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Older opposite-sex romantic partners, sexual risk, and victimization in adolescence☆

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ABSTRACT

This study examined how age gaps among opposite-sex romantic partners related to sexual risk-taking and victimization by partners among 201 at-risk adolescents (60.2% female). We examined three questions: (a) is younger partner age, age gap between partners, or a combination of these two factors most strongly related to negative outcomes; (b) do age gaps relate to negative outcomes differently for male versus female adolescents; and (c) *why* do age gaps relate to negative outcomes? Results revealed that the wider the age gap between partners, the more likely adolescents were to engage in sex and the less likely they were to use protection against pregnancy and STIs. Wider age gaps were also associated with more frequent emotional and physical victimization and higher odds of unwanted sexual behavior. Findings did not differ significantly by gender or younger partner age. Analyses revealed that the wider the age gap, the more likely both partners were to engage in risky lifestyles (i.e., substance use and delinquency), and risky lifestyles – rather than poor negotiation or decision-making equality – helped to explain associations between age gaps and engagement in sexual intercourse and victimization experiences. Results suggest that relationships with age gaps tend to involve two partners who are engaging in deviant lifestyles overall, further corroborating the need to identify and provide services to these youth. Results also support movements toward considering partner age gaps rather than relying on a set *age of consent* when determining adolescents' legal competency to consent to sex.

Older opposite-sex romantic partners, sexual risk, and victimization in adolescence

Romantic relationships between adolescents and older partners pose significant concerns for policymakers, law enforcement, and service providers. In the United States, laws restrict sexual activity between older partners and adolescents. Today the primary goal of such laws, often referred to as statutory rape laws, is to prevent adolescents from being sexually exploited by older partners (Personal Responsibility and Work Opportunity Reconciliation Act PRWORA, 1996). Indeed, research supports the contention that adolescents dating older partners are more likely to experience negative sexual outcomes than adolescents dating similarly-age partners. Early research on partner age gaps revealed that children of teen mothers are

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often fathered by older males (Landry & Forrest, 1995; Lindberg, Sonenstein, Ku, & Martinez, 1997; Males & Chew, 1996). Involvement with older partners has also been linked to early initiation of sexual activity and decreased protection against pregnancy and sexually transmitted infections (STIs; Abma, Driscoll, & Moore, 1998; Begley, Crosby, DiClemente, Wingood, & Rose, 2003; Lindberg, Sonenstein, Ku, & Martinez, 1997; Marín, Coyle, Gómez, Carvajal, & Kirby, 2000; Young & d'Arcy, 2005).

To date, research on partner age gaps has been limited in that most studies focus on links between sexual risks and older partners among *female* adolescents; furthermore, very few studies have examined *why* these links exist. Extending upon past work, this study included both male and female adolescents and investigated *for whom* and *why* age gaps are related to negative outcomes. In addition to examining sexual risks, this study tested whether adolescents experienced greater victimization by partners (i.e., unwanted sexual behavior, physical abuse, and emotional abuse) the wider the age gap between them and their partners. We aimed to inform statutory rape policy and practice, and more generally, to help service providers better understand which youth are most vulnerable to exploitation by older partners. We examined partner age gaps among a sample of low-income, at-risk adolescents to increase the likelihood that results would generalize to youth who are most likely to date older partners, experience unhealthy relationships outcomes, and come to the attention of service providers.

Do partner age gaps, younger partner age, or a combination of the two matter most?

Within the United States, laws deeming when adolescents can consent to sex vary widely (Glosser, Gardiner, & Fishman, 2004). In some states (e.g., CA, IL), adolescents cannot consent to sex with partners of any age until they have reached a specified *age of consent*, ranging from ages 16 to 18 (Glosser et al., 2004). As a result, older teens and young adults can be convicted of a crime for engaging in sexual activity with partners who are as little as one year younger in age. In other states, however, age gap provisions base adolescents' legal competency to consent to sexual activity on (a) whether the younger partner has reached a certain minimum age (ranging from 12 to 18) *and* (b) whether the two partners are within a specified age difference from one another, typically two to four years (Glosser et al., 2004; Smith & Kercher, 2011).

The use of age gap provisions is in line with developmental research showing that adolescents begin to develop the cognitive capacity to *make* informed decisions early in adolescence, but that their ability to *carry out* these informed decisions varies across contexts due to diminished psychosocial maturity (Steinberg, Cauffman, Woolard, Graham, & Banich, 2009). That is, age gap provisions imply that the same adolescent might be competent to consent to sexual activity in certain relational contexts (i.e., with a similarly-aged partner) but not all relational contexts (i.e., with an older partner). Adolescents tend to choose romantic partners who will earn them status and acceptance among peers, including older partners who can represent maturity and autonomy (Collins, 2003; Gowen, Feldman, Diaz, & Yisrael, 2004; Scott, Reppucci, & Woolard, 1995). Older partners can also play the role of emotional or financial caretakers among low-income, at-risk youth (Hines & Finkelhor, 2007). Due to the inequalities and motivations at play, adolescents might be more susceptible to sexual risk-taking and more vulnerable to remaining in violent relationships with older partners than similarly-aged partners. To help legislators make decisions about age of consent standards and age gap provisions, research is needed to identify who are most at-risk for poor health outcomes – young adolescent partners, adolescents who date older partners, or a combination of the two (i.e., the possibility that the youngest adolescents might be the most susceptible to the negative influences associated with age gaps).

Do links between age gaps and negative outcomes differ by gender?

Researchers have called attention to how little is known about associations between age gaps and negative outcomes for male adolescents (Hines & Finkelhor, 2007; Manlove, Moore, Liechty, Ikramullah, & Cottingham, 2005). Historically, statutory rape laws deemed that only female adolescents could be victims given the disproportionate burden of pregnancy placed on females (Michael M. v. Superior Court, 1981). Today male adolescents can legally be victims in all of the United States, yet female youth continue to comprise the vast majority (95%) of victims in statutory rape cases brought to the attention of law enforcement (Troup-Leasure & Snyder, 2005). Both male and female adolescents lack psychosocial maturity (Cauffman & Steinberg, 2000), suggesting that both male and female adolescents are at risk for being exploited by older, influential romantic partners. Indeed, initial research conducted *within* samples of male adolescents suggests that larger age gaps are linked to early sex, unwanted sexual activity, and decreased protection against STIs (Manlove et al., 2005; Marín et al., 2000). Male adolescents sometimes report that sexual activity with older female partners was a positive experience (Bauserman & Rind, 1997); however, male youth might feel pressured to give positive reports about sexual activity with adult women given societal views of these relationships as sexual initiation rather than abuse (Hines & Finkelhor, 2007). To our knowledge, the current study is the first to examine whether the links between age gaps and both sexual risk and victimization differ significantly for male versus female youth.

Why do partner age gaps relate to negative health outcomes?

One could argue that intimate relationships with older partners might foster positive outcomes. For example, older, more mature partners might be able to show younger partners how to access condoms or how to manage relational conflict

without resorting to violence. Yet health *risks*, not benefits, are consistently associated with dating older partners, and little research has examined what precisely it is about dating older partners that might lead to negative health outcomes (Hines & Finkelhor, 2007). Although there are many potential explanations, as a first step we examined three theories particularly relevant within our at-risk sample.

First, most studies of partner age gaps assume that older partners wield greater decision-making power in romantic relationships and use this power to control and victimize younger partners (Gowen et al., 2004; Vézina & Hébert, 2007; Volpe, Hardie, Cerulli, Sommers, & Morrison-Beedy, 2013). Yet only one quantitative study has explored whether older partners actually do hold greater decision-making power than similarly-aged partners (Volpe et al., 2013). Among sexually active female youth, wider partner age gaps were *not* significantly associated with relationship power, a measure of older partners' control and decision-making dominance within the relationship (Volpe et al., 2013). Given that public policies governing statutory relationships assume older partners hold greater decision-making power (e.g., PRWORA, 1996), more research examining partners' control over decision-making is warranted.

A second explanation for links between age gaps and negative outcomes is that older partners tend to engage in more "risky lifestyles" than similarly-aged partners. Lifestyle and routine activity theory posits that some lifestyles increase motivation and opportunity for deviant behaviors and violence (Cohen & Felson, 1979; Riley, 1987). For instance, older partners who are embedded within risky and deviant lifestyles might find themselves in situations that provoke violence or sexual risk-taking (e.g., drunk and alone with their partner). Indeed, involvement in risky lifestyles (particularly delinquency and substance use) has been linked to greater risky sexual behavior and perpetration of partner violence (Elster, Ketterlinus, & Lamb, 1990; Magdol, Moffitt, Caspi, & Silva, 1998; Tapert, Aarons, Sedlar, & Brown, 2001; Temple, Shorey, Fite, Stuart, & Le, 2013). Older adolescents or young adults engaged in substance abuse and delinquency might preferentially date younger partners because their risky lifestyles give them the "cool" or "mature" persona that can be attractive to younger (particularly at-risk) adolescents, but unattractive to partners their own age (Hines & Finkelhor, 2007; Lamb, Elster, & Tavaré, 1986). Regardless of whether older partners hold decision-making power in relationships, older partners' risky lifestyles might expose the adolescents they date to more opportunities for risky sexual behaviors and victimization.

Third, adolescents' own risky lifestyles, not just their older partners' risky lifestyles, might explain links between age gaps and negative outcomes. Adolescents with a host of other psychosocial problems are also more likely to date older romantic partners, and dating an older partner has been associated with increased substance use and delinquency (Hines & Finkelhor, 2007; Lamb et al., 1986; Leitenberg & Saltzman, 2000; Mezzich et al., 1997; Young & d'Arcy, 2005). Thus, adolescents dating older partners are themselves likely to be engaging in risky lifestyles over the course of the relationship, whether due to adolescents' pre-existing individual inclinations toward risk-taking or due to encouragement from their older, more deviant romantic partners. As expected based on lifestyle and routine activity theory, adolescents' own risky lifestyles while dating older partners might place them in more vulnerable situations under which sexual risk-taking and victimization can occur (Grover, 2004; Vézina et al., 2011).

A methodological consideration

The precedent in past literature is to examine age gaps either as a categorical variable (e.g., three or more years older; Manlove et al., 2005) or as a continuous variable ranging from negative values to positive values, including participants who dated younger partners and participants who dated older partners (e.g., Young & d'Arcy, 2005). Categorizing age gaps is problematic in that there is no theoretical justification or reliable legal precedent for how to define "older" partners. Thus, herein we coded age gaps as a continuous variable. Importantly, the outcomes we examined are either inherently bidirectional (e.g., if one partner does not protect against STIs, neither does the other), or tend to be bidirectional due to partner influences and assortative mating (e.g., partners' offending behaviors tend to be correlated; Krueger, Moffitt, Caspi, Bleske, & Silva, 1998). Therefore, the wider the age gap, the more likely both partners might be to report negative outcomes, regardless of whether they are the *older* or the *younger* partner. As a result, if a study included both participants who dated older partners and participants who dated younger partners, associations between age gaps and outcomes would be quadratic rather than linear. However, analyzing partner age gaps within a quadratic model is problematic because the theoretical reasoning behind why younger vs. older partners experience negative outcomes is different. Thus, this study focused solely on adolescents with same age or older opposite-sex partners.

Study overview

This study had three objectives: First, among a sample of at-risk youth, we examined the hypotheses that partner age gaps were associated with sexual risk-taking and victimization above and beyond younger partner age, and that adolescents of all ages are susceptible to the negative effects of partner age gaps. Second, we tested whether partner age gaps differentially related to negative health outcomes for male versus female adolescents. Based on initial work conducted within samples of male youth, and in line with developmental literature suggesting that boys and girls both present with diminished psychosocial maturity, we did not hypothesize gender differences. Third, we examined whether poor negotiation or satisfaction in decision-making, partners' risky lifestyles, and/or participants' risky lifestyles helped to explain why dating older romantic partners was associated with sexual risk-taking and victimization.

Method

Participants

Participants included 201 adolescents (60.2% female) enrolled in a study of romantic relationships among at-risk teens. Participants met three eligibility criteria: a) were between 13 and 18 years old (age $M = 16.40$, $SD = 1.63$), (b) answered yes to "Have you ever 'dated someone' or been in a romantic relationship that lasted at least 1 month?", and (c) participated in community-based services targeting at-risk youth (e.g., foster care or alternative schooling) and/or received low-income services (e.g., free or reduced lunch or low-income housing). Participants self-identified as African American (61.7%), Caucasian (21.9%), Bi-racial/Multi-ethnic (12.9%), Latina/Latino (2.0%), and other (1.5%). The sample was predominately low-income, with 85% reporting they received free or reduced lunch at the time of the interview.

Procedure

We recruited a purposive sample of youth at-risk for poor romantic relationship outcomes. The larger study particularly focused on dating violence and the many risk factors that have been associated with dating violence, including experiencing child abuse or other forms of victimization; exposure to violence in the home, school, or neighborhood; expulsion or suspension from school; and involvement in delinquent or criminal behaviors (for a review see Glass et al., 2003). Particularly relevant for this analysis, poverty has been documented as a risk factor for dating older partners (for a review see Hines & Finkelhor, 2007). The research team collaborated with a number of local agencies that provide services to adolescents who were likely to present with these risk factors, including the Department of Social Services, the Department of Juvenile Justice, alternative schooling programs, and low-income housing developments.

Some service providers screened adolescents for eligibility and provided the research team with contact information for eligible and interested participants. Other service providers distributed the flyers to adolescents, who then, if interested, called in and were screened for eligibility by a researcher. Researchers also distributed flyers door to door in low-income housing neighborhoods, and some participants referred their service-receiving peers. The majority of teens (63%) met the service-involvement criteria due to involvement in the local Department of Juvenile Justice (DJJ), Department of Social Services (DSS), community-based programs serving predominately DJJ- or DSS-involved youth, or alternative schooling. Another 23% were involved in after-school programming targeting at-risk youth. The remaining 14% were involved in services for low-income families, such as low-income housing.

Eligible and willing teens ($n = 223$) completed in-person interviews consisting of about two hours of self report assessments. Participants were first asked about basic socio-demographics, including family and school experiences. The majority of the interview, however, was focused on participants' experiences within up to three romantic relationships. As in past research (Young & d'Arcy, 2005), the relationship with the greatest age gap between a participant and his or her older romantic partner was selected for analysis. Out of the 223 adolescents enrolled in the study, data for 17 adolescents were excluded because they always dated younger partners, and 5 more participants were excluded because they dated only same-sex partners. Of the 22 excluded participants, 14 were male. There were no significant differences between those included versus excluded in participants' age, $t(221) = -1.06$, $p = .289$.

Before the interview, adolescents provided written assent and a legal guardian provided written consent for adolescents under age 18. In exchange for their time, adolescents received a $50 gift card. The study was approved by the University IRB, state Department of Social Services IRB, and state Department of Juvenile Justice IRB. A Privacy Certificate was approved from NIJ to protect against court subpoena of participants' data and ensure participants' confidentiality (unless participants reported they were planning to do immediate harm to themselves or others). The Privacy Certificate also prevented researchers from reporting child abuse without participants' permission.

Measures

Partner age gaps. Age gaps were calculated by standardizing both younger and older partner ages and then subtracting younger partner ages from older partner ages. Standardized difference scores have been recommended over raw difference scores and were preferred herein because standardization protects against spurious findings that might emerge when analyzing (potentially correlated) partner age gaps and younger partner age in the same model (De Los Reyes & Kazdin, 2004).

Sexual risk-taking. Past research documents associations between partner age gaps and (1) an increased likelihood that youth will engage in sex with the older partner and (2) failure to use protection against pregnancy or STIs, which have both been associated with long-lasting negative consequences (e.g., contraction of STIs; Begley et al., 2003). Hoping to replicate and build upon past findings, these same two risky sexual outcomes were examined. First, participants were asked if they had consensual sex with the target partner (0: *no*, 1: *yes*). Second, those who reported having had sex were asked how often they used protection against pregnancy or sexually transmitted infections (STIs) on a scale from 0 (*never*) to 4 (*all the time*).

Victimization by partner. Three types of victimization experiences were assessed. Emotional victimization was assessed via adolescents' reports on 16 items ($\alpha = .90$); 14 of these items comprised the Safe Dates measure of Psychological Aggression (Foshee, 1996), and an additional 2 items were taken from the Psychological Aggression subscale of the Conflict Tactics Scale

2 (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). On a 4-point scale ranging from 0 (*never*) to 3 (*10 or more times*), participants reported how often their partner perpetrated each act of emotional abuse during the relationship, such as my partner "made me describe where I was every minute of the day" and "threatened to hurt me." Emotional victimization scores were averaged and then transformed by adding 1/6 and taking the log.

Physical victimization was assessed via the Physical Assault subscale of the CTS-2 (Straus et al., 1996). On a 4-point scale ranging from 0 (*never*) to 3 (*10 or more times*), participants reported how often their partner perpetrated any of 12 acts of physical abuse during the relationship ($\alpha = .87$), such as my partner "pushed or shoved me" or "kicked me." Physical victimization scores were averaged and then transformed by adding 1/6 and taking the log.

Unwanted sexual behavior was assessed via the Sexual Coercion subscale of the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001). Participants reported whether their romantic partners engaged in any of four unwanted sexual acts, such as my partner "touched me sexually when I didn't want him/her to" and "kissed me when I didn't want him/her to." Due to low endorsement of unwanted sexual behavior, scores were analyzed as a binary outcome (0: *none*, 1: *at least one act*).

Decision-making satisfaction. On a scale from 1 (*very dissatisfied*) to 5 (*very satisfied*), participants rated the following item: "In general, how satisfied were/are you with the way you and your partner divide(d) decisions?"

Partner negotiation. Participants completed the partner negotiation subscale of the CTS-2 (Straus et al., 1996). On a 4-point scale ranging from 0 (*never*) to 3 (*10 or more times*), participants reported how often their partner engaged in 6 forms of healthy compromise and negotiation in decision-making during the relationship ($\alpha = .81$), such as my partner "showed they cared for me even though we disagreed" and "agreed to try a solution I suggested."

Participants' risky lifestyles. Risky lifestyles were assessed as a combined score of participants' involvement in delinquency and substance use. Participants were asked about their participation (0: *no*, 1: *yes*) in 12 types of delinquent behaviors from the Self Report of Delinquency Scale (SRD; Elliott & Huizinga, 1989) during the romantic relationship with the target partner. The items included minor delinquency (e.g., skip class in school) and more serious delinquency (e.g., selling drugs, using a weapon, fist fighting). Participants also reported on 4 items assessing their cigarette, alcohol, marijuana, and hard drug use during the relationship from 0 (*never*) to 3 (*10 or more days per month*). Self-reported delinquency and substance use scores were standardized and summed for a measure of participants' risky lifestyles ($\alpha = .82$).

Partners' risky lifestyles. Participants also reported on their romantic partners' involvement in the same 12 delinquent behaviors and four types of substances described above. Partners' risky lifestyles were then assessed by standardizing delinquency and substance use scores and calculating sum scores ($\alpha = .75$).

Controls. Participant gender (0: *female*, 1: *male*), whether the romantic relationship was the participants' most recent (0: *no*, 1: *yes*), relationship length in months, and participant age at the start of the relationship were added as controls in all models. Race/ethnicity was not included as a control because preliminary regression analyses revealed no significant associations between race and relationship outcomes above and beyond other controls and no significant differences by race in links between age gaps and relationship outcomes.

Results

Romantic relationship characteristics

There was significant variation in partner age discrepancies, with older partners ranging from 0 (i.e., same age) to 13 years older than youth. Female adolescents dated significantly older partners than did male adolescents, $M = 2.14$ years older ($SD = 2.14$) for females vs. $M = 1.06$ years older ($SD = 1.63$) for males, $t(195.08) = 4.05$, $p < .001$. Nonetheless, male youth dated partners 0–10 years older, and 55% of male youth had dated a partner at least 1 year older.

Participants reported high rates of sexual risk and victimization. About half (52.5%) of participants reported engaging in sexual intercourse with their partners, and among those, only 59.2% reported using protection against pregnancy and STIs "all the time" (responses ranged from 0: *never* to 4: *all the time*; $M = 3.16$, $SD = 1.25$). Most youth, 88.4%, experienced emotional victimization (e.g., often being shouted or cursed at; raw scores ranged from 0: *never* to 2.96: *10 or more times*, $M = 0.53$, $SD = 0.55$); 38.9% experienced physical victimization (e.g., often being hit or slapped; raw scores ranged from 0: *never* to 2.50: *between 4–9* and *10 or more times*, $M = 0.16$, $SD = 0.33$); and 34.8% experienced unwanted sexual behavior (e.g., often being kissed when he/she did not want to). In addition, many youth also reported that they (69.7%) and their partners (70.7%) engaged in at least one form of deviant behavior over the course of the romantic relationship, although there was a lot of variation in how frequently deviant behaviors occurred (standardized ranges: −0.74 to 2.82 for participants, −0.79 to 3.03 for partners). On average teens tended to be satisfied with decision-making in their relationships ($M = 3.89$ out of 5, $SD = 1.02$, $R = 1–5$).

Does younger partner age, partner age gaps, or both relate to health outcomes?

Table 1 summarizes the results examining the control variables, participant age, and partner age gaps as correlates of sexual and victimization outcomes. Logistic regressions were conducted to examine sexual intercourse and unwanted sexual behavior outcomes. Ordinary Least Square (OLS) regressions were conducted to examine protection against pregnancy/STIs, emotional victimization, and physical victimization. (See the appendix for basic correlations among all study variables.)

Table 1
Associations between partner age gaps and engagement in sexual intercourse and use of protection.

	Sexual intercourse[a]		Protection against pregnancy/STIs		Emotional victimization		Physical victimization		Unwanted sexual behavior[a]	
	Step 1 OR	Step 2 OR	Step 1 β	Step 2 β	Step 1 β	Step 2 β	Step 1 β	Step 2 β	Step 1 OR	Step 2 OR
Step 1										
Gender	1.57	3.22**	−0.05	−0.14	0.07	0.15*	0.12	0.19**	1.23	1.50
Recent relationship	0.92	1.55	0.36***	0.33***	−0.03	0.05	−0.10	−0.05	0.66	0.77
Relationship length	1.07***	1.08***	−0.23*	−0.27**	0.30***	0.30***	0.32***	0.31***	1.01	1.01
Participant age	1.53***	2.27***	−0.03	−0.13	0.05	0.18**	0.04	0.14*	1.22	1.33*
Step 2										
Age gaps		4.77***		−0.26*		0.34***		0.26**		1.53*
ΔR^2		.15***		.04*		.08***		.05**		.03*
Model R^2	.19***	.34***	.16**	.20***	.08**	.16***	.10**	.15***	.04	.07
No.observations	197	197	103	103	197	197	197	197	197	197

Note: $N = 197$ participants for sexual intercourse, $N = 103$ participants for use of protection (participants with no missing data). Female = 0, Male = 1. OR = Odds Ratio. For sexual intercourse, Nagelkerke R^2 is presented.

[a] Outcome variable is binary (yes = 1, no = 0).

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Results examining engagement in sexual intercourse are summarized in the first column of Table 1. As shown in Step 1, after controlling for gender, whether the relationship was the most recent, and relationship length, participants' (i.e., younger partners') age at the start of the relationship was significantly associated with having sexual intercourse, such that older participants were more likely to engage in sex with their partners. Step 2 illustrates a significant association between age gaps and engagement in sexual intercourse, such that with every one unit increase in the standardized age difference between partners, the odds of the couple engaging in sexual intercourse were nearly 5 times higher (odds ratio [OR] = 4.77).

Next, Table 1 summarizes correlates of protection against pregnancy and STIs. Step 1 illustrates that participant age was not associated with the frequency of protection during sex. Step 2 shows that age gaps were significantly associated with use of protection, such that the wider the age gap between youth and their partner, the less likely they were to use protection against pregnancy and STIs.

A similar pattern emerged for victimization outcomes, shown in the last few columns of Table 1. Step 1 illustrates that participant age was not significantly associated with emotional, physical, or sexual victimization after accounting for the controls. Step 2 illustrates that wider age gaps were associated with significantly more frequent emotional and physical victimization and higher odds of experiencing unwanted sexual behavior. Only after accounting for age gaps did younger partner age become associated with victimization experiences, such that older adolescents were at greater risk for emotional, physical, and sexual victimization.

Next, the final models in Table 1 were replicated to test participant age as a moderator of the association between age gaps and each outcome. Specifically, we accounted for all controls, younger partner's age, and the age gap between partners, and then added the interaction between age gap and younger partner age to the model. Participant age was not a significant moderator for any outcomes (p-values ranged from .15 to .92), indicating that the association between age gaps and negative outcomes was not significantly stronger for the youngest adolescents.

Does dating older partners matter more for female versus male adolescents?

Next, the final models in Table 1 were replicated examining gender as a moderator of the association between partner age gaps and each outcome. That is, we tested the gender × age gap interaction for each outcome. To create the interaction term, gender was coded as −.5 (*female*) and .5 (*male*) and multiplied with the standardized age gap variable. Gender did not significantly moderate any associations between age gaps and outcomes (p-values ranged from .39 to .84). Thus, the associations between partner age gaps and sexual risk and victimization experiences were not significantly stronger for female versus male adolescents.

Why are age gaps associated with sexual risk-taking and victimization?

Next, we examined decision-making satisfaction, partner negotiation, partners' risky lifestyles, and participants' risky lifestyles as potential confounding variables that might account for the significant associations between dating an older partner and sexual and victimization outcomes. Specifically, we examined whether age gaps continued to be associated with sexual risk-taking and victimization even after accounting for these confounding variables that were hypothesized to explain the links.

Table 2
Partial correlations between confounding explanatory variables, sexual risk and victimization outcomes, and partner age gaps.

	Age gaps	Sexual intercourse[a]	Use of protection	Emotional victimization	Physical victimization	Unwanted sexual behavior[a]
Potential confounding explanatory variables						
Decision-making satisfaction	−0.15*	−0.10	0.04	−0.26***	−0.21**	−0.14*
Partner negotiation	0.01	−0.04	−0.14	0.11	0.09	0.03
Partner delinquency and substance use	0.36***	0.35***	−0.23*	0.51***	0.45***	0.30***
Participant delinquency and substance use	0.28***	0.37***	−0.27**	0.39***	0.39***	0.26***

Note: $N = 103$ for use of protection (i.e., only the participants who reported having sexual intercourse with their partners), $N = 197$ for all other outcomes (participants with no missing data). Controls include participant gender, participant age, relationship length, and whether the relationship was the most recent.

[a] Variables are binary (yes = 1, no = 0), and point-biserial correlations are presented.

* $p \leq .05$
** $p \leq .01$
*** $p < .001$.

Confounding variables are related to both the predictor variable and the outcome variable in order to account for significant links between the two (MacKinnon, Krull, & Lockwood, 2000). Table 2 illustrates that, after accounting for control variables, wider partner age gaps were significantly associated with decreased satisfaction with decision-making in the relationship, riskier partner behaviors, and riskier participant behaviors, but not decreased partner negotiation. Decision-making satisfaction was significantly associated only with greater victimization, whereas partners' and participants' risky behaviors were consistently associated with all sexual and victimization outcomes. Thus, partial correlation results provided evidence for testing decision-making satisfaction, partners' risky behaviors, and participants' risky behaviors as potential confounders of victimization outcomes, but only participants' and partners' risky behaviors as confounders of sexual outcomes (MacKinnon et al., 2000). We then examined regression models where all controls were examined in Step 1, age gaps were added in Step 2, and all potential confounding variables hypothesized to explain away the associations between age gaps and outcomes were added in Step 3. Results are presented in Table 3.

Sexual outcomes. First, Table 3 illustrates that the more participants and their partners engaged in risky behaviors, the more likely the couple was to engage in sexual intercourse, and this was true after accounting for all controls and the age gap between partners. Nonetheless, age gaps still remained significantly associated with engagement in sexual intercourse after including risky lifestyles in the model, suggesting that participants' and their partners' risky behaviors could not entirely account for the associations between age gaps and sexual intercourse. Similarly, participants' and their partners' risky behaviors accounted for significant additional variance in protection against pregnancy and STIs above and beyond age gaps (i.e., R^2 change = .05, $p < .05$), but could not entirely account for the link between age gaps and decreased protection against pregnancy and STIs. Specifically, participants' risky behaviors and age gaps were both marginally related to protection against pregnancy and STIs, both βs = −.19, $p = .09$.

Victimization. Also shown in Table 3, findings revealed that after accounting for satisfaction with decision-making, partners' risky behaviors, and participants' risky behaviors, partner age gaps were no longer associated with emotional

Table 3
Participants' and partners' risky behaviors and decision-making satisfaction as explanatory confounding variables.

	Sexual intercourse[a] OR	Protection against pregnancy/STIs β	Emotional victimization β	Physical victimization β	Unwanted sexual behavior[a] OR
Step 1: *Controls*					
Gender	2.05	−0.07	0.11	0.11	1.24
Recent relationship	1.56	0.36***	0.09	−0.02	0.80
Relationship length	1.07**	−0.27**	0.26***	0.26***	1.00
Participant age	2.10**	−0.09	0.04	0.01	1.20
Step 2:					
Age gaps	3.52**	−0.19	0.13	0.06	1.11
Step 3: *Explanatory confounds*					
Decision-making satisfaction	–	–	−0.13	−0.10	0.88
Partner delinquency and substance use	1.73*	−0.08	0.36***	0.29***	1.72*
Participant delinquency and substance use	2.32**	−0.19	0.14	0.21*	1.43
Step 3 R^2 – Step 2 R^2	0.11***	0.05*	0.20***	0.17***	0.11**
Model R^2	0.45***	0.25***	0.36***	0.32***	0.18**
No.Observations	197	103	197	197	197

Note: Step 2 R^2 is presented in Table 1.

[a] Variables are binary (yes = 1, no = 0).

* $p < .05$.
** $p < .01$.
*** $p < .001$.

or physical victimization or unwanted sexual behavior. Partners' risky behaviors emerged as the strongest correlate to all forms of victimization, suggesting that the association documented between partner age gaps and victimization might be confounded by the fact that older partners also tend to lead more risky lifestyles. In addition, participants' risky behaviors also significantly related to physical victimization, suggesting that in part links between age gaps and physical victimization might be confounded by the fact that youth who end up dating older partners also lead riskier lifestyles than youth who date similarly-aged partners.

Discussion

This study examined partner age gaps among low-income, at-risk adolescents to better understand the outcomes associated with dating older partners among adolescents most likely to come to the attention of service providers. In support of the notion that dating older partners is associated with sexual risk, the wider the age gap between youth and their partners, the more likely youth were to engage in sexual intercourse with their partner, and then the less likely they were to use protection against pregnancy and STIs (Landry & Forrest, 1995; indberg et al., 1997; Young & d'Arcy, 2005). In addition, the wider the age gap between adolescents and their romantic partners, the more likely the adolescents were to experience physical, emotional, and sexual victimization by their partners over the course of the relationship.

A consistent pattern emerged documenting that partner age gaps, not the age of the younger adolescent partners, were associated with sexual risk-taking and victimization. Similarly, younger adolescents were no more vulnerable to the negative outcomes associated with dating an older partner than older adolescents. These findings are in line with developmental theory and research suggesting that even young adolescents have the cognitive capability to make healthy sexual and romantic decisions in some situations, such as when dating similarly-aged, non-delinquent partners (American Psychological Association, 1989; Steinberg et al., 2009). Yet, adolescents' psychosocial immaturity (e.g., vulnerability to peer pressure, immature reasoning in partner selection) increases the likelihood that characteristics of the relationship context, such as wide age gaps and concomitant substance use and delinquency, can compromise their ability to make competent decisions (Steinberg et al., 2009).

Building upon initial research examining links between age gaps and negative sexual outcomes within samples of male youth (Marín et al., 2000), this study tested whether age gaps were linked to both sexual risk-taking and victimization outcomes in significantly different ways for male versus female youth. Female adolescents on average dated older partners than did male adolescents, suggesting that the greater policy focus on female victims might be somewhat warranted in that greater numbers of female adolescents are at risk. However, when male adolescents did become involved in relationships with older partners, they were just as likely as female adolescents to take sexual risks and experience victimization. Results document the importance of examining a variety of health outcomes that apply to both males and females, in contrast to early work that tended to focus predominately on links between age gaps and the risk for pregnancy and early childrearing among female adolescents (Landry & Forrest, 1995; Males & Chew, 1996).

To date, very little research has examined *why* age gaps are associated with negative relational outcomes. Three potential explanations were examined herein, namely (1) whether youth who date older (versus similarly-aged) partners might engage in riskier lifestyles overall that render them vulnerable to poor sexual decision-making and victimization; (2) whether older partners who date younger (versus similarly-aged) partners tend to be riskier partners, or (3) whether age gaps lead to unequal negotiation or decision-making power in the relationship. In line with lifestyle and routine activity theory (Cohen & Felson, 1979; Lamb et al., 1986), results revealed that partners' risky lifestyles and, to some extent, adolescents' own risky lifestyles were associated with larger partner age gaps. Of note, it is unknown whether adolescents or their older partners first began engaging in substance use and delinquency before the relationship occurred or as a result of the relationship. Regardless, the significant correlation between age gaps and deviancy of both partners *during the course of their relationship* suggests that teen relationships with age gaps are qualitatively different than same-age teen relationships.

In addition, together participants' and their partners' risky behaviors explained a significant portion of the variance in both engagement in sexual intercourse and protection against pregnancy and STIs, above and beyond age gaps between partners. Findings are in line with past work documenting the co-occurrence of problematic behaviors among youth, as well as evidence documenting deviant behavior as a precursor to sexual activity and pregnancy (Elster et al., 1990; Ketterlinus, Lamb, Nitz, & Elster, 1992; Mott & Haurin, 1988). However, even after accounting for both participants' and partners' risky lifestyles, partner age gaps continued to be significantly associated with engagement in sexual intercourse and marginally associated with the use of protection against pregnancy and STIs. Thus, more research is needed to identify additional factors or mechanisms (e.g., cultural beliefs of each partner or older partners' predatory motivations for dating younger partners) that might explain why age gaps are related to sexual risk-taking.

In contrast, associations between age gaps and adolescents' emotional, physical, and sexual victimization became non-significant after accounting for partners' risky lifestyles, participants' risky lifestyles, and satisfaction with decision-making. Partners' risky lifestyles predominately accounted for the association between age gaps and victimization. Older partners were more likely to be engaging in substance use and delinquency than similarly-aged partners, and those engaging in these risky behaviors were more likely to perpetrate emotional, physical, and sexual victimization in the relationship. In addition, while accounting for partners' risky lifestyles, participants' own risky lifestyles significantly related to physical victimization. Findings support a large and growing body of research documenting significant associations between dating violence and deviant behaviors (Tapert et al., 2001; Temple et al., 2013), and extend upon past work by documenting that dating older or

younger partners might be another indicator of overall risky lifestyles. Perhaps deviant lifestyles create more opportunity or motivation for violence within the context of the relationship, in support of lifestyle and routine activity theory (Cohen & Felson, 1979). Characteristics typical of a person who dates younger partners and who lives a risky lifestyle (e.g., attitudes toward violence, predisposition to aggression) might also explain why older partners were more likely to perpetrate violence toward their adolescent partners.

Implications for policy and practice

Results suggest three implications for policy and practice concerning romantic relationships involving adolescents and older partners. First, results call into question laws that still define sexual activity with youth as illegal based solely on the younger partner's age (e.g., "age of consent" laws; Glosser et al., 2004). Instead, laws that take into consideration partner age gaps to define illegal relationships or to determine the level of punishment for the older partner (namely age gap provisions or Romeo and Juliet clauses) might be a better way to protect teens from exploitation (Glosser et al., 2004; Gross, 2007).

Second, research on partner age gaps and campaigns to prevent relationships between adults and adolescents have largely focused on female adolescents dating older male partners (Hines & Finkelhor, 2007; PRWORA, 1996). The focus on female youth is somewhat warranted in that female adolescents are more commonly involved with older partners than are male adolescents, and female adolescents typically bear the social and economic responsibilities of early pregnancy. Nonetheless, findings revealed that some male youth did become involved with older partners, and those that did were just as likely as female youth to experience worse outcomes the wider the age gap between them and an older partner. Results support past calls for more research aimed at better understanding the correlates of partner age gaps among low-income, at-risk male adolescents (Manlove et al., 2005; Marín et al., 2000).

Third, results suggest that the age gaps themselves might not be fully responsible for the victimization outcomes associated with dating older partners. In part, age gaps might act as a proxy for the risky relationship contexts formed when two partners of different ages pair up and engage in substance use and delinquency over the course of the relationship. In addition to policies and practices focused on preventing relationships involving age gaps, the results suggest another avenue for reducing victimization is to help youth identify and form positive relationships with pro-social romantic partners. In general, there appears to be a need to screen for unhealthy romantic relationships and provide increased access to prevention and intervention programming within populations of at-risk youth.

Limitations

A few limitations are noteworthy. First, all measures were collected via participant self-report, and despite ensuring adolescents' confidentiality, adolescents might have felt uncomfortable reporting on their own or their partners' illegal or undesirable behaviors. Self-report of one's own engagement in illegal behavior tends to be methodologically acceptable and sometimes even preferred to third-party reports (Mills & Kroner, 2006; Thornberry & Krohn, 2000), but little is known about whether participants are aware of or will report the true extent of their *partners'* illegal behaviors.

Similarly, both this study and past research (Volpe et al., 2013) relied on self-report to measure negotiation and satisfaction with decision-making between partners, which might explain the emerging findings suggesting that inequality or satisfaction with decision-making between partners is not a good explanation for links between age gaps and victimization. That is, adolescents might be unaware of poor negotiation or decision-making within the relationship, perhaps because they are not familiar with any other type of context or are in denial. Adolescents might also underreport their partners' dominance in decision-making for self-presentation reasons. Of note, low satisfaction with decision-making was associated with greater emotional, physical, and sexual victimization at a bi-variate level, but these links became non-significant in regression analyses. It is possible that a more comprehensive measure of satisfaction with decision-making would have helped to account for associations because age gaps and victimizations, rather than our one-item measure.

Moreover, risky lifestyles might be a better explanation than partner negotiation and decision-making for links between age gaps and negative outcomes among this low-income, service-receiving sample of youth that were all dating opposite-sex partners, but it is unknown whether results will generalize to other samples of lower-risk youth or youth dating same-sex partners. We focused on low-income, at-risk youth because they appear to be the most likely to date older partners (Hines & Finkelhor, 2007). However, future research among large, representative samples of youth is needed to replicate our findings before results can be generalized to all youth.

Finally, to better inform statutory rape policies and laws, research is needed to determine whether particular age gap cutoffs more strongly relate to negative outcomes than others. Alternatively, if there is no distinct age gap that places youth most at-risk, then future research is needed to determine other ways to identify and intervene in potentially exploitive relationships. Currently statutory rape laws use a "by the numbers" approach for identifying exploitative relationships (i.e., the age of the younger partner or the age gap), but these numbers are likely only a proxy for what really makes relationships potentially exploitative. If researchers can identify the underlying factors driving associations between age gaps and costly negative outcomes, then service providers and law enforcement officials could screen for such risk factors in relationships involving age gaps.

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Appendix A. Appendix

Correlations among all study variables.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Gender (female)	–												
2. Recent relationship	−.08	–											
3. Relationship length	−.30***	.05	–										
4. Participant age	.03	.08	–	–									
5. Partner age gaps	−.25***	−.21**	.14*	−.42***	–								
6. Negotiation	−.10	.25***	.11	.06	−.04	–							
7. Satisfaction with decision-making	−.03	.39***	.08	.05	−.21**	.28***	–						
8. Partner delinquency and substance use	−.16*	−.06	.10	.06	.33***	.09	−.27***	–					
9. Participant delinquency and substance use	.30***	−.02	.04	.18*	.07	.10	−.11	.48***	–				
10. Sexual intercourse	.02	.01	.21**	.26***	.17*	.00	−.06	.35***	.41***	–			
11. Protection against pregnancy/STIs	−.02	.33**	−.16	.07	−.22*	−.05	.14	−.19*	−.20*	NA	–		
12. Emotional victimization	−.02	−.01	.27***	.00	.25***	.12	−.21**	.51***	.38***	.39***	−.16	–	
13. Physical victimization	.03	−.09	.27***	−.01	.21**	.09	−.20**	.44***	.40***	.37***	−.07	.70***	–
14. Unwanted sexual behavior (yes or no)	.05	−.08	.00	.13	.08	.02	−.15*	.31***	.31***	.14*	.08	.44***	.34***

Note: $N = 103$ for correlations between Protection against Pregnancy/STIs and all variables, $N = 201$ for all other correlations.

* $p \leq .05$.
** $p < .01$.
*** $p < .001$.