):291–301. [PubMed: 20116300]
- Ryan S, Franzetta K, Manlove JS, Schelar E. Older sexual partners during adolescence: Links to reproductive health outcomes in young adulthood. *Perspectives on Sexual & Reproductive Health*. 2008; 40(1):17–26. [PubMed: 18318868]

- Schafer J. Measuring spousal violence with the Conflict Tactics Scale. *Journal of Interpersonal Violence*. 1996; 11(4):572–585.
- Senn TE, Carey MP. Age of partner at first adolescent intercourse and adult sexual risk behavior among women. *Journal of Women's Health*. 2011; 20(1):61–66.
- Seth P, Raiford JL, Robinson LS, Wingood GM, DiClemente RJ. Intimate partner violence and other partner-related factors: Correlates of sexually transmissible infections and risky sexual behaviours among young adult African American women. *Sexual Health*. 2010; 7(1):25–30. [PubMed: 20152092]
- Silverman JG, Raj A, Clements K. Dating violence and associated sexual risk and pregnancy among adolescent girls in the United States. *Pediatrics*. 2004; 114(2):e220–e225. [PubMed: 15286260]
- Straus MA, Douglas EM. A short form of the revised Conflict Tactics Scales, and typologies for severity and mutuality. *Violence and Victims*. 2004; 19(5):507–520. [PubMed: 15844722]
- Teitelman AM, Bohinski JM, Boente A. The social context of sexual health and sexual risk for urban adolescent girls in the United States. *Issues in Mental Health Nursing*. 2009; 30(7):460–469. [PubMed: 19544131]
- Teitelman AM, Ratcliffe SJ, Morales-Aleman MM, Sullivan CM. Sexual relationship power, intimate partner violence, and condom use among minority urban girls. *Journal of Interpersonal Violence*. 2008; 23(12):1694–1712. [PubMed: 18349344]
- Teitelman AM, Tennille J, Bohinski JM, Jemmott LS, Jemmott JBI. Unwanted unprotected sex: Condom coercion by male partners and self-silencing of condom negotiation among adolescent girls. *Advances in Nursing Science*. 2011; 34(3):243–259. [PubMed: 21822072]
- Tschann JM, Adler NE, Millstein SG, Gurvey JE, Ellen JM. Relative power between sexual partners and condom use among adolescents. *Journal of Adolescent Health*. 2002; 31(1):17–25. [PubMed: 12090961]
- Young AM, d'Arcy H. Older boyfriends of adolescent girls: The cause or a sign of the problem? *Journal of Adolescent Health*. 2005; 36(5):410–419. [PubMed: 15837345]

Biographies

Catherine Cerulli is the Director of the Laboratory of Interpersonal Violence and Victimization (LIVV) and is an associate professor with the Department of Psychiatry in the School of Medicine and Dentistry at the University of Rochester. The National Institute of Mental Health awarded her a K01 5-year career development grant to conduct a randomized control trial in Family Court to assess whether enhanced mental health enables intimate partner violence victims to better navigate safety. She is also the Co-Principal Investigator on a National Institute of Justice award to assess whether victim participation in prosecution impacts their subsequent safety. She was formerly an Assistant District Attorney in Monroe County, New York, where she created a special misdemeanor domestic violence unit. She has been working on issues surrounding domestic violence and child abuse since 1983 in a variety of capacities. She completed a 3-year consultancy wherein she assisted on a Center for Disease Control study at Emory using a public health approach to increasing safety for domestic violence victims. She is a founding and current Board Member for the Crisis Nursery of Greater Rochester, Inc., a grassroots organization providing emergency respite care for greater Rochester-area families with young children.

Ellen Volpe is an assistant professor at the University of Buffalo, School of Nursing. She completed her postdoctoral fellowship at the Centers for Health Equity Research and Global Woman's Health at the University of Pennsylvania, School of Nursing (T32NR007100; Mentors Drs. Janet Deatrack and Marilyn Sommers). She completed her doctoral work at the University of Rochester, School of Nursing (Dissertation Chair, Dr. Dianne Morrison-Beedy). She also completed a Leadership in Education and Adolescent Health at the University of Rochester. Her research and clinical practice interests include the adolescent health promotion, particularly in sexual health and teen dating violence, and health

disparities. She has received funding from the National Institutes of Mental Health and Nursing Research (F31MH082646) and Nursing Research (T32NR007109), Robert Wood Johnson foundation and Sigma Theta Tau. She worked for 8 years as a family nurse practitioner at Westside Health Services.

Tom Hardie is an associate professor at Drexel University, a retired full professor from the University of Delaware, and an adjunct full professor at the University of Pennsylvania. He is a board-certified adult psychiatric mental health clinical nurse specialist and holds a nurse practitioner license in New York State. He holds a BA from Hofstra University, a BSN and MSN from the Stony Brook University, a doctorate from Teachers College, Columbia University, and has completed postdoctoral fellowships at the University of Pennsylvania (Treatment Research Center and Center for Health Disparities) and the National Institutes of Health (NINR). He has experiences as an advanced practice nurse and psychotherapist in spousal abuse and preparing advanced practice nurses in psychiatry. He was an expert panel member on National Institute on Alcohol Abuse and Alcoholism (NIAAA)'s Nursing Curriculum development and was also the author of the genetic module. He has numerous publications and presentations related to his research in adolescent suicide and addictions. His current funded and unfunded research efforts are in cancer survivorship and caregiving in collaboration with researchers at Drexel University, University of Pennsylvania, University of Delaware, and several community cancer-related organizations. He is also the past chair and current member of the Research Committee of the National Board of Osteopathic Medical Examiners on the Board of Directors for the Cancer Care Connection of Delaware.

Marilyn Sommers is the Lillian S. Brunner Professor of Medical Surgical Nursing at the University of Pennsylvania School of Nursing, Philadelphia, Pennsylvania. She has been a funded injury scientist for 20 years and has mentored more than 30 pre- and postdoctoral trainees in the areas of health disparities, injury and violence prevention and outcomes, and research methods. As a nationally known expert in risk-taking behaviors and injury science, she has been Principal Investigator of three R01s exploring the role of skin color in the forensic sexual assault examination. In addition, she has implemented three randomized controlled trials testing Screening, Brief Intervention, and Referral to Treatment as a strategy to reduce risk-taking behaviors such as risky driving in young adults. All told, she has been Principal Investigator or Co-Principal Investigator of six federally funded studies in the area of injury management and prevention (R01s from the National Institute of Nursing Research, National Institute on Alcohol Abuse and Alcoholism, National Institute of Mental Health and R49's from the Centers for Disease Control and Prevention). Through these studies, she has explored biobehavioral strategies to identify risk or reduce injury and violence in vulnerable populations. She has published findings on health-compromising behaviors and injury in journals such as the *Association for the Advancement of Automotive Medicine*, *Traffic Injury Prevention*, *Alcoholism: Clinical and Experimental Research*, *American Journal of Emergency Medicine*, and *Journal of Trauma*.

Dianne Morrison-Beedy, PhD, RN, WHNP-BC, FNAP, FAANP, FAAN, is dean of the University of South Florida, College of Nursing. She also serves as Senior Associate Vice President, University of South Florida Health, and Professor of Nursing and Public Health. Prior to this appointment, she was the professor and Endowed Chair of Nursing Science and Assistant Dean for Research at the University of Rochester, School of Nursing. She has received more than \$11 million in HIV prevention research funding, most recently serving as the Principal Investigator on two National Institute of Nursing Research (NINR)-funded HIV prevention trials with adolescent girls. Her interdisciplinary contributions also encompass serving as scientific reviewer for multiple HIV-related study sections and special

emphasis panels at the National Institutes of Health. In recognition of her contributions, she received the Florida Nursing Association Award for Research, Association of Nurses in AIDS Care's HIV Prevention Award, New York State Nurses Association HIV Researcher of the Year award, Distinguished Nurse Researcher of New York State, and the Association of Women's Health, Obstetric and Neonatal Nurses award for Excellence in Research for 2010. She is a fellow in the National Academies of Practice, American Academy of Nursing, and the American Academy of Nurse Practitioners. She received her BSN from Niagara University, her MSN and WHNP from the University of Buffalo, and she completed her PhD at the University of Rochester.

Figure 1.
Blanc's (2001, p. 191) Framework of the Relationship Between Power in Sexual Relationships and Reproductive Health

Figure 2.
Partner Age Difference as a Predictor of Relationship Power, IPV, and Condom Use in Adolescent Girls

- a. Paths = pathway from independent variable to mediator.
- b. Paths = pathway from mediator to outcome variable.
- c. Paths = pathway from independent variable to outcome variable.
- c' . Paths = pathway from independent variable to outcome variable, accounting for mediators.

Table 1Sample Characteristics ($n = 155$)

	<i>n</i> (%)	<i>M</i> (<i>SD</i>)	Range (min; max)
Participant age		16.1 years (1.3)	14;18 years
Partner's age		17.8 years (2.6)	14;33 years
Partner age difference		1.6 years (2.2)	-1;15 years
Race category			
• African American/Black	108 (69%)		
• Caucasian	10 (7%)		
• Race > 1	28 (18%)		
Hispanic	30 (19%)		
Low SES	125 (81%)		
SRPSm		2.9 (0.5)	1.01;4
Consistent condom use	37 (24%)		
Physical violence severity			
• No violence	99 (64%)		
• Minor violence only	28 (18%)		
• Severe violence	28 (18%)		
Psychological violence severity			
• No violence	43 (28%)		
• Minor violence only	73 (47%)		
• Severe violence	39 (25%)		

Note: SES = socioeconomic status; SRPSm = modified Sexual Relationship Power Scale.

Table 2

Bivariate Correlations Among Study Variables

	Partner Age Difference	SRPSm	RCm	DMDm	Physical IPV Severity	Psychological IPV Severity	Consistent Condom Use
Participant age	.061	-.122	-.117	-.076	.101	.095	-.167*
Partner age difference	X	.042	.071	-.006	.027	.006	-.191*
SRPSm	X	X	.811***	.785***	-.299***	-.374***	-.171*
RCm	X	X	X	.274**	-.462***	-.344***	.098
DMDm	X	X	X	X	-.125	-.128	.177*
Psychological IPV severity	X	X	X	X	.479***	X	-.168*
Physical IPV severity	X	X	X	X	X	X	-.117*

Note: SRPSm = modified Sexual Relationship Power Scale; RCm = Relationships Control; DMDm = Decision-Making Dominance; IPV = intimate partner violence.

Mediation Analysis of Models

Table 3

Model: Partner Age Difference on Consistent Condom Use as Mediated by Relationship Power, Physical IPV, and Psychological IPV									
Path	Pathway	Direct Effect		Total Effect		Bootstrap Analysis of Indirect Effect			
		B	SE	B	SE	M	SE	95% CI [Lower Limits; Upper Limits]	
a ¹	Partner age difference on relationship power	.0119	.0194						
a ²	Partner age difference on physical IPV severity	.0073	.0284						
a ³	Partner age difference on psychological IPV severity	.0002	.0265						
b ¹	Relationship power on consistent condom use	.6507	.4487						
b ²	Physical IPV severity on consistent condom use	−.0951	.3224						
b ³	Psychological IPV severity on consistent condom use	−.3569	.3219						
c/c'	Partner age difference on consistent condom use	−.4424**	.1689	−.4292	.1645**	.0066	.0260	−.0460; .0623	
Through proposed mediator									
	Relationship power					.0086	.0142	.0105; .0518	
	Physical IPV severity					−.0017	.0162	−.0400; .0208	
	Psychological IPV severity					−.0003	.0125	−.0311; .0248	

Note: IPV = intimate partner violence.

* $p < .05$.

** $p < .01$.

*** $p < .001$.