Family Relations Interdisciplinary Journal of Applied Family Studies
ncfr catalyzing research, theory and practice

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Factors Associated with Romantic Relationship Self-Efficacy Following Youth-Focused Relationship Education

Objective: *To explore how youths' perceived relationship self-efficacy following relationship education may vary on the basis of program and youth characteristics.*
Background: *Youth-focused relationship education has been shown to promote attitudes and behaviors that foster healthy romantic relationships. Yet little is known about the factors associated with variations in these program outcomes.*
Method: *Using data collected from a convenience sample of 1,076 youth who participated in the Love U2: Relationship Smarts Plus program, structural equation models and multiple group analysis using chi-square difference tests were examined to assess whether and how various program and youth characteristics are associated with relationship self-efficacy.*
Results: *Youths' romantic relationship self-efficacy was greater when programming was offered within a week or weekly versus monthly, after school rather than in-school, and whether participants were female and had previous dating experiences. Several demographic factors (e.g., race, sex) moderated the influence of programmatic and individual characteristics on self-efficacy.*
Conclusion: *Variability exists in how relationship and marriage education programs are implemented in uncontrolled real-world settings. Our findings suggest that program outcomes may also vary on the basis of certain youth and program characteristics.*
Implications: *Practitioners should carefully consider how the tailoring of program content and delivery to meet the needs of diverse audiences maintains program fidelity and can potentially influence program outcomes.*

Romantic relationships are salient to youths' concurrent well-being as well as later life functioning (Collins, 2003). For instance, high school youth with less romantic attachment avoidance (e.g., comfort trusting a relationship partner) are more likely to exhibit interpersonal competence (Paulk, Pittman, Kerpelman, & Adler-Beader, 2011). Those who experience healthy romantic relationships in adolescence are also more likely to report better quality relationships as young adults (Madsen & Collins, 2011). However, dating relationships present some notable risks, including dating violence (Maas, Fleming, Herrenkohl, & Catalano, 2010) and risky sexual behaviors (Manlove, Ryan, & Franzetta, 2004). These risky behaviors have been linked to poor models of healthy relationships (Sutton, Simons, Wickrama, & Futris, 2014), faulty beliefs about relationships (Cui, Fincham, & Durtschi, 2011), and a lack of skills

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Key Words: Adolescent romantic relations, family life education, marriage enrichment, program development and evaluation.

to develop and maintain healthy relationships (Foshee et al., 2008).

Youth-focused relationship and marriage education (RME) promotes the development of healthy attitudes and knowledge about relationships and romantic partners (Adler-Baeder, Kerpelman, Schramm, Higginbotham, & Paulk, 2007; Futris, Sutton, & Richardson, 2013), reduces at-risk behaviors (Gardner & Boellaard, 2007), and leads to an increased ability to resist sexual pressure (Schramm & Gomez-Scott, 2012). However, there is limited research on how both program and youth characteristics are associated with variations in program outcomes among individual youth. Identifying such moderators would provide RME practitioners with guidance in program design and implementation (Hawkins, Stanley, Blanchard, & Albright, 2012). This is consistent with Type II translational research aimed at advancing programs that have demonstrated efficacy when implemented with scientific rigor (e.g., high fidelity, controlled setting) when adopted in real-world settings (Rohrbach, Grana, Sussman, & Valente, 2006). The goal of Type II translational research is to better understand the processes and mechanisms that influence this adoption across various populations and settings while demonstrating similar impact (Spoth et al., 2013). Similarly, there is a growing desire among scholars and practitioners to better understand factors associated with program outcomes when evidence-based programs are adapted to fit a particular context or audience need (Olsen, Welsh, & Perkins, 2015). To inform future translational research on RME, the present study was designed to explore how youths' perceived behavioral control and intentions following RME may vary on the basis of program and youth characteristics.

Youth-Focused RME

RME for youth is intended to increase knowledge and self-efficacy related to (a) identifying healthy versus unhealthy relationship patterns and practices, (b) using positive communication and conflict management skills, and (c) avoiding risky dating and sexual behaviors (Kerpelman, 2007). This is partly accomplished by providing youth opportunities to explore different roles and identities related to relationships and sexuality. Further, these programs generally include lessons about the components of a loving relationship, the intersection between identity and romantic relationships, recognizing and responding to dating violence, handling conflict, and communicating effectively.

According to the theory of planned behavior (Ajzen, 1991; Ajzen, Brown, & Carvajal, 2004), youths' perceived ability and intentions to engage in particular behaviors will lead to actual behavioral outcomes. Specifically, youths' development of healthy relationships is influenced by their confidence (or self-efficacy) to have healthy relationships and engage in behaviors that promote healthy relationships (i.e., perceived behavioral control; Ajzen, 1991). Consistent with self-efficacy theory (Bandura, 1977), it is expected that youth who report a high level of perceived self-efficacy (e.g., competence and confidence in practicing learned skills) following their participation in a program are, in turn, more likely to adopt and engage in the behaviors they learned. Importantly, it is only when perceived self-efficacy is combined with intentions to use the skills learned that the desired behavioral outcomes can be achieved.

A growing body of research shows positive influences of RME programs specifically designed for youth on attitudes and beliefs about relationships, marriage, and interpersonal skills (Adler-Baeder et al., 2007; Kerpelman et al. 2010). Participants in youth-focused RME programs tend to report a better understanding of healthy versus unhealthy relationship patterns, effective communication and conflict resolution skills, and smart dating strategies (Antle, Sullivan, Dryden, Karam, & Barbee, 2011), and they report fewer faulty relationship beliefs (Kerpelman, Pittman, Adler-Baeder, Eryigit, & Paulk, 2009; Kerpelman et al., 2010). Moreover, youth who report more positive attitudes and greater awareness of skills to develop healthy relationships after participating in RME are more likely to engage in healthy practices such as managing conflict appropriately, avoiding abusive behaviors, and using effective communication skills (e.g., listener-responsiveness; Adler-Baeder, et al., 2007; Gardner & Boellaard, 2007; Gardner, Giese, & Parrott, 2004; Kerpelman, 2007). On the basis of theoretical and empirical support linking immediate outcomes of RME (e.g., knowledge, beliefs, self-efficacy) to subsequent behaviors, the present study moves this body of research forward by examining differences in perceived relationship confidence and intentions to use the

skills learned following participation in RME based on the characteristics of the program and youth served.

In our review of the literature, we identified 17 peer-reviewed journal publications focused on the evaluation of youth-focused RME. This review did not include studies evaluating sex education or dating violence prevention only. Of the 17 studies, one was qualitative (Toews & Yazedijan, 2010), and the remaining 16 studies examined pre–post survey data, three of which employed a retrospective pretest/posttest design (Adler-Baeder et al., 2007; Futris et al., 2012; Schramm & Gomez-Scott, 2012). Further, 11 compared outcomes between a control group and an intervention group (e.g., Halpern-Meekin, 2014; Kerpelman et al., 2010).

Among these 17 studies, only one considered the influence of program characteristics on outcomes (Ma, Pittman, Kerpelman, & Adler-Baeder, 2014), and 10 compared outcomes based on participant characteristics (i.e., sex, race). For instance, Ma et al. (2014) found only modest differences in the effects of RME on high school youths' standards for partners and relationships based on variations in classroom social climate. Of the 10 studies examining participant characteristics, three found no differential impact in attitudes, knowledge, or behavior following RME based on age, sex, family structure, grade, or family income (Adler-Baeder et al., 2007; Schramm & Gomez-Scott, 2012; Wolfe, Crooks, Chiodo, Hughes, & Ellis, 2012). In contrast, some studies showed greater increases in relationship knowledge for African American students and students with poorer academic performance (Antle et al., 2011; Halpern-Meekin, 2010). Similarly, Kerpelman et al. (2010) reported greater improvements in conflict management for youth with fewer economic resources or from stepfamilies. Further, studies have found that RME has a greater impact among female than male adolescents for the development of healthier beliefs about romantic relationships, intimacy, and trustworthiness (Kerpelman et al., 2009; Ma et al., 2014) and greater increases in knowledge related to curriculum topics (Sparks, Lee, & Spjeldnes, 2012). Also, Bradford, Erickson, Smith, Adler-Baeder, and Ketring (2014) reported that the greatest increase in positive attitudes toward couples counseling (i.e., "behavioral intentions") after participation in RME occurred among African American female adolescents and Caucasian male adolescents, pointing to the importance of both race *and* sex.

In short, research on the association between youth characteristics and RME outcomes has indicated that youth-focused RME has a positive impact on various indicators of romantic relationship self-efficacy (RRSE), but that the impact is uneven across participant characteristics. Further, the number of studies examining potential programmatic moderators (e.g., setting, content, facilitator) is scant. Thus, the aim of the present study is to explore variations in RRSE based on both youth demographic characteristics and programmatic characteristics.

A Framework for Evaluating RME

The present study examines variations in RRSE based on contextual, developmental, and individual characteristics in accordance with the comprehensive framework for marriage education developed by Hawkins, Carroll, Doherty, and Willoughby (2004). This framework outlines seven educational dimensions influential to the impact of RME programs: *content* (what is taught; e.g., awareness, attitudes, relational skills, motivation), *intensity* (dosage; e.g., number of lessons offered, frequency of lessons), *method* (how it is learned; e.g., familiarity of the instructor with participant issues, learning styles), *setting* (where it takes place; e.g., neighborhood, school), *timing* (when it occurs; e.g., temporal and life circumstances of participants), *target* (who receives the program; e.g., sex, race, rural vs. urban dwelling), and *delivery* (how the program is disseminated; e.g., specialized and formal education led by trained specialists vs. education integrated in more comprehensive services provided across multiple setting and times). Hawkins et al. (2012) used this framework to guide a meta-analysis of RME programs for adults and found programs had larger impacts when content focused on communication skills (vs. expectations and virtues), when intensity was of moderate dosage (i.e., 9–21 contact hours), and when sessions were spread out over 10 or more weeks. Setting (e.g., university vs. religious) had no influence on program effects among adults.

Present Study

Using the Hawkins et al. (2004) framework, we expand on research that has found variations in

RME outcomes based on youth characteristics (e.g., race, sex). Specifically, the present study examined variation in youths' RRSE immediately following RME across six of the seven educational dimensions. These dimensions represent potential programmatic influences that have seldom been studied. The last dimension, delivery, reflects how RME is disseminated to the public (e.g., formal education such as community marriage initiatives or the integration of RME into existing human services; Hawkins et al., 2004). In the present study, RME was only disseminated to youth through formal education within a school-based or after-school setting; as such, examination of this dimension was not applicable. In the following subsections, we outline the six dimensions explored with corresponding research questions (RQ) and empirically supported hypothesis (H) when applicable.

Content

First, we explored variations in RRSE based on program content (RQ1). Although programmatic homogeneity is often assumed among RME evaluators (Hawkins et al., 2012), the adoption and implementation of intervention programs is not uniform across communities. Although programmatic homogeneity increases the likelihood of fidelity (e.g., all participants are provided the same information in the same effective way), educators in real-world settings often make adaptations in response to the audience's needs and availability, consumers' (e.g., schools, facilitators) values and preferences, context (i.e., setting), and personal capabilities (e.g., expertise, competing demands; Olsen et al., 2015; Spoth et al., 2013). Consistent with research on adults (Hawkins et al., 2012), we expected youth to report higher RRSE scores when they received content specific to communication and conflict management skills (H1).

Intensity

Next, we explored variation in RRSE based on program intensity using indicators of program dosage and dispersion (RQ2). It is assumed that a greater number of lessons received is linearly associated with more positive outcomes; however, a moderate dosage of programming has been found to yield similar outcomes (Hawkins et al., 2012). The frequency of lessons offered, or program dispersion, may also be associated with RRSE. For instance, when the length between classes is shorter, we suspect educators are better able to build on prior program content and in-class discussion; consequently, youth should be more likely to retain, and therefore apply, new information about romantic relationships. Because the optimal dosage and dispersion of youth-focused RME is unknown, we established no a priori hypothesis and instead took an exploratory approach in examining variations in RRSE based on program intensity.

Setting

We also examined variations in RRSE based on the program setting; that is, whether the program was offered in school or out of school (RQ3). Of the 17 studies described earlier, only two examined RME delivered in out-of-school settings (Antle et al., 2011; Bradford et al., 2014). Our study extends this work by including both in-school and out-of-school settings and by exploring possible variations in RRSE based on setting. Given our inability to identify prior research on this association, no a priori hypothesis was established.

Method

Regarding method (RQ4), the teaching methodology the youth received was similar across lessons (e.g., interactive discussion and activities), and all of the educators were female. However, classes evaluated in the present study were facilitated by local Cooperative Extension family and consumer sciences (FCS) and 4-H educators. Although both types of educators received training to teach the RME program offered, they varied in their programmatic background and experience. FCS educators conduct programming (e.g., family life education, health, nutrition) with both youth and adults; 4-H educators only conduct programming with youth. We made no a priori hypotheses regarding the association between facilitator background and RRSE because no prior youth-focused RME research examining facilitator background could be identified. We also examined method in terms of learning style using implementation of the program with single-sex (e.g., all female or all male youth) versus mixed-sex groups as an indicator. There is a lack of research comparing RME outcomes among youth who participate in a single-sex versus mixed-sex group, and

research in other program areas and in general classrooms shows mixed findings. For example, youth, and especially girls, prefer single-sex classrooms for the purposes of sex education (Strange, Oakely, & Forrest, 2003), and students are generally more attentive and interested and have higher school-related self-esteem in single-sex classrooms (Belcher, Frey, & Yankeelov, 2006). However, others have found that mixed-sex classrooms are related to higher standardized test scores and that single-sex classes are not as beneficial for boys as for girls (Hoffman, Parker, & Badgett, 2008). Thus, we expect that female, but not male, youth who received RME in a single-sex classroom will be more likely to report high RRSE scores (H2).

Timing

We also examined variations in RRSE based on several youth characteristics. Specific to timing (RQ5), 25% of youth begin dating as early as 12 years of age (Collins, 2003), and although the efficacy of RME is influenced by the developmental appropriateness of both content and timing of delivery (Hawkins et al., 2004), the empirical testing of this association is scant. We explored variations associated with youth's current grade level (i.e., Grades 6 and 7 vs. Grade 8 vs. Grades 9–12) and whether they reported having prior dating experience. We hypothesized that youth in high school and with prior dating experience are better able to contextualize and process the information being taught and hence would report higher RRSE scores compared with younger participants and youth who participated in the program before ever dating (H3).

Target

In relation to the target dimension (RQ6), we examined sex, race, and whether youth resided in a rural versus an urban county. Consistent with the literature described earlier (e.g., Antle et al., 2011; Kerpelman et al., 2009), we expected female youth and African American youth to report greater RRSE (H4). In addition, Hawkins et al. (2004) noted that an overlooked population in the evaluation of RME "is rural Americans whose lives are substantially different from those in urban settings and who have less access to services" (p. 555). In fact, rural youth experience teen dating violence at higher rates than urban youth, and this has been explained as a function of several factors including social isolation, lack of services, and patriarchal ideologies (Vézina & Hébert, 2007). However, given a lack of existing evidence on possible variations between rural and urban youth who participate in RME, we established no a priori hypothesis.

Youth Characteristics

Last, to expand on prior research showing an interaction between sex and race in influencing RME outcomes among youth (Bradford et al., 2014), we examined the interaction between each youth characteristic indicator (RQ7; i.e., sex, grade, previous dating experience, race, residency). Also, we explored whether the association between the program characteristics (i.e., content, intensity, method, setting) and RRSE are moderated by youth characteristics (RQ8). Because of the exploratory nature of these analyses and lack of prior research examining these interactions (with the exception of sex × race), no a priori hypotheses are specified.

Method

Procedures and Participants

The data for this study were collected from youth between 12 and 18 years of age who participated in Love U2: Relationship Smarts Plus (RS+; Adler-Baeder et al., 2007; Kerpelman et al., 2009; Pearson, 2007), which is listed in the U.S. Government's Substance Abuse and Mental Health Services Administration National Registry of Evidence-Based Programs and Practices. The program comprises 13 lessons focused on (a) building a foundation for understanding healthy relationships (Lessons 1–4), (b) knowledge about dating processes (Lessons 5–8), (c) developing communication and conflict management skills (Lessons 9–10), and (d) marriage and future planning (Lessons 11–13). As noted earlier, Cooperative Extension FCS and 4-H educators trained in RS+ facilitated the programs. The preferences of school and after-school administrators as well as FCS and 4-H educators, comfort with content, and available time to teach the program influenced which lessons were offered.

Because the aim of the present study was to understand variations in youths' RRSE following participation in the RS+ program—not

to evaluate program impact—youth were only asked to complete a survey at the conclusion of the series. Educators who offered a minimum of three lessons across at least three of the four content areas were asked to administer a brief, one-page survey to the youth to complete anonymously. As described subsequently, youth shared basic demographic information and rated themselves on a series of indicators reflecting RRSE. Importantly, youth were prompted to think about changes in their confidence compared with before they participated in the program as well as their intentions to use these skills.

Across a 4-year period, 27 Cooperative Extension educators (59.3% FCS; 88.9% Caucasian) reached a total of 2,003 youth across 96 offerings of the RS+ program. The sample was reduced to 1,620 youth who participated in a program that included at least three lessons—the minimum number required to be offered the survey—and 544 of them were absent on the last day of the program when the survey was administered or elected not to respond, leaving a sample of 1,076. Based on program-related data shared by the educators and the demographic data collected from the youth, Table 1 summarizes the characteristics and program experiences of the 1,076 youth who completed the survey and compares them and the 544 who were missing or refused to participate. Statistical differences between respondents and nonrespondents were detected on most program and youth characteristics—exceptions being classroom composition, prior dating experience, and sex—but we nonetheless believe that the analytic sample represents a sufficiently diverse group of youth to examine possible variations in RRSE across our dimensions.

Measures

Romantic Relationship Self-Efficacy. Respondents were asked, "As a result of participating in this program, how confident do you feel now compared to before in …" (a) forming healthy relationships (two items: "having a healthy relationship with friends and family" and "having a healthy dating relationship") and (b) applying interpersonal skills (three items: "handling conflict in a healthy way," "being a good and sensitive listener," and "expressing your feelings and sharing what you want from a dating partner"). Response options for each item ranged from *less confident* (scored as 1) to *a lot more confident* (4). Mean scores were computed for each of the two subscales, with higher scores corresponding with more RRSE. In the present study, each subscale had an acceptable level of internal reliability: Cronbach's $\alpha = .74$ for confidence forming healthy relationships and .79 for confidence applying interpersonal skills. The survey also included a single-item indicator of behavioral intention: "How likely are you to use the skills you learned in this program?" Response options ranged from *not at all likely* (1) to *very likely* (5). In our structural equation modeling analysis (described subsequently), this single item and the two computed subscales were used as indicators for a latent variable of perceived change in RRSE.

Educator-Reported Dimensions. For *content* (Dimension 1, RQ1), educators reported which lessons they offered during each series. Binary codes (*no* [0] and *yes* [1]) indicated each respondent was offered RS+ lessons within each content area. Within Content Area 1, Lessons 1 and 2 focus on identity and maturity development, and Lessons 3 and 4 define *love*. Within Content Area 2, Lessons 5 and 6 reinforce healthy dating practices, and Lessons 7 and 8 help youth distinguish between healthy versus unhealthy relationships. Within Content Area 3, Lessons 9 and 10 focus on communication and conflict management skills, and Lessons 11 and 12 explore future relationship choices, including parenting and marriage. No data were used from Lesson 13 because it is a review lesson and was rarely offered. *Intensity* (Dimension 2, RQ2) was assessed as the dispersion of the RS+ program and coded as a categorical variable with three groups: *1 week or less* (1), *weekly* (2), or *monthly* (3). Also, the total number of lessons offered (i.e., dosage) to each youth was computed as an indicator of intensity. Because prior research suggests that dosage affects the magnitude of effect (Hawkins et al., 2012), we explored variations in RRSE based on low (3–4 lessons), moderate (5–6 lessons), and high (7+ lessons) dosages. Next, *setting* (Dimension 3, RQ3) indicated whether youth received the program *during school* (0) versus *after school* (1), the latter occurring in community centers, religious settings, club meetings, and the like. Last, *method* (Dimension 4, RQ4) indicated whether the educators' program area of specialization was in general family life education or

Table 1. *Sample Characteristics and Group Differences*

Program and youth characteristics	Missing ($n = 544$)		Participant ($n = 1,076$)		F or χ^2	p
	n	%	n	%		
Dimension: content offered[a]						
Lesson 1–2 (development)	478	87.9	1070	99.4	113.98	<.01
Lesson 3–4 (love)	328	60.3	621	57.7	0.99	.32
Lesson 5–6 (healthy dating)	461	84.7	1040	96.7	75.33	<.01
Lesson 7–8 (healthy relationships)	488	97.7	1032	95.9	24.02	<.01
Lesson 9–10 (communication)	472	86.8	866	80.5	9.92	<.01
Lesson 11–12 (marriage and parenting)	278	51.1	428	39.8	18.85	<.01
Dimension: intensity						
Program dispersion					74.81	<.01
<1 week	28	5.1	196	18.2		
Weekly	238	43.8	520	48.3		
Monthly	278	51.1	360	33.5		
Total lessons offered					19.58	<.01
3–4	145	26.7	266	24.7		
5–6	267	49.1	636	59.1		
7–12	132	24.3	174	16.2		
Dimension: method						
Educator: FCS (vs. 4-H)	317	58.3	568	52.8	4.38	.04
Classroom sex: mixed (vs. single)	443	81.4	862	80.1	0.40	.53
Dimension: setting						
In school (vs. out of school)	397	73.1	941	87.5	52.66	<.01
Dimension: timing						
Age[a]	14.2	1.5	13.7	1.1	42.57	<.01
Education level					112.17	<.01
Grade 6–7	80	14.9	142	13.2		
Grade 8	273	50.8	796	74.0		
Grade 9–12	184	34.3	138	12.8		
Prior dating: Yes (vs. no)	380	84.3	847	82.8	0.48	.49
Dimension: target						
Sex: Female (vs. male)	294	55.0	611	57.0	0.61	.44
Ethnicity					36.53	<.01
African American	205	40.5	307	28.7		
Caucasian	201	39.7	599	55.9		
Other	100	19.8	165	15.4		
Residence: rural (vs. urban)	399	73.3	946	87.9	54.44	<.01

FCS (0) versus youth development or 4-H (1). Method was also assessed based on whether facilitators taught the program to a mixed-sex group (0) or single-sex group comprising all male or all female youth (1).

Youth-Reported Dimensions. School grade was used to assess *timing* (Dimension 5, RQ5)—that is, to explore variations across early, middle, and late adolescence: Grades 6 and 7 were labeled *early middle school* (1), Grade 8 was labeled *late middle school* (2), and Grades 9 through 12 were labeled *high school* (3). Youth also reported whether they had ever been in a dating relationship (1 = *yes*). *Target* (Dimension 6, RQ6) included youths' self-reports of their sex (*female* [0] or *male* [1]) and ethnicity. Because the vast majority of youth self-identified as either Caucasian (50.7%) or African American (32.5%), those who self-identified as Hispanic/Latino (9.2%), Native American (0.9%), Asian American (0.7%), or "other" classifications such as multiracial (4.6%) were collectively coded into an *other* category. Last, based on the county

where RS+ was offered, we coded whether youth resided in an *urban* (0) or *rural* (1) county using the Metropolitan Statistical Area index.

Analyses

Preliminary multivariate analyses of variance were conducted to examine the associations between our multiple independent variables and each indicator of RRSE. Results (not shown) indicated differences, in the expected direction, based on each youth and programmatic characteristic with the exception of receiving Lessons 1–2, 5–6, and 9–10, and residence (urban vs. rural). Thus, we proceeded with structural equation modeling (SEM) to assess the association between each characteristic and youths' RRSE while accounting for all other independent variables. A measurement model was tested to assess the factor loadings of the indicators for the latent RRSE construct. Because of their conceptual similarity, both indicators of confidence (i.e., *forming healthy relationships* and *applying interpersonal skills*) were allowed to covary. The full structural model was then analyzed to examine RQ1 through RQ6. Model fit for each SEM analysis was assessed using root mean squared error approximation (RMSEA; <.05 is satisfactory), comparative fit index (CFI; >.95), and Tucker-Lewis index (TLI; >0.95; Hu & Bentler, 1999). Last, we conducted multiple group analysis using chi-square difference tests to examine whether and how program (i.e., content, intensity, method, setting) and youth (i.e., sex, grade, prior dating experience, race, residency) characteristics interact to influence RRSE (RQ7–RQ8). Specifically, the difference in the chi-square value from the base model (i.e., all parameters free to vary) and for a model in which each parameter was constrained one at a time was compared with the critical value for one degree of freedom to determine the presence of moderation (Schumacker & Lomax, 2004).

Results

Descriptive Statistics and Measurement Model

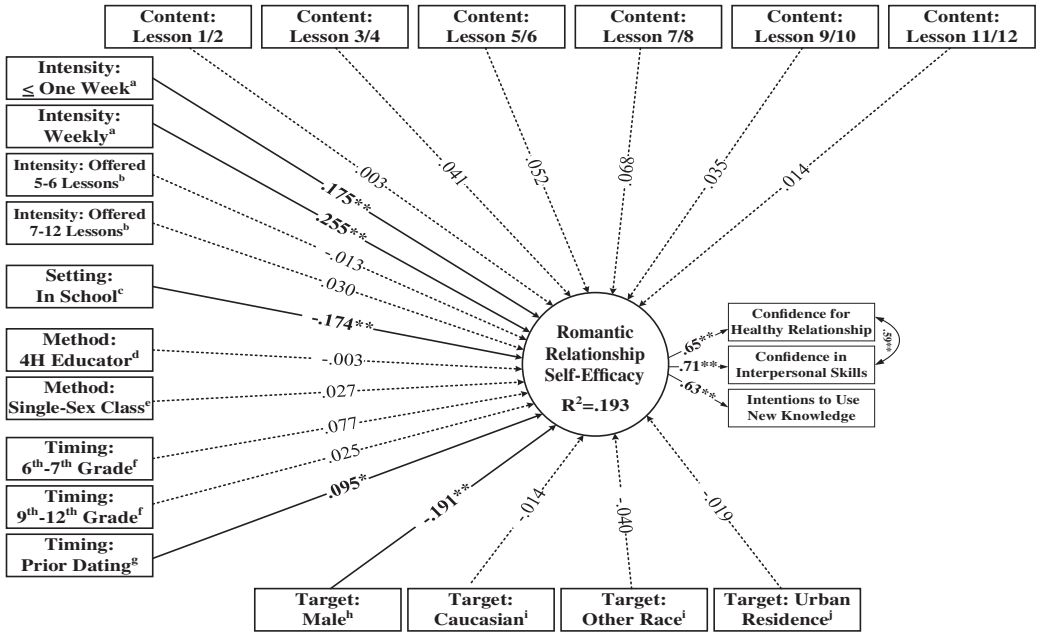
On the basis of group means, respondents reported feeling a little more confident after the program in their ability to form healthy relationships ($M = 3.25$, $SD = 0.74$) and apply the interpersonal skills learned ($M = 3.16$, $SD = 0.72$). Respondents as a whole also reported that they were likely to use the skills learned ($M = 4.03$, $SD = 0.98$). Results of the confirmatory factor analysis conducted to test the measurement model for the RRSE latent factor showed standardized factor loadings were adequately high, ranging from .49 to .91 ($p < .001$).

Full Model and Multigroup SEM Results

Results of the full structural model examining RQ1 through RQ6, illustrated in Figure 1, indicated good fit (CFI = 1.00, TLI = 0.99, RMSEA = .01). On average, youths' RRSE scores were statistically higher when the program was offered (a) within a week or in a weekly format (vs. monthly), (b) after school (vs. in school), and (c) subsequent to having had dating experience. In addition, female youth exhibited higher RRSE scores than male youth. Overall, the independent variables accounted for 19.3% of the variance in RRSE scores.

Next, we fit additional models to explore whether and how youth characteristics (i.e., timing and target dimensions) moderated the associations between other youth characteristics (RQ7) as well as between program characteristics (RQ8; i.e., content, intensity, method, and setting) and youths' RRSE following RME. Table 2 presents the statistically significant results of these multigroup comparison models (complete results are available from the first author). Across all models, results indicated good fit, with CFI and TLI ranging from .96 to 1.00 and RMSEA ranging from .00 to .03. In general, the results in Table 2 reinforce the findings reported earlier in the full model regarding the consistent statistical association between youths' RRSE following RME and program characteristics such as dispersion (i.e., weekly vs. monthly) and location (in-school vs. after-school setting) as well as youth characteristics such as sex and prior dating experience. Further, these analyses show that certain characteristics may be more strongly associated with RRSE for certain youth. Examination of the chi-square difference tests (see Table 2) indicated statistically significant sex × race (Model 1), grade × content (Model 2), race × intensity (Model 6), and race × timing (Model 8) effects. As shown in Model 1, despite some differences in RRSE based on sex, sex only statistically moderated the association between race and RRSE. Specifically, African American male youth had higher scores than Caucasian

FIGURE 1. STRUCTURAL EQUATION MODELING ESTIMATES OF YOUTH AND PROGRAM CHARACTERISTICS ON YOUTHS' PERCEIVED CHANGE IN ROMANTIC RELATIONSHIP SELF-EFFICACY ($n = 1{,}020$).



Comparative fit index (CFI) = .996; Tucker-Lewis index = .995; Root mean squared error approximation = .01; Standardized root mean square residual = .008. Comparison groups: [a]Monthly lessons. [b]Offered three or four total lessons. [c]After school. [d]FCS. [e]Mixed sex. [f]Eighth grade. [g]No prior dating experience. [h]Female. [i]African American. [j]Rural. ** $p < .01$; * $p < .05$.

male youth, whereas race was not associated with RRSE among female youth. As shown in Model 2, youth in eighth grade reported higher RRSE than youth in sixth or seventh grades when they were offered Lesson 11 (*Through the Eyes of a Child*), Lesson 12 (*Looking Toward the Future*), or both. Further, African American youth reported higher RRSE when they received the program as part of a weekly series (vs. Caucasian youth, Model 6) and subsequent to dating (vs. "others," Model 8).

DISCUSSION

Research based on test–control designs consistently demonstrates that youth-focused RME in general, and the RS+ program specifically, effectively promotes positive change in various youth outcomes. The present study addresses an important gap in the literature by exploring whether youths' reports of perceived changes in RRSE after RME varied on the basis of participant and program characteristics. This work can help inform the transportability of evidence-based youth-focused RME programming. Guided by a framework for effective RME programming (Hawkins et al., 2004) and work on self-efficacy and behavioral control (Ajzen, 1991; Ajzen et al., 2004; Bandura, 1977), we found statistical differences in a diverse sample of youths' reports of perceived changes in RRSE after their participation in the RS+ program. Although most youth reported high RRSE scores, the observed differences in RRSE associated with youths' characteristics and program implementation offer insightful implications for future research and practice in RME. The remainder of this article is focused on our interpretation of the main findings and corresponding recommendations for practice.

First, regarding participant characteristics (i.e., target and timing), prior research shows that RME may have a greater influence on outcomes for female youth and African American male youth (e.g., Antle et al., 2011; Bradford et al., 2014; Kerpelman et al., 2009; Sparks et al., 2012). Our findings reinforce similar differences on perceived changes in RRSE.

Table 2. *Multigroup Comparisons of Youth and Program Characteristics on Youths' Perceived Change in Romantic Relationship Self-Efficacy*

		Group 1			Group 2				
Model	Dimension: Groups compared	β	*SE*	*p*	β	*SE*	*P*	$\Delta\chi^2(1)$	*p*
1	Sex: male ($n = 440$) vs. female ($n = 580$)[a]								
	Content: Lesson 5–6	.17	.08	.04	–.01	.06	.86	3.69	.05
	Intensity: weekly (vs. monthly)	.30	.11	.00	.22	.10	.02	0.63	.43
	Timing: prior dating	.14	.06	.02	.05	.05	.34	1.24	.27
	Setting: in school	–.14	.09	.11	–.18	.08	.02	0.02	.89
	Target: Caucasian (vs. African American)	–.16	.07	.03	.09	.06	.15	6.93	<.01
2	Grade: sixth–seventh ($n = 128$) vs. eighth ($n = 764$)[b]								
	Content: Lesson 11/12	–.57	.30	.06	.18	.07	.02	5.37	.02
	Intensity: <1 week (vs. monthly)	.30	.34	.38	.17	.06	.01	0.00	1.00
	Intensity: weekly (vs. monthly)	–.23	.28	.41	.35	.08	.001	2.11	.15
	Setting: in school	–.24	.38	.53	–.13	.05	.01	0.17	.68
	Timing: prior dating	.09	.11	.42	.10	.04	.02	0.00	1.00
	Target: male	–.07	.11	.54	–.19	.05	.00	1.42	.23
3	Grade: ninth–twelfth ($n = 128$) vs. sixth–seventh ($n = 128$)[c]								
	Intensity: <1 week	.37	.19	.04	.26	.29	.37	0.12	.73
	Timing: prior dating	.25	.10	.01	.08	.09	.39	1.79	.18
	Target: Male	–.20	.09	.02	–.08	.08	.34	1.32	.25
4	Grade: ninth–twelfth ($n = 128$) vs. eighth ($n = 764$)[d]								
	Content: Lesson 11/12	.15	.22	.50	.18	.08	.02	0.23	.63
	Intensity: <1 week (vs. monthly)	.45	.22	.04	.17	.06	.01	0.41	.52
	Intensity: weekly (vs. monthly)	.07	.20	.72	.34	.08	.00	2.94	.09
	Timing: prior dating	.34	.14	.01	.10	.04	.02	1.39	.24
	Setting: in school	.06	.26	.82	–.13	.05	.01	3.05	.08
	Target: male	–.42	.14	.00	–.19	.05	.00	0.62	.43
5	Prior dating: yes ($n = 846$) vs. no ($n = 174$)[e]								
	Intensity: <1 week (vs. monthly)	.17	.08	.04	.24	.20	.25	0.06	.81
	Intensity: 2eekly (vs. monthly)	.27	.08	.00	.16	.16	.33	0.28	.59
	Setting: in school	–.16	.07	.01	–.14	.13	.28	0.00	1.00
	Target: male	–.18	.04	.00	–.31	.09	.00	2.06	.15
6	Ethnicity: Caucasian ($n = 577$) vs. African American ($n = 286$)[f]								
	Content: Lesson 11/12	.20	.10	.05	–.12	.14	.40	3.72	.05
	Intensity: <1 week (vs. monthly)	.27	.10	.01	.21	.14	.14	0.30	.58
	Intensity: weekly (vs. monthly)	.42	.09	.00	–.01	.19	.95	5.52	.02
	Timing: prior dating	.08	.05	.09	.22	.08	.00	2.12	.15
	Setting: in school	–.19	.07	.01	–.16	.15	.28	1.14	.29
	Target: male	–.24	.05	.00	–.04	.08	.62	5.99	.01
7	Ethnicity: other ($n = 157$) vs. Caucasian ($n = 577$)[g]								
	Content: Lesson 11/12	.18	.09	.048	–.12	.13	.38	3.51	.06
	Intensity: <1 week (vs. monthly)	–.01	.21	.981	.23	.08	.01	1.41	.23
	Intensity: weekly (vs. monthly)	.07	.21	.727	.38	.08	.00	2.31	.13
	Setting: in school	–.24	.13	.063	–.19	.07	.01	0.16	.69
	Target: male	–.21	.09	.027	–.22	.05	.00	0.05	.82

Table 2. *Continued*

Model	Dimension: Groups compared	Group 1			Group 2				
		β	*SE*	*p*	*β*	*SE*	*P*	$\Delta\chi^2(1)$	*p*
8	Ethnicity: other ($n = 157$) vs. African American ($n = 286$)[h]								
	Content: Lesson 5–6	.08	.12	.485	.16	.08	.04	0.72	.39
	Timing: prior dating	–.06	.09	.543	.22	.07	.00	5.66	.02
	Target: male	–.21	.09	.020	–.02	.08	.83	2.56	.11
9	Residence: rural ($n = 901$) vs. urban ($n = 119$)[i]								
	Timing: Grade 6–7 (vs. Grade 8)	.20	.05	<.001	.12	.18	.49	0.41	.52
	Timing: prior dating	.09	.04	.023	.12	.10	.22	0.27	.60
	Setting: in school	–.13	.05	.018	–.04	.82	.96	0.04	.84
	Target: male	–.17	.04	<.001	–.35	.11	.00	2.36	.12

Note. Only statistically significant results presented. Full model results are available from the first author.

[a]Model 1: comparative fit index (CFI) = .99; Tucker-Lewis index (TLI) = 0.98; root mean squared error approximation (RMSEA) = .02; $R^2 = 13.4\%$ (G1: females), 23.3% (G2: males). [b]Model 2: CFI = .98; TLI = 0.98; RMSEA = .03; $R^2 = 27.7\%$ (G1: sixth- and seventh-graders), 15.8% (G2: eighth-graders). [c]Model 3: CFI = 1.00; TLI = 1.00; RMSEA = .00; $R^2 = 41.4\%$ (G1: ninth- through 12th-graders), 28.4% (G2: sixth- and seventh-graders). [d]Model 4: CFI = .98; TLI = 0.97; RMSEA = .03; $R^2 = 15.8\%$ (G1: eighth-graders), 44.6% (G2: ninth- through 12th-graders). [e]Model 5: CFI = .97; TLI = 0.96; RMSEA = .03; $R^2 = 19.3\%$ (G1: prior dating), 28.6% (G2: no prior dating). [f]Model 6: CFI = .98; TLI = 0.98; RMSEA = .03; $R^2 = 24.9\%$ (G1: White), 27.5% (G2: Black). [g]Model 7: CFI = .98; TLI = 0.98; RMSEA = .03; $R^2 = 28.7\%$ (G1: other), 23.0% (G2: White). [h]Model 8: CFI = .99; TLI = 0.99; RMSEA = .02; $R^2 = 27.5\%$ (G1: other), 24.5% (G2: Black). [i]Model 9: CFI = .98; TLI = 0.97; RMSEA = .03; $R^2 = 16.6\%$ (G1: rural), 38.8% (G2: urban).

Still, our study is unique in showing that this association exists even after accounting for all other youth and program characteristics. Although Caucasian male youth tended to report high RRSE scores following RS+, our findings suggest that female adolescents and African American male adolescents may feel more confident about their new healthy relationship skills after receiving RME. This is especially relevant for female adolescents given their elevated risk for being victims of dating violence and sexual victimization (e.g., Centers for Disease Control and Prevention, 2014; Maas et al., 2010; Manlove et al., 2004). Similarly, African American youth are more likely than Caucasian youth to engage in physical and verbal aggression in their dating relationships (e.g., Adler-Baeder et al., 2007; Foshee et al., 2008) and, as adults, are more likely to have children outside of marriage, not marry, and divorce (e.g., Chambers & Kravitz, 2011). Thus, RME may have a positive influence on youth most vulnerable to abusive and unstable relationships.

Also unique to our study is the examination of timing—when youth receive RME—relative to their grade level and dating experience. With regard to grade level, we found no statistical differences between middle and high school students on RRSE, contrary to our hypothesis that youth in high school would be better able to contextualize and process the information taught. Youth are beginning to explore romantic relationships during early adolescence (Kerpelman, 2007), so acquiring knowledge early in middle school could help youth develop healthy relationship practices that improve their emotional, social, physical, and academic well-being later in adolescence. Further, group comparisons suggest that certain RME content may be more developmentally appropriate and advantageous for promoting positive RRSE. As shown in Table 2 (see Model 2), eighth-graders who received Lessons 11, 12, or both, which reinforce the importance of healthy relationships on future parenting and marital choice, tended to report greater perceived change in RRSE compared with sixth- and seventh-graders who received those lessons. It is possible that eighth-graders have greater sexual awareness (e.g., sex education classes, conversations with parents, familiar with peers who experienced teen pregnancy) than sixth- and seventh-graders and are therefore better prepared to process the content from these lessons. However, we are reluctant to offer a definitive interpretation of this finding because we are not aware of prior research examining

variations in youth outcomes based on the interaction between timing (i.e., grade level) and specific RME curriculum content. At best, these findings collectively reinforce the potential value in tailoring RME to be developmentally relevant for the youth being served.

In addition, our findings consistently showed that youth who had dating experience reported greater perceived change in RRSE at the conclusion of the RS+ program than youth who did not. Nearly 83% of the youth in our sample reported that they were in a dating relationship before participating in the RS+ program, with a slightly greater proportion of eighth-graders (85%) and ninth- through twelfth-graders (83%) reporting that they had previously dated compared with sixth- and seventh-graders (73%). Prior dating experience, regardless of the nature and extent of relationships, may help youth better understand the real-life implications of RME. Thus, these youth may feel more confident in applying the knowledge and skills they learn. Further, our group comparison models (see Model 8 in Table 2) suggest that prior dating experience was more strongly associated with perceived change in RRSE for African American youth than those who identified with other or multiple ethnicities. Consistent with previous work (e.g., Antle et al., 2011), it may be that African American youth have a greater need for RME and thus are more likely to report an increase in knowledge and efficacy following participation.

Next, no prior research to our knowledge has examined variations in youth-focused RME related to program implementation (e.g., content, intensity, method, setting). This may be due to expectations that rigorous and publishable program evaluation research should reflect controlled and standardized programing (e.g., all participants receive the same content of programming in a similar way and setting). However, real-world implementation of family life education programs varies based on community input and audience needs, programmatic constraints (e.g., time, space, audience accessibility, school policies), and facilitator preferences (Halpern-Meekin, 2010; Olsen et al., 2015). This raises concerns about the replicability of evidence-based programs when controls are not in place. A better understanding of how program outcomes differ as a result of implementation variability could help inform future practice (Olsen et al., 2015). Consistent with prior studies evaluating RME with adults (Hawkins et al., 2012), our findings suggest that similar variations in outcomes may exist among youth.

Specifically, after accounting for all other youth and program characteristics, the intensity and setting of programming was important for youth in the present study. Although the number of lessons offered (i.e., dosage) was not statistically associated with youths' perceived changes in RRSE, program dispersion was: Youth who received RS+ lessons either weekly or within a week reported higher RRSE scores compared with those who received the program as part of a monthly series. Consistent with research evaluating the benefits of RME for adults (Hawkins et al., 2012), our findings suggest that there is value in scheduling youth-focused RME with short—daily or weekly—rather than relatively long intervals between sessions. This may facilitate instruction (e.g., less time reviewing past material, easier to connect content across lessons) and greater learning retention for youth. Examining the data by gender indicated that there was a positive association between RRSE and receiving the program in a weekly format for both male and female adolescents. However, our group comparisons also revealed that the RRSE benefit of a weekly versus monthly series was larger for Caucasian youth than for African American youth (see Model 6 in Table 2). Although we take caution in interpreting this unique finding, we believe it simply reinforces the possible benefits of RME for African American youth regardless of whether it is delivered weekly or monthly.

In addition, youth offered the program in an after-school (vs. in-school) setting tended to report higher RRSE scores. County Extension educators reported limited time and classroom management as common challenges implementing RS+ in schools during regular class times. Thus, the observed differences may be at least partially accounted for by typical differences in classroom sizes and duration of time teaching each lesson (e.g., 45 minutes for in-school programs and 60 minutes for out-of-school programs). Although data are unavailable to examine this supposition, it is possible that out-of-school settings provided more time and flexibility for facilitators to teach the curriculum content and engage youth, which can facilitate greater adherence or fidelity to the curriculum and consequently more positive outcomes (Spoth et al., 2013). Future research could use various approaches (e.g., survey,

observation, interviews) to examine what is actually occurring across different settings to better understand the influence of setting on program outcomes.

Last, examination of the method in which RS+ was delivered revealed no statistical differences by educator specialization (FCS vs. 4-H Extension educators) or classroom composition (mixed- vs. single-sex groups). Although educators with various backgrounds, training, and job responsibilities implemented RS+, each educator received curriculum training from the first author, as well as technical assistance and support before and during implementation, as needed. Uniform training is essential for promoting consistent implementation and enhancing program outcomes (Spoth et al., 2013) and may explain why differences were not observed in youths' reports of RRSE according to educator specialization. Also, our results suggest that classroom composition may not be as critical relative to other program characteristics. This finding may be particularly useful to educators who often do not have control over classroom composition and reinforces the importance of attending to curriculum content, intensity, and effective delivery.

Implications for Educators and Practitioners

Our findings on variations in RRSE based on youth and program characteristics offer some practical insights about the dissemination of youth-focused RME. In general, there are benefits in taking an inclusive approach to RME with youth, as demonstrated by the diversity of youth the County Extension educators engaged. Although certain youth, and especially at-risk youth, could benefit more from RME, it may be challenging for practitioners to identify which youth are most vulnerable and in need of RME. Practitioners may find value in documenting and examining program outcomes for all youth as well as subgroups of youth. Exploring both between-group (e.g., male vs. female youth) and within-group (e.g., male youth) variations in program outcomes could facilitate informed decisions regarding the need for supplemental program content and resources to meet the needs of the youth being served. Importantly, like others (Adler-Baeder et al., 2007), we caution against interpreting the differences detected in our findings based on sex, race, and grade level as implying that any one particular group of youth should be targeted for RME. Instead, our findings reinforce the importance of understanding the diversity of a target audience to appropriately tailor the delivery of program content to meet their needs. In fact, program characteristics such as setting and intensity, described earlier, may be more important for practitioners to consider when planning RME programming with youth.

Practitioners should be sensitive to the tension between adapting program content to meet the needs of diverse groups and fidelity to the material. Programmatic homogeneity increases the likelihood that material is taught with fidelity and that recipients are provided the information in the most effective way. This is particularly relevant when using evidence-based programming. However, in practice, educators often encounter contextual constraints (e.g., setting, time), differing knowledge levels and needs of the audience, and other factors that can influence what is taught and how it is taught. This was often why the majority of County Extension educators offered the youth in our sample a subset of the lessons from the RS+ curriculum. Still, they did offer a minimum of one lesson from each of the first three core content areas focused on understanding healthy relationships (Lessons 1–4), dating relationship processes (Lessons 5–8), and communication/conflict management skills (Lesson 9–10), which may explain why variations in RRSE were not observed across the various RS+ lesson topics. According to Olsen et al. (2015), practitioners can balance tailoring program content in response to individual and contextual needs with program fidelity by retaining the program's "essential ingredients" (e.g., activities, practices, lessons) responsible for program outcomes.

Limitations and Future Directions

Although this study offers unique contributions to the literature and has relevant implications for practitioners conducting youth-focused RME, it is important to note a few limitations. First, to ensure anonymity and reduce response burden among youth, our examination of target characteristics was limited. Prior research indicates other youth characteristics, such as socioeconomic background, parents' marital status, and household composition, as well as youths' prior relationship beliefs and experiences, also influence the efficacy of RME

for youth (Halpern-Meekin, 2010; Kerpelman et al., 2010). We are also not familiar with published research on, nor did we collect data that allowed us to examine, the influence of youths' sexual orientation on the impact of RME. Thus, additional research is needed to examine the influence of a broader array of target characteristics to better understand for whom RME may yield greater short- and long-term impact.

In addition, although our study captures many of the dimensions reflected in the Hawkins et al. (2004) framework, we were unable to document and examine program delivery (e.g., stand-alone program versus integrated into a larger program or range of services) as well as other aspects of program content (e.g., whether specific content within certain lessons may matter more than other content), setting (e.g., type of class the program was offered in during school; nature of out-of-school program; classroom size), intensity (e.g., offered vs. received lessons; duration of each lesson), and method (e.g., program fidelity; facilitator characteristics and teaching styles). For example, similar to an intent-to-treat approach in most randomized control–treatment design studies (i.e., all treatment group participants are included in analyses regardless of the level of program dosage completed), our analyses of dosage focused on whether youth were offered lessons (an opt-in approach) as opposed to whether they passively received the lessons in the course of their existing schedules. Although 76.7% of the youth in our sample attended the lessons offered, it is not clear to what extent the youth who missed lessons might have been affected differently (e.g., did youth share information about lesson content with those who missed a lesson?). Future research is needed that examines this more closely as well as the possible linear versus curvilinear association between dosage and program outcomes.

Similarly, the extent to which lessons were covered in their entirety could also have influenced youth outcomes. Decisions not to teach certain lessons and modifications to content may have been influenced by administrator and educator preferences regarding what they felt would be most beneficial for their audience, school performance standards, and perceived receptiveness among parents. Although educators were trained and encouraged to address the core concepts of each lesson and were provided recommendations on how to trim content as needed based on time constraints, how much of each lesson they actually taught and adherence to program fidelity was not documented. A closer look at administrator and facilitator preferences, content actually delivered and received, as well as variations in the relevance of specific content and adaptations based on youth characteristics and experiences (e.g., age, dating experience) should be examined in future research. Also, we were unable to examine facilitator race (89% Caucasian) and sex (100% female) due to lack of variability, we did not have data on facilitator ages, and we were also unable to examine interactions between these facilitator characteristics and youth characteristics on youths' outcomes. It is possible that youth who perceive their facilitator as someone they can better relate to (e.g., they are of the same race or sex; the facilitator is younger) may be more receptive to program messages and thus get more out of the program experience. Although empirical support for this "matching hypothesis" has been reported in studies of RME programming with adults (e.g., Bradford, Adler-Baeder, Ketring, & Smith, 2012), we are not aware of similar research on youth. Future examination of how programs are disseminated could provide a deeper understanding of how these dimensions of RME programming contribute to positive outcomes for youth.

Further, the convenience sample and posttest-only design of the present study warrant caution for the generalizability of our findings and exertion of any assumptions regarding program impact. First, youth who completed the survey were statistically different from those who did not across most dimensions examined. Although the impact of differential attrition was minimized by including all of these variables in a simultaneous analysis (in effect, statistically controlling for those dropout differences), postprogram means scores were still potentially biased along these dimensions. Also, we are unable to account for which youth were nested within the same classroom and school (or after-school setting), and our data are not independent because youth in one classroom or school are likely more similar to each other than youth from another classroom or school. Thus, our analyses may have produced biased estimates of the association between our variables. In addition, we have no knowledge of the youths' relationship skills before the program and no control or comparison group with whom to compare program effects. As such, we cannot infer whether and how much

the program actually influenced change in relationships skills. Rather, our measure only allows us to draw conclusions on how youth *felt* they changed over the course of the program, consistent with the concept of self-efficacy. Our findings showed that youth who completed the RS+ program tended to self-report positive perceived confidence changes and intentions to engage in the relationship skills learned. According to the theory of planned behavior (Ajzen, 1991; Ajzen et al., 2004), when perceived behavioral control is combined with intentions to use the skills learned, desired behavioral outcomes can be achieved. Although existing, albeit limited, research has shown RME to deter unhealthy dating behaviors (e.g., Adler-Baeder et al., 2007; Gardner & Boellaard, 2007), research is still needed to determine whether and how these beliefs translate into behaviors that positively shape the relationship trajectories of youth and whether youth and program characteristics moderate the association between program impact and future healthy relationship behaviors.

In closing, variability exists in how programs in general, and RME specifically, are implemented in uncontrolled real-world settings. Knowing prior research using intervention–control designs has demonstrated the effectiveness of the RS+ curriculum, our collective findings contribute to an understanding of variability in youths' perceived behavioral control and intentions postprogram. Despite clear limitations, our findings suggest that youths' perceived behavioral control and intentions may vary on the basis of certain youth and program characteristics. Additional research is needed to further understand the influence of these characteristics across programs aimed at promoting healthy relationships for youth to inform effective program design and delivery.

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*Indicates an RME evaluation article in which outcomes were compared based on youth characteristics

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