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Pilot investigation of the Katie Brown Educational Program: a school-community partnership

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Abstract

BACKGROUND—Schools in the United States are increasingly being urged to address the problem of adolescent dating violence (DV) with their students. Given the limited time available to implement prevention programming during the school day, brief programs are needed. The purpose of this study was to test the efficacy of a widely disseminated, brief community-based DV prevention program in partnership with a non-profit community agency.

METHODS—We conducted a randomized wait-list control trial of a 5-session DV prevention program (active condition) compared to health class as usual (wait-list control condition). Participants were 225 10th grade students with a recent dating history in a large public school in New England. Surveys were administered at baseline, end of program, and 3 months post-intervention.

RESULTS—After completing the program, students in the active condition reported significantly lower approval of aggression, healthier dating attitudes, and more DV knowledge. These effects were sustained at 3-month follow-up. In addition, students in the active condition reported significantly less emotional/verbal and total DV perpetration and victimization at 3-month follow-up.

CONCLUSIONS—These findings suggest that a brief, community-based DV prevention curriculum can promote change in behaviors, attitudes and knowledge among high school students.

Keywords

dating violence; school; adolescents

Dating violence (DV) is a significant public health problem which characterizes a large percentage of teen dating relationships.¹ According to the US Centers for Disease Control, in 2012, 9% of US high school students reported physical DV victimization in the past 12 months.² For young men, the overall prevalence of physical DV victimization varies from 6% to 38% and perpetration varies from 11% to 20%, whereas the overall prevalence of female victimization varies from 8% to 57% and perpetration varies from 28% to 33%.³ Similar to violence in adult relationships, teen dating violence appears to exist on a continuum ranging from emotional and verbal abuse to physical and sexual abuse, including rape and murder.⁴ A growing number of US states, including Massachusetts,⁵ have enacted legislation to mandate DV education in public schools. The decision to impose mandated DV education stems from increasing awareness of the prevalence of adolescent DV, its consequences for adult psychosocial adjustment and relationship health⁶ and recognition that schools play a crucial role in educating youth about healthy dating relationships.⁷ Indeed, offering DV education in public schools has the potential to increase awareness of the problem, provide knowledge of what healthy relationships look like, as well as prevent DV behaviors. Despite the many benefits of providing DV education in schools, the schools themselves are often under-resourced. Identifying an efficacious curriculum that is brief may offset some of the burden of DV education on schools in terms of finances, training, and time, and increase the likelihood that the program will be implemented with fidelity.

A number of classroom- and school-based, primary prevention programs have shown promising results in reducing attitudes supportive of DV and DV behaviors, including Safe Dates,⁸ the Fourth R,⁹ and Expect Respect.¹⁰ Unfortunately these evidence-based programs are time-intensive (12 to 28 hours of instruction), reducing the feasibility of incorporating these programs with fidelity into health education curricula. When program structure and content are altered to fit into the school day, they may not be as effective. Given the dearth of brief interventions, a number of community-based organizations (CBOs) have developed their own programs with the needs of schools in mind. Despite the promising feasibility of these programs, there is a need for rigorous research to investigate their efficacy as a potentially cost-effective, efficient alternative to developing new prevention programs.¹¹ In particular, universal DV prevention programs that can be implemented in community settings, such as high schools, are needed.^{12, 13}

Interest in research partnerships with CBOs has surged during the last several years because of the potential of these collaborations to enhance the quality and usefulness of research outcomes. This paper describes our partnership with a DV prevention CBO, the Katie Brown Educational Program (KBEP), whose primary activity is delivering a DV prevention program in schools throughout southern New England. The KBEP curriculum is a fully-

developed program that has never been empirically tested, yet has already been widely disseminated: more than 67,000 students have completed the program since 2001, and the curriculum was delivered in 26 schools during the 2013–2014 school year, including both schools with prior KBEP involvement and schools new to the program. This suggests that it is feasible to administer within local schools and acceptable to staff and students alike. However, KBEP had not previously conducted an efficacy trial of its DV prevention curriculum.

Our research team partnered with KBEP and a local high school to evaluate the KBEP program. The curriculum had been delivered in this school to various grades for several years prior to the start of the study, so school administrators were familiar with the program and its staff. This efficacy trial assessed both behavioral outcomes (perpetration and victimization of DV) and hypothesized mediators of the KBEP curriculum on behavior (knowledge and attitudes about DV). We tested the following hypotheses: that students in the active condition would report improved DV-related attitudes (H1) and knowledge (H2) at the end of the program, and at three-month follow up (H3 and H4), as well as lower rates of DV perpetration (H5) and victimization (H6) at the 3-month follow-up. Whereas we did expect to find changes in knowledge and attitudes immediately following completion of the program, we reasoned that the one-week period between T1 and T2 would not be long enough to detect behavioral changes.

METHODS

The research site was a large, urban public high school in a small city in Massachusetts, where the KBEP curriculum was already planned to be implemented as part of the 10th grade health class curriculum. The school has approximately 2300 students in grades 9–12. The student body is 30% ethnic/racial minority and 72% economically disadvantaged. Because the curriculum was designed to be delivered in ongoing classes, randomization was conducted by classroom. Twenty-four classrooms were randomly assigned to receive either the active curriculum (N = 11) or the control condition (their usual health class curriculum; N = 11) in February 2013. Due to changes in the high school schedule in between consent form completion and the beginning of the intervention, students in 2 additional health classrooms completed the baseline assessment, and were included in the analyses as part of the control condition as it was not possible to schedule the KBEP program for these sections. An average of 16 students participated in the study in the KBEP classrooms, whereas an average of 18 students participated in the control classrooms. The control classrooms then received the DV prevention curriculum in May 2013, after the research study was completed. Assessment occurred at baseline (T1), post-intervention (T2), and a 3-month follow-up (T3).

Participants

Overall, 578 students enrolled in 24 10th grade health classes were provided with permission forms to obtain parental consent and adolescent assent. Adolescents aged 14–19 were eligible for enrollment with the following criteria: (1) adolescent was English-speaking; (2) parent/legal guardian provided consent; and (3) the adolescent provided assent.

Procedure

All students who registered for 10th grade health class were given a consent form to bring home for their parents to sign, and only students whose parents provided consent completed the research surveys. The T1 assessment took place before the DV prevention curriculum was implemented in early February in all 24 classrooms; T2 took place after session 5 was completed approximately 10 days later in February; and T3 took place 3 months later in May, before the waitlist control group received the KBEP curriculum. Trained research staff members, who were full-time, bachelor-level research assistants from the research institution (not KBEP staff or teachers) administered the assessments in school classrooms. Students in the control condition received their usual health class curriculum during the study period, following the state Comprehensive Health Curriculum Framework. The curriculum includes material on physical health, social/emotional health, safety and prevention, and personal and community health, but does not address DV prevention.

Intervention

The KBEP DV prevention program is a brief, manualized group-based curriculum that takes the place of 5 high school health class periods during one week. Sessions are designed for delivery in a classroom setting, with 50–60 minutes for each session and to accommodate up to 35 students at a time. One bachelor-level paraprofessional employed by KBEP individually led each class. Group leaders were extensively trained in the curriculum by KBEP staff. Thirty-eight percent (N = 23) of the active curriculum classroom sessions were rated for adherence to the manual by one member of the research staff, who conducted in-class observations using a checklist of curriculum components. In these classes, 97% of the session modules were completed as designed.

The curriculum is rooted in Social Learning Theory (SLT),¹⁴ with lessons that aim to modify cognitions (dating attitudes, expectations, and knowledge) and behaviors (conflict resolution, and communication skills) to help students foster healthy relationships: in other words, relationships free from the spectrum of DV behaviors, including emotional/verbal, physical and sexual abuse as well as threatening behaviors. The curriculum uses observational learning, discussion, role-play, and modeling of healthy relationship skills. Each session includes lecture, discussion, group and individual activities, handouts, and worksheets. For example, in session 4, students learn what assertive communication means, watch facilitators perform a role-play demonstrating assertive communication skills in a relationship context, and then have the opportunity to practice their own assertive communication skills in a group game. Discussion material includes examples of DV-related behaviors and incorporates student-generated examples, including DV behaviors perpetrated through technology such as social media or texting.

The material covered in the KBEP curriculum includes identifying types of violence, rights in relationships, personal power and self-esteem, conflict resolution, communication skills, components of healthy relationships, taking responsibility for choices and actions, expectations of dating relationships, stereotypes/the media's portrayal of gender roles, the cycle of violence and warning signs of DV. An overview of the curriculum is provided in Table 1.

The curriculum was originally created by KBEP staff; all KBEP curriculum sessions were identical to those that have already been widely disseminated, with the exception of Session 4 (Communication Skills). Our research team worked with KBEP staff to develop this additional session in order to strengthen the curriculum's foundation in SLT by having staff model and teach communication skills. Because the curriculum is delivered to all 10th grade classrooms in each high school, its influence may extend to changing peer norms and expectations about DV, and thus, one of the program goals is to create a community atmosphere characterized by DV awareness.

Many of the concepts addressed in the KBEP curriculum are similar to existing evidence-based interventions, such as SafeDates⁷ and the Fourth R⁸ – for example, discussing the cycle of violence, power in relationships, and assertive communication. In contrast to these programs, however, the KBEP program was developed in the community and is comparatively brief (5 sessions). The lengthy nature of other programs' curricula makes them difficult to disseminate, whereas the present curriculum is already widely disseminated. The KBEP program is freestanding and can be incorporated into any existing high school health curriculum. The curriculum is appropriate for both boys and girls, directly addresses issues related to sex roles and stereotypes, and portrays people of both sexes as potential perpetrators and victims of DV.

Instruments

All questionnaires and sessions included gender-neutral terminology so that study procedures were equally applicable to heterosexual and sexual minority youth. All measures were written at the 5th grade reading level or below and have previously been used successfully with adolescents.

Conflict in Adolescent Dating Relationships Inventory—The CADRI¹⁵ is a 35-item measure completed by teens in reference to actual conflict or disagreement with a current or recent dating partner. It assesses DV perpetration and victimization frequency in the past 3 months and was administered at T1 and T3, so participants reported on their DV-related behaviors in the 3 months prior to the study (T1) and in the 3 months between T1 and T3 (T3). The CADRI scales assess perpetration and victimization of emotional/verbal DV, threatening behaviors, relational aggression, and physical DV; we also created a total DV score to assess whether participants endorsed any of these 4 types of violence. DV perpetration and victimization scores were dichotomized (yes/no). Given the short time frame between follow-up assessments, we felt it was important to evaluate whether or not DV behaviors happened rather than how often they happened, particularly for low-frequency behaviors like physical abuse. We did not include the sexual DV scale of the CADRI at the request of school administrators. The CADRI has shown strong internal consistency (total $\alpha = .83$) and 2-week test retest reliability ($r = .68, p < .01$), as well as acceptable partner agreement ($r = .64, p < .01$).¹⁴ Internal consistency for the CADRI scales for the present sample was generally good, ranging from $\alpha = .63$ to $.81$.

Normative Beliefs about Aggression Scale—The NOBAGS¹⁶ is a 30-item survey which assesses young people's self-regulating beliefs about the appropriateness of social

behaviors. Higher scores indicate greater approval of aggression. The NOBAGS scales demonstrated strong internal consistency in the present sample (α for both the general and retaliation scales was .83).

Attitudes Towards Dating Violence Scale—The ATDVS¹⁷ is a 28-item survey which measures attitudes toward use of psychological, physical, and sexual dating violence by boys and by girls. ATDVS items were averaged to produce two scale scores: attitudes towards female perpetration of violence and attitudes towards male perpetration of violence. Higher scores are reflective of more positive attitudes about violence perpetration. The internal consistencies of each ATDVS subscale were strong, ranging from $\alpha = .74$ to .80 in the present sample.

KBEP questionnaire—This survey included checklists assessing DV knowledge and healthy relationship attitudes directly targeted by the KBEP DV prevention curriculum. Higher scores indicate less knowledge about DV and more healthy attitudes about relationships, respectively.

Data Analyses

All data analytic procedures were conducted by research staff, independent of KBEP and of the school. First, relationships between demographic and study variables with study condition at baseline were examined using chi-square and independent samples t-tests. To test the primary study hypothesis that there would be differences between the active and control groups in terms of DV-related cognitive factors and behaviors, we employed generalized estimating equations (GEE) using the SPSS 22 software package.¹⁸ We used GEE, a type of generalized linear model, to account for the nesting of students within classrooms, and because it flexibly handles multiple types of distributions, including both continuous and binary outcome distributions. We specified the GEE models to include an exchangeable correlation structure and the random effect of classroom in all models. We used a normal distribution and identity link for the continuous outcome variables, and a binomial distribution and logit link for the dichotomous variables. Separate models were tested for scores on each of the 6 cognitive outcome variables at the end of the study (T2), and on both the cognitive variables and eight behavioral outcomes at the 3-month follow-up (T3). We applied the Bonferroni correction to adjust for multiple comparisons testing the same hypothesis using adjusted alpha levels of .01 (.05/5) per test. All models controlled for the baseline assessment (T1) of the respective measure; we did not include any demographic covariates because there were no significant differences between conditions on any of these variables. We conducted follow-up bootstrapping mediation analyses using the INDIRECT v.4.2 macro for SPSS,¹⁹ because INDIRECT can include covariates and be used with dichotomous outcome variables.

RESULTS

Preliminary Analyses

All forms were checked for missing data and all data were double-entered into the computer database. We ran descriptive statistics to examine the distributional properties of the

variables, including normality and internal consistency, for the present sample. The average percentage of missing data was 12.7%, with the majority of missingness due to student absences at one of the data collection time points.

Sample Characteristics

Overall, 433 students (75%) out of 579 eligible students in 10th grade health classes had parental consent or adolescent (>18) assent to participate (Figure 1). Moreover, 370 students completed assessments at T1, 365 students at T2, and 357 students at T3. For the purpose of the present analyses, the sample was restricted to the 225 students who endorsed the statement “I have dated and/or had a boyfriend/girlfriend in the past 3 months” at T1 (54% of participants with available data: 139 in the control condition, 86 in the active condition) because we hypothesized that non-daters would not have the opportunity to engage in DV-related behaviors and the intervention would be most salient for those in a dating relationship.

Students' ages ranged from 14 to 19 years old, $M = 15.85$, $SD = .85$. Consistent with the demographics of the school district, 54% of the dating students were female. Ethnic representation was 20% Hispanic/Latino. Racial representation, including both Hispanic and non-Hispanic ethnicity, was 73% white, 12% African-American or black, 6% Asian, 3% Native American, 1% Native Hawaiian/Pacific Islander, and 12% other racial identity; students were able to endorse multiple racial categories. For the present analyses, race was dichotomized into non-white and white categories. At baseline, 91.8% of the students in a recent dating relationship reported being the victim of at least one instance of threatening behavior, relational aggression, emotional/verbal or physical DV by a partner in the past 3 months, and 92.0% reported at least one instance of perpetration. Also at baseline, 27.7% of students reported being the victim of physical DV in the past 3 months, and 28.0% reported being the perpetrator of physical DV in the past three months from the CADRI Physical Abuse Scale.

Comparisons between Conditions, by Session Attendance, and by Retention over Time

There were no significant baseline differences between conditions on demographic characteristics or DV history (Table 2). Students in the active condition attended an average of 4.20 out of 5 sessions of the DV prevention program. Results from the primary analyses were comparable when the full sample was used versus only students who successfully completed the program; thus, only the analyses based on the full sample are reported here. Two hundred and seven students completed all 3 time points. The t-test and chi-square analyses indicated that these students did not differ from the students who did not complete T2 and/or T3 on any of the primary variables of interest at T1, with 2 exceptions: students who completed all 3 time points were less likely to report having perpetrated threatening behavior ($\chi^2 = 7.37$, $p < .01$) and physical abuse ($\chi^2 = 6.78$, $p < .01$). Participants were included in the analyses if they had data at any one of the 3 time points.

Intervention Outcomes: Cognitive Factors

Results of the GEE analyses for DV-related attitudes and beliefs are presented in Table 3. We found significant differences between conditions in the cognitive factors the KBEP

program targets immediately following the program (T2) and at 3-month follow-up (T3). Specifically, students who received the DV prevention curriculum reported healthier attitudes towards dating relationships and more knowledge about DV at T2 (H1 and H2) and at T3 (H3 and H4). Attitudes towards dating violence also differed between the active and control groups, on both the NOBAGS and the ATDVS scales. At both T2 and T3, participants in the DV intervention endorsed less positive beliefs about retaliatory aggression. In addition, at T3, participants in the active condition reported less approval of aggression in general, attitudes towards male perpetration of violence, and attitudes towards female perpetration of violence.

We also examined whether study outcomes varied by sex. Condition $\times$ sex interaction terms were significant at T3 for attitudes towards male perpetration of violence, Wald $\chi^2 = 11.39$, $p < .01$, and for DV knowledge, Wald $\chi^2 = 4.53$, $p < .05$. The effect of the KBEP program on DV knowledge was greater for men (Wald χ^2 for men only = 12.18, $p < .001$) than for women (Wald χ^2 for women only = 5.70, $p < .05$). The KBEP program was associated with significantly less approval of male perpetration of violence for men (Wald χ^2 for men only = 51.66, $p < .001$) but showed no association for women (Wald χ^2 for women only = 2.71, $p = .10$). There was no significant condition $\times$ race (white vs. non-white) interaction for any of the cognitive variables.

Intervention Outcomes: Behavior

Results of the GEE analyses for DV perpetration and victimization at T3 are depicted in Table 4. We found partial support for our hypotheses (H5 and H6). At the 3-month follow-up, students who had received the DV prevention curriculum were significantly less likely than students in the control condition to have perpetrated emotional/verbal DV (79% vs. 90%) or any kind of violence (79% v. 90%). Finally, students who received the community-based DV prevention program were also less likely to report emotional/verbal DV victimization (82% vs. 93%) and total victimization (82% vs. 93%). There was no significant condition $\times$ sex or condition $\times$ race interactions for any of the behavioral outcomes.

Mediation Analyses

Although we had no specific hypotheses about which type of knowledge or attitude change would facilitate behavior change in these high school students, we still wondered whether change in any of the knowledge and attitude domains we measured partially accounted for the behavior change observed. Therefore, we decided to conduct follow-up mediation analyses. We tested whether there was a significant indirect effect from KBEP condition to total perpetration and victimization at T3 via attitudes and knowledge at T2, controlling for baseline attitudes/knowledge and DV behavior. We tested approval of retaliatory aggression, dating attitudes, and DV knowledge as potential mediators because these variables were significantly associated with treatment condition at T2.²⁰ We employed bootstrapping procedures in separate tests for each potential mediator using 5000 bootstrapped samples.

We found significant indirect effects of condition on total DV perpetration via approval of retaliatory aggression, $b = -.37$, 95% CI $[-0.78, -10]$ and via dating attitudes, $b = -.30$, 95%

CI [-0.70, -.02]. The indirect effect of condition on total perpetration via DV knowledge was not significant, $b = -.09$, 95% CI [-0.63, .26]. For the effect of condition on total DV victimization, we found a significant indirect effect via approval of retaliatory aggression, $b = -.32$, 95% CI [-0.70, -.07]. The indirect effect of condition on total victimization via dating attitudes was not significant, $b = -.30$, 95% CI [-0.67, .00], nor was the indirect effect via DV knowledge, $b = -.12$, 95% CI [-0.94, .28].

DISCUSSION

The purpose of this study was to partner with KBEP, a DV prevention CBO, to evaluate a brief, widely-disseminated high school DV prevention curriculum using a waitlist control design. Students' DV-related attitudes and behavior were evaluated at baseline (T1), immediately following delivery of the program (T2), and at 3-month follow-up (T3). Our results indicate that students who received the brief DV prevention curriculum reported changes in both DV-related cognitions and behavior. Immediately following completion of the program, students in the active condition reported less approval of retaliatory aggression and more healthy attitudes about dating and knowledge about DV. These effects were sustained at 3-month follow-up, and students also reported less approval of male and female DV perpetration and general aggression at T3. Students who received the KBEP program reported less emotional/verbal DV perpetration and victimization, and overall DV perpetration and victimization, 3 months after the conclusion of the intervention. However, there were no changes in the other behavioral outcomes. This study is significant in that it is among the few trials of adolescent DV prevention programs to detect significant behavioral outcomes.²¹ Our results provide promising initial empirical support for this brief, theoretically-driven and community-based DV prevention program, which is widely disseminated in New England.

A strength of this study is the diversity of the sample, incorporating boys and girls from diverse ethnic and racial backgrounds. The sample also includes a large proportion of teens that had already experienced some form of DV. The study was acceptable to parents and teens, with a 75% consent rate, exceeding prior estimates of 30% to 60% for active consent procedures in prevention research studies in schools.¹⁹ In addition, this study adds to the literature by measuring emotional/verbal DV, relational aggression, and threatening behaviors in addition to physical DV, which has commonly been the focus of DV prevention trials.²² Measuring behavior change is a critical component of DV prevention research and is rarely found in studies of adolescent DV prevention programs.²³

Another strength is that this community-based prevention curriculum is firmly grounded in theory. The DV prevention curriculum was designed within the framework of SLT.¹⁴ According to SLT, behavior change results from changes in cognitions, such as beliefs about dating violence and expectations of healthy relationships. We did find considerable changes in attitudes and knowledge among students who received the curriculum in comparison with those received their usual health class instruction. In addition, our follow-up mediation analyses suggest that the reductions in DV perpetration we observed are partially mediated by reductions in approval of retaliatory aggression and increases in healthy dating attitudes. Because the intervention resulted in a significant improvement in the cognitive factors

hypothesized to mediate the curriculum's effects on behavior, and there were significant indirect effects for some of the knowledge and attitude variables, we are hopeful that DV perpetration and victimization will decrease over time as students have the opportunity to apply their new skills and knowledge in new romantic relationships. For example, the decrease in DV victimization, which was partially mediated by less approval of retaliatory aggression, might manifest as an adolescent leaving an unhealthy relationship because he or she now has less tolerance for aggressive conflict resolution strategies.

Perhaps the 3-month follow-up window may not have been long enough to detect this effect for all of the DV behaviors we measured. Increasing the skills component of the KBEP curriculum may also make the program more powerful and more effective in changing behavior. For example, whereas students in the KBEP condition were less likely than control group students to report emotional/verbal abuse perpetration at T3, 79% of them endorsed doing at least one of these behaviors in the past 3 months. This high rate of emotional/verbal abuse is concerning, and speaks to the need for adolescent prevention programming to address the entire DV spectrum – for example, via increased emphasis on problem-solving and assertive communication skills to promote respectful conflict resolution.

Limitations

The KBEP curriculum was only evaluated in one school, limiting the generalizability of our results. Also, because our participants were enrolled in the same school, there may have been some contamination across conditions, resulting in the transmission of attitudes and skills from the active KBEP group to the control group. Due to last-minute changes in the school schedule, we ended up with extra students in the control group; however, there were no differences between students in the control and KBEP conditions at baseline.

While the DV prevention program includes material on gender stereotypes, it is not tailored separately for provision to boys and girls, something previous research suggests may be effective.²⁰ Similarly, prior research has shown differential effects for students who have a history of DV victimization or perpetration.⁸ Further research should explore how the program's effects may differ by sex and prior DV exposure.

We restricted the present analyses to students who reported having dated in the past 3 months at baseline to have power to demonstrate a behavioral effect. This may have resulted in the exclusion of DV behaviors that occurred during new relationships that began between T1 and T3. A larger study enrolling students from multiple schools with a longer assessment period is needed to examine the impact of the intervention on youth excluded from these analyses. We found that students who did not complete T2 or T3 were more likely to report perpetrating threatening behavior and physical abuse at T1, which may have resulted in less frequent reports of these behaviors in subsequent waves. Perhaps thinking about their past perpetration made these students uncomfortable and unwilling to complete the subsequent time points. It will be important for future studies to think carefully about how to keep DV perpetrators engaged in longitudinal research to avoid underestimating perpetration. Lastly, due to the wishes of school administrators, we were not able to assess sexual DV in the present study. Working with schools to determine how to assess sensitive topics such as sexual abuse will be an important avenue for future research on KBEP and similar programs.

Conclusions

The primary goal of this study was to partner with a CBO to test their DV prevention curriculum's efficacy in a classroom-based, randomized waitlist control trial. Our study is the first to show empirical support for a brief, classroom-based DV prevention curriculum that has already been delivered to thousands of students. Identifying an efficacious and brief curriculum is crucial, as brief programming may offset the burden of DV education on school resources and thus, increase the likelihood that the manualized program will be fully implemented.

Our results suggest that boys and girls might respond differently to certain aspects of the intervention, including retaining factual information and changing attitudes about male perpetration of violence. A closer examination of the mediational pathways linking the specific skills and information students learn during the program to behavioral outcomes could lead to potential theoretically-driven modifications to the program which may increase its impact on behavior – for example, improving the DV knowledge component of the intervention, since this did not mediate intervention outcomes in the present study. Whereas attitude change appears to be an important mediating factor in preventing adolescent DV,²⁰ it is behavior change that should ultimately provide conclusive evidence for the efficacy and effectiveness of classroom- and school-based DV prevention programs.

IMPLICATIONS FOR SCHOOL HEALTH

The prevalence of teen DV in the US² suggests that primary prevention programs are strongly indicated. In addition, baseline rates of DV involvement in the present study suggest that an alarming number of teens are already involved in unhealthy, coercive, or violent relationships by 10th grade, indicating that broadly focused prevention interventions need to be implemented sooner rather than later in students' academic careers. However, most DV prevention programs are lengthy and difficult to implement with fidelity or adapt to the school setting. The present study addresses this gap in the literature. The community-based DV prevention curriculum we evaluated is already regionally disseminated in 26 schools and 11 non-traditional programs in 13 communities in southern New England, and has demonstrated excellent feasibility largely due to its brevity and its appropriateness for mixed-gender groups which are typical of school health classes. Given that the curriculum is manualized, using SLT principles familiar to most teachers like role-play activities, skill practices games, and group discussions, brief teacher trainings could enable health teachers to deliver the curriculum in their own classrooms in the future.

Human Subjects Approval Statement

This research was approved by the Institutional Review Board of Rhode Island Hospital, Providence, Rhode Island (protocol #407312).

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Figure 1.
CONSORT Diagram.

Table 1

Overview of DV Prevention Curriculum

Session	Topic	Example Activities	CBT Targets
1	Understanding Violence	Violence 101 Presentation 5 Types of Violence Activity	Knowledge
2	Wants and Needs in a Relationship	Agree/Disagree Game Dating Characteristics Activity	Attitudes Self-Efficacy
3	Expectations in Dating Relationships	Fair and Unfair Expectations Discussion Expectation Cards Activity Jealousy Discussion	Knowledge Self-Efficacy Attitudes
4	Communication Skills	Aggressive/Passive/Assertive Communication Role-Play Assertive Comebacks Game	Knowledge Communication Skills
5	Cycles of Violence and Warning Signs	Cycle of Violence Discussion Warning Signs of an Abusive Relationship	Knowledge Attitudes

Table 2

Unadjusted Descriptive Statistics for Active Daters at Baseline (T1)

	Control Condition (N = 139)	Active Condition (N = 86)		Range of Possible Scores (Cognitive Factors)
	M (SD)/ N (%)	M (SD)/ N (%)	t/χ^2	
<u>Demographics</u>				
Sex (% girls)	78 (57%)	41 (49%)	$\chi^2 = 1.50$	
Race (% non-white)	38 (30%)	25 (32%)	$\chi^2 = 0.07$	
Ethnicity (% Hispanic)	20 (23%)	9 (16%)	$\chi^2 = 1.21$	
Age	15.85 (.85)	15.85 (.87)	t = 0.02	
<u>DV Cognitive Factors</u>				
Approval of agg, general	1.54 (.53)	1.57 (.51)	t = -0.35	1 – 4
Approval of agg, retaliatory	2.14 (.53)	2.20 (.46)	t = -0.87	1 – 4
Female DV perp attitudes	2.12 (.62)	2.10 (.62)	t = 0.16	1 – 5
Male DV perp attitudes	2.07 (.50)	2.13 (.54)	t = -0.95	1 – 5
Dating attitudes	2.23 (.41)	2.29 (.40)	t = -1.03	1 – 4
DV Knowledge	1.12 (.15)	1.14 (.17)	t = -1.20	1 – 2
<u>DV Behaviors</u>				
Emo/verbal abuse – perp (y/n)	125 (91%)	80 (93%)	$\chi^2 = 0.39$	
Rel aggression - perp (y/n)	33 (24%)	16 (19%)	$\chi^2 = 0.82$	
Threat bx - perp (y/n)	36 (27%)	26 (31%)	$\chi^2 = 0.48$	
Physical DV - perp (y/n)	33 (24%)	30 (35%)	$\chi^2 = 2.73$	
Emo/verbal abuse – vict (y/n)	120 (90%)	81 (94%)	$\chi^2 = 1.05$	
Rel agg - vict (y/n)	44 (33%)	32 (38%)	$\chi^2 = 0.53$	
Threat bx - vict (y/n)	47 (36%)	27 (32)	$\chi^2 = 0.30$	
Physical DV - vict (y/n)	36 (27%)	25 (29%)	$\chi^2 = 0.15$	

Note.

Descriptive information is for participants who reported dating involvement in the past three months.

Emo/verbal = emotional/verbal. Rel = relational. Agg = aggression. Threat = threatening. Bx = behavior. Perp = perpetration. Vict = victimization.
 DV = dating violence. Y/n = yes or no.

Table 3
Generalized Estimating Equations for Effect of Treatment Condition on Cognitive Outcomes at T2 and T3, Daters Only

Outcome	T2 Control			T2 Active			Wald χ^2	T3 Control			T3 Active			Wald χ^2
	M	SE		M	SE			M	SE		M	SE		
Approval of agg. general	1.53	.09		1.42	.08	-.11 (.06)	2.94	1.68	.11	1.48	.08	-.20 (.06)	-0.33 - -0.07	9.60**
Approval of agg. retal	2.10	.07		1.87	.07	-.23 (.05)	20.08***	2.16	.10	2.02	.10	-.14 (.05)	-0.23 - -0.05	9.41**
Attitudes to female DV perp	2.09	.09		1.97	.09	-.12 (.05)	6.56	2.29	.10	2.08	.10	-.21 (.06)	-0.34 - -0.08	10.60**
Attitudes to male DV perp	2.10	.06		1.95	.05	-.16 (.07)	5.36	2.21	.07	2.01	.07	-.20 (.05)	-0.29 - -0.12	20.27***
Dating attitudes	2.32	.08		2.60	.08	.28 (.07)	15.60***	2.29	.07	2.51	.07	.23 (.05)	0.12 - 0.33	18.49***
DV Know	1.10	.02		1.04	.01	-.06 (.01)	18.38***	1.08	.02	1.05	.01	-.04 (.01)	-0.06 - -0.01	9.74**

Outcomes are for participants who reported dating involvement in the past 3 months. All GEE models included scores on the outcome variable at T1 as covariates; estimates are omitted for brevity. Descriptive statistics include estimated marginal means from the GEE models, controlling for baseline means. P-values are Bonferroni-corrected to adjust for multiple comparisons.

Agg = aggression. Retal = retaliatory. DV = dating violence. Know = knowledge.

**

p < .01.

p < .001.

Table 4
Generalized Estimating Equations for Effect of Treatment Condition on Behavioral Outcomes at T3, Daters Only

Outcome	T3 Control		T3 Active		OR	95% CI for OR	Wald Chi-Square
	N	%	N	%			
Emotional/verbal DV perp	109	90	60	79	.27	.12 – .62	9.68**
Relational aggression perp	35	29	18	24	.85	.42 – 1.70	.22
Threatening behaviors perp	38	31	13	17	.42	.14 – 1.28	2.31
Physical DV perp	35	29	17	22	.58	.28 – 1.20	2.15
Total Perpetration	109	90	60	79	.31	.13 – .71	7.66**
Emotional/verbal DV vict	111	93	62	82	.26	.1 – .41	32.40***
Relational aggression vict	38	32	22	29	.90	.42 – 1.93	0.07
Threatening behaviors vict	42	35	17	22	.56	.28 – 1.11	2.74
Physical DV vict	36	30	15	20	.62	.34 – 1.14	2.39
Total Victimization	111	93	62	82	.25	.15 – .41	30.13***

Outcomes are for participants who reported dating involvement in the past three months. All models included scores on the outcome variable at T1 as covariates; estimates are omitted for brevity.

Perp = perpetration. Vict = victimization. DV = dating violence.

P-values are Bonferroni-corrected to adjust for multiple comparisons.

**
p < .01.

p < .001.