Merging Relationship Education and Child Abuse Prevention Knowledge: An Evaluation of Effectiveness with Adolescents

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Using a quasi-experimental design with sample of 623 high school students, we examined the effectiveness of combining information about child abuse prevention with relationship education, on several outcomes. Findings suggest that adolescents who participated in the classes showed significant increases in their knowledge and understanding of healthy relationships, including more realistic beliefs and attitudes about romance and mate selection, decisions about sex, and decreases in their use of verbal aggression in dating relationships compared with control subjects. Participants also showed increases in their knowledge related to harsh caregiving, spanking, and sudden infant death syndrome. Implications for educators, practitioners, and future programming are discussed.

KEYWORDS   adolescent romantic relationships, child abuse prevention, dating relationships, family life education, program evaluation, relationship education

INTRODUCTION

Adolescence is a time when individuals are learning to develop intimate, lasting relationships and are forming their own personal beliefs, attitudes, expectations, and values about dating and how to treat other people. There is a growing consensus among researchers that high school is an ideal period to begin teaching healthy relationship skills (Gardner, Giese, & Parrott, 2004;

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Silliman & Schumm, 2004). In recent years there has been an expansion of relationship education curricula available and programs implemented in public schools. Much of this growth and interest in relationship education stems from a larger federal Healthy Marriage Initiative, with one of the U.S. Administration for Children and Families' seven goals being to "increase the percentage of youth and young adults who have the skills and knowledge to make informed decisions about healthy relationships including skills that can help them eventually form and sustain a healthy marriage" (Administration for Children and Families). An overarching objective of this and other healthy relationship initiatives across the globe is to promote healthy relationships, with the hope that healthy couple relationships spill over into other areas of family life, including healthy parenting practices. In fact, a growing body of research has provided support for this "spill-over" effect, which promotes positive child outcomes (Carlson & McLanahan, 2006; Cowan & Cowan, 2005).

There are at least two primary methods of promoting healthy child outcomes among adolescents. One method, and arguably the most common, is an indirect approach that teaches individual skills related to healthy couple relationships, with the expectation that healthy outcomes for children are most likely to occur within the context of a healthy couple relationship (i.e., spill-over effect). A second approach for promoting healthy children and healthy parent–child relationships is to teach healthy parenting skills directly, such as teaching facts about healthy parenting practices, child abuse, shaken baby syndrome (SBS) and sudden infant death syndrome (SIDS). Previous studies have largely focused on the first approach—teaching adolescents healthy relationship skills, while neglecting to include information about future healthy parent–child relationships.

The purpose of this study is to add to the current empirical literature on relationship education and child abuse prevention by implementing a quasi-experimental study with a sample of 623 high school students using the *Relationship Smarts Plus* curriculum and an additional lesson module that focuses specifically on preventing child abuse and neglect. Specifically, we examine how combining education about child abuse with a relationship education curriculum in high schools influenced knowledge and behavior in adolescents in both the realms of appropriate childcare and healthy relationship practices.

EMPIRICAL BACKGROUND

Adolescent Dating and the Impact of Relationship Education

Scholars have suggested that high school is a key time to begin educating young adults about relationships and marriage (Gardner et al., 2004; Silliman & Schumm, 2004). In addition to increases in knowledge about healthy

romantic relationships, teenagers completing a course focused on relationship education have been shown to display lower levels of both physical and verbal aggression in romantic relationships and dating situations when compared with adolescents in a control group (Adler-Baeder, Kerpelman, Schramm, Higginbotham, & Paulk, 2007; Gardner et al., 2004). Further, it has been suggested that enrollment in relationship education can inspire willingness to seek relationship guidance and enrichment later in adult life (Gardner et al., 2004). In one study, students who took such a class stated they would be more open to participating in marriage preparation, marriage counseling, and marriage enrichment in later romantic relationships when compared with a control group of students (Kerpelman, Pittman, Adler-Baeder, Eryigit, & Paulk, 2009). The overall picture given by these studies is that adolescents from a variety of racial and economic backgrounds can show positive changes in their relationship beliefs and practices after taking a relationship education course, regardless of many other demographic characteristics.

In addition to short-term outcomes, relationship education is becoming more promising due to the demonstration of lasting program impact through longitudinal research. Relationship skills curricula that increase awareness of dating violence and emphasize its dangers have shown to have continued effects up to 4 years later (Gardner & Boellaard, 2007). Students who were exposed to these curricula showed significantly less use of violence in resolving conflicts in romantic/dating relationships than students in control groups (Gardner & Boellaard, 2007). These students also reported greater family cohesion, perhaps due, in part, to the conflict resolution techniques learned. In other longitudinal research, Kerpelman and colleagues (2009) found at a 1-year follow-up students that received the *Relationship Smarts Plus* curriculum in class continued to display fewer faulty relationship beliefs and greater conflict management ability when compared with peers who were not enrolled in a class where the curriculum was taught.

Child Abuse Awareness and Early Prevention

Just as high school is a key time to begin relationship education, it could also be a key time for introducing child abuse awareness and prevention education. There is evidence to suggest that teaching about child abuse and child welfare has a positive impact on childcare practices, although this has never been directly examined in teenagers (Adams et al., 1998; Campbell Daley, 2004). Given that there are over 440,000 infants born to teenage girls in the United States each year, a need for child welfare education at the high school level can be identified (Martin et al., 2009). Young mothers and their peers can be targeted as recipients of education about healthy childcare practices, as being a teen parent is a risk factor for potential child abuse (Crouch & Milner, 1993; English, 1998; McKay, 1994). Connecting child abuse education

to relationship education—combining both the direct and indirect approaches to preventing child abuse—could prove to be especially beneficial because certain themes remain in synchrony when studying healthy relationships and healthy children. By teaching teens how to handle conflict in a romantic relationship without aggression or by making them aware of the warning signs of an abusive partner and empowering them to leave such a relationship, their future and the future of their children can be impacted. These two educational areas, relationship education and child abuse prevention, are connected by research showing that a history of high levels of relationship conflict or abuse, either as a child or in romantic relationships, is a risk factor for child abuse occurring when that individual has children of his or her own (Belsky, 1993; McKay, 1994).

Curriculum Overview

The current study implemented a research-based relationship education curriculum entitled *Relationship Smarts Plus* (RS+) (Pearson, 2007). This curriculum, designed for students in grades 8 through 12, consists of 13 lessons designed to help adolescents gain knowledge and skills to assist them in developing and strengthening healthy relationships. This empirically supported curriculum has been shown to increase knowledge about relationships, lower verbal aggression, increase realistic beliefs about romantic relationships while decreasing faulty beliefs, and increase a teen's ability to manage conflict (Adler-Baeder et al., 2007; Kerpelman et al., 2009).

To educate teenagers about healthy parenting practices for the future and to provide education to teens that have already become parents, we developed an additional lesson focused on child abuse awareness and prevention. Goals of this lesson also included proper infant care techniques and increasing knowledge about harsh discipline behaviors and abusive and neglectful situations and how to prevent them. Studies have found positive results in terms of reduction of SIDS and SBS with education, but there are relatively few educational programs that focus on these issues and no program that we are aware of that provides information about SIDS and SBS to teens (Dias & Barthauer, 2001). In light of this, the developed lesson also focused on protecting against SIDS and raising awareness of SBS. The lesson was constructed using research about child abuse and proper childcare techniques, including protective factors for promoting healthy families as endorsed by the Child Welfare Information Gateway (Horton, 2003; Kagan, 2003).

Purpose and Hypotheses

The primary goals of the RS+ lessons are to increase knowledge and awareness of what a healthy relationship entails, reduce the risk of maltreatment

in dating relationships, and promote future healthy relationships as they enter parenthood and adulthood. The goals of the additional lesson on child abuse and neglect are to increase knowledge and awareness of child abuse and neglect and increase understanding related to proper care of infants, including specific information about SIDS and SBS.

This evaluation of RS+ measured change over time in student's beliefs, knowledge, and behaviors related to both romantic relationships as well as child abuse and caregiving of children. We tested several hypotheses related to the goals of the RS+ curriculum and the added lesson about child abuse and neglect. First, we hypothesized that students who participated in the RS+ classes would self-report increases in their relationship knowledge and understanding related to healthy and unhealthy relationships, including knowledge about child abuse and neglect. Second, we hypothesized that students who received the RS+ curriculum and supplemental child abuse and neglect lessons, compared with control students, would experience (1) a greater increase in their realistic beliefs and attitudes about romance and mate selection, (2) a greater increase in their realistic beliefs and attitudes about marriage education/counseling and marriage, and (3) a greater increase in realistic beliefs and attitudes about sex and perceived ability to resist sexual pressure. The RS+ curriculum also focuses on reducing verbal and physical violence in romantic dating relationships, so we also hypothesized that compared with the control students, the experimental students currently in a dating relationship would report (4) a greater decrease in use of verbal and physical violence against their partner. Finally, because a primary purpose of this research was to introduce material related to child abuse and neglect to students, we hypothesized that compared with control students, experimental students would report (5) greater increases in knowledge related to SBS and child abuse, including harsh caregiving, spanking, and SIDS.

METHODS

Participants and Procedures

Teachers from 22 high schools (grades 8–12) participated in the study. Participating schools and teachers were recruited through a convenience sample method using the supports of interested district superintendents in a midwestern state. Each participating school selected one or two teachers to be trained in the new curriculum. These teachers then selected one class period to receive the RS+ curriculum along with a control group class to receive the standard family and consumer science curriculum provided by the school. Both class periods were given a set of pretests designed to measure various facets of knowledge of healthy relationships and childcare

techniques. Based on their individual circumstances, teacher could decide whether they would teach the 14 modules (approximately 55 minutes each) across 14 weeks or more frequently across fewer weeks. At the conclusion of teaching the 14 modules, posttests were administered to students in both the experimental and control group classes to assess gains in knowledge in these two dimensions. Students' identification numbers were assigned to the pretest and posttest and were matched for analyses. Both students and their parents provided consent for data to be used.

A total of 803 students completed and returned questionnaires. Of those, 623 were retained for analyses: 426 who received the RS+ curriculum and 197 who were in the control group. Students' questionnaires were removed if they did not return their consent forms, if they returned only the pretest or posttest but not both, and some if they appeared to have large sections of the survey systematically marked with the same answer.

Of the sample of 426 experimental students, 75% were girls and 25% boys. Most students were White (78%), with 10% African American or Black, 4% Hispanic/Latino, 2% Asian, and the remaining 6% reported in the "Other" category. The students were primarily juniors and seniors in high school (58%), with the remaining 42% reporting their grade level between 8th and 10th grade. Analyses of these demographic variables revealed no significant differences between groups.

Measures

In addition to demographic variables, the questionnaire consisted of scales and items that assessed knowledge and beliefs about current and future romantic relationships and behaviors used in interpersonal conflict. The questionnaire also assessed knowledge and beliefs about caregiving and child abuse and neglect.

RELATIONSHIP KNOWLEDGE

Adolescents who received the RS+ curriculum completed 19 retrospective pre-post items that assessed change in knowledge related to each of the modules. Items were created based on specific learning objectives for each lesson module and designed to assess students' understanding and knowledge of some of the key components of the curriculum, including the added child abuse module, both before and after participating. For the questions under the "Before" column, answers included four options formatted in a Likert scale that ranged from *Was Poor* (1) to *Was Excellent* (4). The "After" response options were written in an equivalent manner (i.e., *Is Poor* [1]; *Is Excellent* [4]). This method was used to control for response shift bias that often masks program effectiveness due to the pretest results over/underestimating actual learning (Pratt, McGuigan, & Katzev, 2000).

A principal components analysis with varimax rotation of the 19 items revealed three factors: knowledge of "relationship readiness" (8 items, e.g., "my knowledge of my personal values"), "healthy relationship knowledge" (6 items, e.g., "my knowledge of the six types of intimacy"), and "child abuse knowledge" (4 items, e.g., "my understanding of the four types of child abuse and their risk factors"), with alphas ranging from .81 to .88.

ATTITUDES ABOUT ROMANCE AND MATE SELECTION SCALE

Three factors from this scale (Cobb, Larson, & Watson, 2003) were used to measure constraining beliefs about mate selection: one and only ($\alpha = .74$) (4 items, e.g., "there is only one true love out there who is right for me to marry"), love is enough ($\alpha = .76$) (4 items, e.g., "our feelings of love for each other should be sufficient reason to get married"), and cohabitation ($\alpha = .93$) (4 items, e.g., "it is a good idea for us to live together before getting married as a way of 'trying out' our relationship"). Respondents were asked to rate their level of agreement on a five-point Likert scale (1 = *Strongly disagree,* 5 = *Strongly agree*).

ATTITUDES TOWARD COUNSELING

Students' attitudes toward premarital and marital counseling were assessed with four Likert scale items (1 = *Strongly disagree,* 5 = *Strongly agree*; e.g., "I will go to premarital counseling with my fiancé before I get married") developed by Gardner and colleagues (2004) ($\alpha = .82$).

MARRIAGE ATTITUDES

A set of five Likert scale (1 = *Strongly disagree,* 5 = *Strongly agree*; e.g., "Having a successful marriage is the most important thing in life to me") items assessed students' attitudes toward marriage (Gardner et al., 2004) ($\alpha = .81$).

SEXUAL ATTITUDES

This attitude scale consisted of four Likert scale items (1 = *Strongly disagree,* 5 = *Strongly agree*; e.g., "It is risky for young teens to have sex.") developed by Gardner et al. (2004) and measured attitudes toward sex and sex in future relationships ($\alpha = .66$).

RESISTING SEXUAL PRESSURE

The resisting sexual pressure measure consisted of four Likert scale items (1 = *Strongly disagree,* 5 = *Strongly agree*; e.g., "I intend to say 'no' if I am

being pressured to have sex.") developed originally by Gardner et al. (2004) and assessed students' beliefs about their personal abilities to refuse sexual pressures ($\alpha = .65$).

CONFLICT TACTICS SCALES

A modified version of the Conflict Tactics Scale (Straus, 1979) was used to assess verbal and physical aggression. Adolescents reported the frequency of various aggressive tactics on a scale from 0 (never) to 3 (three times or more) with regard to the past month. The verbal aggression subscale consisted of four items (e.g. "insulted or swore at") ($\alpha = .73$) and two items were used to assess physical aggression (e.g. "pushed, grabbed, or shoved") ($\alpha = .72$).

HARSH CAREGIVING RESPONSE SCALE

Four Likert scale items (1 = *Strongly disagree,* 5 = *Strongly agree*; e.g., "Spanking is an appropriate way to discipline babies.") from the Shaken Baby Syndrome Awareness Assessment (Ruessell & Britner, 2006) were used to assess knowledge of appropriate and harmful caregiving responses ($\alpha = .66$).

SPANKING BELIEFS

Two Likert scale items (1 = *Strongly disagree,* 5 = *Strongly agree*; e.g., "Spanking can teach children that it is alright to hit others") from the Adult-Adolescent Parenting Inventory (Bavolek, 1984) were used to assess beliefs related to spanking. A spanking beliefs score was computed by obtaining the mean of both responses ($\alpha = .62$).

CHILD ABUSE KNOWLEDGE

This measure consisted of four Likert-type items (1 = *Strongly disagree,* 5 = *Strongly agree*; e.g., "Parents are rarely the ones who abuse their children—abuse usually comes from other people" [reverse coded]). A child abuse knowledge score was computed by calculating a mean for all responses ($\alpha = .68$).

SIDS KNOWLEDGE

This measure consisted of two Likert-type items (1 = *Strongly disagree,* 5 = *Strongly agree*; e.g., "You can reduce the risk of SIDS by waiting until you are at least 20 years old to have a baby.") developed by the authors to assess students' knowledge related to SIDS. A mean score was used after combining both items ($\alpha = .58$).

RESULTS

To test the first hypothesis we analyzed only the students who participated in the RS+ classes. To determine whether perceived relationship knowledge changed from the beginning of the classes to the end of the classes, we examined the students' retrospective pre- and posttest scores of three sub-scales (relationship readiness, healthy relationship knowledge, and child abuse knowledge) using paired-samples *t* tests to compare scores from time 1 to time 2 (Table 1). There was a statistically significant increase in per-ceived relationship readiness, healthy relationship knowledge, and child abuse knowledge. The magnitude of these differences is quite large as the mean difference exceeded the standard deviation for each of the three subscales.

Romance and Mate Selection

One purpose of the RS+ curriculum is to help adolescents acquire realistic relationship beliefs about dating, cohabitation, and what makes future romantic relationships work. Specifically, questions tap students' beliefs about whether love is enough to keep a relationship strong, whether there is only one person out there who will make them happy, and whether living together is a wise way to test how workable a marriage would be. We used repeated measures analyses of variance (ANOVAs) where the pre- and post-test scores were the repeated measure, and group was students in the RS+ class versus the control group of students. The primary outcome we sought in each analysis was the presence of a time × group interaction effect. The results, displayed in Table 2, showed a significant interaction for all three subscales.

For the one and only subscale, the RS+ students reported a significant decrease in their beliefs that there is only one person meant for them, whereas the control group reported a nonsignificant change over time,

TABLE 1 Paired-Samples *t*-tests for Relationship Knowledge Subscales for Experimental Group

Relationship knowledge subscale	Pretest		Posttest		Mean difference	SEM	*df*	*t*	Cohen's *d*
	M	SD	M	SD					
Relationship readiness	2.73	.64	3.51	.44	−.77	.03	398	−25.51***	−1.42
Healthy relationship knowledge	2.41	.63	3.37	.49	−.95	.03	398	−29.57***	−1.70
Child abuse knowledge	2.71	.78	3.54	.56	−.82	.04	394	−21.71***	−1.22

***$p < .001$.

TABLE 2 Means and Standard Deviations of Relationship Subscales

| Relationship subscale | Experimental group | | | | Control group | | | | F^a |
| | Pretest | | Posttest | | Pretest | | Posttest | | |
	M	SD	M	SD	M	SD	M	SD	
One and only	3.24	.93	2.96	1.94	3.22	.99	3.16	1.00	8.26**
Love is enough	3.60	.87	3.27	.86	3.59	.92	3.42	.92	4.12*
Cohabitation	3.20	1.14	2.54	1.17	3.09	1.22	3.08	1.20	46.43***
Attitudes toward counseling and marital enrichment	2.88	.94	3.06	.94	2.98	.93	3.12	1.00	.37
Marriage attitudes	3.82	.77	3.73	.77	3.75	.77	3.76	.77	2.49
Sexual attitudes	3.68	.94	3.91	.89	3.82	.84	3.82	.87	11.73***
Resisting sexual pressure	4.12	.84	4.25	.81	4.21	.80	4.15	.82	7.99**
Verbal aggression	.70	.71	.54	.61	.73	.73	.75	.74	6.97*
Physical aggression	.20	.54	.14	.45	.24	.59	.29	.71	2.38
Harsh caregiving	1.52	.68	1.45	.58	1.52	.68	1.61	.74	6.52*
Spanking beliefs	2.97	1.09	3.32	1.06	2.97	1.11	3.08	1.10	6.30*
Child abuse knowledge	4.18	.73	4.18	.72	4.21	.72	4.19	.73	.14
SIDS knowledge	3.33	.79	3.79	.88	3.42	.79	3.52	.77	16.17***

[a]The F test results shown refer to testing the group × time interaction effect.
*$p < .05$, **$p < .01$, ***$p < .001$.

$F(1, 620) = 8.26$, $p = .004$. Similarly, the RS+ students reported a significant decrease in their beliefs that love is enough to sustain a happy marriage, whereas the control group did not experience a significant change over time, $F(1, 620) = 4.12$, $p = .04$. Finally, the RS+ students experienced a significant decrease in their belief that cohabitation is a wise way to test whether a relationship will work, whereas the control group of students did not experience a change over time, $F(1, 620) = 46.43$, $p < .001$.

Marriage Attitudes

Another goal of the current project is to educate adolescents about the potential helpfulness of premarital counseling, education, and marriage counseling and increase their understanding of the potential happiness found in healthy marriages. Overall, results from the ANOVAs revealed no significant interactions for the attitudes toward counseling and marital enrichment scale, $F(1, 619) = .37$, $p = .54$, or the marriage attitudes scale, $F(1, 620) = 2.49$, $p = .11$.

Sexual Attitudes and Resisting Sexual Pressure

Results from the ANOVAs indicated a significant time × group interaction for sexual attitudes, $F(1, 619) = 11.73$, $p = .001$. That is, RS+ students indicated an

increased understanding about the risks of sex and an increased willingness to wait until there is more of an emotional connection before having sex, from pretest to posttest, compared with the control group. The RS+ students also reported a significant increase in their perceived ability to resist sexual pressure, whereas the control group declined somewhat, $F(1, 619) = 7.99$, $p = .005$.

Aggression

A key component of the RS+ curriculum is to help adolescents understand what a healthy relationship looks like and treating dating partners with kindness and respect. To accomplish this task, several activities in the curriculum focus on providing examples of both unhealthy and healthy dating relationships, including the harmful effects of verbal and physical aggression. Results from the ANOVAs revealed a significant interaction for verbal aggression, $F(1, 407) = 6.97$, $p = .037$. That is, students who were currently involved in a dating relationship reported a significant decrease in their use of verbal aggression toward their dating partner across time, whereas the control group of students did not experience a significant decrease in verbal aggression toward their dating partner. There was not a significant interaction for physical aggression $F(1, 406) = 2.38$, $p = .12$, although the means were very low across time.

Child Caregiving

An important and unique contribution of this study was the incorporation of an additional lesson to the RS+ curriculum that centered on proper caregiving and awareness and understanding of child abuse and neglect. To address these hypotheses, we again tested for changes across time × group for four subscales related to caring for children. First, a significant interaction was found for the harsh caregiving subscale, $F(1, 620) = 6.52$, $p = .011$. This indicates that students who received this lesson reported significantly lower scores over time related to their beliefs about the appropriateness of delivering harsh forms of punishment to infants when compared with the control group of students. Similarly, results from the ANOVAs revealed a significant interaction for spanking beliefs, $F(1, 619) = 6.30$, $p = .012$. That is, the experimental group of students became more knowledgeable about the unintended consequences of spanking compared with the control group of students. The results also indicated a significant time × group interaction for the SIDS knowledge subscale, $F(1, 619) = 16.17$, $p < .001$. This indicates that students who participated in the RS+ group significantly increased their understanding about SIDS and how it can be prevented, compared with the control group of students. There was not a significant interaction for child abuse knowledge $F(1, 619) = .14$, $p = .71$.

DISCUSSION

This study builds on previous adolescent relationship education research from Adler-Baeder and colleagues (2007), Gardner (2001), and Gardner, Giese, and Parrott (2004) who found that adolescents who participated in relationship education classes showed improvements in knowledge, attitudes, realistic beliefs, and relational behaviors compared with control groups of students. Adler-Baeder and colleagues (2007) extended this research by finding that the positive effects largely held across diverse socioeconomic status and family structure backgrounds of students. The purpose of this study was to combine relationship education with parenting and child abuse prevention education and assess students' perceived knowledge, beliefs, and attitudes across these domains.

We hypothesized that students who participated in the RS+ curriculum would report significant increases in knowledge and understanding based on their retrospective pre-post surveys. Results showed that, without exception, students who participated in the RS+ classes experienced significant improvements in both healthy relationship knowledge and knowledge of child abuse, which was of particular importance in this study.

We also hypothesized that the RS+ students would experience significant increases in their realistic beliefs and attitudes about romance and mate selection, compared with control students. The results supported this hypothesis as students came away from the RS+ classes with more realistic expectations about romance and mate selection, including a better understanding of the risks associated with cohabiting outside of marriage. This latter finding was particularly robust, which suggests that students may be unfamiliar with research that shows the risks of cohabiting before marriage, as nearly two-thirds of all high school seniors agree that it is a good idea for couples to live together before marriage (Johnston, Bachman, & O'Malley, 2001).

Contrary to expectations, there were no differences between the RS+ students and the control students in relation to attitudes toward counseling and marital enrichment and general attitudes toward marriage. It should be noted that the RS+ curriculum content does not provide in-depth information related to premarital or marital counseling, but it was anticipated that students who participated in the RS+ classes would view the opportunity to reach out for additional resources and education more favorably in the future than control students. Furthermore, the marriage attitudes mean scores were relatively high to begin with, and it is likely that the control groups of students received positive content about marriage in their family and consumer science class already.

A small portion of the RS+ curriculum centers on making informed decisions about sex and respecting personal boundaries. As expected, students who participated in the RS+ classes exhibited significantly greater increases in sexual attitudes and resisting sexual pressure. This finding

suggests that students are both able to gain knowledge about their sexual boundaries and are willing to enforce those boundaries when needed. This is particularly relevant because nearly 1 of 10 students (8%) report being forced to have sex against their will (Eaton et al., 2008).

We also hypothesized that students who participated in the RS+ classes would report lower levels of verbal and physical aggression aimed at their dating partner, if they were in a dating relationship. Although the results did not provide support for decreases in the use of physical aggression, they did provide support for a decrease in verbal aggression for those who participated in the RS+ classes. The mean levels of verbal and physical aggression at both time 1 and time 2 for the experimental and control groups were very low to begin with, which is an encouraging sign. The decrease in reported levels of verbal aggression is especially heartening as some research indicates that verbal aggression is a predictor and precursor to physical aggression (O'Leary & Slep, 2003). With some research documenting dating violence in high schools between 20% and 32% (Center for Disease Control and Prevention, 2009; Halpern, Oslak, Young, Martin, & Kupper, 2001), any decrease in verbal aggression from participating in classes is a positive sign. Our findings are consistent with other relationship education research that has documented decreases in verbal aggression (Adler-Baeder et al., 2007; Gardner et al., 2004), suggesting that providing teens with healthy relationship tools and information can be helpful in preventing and reducing teen dating violence.

The primary contribution of the current study was the implementation and evaluation of a lesson that focused on preventing child abuse and neglect and promoting positive caregiving of children. As expected, we found that students who participated in the RS+ classes were significantly more likely to disagree with harsh caregiving responses to infants, such as spanking and shaking, when compared with the control group of students. Although the mean scores were relatively low at both pre- and posttest, the findings suggest that students gained understanding about the harm that can be done to infants when responding to them in inappropriate ways, and hopefully this information will translate into positive parenting as they enter parenthood over the next decade. Similar results were found that supported our hypothesis about spanking beliefs. Students who participated in the RS+ classes appear to have a better understanding of some of the potentially negative consequences of spanking children.

Contrary to expectations, there were no significant improvements in perceived knowledge about child abuse. Students in both the control group and experimental group had relatively high mean scores at both pretest and posttest. This may indicate that the questions developed to assess child abuse knowledge tapped information that students were previously aware of from prior classes, media exposure, or discussions at home. However, we found strong support for our hypothesis about knowledge related to SIDS. Students

who participated in the RS+ classes exhibited significant increases in their reported understanding of SIDS and factors related to prevention. This topic is apparently new information for many students and it is hoped that this new understanding carries over into their future parenting.

Limitations and Recommendations

Although this is the first empirical study to combine relationship education with child abuse prevention and find positive outcomes, there are limitations similar to other relationship education studies. First, it is recognized that without random assignment to groups, it is plausible that other unforeseen factors may have contributed to the significant differences we found. Second, the teachers who implemented the RS+ curriculum self-selected themselves to be trained and participate in the study, which may indicate they had more positive attitudes and passion about healthy relationships, thus carrying over into their teaching style with this curriculum. This may have contributed to the positive findings in the experimental group. This could limit the generalizability of the findings as future teachers who may be required to teach this curriculum, and thus less motivated, may find different results. Further, the teachers were instructed to teach their "regular" family and consumer science curriculum to a control class of students, and it is unclear what this curriculum consisted of, and it likely varied across teachers. That is, it is uncertain what topics were covered in the control class or whether teachers occasionally used concepts or topics from the RS+ curriculum in their control class, even though they were instructed to keep the curricula and topics separate. Similar to teachers, students self-select themselves into the elective family and consumer science class, and different sections of the class could be quantitatively and substantively different in ways not measured by demographic variables, which is a further limitation of the study.

Another limitation is the nature of self-report measures and the limited reliability of the measures that were incorporated or developed for this study. A common limitation of self-report measures is their subjective nature. Self-report surveys measure a perception of the construct (e.g., verbal aggression or ability to resist sexual pressure) rather than measuring it directly and perceptions are not always congruent with reality. With several of the measures used in the current study ranging between .58 and .68, some scholars suggest this range falls between questionable and acceptable (George & Mallery, 2003), although the small number of items also commonly contributes to lower alphas. Nevertheless, future studies should incorporate more reliable and valid measures in the realm of both relationship education and child abuse prevention.

An essential recommendation for future research is to incorporate a qualitative component. Kerpelman and colleagues (2009) gained unique insights into students' attitudes and perceptions about the content by

holding focus groups with students. Conducting interviews or focus groups with students would be a helpful way of assessing students' thoughts and recommendations related to child abuse prevention and combining relationship education with child abuse prevention content.

An important next step is to examine the effects over time by conducting longitudinal studies. This study provides some positive outcomes based on assessing students before the first class and again at the end of the last session of the RS+ curriculum. Future studies would do well to follow up with students over time to determine long-term impacts (for exceptions see Gardner & Boellaard, 2007; Kerpelman et al. 2009). However, it would be costly and time consuming to follow students over time to determine whether the information affects their future relationships and parenting behaviors. Furthermore, asking students to provide the personal information necessary to follow them over time would reduce the degree of anonymity and confidentiality currently offered, which could have implications in their willingness to disclose sensitive information.

In sum, this study adds to the growing body of research documenting the positive effects of relationship education for adolescents on a variety of outcomes. Similar to previous studies that have examined the effectiveness of relationship education curricula, we also found positive results. Unique to this study, however, we also found that students can learn positive ways to care for children and prevent child abuse and neglect. Building awareness of child abuse and neglect may have positive implications for potential parent–child relationships. Future relationship education curricula that is designed to promote healthy relationships and future parent–child relationships might do well to incorporate information related to caregiving of children. By combining the direct and indirect approaches of promoting positive relationships and child well-being, adolescents will have a greater chance for relationship success.

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