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Lifetime Prevalence Rates and Overlap of Physical, Psychological, and Sexual Dating Abuse Perpetration and Victimization in a National Sample of Youth

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Abstract

National, epidemiological data that provide lifetime rates of psychological, physical, and sexual adolescent data abuse (ADA) perpetration and victimization within the same sample of youth are lacking. To address this gap, data from 1058 randomly selected U.S. youth, 14–21 years old, surveyed online in 2011 and/or 2012, were weighted to be nationally representative and analyzed. In addition to reporting prevalence rates, we also examined the overlap of the six types of ADA queried. Results suggested that ADA was commonly reported by both male and female youth. Half (51%) of female youth and 43% of male youth reported victimization of at least one of the three types of ADA. Half (50%) of female youth and 35% of male youth reported at least one type of ADA perpetration. More male youth reported sexual ADA perpetration than female youth. More female youth reported perpetration of psychological and physical ADA and more reported psychological victimization than male youth. Rates were similar across race and ethnicity, but increased with age. This increase may have been because older youth spent longer time in relationships than younger youth, or perhaps because older youth were developmentally more likely than younger youth to be in abusive relationships. Many youth reported being both perpetrators and victims and/or involved in multiple forms of ADA across their dating history. Together, these findings suggested that interventions should acknowledge that youth may play multiple roles in abusive dyads. Understanding the overlap among ADA within the same as well as across multiple relationships will be invaluable to future interventions aiming to disrupt and prevent ADA.

Keywords

Teen dating violence; Adolescent dating abuse; Adolescence; Sexual violence

Introduction

Adolescent dating abuse (ADA) is a significant public health issue (Ellis, Crooks, & Wolfe, 2009; Foshee, McNaughton Reyes, & Ennett, 2010; Holt & Espelage, 2005; Howard & Wang, 2003; Wolitzky-Taylor et al., 2008). Victims are more likely than non-victims to experience depression (Ellis et al., 2009; Holt & Espelage, 2005; Howard & Wang, 2003; Wolitzky-Taylor et al., 2008) and engage in health-risk behaviors such as substance use, physical fighting, and risky sexual activity (Howard & Wang, 2003). Conversely, female perpetrators are more likely than non-perpetrators to report concurrent, elevated levels of depression, and substance use (Foshee et al., 2010).

Adolescent Dating Abuse Prevalence Rates

National rates of ADA victimization and perpetration are critical to understanding the scope of the problem, as well as to provide benchmarking for the ongoing investigation of the behavior. A review of the literature identified several nationally representative studies of randomly identified youth that reported ADA victimization rates (see Table 1 for methodological information). Psychological ADA is most common, while sexual ADA is least commonly reported. Specific prevalence rate estimates are as follows:

1. Psychological ADA victimization: An estimated 29% of adolescent females and 28% of adolescent males reported psychological abuse victimization in the past 18 months (Halpern, Oslak, Young, Martin, & Kupper, 2001).
2. Physical ADA victimization: Between 5 and 13% of female and 7–12% of male youth reported physical ADA victimization in the past year to 18 months (Eaton et al., 2012; Halpern et al., 2001; Hamby & Turner, 2013; Kann et al., 2014). Wolitzky-Taylor et al. (2008) found very different rates: 1.2% of 12-to 17-year-old females and 0.4% of same-aged males reported lifetime rates of physical assault by a dating partner.
3. Sexual ADA victimization: Among 1680 youth, aged 12–17 years, surveyed nationally, Hamby and Turner (2013) reported that 3% of adolescent females and 1% of adolescent males in dating relationships were victims of sexual ADA ever in their lifetime. Among the same age group, Wolitzky-Taylor et al. (2008) found that 0.3% of adolescent males and 1.5% of adolescent females experienced sexual ADA victimization. However, the recent Youth Risk Behavior Survey study of 9th–12th graders across the U.S. found that 14% of high school-aged females and 6% of high school-aged males reported sexual ADA victimization in the past year (Kann et al., 2014).

Even with significant variations in rates and ages of adolescents studied, these studies suggest that ADA victimization is a pervasive problem that has affected a substantial minority of young people. Nonetheless, the range in national prevalence rates across studies

is notable. Reasons for these disparities could include differences in measurements and definitions of ADA, sampling methodologies, observation periods (e.g., lifetime versus past 18 months), and other methodological aspects (e.g., in-person versus online data collection, variations in the ages of participants, although all fall under the NIH definition of adolescent) (National Institutes of Health, 1999). Moreover, given that most studies reported victimization in the past 12–18 months, lifetime rates of ADA victimization are less well reported. Because all of the above studies restricted their samples to those who were dating, population-based rates of ADA involvement are lacking as well. Importantly, too, we were unable to identify literature that examined all three types of ADA victimization within the same study. Thus, these studies likely underestimated the true proportion of youth affected, and the overlaps among these ADA experiences were difficult to discern.

Compared to victimization, our understanding of ADA perpetration rates is wanting. Haynie et al. (2013) reported that, nationally, 31% of 10th graders perpetrated physical and/or verbal ADA in the past 12 months. Although three perpetration items were assessed in Wave 2 of the Add Health study, prevalence rates for perpetration were not reported (Halpern et al., 2001; Halpern, Young, Waller, Martin, & Kupper, 2004). Renner and Whitney (2010) reported perpetration as part of an overall rate of physical ADA involvement as either a perpetrator and/or a victim.

Perpetration rates at the local level were more widely reported, but they still varied significantly, likely because of regional differences in cultural and social norms, socioeconomic status, and other factors related to ADA involvement. For example, prevalence rates for victimization of various types of forced sexual activity or sexual coercion, experienced by female youth within their dating relationships, ranged from 15% (Foshee, 1996) to 58% (Jackson, Cram, & Seymour, 2000). A more complete understanding of the occurrence rates of ADA perpetration among a national sample of male and female youth who are of various ages is warranted.

Overlap in Perpetration and Victimization and Different Forms of Adolescent Dating Abuse

Beyond general prevalence rates, previous methodologies have also left an incomplete understanding of how perpetration and victimization, as well as various forms of ADA, might overlap. In the Add Health survey, one in four young adult couples, aged 18 years and older, reported both physical violence perpetration and victimization at least once in their current relationship (Marcus, 2012). Among older youth who have been in a relationship and experienced some type of intimate partner violence, 54% reported both victimization and perpetration experiences across relationships (Renner & Whitney, 2010). Relatively little is known about whether these overlaps exist for younger youth. Halpern et al. (2001) reported that, among 7500 youth in Grades 7–12 who reported exclusively heterosexual romantic relationships, 12% of young males and 12% of young females reported physical or both physical and psychological victimization. Wolitzky-Taylor et al. (2008) found that, among over 3600 12- to 17-year-olds, 0.6% of males and 2.7% of females were victims of either serious physical or sexual ADA. The number of youth who experienced both versus one type of ADA victimization was not reported. However, data from adult studies suggest that overlaps in abuse are important to examine. For example, data from the Boston Area

Community Health survey indicated that 4% of adult males and 8% of adult females had been victims of physical, emotional, and sexual abuse perpetrated by another adult (Chiu et al., 2013). An additional 8% of adult males and 14% of adult females were victims of two types of abuse. It also was noted among these adults that experiencing one type of abuse significantly increased the odds of being a victim of another type of abuse. Given that none of the existing nationally representative studies among youth have reported the overlap among ADA victimization rates, little is known about how these forms of victimization overlap within youth's lives.

Gaps in the Literature

Although national prevalence estimates of ADA victimization exist, as noted above (Eaton et al., 2012; Halpern et al., 2001; Hamby & Turner, 2013; Haynie et al., 2013; Wolitzky-Taylor et al., 2008), a comparable focus on ADA perpetration rates is lacking. Moreover, a comprehensive understanding of the prevalence of youth affected by all forms of ADA is absent. Understanding whether it was a few youth who experience multiple forms of abuse or many youth who experience singular forms has implications for prevention effects—particularly during this pivotal developmental period. Furthermore, many existing studies assessed ADA over a limited time period and restricted their sample to dating youth, precluding population-based estimates critical for public health planning and resource allocation. Finally, few, if any, studies considered how rates might change as adolescents age. Consequently, in the current article, we (1) report national, lifetime prevalence rates of physical, psychological, and sexual ADA victimization and perpetration among all youth as well as by youth characteristics (e.g., age, race), and (2) consider the lifetime interplay among victimization and perpetration experiences of psychological, physical, and sexual dating violence. These noted gaps were addressed using data from the *Growing Up with Media* study, which included a large sample of male and female youth across a wide range of ages, race and ethnicities, and household income levels. This study was particularly amenable to contributing to the ADA literature because of its methodology: Youth were surveyed online to increase their safety and privacy, thereby increasing the likelihood of self-disclosure (Joinson, 1998, 1999). Because youth chose when and where to complete the survey, the survey experience was less vulnerable to peer or teacher influences that might impact school-based data collection efforts. The sample size, over 1500 youth 14–21 years of age, was large enough to support the examination of rates by key demographic indicators. It also allowed for the mapping of rates as youth aged from middle to late adolescence and young adulthood. Furthermore, the methodology used to collect this large dataset made it possible to apply weights, such that the resulting sample can be considered nationally representative.

Method

The survey protocol for this national longitudinal study was reviewed and approved by the Centers for Disease Control and Prevention Institutional Review Board for Waves 1–3 and the Chesapeake Institutional Review Board for Waves 4–5. Caregivers provided informed permission for their child's participation; youth provided informed assent. In both cases, agreement was documented by clicking “I agree” in the online survey.

Participants

Wave 1 data were collected in 2006 with 1586 youth-caregiver pairs. Eligible caregivers were equally or more knowledgeable than other adult household members about the youth's daily activities. Youth participants were 10–15 years old at baseline, English-reading, living in the household at least 50% of the time, and using the Internet in the last 6 months.

The sample was obtained from the Harris Poll OnlineSM (HPOL) opt-in panel (Harris Interactive), which was a multimillion-member panel of online participants and the largest available database of individual double opt-in participants when the cohort was initially recruited in 2006. Diverse methods were leveraged to identify and recruit potential panelists, including targeted emails sent by online partners to their audiences, trade show presentations, targeted postal mail invitations, TV advertisements, member referrals, and telephone recruitment of targeted populations. HPOL data have consistently been shown to be comparable to data obtained from random digit dialing (RDD) surveys of the general populations, once propensity weighting and appropriate sample weights are applied (Berrens, Bohara, Jenkins-Smith, Silva, & Weimer, 2003; Schonlau et al., 2004; Terhanian, Bremer, Smith, & Thomas, 2000). As expected, the sociodemographic characteristics of HPOL panelists when the cohort was recruited in 2006 were similar to the U.S. general population (Ybarra & Mitchell, 2008).

Data were weighted statistically to reflect the population of adults with children 10–15 years of age in the U.S., according to adult age, sex, race/ethnicity, region, education, household income, and child age and sex using statistics from the U.S. Census (Bureau of Labor Statistics & Bureau of the Census, 2006). Adults were the weighting target because they were the recruitment target. A second weight was applied to adjust for attitudinal and behavioral differences of adults in the online panel versus adults who were recruited in nationally representative RDD cohorts. Items included in the weight were general questions included in all telephone and online surveys conducted by the online panel (e.g., the average number of days per week that one exercises, frequency of buying things online). Accordingly, youth characteristics mirrored those of the national population (Table 2).

Emails were sent to randomly identified HPOL adult members who reported a child living in their household. To reduce response bias related to a particular topic (e.g., dating violence) (McNutt & Lee, 2000), eligibility was confirmed through a preliminary short survey of general demographic questions. Caregivers taking the short survey were unaware of the possibility of being included in a larger survey. Those who were eligible were then invited to take part in the *Growing Up with Media* study. Recruitment was balanced on youth sex and age.

Of the 2526 eligible households identified during the short survey, 63% completed the Wave 1 survey, 18% were eligible but not surveyed because the targeted sample size had been reached, and 19% declined to participate. The stages of recruitment are represented in Fig. 1. Compared to the adults in the cohort, adults of households that declined to participate were significantly older ($M = 47.7$ years, $SD = 0.6$ versus $M = 44.1$ years, $SD = 0.3$), $t(2067) = -6.47$, $p < .001$; more likely to be employed, 56 vs. 50%, $\chi^2 = 5.15$, $p = .02$, and White race, 79 versus 71%, $\chi^2 = 14.28$, $p < 0.001$; and less likely to be Hispanic, 7 versus 12%, $\chi^2 =$

10.84, $p = .001$, or of a low income (<\$35,000 peryear) household, 19 vs. 25%, $\chi^2 = 7.14$, $p = .008$. The groups were equally likely to be married, 73 versus 72%, $\chi^2 = 0.21$, $p = .65$.

The Wave 1 survey response rate was calculated as the number of qualified participants, plus the number of non-qualified participants, plus the number of participants who started but did not complete the survey, divided by the total number of email invitations sent, minus the number of invitations that bounced back as undeliverable. This rate, 31%, was within the range of well-conducted online surveys at the time (Cook, Heath, & Thompson, 2000).

ADA items were added at Wave 4 and also included in Wave 5. Therefore, the analyses discussed in the current article include only data collected at Wave 4, fielded October 2010–February 2011 with youth aged 13–20 years, and Wave 5, fielded October 2011–March 2012 with youth aged 14–21 years. For these waves, the permission/assent description was updated to mention topics about exposure to sexual, physical, and psychological abuse, among other sensitive subjects (e.g., substance use). The survey included an explanation that their participation and these questions were critical for the research team to understand why some youth have unhealthy relationships. Of the 1586 households who completed the baseline survey, six parents declined, and an additional 63 did not finish the Wave 4 survey before the child could be qualified (i.e., either because the parent did not finish, did not hand the survey to their child, or the child did not complete the qualification process).

Sixty-seven percent of baseline households ($n = 1058$) completed either the Wave 4 and/or the Wave 5 surveys, of which 71% ($n = 750$) of youth completed both waves. Characteristics of included participants (i.e., Wave 4, Wave 5, or both Waves completed) were similar to the characteristics of the original sample, suggesting internal validity remained intact (Table 2). For example, 53% of the participating youth in Waves 4 and/or 5 were males, compared to 47% of non-participants, $F(1,1582) = 1.50$, $p = .22$. Twenty-four percent of participants in Waves 4 and/or 5 reported household incomes of less than \$35,000, as did 24% of non-participants, $F(1,1582) = 0.01$, $p = .93$.

Caregivers received \$20 and youth received \$25 as incentives to complete each survey. To increase response rates, an additional \$10 was offered in the last month of fielding the survey to youth who had yet to complete the survey.

Measures

Although “teen dating violence” is perhaps the more commonly used phrase, “adolescent” was used in the current study to reflect the broader age range of participants and to mirror the NIH definition of adolescent, which includes youth through age 21 (National Institutes of Health, 1999). “Abuse” was used, rather than violence, to connote a broader range of experiences (i.e., many attribute violence to refer solely to physical acts) (Miller & Levenson, 2013).

For all youth, we deemed their demographic characteristics (e.g., age, household income) at the time of the most recent ADA event to be most important. As such, for youth who reported ADA at Wave 4 but not Wave 5, we used their demographic characteristics at Wave 4, whereas for those who reported ADA at both Wave 4 and 5, we used their Wave 5

demographic data. For youth who did not report ADA, we deemed their most recent report of demographics to be most important and therefore used their Wave 5 data, if available. If not available, we used Wave 4 data.

If ADA was reported in both years, it was only counted once in the prevalence rates. Specifically, among the 750 youth who responded to both waves, the 25% of youth who reported ADA in both waves were counted only once as having experienced victimization and/or perpetration ever in their lifetime.

Youth who reported ever having a romantic relationship were asked subsequent questions about psychological and non-defensive physical ADA victimization and perpetration using items from scales created by Foshee (1996) in a dating violence prevention program for 8th and 9th graders (Foshee et al., 1998). Items were adapted by combining them to result in a shorter scale (e.g., combining pushed, grabbed, kicked, shoved, and hit into one physical abuse item). Adequate internal consistency was reported for these four subscales (i.e., Cronbach's $\alpha > .70$ for all but one subscale).

The psychological ADA questions were worded as follows: "Think about all of the people you have been in a romantic relationship with—someone you would call a boyfriend or girlfriend. Which, if any, of the following things has a boyfriend or girlfriend *ever* done to you? These are things that can happen anywhere, including in-person, on the Internet, and on cell phones or text messaging." Four psychological ADA victimization items were asked (items shown in Table 3; $\alpha = .66$).

Immediately following the victimization questions, parallel perpetration questions were asked (four psychological ADA perpetration items, $\alpha = .73$). Due to the scope and length of the survey, perpetration was measured as a frequency and victimization as a dichotomous experience. To align the measures, perpetration was reduced to a dichotomous experience. As a result, the relative frequency of both experiences was masked.

Non-defensive physical ADA victimization was introduced thusly: "For this question, again please think about the people you have been in a romantic relationship with—someone you would call a boyfriend or girlfriend. Which, if any, of the following things has a boyfriend or girlfriend *ever* done to you *on purpose*? (Only count it if they did it first. Do not count it if they did it in self-defense)." Seven items were presented, as shown in Table 3 ($\alpha = .79$). Parallel non-defensive perpetration questions were asked immediately following this victimization section ($\alpha = .78$). Participants were again told not to include self-defensive incidents.

To understand sexual victimization and perpetration more generally, the sexual abuse questions were asked of all youth. The nature of the relationship with the perpetrator was determined in a follow-up question. If the victim or perpetrator was identified as a boyfriend or girlfriend, the experience was categorized as ADA. Three different types of sexual victimization were queried: (1) Has anyone ever kissed, touched, or made you do anything sexual when you *did not want to*?; (2) Has someone ever tried, but not been able, to make you have sex when you *did not want to*?; and (3) Has someone ever made you have sex when you *did not want to*? These items are similar to, but more comprehensive, than the

sexual violence item recently added to the Youth Risk Behavior Survey: “kissed, touched, or physically forced to have sexual intercourse when they did not want to” (Kann et al., 2014). Parallel perpetration questions were asked subsequently.

Analyses

“Decline to answer” responses were imputed using single imputation (StataCorp, 2006). To reduce the likelihood of imputing truly non-responsive answers, participants were required to have valid data for at least 80% of the survey questions prior to imputation. As a result, 11 participants were dropped from Wave 4 and 7 were dropped from Wave 5, resulting in a final analytic sample size of 1058 unique youth.

Rates were reported for all youth, dating and non-dating, to provide population-based estimates. Statistical comparisons between ADA experiences and categorical variables were measured using design-based F statistics (i.e., chi-square tests adjusted for survey weighting). Logistic regression equations quantified significant associations.

Results

Eighty percent ($n = 827$) of youth surveyed had ever had a boyfriend or girlfriend. Although the sex of the partner was not queried, between 3 and 5% of youth in either or both of the two waves reported a non-heterosexual identity (e.g., lesbian, gay, bisexual) and/or a transgender identity. Unfortunately, subsequent analyses by sexual and gender identity were precluded due to insufficient sample size.

Among all youth, irrespective of dating history, 35% reported both victimization and perpetration, 8% reported perpetration but not victimization, 12% reported victimization but not perpetration, and 46% reported neither victimization nor perpetration. Sixty percent of females self-reported being involved in some form of ADA with a romantic partner: 51% as victims and 50% as perpetrators ever in their lifetime. Forty-nine percent of males reported ADA involvement: 43% as victims and 35% as perpetrators. Females were significantly more likely than males to report ever experiencing psychological ADA victimization (47, 35%; Table 3), Cohen's $d = .16$; $F(1, 1054) = 6.43$, $p = .01$, psychological ADA perpetration (46, 33%), Cohen's $d = .18$; $F(1, 1054) = 8.46$, $p < .01$, and non-defensive physical ADA perpetration (23, 12%), Cohen's $d = .18$; $F(1, 1054) = 8.81$, $p < .01$. Males were significantly more likely than females to report sexual ADA perpetration in a romantic relationship as measured by response to at least one of the three sexual abuse items included in the survey (5, 2%), Cohen's $d = .12$; $F(1, 1054) = 4.05$, $p = .04$.

Twice as many females than males reported experiencing: having their looks put down or having their partner say hurtful things in front of others, being slammed or held against a wall by their partner, and attempted rape (i.e., their partner tried but was not able to make them have sex) by their partner. On the other hand, twice as many males than females reported being scratched or slapped by their partner. In terms of perpetration, more than two times as many females than males reported throwing something at their partner and scratching or slapping their partner, whereas 10 times as many males than females reported attempting to rape their partner.

As shown in Fig. 2, most youth who reported ADA experienced or perpetrated only one of the behaviors queried. For example, 22% of all youth (19% of males and 25% of females) reported one of the four types of psychological ADA victimization queried. However, 19% reported between two and four of the behaviors. Similarly, 9% of all youth (7% of males and 11% of females) reported only one of the seven types of physical ADA perpetration queried. Nine percent reported between 2 and 7 of the behaviors. Patterns were similar for males and females.

Rates of ADA experiences were similar by race and ethnicity, and mostly similar by income (Table 4). Lifetime ADA generally increased by age, with differences noted by sex (Table 5). More than one in four (30%) males reported being both a victim and a perpetrator of at least one type of ADA at some point in their life (not shown in tables), suggesting overlap in abuse-role experiences. Specifically, across the sample, while 26% of males reported being a victim of only one form of ADA, 17% reported being victims of two or all three forms of ADA. Similar rates in type of abuse overlaps were also noted for perpetration. While 24% of males reported perpetrating one form of ADA, 11% reported perpetrating two or all three forms of ADA.

High rates of abuse-role overlap were also noted for female youth: 40% reported being both an ADA victim and perpetrator. Overlaps among the three types of abuse were also fairly common. While 26% of females reported being victims of only one form of ADA, a similar percentage, 24%, reported being victims of two or all three forms of ADA. At the same time, while 30% of females reported perpetrating only one form of ADA, 20% of females reported perpetrating two or all three forms of ADA. These numbers reflect the overlap of experiences these youth have had across their existing dating history, regardless of whether or not the experiences occurred in the same dating relationship.

Adjusting for other youth characteristics listed in Table 6, the relative odds of reporting both types of psychological ADA (victimization: aOR = 1.60; perpetration: aOR = 1.90) and physical ADA perpetration (aOR = 2.00) were significantly higher, whereas the relative odds of reporting sexual ADA perpetration (aOR = 0.32) were significantly lower for females (Table 6). In general, the relative odds of all types of ADA increased with age among otherwise similar youth. Number of lifetime partners was positively associated with psychological victimization and perpetration, physical victimization, and sexual perpetration; and negatively associated with sexual perpetration. As expected based upon bivariate comparisons, income, ethnicity, and race did not predict ADA involvement holding all other things equal. Survey process measures were also generally non-significant, with only two exceptions noted.

Table 7 shows the rates of co-occurrence among different types of ADA. Effect sizes were adjusted for number of lifetime dating partners, sex, age, race, ethnicity, income, honesty in answering survey questions, and being alone or not when taking the survey. For example, the most common overlap was psychological abuse: 28% of youth reported both victimization and perpetration. The relative odds of psychological ADA victimization was 9.5 times higher for youth who reported perpetration compared to otherwise similar youth who did not report perpetration. Although fewer youth reported both non-defensive physical ADA

perpetration and victimization (13%), the magnitude of association was the strongest of all pairs of ADA types (aOR = 47.3, $p < .001$).

Discussion

In this national study that measured lifetime prevalence rates of psychological, non-defensive physical, and sexual ADA victimization and perpetration among youth spanning middle to late adolescence, findings indicate ADA is a multifaceted phenomena that occurs with substantial frequency in the relationships of U.S. youth. It also appears that an important minority experience multiple behaviors within each type of ADA. Given these findings, next steps should include examination of the frequency of each of these types of episodes within anyone relationship, as well as the number of different relationships that include ADA (e.g., youth who have been in multiple abusive relationships versus one).

Victimization rates for all three forms of ADA were higher in this study than those reported in other national studies (Eaton et al., 2012; Halpern et al., 2001; Hamby & Turner, 2013; Kann et al., 2014), perhaps because the current cohort spanned a wider age range, whereas many previous studies have focused on either younger or older youth. Additionally, lifetime rates were assessed in the current study, whereas some previous studies constrained the assessment to the past 12–18 months. Moreover, questions in the current study were not restricted to one particular dating relationship but rather included all previous and current relationships. Also, multiple questions, reflecting a range of experiences from less to more severe were used to assess each type of ADA in the current study, whereas earlier studies have used fewer items to measure each type of ADA. Furthermore, respondents in the current study were prompted to think about experiences in different settings, including in-person, online, on a cell, and via text messaging. To our knowledge, these other national studies have not specified a specific setting. This may have resulted in youth limiting their responses to in-person experiences. The private online data collection strategy may also have resulted in higher rates of self-disclosure—particularly for involvement as a perpetrator, which is likely viewed as socially undesirable or possibly underreported, especially when assessed in the more commonly used school setting strategy.

In the current study, youth reported significant overlap in roles (i.e., perpetration and victimization) and involvement (i.e., the different forms of abuse). Given that these three different types of ADA predicted each other (e.g., psychological ADA victimization was associated with elevated odds of physical ADA perpetration), it would have been impossible for previous studies to disentangle the impact of one type of ADA, particularly if only one form was examined. For example, researchers studying the effects of physical ADA victimization may have also captured the effects of psychological ADA victimization, making it difficult to determine which types of ADA have particularly deleterious effects. To address this issue in the future, researchers may need to assess all types of victimization and perpetration simultaneously.

Differences by sex were noted in the current study. More female youth reported both perpetrating and being victimized by psychological ADA than male youth. They were also more likely than males to report perpetrating non-defensive physical ADA. Interestingly, this

disparity in abuse perpetration by sex increased among older youth (Table 3). The issue of gender parity in dating abuse perpetration measures is complex (Hickman, Jaycox, & Aronoff, 2004). Although the results from this and other studies indicate that females engage in relationship abuse at rates either similar to or greater than males (Archer, 2000, 2002), some have argued that female victims acting in self-defense are often miscategorized as perpetrators (Swan, Gambone, Caldwell, Sullivan, & Snow, 2008). A strength of the current study was the explicit question format excluding incidences of self-defense. However, inferences of the other partner's intent were still required. For example, if a partner hit the participant in reaction to the participant's verbal threats, the participant could interpret the survey question as victimization experience because the partner hit "first." It is also important to note that previous research has suggested that females experience greater physical and emotional impacts from ADA victimization than males, including physical injuries (Archer, 2000, 2002; Swahn, Simon, Arias, & Bossarte, 2008), symptoms of posttraumatic stress disorder (Black et al., 2011; Wolitzky-Taylor et al., 2008), and fearfulness (Black et al., 2011). That is not to say that male victims do not report negative outcomes, as they do (Black et al., 2011; Exner-Cortens, Eckenrode, & Rothman, 2013). As such, it is important to focus on all victims—females and males. Moreover, interventions are likely to be considerably more effective if they acknowledge and adequately address all youth's roles and experiences.

Findings indicated that sexual ADA perpetration was more commonly reported by males than females. This provides support for interventions that treat unwanted sexual behavior in dating relationships as distinct from other forms of ADA. Nonetheless, females also reported perpetrating sexual ADA. Given the potential negative impacts associated with sexual ADA, including unwanted pregnancies, sexually transmitted infections and mental health consequences, efforts to reduce sexual ADA perpetration among *all* youth are needed.

Given the predominantly heterosexual sample, some might assume that the victimization rates of one sex should generally mirror the perpetration rates for the other sex, yet, in some cases, there were wide disparities. For example, while 33% of males reported perpetrating psychological ADA, 47% of females reported being victims of psychological ADA. This incongruence may have been because participants were less likely to admit to perpetration than victimization. It may also have been that experiencing victimization was more salient than perpetration and so was easier to remember and report when lifetime rates were queried. Another possible explanation is that perpetrators were more likely to aggress upon multiple partners, resulting in greater victimization rates. Physical perpetration rates may also have been lowered by the explicit instructions to "only count it if they did it first. Do not count it if they did it in self-defense." This could imply that if someone does not initiate physical violence, then it must be self-defense. This may inadequately capture the concept of self-defense, where someone acts to protect themselves from potential harm. For example, someone might hit or push their partner, and their partner could respond with a violent attack. The second actor may not be acting in self-defense in this scenario but rather retaliatory or more intense physical abuse in response to a partner's initiation of physical abuse. This is certainly an important area of future inquiry.

Because prevalence rate differences were noted by age, comparing rates generated from studies with various ages of youth participants may lead to disparate findings. In general, rates increased as youth aged in the current study. Older youth may be more likely to engage in dating abuse as part of a developmental trajectory that extends into young adulthood. Because the rates reported here were population-based, it is also possible that the rates were higher for older youth because they had spent more time at risk and because dating becomes more common as youth age. Interpretation of increased rates among older youth should consider these possibilities.

Beyond those mentioned above, the current study had several additional limitations. Recruiting truly nationally representative samples is increasingly difficult (Pew Research Center for the People & the Press, 2012). These difficulties are magnified when recruiting youth for studies that involve sensitive topics. In addition, underlying factors related to self-selection in the online panel may have affected the sample's generalizability. However, to address this limitation and to minimize self-selection bias, participants were randomly recruited from the four million panel members, and eligibility was determined before describing the study's purpose, so as not to attract participants with particular experiences. Moreover, these potential underlying differences were adjusted in the weighting scheme, which included attitudinal and behavioral attributes that were weighted to approximate those observed in national samples recruited via RDD (Schonlau et al., 2004; Terhanian et al., 2000).

Due to the scope and length of the survey, a broad range of potentially more and less serious abusive behavior was assessed in each type of ADA. Experiences were not classified a priori by us as more or less severe because this would have required a value judgment that may not reflect the physical or emotional injuries sustained by those involved. Thus, if space allows, future research should include measures of impact to identify those most severely affected by any particular act of abuse.

As a strength, asking about youth's lifetime ADA experiences led to more comprehensive public health estimates. However, it might have also increased the likelihood of recall bias. For example, some youth may have forgotten about past abuse or characterized the experience differently across time.

Research suggests participants tend to underreport their own violence (Archer, 1999). Perpetration rates might have been even higher if both partners were surveyed. Youth might have been less willing to report perpetration experiences because of social undesirability or privacy concerns. Bell and Naugle (2007) found that indications of social desirability were associated with less endorsement of dating abuse perpetration and victimization experiences for females, but not for males. However, social desirability accounted for less than 10% of variance in the reports.

Conclusions

Taken as a whole, these findings suggest that affected youth, both male and female, are likely to experience many forms of ADA (i.e., psychological, physical, sexual), and many

have experienced both perpetration and victimization roles. Although existing ADA prevention programs have affected attitudes and norms, affecting actual perpetration rates has proved difficult (De La Rue, Polanin, Espelage, & Pigott, 2016; Fellmeth, Heffernan, Nurse, Habibula, & Sethi, 2013; Langhinrichsen-Rohling & Capaldi, 2012). Results of this study reinforce the need for comprehensive prevention programs that address all forms of ADA and that begin early, with youth as young as 14 years of age, and extend throughout adolescence. Future research could give attention to bidirectional violence, common pathways, interchanging roles, and shared risk factors across forms of ADA for both male and female youth. Collecting comprehensive ADA data in samples that are nationally representative will continue to be invaluable for effective prevention and intervention efforts with male and female U.S. youth.

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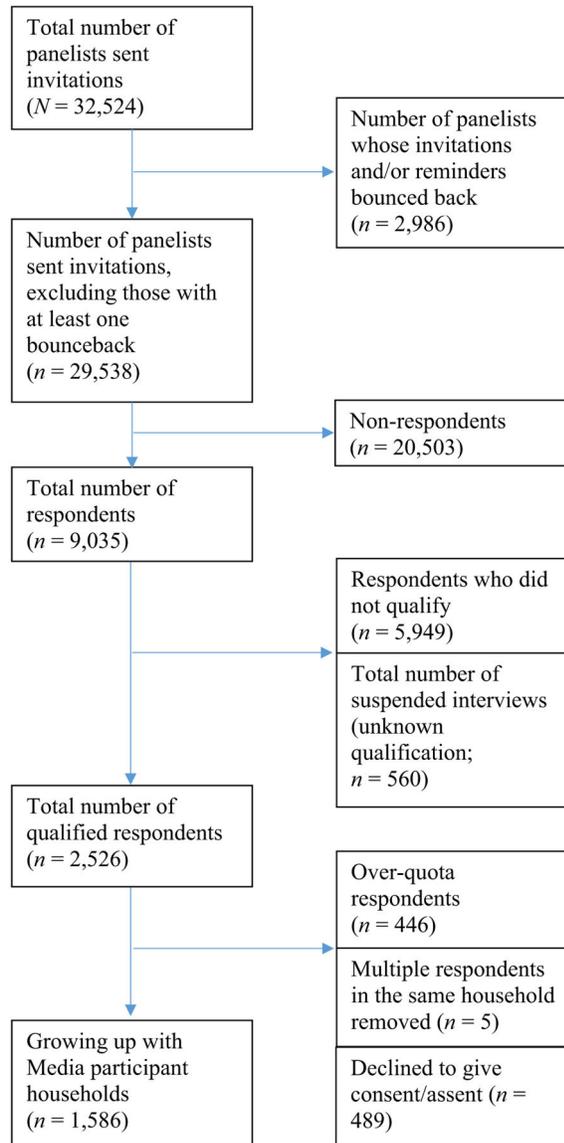


Fig. 1.
Growing up with media study disposition

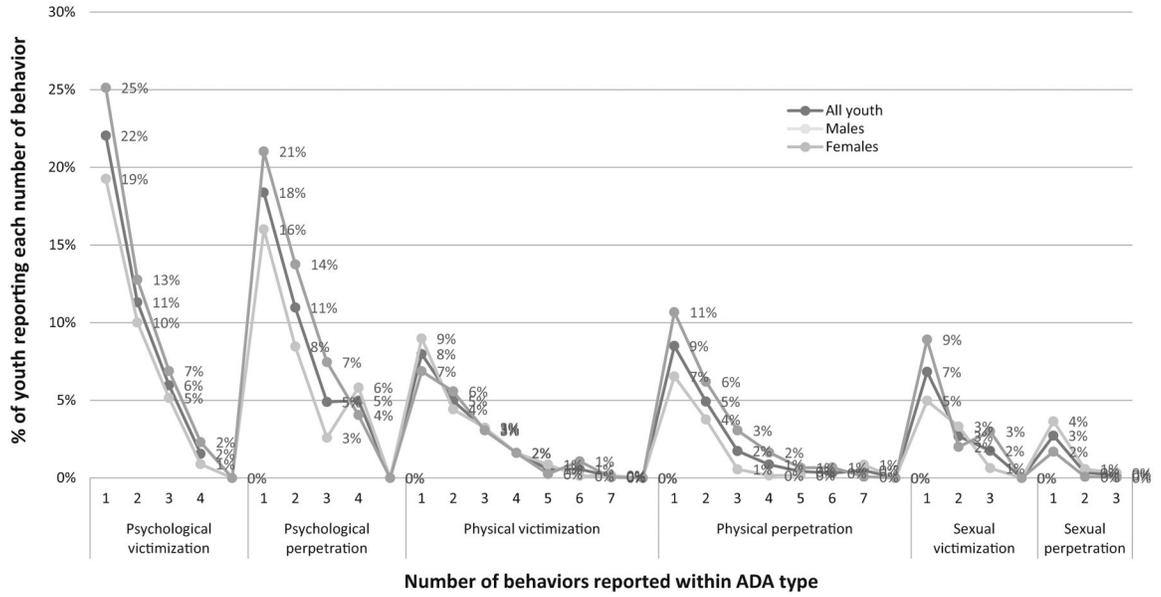


Fig. 2. Number of different dating abuse behaviors reported among those who have experienced each type of dating abuse. Percentages reflect the overall sample and can be interpreted as population-based. They do not sum to 100 because youth who reported 0 behaviors are not shown. Data were collected online in 2011 and 2012

Table 1 A description of the sampling methodology and questions asked in other nationally representative ADA surveys

	Sample size	Participant age	Collection time	Sampling frame	Sampling frame details	Collection method	ADA measures
Eaton et al. (2012)	15,425	Grades 9–12	September 2010–December 2011	National	All regular public and private schools with students in at least one of the grades 9–12 in the 50 states and the District of Columbia. The sampling frame was obtained from the Market Data Retrieval (MDR) database, which is based upon data from the Common Core of Data from the National Center for Education Statistics.	Self-administered survey in class	<p><i>Physical ADA victimization</i></p> <ul style="list-style-type: none"> During the past 12 months, did your boyfriend or girlfriend ever hit, slap, or physically hurt you on purpose? <p><i>Sexual ADA victimization</i></p> <ul style="list-style-type: none"> Have you ever been physically forced to have sexual intercourse when you did not want to?
Halpern et al. (2001)	7493 (who reported exclusively heterosexual relationships)	Grades 7–12	Wave II: April–August 1996	National	Systematic sampling methods and implicit stratification to ensure that the 80 high schools selected were representative of US schools with respect to: region, urbanicity, size, type, and ethnicity. Eligible high schools included an 11th grade and enrolled more than 30 students.	In-home interview administered via laptop computer; audio computer-assisted self-interview technology was used for sensitive questionnaire content, such as dating violence	<p><i>Physical ADA victimization</i></p> <ul style="list-style-type: none"> Did {INITIALS} call you names, insult you, or treat you disrespectfully in front of others? Did {INITIALS} swear at you? Did {INITIALS} threaten you with violence? Did {INITIALS} push or shove you? Did {INITIALS} throw something at you that could hurt you?
Hamby and Turner(2013)	1680	12–17 years old	January–May 2008	National	The majority of the sample (67%) was acquired through RDD from a nationwide sampling of residential telephone numbers that took place between January and May, 2008. The other 33% of the sample was obtained through an oversampling of U.S. telephone exchanges that included 70% or more African American, Hispanic, or low income households.	Telephone	<p><i>Physical ADA victimization</i></p> <ul style="list-style-type: none"> At any time in your life, did a boyfriend or girlfriend or anyone you went on a date with slap or hit you? <p><i>Additional physical victimization</i></p> <ul style="list-style-type: none"> Sometimes people are attacked with sticks, rocks, guns, knives, or other things that would hurt. At any time in (your child's/your) life did anyone hit or attack (your child/you) on purpose with an object or weapon? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else? At any time in (your child's/your) life, did anyone hit or attack (your child/you) WITHOUT using an object or weapon? When a person is kidnapped, it means they were made to go somewhere, like into a car, by someone who they

Sample size	Participant age	Collection time	Sampling frame	Sampling frame details	Collection method	ADA measures
						thought might hurt them. At any time in (your child's/your) life, has anyone ever tried to kidnap (your child/you)?
						<ul style="list-style-type: none"> At any time in (your child's/your) life, (has your child/you) been hit or attacked because of (your child's/your) skin color, religion, or where (your child's/your) family comes from? Because of a physical problem (your child has/you have)? Or because someone said (your child was/you were) gay? Sometimes groups of kids or gangs attack people. At any time in (your child's/your) life, did a group of kids or a gang hit, jump, or attack (your child/you)? At any time in (your child's/your) life, did any kids try to hurt (your child's/your) private parts on purpose by hitting or kicking (your child/you) there?
						<p><i>Sexual victimization</i></p> <ul style="list-style-type: none"> Now think about other kids, like from school, a boyfriend or girlfriend, or even a brother or sister. At any time in your life, did another child or teen make you do sexual things? At any time in your life, did anyone try to force you to have sex; that is, sexual intercourse of any kind, even if it didn't happen?
						<p><i>For both types of victimization, youth were asked the follow-up</i></p> <ul style="list-style-type: none"> Who did this?" If respondent participant answered boyfriend, girlfriend, or ex-boyfriend/girlfriend, they were coded as ADA victims
Kann et al. (2014)	Grades 9–12	September 2012–December 2013	National	All regular public and private schools with students in at least one of the grades 9–12 in the 50 states and the District of Columbia. The sampling frame was obtained from the Market Data Retrieval (MDR) database, which is based upon data from the Common Core of Data from the National Center for Education Statistics.	Self-administered in class	<p><i>Physical ADA victimization</i></p> <ul style="list-style-type: none"> During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.) <p><i>Sexual ADA victimizations</i></p> <ul style="list-style-type: none"> During the past 12 months, how many times did someone you were dating or going out with force you to do sexual things that you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.)

Sample size	Participant age	Collection time	Sampling frame	Sampling frame details	Collection method	ADA measures
Wolitzky-Taylor et al. (2008) 3614	12–17 years old	2005	National	A national household probability sample obtained from RDD with an oversample of urban-dwelling adolescents.	Telephone	<p><i>Sexual assault</i></p> <ul style="list-style-type: none"> <p>Sometimes a person may do sexual things to a young person that the young person doesn't want.</p> <p>[IF RESPONDENT IS MALE (B3 = 1) SAY: These unwanted sexual things can happen to boys as well as girls and to young men as well as young women.]</p> <p>People who try to do unwanted sexual things to young people are not always strangers but can be someone you know well like a friend, neighbor, teacher, coach, counselor, baby-sitter, minister or priest. They can even be a</p> <p>[IF RESPONDENT IS MALE (B3 = 1) SAY: girlfriend, ELSE SAY: boyfriend] or dating partner. They can even be a parent or family member. People who try to make young people do unwanted sexual things aren't always men or boys—they can also be women or girls. I would like you to think about <i>any</i> experiences you have ever had where someone tried to make you do something sexual you didn't want to do, no matter who did it, how long ago it happened, or whether it was reported to the police or other authorities</p> <p>Has a man or boy ever put his private sexual part</p> <p>[IF RESPONDENT IS FEMALE, B3 = 2, SAY: inside your private sexual part.] inside your rear end, or inside your mouth when you didn't want him to?</p> <p>Has anyone, male or female, ever put fingers or objects</p> <p>[IF RESPONDENT IS FEMALE, B3 = 2, SAY: inside your private sexual part or] inside your rear end when you didn't want them to?</p> <p>Has anyone, male or female, ever put their mouth on your private sexual part [IF RESPONDENT IS FEMALE (B3 = 2) SAY: that is below your waist] when you didn't want them to?</p> <p>Has a man or boy ever made you put your private sexual part in his rear end when you didn't want to?</p> <p>Has a woman or girl ever made you put your private sexual part in her mouth or inside her body when you didn't want to?</p> <p>Has anyone, male or female, ever <i>touched</i> your private sexual parts when you didn't want them to?</p> <p>Has anyone, male or female, ever made you touch <i>their</i> private sexual parts when you didn't want to?</p>

Sample size	Participant age	Collection time	Sampling frame	Sampling frame details	Collection method	ADA measures
<i>Physical assault</i>						
						<ul style="list-style-type: none"> Sometimes young people get hit, beat up or physically assaulted by another person. The person who hits, attacks or beats them up isn't always a stranger, but can be someone they know well, even a family member or friend. The person doing the hitting can be older than the young person, about the same age, or even younger than the young person. Young people tell us they sometimes get hit, attacked or beat up at school, in their neighborhood, or even at home. These types of attacks can even happen to small children sometimes. Many times, young people never tell anyone about these events. Has anyone—including family members, dating partners, or friends—ever attacked you with a gun, knife or some other weapon, regardless of when it happened or whether you ever reported it to the police? Has anyone—including family members, dating partners, or friends—ever physically attacked you without a weapon, but you thought they were trying to kill or seriously injure you? Has anyone—including family members, dating partners, or friends—ever threatened you with a gun or knife, but didn't actually shoot or cut you? Has anyone—including family members, dating partners, or friends—ever beat you up, attacked you, or hit you with something like a stick, club, or bottle so hard that you were hurt pretty bad? Has anyone—including family members, dating partners, or friends—ever beat you up with their fists so hard that you were hurt pretty bad?
<i>Follow-up to sexual and physical assault questions</i>						
						<ul style="list-style-type: none"> Was the person who did this male or female? Was the person who did this an adult, a teenager, or a child? Had you ever seen the person who did this to you before? What was that person's relationship to you?

A comparison of unweighted and weighted demographic characteristics of the youth sample to the national population in 2006

Table 2

Demographic characteristics	Wave 1 (unweighted) (n = 1581)	Wave 1 (weighted) (n = 1581)	U.S. General Population (Bureau of Labor Statistics & Bureau of the Census, 2006; U. S. Census Bureau, 2008)	Wave 4/5 Respondents (weighted) (n = 1058)
Age in years, <i>M (SE)</i>	12.5 (0.04)	12.6 (0.06)	-	12.5 (0.07)
Sex				
Male youth	50%	51%	51%	53%
Female youth	50%	49%	49%	47%
Race				
White	73%	71%	76%	72%
Black or African American	14%	14%	16%	14%
Mixed racial background	7%	9%	3%	9%
All other	6%	6%	5%	5%
Hispanic ethnicity	13%	17%	19%	16%
Household income				
\$24,999 or less	12%	12%	22%	12%
\$25K–34,999	13%	12%	11%	12%
\$35K–49,999	18%	18%	16%	17%
\$50K–74,999	27%	23%	20%	24%
\$75K–99,999	15%	17%	13%	16%
\$100K+	16%	18%	18%	18%

Wave4 and Wave5 data were collected online in 2011 and 2012, respectively. Five youth are excluded from the Wave1 sample because they were non-responsive to more than 20% of the survey items

Table 3 Lifetime prevalence rates of specific forms of adolescent dating abuse (ADA) perpetration and victimization among 14- to 21-year-olds (*n* = 1058)

Form of ADA	All Youth% (<i>n</i>)	Females% (<i>n</i>)	Males% (<i>n</i>)	Effect size ^a	<i>d</i>	<i>p</i> value
Victim of psychological ADA	40.9 (413)	47.1 (229)	35.3 (184)	.16	$F(1, 1054) = 6.43$	.01
1. Would not let you spend time with other people/talk to someone of the opposite sex	20.7 (211)	23.6 (119)	18.0 (92)	.09	$F(1, 1054) = 2.02$	.16
2. Made you describe where you were every minute of the day	12.7 (130)	16.9 (76)	8.9 (54)	.16	$F(1, 1054) = 6.70$	.01
3. Did something just to make you jealous	27.7 (300)	28.6 (156)	26.9 (144)	.02	$F(1, 1054) = 0.16$	.69
4. Put down your looks or said hurtful things in front of others	7.8 (99)	11.5 (67)	4.5 (32)	.21	$F(1, 1054) = 11.34$	<.01
Perpetrator of psychological ADA	39.2 (420)	46.3 (242)	32.9 (178)	.18	$F(1, 1054) = 8.46$	<.01
1. Would not let your partner spend time with other people/talk to someone of the opposite sex	17.9 (197)	18.4 (106)	17.5 (91)	.02	$F(1, 1054) = 0.06$	.80
2. Made your partner describe where s/he was every minute of the day	13.2 (136)	15.2 (74)	11.3 (62)	.07	$F(1, 1054) = 1.41$	.23
3. Did something just to make your partner jealous	32.1 (341)	40.5 (202)	24.5 (139)	.23	$F(1, 1054) = 13.42$	<.01
4. Put down your partner's looks or said hurtful things in front of others	11.8 (128)	13.0 (71)	10.7 (57)	.05	$F(1, 1054) = 0.64$	.42
Victim of non-defensive physical ADA	19.0 (190)	18.5 (96)	19.4 (94)	.05	$F(1, 1054) = 0.61$	.81
1. Pushed, grabbed, kicked, shoved, or hit you	7.4 (100)	6.4 (52)	8.4 (48)	.06	$F(1, 1054) = 0.83$	.36
2. Threw something at you	8.1 (89)	7.6 (39)	8.5 (50)	.02	$F(1, 1054) = 0.13$	.72
3. Scratched or slapped you	9.1 (82)	6.2 (27)	11.7 (55)	.11	$F(1, 1054) = 3.41$	.07
4. Damaged something that belonged to you	7.3 (71)	8.0 (40)	6.6 (31)	.03	$F(1, 1054) = 0.30$	.58
5. Slammed or held you against a wall	3.3 (35)	5.5 (26)	1.2 (9)	.21	$F(1, 1054) = 11.80$	<.01
6. Tried to choke you	1.5 (21)	2.0 (13)	1.1 (8)	.07	$F(1, 1054) = 1.20$	.27
7. Physically twisted or bent your arm or fingers	4.3 (51)	5.9 (30)	2.8 (21)	.11	$F(1, 1054) = 3.06$	.08
Perpetrator of non-defensive physical ADA	17.3 (165)	23.0 (107)	12.1 (58)	.18	$F(1, 1054) = 8.81$	<.01
1. Pushed, grabbed, kicked, shoved, or hit your partner	8.2 (85)	11.4 (55)	5.3 (30)	.15	$F(1, 1054) = 6.24$	.01
2. Threw something at your partner	8.7 (81)	13.3 (58)	4.6 (23)	.19	$F(1, 1054) = 9.37$	<.01
3. Scratched or slapped your partner	7.1 (72)	10.4 (60)	4.1 (12)	.14	$F(1, 1054) = 5.48$	.02
4. Damaged something that belonged to your partner	5.0 (52)	5.7 (25)	4.5 (27)	.04	$F(1, 1054) = 0.42$	.52
5. Slammed or held your partner against a wall	2.0 (22)	2.0 (10)	2.0 (12)	.00	$F(1, 1054) = 0.00$	1.00
6. Tried to choke your partner	1.6 (13)	1.4 (9)	<i>b</i>		$F(1, 1054) = 0.13$	
7. Physically twisted or bent your partner's arm or fingers	1.9 (22)	2.7 (16)	1.1 (6)	.09	$F(1, 1054) = 1.98$	.16
Victim of sexual ADA	10.8 (113)	13.6 (72)	8.3 (41)	.11	$F(1, 1054) = 3.18$	.08
1. Your partner kissed, touched, or did something sexual when s/he knew you didn't want to	9.2 (96)	10.9 (58)	7.7 (38)	.07	$F(1, 1054) = 1.27$	.26

Form of ADA	All Youth% (n)	Females% (n)	Males% (n)	Effect size ^a	d	p value
2. Your partner tried but was not able to make you have sex	5.6 (58)	7.1 (43)	4.1 (15)	.08	$F(1, 1054) = 1.68$	.20
3. Your partner made you have sex	2.7 (22)	3.9 (15)	1.6 (7)	.09	$F(1, 1054) = 1.95$	.16
Perpetrator of sexual ADA	3.2 (38)	1.6 (11)	4.6 (27)	.12	$F(1, 1054) = 4.05$	.04
1. Kissed, touched, or did something sexual to your partner when you knew s/he didn't want you to	0.6 (7)	<i>b</i>	<i>b</i>		$F(1, 1054) = 0.18$	
2. You tried but were unable to make your partner have sex	2.5 (28)	0.4 (6)	4.4 (22)	.34	$F(1, 1054) = 30.82$	.001
3. You made your partner have sex	0.9 (11)	<i>b</i>	1.0 (7)		$F(1, 1054) = 0.01$	

Data were collected online in 2011 and 2012

^aEffect size is Cohen's *d*, which compares rates for females versus males

^bNot shown because 5 observations

Table 4 Comparisons of lifetime prevalence rates of adolescent dating abuse (ADA) by youth demographic characteristics among 14- to 21-year-olds ($n = 1058$)

Type of ADA	By race		By ethnicity		Household income ^a		
	Non-white ($n = 275$)	White ($n = 783$)	Non-Hispanic ($n = 927$)	Hispanic ($n = 131$)	<\$35,000 per year ($n = 223$)	\$35,000–<\$75,000 per year ($n = 528$)	\$75,000 per year ($n = 307$)
Psychological ADA							
Victimization	40.2% (102)	41.2% (311)	40.5% (359)	42.7% (54)	49.9% (106)	40.3% (189)	34.7% (118)
Perpetration	34.7% (103)	41.0% (317)	38.2% (363)	44.9% (57)	40.6% (88)	36.6% (201)	41.8% (131)
Physical ADA							
Victimization	13.2% (45)	21.2% (145)	20.0% (172)	13.7% (18)	21.8% (51)	18.6% (84)	17.2% (55)
Perpetration	14.0% (41)	18.5% (124)	17.1% (145)	17.9% (20)	24.3% (49)	15.6% (68)	14.1% (48)
Sexual ADA							
Victimization	11.1% (30)	10.6% (83)	10.0% (100)	14.6% (13)	13.7% (26)	6.3% (43)	14.7% (44)
Perpetration	2.9% (10)	3.3% (28)	3.0% (32)	3.9% (6)	2.5% (10)	3.3% (17)	3.5% (11)

No significant differences were noted by race or ethnicity. By household income, sexual ADA victimization varied: low income versus middle income: $F(1, 747) = 4.85, p = 0.03, d = 0.18$; high income versus middle income: $F(1, 831) = 7.10, p = .008, d = 0.19$

^a As reported by caregivers. Data were collected online in 2011 and 2012

Table 5

Comparisons of lifetime prevalence rates of adolescent dating abuse (ADA) by age and sex among 14- to 21-year-olds ($n = 1058$)

Form of ADA	14- to 15-year-olds ($n = 196$)			16- to 17-year-olds ($n = 379$)			18- to 21-year-olds ($n = 483$)					
	Females ($n = 97$)	Males ($n = 99$)	d	p value	Females ($n = 188$)	Males ($n = 191$)	d	p value	Females ($n = 234$)	Males ($n = 249$)	d	p value
Psychological ADA												
Victimization	33.3% (31)	24.8% (32)	.13	.37	45.3% (78)	32.0% (56)	.19	.07	52.1% (120)	40.9% (96)	.15	.11
Perpetration	36.9% (35)	16.5% (28)	.37	.01	47.6% (81)	25.6% (49)	.32	<.01	48.1% (126)	42.7% (101)	.07	.45
Non-defensive physical ADA												
Victimization	11.6% (13)	6.5% (11)	.17	.24	10.3% (24)	14.7% (28)	.09	.38	25.7% (59)	26.5% (55)	.01	.90
Perpetration	7.5% (9)	^a			19.7% (33)	8.7% (21)	.13	.03	29.5% (65)	17.1% (32)	.19	.04
Sexual ADA												
Victimization	11.1% (10)	6.5% (7)	.11	.45	12.3% (26)	2.6% (10)	.34	<.01	15.1% (36)	12.4% (24)	.05	.58
Perpetration	^a	^a			^a	4.5% (9)			3.0% (9)	6.0% (17)	.11	.24

Data were collected online in 2011 and 2012. One 13-year-old was included in the analysis and is incorporated into the '14- to 15-year-olds' column

^aNot shown because 5 observations

Table 6

Relative odds of reporting each type of ADA given youth characteristics

Youth characteristics	Psychological ADA victimization aOR (95% CI)	Psychological ADA perpetration aOR (95% CI)	Physical ADA victimization aOR (95% CI)	Physical ADA perpetration aOR (95% CI)	Sexual ADA victimization aOR (95% CI)	Sexual ADA perpetration aOR (95% CI)
Demographic characteristics						
Female	1.60 (1.08, 2.37)	1.90 (1.29, 2.81)	0.86 (0.53, 1.41)	2.00 (1.18, 3.40)	1.62 (0.91, 2.89)	0.32 (0.13, 0.77)
Age	1.17 (1.04, 1.31)	1.17 (1.05, 1.30)	1.40 (1.21, 1.60)	1.34 (1.17, 1.54)	1.16 (0.98, 1.36)	1.50 (1.09, 2.05)
Income						
Low income	1.00 (RG)	1.00 (RG)	1.00 (RG)	1.00 (RG)	1.00 (RG)	1.00 (RG)
Middle income	0.76 (0.46, 1.26)	1.00 (0.60, 1.67)	0.77 (0.40, 1.46)	0.58 (0.31, 1.10)	0.43 (0.20, 0.92)	0.99 (0.29, 3.33)
High income	0.50 (0.28, 0.88)	1.04 (0.59, 1.86)	0.57 (0.29, 1.12)	0.44 (0.21, 0.92)	1.09 (0.52, 2.28)	0.94 (0.24, 3.60)
Hispanic ethnicity	1.08 (0.59, 2.00)	1.42 (0.80, 2.52)	0.80 (0.36, 1.76)	1.38 (0.64, 2.97)	1.69 (0.74, 3.87)	1.59 (0.38, 6.75)
White race	1.14 (0.71, 1.83)	1.46 (0.92, 2.31)	1.82 (0.96, 3.44)	1.69 (0.90, 3.17)	1.08 (0.57, 2.02)	1.35 (0.35, 5.13)
Number of dating partners (lifetime)	1.18 (1.05, 1.32)	1.16 (1.04, 1.30)	1.09 (1.02, 1.17)	1.03 (0.98, 1.08)	1.02 (0.96, 1.09)	0.51 (0.30, 0.84)
Survey process measures						
Dishonesty in answering survey questions	3.21 (1.45, 7.07)	2.24(0.82, 6.17)	1.78 (0.74, 4.29)	2.43 (0.91, 6.52)	1.66 (0.63, 4.33)	7.79 (2.13, 28.50)
Not alone when completing the survey	0.94 (0.63, 1.40)	0.82 (0.55, 1.23)	1.43 (0.85, 2.43)	1.52 (0.87, 2.62)	1.75 (0.92, 3.31)	1.49 (0.47, 4.65)

Six multivariate logistic regression models are shown. Each predicts the relative odds of reporting a specific type of ADA given youth characteristics. Odds are adjusted for other characteristics shown on the left side of the table. Data were collected online in 2011 and 2012

RG reference group

Table 7
 The relative odds of one form of adolescent dating abuse (ADA) given the experience of another form of ADA among youth 14–21 years of age (*n* = 1058)

Type of ADA	Psychological ADA perpetration		Non-defensive physical ADA victimization		Non-defensive physical ADA perpetration		Sexual ADA victimization		Sexual ADA perpetration	
	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)	%	OR (95% CI)
Psychological ADA victimization	28.3	9.5 (5.8, 15.4)	15.6	10.4 (5.5, 19.6)	14.2	8.8 (4.5, 17.4)	8.1	5.0 (2.5, 10.3)	2.6	9.2 (3.2, 26.4)
Psychological ADA perpetration			14.4	7.3 (4.0, 13.3)	14.6	13.1 (6.5, 26.6)	8.0	5.1 (2.5, 10.5)	2.5	7.0 (2.0, 24.2)
Non-defensive physical ADA victimization					12.6	47.3 (23.4, 95.7)	3.4	2.0 (1.0, 3.9)	2.1	8.5 (3.1, 23.1)
Non-defensive physical ADA perpetration							5.5	6.4 (3.2, 12.9)	2.3	19.0 (6.3, 57.4)
Sexual ADA victimization									1.7	13.6 (4.3, 42.6)

Percentages reflect the percent of youth in the sample who reported both types of ADA. Youth are represented in multiple cells if they reported more than two different forms of ADA. OR = odds ratio; reflects the relative odds of reporting the top row (e.g., psychological ADA perpetration) given the left column (e.g., psychological ADA victimization). Effect sizes were adjusted for number of dating partners (lifetime), sex, age, race, ethnicity, income, self-reported honesty, and whether alone or not when completing the survey

Data were collected online in 2011 and 2012