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# Depressive Symptoms Moderate Dating Violence Prevention Outcomes Among Adolescent Girls

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## Abstract

**Purpose:** Few dating violence prevention programs assess how variations in initial violence risk affects responsiveness. This study examines the efficacy of Date SMART, a dating violence and sexual risk prevention program designed to target high-risk adolescent girls, in preventing dating violence in the context of varying initial levels of depressive symptoms.

**Method:** A diverse sample of $N = 109$ female adolescents with a history of physical dating violence participated in a randomized controlled trial of the Date SMART program and a knowledge only (KO) comparison.

**Results:** Using baseline depression level as a primary risk factor, a series of multilevel models revealed significant main effects of baseline depression such that higher baseline depression was associated with greater physical dating violence perpetration and victimization. Results also showed a three-way interaction for assessment point, depressive symptoms, and condition for physical dating violence perpetration. Specifically, those with higher baseline depression in Date SMART showed significantly less physical dating violence perpetration at follow-ups compared with those with higher baseline depression in the KO group. This difference in violence reduction between conditions was not observed for those with lower baseline depression.

**Discussion:** Date SMART appears to effectively reduce physical dating violence perpetration in those with higher levels of initial risk. Current findings support that adolescents with different risk profiles respond differently to violence prevention programs.

### Keywords

dating violence; domestic violence; intervention/treatment; domestic violence; mental health and violence

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Adolescent dating violence (ADV) includes physical, sexual, and psychological aggression that can be perpetrated both in person and using technology. ADV is a pervasive public health issue that leads to numerous deleterious consequences for youth and significant costs to society. Indeed, approximately 9% of adolescents reported being involved in physical ADV in a 1-year span (Centers for Disease Control and Prevention [CDC], 2016). Adolescents involved in ADV are at greater risk for substance use, suicidal ideation, poorer educational attainment, depression, smoking, and adult intimate partner violence victimization (Banyard & Cross, 2008; Exner-Cortens, Eckenrode, & Rothman, 2013; Nahapetyan, Orpinas, Song, & Holland, 2014; Parker & Bradshaw, 2015). Given that the negative impact of ADV involvement appears to be pervasive and long-lasting, preventing ADV is critical.

Several prevention programs aimed at reducing such violence currently exist. These programs are designed to improve knowledge about ADV, changes attitudes toward violence, decrease violent behaviors, and teach healthy relationship skills (Lundgren & Amin, 2015). Indeed, most have evidenced success at short-term changes in both knowledge about ADV and attitudes toward violence (Cornelius & Resseguie, 2007; De Koker, Mathews, Zuch, Bastien, & Mason-Jones, 2014; De La Rue, Polanin, Espelage, & Pigott, 2017; Leen et al., 2013; Lundgren & Amin, 2015; Whitaker et al., 2006). Furthermore, programs such as *Shifting Boundaries, Safe Dates*, and Fourth *R* have emerged, demonstrating efficacy in changing ADV behaviors themselves (Cornelius & Resseguie, 2007; De La Rue et al., 2017; Foshee et al., 2004, 1996; Taylor, Mumford, & Stein, 2015; Taylor, Stein, Mumford, & Woods, 2013; Wolfe, Crooks, Jaffe, Chiodo, Hughes, Ellis, et al., 2009). However, despite these gains, limitations in prevention programming continue to exist. In particular, programs designed to reduce community-level dating violence (DV) have not been tailored to the unique challenges of adolescent girls with histories of DV (Cornelius & Resseguie, 2007). That is, greater attention to secondary prevention efforts is critical, especially given the high rates of revictimization (Exner-Cortens et al., 2013). Relatedly, existing prevention programs are often implemented among normative samples in school settings (Leen et al., 2013). As such, they fail to engage a high-risk population who may also be frequently absent from school (Cornelius & Resseguie, 2007). In essence, those in most need of prevention programming are also the youth most at risk of not receiving it. The nature of these existing programs also reveals a final limitation: Because they are often assessed within a normative population, we know little about the differential impact of interventions based on degree of risk.

## Date SMART

Date SMART (*Skills for Managing Aggression in Relationships for Teens*; Rizzo et al., 2017a) is a group-based intervention that utilizes principles of cognitive behavioral therapy (CBT) to target theoretically driven mechanisms, most notably depressive symptoms, in the prevention of ADV and sexual risk behaviors. Findings from the pilot, randomized controlled trial of the Date SMART program revealed that adolescent girls randomized to the Date SMART group evidenced clinically meaningful within-group change on physical ADV involvement (Rizzo et al., 2017a). However, no between-group differences were found between Date SMART and the comparison (knowledge only [KO]) group for physical ADV

involvement. Notably, Date SMART was specifically designed to address limitations in the literature by targeting a high-risk population of girls who had prior history of physical ADV involvement. As such, it includes adolescent girls who would often be missed by more typical intervention efforts. In this way, Date SMART offers an ideal opportunity to assess how degree of initial risk, as measured by a primary theoretical mechanism of change, moderates intervention effects.

## Depressive Symptoms

The Date SMART intervention targets depressive symptoms as a primary mechanism of change because depression has been repeatedly linked to both ADV perpetration and victimization (Brooks-Russell, Foshee, & Ennett, 2013; Capaldi, Knoble, Shortt, & Kim, 2012). Theories of ADV etiology contend that depressive symptoms are critical for the development and persistence of ADV involvement, particularly among adolescent females (Shorey, Cornelius, & Bell, 2008). Depressive symptoms are theorized to make adolescents more vulnerable to remaining in low quality or ADV-involved relationships. They may also be at greater risk for ADV perpetration as a result of depression-related irritability and negative attributions (Brooks-Russell et al., 2013; Halpern, Spriggs, Martin, & Kupper, 2009). Indeed, theoretical models of ADV suggest a feedback loop exists wherein dating violence may contribute to further depressive symptoms, thereby increasing risk for revictimization (Riggs & O'Leary, 1989; Young, Furman, & Jones, 2012). Consistent with this, ADV involvement in adolescence and young adulthood is associated with increases in depressive symptoms (Johnson, Giordano, Longmore, & Manning, 2014). Taken together, substantial evidence suggests that adolescent girls with higher levels of depressive symptoms are at greater risk for ADV victimization and perpetration.

Less is understood about how girls with higher depressive symptoms may respond differently to ADV intervention efforts. Prior research indicates that risk for ADV involvement is dynamic (Collibee & Furman, 2016). As such, we may expect that intervention effects should not be uniform across degree of risk. It is, therefore, expected that some youth benefit differentially from a preventive intervention, in part, based on the risk factors that they possess, such as depressive symptoms (Capaldi et al., 2012). Indeed, a lack of intervention effects for ADV behaviors themselves may be related to heterogeneity in response to interventions. Despite likely heterogeneity, differential effects of interventions are typically limited to demographic considerations, such as gender or race (De Koker et al., 2014), or prior ADV involvement (Foshee et al., 2004; Taylor et al., 2015). Given that girls with more depressive symptoms are at greater risk for ADV involvement, and the likelihood of increased depressive symptoms among an indicated sample, it is essential to better understand the impact depressive symptoms have on intervention efforts. To our knowledge, no study to date has examined how initial depressive symptoms affect intervention effects. Thus, by singularly focusing on demographics or prior involvement, we fail to understand other features that may make some adolescents more responsive to intervention efforts. As Date SMART was designed to target a high-risk sample, it offers the ideal opportunity to assess whether the intervention works uniformly across degree of risk among adolescent girls, or whether, as it was intended, it is especially fruitful among those girls who are at greatest risk.

## Hypotheses

Consistent with prior work, we hypothesized the following:

### Hypothesis 1:

There would be a significant positive association of baseline depressive symptoms with physical ADV victimization and perpetration.

Given prior findings across the condition arm, we hypothesized that

### Hypothesis 2:

All girls would show a decline in physical violence victimization and perpetration. We expected that this decline would not vary across groups.

We further hypothesized the following:

### Hypothesis 3:

Girls with more initial depressive symptoms would show the greatest declines in physical ADV perpetration and victimization.

### Hypothesis 4:

Date SMART would be especially effective in the context of greater initial depressive symptoms. Specifically, we hypothesized that we would find a significant three-way interaction among assessment time point, condition, and baseline depressive symptoms.

## Method

### Participants and Procedures

Participants for the study were recruited from high schools within the Providence, Rhode Island area between 2009 and 2013. Study staff conducted school-based presentations during health and physical education classes to garner participant interest. Interested students with parental consent completed the screening survey, which consisted of subscales from the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001; further details provided in the section “Measures”). Adolescent females between the ages of 14 and 17, with a history of physical ADV perpetration or victimization, and who were English speaking and not enrolled in another ADV or sexual risk prevention program were eligible to participate. A total of 109 adolescent females were enrolled in the study (Rizzo et al., 2017a).

Enrolled participants completed a baseline assessment, which was administered using audio computer-assisted structured interviews (ACASI) on laptop computers facilitated by trained research assistants. Follow-up assessments were conducted at 3, 6, and 9 months postintervention. Adolescents were compensated up to US$100 for completing assessments according to the following schedule: US$20 at baseline, US$25 at 3-month (i.e., end of intervention), US$25 at 6-month, and US$30 at 9-month follow-up.

After completing the baseline assessment, adolescents were randomized to either the Date SMART or KO condition. An urn randomization procedure was used to probabilistically balance the groups on two factors: presence of *severe* ADV (defined as being kicked, hit, punched, or forced to have sex) and history of vaginal sex.

This study and all study procedures were approved by the affiliated hospital Institutional Review Board. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

## Intervention

Both conditions consisted of six 2-hr, weekly group sessions followed by one booster session 6 weeks after the last weekly session.

**Date SMART group.—**The Date SMART group is a trauma-informed, skills-based intervention that aims to enhance teens' ability to prevent and/or reduce involvement in dating or sexual risk behaviors. Skills targeted in the Date SMART group include self-assessment, cognitive restructuring, problem solving, assertive communication training, self-soothing, and emotion regulation strategies for anger, jealousy, and sadness, and discussion of partner selection and relationship values (Rizzo et al., 2017a). Each session incorporates delivery of factual knowledge, psychoeducation, skills training, practice of skills covered in the previous sessions, and goal-setting for future sessions. Furthermore, session content was structured such that participants receive skills training to manage thoughts and feelings prior to engaging in sessions with sensitive dating or sexual risk content. This format was adapted with the intention of providing participants the opportunity to utilize previously learned skills when encountering sensitive material, if necessary. Facilitators were also trained to recognize and respond to trauma-related content and reactions in a sensitive manner.

### KO group.

The KO group was developed specifically for this study as a control condition. The KO group includes content related to dating violence and sexual health prevention similar to what is provided in school-based health classes, such as increasing knowledge regarding DV and HIV/sexually transmitted infections (STIs), and awareness of factors that may contribute to or exacerbate risk for DV or HIV/STIs. The format of the KO group includes interactive games and activities, such as "Jeopardy" games, but does not include references to skill development or practice.

Group facilitators for both conditions included pre- and postdoctoral psychology trainees, social workers, and licensed mental health counselors with experience counseling youth. Prior to facilitating group sessions, facilitators attended an 8-hr training seminar, which included practice administering the intervention modules and discussion of behavior management strategies and best practices for addressing mental health and trauma symptoms, life-threatening DV, suicidality, and reports of child abuse.

## Measures

### Dating involvement.

Participants identified if they were in a current romantic relationship, defined as "a boyfriend/girlfriend, sexual partner, or someone you are going out with. You could be committed to this person (dating only them) or you could be in an open relationship where you are dating other people."

### The Beck Depression Inventory–II (BDI-II).

Participants completed the BDI-II (Beck, Steer, & Brown, 1996) to assess baseline depressive symptoms. The BDI-II is a 21-item self-report instrument that assesses symptoms of depression within the past 2 weeks using criteria from the American Psychiatric Association's (2000) *Diagnostic and Statistical Manual of Mental Disorders*—Fourth Edition (*DSM-IV*). The BDI-II utilizes a 4-point Likert-type-scale, with higher numbers indicating greater symptom severity. The BDI-II has been validated among adolescent populations (Osman, Kopper, Barrios, Gutierrez, & Bagge, 2004; Steer, Kumar, Ranieri, & Beck, 1998; Whisman, Perez, & Ramel, 2000). In the present sample, the BDI-II had excellent internal consistency (Cronbach's $\alpha = .88$). The BDI-II *sum* $M = 16.67$ in the current sample. As 17 is commonly accepted as a clinical cutoff for the BDI-II (Sprinkle et al., 2002), scores above the mean in the current sample reflect borderline or clinical elevations of depressive symptoms. Mean scores (rather than summed) were used in all analyses (see Table 1) for consistency with prior work (Rizzo et al., 2017a).

### CADRI.

The CADRI (Wolfe et al., 2001) was used to assess ADV perpetration and victimization. The CADRI is a 35-item, self-report questionnaire intended to assess adolescents' actual conflict or disagreement with a current or recent dating partner. For the purposes of the present study, we used the Physical Abuse subscale. Each behavior is asked from the perspective of perpetration and victimization. Using a 4-point Likert-type scale, an example question is, "I slapped him or her or pulled his or her hair," to which participants respond with "never" = 0, "seldom" = 1, "sometimes" = 2, or "often" = 3. Internal consistency of this subscale in the present study was excellent (Cronbach's $\alpha = .89$). In addition, the CADRI has strong internal consistency (total $\alpha = .83$); 2-week test-retest reliability, $r = .68$, $p < .01$; and acceptable partner agreement ($r = .64$, $p < .01$) on the basis of 35 couples (Wolfe et al., 2003). As with the BDI-II, mean scores were used in analysis (see Table 1).

## Results

The average age of participants at baseline was 15.75 years ($SD = 0.94$). Self-reported ethnicity and race among the sample was 50% Hispanic, 35% African American, 22% White, 8% American Indian, and 3% Asian; participants were able to endorse multiple options for race and ethnicity. Regarding family structure, 96% reported having a mother figure at home, and 62% reported having a father figure at home. Participants reported on their eligibility for free or reduced-price school lunch, which was examined as a measure of socioeconomic status. Free or reduced-price lunch is available for families up to 185% of the

poverty level, with 69% of the lunches served free or at the reduced price; 81% of participants reported that they currently qualified for free or reduced-price lunch. Finally, 53% of participants reported any physical dating aggression at baseline. No significant differences emerged between the DS and KO groups for baseline depressive symptoms, physical ADV perpetration, or physical ADV victimization ($ts = -.989$ to .530, $ps > .05$). Further descriptive statistics regarding baseline sample characteristics can be found in Table 1 and in Rizzo et al., 2017b.

Our hypotheses regarding the different effects of DS and KO by initial depressive symptoms were assessed through a series of multilevel models (MLMs) using the statistical program MPlus v.6.11 (Muthén & Muthén, 2011). Multiple imputation procedures were used to estimate missing data (Schafer & Graham, 2002). Multiple imputation procedures are recommended to protect against bias in analyses, which occur with listwise deletion (Graham, Olchowski, & Gilreath, 2007; Little, Jorgensen, Lang, & Moore, 2013). Relevant auxiliary variables were included in our multiple imputations to maximize the likelihood of meeting the assumption that the data were missing at random (Collins, Schafer, & Kam, 2001). Per recommendations, 100 multiple imputation datasets were generated using the software program Amelia II (Honaker, King, & Blackwell, 2011). The results of the analyses of the 100 datasets were averaged using MPlus.

To test our hypotheses, we used the following model:

$$\text{Level 1: } Y_i = \beta_0 + \beta_1(assessment) + r_i$$

$$\text{Level 2: } \beta_0 = \gamma_{00} + \gamma_{01}(Baseline\ depressive\ symptoms) + \gamma_{02}(Condition) + u_0\beta_1 = \gamma_{10} + \gamma_{11}(Baseline\ depressive\ symptoms) + \gamma_{12}(Condition) + \gamma_{13}(Baseline\ depressive\ symptoms\ X\ Condition) + u_1$$

In these models, $Y$ represented physical ADV for individual $i$ at Assessments 2 to 4. We included a random slope effect for assessment ($\beta_1$) and examined slope effects of depressive symptoms and condition by including the cross-level interactions between baseline depressive symptoms ($\gamma_{11}$), and condition ($\gamma_{12}$) and assessment ($\beta_1$). All of the predictors were grand mean centered except for assessment. Finally, the three-way interaction testing how interaction effects of condition vary by depressive symptoms was examined by including the cross-level interaction of the product of depressive symptoms and condition ($\gamma_{13}$). We used a two-step model to examine these associations, with assessment, baseline depressive symptoms, and condition entered first. Next, we examined the interaction effects after the main effects to avoid concerns of conditionality (Little, 2013). Each model was conducted twice, once to examine the effects for physical ADV perpetration and then also for physical ADV victimization. Table 2 reports the results of these analyses. Although all the effects are presented together, the unstandardized regression coefficients and standard errors are the values at the step in which these terms were first entered in the model.

First, we examined the main effects of assessment, condition, and baseline depressive symptoms on physical ADV victimization and perpetration. Physical ADV victimization and perpetration both decreased over time. Furthermore, there was a main effect of baseline

depressive symptoms such that it was associated with greater physical ADV. There was no main effect of condition for either victimization or perpetration. There was no three-way interaction or two-way interaction for physical ADV victimization.

A three-way interaction emerged for assessment, depressive symptoms, and condition for physical ADV perpetration ($\gamma_{13}$). The results indicated that the longitudinal intervention effects varied by baseline depressive symptoms. To better understand these differences, we examined the two-way interactions between the relational risk factor and substance use for adolescents with higher levels of depressive symptoms (i.e., greater risk) and those with lower levels of depressive symptoms. Specifically, we split the data such that those with baseline depressive symptoms greater than the mean (*M* sum of BDI = 16.67) were conceptualized as higher risk whereas those with baseline depressive symptoms below the mean were conceptualized as lower risk. We then examined the following model separately by depressive symptom risk level:

$$\text{Level 1: } Y_i = \beta_0 + \beta_1(assessment) + r_i$$

$$\text{Level 2: } \beta_0 = \gamma_{00} + \gamma_{01}(Condition) + u_0$$

$$\beta_1 = \gamma_{10} + \gamma_{11}(Condition) + u_1$$

Table 2 presents these results. A significant cross-level interaction between condition and assessment was found for those with higher depressive symptoms. To further interpret this and the other significant interactions, we used Preacher, Curran, and Bauer's (2006) computational tools to plot the estimated effects of assessment on physical ADV perpetration for those randomized to the Date SMART and KO groups. Consistent with hypotheses, only those in the Date SMART group showed declines in physical violence perpetration, $B = -0.07$, $t(216) = -3.47$, $p < .001$ (see Figure 1). Those in the KO group demonstrated no declines in physical violence perpetration, $B = 0.01$, $t(216) = 0.50$, $p = .62$. As seen in Figure 2, no cross-level interaction between condition and assessment was found for those with lower depressive symptoms.

## Discussion

The present study aimed to assess the differential effect of Date SMART, a skills-based ADV prevention program for ADV-exposed adolescent girls, by degree of initial risk (Rizzo et al., 2017a). Consistent with the hypotheses, we found that only girls with higher initial depressive symptoms showed significant reductions in physical violence perpetration in the Date SMART condition. Notably, they did not show any improvements in physical violence perpetration in the KO condition. Thus, as expected, these findings indicate that Date SMART is especially fruitful among those girls who are at increased risk.

One question that arises from this pattern of results is why Date SMART is particularly effective among adolescent girls with more depressive symptoms. On first blush, one may suspect that these results are related to regression to the mean wherein girls who begin with more depressive symptoms will show greater improvements as a statistical artifact. However, the differential benefits obtained only by the higher risk girls randomized to Date SMART indicates that regression to the mean cannot account for the pattern of effects. That is, if the results were to be attributed to a statistical artifact, girls with more depressive symptoms would have improved uniformly across intervention groups. Another explanation for the current findings is adolescent girls respond differently to interventions depending on their initial risk. In other words, whereas adolescent girls with lower initial risk did not see improved benefits from Date SMART compared with a more typical KO program, adolescent girls at greater risk did.

The current findings offer important implications for ADV intervention programs. Reviews of intervention efforts find inconsistent patterns and rarely demonstrate changes in behaviors themselves (Cornelius & Resseguie, 2007; Fellmeth, Heffernan, Nurse, Habibula, & Sethi, 2015; Leen et al., 2013). The current results indicate that these mixed-findings may be the result of applying a uniform model across risk profiles. Indeed, prior work has suggested that adolescents with chronic risk may be more likely to benefit from intervention efforts (Collibee & Furman, 2016). The current results better elucidate that adolescent girls with greater risk (i.e., more depressive symptoms) significantly benefit from skill-based intervention but not the more passive, psychoeducational programming typically seen in schools. Consequently, the results may point to the need for different degrees of intervention depending on an adolescents' risk profile. That is, it may be most cost-effective to implement educational programming for all adolescents at lower levels of risk but target those with greater risk on mechanisms of change with intensive skill-based programming.

The differential effects of the intervention arm were only found for ADV perpetration and not victimization. This pattern is contrary to hypotheses and is also inconsistent with prior work, which largely demonstrates consistency across victimization and perpetration (Brooks-Russell, Foshee, & Reyes, 2015; Exner-Cortens et al., 2013; Vagi et al., 2013). This unexpected pattern may be related to the content of the Date SMART intervention, which emphasizes skills practice and rehearsal in scenarios involving perpetration but places less emphasis on victimization. The changes in perpetration may also be related to the relatively short longitudinal follow-up in the current design. That is, theoretically, improvements in depressive symptoms may first be evidenced in perpetration because reductions in irritability or improvements in coping are apt to have more immediate effects in preventing escalating violence. In contrast, the path from a reduction in depressive symptoms to removing oneself from a violent relationship may require longer temporal delays to capture. Future work should aim to examine these patterns using a longer longitudinal follow-up to better assess for victimization effects as well.

## Limitations and Future Directions

Despite these promising results, there are a number of important limitations to consider. First, the present study is limited by its small sample size. Although we obtained a

significant three-way interaction, speaking to the robustness of the effect, the null effect for victimization may be attributable to a lack of power. Furthermore, although we used an indicated sample ensuring a greater rate of physical ADV involvement, it was nonetheless a relatively rare occurrence. Subsequent larger randomized control trials should be done in order to to better assess these patterns a larger sample.

Second, we only conducted follow-up assessments for 9 months, making it difficult to determine whether the benefits of the Date SMART intervention for higher risk girls was sustained. Furthermore, as noted previously, some intervention effects may take longer to emerge. As such, future work should aim to replicate the current findings using a more extensive longitudinal design.

Third, the current intervention was designed for adolescent girls who have already experienced ADV involvement. In many respects, this is also a strength of the present study as revictimization frequently occurs, so any variation in this pattern is noteworthy (Exner-Cortens et al., 2013). However, because these girls were already determined to be “higher risk” for their involvement, it will be important to examine these patterns in a broader sample to assess whether greater depressive symptoms alone can account for variations in intervention effects.

Finally, although the KO group was designed to be passive, numerous factors resulted in it becoming a more active control (Rizzo et al., 2017a). All group facilitators were trained clinicians, expert in delivering group-based interventions. As these clinicians covered many of the same topics as the DS condition in an educational format, and these topics generated meaningful discussion, it is likely that these encounters became highly therapeutic. Thus, our KO comparison group did not serve as a control condition but rather was an active therapeutic group that unintentionally provided therapeutic processing and social support. As such, future work should aim to test these patterns with a true passive control to determine whether the effects remain.

Despite these limitations, the present study is the first to our knowledge to evidence variations in intervention effects by degree of risk on a primary mechanism of change. Indeed, the findings further support the supposition that adolescent girls with higher risk may benefit more from intervention efforts aimed at skill development, in particular. In contrast, girls with lower risk may not require such intensive efforts. In sum, the present study underscores that as we strive to make ADV intervention efforts efficient and effective, we may benefit from moving away from a uniform approach to implementation. Instead, our intervention efforts should mirror the dynamic nature of risk itself by flexibly targeting those most vulnerable.

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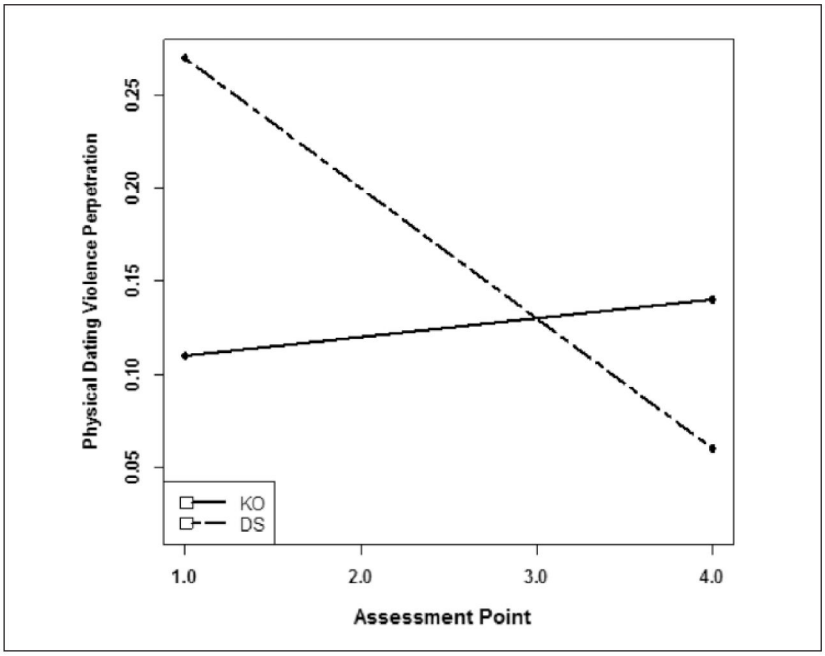


**Figure 1.**

Interaction between assessment and condition for those with higher baseline depressive symptoms. The two lines depict the association between assessment and physical dating violence perpetration for those randomized to the DS group and the KO group.

DS = Date SMART; KO = knowledge only.

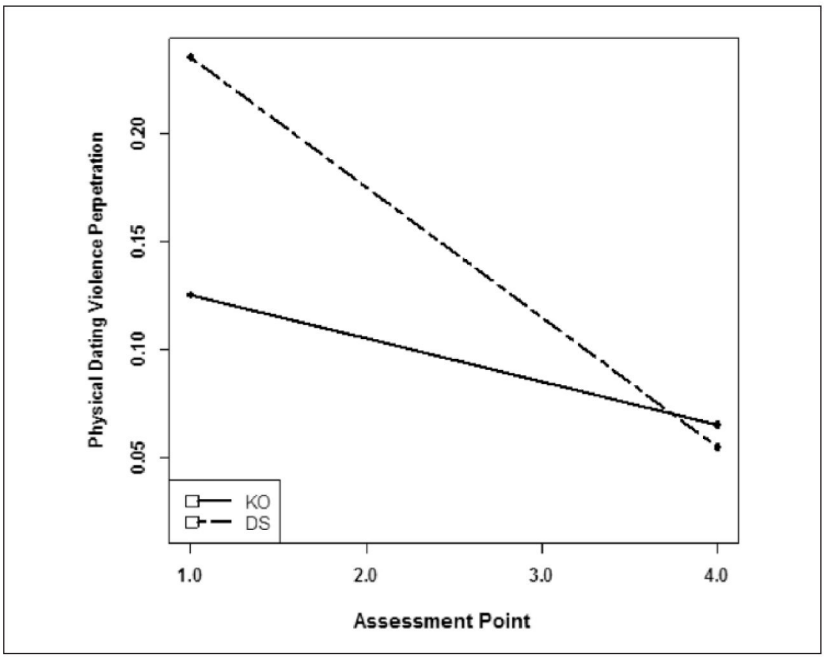


**Figure 2.**

Interaction between assessment and condition for those with lower baseline depressive symptoms. The two lines depict the association between assessment and physical dating violence perpetration for those randomized to the DS group and the KO group.

DS = Date SMART; KO = knowledge only.

**Table 1.**

Baseline Characteristics and Measures of 109 Girls With Dating Violence Exposure by Intervention Arm.

| | KO (*n* = 49) | DS (*n* = 60) |
|---|---|---|
| Sociodemographics | | |
| Race | | |
| American Indian or Alaskan Native | 3 (6%) | 6 (10%) |
| Asian | 3 (6%) | 0 (0%) |
| Black | 16 (33%) | 22 (37%) |
| White | 12 (25%) | 12 (20%) |
| Other race | 23 (47%) | 27 (45%) |
| Ethnicity | | |
| Hispanic | 25 (53%) | 29 (48%) |
| Free or reduced-price lunch | 39 (80%) | 49 (82%) |
| Mother figure at home | 48 (98%) | 57 (95%) |
| Father figure at home | 35 (71%) | 32 (53%) |
| DV | | |
| DV perpetration (*SD*) | 0.26 (0.55) | 0.25 (0.48) |
| DV victimization (*SD*) | 0.19 (0.37) | 0.15 (0.35) |
| BDI (*SD*) | 1.75 (0.47) | 1.85 (0.59) |

*Note*. Data are expressed as no. of participants (%) or means (*SD*). Note that participants were able to endorse multiple options for race and ethnicity. DV = dating violence;

KO = knowledge only intervention arm; DS = Date SMART intervention arm; BDI = Beck Depression Inventory.

**Table 2.**

Multilevel Models Testing the Differential Impact of DS and KO by Depressive Symptoms.

| | Physical aggression perpetration | Physical aggression victimization |
|---|---|---|
| Full model | | |
| Intercept ($\beta_0$) | 0.30 (.05) | 0.17 (.04) |
| Assessment point ($\beta_1$) | −0.06*** (.02) | −0.04** (.01) |
| Condition ($\gamma_{12}$) | −0.02 (.05) | −0.01 (.03) |
| Baseline depressive symptoms ($\gamma_{11}$) | 0.14** (.05) | 0.08** (.03) |
| Condition × Assessment | −0.01 (.03) | 0.01 (.02) |
| BDI × Assessment | −0.04 (.03) | −0.02 (.02) |
| Condition × BDI × Assessment | 0.05* (.02) | 0.01 (.02) |
| High BDI | | |
| Intercept ($\beta_0$) | 0.22 (.05) | — |
| Assessment point ($\beta_1$) | −0.31 (.02) | — |
| Condition | 0.24* (.03) | — |
| Condition × Assessment ($\gamma_{11}$) | −0.08* (.04) | — |
| Low BDI | | |
| Intercept ($\beta_0$) | 0.22 (.05) | — |
| Assessment point ($\beta_1$) | −0.04** (.02) | — |
| Condition | 0.15 (.10) | — |
| Condition × Assessment ($\gamma_{11}$) | −0.05 (.03) | — |

*Note*. The primary numbers in the table are the unstandardized coefficients. Standard errors are in parentheses. DS = Date SMART intervention arm; KO = knowledge only intervention arm; BDI = Beck Depression Inventory.

* $p < .05$.

** $p < .01$.

*** $p < .001$.