Peer Influence Moderates Relationship Education Effects on Adolescents' Romantic Ideals

by

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Abstract

The effectiveness of relationship education has been confirmed for youth in correcting faulty romantic beliefs. Some evaluation studies also support that relationship education plays a role for building and modifying romantic standards among adolescents. We know little about which factors, besides participants' characteristics, influence program efficacy to what extent, and for whom. This current study drew upon assumptions from social ecological framework that proposes the importance of contextual influence conceptualized by peer influences on adolescents' romantic ideals among a locally representative sample in terms of race of 1,616 adolescents from 111 high schools who registered in family and consumer science classes in a southern state. Multi-level models were conducted.

This study confirmed the relationship education effects on adolescents' romantic beliefs and standards. It suggests that the curriculum is valuable for adolescents in modifying their romantic beliefs and standards in the desired directions. Moreover, curriculum delivery in elective classes is a practical device for reaching a broad range of adolescents.

In addition, this study tested different types of peer influences, at both individual- and class-levels, as a condition and mechanism of the linkage between relationship education and romantic ideals beyond the personal demographics (i.e., age, gender, and race) and dating experience (i.e., currently, past, and never dated). The results indicated that the individual deviant peer influence (DPI) seemed to be a stronger predictor than class DPI. In classes with higher mean levels of DPI among the members, greater inaccuracy was observed for one

construct (“love is enough”). When adolescents attributed deviant behavior to more of their personal peer network, these adolescents endorsed lower standards for romantic relationships and relationship partners. However, the less inaccurate belief of “one and only” was observed among those students unexpectedly, which may be attributed to the diverse family structures. Both individual and class DPI did not moderate program efficacy independently, but relationship education was especially beneficial to those whose peer influence at both the individual- and class-level is most deviant simultaneously for two constructs (i.e., “love is enough” and intimacy/loyalty), while controlling for everything else. Females had slightly higher romantic relationship and partner standards. Those who were currently dating endorsed more inaccurate beliefs compared to their counterparts who had dated in the past or had never dated.

Relationship education evaluation implications include focuses on considering peer influence when examining program efficacy, understanding that students with greatest needs benefitted most from treatment (i.e., both high individual and class DPI), having well-trained teachers who are good at facilitating a constructive classroom and delivering curriculum content, assessing romantic standards using both attitudinal and behavioral aspects to tap standards completely, refining the moderators to know their effects on program more accurately, and tailoring curriculum content specially to males. Future research directions should expand to consider more potential influence from individual, class, school, and family when testing the development of romantic ideals and relationship education effects.

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I. Introduction

One of the important developmental tasks of adolescence is learning what it means to form and maintain romantic relationships (Simon, Aikins, & Prinstein, 2008). Adolescents' experiences in these relationships are related to a wide range of psychosocial adjustments (e.g., social status, depression, antisocial behaviors, and self-esteem, Furman & Shaffer, 2003). Researchers have long studied broader beliefs about the romantic feeling of love and what specific characteristics make romantic relationships work that guide individuals to select romantic partners (e.g., Hill, 1945) and develop romantic relationships (e.g., Cobb, Larson, & Watson, 2003; Fletcher, Simpson, Thomas, & Gile, 1999). A great volume of work has emerged in this area (e.g., Buss & Barners, 1986; Cobb et al., 2003; Goodwin & Tang, 1991; Larson, 1992; Simpson & Gangestad, 1992), and prior studies show that romantic beliefs and standards play a significant role in determining how individuals maintain, and terminate romantic relationships (e.g., Eastwick & Finkel, 2008; Fletcher & Simpson, 2000) and whether there is good relationship quality (e.g., Larson & Holman, 1994). For this study, we will refer to these beliefs and standards as "romantic ideals."

Prior research (e.g., Hefner & Wilson, 2013) describes romantic standards and beliefs as two types of romantic ideals. Romantic beliefs can be thought of as a set of broader ideals about love and romance (e.g., Cobb et al., 2003; Larson, 1992; Regan & Anguiano, 2010; Sprecher & Metts, 1989). For example, Hefner and Wilson described romantic beliefs as a set of expectations about how relationships should be initiated, developed, and maintained. Romantic beliefs can be accurate or inaccurate. Realistic, accurate relationship beliefs may facilitate individuals' personal growth and help in the development of relationships (Hamamci & Esen-Coban, 2010). One example of accurate romantic beliefs is that relationships are not always

perfect (e.g., Sullivan & Schwebel, 1995). However, inaccurate or faulty relationship beliefs, which are described as irrational expectations regarding the nature of relationships (e.g., Larson, 1992), may negatively influence individuals' romantic experience in ongoing romantic or marital relationships (e.g., Addis & Bernard, 2002; Epstein, Eidelson, & Dryden, 1988). For example, one typical faulty relationship belief is that there is only one ideal partner in the world for each person to marry (e.g., Larson, 1992). People who hold this belief may wait passively for the special person and miss many viable prospective partners (Cobb et al., 2003; Larson 1992).

Romantic standards can be understood as a set of ideals that reflect desired qualities in partners/ relationships (e.g., Fletcher et al., 1999, 2000; Markey & Markey, 2007). For example, Fletcher et al. (1999) defined romantic standards as continuously accessible knowledge structures relating to what makes for better romantic partners or relationships. For example, individual standards for a romantic partner might include being understanding, supportive and/or considerate. Researchers studying these romantic standards tend to ask participants to rate their partner's descriptive traits (e.g., Fletcher et al., 1999). Prior studies have shown that these knowledge structures play a significant role in deciding whom people should select and maintain as romantic partners (e.g., Fletcher et al., 2000), supporting the importance of these standards in all ongoing romantic-type relationships. For example, a study by Fletcher and colleagues of 100 university students from the 1st to 12th month of their dating relationships found that participants are more likely to experience greater relationship quality and less relationship dissolution if their current partners match their standards. Moreover, standards vary in their functionality. Partners and relationships that meet a higher standard objectively tend to be higher quality relationships with more satisfied participants and more stable relationships. For example, Kaslow and Robison

(1996) revealed some essential standards relating to higher marital satisfaction such as commitment, respect and responsibility among 57 couples married over 25 years.

Before forming romantic relationships, individuals may have pre-existing expectations regarding what relationships should be that represent romantic beliefs and what characteristics the partners should have that represent romantic standards (e.g., Sprecher & Metts, 1999). These expectations regarding romantic ideals influence their later relationship satisfaction, love and commitment (e.g., Addis & Bernard, 2002; Murray, Holmes, & Griffin, 1996). Because adolescents tend to be unrealistic about romantic relationships and expect their relationships with romantic partners to be nearly perfect (Montgomery, 2005), they are vulnerable. How do they form and develop ideals regarding romantic relationships? The ecological model (Bronfenbrenner 1989) gives theoretical support to the idea that individuals' expectations of romantic ideals for their partners and relationships originate in cultural norms rooted in role models (e.g., peer models), as well as individuals' personal attributes (e.g., sex, age, and gender) and amounts of dating experience. Prior studies also have reported that adolescents obtain dating information through diverse sources, including interactive contexts with significant others (e.g., peers and parents), and relationships education in various settings (e.g., Wood, Senn, Desmarais, Park, & Verberg, 2002).

But not all sources through which teens obtain romantic relationship knowledge provide accurate information. Social cognitive theory (Bandura, 1986, 2002) suggests that media could offer unhealthy romantic ideals. Other empirical studies also make this claim (e.g., Holmes, 2007; Segrin & Nabi, 2002). For example, Holmes reported an association between romantic-oriented themes (e.g., love at first sight) transmitted in media and undergraduate students' unhealthy romantic beliefs (e.g., meeting the right person only happens once in a lifetime).

Similarly, Segrin and Nabi (2002) found a relationship between romantic television consumption and university students' idealized marriage expectations (e.g., you should know each other's inner-most feelings). In addition, some teenagers may not understand what constitutes a healthy relationship and may lack positive roles models, which would make them prone to unhealthy relationships/ behaviors (Kerpelman, Pittman, Adler-Baeder, Eryigit, & Paulk, 2009). This study examines high school students' healthy and unhealthy romantic ideals (i.e., beliefs and standards).

Among all the information sources from which adolescents attain standards and beliefs regarding romantic relationships, research based relationship education is unique since it transfers healthy information while other sources may transmit both healthy and unhealthy knowledge. Several studies have already reported that inaccurate relationship beliefs could be corrected by relationship education (Adler-Baeder, et al., 2007; Kerpelman, et al., 2010) although research addressing whether relationship education affects romantic partners/relationships standards is limited (for exceptions see Ma, Pittman, Kerpelman, & Adler-Baeder, 2014; Kerpelman et al., 2009). To contribute to this area of need, this study uses a pre-test/post-test design controlling for pretest scores to test whether relationship education modifies adolescents' romantic ideals in desired directions while testing the direct and interactive effects of other environmental and personal influences. *Our first and most important research question is whether standards for romantic partners/relationships and romantic beliefs are influenced in the desired directions by a general relationship education curriculum, and we expect that they are. Specifically, we anticipate that high school aged students receiving a relationship education curriculum will increase romantic partner/relationship standards and decrease faulty romantic relationship beliefs compared to peers who do not receive the curriculum.*

Besides relationship education, the effects of social contexts on romantic beliefs and standards stem from diverse sources. Peer influence may be especially important since prior studies have shown that peers provide a social climate in which group norms regarding diverse behaviors and attitudes are developed and maintained (e.g., Eder & Nenga, 2003). Kerpelman et al. (2009) first called for considering the impacts of peer influence on relationship education effects because peer influence appeared to explain the erosion of long term program efficacy. Echoing their suggestion, Ma et al. (2014) conceptualized social climate among classroom members as a type of peer influence and tested it as a predictor of romantic standards and a moderator of relationship education. However, their findings only supported the effect of class social climate on one of two outcomes and only for students with higher pre-test scores. The authors attributed the weak impacts to the fact that the peer influence variable (which was the class mean of class members' pretest scores) was not observable to class members and hence, was not an obvious and influential social climate to individual class members. Therefore, the current study takes the perspective that influence from close peers will have a more powerful effect on romantic ideals as they do in research on attitudes and behaviors in other areas of adolescent experience (e.g., Prinstein & Dodge, 2008).

Prior studies have demonstrated that the adolescents' behavior and attitudes are influenced easily by their close friends' behavior or attitudes (e.g., Jaccard, Blanton, & Dodge, 2005). A "deviant" peer is one whose behavior, values or attitudes differ from the norm whereas a "conventional" peer is one whose behavior, values or attitudes conform to norms (e.g., Lin, 1991). Many studies document the negative effects of deviant peers on adolescents' behaviors in diverse domains (e.g., reduced academic achievement, aggressive behavior, drug use, delinquency, sexual behavior and binge drinking; Fuligni, Eccles, Barber, & Clements, 2001;

Jaccard et al., 2005; Reitz, Dekovic, Meijer, & Engels, 2006). Other studies demonstrate positive effects of teens' affiliation with non-deviant (conventional) peers on school performance, academic achievement, and emotional well-being (e.g., Cook, Deng, & Morgano, 2007; Nelson & DeBacker, 2008).

Numerous studies (e.g., Andrews, Hampson, & Barckley, 2008; Haines, 1996; Gibbons & Gerrard, 1995, 1997; Gibbons, Gerrard, & Lane, 2003; Perkins, 1995) also have reported that peers play a significant role in attitude formation in diverse domains through various mechanisms such as social norms, social image, social evaluations, peer acceptance and peer rejection, although the influence of deviant peers has not been examined directly in the formation of adolescents' romantic beliefs and standards. For example, a great body of research studies the role of children's perception of their peers' risky behaviors on their own risky behaviors by using social image as one of the mechanisms (e.g., Andrews et al., 2008; Gibbsons & Gerrard, 1995). For example, adolescents' perceived popularity of the risky behavior by peers predicts the child's enactment of the risky behavior.

The prototype/willingness model (Gibbons & Gerrard, 1995, 1997; Gibbons et al., 2003) describes another mechanism for understanding peers' role on teens' own attitudes and behaviors and claims that individuals hold mental prototypes of the kinds of people who perform certain types of behaviors or hold certain types of beliefs/standards. The prototype, in turn, predicts their willingness to engage in the behavior through perceived consequence of conducting the risky behaviors (e.g., "if I smoke in front of my peers, I may be accepted by them"; Stone & Brown, 1998) or through social comparison process (e.g., the more similarity between adolescents' self-image and prototype, the more likely to conduct the behavior related to the prototype; Gibbons et al., 2003; Rivis, Sheeran, & Armitage, 2006). Earlier studies report that adolescents develop

risky images or prototypes that reflect their perceptions of the type of person that does specific negative behaviors (e.g., smoking) at very early ages (Gerrard, Gibbons, Stock, Vande Lune, & Cleveland, 2005). Although there are sparse studies regarding the decision making procedure involved in romantic ideals, it can be assumed that what adolescents think their close peers are doing and their perceptions of the deviant bias of their peers play a vital role in shaping their own romantic ideals. Individual deviant peer influence (DPI) is conceptualized as a deviant bias at the individual-level originating from the individual's perceptions that their close friends engage in relatively many deviant behaviors and relatively few conventional behaviors. This bias may affect the response of individuals to norms related to romantic ideals and educational messages that target those ideals.

One emerging theme in the peer influence literature is to consider different types of peer influence simultaneously (e.g., close friends, classmates; Brechwald & Prinstein, 2011). Research documents that the larger social context in which peer relationships are nested includes a variety of other peer and peer-like relationships beyond close friends (e.g., Brechwald & Prinstein, 2011) that may influence the individuals with whom they interact. Within the context of a school setting, a class-level social climate variable can reflect the average level of DPI among the members of a class and may be a salient class attribute beyond the individual's own deviance for shaping the social influence taking place in that class. In a class with more individuals with more deviant close friends, a deviant bias may exist in the class that is distinct from the deviant bias derived from the individual member's close network of peers. DPI in the class context continues to refer to deviant peer influence, but at a class-level. Peer relationships at multiple levels are important to adolescent attitudes and decisions (e.g., Brown & Klute, 2003; Kindermann, 2007). Since in this study classmates are also co-participants in relationship

education, the social climate among class members may influence romantic ideals directly. Therefore, *our 2nd research question is whether individual and/or class DPI are associated with romantic ideals like they are with other aspects of children's healthy and unhealthy performance and adjustment. Our expectation is that they are and that association is negative (i.e., in the less healthy direction).*

The general effectiveness of relationship education toward adolescents has been consistently identified by previous research (e.g., Adler-Baeder et al., 2007; Gardner, 2004; Gardner & Boellaard, 2007; Kerpelman et al., 2010), but it is essential to understand "what works for whom" by considering the factors moderating relationship education effects (Wadsworth & Markman, 2012). As a type of academic activity, relationship education involves a learning process that can be expected to be as open to the effects of DPI as any other academic activity. Deviant youth tend to resist attempts to alter or influence their behaviors or attitudes in the direction of the normative (e.g., Conduct Problems Prevention Research Group [CPPRG], 2010). Moreover, adolescents' externalizing (delinquent and aggressive) behaviors are associated with their friends' deviant behaviors (e.g., Reitz et al., 2006). Therefore, adolescents who are exposed to a bias toward deviance (i.e., have more deviant close friends) may also resist or disrespect the general normative theme of the curriculum or the specific messages regarding romantic beliefs and standards. Therefore, it is necessary to test the two-way interaction between individual DPI and treatment. In detail, individual DPI is expected to influence adolescents' acceptance of relationship education negatively among test students.

The ecological perspective (Bronfenbrenner, 1989) encourages consideration of social context in individual behavior. Social and developmental psychologists assert that social norms regulate adolescents' behaviors and help explain peer influence (e.g., Bandura, 1986; Berger,

2008; Blanton & Burkley, 2008; Crick & Dodge, 1994; Dodge, 1986; Prentice, 2008). Reference group theory (Kelly, 1952) suggests that peers serve to influence children's behaviors and beliefs indirectly through group norms and social comparison. The above frameworks reveal different types of peer influence both from close friends' behaviors and from broader contexts. In this study, because classmates are co-participants in the curriculum, we examine a class-level form of potential collective peer influence conceptualized paradoxically as a group "norm" toward a deviant bias. Specifically, we assume that the general openness of individuals to the curriculum message will be different in classrooms with varying levels of DPI. In particular, the class social climate is expected to be less conducive to learning the curriculum themes if the class-level DPI is more deviant because of the tendency to be more non-accepting of normative curriculum themes. Independent of individual DPI, the two-way interactions between class DPI and treatment are also examined with an expectation that class-level variation in collective DPI will affect learning about romantic ideals negatively among test students.

Although empirical evidence is restricted (for exceptions, see Maddock & Glanz, 2008), researchers propose that it is necessary to consider different types of peer influences because peer influence from close friends could be altered by a more distal social context such as classrooms (e.g., Brechwald & Prinstein, 2011). Therefore, we expect that individual and class DPI influence romantic ideals jointly. In this study, if individual- and class-level DPI both promote negative responses toward curriculum themes, then their combination should minimize the desired impact of the relationship education curriculum. Although it would be reasonable to expect the combination of two negative effects to be negative, the absence of prior research in this specific area does not support proposing a directional hypothesis for the three-way interaction among treatment, individual and class DPIs. *The 3rd research question scrutinizes*

whether individual- and class-level DPI moderate the effects of relationship education on romantic ideals independently and interactively (i.e., in 2-way interactions between individual DPI x treatment condition, between class DPI x treatment condition, and in a 3-way interaction between individual DPI x class DPI x treatment condition).

In addition to testing moderating effects of peer influence on relationship education as it affects adolescents' romantic ideals, the current study also examines a number of individual attributes, including sex, age, race and dating experience, as factors that may contribute to the effects of relationship education (or that should at least be statistically controlled in the models). Many studies document that males tend to endorse inaccurate romantic beliefs more than females (e.g., Sharp & Ganong, 2000; Sprecher & Metts, 1989, 1999; Weaver & Ganong, 2004). However, males and females prioritize some dimensions of standards above others, the standards in this study are generally desired attributes that are prized across the genders, such as having a supportive partner (e.g., Delucia-Waach, Gerrity, Taub, & Baldo, 2001; Moore, Kennedy, Furlonger, & Evers, 1999; Sprecher & Metts, 1989). We know less about age differences in romantic ideals, but previous studies report that younger participants endorse more inaccurate romantic beliefs (Priest, Burnett, Thompson, Vogel, & Schvaneveldt, 2009). However, several studies indicate that some standards do not vary with age, such as preferring a romantic partner who is supportive (e.g., Bleske-Recheck, VandenHeuvel, & Wyst, 2009; Kerpelman et al., 2009). Fewer studies examine racial differences. Some find no racial differences in romantic beliefs (Kerpelman et al., 2010) or standards (Ma. et al., 2014). Whereas, Weaver and Ganong (2004) report that there are different factor structures of romantic beliefs between black and white college students. Several theoretical approaches also suggest that dating experience may play a role in the development of romantic ideals (e.g., life course perspective, Elder, 1998;

social cognitive perspective, Bandura, 2011).Therefore, sex, age, race and dating experience are examined initially as control factors to confirm that significant main effects and interactions remain when these variables are included in the models and subsequently as potential explanatory variables when considering the factors influencing romantic ideals. Specifically, males or younger adolescents are expected to have more inaccurate beliefs but these differences are not expected for romantic standards. No directional expectations are posited regarding racial and dating experience differences on romantic ideals. Individual and class pre-test scores are also controlled to model and account for the stability expected in measures observed longitudinally.

In addition to treating sex, age, race and dating experience as potential explanatory variables, they may also operate as moderators of educational interventions in line with the earlier studies (e.g., Adler-Baeder et al., 2007; Sparks, Lee, & Spjeldnes, 2012). Previous evaluation research suggests that girls are more receptive to treatment (McKay & Holowaty,1997; Sparks et al., 2012). However, mixed results exist regarding whether and how race moderates program efficacy. Specifically, some studies find no racial differences (e.g., Adler-Baeder et al., 2007; Kerpelman, 2010), whereas other find that blacks benefit more from relationship education than do whites (e.g., Wood et al. , 2010) or the opposite (e.g., whites gain more than blacks, Rauer et al., 2014). Finally, to our knowledge, no empirical studies test whether age and dating experience moderate relationship education efficacy. To summarize, females are expected to benefit more from the curriculum than do males. No specific expectations are posited regarding the moderating role of racial and age on program efficacy. We tentatively expect that currently dating participants will be more attuned to the messages of the curriculum and hence most benefited from the curriculum.

In sum, this dissertation extends prior studies that provide evidence that relationship education in high schools is beneficial to youth in terms of increasing the perceived importance of relationship and partner quality in romantic relationships (e.g., Kerpelman et al., 2009; Ma et al., 2014) and endorsing more realistic romantic beliefs (e.g., Kerpelman et al., 2008). Extending the study of Ma et al. (2004), this dissertation examines the social context in a more developed way by assessing how DPI at the individual-level and class-level affects romantic ideals and moderates the effects of a relationship education curriculum. This dissertation also examines the effects of personal characteristics (i.e., age, race, gender and romantic relationship experience) as direct and moderating influences on the positive role of relationship education on adolescents' romantic ideals.

II. Literature Review

The relevance of romantic relationship ideals (standards and beliefs) for selecting romantic partners and affecting romantic relationships outcomes has received attention for a long time (e.g., Baucon & Epstein, 1990; Fincham & Bradbury, 1989; Hamamci, 2005; Huston, Neihuis, & Smith, 1997), but mostly among adults or married couples. Fewer studies have considered the relevance for high school aged adolescents of healthy relationship ideals. In addition, although several studies provide some evidence that among adolescents relationship education can influence romantic ideals in the desired directions (e.g., Kerpelman et al., 2009; Ma et al., 2014), more empirical studies investigating relationship education effects on adolescents are still needed to address what factors could moderate program efficacy. Furthermore, prior studies also report that adolescents obtain dating information through diverse sources besides relationship education such as from peers (Wood et al., 2002). Very few studies test peer influence on the formation of romantic ideals although the peer influence literature suggests that peers play a pivotal role in adolescents' attitude formation (e.g., Andrews et al., 2008; Gibbsons & Gerrard, 1995; Gibbsons et al., 2003).

Ma et al. (2014) is an exception. They tested whether social climate, conceptualized as a type of peer influence, moderates the effects of relationship education on romantic standards. The authors reported that students who initially valued the relationship partner standard for warmth/trustworthiness, but who were nested in classes where the pre-test average for this standard was low, experienced small but significant erosion at post-test in this standard. However, the peer influence measure used by Ma et al. was limited because the class-level variable was based on an aggregate of member responses that did not provide a directly observable norm. An alternate measure that is based on the attributes of close friends may

provide a more observable norm. Furthermore, being in a class full of adolescents with more deviant peer influence may play a role when evaluating curriculum effects because all class members are also co-participants of treatment. Therefore, the major contribution of this study is being the first to test the moderating role of individual and class deviant peer influence (DPI) separately and jointly on program efficacy.

To better understand whether adolescents with different personal backgrounds differ in the extent to which they benefit from relationship education, recent research has started to test whether personal backgrounds could alter program efficacy on romantic ideals. Almost all the evaluating studies testing demographics as moderators for program efficacy only focus on gender (e.g., Sparks et al., 2012) and racial differences (e.g., Adler-Baeder et al., 2007; Kerpelman et al., 2010). To our knowledge, no empirical studies ever test whether age and dating experience moderate treatment effects. Another contribution of this study is to consider the effects of demographics and dating experience on romantic ideals directly and interactively with treatment beyond individual and class DPI.

This literature review has the following goals. First, following the empirical findings regarding the importance of romantic standards and beliefs respectively, studies investigating the concepts and measurements of romantic ideals are reviewed. Secondly, the importance, benefits and findings of relationship education for changing romantic attitudes in adult and adolescent samples are discussed. Third, the mechanism of peer influence on adolescent attitude formation and behavior is examined, combined with a general discussion of how peer influence could moderate the effects of relationship education on romantic ideals. Fourth, studies of the effects of different demographic characteristics and romantic relationship experience on standards and beliefs about romantic partners/relationships are investigated. Fifth, because it is relevant to the

analysis plan for the current study, when and why multi-level models should be used in analysis is briefly discussed.

Romantic Partners/Relationships Beliefs and Standards

The cognitive component of relationship functioning is widely recognized, and attention has focused on two cognitive approaches (e.g., Epstein, 1982; Hamamci, 2005; Ginsberg, 1988). One approach investigates culturally shared knowledge structures (e.g., scripts, traits, schemata) that represent standards for current or future romantic partners/relationships (e.g., Baxter, 1987; Fletcher et al., 1999). The romantic standards reflect desired traits for romantic partners and relationships (e.g., Fletcher et al., 1999, 2000; Markey & Markey, 2007). Another approach examines broader beliefs and attitudes about love and romance that may influence the health and functioning of romantic relationships (e.g., Cobb et al., 2003; Larson, 1992; Sprecher & Metts, 1989). Hefner and Wilson (2013) indicated that the above two cognitive approaches (i.e., standards and beliefs) are the predominant ways to define romantic ideals. For this review we begin with an overview of the literature on relationship beliefs and then turn to relationship standards.

Romantic partners/relationships beliefs. Numerous studies demonstrate that beliefs about romantic relationships play an important role in relationship outcomes (e.g., adjustment, commitment, distress, satisfaction; Fincham & Bradbury, 1989; Huston et al., 1997; Larson & Holman, 1994). Huston et al. reported the association between romantic beliefs and relationship disappointment and disillusionment; Larson and Holman reported the associations between romantic relationship beliefs and marital satisfaction. Cognitive-behavior family theory (Schwebel & Fine, 1992, 1994) explains that relationship-related cognitions such as the romantic

beliefs individuals endorse affect how they think and behave in romantic relationships, which in turn shape relationship qualities.

Hefner and Wilson (2013) described romantic beliefs as a set of expectations about how relationships should be initiated, developed, and maintained. Regan and Anguiano (2010) defined romantic beliefs as assumptions about the nature of love and the features of romantic unions. Romantic beliefs represent broad views and attitudes about love and romance that are learned and may be accurate/healthy or inaccurate/unhealthy (e.g., Cobb et al., 2003; Larson, 1992, Sprecher & Metts, 1989). Examples of healthy beliefs are: (a) forming and sustaining a healthy relationship needs effort, (b) conflict is unavoidable as long as people interact, (c) it is important to consider both partners' needs, (d) relationships are not always perfect, and (e) partners have diverse viewpoints on the same issue (e.g., Sullivan & Schwebel, 1995). Healthy relationship beliefs could facilitate individuals' personal growth and help in the development of relationships (Hamamci & Esen-Coban, 2010). Researchers (e.g., Sullivan & Schwebel, 1995) propose that individuals who endorse healthy beliefs tend to interact in a more effective way and express love better because their beliefs reflect romantic partner/relationship realities.

Alternatively, inaccurate or faulty relationship beliefs are irrational expectations regarding the nature of relationships (e.g., Larson, 1992) and are based on the faulty premise that love is mysterious and all encompassing (Hendrick & Hendrick, 1986). These beliefs may negatively influence individuals' romantic experience in ongoing romantic or marital relationships (e.g., Addis & Bernard, 2002; Epstein, Eidelson, & Dryden, 1988). Larson (1992) attributes the high divorce rate in America to marital dissatisfaction that stems from inaccurate expectations about marriage. Researchers suggest that individuals who hold inaccurate beliefs tend to be more vulnerable to relationship distress and experience relationship disappointment

because those cognitions do not represent romantic partners/relationships realities and the inaccurately optimistic outcomes linked to those beliefs are hard to obtain (e.g., Sullivan & Schwebel, 1995).

When measuring romantic beliefs, some researchers use romanticism scales that focus relatively narrowly on attitudes and beliefs about the romantic feeling of love (e.g., Sprecher & Metts, 1989) and other researchers adopt a broader scale that emphasizes love and mate selection at the same time (e.g., Cobb et al., 2003; Larson, 1992). For example, the 15-item Romantic Beliefs Scale (RBS) created by Sprecher and Metts measures four faulty beliefs: the belief that love can conquer all barriers (love finds a way), the belief that there is just one person who can be one's true love (one and only), the belief that romantic partners will be perfect (idealization), and the belief that love can happen immediately without former communication (love at first sight). These four beliefs include three of the nine faulty beliefs **(**i.e., one and only, love is enough, and idealization) about mate selection identified by Larson, who describes all faulty relationship beliefs as unhealthy.

Building on Larson's (1992) findings, Cobb et al. (2003) produced a 32-item Attitudes about Romance and Mate Selection Scale (ARMSS) and demonstrated good construct validity, concurrent validity and reliability using a sample of 302 college students. The study of Cobb et al. revealed seven unhealthy or faulty beliefs that individuals frequently endorse about romantic partners/relationships. The first three of the ARMSS focus on the romantic feeling of love and overlap with the RBS (Sprecher & Metts, 1989). Like the RBS, the first belief is named "one and only" and means only one person in the world is "right" for a person to marry (Larson, 1992). People who hold this belief may approach relationships too passively waiting for the excited special moment when the one and only comes into their life and hence may keep away from the

many viable prospective partners (Cobb et al., 2003; Larson 1992). Echoing “Love finds a way” from the RBS, the second belief is “love is enough.” Individuals holding this belief may think it is sufficient just to consider the romantic feeling of love when making a marriage decision and may overlook other important personal and interpersonal characteristics (Cobb et al., 2003; Larson 1992). Again like the RBS, the third belief reported by Cobb et al., is called “idealization” and assumes both the perfection of a future partner and future relationship. Those holding this belief think they should not marry unless there is a perfect person or relationship. In other words, one should expect no problems in an existing relationship or marriage because any problem indicates a fatal flaw in the relationship. This belief is sabotage to any relationship since there is no perfect partner or relationship (Cobb et al., 2003; Larson, 1992).

Besides the scales that assess romantic feelings of love, the ARMSS also includes other fallacies focused on finding a partner and relationship. Specifically, one is “opposites complement,” which suggests individuals should marry someone with a distinctly different personality. However, prior studies demonstrate that similarity in attitudes, values and personalities predict more successful marriages (Larson & Holman, 1994). “Ease of effort” suggests that choosing a partner is easy and that successful mate selection is an accident. This fallacy does not encourage the careful thought and preparation that is necessary to find a good partner and successful relationship (Cobb et al., 2003; Larson, 1992). “Complete assurance” is another fallacy the meaning of which is that one should not marry until one is completely assured that they are ready for marriage. The fallacy here is that it tends to make individuals excessively anxious about marriage decisions (Cobb et al., 2003; Larson, 1992). Finally, the last fallacy identified by Cobb et al., (2003) and Larson, is that living together before marriage improves the chance of being happily married. The literature on the association between cohabitation and

marital outcomes is not conclusive but the general patterns suggest that the effects of premarital cohabitation are negative (Cobb et al., 2003; Larson, 1992).

Romantic partners/relationships standards. The above section focused on relationship beliefs. The current one addresses the other aspect of relationship ideals, specifically, relationship standards. Relationship standards are important because they are linked to the quality and stability of relationships. Support is found in cross-sectional (e.g., Fletcher et al., 1999) and longitudinal studies (e.g., Fletcher & Simpson, 2000). Fletcher et al. studied 63 female and 26 male university students and showed that there is better relationship evaluation if participants' perceptions of current partners approximate their romantic standards. Many studies also report the positive association between more negative relationship evaluation and greater relationship dissolution (e.g., Murray & Holmes, 1997). Moreover, a generation of research indicates standards also relate directly to marriage stability and quality (e.g., Fennel, 1987; Kaslow & Robin, 1996; Lewis & Spanier, 1979; Rollins & Cannon; 1974). By using 147 couples in first marriages lasting over 20 years, Fennel derived standards including commitment, respect and loyalty that influence marriage stability. Rollins and Cannon reported that reduced commitment relates to decreased marital satisfaction. Lewis and Spanier in their theoretical review summarized that higher expectations for marriage are associated with higher marital quality.

Many studies assess the specific standards that individuals endorse regarding preferred romantic partner characteristics and desired romantic relationship qualities (e.g., Buss & Barnes, 1986; Goodwin & Tang, 1991; Simpson & Gangestad, 1992). For example, Simpson and Gangestad (1992) reported on 221 male and 252 female university students who rated the importance of 15 partner attributes. They showed relationship closeness/intimacy (e.g., kindness,

loyalty) and attractiveness/social visibility as two desired traits. Goodwin and Tang showed in a sample of 40 British and 48 Hong Kong Chinese university students who completed a 15-item preferences questionnaire that students in both countries value kindness/consideration, extraversion, and sensitivity (Goodwin & Tang, 1991). From 92 married couples who ranked 76 relationship partner characteristics from most desired to least desired, Buss and Barnes concluded that the 10 most valued attributes are: good companion, considerate, honest, affectionate, dependable, intelligent, kind, understanding, interesting to talk to and loyal. In a similar sample of 50 female and 50 male university students, Buss and Barnes replicated their findings from their married couple sample. From these data, the most preferred attributes were kindness and understanding. All these studies indicated that kindness is a desired attribute. Two of the studies (Buss & Barnes, 1986; Simpson & Gangestad, 1992) found traits that females tend to emphasize, including social visibility and being exciting, whereas one study (Simpson & Gangestad, 1992) revealed characteristics that males emphasize, specifically, physical attractiveness. In sum, some traits seem to have a gender basis such as physical attractiveness and social visibility, while others are more universal such as kindness.

The above studies do not distinguish partner-oriented from relationship-oriented attributes. Fletcher et al. (1999) described three ideal dimensions for romantic partners (warmth/trustworthiness, vitality/attractiveness, and status/resources) and two ideal dimensions for relationships (intimacy/loyalty and passion). These dimensions were revealed in a series of studies of undergraduate students at the University of Canterbury. The warmth/trustworthiness dimension represents individual attributes that affect the quality of intimate relationships (supportive, sensitive, honest, trustworthy, communicative, and affectionate). The vitality/attractiveness dimension includes characteristics reflecting the perceived attractiveness

and vigor of the prospective partner (nice body, sexy, good sense of humor, and attractive). Finally, the status/resources dimension assesses markers of the partner's social status (good job, financially secure, well dressed, appropriate age, and successful). The first two dimensions for partners are again reflected in the attributes that describe relationships. Specifically, standards for relationships are evaluated in terms of intimacy/loyalty (respect, trust, loyalty, monogamy, equality, sharing and acceptance) and relationship passion (passionate, romantic, similar personalities, and intellectual equality). Through replication and carefully selected questions and analyses, convergent, divergent, and construct validity were demonstrated for assessments of these dimensions pertaining to ideal standards for partners/relationships among college-aged participants.

The components of the ideal standards described by Fletcher et al. (1999) are rated positively across studies regardless of the age of the relationship participants (e.g., kindness; Buss & Barners, 1986; Regan, Levin, Sprecher, Christopher, & Cater, 2000), and they tend to be appealing characteristics with advantageous interpersonal consequences (Wiggins, 1979). Further, Fletcher and Simpson (2000) identified these standards for partners/relationships with the comparison standards described in interdependence theory (Thibaut & Kelley, 1956). As such, these standards calibrate ongoing relationship quality and play a significant role for making decisions about initiating, maintaining and terminating romantic relationships (Fletcher et al., 1999).

In summary, before entering romantic relationships, individuals may have pre-existing expectations regarding what relationships should be that represents romantic beliefs and what characteristics the partners should have regarding romantic standards (Baucom & Epsten, 1990; Sprecher & Metts, 1999; Vangelisti & Daly, 1997). Furman (2002) reported that young people

spend a lot of time in romantic relationships, and they think and talk about their partners and relationships often. Thus, it is reasonable to assume that these standards and beliefs are in the process of forming for adolescents. As Montgomery (2005) noted, middle school aged adolescents tend to have unrealistically high expectations for romantic relationships. In light of research that unhealthy romantic partner/relationship standards and unrealistic or faulty relationship beliefs influence relationship outcomes, it seems desirable to investigate the degree to which young individuals endorse healthy romantic partner/relationship standards and beliefs and what factors could influence the two cognitions.

Relationship Education

Why relationship education matters. As a way to transfer healthy information regarding romantic relationships, relationship education for couples has a long history, emerging during the 1930s (Stahmann & Salts, 1993). More recently, educational programs developed to inspire healthy marriage have become widespread (e.g., Stanley, Amato, Johnson &, Markman, 2006). Although healthy, successful, life-long marriages are highly desired by the majority of Americans, the national divorce rate is high. In a 2009 study of first married couples, there was a 9.7 chance per 1,000 married women and a 9.2 chance per 1,000 married men aged 15 and over to divorce during the previous 12 months (Elliott & Simmons, 2009). Given that many distressed couples choose not to divorce, high levels of marital conflict and dissatisfaction are common marital issues (e.g., Nottarius & Markman, 1993). Marital distress negatively affects physical health (Burman & Margolin, 1992), mental well-being (Halford & Bouma, 1997), and work productivity (Forthofer, Markman, Cox, Stanley, & Kessler, 1996). Couple relationship education (whether marital or premarital) helps teach interpersonal skills and strategies, increases the possibility of a stable and happy marriage, acknowledges that relationships require effort,

creates supportive environments, and addresses marital problems (Markman & Halford, 2005; Ooms, 2005) and, therefore, can be an effective intervention for marital distress (Lucier-Greer & Adler-Baeder, 2012; Lucier-Greer, Adler-Baeder, Ketring, Harcourt, & Smith, 2014).

Although relationship education tends to be focused on couples, Hawkins, Carroll, Doherty and Willoughby (2004) argued for starting earlier with adolescents who are assumed still to be forming attitudes and beliefs about marriage and relationships. In fact, there is a growing consensus that high school is a key time to conduct relationship education (e.g., Gardner, 2001; Gardner, Gieses, & Parrott, 2004; Silliman & Schumm, 2004).

Adolescence is a period during which first experiences in intimate relationships often occur. Adolescents develop their own attitudes, beliefs, and expectations regarding relationships and dating (Schramma & Gomez-Scott, 2012). Adolescent relationships provide positive growth areas such as possible selves (Furman & Shaffer, 2003), interpersonal skills (Barber & Eccles, 2003) and academic performance (Giordano, Phelps, Manning, & Longmore, 2008), but there are also potential negative outcomes related to these relationships such as conflict and aggression since many youth do not have effective strategies to manage interpersonal conflict (Shulman, 2003).

Adolescents in romantic relationships observe role models to develop their attitudes, behaviors, and expectations, but they differ in the positive and negative models they have and the extent to which they internalize these models (Pittman, Kerpelman, Soto, & Adler-Baeder, 2012). Adolescents may not know how to distinguish a healthy from an unhealthy romantic relationship even when they have positive role models (Furman, Ho, & Low, 2007). Researchers propose that adolescents feel pressure to establish romantic relationships (Collins, 2003; Furman & Shaffer, 2003), and want to learn about these relationships (Wood et al., 2002), but often have

little basis for evaluating the accuracy of information received and therefore form faulty relationship views (Kerpelman, 2012). In addition, it is not surprising that youth make decisions according to their instant wishes without considering future consequences, especially when strongly attracted to another and when they have little knowledge of how to negotiate relationships (Kerpelman, 2012).

The life course perspective (Elder, 1998) offers a rationale for youth relationship education. It suggests that early experience shapes attitudes and behaviors in subsequent development and focuses on the associations between individual and historical context within which individuals are nested (Giele & Elder, 1998). Thus the approach suggests that there is continuity between one life course stage (e.g., adolescence) and the next (e.g. early adulthood). Prior studies also have offered empirical support for the continuity. A relevant example is the eight year longitudinal study from adolescence to early adulthood of a predominantly African American sample by Fergus, Zimmerman, and Caldwell (2007) that found sexual risk taking patterns endorsed by teens are sustained into young adulthood.

Relationship education matters because empirical studies have reported that age-appropriate, research-supported relationship education conducted by well-prepared educators can minimize the negative outcomes associated with adolescents' romantic relationships, and increase the likelihood of good experiences and outcomes (e.g., Adler-Baeder, Kerpelman, Schramm, Higginbotham, & Paulk, 2007; Kerpelman et al., 2009). It works by helping teenagers distinguish healthy and unhealthy relationships, understand the nature of healthy relationships, establish healthy relationship patterns, form problem solving and communications skills, develop positive role models, gain accurate and healthy information, acquire concrete, "real-life" examples, and make wise relationship decisions.

The effectiveness of relationship education. Relationship education for couples has received scrutiny in evaluation studies, and the efficacy of couple education has been well documented since the mid-1970s (Carroll & Doherty 2003; Hawkins, Blanchard, Baldwin, & Fawcett, 2008). For example, Carroll and Doherty reviewed 13 experimental studies in a meta-analysis and reported that couple education was generally effective in increasing interpersonal skills and relationship quality. The meta-analysis of 117 studies by Hawkins et al. (2008) also reported couple education efficacy on relationship quality and communication skills. Another 14 study meta-analysis of relationship education among remarried couples by Lucier-Greer and Adler-Baeder (2012) found small overall relationship education efficacy and slightly larger effectiveness in the specific domains of family and parental functioning. Studies show that couple education has a positive influence in relationship communication and conflict management (e.g., Hahlweg, Markman, Thurmaier, Engl, & Eckert, 1998), marital satisfaction (e.g., Hahlweg et al., 1998; Stanley et al., 2006), the prevention of relationship aggression (e.g., Markman, Renick, Floyd, Stanley, & Clements, 1993), and divorce (Hahlweg et al., 1998; Markman et al., 1993). For example, Hahlweg et al. found among 55 couples that the Ein Partnerschaftliches Lern-program yielded better communication skills, more relationship satisfaction and lower dissolution rates compared to 17 control couples in a longitudinal study (pre-test, post-test, 1.5-, and 3- year follow-up). Stanley et al. in a study of 1,977 currently married couples reported that participation in premarital education was related to more marriage satisfaction and commitment, less marital conflict, and reduced odds of divorce. Markman et al. found in the last two follow-ups of a five year longitudinal study that the 15 couples who participated in the Prevention and Relationship Enhancement Program revealed better communication skills and less marital violence compared to 24 control couples. Finally, Lucier-

Greer et al. (2014) in a study of 1,542 married couples using a pre-test/post-test design documented that re-married couples (47.7%) and first married couples (52.3%) reported similar levels of benefit from a general relationship education program.

Although the studies of relationship education programs for high school students are not as extensive as those for adults, several support the efficacy of relationship education for younger individuals (Adler-Baeder et al., 2007; Gardner, 2001; Gardner & Boellard, 2007; Garder et al., 2004; Halpern-Meekin, 2012; Kerpelman, 2007; Kerpelman et al., 2009; Kerpelman, Pittman, Adler-Baeder, Stringer, Eryigit, Cadely, & Harrell-Levy, 2010; Sparks et al., 2012). Even though the studies differ in the skills they address, each finds that participants benefit from participation in relationship education. For example, Gardner et al., using pre-test/post-test design, reported that 213 students receiving the *Connections: Relationships and Marriage Curriculum* (Kamper, 2003) has less accepting attitudes toward divorce, more use of reasoning as a conflict tactic, and more positive attitudes toward relationship counseling at the end of the program. Using the same quasi-experimental design and the *Connections* curriculum with a larger, more diverse sample gathered from 6 public high schools (264 test students versus 147 control students), Gardner et al. found that participating students increased in relationship knowledge and communication with parents and were more willing to seek relationship information. In a longitudinal follow-up (1-year and 4-years later), Gardner and Boellaard revealed in a sample of 72 high school students that those who receiving the *Connections* curriculum reported more self-esteem and family cohesion and less dating violence over 4 years compared to those who did not.

Another series of studies tested the effectiveness of the *Relationship Smarts* curriculum (Pearson, 2004/2007). Adler-Baeder et al. (2007), using a pre-test/post-test design to study 340

high school students (235 test students versus 105 control students), reported that test students increased in perceived curriculum knowledge and realistic relationship beliefs and decreased in verbal aggression. In a longitudinal study (pre-/post-test, 1-year and 2-year follow-up) of high school students, Kerpelman et al. (2009) reported that, at post-test, the 1,045 test participants had fewer faulty relationship beliefs, greater interest in premarital counseling for the future, greater perceived conflict management ability and placed greater importance on having a supportive romantic partner than the 788 control participants. Although it is common to have reduced treatment effects over time (e.g., Gardner & Boellaard, 2007), the above relationship education effects were sustained at the 1-year follow-up but had faded by the 2-year follow-up. In an independent sample collected at three time points (pre-test, post-test, and 1-year follow-up), Kerpelman et al. (2010) continued to test curriculum effects of *Relationship Smarts* among high school students and reported that the 788 test students compared to the 640 control students lowered their faulty relationship beliefs and increased their relationship skills. Additionally, modest but meaningful treatment effects are sustained over one year.

In some of the above studies, relationship education is applied in elective high school classes. Because several states have started to mandate relationship education (Kerpelman et al., 2009), it is desirable to determine whether curriculum effectiveness is affected when taught in a class required of all students. Several studies have addressed this issue. For example, Halpern-Meekin (2011) examined 222 high school students and tested whether the effects of the *Connections* curriculum vary between sites where the courses were mandated or self-selected. Participants nested in schools mandating relationship and marriage education had better results compared to students in schools where the course was self-selected. Sparks and colleagues (2012) studied 139 students with a pre-test/post-test design. Participants were enrolled in schools

mandating health education classes and these classes included the *Connections: Dating and Emotions* curriculum. Findings revealed small but significant changes in the desired direction for relationship knowledge, marriage attitudes, and dating abuse attitudes.

Fruitful evaluation studies already demonstrate that relationship education works for a wide variety of relationship related topics for youth as well as adults. For example, participants benefit from relationship education for improving communication and conflict management skills (e.g., Gardner, 2001, 2004; Kerpelman et al., 2010). What still needs to be reviewed is the research that focuses on the effects of relationship education on romantic ideals among adolescents.

Romantic ideals and relationship education. Individuals need to know what personal and relationship characteristics to seek in a possible romantic relationship and need accurate beliefs about relationships, because these factors are related to future relationship quality (e.g., Stanley, 2001). The likelihood of making smart mate selection and marriage decisions could increase when individuals are armed with the above foreknowledge (Larson & Hickman, 2004).

Gardner (2001) asserts that relationship education should be conducted in high school to provide accurate information about romantic ideals. In light of the research regarding the importance of romantic ideals on adolescents' development (e.g., Huston et al., 1997), it seems desirable to help youth develop accurate romantic standards and beliefs by directing relationship education toward them.

Several studies examine the effectiveness of relationship education on building or modifying romantic standards directly. For example, the study of Kerpelman et al. (2009) showed that adolescents receiving a curriculum, compared to adolescents who did not, placed

greater importance on having a supportive partner when describing their ideal partners. Their study also found that the influences of the curriculum on this romantic ideal lasted for a year after the program but faded by two years, suggesting that peers without exposure to relationship education may catch up after a period of time.

Fruitful studies have demonstrated that relationship education matters for altering romantic beliefs in the desired direction. For example, Adler-Baeder et al. (2007) used a test/control, pre-test/post-test design and reported that 235 test students (compared to 105 control students) lowered more their faulty relationship belief that happy marriages never have conflict. Similarly, in their longitudinal study, Kerpelman et al. (2009) found that test students compared to control students lowered three faulty relationship beliefs: specifically, that there is just one right person in the world to marry, that falling in love with someone is sufficient rationale to marry that person, and that living together before marriage automatically leads to a happy marriage. In another study with an independent sample, Kerpelman et al. (2010) also showed that students receiving the curriculum, compared to control students, were less inclined to believe that the feeling of love is enough reason for marriage.

To summarize, studies confirm the role of general relationship education efficacy in reducing adolescents' inaccurate romantic beliefs (e.g., Adler-Baeder et al., 2007; Kerpelman et al., 2009), and increasing romantic standards (e.g., Kerpelman et al., 2009; 2010). Across these evaluation studies, very little attention has been given to broader contextual influences and their potential roles as moderators of education effects. Ma et al. (2014) is unusual in this regard. They explored the moderating role of classroom social climate on the effects of relationship education and found that class social climate did matter for adolescents with higher pre-test scores for one romantic standard (i.e., warmth/trustworthiness). Their social climate measure was

conceptualized as peer influence, but was limited by the fact that it was not directly observable to students in the classes. Therefore, echoing their suggestion to measure peer influence more directly, this study is the first to assess directly the perceived deviant character of adolescents' peer networks. Considering the fact that students are nested within classrooms, the class deviant bias is also examined because being in classrooms full of students with high deviant influence is expected to weaken program efficacy. Finally, this study tests the combined moderating role of a more influential and observable form of peer influence from close friends on both individual and class levels on the relationship between treatment and romantic ideals.

Peer Influence

Unlike relationship education that seeks to communicate accurate and healthy attitudes, peers may transfer both accurate/healthy and inaccurate/unhealthy values (Prinstein & Dodge, 2008). Psychosocial theory (Erikson, 1963; Newman & Newman, 2009) suggests that peer relationships are pivotal for adolescents since they offer a context for obtaining interpersonal skills and contribute to identity formation. Peers also provide a social climate in which group norms regarding diverse behaviors and attitudes are developed and maintained (e.g., Eder & Nenga, 2003). Peer influence may have consistent or competing effects relative to relationship education. Thus, as one source of information about dating separate from relationship education (e.g., Wood et al., 2002), peer influence may have an enhancing or detracting role when considering the effectiveness of relationship education.

In their review paper, Brechwald and Prinstein (2011) emphasized the importance of peer closeness when testing peer influence. That is, close friends can be expected to have more influence than acquaintances. Previous research has proposed that perceptions of the character and behavior of close friends are important in the social and academic environments of teens

(e.g., Dodge & Pettit, 2003; Goldsmith, 2004). Moreover, even if these close peers are not physically present in a social context such as a school classroom their influence may persist and affect a student's response to an educational intervention. It is clear that peer influences evident in the social climate of a classroom or school matter when considering the efficacy of interventions on adolescents' deviant behaviors and academic performances (e.g., Aber et al., 2002; Hughes, Cavell, Meehan, Zhang, & Collie, 2005).

In this dissertation, we test peer influence at the individual level but also, because participants are nested within classrooms and classmates comprise one type of peer group, we examine the collective influence of class-level peer influence. Below literature pertaining to peer influence is reviewed.

Individual deviant peer influence (peer influence from close friends). Adolescence is a period when vulnerability to peer influence is amplified because of teens' increased time with peers, stronger desire to develop independence from parents, and their increasing reliance on peers for making decisions and seeking support. Adolescents are more easily influenced by close friends than by other types of peers (Prinstein & Dodge, 2008), especially in terms of behavior (Jaccard et al., 2005). For example, Jaccard et al. reported from a study of 1,700 peer dyads that behaviors of teens' close friends predict adolescents' changes in sexual activity and binge drinking better than the behaviors of random classmates with the same sex and age.

Deviant peer influence may play a negative role in adolescent development depending on the nature of the adolescent's own behaviors and the direction of a peer's influence. Many studies document the negative effects of deviant close friends on adolescents' behaviors in diverse domains. For example, in a sample of 1,200 teens, Fuligni and colleagues (2001) found that adolescents with more deviant close peers, defined in terms of their rates of alcohol

consumption, drug use and skipping class at school, experienced poorer school performance than other adolescents. Reitz and colleagues (2006) found in a sample of 650 youth that the deviant behaviors of friends affected adolescents' externalizing (delinquent and aggressive) behaviors. Other studies demonstrate the positive effects of close conventional friends on school performance, academic achievement, emotional well-being, and competence of adolescents (e.g., Cook et al., 2007; Nelson & Debacker , 2008). A great many studies (e.g., Andrews et al., 2008; Gibbons & Gerrard, 1995, 1997) also show that peers play a significant role in attitude formation. These influences are thought to occur through various mechanisms such as social norms, social evaluations, peer acceptance, and peer rejection.

Given these documented mechanisms of peer influence, it seems reasonable to expect that a social context calibrated on a dimension of deviance (which we call "deviant peer influence" or DPI in this study) would also affect the formation of adolescents' romantic beliefs and standards. For example, self-determination theory focuses on the motivations derived from basic needs for autonomy, competence, and relatedness (Ryan & Deci, 2000) and asserts that a teen's achievement motivation is influenced by peers through the desire for acceptance and belonging. Patterson, Forgatch, Yoerger and Stoolmiler (1998) suggested that rejected youth fulfil their need for relatedness by developing relationships with other aggressive, rejected children. However, the friendships among aggressive and rejected children tend to be short, low in quality (Bagwell & Coie, 2004) and influence children's psychosocial and academic outcomes destructively (Burk & Laursen, 2005).

Social image is one of the mechanisms through which peers shape children's attitudes and behaviors. For example, the Andrews et al. (2008) study of 1,075 elementary students revealed that children's own views of smokers and their beliefs about their peer's views of

smokers were related and both sets of views predicted children's intention to smoke. In a longitudinal study of 679 college students, Gibbons and Gerrard (1995) reported a reciprocal link between change in participants' beliefs about the prevalence of risk behaviors and their health risk behaviors. Additional studies also demonstrate that adolescents' social image of risky behaviors (e.g., smoking, drinking) predicts their intention and initiation of risk behaviors even after controlling for peers' use. For example, the Iannotti and Bush (1992) study of 3,073 fourth- and fifth- graders found that perceived substance use (i.e., alcohol, cigarettes, and marijuana) by close friends was a better predictor of a child's actual substance abuse than the close friends' self-reported substance use.

The prototype/willingness model (Gibbons & Gerrard, 1995, 1997; Gibbons et al., 2003) explains another mechanism for understanding the role of peers on shaping teens' attitudes and behaviors. This model claims that individuals hold mental prototypes of the kinds of people who perform certain types of behaviors or hold certain types of values/beliefs/standards. The prototype, in turn, predicts their willingness to engage in the behavior. Other studies report that adolescents develop at very early ages conceptual prototypes that reflect the type of person they think does specific risky behaviors (e.g., smoking) (Gerrard et al., 2005). The prototype/willingness model works through perceived social consequences of engaging in the risky behavior (e.g., "if I smoke in front of my peers, I may be accepted by them;" Stone & Brown, 1998) or through social comparison process (e.g., the more similar between adolescents' self-image and prototype, the more likely to conduct the behavior related to the prototype; Gibbons et al., 2003; Rivis, Sheeran, & Armitage, 2006). Because adolescents' behaviors and beliefs are influenced by peers (Prinstein & Dodge, 2008), it is reasonable to assume that romantic beliefs and standards could be influenced among peers as well through shaping

attitudes and other cognitions. The current study is not focused on the mechanisms of peer influence, however, the mechanisms are included and discussed here in order to explain why and how adolescents' romantic ideals might be influenced by peers. This line of reasoning allows us to assume that what adolescents assume their close peers are thinking, believing, doing, and expecting with reference to romantic relationships will play an important role in shaping their own romantic ideals. The prototype/willingness model also suggests that peers' perceptions of deviant leanings of their peers matter for their behavior choices. Thus, we expect that adolescent DPI will influence romantic beliefs and standards through processes already documented in other aspects of children's healthy and unhealthy performances and adjustments.

Prior studies report that children's disruptive behaviors can undermine the social and academic environment for other children (Dodge & Pettit, 2003; Goldsmith, 2004) and that association with a greater number of deviant peers in one's network is related with higher self-reported involvement in deviant behaviors (Lonardo, Giordano, Longmore, & Manning, 2009). As a type of academic activity, relationship education involves a learning process that can be expected to be as open to the effects of deviant peer influence as any other academic activity. Deviant youth will resist attempts to alter their behaviors or attitudes in the direction of the normative (e.g., CPPRG, 2005). Thus we expect that adolescents whose close friends are more deviant will experience more DPI and may not respect the general normative theme of the curriculum, nor the specific messages regarding romantic beliefs and standards. Conversely, students with less deviant peers will allow attempts to change their beliefs and behaviors in the direction of the normative message (Gest, Sesma, Masten, & Tellegen, 2006). Therefore, the task of this study will be to test whether the level of DPI moderates the generally positive relationship between curriculum content and teens' romantic beliefs and standards.

Class deviant peer influence (peer influence from broader context). A group of close peers is one kind of social context, but a high school class represents another potentially distinct social context consisting of a collection of individuals each of whom has his/her own group of close peers. Since classmates are participants in relationship education, the peer influence from the broader context arises from and represents the variability among classmates in the directions of their social influence. Specifically, it is variability that reflects a class-level variable pertaining to the typical amount of DPI among class members.

The ecological theory (Bronfenbrenner, 1989) encourages consideration of social climate in individual behavior. Social and developmental psychologists maintain that social norms significantly regulate adolescents' behaviors and explain peer influence (e.g., Bandura, 1986; Berger, 2008; Blanton & Burkley, 2008; Crick & Dodge, 1994; Dodge, 1986; Prentice, 2008). Reference group theory (Kelly, 1952) suggests that peers serve to influence children's behaviors and beliefs indirectly through group norms and social comparison. Although studies of the effect of group norms and social comparisons on adolescents' romantic beliefs and values are limited, studies in other domains are suggestive of relevant processes and patterns. For example, studies show that adolescents develop beliefs regarding their academic competence based on self-comparisons with peers, which in turn provides information about their fit with social norms (Marsh & Parker, 1984). In their study of 3,600 primary school students in the Netherlands, Guldmond and Meijnen (2000) found that classmates served as a reference group for self-comparison and had a substantial effect on children's mathematical achievement.

This class variable could affect the general openness of the class to a curriculum. It seems reasonable to assume that a class with more cumulative, individual DPI would tend to bias the whole class against the curriculum. The dimension of deviant social climate could affect

the responsiveness of individuals in the class to a curriculum independent of those individuals' own biases reflected in the DPI of their own individual peer groups.

Research reports that interventions are most effective in settings having fewer deviant adolescents or less favorable collective norms toward the deviant behavior of concern (Aber et al., 1998, Hughes et al., 2005). For example, the study by Aber et al. of 5,054 elementary students reported that the effectiveness of Resolving Conflict Creatively Program (RCCP) was weakened for children nested in classrooms with more accepting attitudes/norms toward aggression. Another study by Hughes et al. (2005) with 86 aggressive second- and third- graders nested in 13 schools found that Prime Time, an intervention to promote children's competencies, was most effective in low adversity schools (i.e., schools with a lower frequency of observed playground aggression, lower percentage of students eligible for free or reduced-price lunches, and lower percentage of students who enter and/or leave a school during the school year). School-based relationship education is also a learning activity with messages regarding romantic ideals that may be undermined by the class social climate. Through self-comparisons with classmates, adolescents may adjust their fit with class norms and beliefs regarding the romantic ideals. Therefore, the class DPI may play a role in maintaining, reproducing, and recreating the norms regarding romantic ideals obtaining from different sources including relationship education. Thus, we expect that classes with higher average levels of DPI among its members will impair and attenuate relationship education effects.

This expectation, however, is not based on a large body of existing research. Instead it is an extension from research on quite different interventions that target quite different outcomes. The study of Aber and colleges (1998) proposed that peer influence plays a more critical role in culturally disapproved behaviors, compared to culturally approved behaviors. By extension,

deviant peers may not undermine all relationship education messages evenly. The more clearly the messages represent adult views, the more likely they are to be influenced by deviant peers. If romantic ideals represent adult views less obviously than deviant or aggressive behaviors, relationship education interventions may be less influenced by deviant peers than interventions designed for reducing deviant and aggressive behaviors. If relationship education outcomes are lower on a continuum of being influenced by peers, it will be harder to find the effects expected.

Brechwald and Prinstein (2011) proposed that a broader, diffuse social context such as classrooms may alter peer influence from close friends on some behaviors and attitudes (e.g., deviant behaviors). For example, Maddock and Glanz (2008) studied 433 university students and found that perceived close friends' norms could alter the relationship between the perceived general campus norm regarding alcohol use and adolescents' actual alcohol consumption. Moreover, according to the prototype/willingness model (Gibbons & Gerrard, 1995, 1997; Gibbons et al., 2003), students with low DPI are less likely to be influenced undesirably when nested in deviant-driven classes. Social comparison processes may serve to explain why individuals with low DPI might buffer against high class DPI, that is, there are less similarities between those students and most of their classmates.

The combination of a deviant peer group at the individual-level and a classroom characterized either by a class norm unfavorable to healthy romantic standards and beliefs, or by a class setting more biased toward deviance may have a negative synergistic influence on adolescents. Therefore, we expect that the social climate, whether organized around one's own close friends, or organized around a group of classmates each of whom has his/her unique set of close friends or the combination of individual and class levels, will alter the association between relationship education romantic standards and beliefs. That is, the relationship education effects

should be weakened by all norms biased toward deviance whether from close friends, class mates or both.

Demographics, Dating Experience, Individual and Class Pre-test Scores,

Besides the potentially moderating effects of peer influence, demographics and personal attributes might mitigate the expected effects and also make meaningful and substantive contributions to models of treatment effects. The formation of romantic ideals is indeed a process that evolves and changes over time. Although it may start in early adolescence, it still evolves through emerging adulthood as those beliefs and standards are put into practice (Arnett, 2000; Collins & van Dulmen, 2006). The purpose of this study is to examine factors crucial to the emergence of romantic ideals. In addition to the factors already reviewed, this study also considers three demographics (i.e., gender, age, and race) and three dating experience conditions (i.e., current involvement, past involvement only, and no involvement). These factors are treated as control factors, but also potential explanatory variables due to the evidence that they are related to romantic ideals. In addition, they are tested as potential moderators of the treatment effects. Meanwhile, individual and class pre-test scores are also controlled.

Gender. Gender can be understood as a type of broader culture context that shapes romantic ideals. Gender socialization develops different scripts regarding romantic relationship expectations and understandings (e.g., Alaner, 1995) and definitions of love (e.g., Sprecher & Toro-Morn, 2002). For example, males tend to be more romantic (Sprecher & Metts, 1989), which gives them more freedom to choose a romantic partner by just considering the romantic feeling of love and neglecting other factors.

Past studies report that males generally tend to endorse more faulty relationship beliefs compared to females (e.g., Sharp & Ganong, 2000; Sprecher & Metts, 1989, 1999; Weaver & Ganong, 2004). For example, Sprecher and Metts reported in their study of 730 undergraduate students that males were more likely to endorse faulty relationship beliefs such as love is the sole basis of marriage, love overcomes all obstacles, love at first sight, and romantic partners and relationships should be perfect. Sharp and Ganong, in a study of 165 undergraduate students, also found that males hold more faulty relationship beliefs than females. Sprecher and Metts found the same gender difference in endorsing different levels of faulty beliefs in a sample of 101 dating college couples. Finally, in a study of romantic beliefs using 254 African-American college students and 234 European-American college students, Weaver and Ganong extend the gender pattern to both racial groups. In line with the past studies, males are expected to report more faculty relationship beliefs.

Gender differences also exist in terms of ideal standards for relationships. For example, on average, females focus more on the social status of romantic partners than do males, while males tend to value physical attractiveness more than do females. However, some standards are shared across genders. Both females and males place importance on supportiveness when exploring the desirable traits of romantic partners and relationships (e.g., Buss, 1989; Buss, Shackelford, Kirkpatrick, & Larsen, 2001; Eastwick & Finkel, 2008; Kenrick, Sadalla, Groth, & Trost, 1990; Shackelford, Schmitt, & Buss, 2005). In a study of 10,047 participants in 37 samples residing in 33 countries with mean ages ranging from 17 to 29, Buss showed that both males and females view kindness, intelligence, and stability as charismatic characteristics. Similarly, Eastwick and Finkel revealed the absence of a sex difference in romantic standards of attractiveness and earning prospects among 163 undergraduate students when testing their

romantic interest in real-life, actual romantic partners. Therefore, the standards regarding romantic partners/relationships measured in the current study (i.e., warmth/trustworthiness, and intimacy/loyalty) would not be expected to reveal gender difference because they are appreciated as important in the wider culture.

Age. Research well documents the similarities and differences in males and females romantic ideals, but we know less about the variation in romantic ideals based on adolescents' age. Prior research suggests that younger participants hold more unrealistic romantic beliefs (e.g., Kerpelman et al., 2009; Montgomery, 2005; Priest et al., 2009). For example, the Montgomery (2005) study of 473 adolescents and emerging adults revealed that younger adolescents tend to endorse more beliefs of idealization and love finds a way. Kerpelman et al. reported that younger high school students tend to endorse the faulty relationship belief that "love is enough" among 1,824 high school students. Priest and colleagues in a study of 261 college students found the same faulty belief endorsed along with others. Based on the prior research, we expect that younger adolescents will endorse more faculty romantic relationship beliefs.

Although the endorsement of faulty relationship beliefs reveals age differences, some standards for romantic partners do not vary with age (e.g., Bleske-Recheck, VandenHeuvel, & Wyst, 2009; Kerpelman et al., 2009). For example, Bleske-Recheck et al. (2009) studied 288 college students and an internet sample of 307 young adults and reported that participants vary little from late teens to emerging adulthood on their romantic standards for such attributes as sense of humor, physical attractiveness, intelligence, potential for financial success and other socially desirable characteristics. Kerpelman et al. showed that younger adolescents do not differ from older teens on the importance of having a supportive partner. Ma et al. (2014) studied 1,808

high school aged adolescents and also revealed no age difference in the importance of having a supportive partner. Unlike our expectations for romantic beliefs, we expect no age-based variation in romantic standards in a high school sample.

Race. The degree to which racial groups matter to romantic ideals is a less-charted area, and the noteworthy gap in prior studies could be attributed to the predominantly white samples in most romantic ideals research. Kerpelman and colleagues report that adolescents endorse the inaccurate belief of "love is enough" equally no matter whether they belong to the majority racial group. Weaver and Ganong explored racial differences among 254 African-American and 234 European-American college students through factor analyses. They report that black and white respondents differed substantially in the factor structures of the Romantic Beliefs Scales which means that the racial groups may think about these beliefs in meaningfully different ways. They also suggested several possible reasons for racial differences, such as historical slavery and racial oppression (e.g., Collins, 2000), the ratio of African-American men available to women due to early death and imprisonment of African-American men, and African-American men tending to have lower paying jobs compared to African-American women. The study by Regan and Anguiano (2010) was another one that attended to possible differences in romantic beliefs by ethnicity. In a sample of 436 adults they tested differences in romantic beliefs among participants describing their ethnic background as Latino (44.5%), non-Hispanic White (20.4%), Asian/Pacific Islander (19%), African American (9.9%), Middle Eastern (1.6%), Asian Indian (1.6%), Native American/American Indian, and Mixed Race/other (1.6%). Their results indicated that Asian/Pacific Islanders endorsed more inaccurate romantic beliefs compared to African-American participants. For the current study, no specific racial differences in beliefs about romantic relationships are stated because there is too little research to warrant a directional

expectation. We know even less about racial differences on romantic standards. The only exception is the study of Ma et al. (2014), which reported no racial differences on romantic standards. This study will state no expectations about racial differences on romantic ideals.

Romantic relationship experience. The majority of adolescents are involved in romantic relationships. For example, Carver, Joyner and Udry (2003) reported that by age 16, 55% of boys and 64% of girls claim romantic relationship experience during the past 18 months. Nevertheless, adolescents are novices at romantic relationships. Although there is limited specific research regarding the role of romantic relationship experience in the formation of romantic ideals, several conceptual perspectives propose a possible association. The life course perspective (Elder, 1998) suggests that early experience with romantic partners will influence later romantic relationships. Romantic relationship experience plays a crucial role when forming and developing cognitive frameworks about romantic relationships, and learning how to behave with their romantic partners (Bandura, 1986; 2011).

We classify adolescents' romantic experience into three categories: active current experience, past experience only and no experience. Individuals form expectations regarding romantic relationships independent of direct experience (e.g., Sprecher & Metts, 1999), but once they have their own romantic experience, those pre-existing views become information for comparing with their actual romantic experience (Furman & Simon, 1999). Adolescents' various dating experiences would result in the development of different belief systems regarding romantic relationships.

To our knowledge, very few studies have tested the role of dating experience on romantic ideals directly. One might expect that people currently involved in a dating relationship would be

more attuned to the curriculum and responsive to its messages, but McElwain (2015) found that, at post-test, currently dating adolescents endorsed the most inaccurate faulty beliefs compared to their counterparts who had dated in the past or had never dated. With regard to race differences in romantic beliefs, Regan and Anguiano (2010) attributed the difference between Asian/Pacific Islanders and African-American participants to their different relationship experience. Specially, Asian-Americans start relationship and sexual activities at a later age (e.g., Regan, Durvasula, Howell, Ureño, & Rea, 2004), which indicates that Asian-American adolescents may have less romantic experience compared to their counterparts from other racial groups. Since there are very few empirical studies besides the theoretical evidence suggesting a link between relationship experience and romantic ideals, no directional expectation was developed regarding the role of dating experience on romantic ideals.

Demographics and dating experience as moderators. Besides the direct impact of demographics (i.e., gender, race, and age) on romantic ideals, this study also explores how demographics (i.e., gender, race, and age) and relationship experience moderate treatment effectiveness. Relationship education may not work equally well for all participants. Although it is essential to understand "what works for whom" (Wadsworth & Markman, 2012), only a few studies offer tentative examinations of subgroups by gender or race. Girls appear more receptive to relationship education. For example, McKay and Holowaty (1997) reported that girls tend to garner more romantic relationship information. Sparks et al. (2012) stated that boys gain less knowledge about relationships. Moreover, Sharp and Ganong (2000) found that males are slightly more resistant to altering relationship beliefs in response to relationship education than females are. Prior studies report mixed results regarding whether program efficacy differs by racial groups. Some have found that relationship education works similarly across different racial

groups for improving conflict management tactics and correcting faulty romantic beliefs (e.g., Adler-Baeder et al., 2007). In contrast, Rauer et al. (2014) reported enhanced program effects for whites as compared to blacks, but Wood et al. (2010) reported the opposite. Interestingly, Kerpelman et al. (2010) found no racial differences in program impacts on inaccurate beliefs but the desired improvement in conflict management skills among racial minorities. Together, these studies suggest that demographics may moderate some treatment outcomes but not all. The curriculum is expected to be more beneficial to females compared to males. Studies testing racial differences on program efficacy have not been discovered to have a general pattern; therefore no directional expectations regarding the moderating role of race are posited. Considering the paucity of literature, no specific moderator expectations are proposed for age. We still tentatively expect that adolescents who are currently dating may be more attuned to the messages of the curriculum and hence benefit more from the curriculum.

Individual and class pre-test scores. Because this study uses a pre- and post-test design, the individual pre-tests scores are treated as control variables to guarantee the empirical stability of scores over time**.** Class pre-test scores, which are the typical or average views of participants within the classroom on romantic ideals, are included in this study as controls as well because they represent the class average initial values of romantic ideals at pre-test. Just as individuals within a class may describe romantic standards and beliefs differently, the class-level aggregate of these standards and beliefs can also fluctuate across classes. Exposure to different class climates could be viewed as exposure to different peer group views regarding beliefs and standards for partners/relationships. The class pre-test scores may represent the general understanding or misunderstanding at the class level about the romantic ideals. That would

indicate a possible deficit of knowledge that a program could affect. That knowledge variable is somewhat different from a norm which regulates what is "normal."

Ma et al. (2014) directly tested the role of class shared norms on adolescents' romantic standards among 1,808 high school students by using a pre-test/post-test design. They considered class-level pre-test scores as a limited measure for social climate. It reflects a characteristic of the class, but it may not be observable and therefore may apply to all class members differently. In line with their suggestion for better social climate measure in future studies such as peer context, this study focuses more explicitly on close friends' DPI. Therefore, we treat class pre-test scores only as a control variable, although the aggregation of perspectives represents an echo of class social climate on that construct (Barth, Dunlap, Dane, Lochman, & Well, 2004).

Overview of Multi-level Models

Multi-level modeling (MLM; also called mixed-effects modeling or hierarchical linear modeling) can be understood as an extension of multiple regressions for testing nested/clustered data (e.g., Meisinger, Blake, Lease, Palardy, & Olejnik, 2007). Nested/clustered data contains a hierarchical structure. That is, individuals are nested within naturally occurring hierarchies like classes at school or neighborhoods or even families and they are more similar to each other because of the experience they share than to individuals in other groups. Such nested/clustered data structure violates one assumption of standard ordinary least squares (OLS) regression, which is that observations in a data set are independent. This assumption is critical because the differences within and between nested groups are expected to be important (e.g., Singer, 1998).

In addition to any methodological reasons for accounting for the hierarchical organization of nested data, Halpern-Meekin (2012) suggested theoretical reasons to consider MLM when

examining the efficacy of relationship education. That is, ignoring important differences introduced at the level of the higher unit of organization (whether school, classroom or other grouping unit) also ignores the potential effects of these differences on the outcomes of interest. For the current study we have students nested within classrooms. This study focuses on whether and how the inequalities among different classes in terms of DPI affect adolescents' romantic ideals directly and in interaction with the curriculum. Ignoring important class differences is theoretically inappropriate because it ignores the larger social context which is at least partially preserved in the structure of the data.

Benefits of multi-level models. The most important advantage of MLM is that it provides a powerful analysis for interdependent data. It can simultaneously model data at lower levels (e.g., individuals) and higher levels (e.g., classrooms), estimate and separate variance components between and within groups, and test how variables of interest predict between and within group variation (e.g., Goldstein, 2003; Singer & Willett, 2003).

Other advantages also exist for MLM analysis. For example, more traditional methods for studying repeated measures such as repeated measures ANOVA assume data are completely balanced (e.g., each class has same numbers of students). Unbalanced data cannot be handled in those traditional methods. However, MLM uses iterative full information maximum likelihood processes of model estimation that use all data available (e.g., Goldstein, 2003).

III. Method

Sample

The sample included 2,066 high school students nested in 111 elective Family and Consumer Science (FCS) classes in a Southern state. The study was designed to evaluate a youth-focused relationship education curriculum *Relationship Smarts Plus (*RS+; Pearson, 2004/2007*)*. Participants in the 64 test classes received the curriculum whereas those in the 47 control classes did not.

In order to maximize the variability at the classroom level, 7 classes (3 test classes and 4 control classes) with fewer than 8 students were excluded and 34 students were lost due to this procedure. Data problems (e.g., obvious response set) during pre-test (Time 1) or post-test (Time 2) also lead to the exclusion of 259 participants. Classes with missing data for all members at both pre-test and post-test were also removed, thus another 87 adolescents were excluded from the current study. Compared to the excluded students, those retained for analysis did not differ in terms of gender, age, or race. Useable data were provided by 1,686 high school students (960 test students vs. 726 control students) enrolled in 98 classes (56 test classes vs. 42 control classes). The class size ranged from 8 to 31 with an average of 20 students.

The sample was 77% female, 25% Black, 69% White, and 6.0% other minorities. Participants had an average age of 16 (*SD*=1.3). In terms of grade level, 35.5% of students were in 9th grade, 26% were in 10th grade, 18.7% in 11th grade, and the remaining 18.8% were in 12th grade. For dating experience, 51% were currently dating someone, 36% were not currently dating but reported a dating relationship in the past that lasted a month or more and 13% had no dating experience.

Procedure

Schools were randomly sorted into test or control conditions with approximately two test schools for every control school. This tactic maximized exposure to the curriculum while also assuring enough control students. Test teachers received a two-day training regarding the curriculum and the evaluation procedures before delivering the curriculum.

For test students, the RS+ lessons were delivered during regular class periods. All teachers received packets including all pre- and post-test materials and instructions about when and how to collect and return data for the evaluation. To protect confidentiality, every student was assigned an ID number so that their real name did not appear on their surveys. Test students completed the pre- and post-test surveys in the class meeting immediately preceding and following the presentation of the curriculum. Control students completed the pre-test survey early in the Spring semester 2006 and the post-test survey six weeks later. Parental consent and student assent were obtained for both test and control participants.

Curriculum Overview

As a general research-based relationship education curriculum designed for 8th- to 12th graders, RS+ includes four units and a total of thirteen 60-90 minute lessons. The first unit, which has four lessons, addresses the notions of maturity, values, infatuation, and love; Unit 2, which also has four lessons, includes knowledge about dating relationship processes; Unit 3, which includes two lessons, covers communication skills for healthy relationships; and Unit 4, with three lessons, assists participants in understanding how and why a healthy relationship matters and promotes relationship success and helps adolescents plan for the future. The lessons most closely targeted to faulty relationship beliefs and partners/relationships standards are the

third lesson, which assists students in thinking about the foundation of good relationships such as having common interests and talking to each other, and the twelfth lesson, which targets making wise decisions about mate-selection.

Measures

This study included both individual-level variables and class-level variables. In detail, at the individual-level, romantic beliefs and romantic standards (at both pre-test and post-test), deviant peer influence (DPI), personal characteristics and romantic relationship experience were assessed. At the class-level, treatment condition, class-level DPI, and class-level romantic standards and beliefs (at pre-test) were measured.

Romantic beliefs. Two of the 7 dimensions measured by the Attitudes about Romance and Mate Selection Scale (Cobb et al., 2003) were used to assess teens' faulty romantic beliefs ("one and only," and "love is enough"). One and only tapped the idea that there exists for each person only one ideal partner (example item: "there is only one true love out there who is right for me to marry"). Love is enough addressed the notion that love should "trump" other reasons when making marriage decisions (example item: "in the end, our feeling of love should be enough to sustain a happy marriage"). Participants rated the items on a five-point scale that ranged from 1 (strongly disagree) to 5 (strongly agree). For each construct, the four items were averaged and higher scores indicated more faulty beliefs. The alpha reliability at pre- and post-tests, respectively, were acceptable at .65 and.69 for one and only, and .69 and .75 for love is enough.

Romantic standards. Fletcher et al. (1999) described three dimensions assessing standards for romantic partners (i.e., warmth/trustworthiness, vitality/attractiveness, and status/resources) and two constructs for measuring standards for romantic relationships (i.e.,

intimacy/loyalty and passion). Of these five dimensions, two were tested in the current study. The others were excluded from consideration because the curriculum deemphasizes making relationship decisions based on attractiveness and partner status since adolescents tend to over-emphasize those dimensions. The curriculum also encourages youth to put passion on hold while other facets of close relationships grow first. A sample item for warmth/trustworthiness is "understanding." For intimacy/loyalty, an example item is "honesty." Participants rated the items on a 5-point scale that ranged from 1 (very unimportant) to 5 (very important). Each construct contained six items that were averaged and higher scores meant higher value placed on the standard. The alpha reliability at pre- and post-tests, respectively, were excellent at .93 and .94 for warmth/trustworthiness, and .97 and .97 for intimacy/loyalty. As predictors in the analysis, the pre-test scores for both romantic beliefs and romantic standards are referred to in the Tables as **Student T1.**

Individual-level DPI. Participants rated their closest friends at pre-test on nine 4-point descriptions that ranged from 1 (none of my closest friends fit the description) to 4 (all of my closest friends fit the description). Four items focus on more deviant attributes (sample item: "drink alcohol"); whereas five other items focus on less deviant (more conventional) attributes (sample item: "work hard at school"). Before averaging all items, the five more conventional items were reverse-scored so that higher scores indicate a bias toward deviance in the peer network. The alpha reliability for the 9 items was acceptable at .75.

Personal characteristics. The following personal attributes were assessed as control factors and potential moderators of the effects of relationship education. *Age* was coded in years. *Sex* was coded as 1=female and 0=male. Race was measured by creating one dummy variable of

“White” in order to compare White respondents with other ethnicities (White=1 and Non-White=0).

Romantic relationship experience. Another individual-level control variable reflected participant relationship experience at pre-test. Two items asked: “Are you currently dating (going out) with someone?” and “Have you ever had a dating relationship (going out) that lasted a month or more?” Responses were coded yes = 1 and no = 0. Based on the two items, three conditions were coded: current experience (currently dating =1), past experience only (currently dating =0 and past dating=1) and no experience (currently dating =0 and past dating=0).

Treatment condition. Because students were assigned to the treatment condition (treatment/control) by class, treatment condition was a class-level variable and was coded as 1=treatment and 0=control.

Class-level DPI. The individual-level DPI scores were aggregated within classes to assess class-level DPI. We consider this class-level variable an indication of the level of deviant bias in a class that could affect perceptions of individual participants regarding the curriculum themes. Higher scores represented more class-level bias.

Class-level pre-test aggregate of individual-level pre-test scores (Class T1). The measures assessing romantic ideals (standards and beliefs) for individuals at pre-test were aggregated within classes to assess the average ideals within classrooms. These aggregates were treated as control variables, so that other effects are net of a class-rooms’ initial average view on the romantic ideal. Higher scores for romantic standards and lower scores for faulty romantic beliefs represented classrooms with more overall accurate views at the beginning of the study.

Analysis Strategy. To address our research questions regarding the effects of the individual- and class-level variables on students’ romantic ideals at post-test, we conducted a

series of additive multi-level models. An unconditional means model without any individual or classroom characteristics was first conducted (Model 1). This procedure calculates the amount of variation in outcome variables across level 2 units (e.g., classrooms; Peugh, 2010) and gives this information in a coefficient called an intra-class correlation (ICC). The ICC coefficient, which is calculated with the formula $\rho = \tau_{00}/(\tau_{00+}\sigma^2)$, establishes whether multilevel models are needed by calculating the ratio of between-group variance divided by the total variance (Peugh, 2010). A higher ICC indicates a higher proportion of variance exists across groups in the outcome variable and is consistent with greater violation of the independence assumption. Peugh (2010) summarized that it is common to have ICC values from .05 to .20 based on cross-sectional MLM applications in social science research (e.g., Muthén, 1991, 1994; Spybrook, Raudenbush, Liu, Congdon, & Martinez, 2008). Whereas some researchers have proposed that a small amount of between-class variance (e.g., smaller than 10%) would not, by itself, require the use of multilevel models (e.g., Lee, 2010), because this study focuses on class-level social climate factors (class-level DPI; class-level pre-test scores) as explanatory and control variables, it is necessary to use MLM even when ICC is smaller than 10% as long at the amount is statistically significant.

When Model 1 reveals an ICC greater than zero, two models were conducted to test the main effects of relationship education, individual- and class-level DPI (Model 2) and their interactions (Model 3). These were done in the absence of controls, and then in their presence to assess the robustness of the findings and their role for impacting romantic ideals (Model 4). Then, consistent with the possibility that the demographics and dating experience could moderate program efficacy as well, their interactions with treatment were also tested (Model 5). Finally, Model 6 presented a trimmed model that dropped non-significant variables (unless they were needed as a component of a higher-order interaction that was significant in Model 6).

All models except the unconditional models accounted for adolescents' pre-test scores. A consistently significant association between pre-test and post-test scores across these analyses would indicate significant stability in scores over time as would be expected in a study where over a third of study participants were in a non-treatment control group.

The multi-level models were computed using SAS 9.2 (SAS Company, 2008). In order to better explain the average estimated outcomes, all continuous predictors were centered at their grand mean (the mean calculated at the individual level for individual-level variables and calculated as the mean of class means for class-level variables) so that each parameter was understood as the estimated average outcome when all other predictors in the models were at their average or zero in the case of control variables (Raudenbush & Bryk, 2002). (See Table1 for descriptive statistics before centering)

Deleting cases is not a satisfactory solution for handling missing data because it leads to a biased sample and decreases the validity of inferences. Single imputation (e.g., mean substitution, regression-based imputation) is also not the best method (e.g.,Wayman, 2003) because the imputed values are completely decided by the model fitted to the observed data, which means the imputed values contain no error and lead to overestimation of test statistics (Allison, 2001). Multiple imputation procedures overcome the limitations of single imputation by drawing values from a possible distribution to replace missing values with several acceptable values that inherently contain some variation and generate multiple imputed data sets (Allison, 2001). Therefore, it offers a more valid solution that combines results across the multiple datasets (Wayman, 2003). In this current study, multiple imputation (N=5) was conducted and the coefficients in the tables are the averages across the five imputations.

IV. Results

Preliminary Analyses

Before moving into models answering the research questions, sets of independent-samples t-tests and one way ANOVA were conducted to compare means of romantic ideals at post-test by gender, race and dating experience. Table 2 contains the results and indicates that females tended to endorse higher quality romantic standards but more inaccurate romantic beliefs related to "one and only." There was also a significant racial difference for "one and only." Post hoc comparisons indicated that the mean score of White students was significantly higher (more inaccurate) than the means of the other two groups, which did not differ from each other. Dating experience also predicted the two romantic beliefs constructs. Post hoc comparisons indicated that students who were currently dating had significantly higher scores (more inaccurate) for both romantic beliefs than did teens who had never dated or had dated only in the past. The latter two dating conditions did not differ.

Unconditional Model (M1)

The unconditional means models for the four constructs of interest are reported in Model 1 of Tables 3 through 6. These models partitioned the variance in each romantic ideal at post-test into two parts. One was between-class variance revealing the variance that lies systematically between classes. The other was within-class variance, indicating how much variance lies among students in the same class. In this current study, between-class variances (τ_{00} in Model 1) were all significant and ranged from .031 to .062 across the four constructs. Within-class variances (σ^2 in Model 1) were all significant also and ranged from .573 to .717, which suggests meaningful

variability occurred among students within classes. All four ICCs were close to or higher than 5% (range: 4.97%-9.20%).

The intercepts for the two romantic standards were high (both greater than 4.43, on a 5-point scale), indicating that participants, regardless of treatment condition, prized warmth/trustworthiness and intimacy/loyalty at post-test. The intercepts for the two romantic beliefs were not as high but were above the midrange of the five-point scale (One and only, γ_{00}=3.42; Love is enough, γ_{00}=3.59), suggesting that adolescents endorsed on average somewhat inaccurate romantic beliefs.

Main Effects of Treatment, Individual- and Class-level DPI (M2)

Model 2 tested the main effects of treatment, individual-level and class-level DPI while accounting for adolescents' pre-test scores. This model addressed the 1st and 2nd research questions. The 1st and most important research question tested whether romantic ideals were affected in the desired directions by the curriculum (i.e., lower scores for romantic beliefs and higher ratings for romantic standards) at post-test. Model 2 indicates that the main effects of relationship education were significant across all four constructs in the desired directions (e.g., in Table 3, for one and only, γ_{01} =-.29, p<.001; in Table 5, for warmth/trustworthiness, γ_{01} =.18, p<.001). The results supported our expectation that test students compared to control students reported lower inaccuracy regarding romantic beliefs (i.e., "one and only" and "love is enough") and greater importance of romantic standards (i.e., warmth/trustworthiness and intimacy/loyalty) after receiving the curriculum.

The 2nd research question asked whether DPI perceived at the individual-level predicted romantic ideals at post-test. These analyses ignored the effects on individuals of the treatment

condition. The findings indicated that individual-level DPI had the expected negative main effect on romantic standards whereby students with greater DPI valued warmth/trustworthiness and intimacy/loyalty less than those with lower DPI. Using warmth/trustworthiness as an example, those with DPI scores one point higher at pre-test had a post-test score on warmth/ trustworthiness that was .23 points lower. For the romantic beliefs, DPI was unrelated to "love is enough" but showed an association with "one and only" that was not in the expected direction. In detail, more DPI was associated with more accurate beliefs at post-test for "one and only."

This was the step in the analysis at which the random effect of individual-level DPI was tested for each of the four constructs. The random effect tells whether the impact of individual-level DPI on romantic ideals varies randomly across classrooms (random) or is statistically the same (fixed) for all classes. Results indicated that the random effects were not significant and are therefore not shown in Model 2 or subsequent analyses.

The 2nd research question also asked whether class-level DPI was related to romantic ideals at post-test, again ignoring treatment condition. The results revealed one significant main effect among the four tests. Specifically, and consistent with expectations, students with higher class-level DPI reported more inaccurate beliefs about "one and only" (γ_{03}=.38, p<.05).

Interactions among Individual- and Class-level DPI and Treatment (M3)

Model 3 added two-way interactions (Treatment × Individual-level DPI, Treatment × Class-level DPI, and Individual-level DPI × Class-level DPI) and their three-way interaction (Treatment × Individual-level DPI × Class-level DPI) to the main effects presented in Model 2. This model addressed the 3rd research question testing the moderating effects of individual-DPI and class-level DPI separately and together on curriculum outcomes. The results indicated

significant three-way interactions for two constructs (i.e., “love is enough” and intimacy/loyalty). For both outcomes, the treatment effect was moderated by different combinations of individual- and class-level DPI.

To better explain the significant three-way interaction for “love is enough” and intimacy/loyalty, the significant regions of the slopes were calculated by using the Preacher, Curran, Bauer (2006) on-line computational plotting tool. The significant regions procedure for understanding two-way interactions detects the particular values of the moderators at which the slope of a focal moderated variable on outcome changes from non-significance to significance (Preacher et al., 2006). The use of the significant regions procedure in three-way interactions is much more complex (Curran, Bauer, & Willoughby, 2006). To make the process manageable, the significant regions are calculated to define a range of special significant values for one moderator at two selected values (often -/+ 1 *SD*) of the other moderator (Preacher et al., 2006). Although there was no a priori rationale for choosing either individual- or class-level DPI as the first versus the second moderator, because we were more interested in testing how individual-level DPI affected an individuals’ romantic ideals within the broader context of class-level DPI, we treated class-level DPI as the second moderator and the effect of individual-level DPI on romantic ideals as the first moderator. Therefore, we calculated slopes that represent the effect of individual-level DPI on treatment for “love is enough” and intimacy/loyalty at a low and a high value of class-level DPI.

Figure 1 shows the calculated slopes that represent the mean differences in the control versus the treatment groups for the inaccurate belief of “love is enough” at four different combinations of individual- and class-level DPI scores. (Note that scores for both individual-level and class-level DPI were mean centered, whereas the scores for the dependent variable,

“love is enough,” were not.) Two slopes were calculated at a low level (-1*SD* = -.17) of class DPI and show the significant regions in the association between treatment and individual level-level DPI (see the solid lines in Figure 1). For cases with low class-level DPI, the treatment effect was significant for the following range of individual-level DPI scores: the minimum score (-1.05) to a moderately high score (.59, approximately 1.5 *SD* above the mean). It can be seen that, as the individual-level DPI scores increased across the range of significant scores in classes with low DPI, the slope became flatter until it ultimately became non-significant (statistically flat) at individual-level DPI scores greater than 0.59. Two additional slopes (see dashed lines) show the significant regions for the treatment effect for students who were in classes with high DPI (+.17). Here, the slope of treatment was only significant when individual-level DPI was above the mean. Specifically, the slope became significant at an individual-level DPI score of .05 and remained significant to its highest value (+1.84). Figure1 indicates that three of the four lines display a similar pattern with one quite different. First, for all four lines, the treatment was effective (lower scores in the treatment group relative to the control group), but the differences were quite similar for three of the groups. Specifically, the significant test-control differences were between two-tenths and four-tenths of a point when class-level DPI and individual-level DPI were both low and when class-level DPI was high and individual-DPI was at the low end of its significant range. However, when both class-level and individual-level DPI were high, the control group was most inaccurate, the test group was most accurate, and the test-control difference was over seven-tenths of a point. This was not the pattern expected. It was expected that deviant biases at both individual and class-levels would combine to exaggerate a negative outcome. However, this pattern is what one would expect if the treatment were having its greatest impact among those most in need.

The other three-way interaction was found with the intimacy/loyalty relationship standard. Again using -/+ 1 *SD* for the high and low scores on class-level DPI (-/+.17), we found that treatment and control group scores did not differ for students at any level of individual DPI when they were nested in classes with low class-level DPI. In other words, in classes where DPI was low, there was no effect for individual-level DPI on treatment outcomes for the intimacy/loyalty standard. However, this was not true in classes with high DPI. Here the treatment-control difference became significant when individual-level DPI ranged from .17 (less than 0.5 *SD*) above the mean to its maximum score of 1.84. Figure 2 shows the plot of these findings. Note that for students nested in classes with high DPI scores, as individual-level DPI scores increased from moderately high to extremely high, the difference between the control and test scores became more pronounced. If the impact of the treatment is assessed as the discrepancy between control and treatment groups under these varying conditions, this finding suggests that the treatment effect got stronger with the combination of high class- and high individual-level DPI scores. It should be noted, however, that despite this large control-treatment group discrepancy, the treatment outcome for those with the most extreme individual-level DPI scores were not as strong in absolute terms as that for the treatment participants with more moderate individual-level DPI scores. Nevertheless, the overall finding for this interaction is that the intervention was effective in producing significant changes in standards where both the class-level and the individual-level DPI were high. Again, counter to expectation, this suggested a treatment effect for those potentially in greatest need.

Control Variables and Interactions of Treatment with Controls (M4 and M5)

Building on Model 3, the next model included control variables to explore their associations with the outcomes (Model 4) and to examine the robustness of the findings in the

uncontrolled models. The controls included age, gender, race, dating experience, and the classroom aggregate of pre-test scores on the focal outcome variables. The analysis entered all controls simultaneously. All the significant or marginally significant findings in M3 collected across the four constructs remained significant/marginally significant after adding the control variables, suggesting that they did not affect the patterns of findings. Although their roles as control variables were not very impressive, some of them predicted post-test romantic ideals. Specifically, results indicate that females reported higher scores on warmth/trustworthiness and intimacy/loyalty than males and participants who were currently dating reported marginally more inaccurate beliefs than other students (higher scores) on "one and only" and "love is enough".

To explore whether demographics and dating experience modify treatment effects net the variables already in the model, the interactive effects of each control variable with relationship education were tested simultaneously in the prediction of romantic ideals at post-test (Model 5). The results indicated a marginally significant interaction between treatment and gender for warmth/trustworthiness (γ_{31}=-.17, p<.01). To better understand the two-way interaction, a bar chart was graphed based on the cell means for test and control conditions for female and male students respectively (Figure 3). The chart indicates that although female test students had the highest scores for warmth/trustworthiness at post-test compared to other students, the largest discrepancy between the test and control groups was for males, suggesting that males may have learned more from the curriculum than girls about the relationship standard for warmth/trustworthiness.

Final Model (M6)

The final model (Model 6) is a trimmed model containing only significant parameters. (If the three-way interaction was significant, all two-way interactions and main effects contributing to it are also included whether they are significant or not.)

The results of the final models (Model 6) indicate that the intercepts, which represent the mean romantic ideals at post-test across all control classes, were significant and modest for the inaccurate beliefs but high for the romantic standards. There was a significant direct treatment effect in the desired direction (i.e., reductions in faulty beliefs and enhancements in romantic standards) across all constructs, indicating the treatment effects were consistent with curriculum objectives. (Although the *p*-value <.10 is shown for intimacy/loyalty, it is significant in M2 without the interaction parameters. The main effect is moderated by the three-way interaction, see Table 6, M3-M6). Individual-level DPI had significant direct effects on two of four constructs (i.e., "one and only" and warmth/trustworthiness). Higher individual-level DPI at pre-test was associated with lower scores at post-test for both "one and only" (unexpected) and warmth/trustworthiness (expected). Class-level DPI was a significant direct predictor for "one and only", suggesting that higher class-level DPI at pre-test was associated with more inaccurate beliefs (higher post-test scores) for this construct, as expected. Dating experience and gender predicted romantic ideals net the effect of other variables. In detail, at post-test, those who were currently dating report greater inaccuracy regarding "one and only" and females valued warmth/trustworthiness more than males. The significant three-way interaction among relationship education, individual- and class-level DPI was significant for two constructs (i.e., "love is enough" and intimacy/loyalty). Both demonstrated that the combination of high individual-level DPI with high class-level DPI was associated with the largest gains from the curriculum for these two constructs. While these two DPI factors affected outcomes in a negative

direction when operating alone, in combination they appeared to promote greater knowledge gain and attitude change.

To calculate the global effect size for the final models (M6) the correlation between the observed and estimated romantic ideal at post-test was calculated (using the estimated coefficients in the equations) and then squared (Peugh, 2010). The global effect size suggested that respectively 25.97%, 24.27%, 10.30% and 6.71% of the total variance in "one and only," "love is enough," warmth/trustworthiness, and intimacy/loyalty was addressed by the variables in M6.

For each construct, comparing the final model (M6) with the unconditional means model (M1) allows the calculation of the local effect size between-classes (τ_{00}) and within-classes (σ^2). Using "love is enough" as an example, the between-classes variances (τ_{00}) decreased from .053 to .020, suggesting that approximately 62% of the variance between classes was explained by the variables in the full model. The within-class variances (σ^2) diminished from .717 to .559, indicating that around 22% of the variance within-class was explained by these same variables. Across the four constructs of interest, the explained between-class variances (τ_{00}) and within-class variances (σ^2) range from 14% to 62% and from 7% to 23%, respectively. Based on Cohen (1988), the cutting points of effects size are widely accepted as small is around 10%, medium is around 30%, and large is around and over 50%.

Overall, these results indicate moderate to large amounts of variance explained globally, and small to large amounts of between-class variance and small to moderate amounts of within-class variance explained by the variables in the final model. Both global and local effect size

calculations suggest that the models for romantic beliefs accounted for the largest amounts of variance both between- and within-classes compared to the models for romantic standards.

V. Discussion

Prior relationship education evaluation literature provides evidence that relationship education works. It enhances knowledge, communication and conflict management skills (e.g., Gardner, 2004; Kerpelman et al., 2010); improves attitudes toward future relationship education participation (e.g., Gardner, 2011), decreases inaccurate romantic beliefs (e.g, Kerpelman et al., 2009), increases the perceived importance of romantic standards (e.g., Ma et al., 2014), increases disapproval of marriage and dating abuse (e.g., Sparks et al., 2012); and reduces aggressive behaviors (e.g., Adler-Baeder et al., 2007; Gardner & Boellaard, 2007). All the above studies demonstrate the general effectiveness of relationship education for adolescents.

Consistent with the literature, we found the expected effects for a general relationship education curriculum (Relationship Smarts; Pearson, 2004/2007) on two types of romantic ideals. Specifically, romantic beliefs that were described as culturally derived inaccurately ideas about love and romance (e.g., Cobb et al., 2003) and romantic standards that were defined as desired qualities in partners/relationships (e.g., Fletcher et al., 1999). Ratings of the inaccurate romantic beliefs (i.e., “one and only” and “love is enough”) decreased and ratings of the importance of romantic standards (i.e., warmth/trustworthiness and intimacy/loyalty) increased in the participation group. These improvements supported the general effectiveness of relationship education for all areas examined.

The reductions in inaccuracy were consistent with Adler-Baeder et al. (2007) and Kerpelman et al. (2009), who reported the similar desired curriculum effects on students’ inaccurate beliefs about “love is enough.” The current study replicated these findings and also showed the same effect for another inaccurate relationship belief: “one and only.” The overall

pattern seen for the test and control groups suggested that relationship education appeared to be an effective strategy for changing faulty attitudes or beliefs about relationships among adolescents. Moreover, classroom delivery in an elective class was a practical mechanism for reaching a broad range of adolescents, although disproportionately female, during a crucial developmental period when they would be expected to be sensitive to romantic relationship information.

In line with earlier research evaluating the effects of relationship education on standards for romantic partners and relationships (e.g., Kerpelman et al., 2009; Ma et al., 2014), students exposed to a relationship education curriculum in the current study placed more importance on warmth/trustworthiness as a valued romantic partner attribute and intimacy/loyalty as a prized romantic relationship characteristic than did students in a control group. However, most participants scored high on both standards at the pre-test assessment prior to receiving the curriculum, suggesting that even with an average age of 16 they already have articulated standards consistent with higher quality partners and relationships. Nevertheless, adolescents are in a process of refining their skills to decipher accurate from inaccurate romantic relationship information and even though they describe high romantic standards, it should not be assumed that these standards are deeply ingrained in their understanding or behavior. Furthermore, the fact that the educational intervention affected relationship standards indicated that adolescents were willing to modify their standards in the desired direction when there was room for improvement. The fact that pre-test scores were high, however, indicates a ceiling effect may have limited our ability to fully test the effectiveness of the curriculum to affect standards. Not only are adolescents still learning about romantic relationships and partners, but their sources of information may not be of consistently high quality. Youth may value warmth in a partner or

loyalty in a relationship but in ways that are wrong or misinformed. For example, warmth and loyalty may not be the best relationship standards to apply when suffering an abusive relationship. Adolescents have many sources of relationship information such as popular media that may offer conflicting messages. The value of relationship education for high school students is giving accurate information that allows them to begin seeing how to translate their standards, and romantic beliefs, into real relationship contexts. The evidence from this and other relationship education evaluation research is that it can be an effective aid even for youth with limited relationship experience. However, given our smaller effect size for romantic standards, it is possible that these standards are less malleable.

Our second goal was to examine associations between deviant peer influences (DPI) assessed at the individual- and class-levels with romantic ideals. We initially considered these associations independently of relationship education. In other words, we examined their main effects, ignoring the effects of the curriculum. Moreover, it is harder to find the expected effects on romantic ideals since DPI is in the lower continuum of being influenced by peers, compared to other more apparent adult disapproved behaviors such as aggressive behaviors. It also suggests that not all constructs of romantic ideals are influenced by peers equally due to the fact that inaccurate beliefs have larger effect sizes than romantic standards do.

The patterns observed displayed interesting distinctions within and across constructs. Individual-DPI predicted the post-test scores on the two standards in ways consistent with expectations. When adolescents attributed deviant behavior to more of their personal peer network, these adolescents endorsed lower standards for romantic relationships and relationship partners. Adolescents with lower individual DPI may accept the culturally supported norms that define more functional standards, whereas those with higher individual DPI may tend to resist

those norms. As we expected, adolescents' perception of their close friends' deviant behavior seemed to help shape their romantic standards, maybe through the two mechanisms of the prototype/willingness model: social consequences and social comparison (Gibbons & Gerrard, 1995, 1997; Gibbons et al., 2003). In detail, their tendency to accept or resist the norms defined and supported in the larger culture may have depended on the perceived social consequences of being more receptive or resistant to these broad cultural norms. For example, students more receptive toward the normative relationship standards had less deviant close friends. These students may have perceived peer acceptance by these less deviant peers as the consequence of their receptivity. Alternatively, students more resistant toward the standards had more deviant peers. These individuals may have expected acceptance from their more deviant peers to follow from norm resistance. In addition to social consequences, direct social comparison between self-image and the image of close friends may have contributed to the association between DPI and romantic standards for participating students at post-test. For example, according to the mechanism of social comparison, individuals behave as they expect those who are more similar to them to behave. Those who perceive themselves to be more deviant behave like their deviant peers, resisting the norms for relationship standards. Those who perceive themselves to be less deviant compare themselves with less deviant peers, more accepting toward those standards.

DPI also had a statistically significant association with the romantic relationship beliefs about "one and only," but this association was in the opposite direction from expectation. Greater DPI was associated with greater accuracy with respect to the "one and only" belief, again, independently from the effects of the curriculum. Additional analyses (not shown) indicated that adolescents with higher individual-DPI were more likely to come from divorced households, single parent households or step households where their parents and adult role models may have

demonstrated through relationships with multiple partners over time that the "one and only" belief is indeed a fallacy. If this practical experience derived from living in diverse family structures rather than the continuously married, two biological parent families helped them identify the myth, then this unexpected association between individual-level DPI and the "one and only" myth is understandable but spurious. It is not the level of DPI that explains the greater accuracy, but rather the life experience which has provided an experiential foundation for that accuracy.

The findings regarding class-level DPI told a much simpler story. Only one association was found and it was for the inaccurate belief of "love is enough." The association was in the expected direction. In classes with higher mean levels of DPI among the members greater inaccuracy was observed. At the level of these main effects, the individual-level assessment seemed to be a stronger predictor of an individually reported response than a class-level assessment. That suggests a conceptual proximity that makes sense. Bronfenbrenner's ecological model (1979) presented a set of concentric circles that represent increasingly abstract and distant contexts. The contexts closer to the actor would be expected to show stronger associations with the actor's development. Therefore, it is reasonable that individual attributes predicting an individual's romantic ideals would be more predictive than class-level attributes predicting individual outcomes. To summarize, the present findings added to previous research demonstrating the importance of peer influences in attitude formation in a variety of areas (e.g., Andrews et al., 2008; Gibbsons & Gerrard, 1995) by demonstrating that the two types of peer influences (individual-level and class-level) directly affected the participants' views of romantic ideals after exposure to a general relationship education curriculum.

Since even the most effective treatment is not 100 percent effective, Wadsmorth and Markman (2012) recommended identifying moderators of relationship education efficacy. Therefore, a major goal of the current study was to consider several factors that may affect how well relationship education works for the participating adolescents. This study built on Ma et al., (2014). That study considered class-level social climate measured by aggregating individual's pre-test scores which they argued reflected a class norm pertaining to the beliefs and standards that were the subject of the study. They found that students with higher pre-test scores placed slightly, but significantly, less importance on warmth/trustworthiness at post-test if registered in classes with less favorable attitudes toward the standard (lower average pre-test scores).The authors attributed the weak social climate effects to the possibility of not having observable measures. As a future direction, they called for exploring other types of peer influence that are more influential and obvious. Therefore, for the current study, deviant peer influence (DPI) was conceptualized as a characteristic of the network of peers to which individuals belonged. We expected that DPI might affect the individual adolescent's response to normative attitudes and beliefs about relationships in general and to relationship education in particular. In other words, it was conceptualized as a potential moderator of the effect of curriculum messages on student outcomes. DPI was assessed by each participant as the number of their close friends (none, some, most, all) whose behavior was deviant across a variety of relevant behaviors (e.g., drug use, trouble at school, etc.). Beyond this individual-level contextual influence, we proposed another contextual variable at the class-level because these individuals were also nested in classrooms. If an individual's deviant peer network can affect that individual's response to relationship education, being nested in a class full of people with high deviant influence may further mitigate the effects of the curriculum. Consistent with an ecological framework (Bronfenbrenner's, 1979;

1989) in which nested levels of context affect the developing individual's experience and outcome, we argued that both the individual's peer influence and the larger social climate created by the unique combination of social networks represented by the class members might affect the outcomes of an educational intervention.

A central goal of this study was to scrutinize how the relationship education program worked differently for different people based on their varying individual and class-level DPI independently and interactively. Hence, we examined individual and class-level DPI as potential moderators of the intervention. Perhaps the most interesting and novel contribution of this study was that, the two contextual influences, individual-level DPI and class-level DPI, interacted in a three-way interaction with treatment to alter the effect of the curriculum on romantic ideals for two of our four focal outcomes: "love is enough" and intimacy/loyalty. Prior studies have found that deviant characteristics of children and their peers dampen academic achievement (Cook et al., 2007; Goldsmith, 2004; Nelson & Debacker, 2008), and more acceptance of collective norms supporting aggressive behaviors weakens the effectiveness of an anti-aggression intervention (e.g., Aber et al., 1998). To our knowledge, no study has tested how such social climate factors strengthen or weaken a relationship education intervention. The significant interactions found in this study support the Bronfenbrenner (1979; 1989) social ecological framework by showing that variability in adolescents' romantic ideals is a function of nested contexts (i.e., treatment or control conditions for relationship education, and individual- and class-level DPI). We demonstrated that the interaction of these three contexts affected adolescents' outcomes (e.g., Darling, 2007).

In the three-way interaction among treatment, individual-level DPI and class-level DPI, two general patterns were found for the two constructs, "love is enough" and intimacy/loyalty.

First, students in the treatment group were responsive to the curriculum in the expected directions when DPI at both individual and class levels were low. This was expected because either less individual or class DPI could strengthen the program efficacy, therefore, their combined influence was expected to facilitate relationship education as well. A more accepting attitude from students with lower individual DPI could be reinforced in classrooms with less class DPI. However, this outcome occurred only with "love is enough." This pattern may not have been found in the intimacy/loyalty model because of the ceiling effect in the post-test scores. Students with both lower individual- and class-level DPI already highly valued intimacy/loyalty at pre-test. For this group, the standard was very likely reinforced and affirmed by the curriculum, but the post-test scores could not increase because they were already at the top of the range. It is likely that the assessments of the two romantic standards were too simplistic to tap sufficient variability in adolescent standards. Based on their limited experience with close relationships, it seems improbable that 16 year olds would have a complete grasp of the qualities that represent high standards for relationships. Instead, it is more likely that these assessments tapped information that those students were previously aware of from other classes, media exposure, disclosures with friends and/or discussions at home.

Based on the findings that, when both individual and class-level DPI were low, outcomes seemed to improve or remain at their ceiling, and when either individual or class-DPI was high, a decrement in the outcomes occurred, we expected that when both individual and class-DPI were high, the outcomes would be at their worst in the treatment group. However, we were surprised to find that the greatest test-control differences were registered in the desired direction when both individual- and class-level DPI were high. This pattern was found for both three-way interactions. In fact, for one of the two models (i.e., for "love is enough"), the best (most

accurate) scores at post-test were seen for test students with *highest* individual-level DPI nested in classes with high DPI. It seems that the combination of the two forms of DPI may have produced a social climate that operated differently than expected. A plausible explanation for this unexpected pattern is the differential susceptibility hypothesis (Belsky, 1997; Belsky & Pluess 2009).This hypothesis suggests that "vulnerable" children are easily influenced in a negative direction by a risky environment, but they are also influenced easily in a positive direction by supportive surroundings. In the current study, students with high levels of both individual- and class-level DPI had the worst scores if they were in the control group, which meant that they were least aware of relationship myths or the factors that define high standards for quality relationships. Therefore, in this context they could be understood as vulnerable. The other part of Belsky's hypothesis is that this vulnerability must be confronted in a context of support. It seems likely that the Relationship Smarts curriculum, which was specifically developed for students this age and has many activities that engage students in learning, might be experienced by participating students as a supportive environment. Furthermore, all teachers received specific training in the goals of the curriculum and how to deliver the activities in engaging ways. Therefore, consistent with the differential susceptibility hypothesis, it seems plausible that the adolescents with the riskiest orientation to romantic relationships benefited most. If this plausible explanation is valid, it should be understood that this unexpected outcome was not the result of the students' vulnerability. Rather, it is the result of the class being perceived as providing a safe and supportive atmosphere for exploring these romantic standards and beliefs. Therefore, it is important for the teachers to provide supportive surroundings. Future studies could train teachers on special management skills to facilitate a constructive class environment and improve skills for delivering curriculum contents.

Another interesting aspect of the three-way interaction was that the effects of relationship education were minimal when individual and class DPI were in the opposite directions. Reference group theory (Kelly, 1952), which proposed that children's behaviors and beliefs are influenced through group comparison (e.g., among classmates), may help explain this finding. When the two kinds of DPI were at odds, those combinations appeared to interfere with the effective communication of the curriculum content negatively. Some researchers found that adolescents with low future educational orientation had more problem behaviors when nested in schools with more average future orientation. They attributed this pattern to the possibility that they may feel hopeless when comparing the school climate and their own future orientation (e.g., Chen & Vazsonyi, 2013; Khattab, 2005). The sense of hopeless may be generated due to the great distance between their goal and starting point. Likewise students with higher individual-level DPI in the classrooms with lower PDI may resist the themes of a relationship education curriculum because of a pessimistic feeling of not belonging. Here the individual-level effect is stronger and the class-level effect is not protective but rather seems to discourage the dissimilar student. When the situation is reversed, and the student has lower individual-level DPI but is nested in a class with higher DPI, the individual-level variable is not stronger. Instead, the class context appears to promote less sensitivity to the curriculum material. The sense of being different may play a role but in this instance, there may be the pressure of peer norms. Neither individual nor class-level DPI was found to moderate relationship education for the other two constructs (i.e., "one and only" and warmth/trustworthiness). Rather, for these constructs, the direct effects of DPI and treatment outline the findings. At the individual level, DPI is a negative predictor of post-test scores, regardless of treatment condition and the treatment effects occur regardless of the level of DPI. Of course, it is also possible that other factors not considered in

this study may affect program efficacy for the two constructs including the proximal impacts from peers, families, teachers and classrooms, and the distal influence from schools or communities as well as participants personal backgrounds.

Besides the above social contextual influences from peers, another contribution of this study comes from analyses testing the independent effects of participants' demographics and dating experience on romantic ideals and their interactions with relationship education. Moreover, Bronfenbrenner's (1979; 1989) social ecological framework suggests the importance of both personal and contextual influence on adolescents' development. On average, there were meaningful, albeit small differences in how relationship education worked based on participants' demographics and dating experience. In detail, the findings indicated that females had slightly higher romantic relationship and partner standards. This finding differs from previous studies where both males and females tended to report similar standards for romantic relationships/partners (e.g., Buss et al., 2001; Eastwick & Finkel, 2008; Shackelford et al., 2005). However, these prior studies examined samples of college age and older participants whereas the current study focused on high school students. Perhaps there is a developmental phenomenon occurring that this study cannot address because of the age limitations of the sample. The finding that girls in this sample have higher romantic standards is not surprising, because girls mature faster than boys and high school aged girls tend to have higher expectation toward marriage than like aged boys (e.g., Manning, Longmore, & Giordano, 2007). Moreover, greater desire for intimacy arises earlier for girls than boys. For example, girls more often achieve intimacy before or together with identity formation (e.g., Lytle, Bakken, & Romig, 1997, Scheidel & Marcia, 1985). Even accounting for these differences, however, males benefitted from the curriculum and

the small gender difference may be made up if some of the curriculum activities are designed specifically to address their interests.

Current dating condition also played a role in predicting the two faulty relationship beliefs (i.e., “one and only” and “love is enough”). More specifically and consistent with McElwain (2015), those who were currently dating endorsed more inaccurate beliefs compared to their counterparts who had dated in the past or had never dated. This was counter to our expectations. We expected that active engagement in a relationship would promote interest in the curriculum and, by enhancing the effectiveness of the messages it delivered, produce an average increase among the actively dating. However, instead, being actively involved in a relationship seemed to correspond with greater acceptance of relationship myths. One possible explanation for this unexpected finding is that adolescent romantic relationships are characterized by emotional intensity and infatuation (Collins, 2003; Collins et al., 2009). This emotional intensity and infatuation may promote perceiving romantic relationships through unrealistic lenses (Montgomery, 2005) and lead actively dating individuals to the false impression that they know more about relationships than they do. Importantly, involvement in a current dating relationship did not interact with the educational intervention, implying that adolescents involved in relationships were not less attuned to curriculum messages. This pattern emerged regardless of the treatment condition.

The demographic attributes and dating experience did not play a critical role in most models, and the only significant findings for these factors were direct effects since no interactions were revealed. However, those characteristics should not be ignored when seeking to understand adolescents’ romantic ideals and program efficacy. Therefore, the next step is not to

adjust curriculum contents but rather to continue to enhance our knowledge of how moderators affect the receptivity to curricula (Johnson, 2012).

Both global and local effect sizes were substantial for romantic beliefs with a quarter of the total variance being explained by all predictors in the final model and half of the between class variance being explained by treatment (and class DPI for "love is enough"). These effect sizes were more modest for romantic standards, with a tenth of the total variance being explained by all predictors in the final model and almost a third of the between class variance, respectively, being explained by treatment (and class DPI for intimacy/loyalty). That is, on average, the curriculum was most powerful in addressing inaccurate romantic beliefs than on enhancing romantic standards. However, the relative weakness of the program effects for romantic standards may have been due to measurement issues whereby students reported high romantic standards prior to the intervention. Even though they reported high standards at pre-test, it is not entirely clear the degree to which these standards are fully engrained in their behavior and relationship-linked values. It is one thing to believe warmth and trustworthiness is good and another to be warm and trustworthy in relationships. Therefore, future studies may need to examine both the attitude and the behavior, perhaps through vignettes or scenarios or even through direct, observable behavior to establish treatment effects.

The effect sizes in this study were consistent with or stronger than the anticipated small-to-moderate effects typical of quasi-experimental or experimental studies in relationship education (e.g., Hawkins et al., 2008). The major finding was that the curriculum was especially beneficial when high levels of individual- and class-level DPI were combined for "love is enough" and intimacy/loyalty. Deviant peer influence revealed some direct associations with the attitudes and standards that were the focus of this study and the individual and class levels of

deviant peer influence interacted with the educational intervention to affect pre-to-post-test change among those participating in the curriculum. These findings suggest that peer influences may be important to consider when assessing the efficacy of relationship education programming. In keeping with the suggestion from Wadsworth and Markman (2012) to study who benefits from interventions and under what circumstances, this study made an important initial contribution for understanding the effectiveness of a general relationship education program by testing the moderating roles of different types of peer influences. The information we provided here can serve to inform teachers not to give up on students with greatest needs (i.e., both high individual and class DPI) and sensitize evaluation researchers to the potential program efficacy differences among students who have experienced different peer influences.

Implications

The HCHCTY project aims to disclose the components and factors facilitating relationship education effectiveness among adolescents. Comparisons of the test and control groups at post-test after controlling for pre-test scores suggest that the curriculum is valuable for adolescents in modifying their romantic beliefs and standards in the desired directions. Moreover, curriculum delivery in elective classes is a practical device for reaching a broad range of adolescents who are willing to refine their skills for distinguishing accurate and inaccurate information regarding romantic relationships.

The findings also identify areas relating to the improvement of this youth-focused and research-based relationship education. Some of the areas belong to the research side of the program, such as considering peer influence when examining program efficacy, assessing romantic standards using both attitudinal and behavioral aspects to tap standards completely,

refining the moderators to know their effects on the program more accurately, and tailoring curriculum contents especially to males. Other areas tap the instruction side of the program, including having well-trained teachers who are good at facilitating a constructive classroom and delivering curriculum content, as well as understanding that students with greatest needs (i.e., both high individual and class DPI) can benefit most from treatment.

This current study tests new and unexplored moderators. Evaluation researchers should gather adolescents' understanding about how well the contents fit their needs, peak their interests, and apply to their real lives. Besides participants' personal information (e.g., demographics), both the proximal influence from peers, families, teachers and classrooms and the distal impacts from schools, and communities should be considered in future research to make sure the curriculum is applied appropriately.

Limitations

This study offered empirical evidence of relationship education effects on romantic ideals and considered both personal and contextual moderators among a relatively large sample of high school students that were diverse both in terms of race and dating experience. Additional strengths of this study methodologically were that it used true test and control groups, true pre- and post-test data collection, multi-level models for nested data structure, and multiple imputation procedures for handling missing data. Nevertheless, this study was not without limitations. First, most participants were females because the curriculum was delivered in FCS classes, which traditionally over-represents females. Due to the unbalanced sample, the generalizability of this study to males is limited. These FCS classes were elective classes, therefore, even though classes were included from across the state, the participants in this study

were not representative of students in public schools in the state nor did they represent adolescents nationally. Therefore, future studies are needed using a more nationally representative sample.

Second, the measure of class-level DPI may be limited because it is based on the classroom average of reports of individuals about themselves. The resulting class score is meaningful, since it creates a class-level dimension ranging from low to high deviant peer influence, but it may not be a dimension that class members actually can observe with precision. To the extent that the class-level dimension is not observable, the mechanism by which it works is obscure. To address this concern, future research could directly ask students in a class to evaluate the class on the dimensions that are of interest. Then the class-level aggregate would be a direct representation of the observed class attribute. Without such a direct assessment, results based on a class aggregate of individual self-descriptions must be interpreted with caution.

Finally, the adolescents in this study rated both standards very positively at pre-test. This created a ceiling effect, which attenuated the treatment effects for these models. That is, the romantic standards measure in this study was too simplistic to guarantee sufficient variance among adolescents. Therefore, the findings relating to romantic standards also should be interpreted with caution. If future research assesses standards using both attitudinal and behavioral aspects, the resulting measure may more completely tap in their relationship standards.

Future Directions

Moderators help us understand “what works for whom” (Wadsworth & Markman, 2012), and can indicate whether and how to expand, tailor, and adjust curriculum contents. Future

studies would benefit from considering additional potential sources of peer influence such as romantic partners, cliques, and crowds, as well as close friends and classmates (e.g., Brechwald & Prinstein, 2011). For example, cliques have been shown to affect adolescents' romantic relationships by serving as a context for learning preliminary patterns of dating (e.g., Dunphy, 1963).

In addition to peer socialization, adolescents also are influenced by cultural norms regarding romantic ideals gained through other social relationships such as parents and siblings. Future studies could include the romantic ideals that parents endorse because previous studies have confirmed the transmission between parents' and childrens' behaviors and attitudes (e.g., Hutchinson, 2002; Newcomes & Udry 1984). Moreover, the parent-child communication about romantic relationships may be important to consider. Finally, although little romantic relationship research tests siblings as social agents, some recent interesting work has been given to the significance of siblings in shaping one another's romantic views (e.g., Killoren & Roach, 2014).

Future evaluation studies of relationship education for adolescents may benefit from considering other individual-level moderators, such as adolescents' academic aspirations or television consumption. The relationship between academic aspirations and romantic ideals is largely unstudied, but suggestive prior research has reported that adolescents with higher educational aspirations and better academic performance are more likely to express intentions to marry (Manning et al., 2007). Sparks et al. (2012) is one of few researchers to test whether academic performance affects relationship education. They found that good students were better informed about relationships than weak students. Young people seek out television and other media to learn about romantic relationships (e.g., Zurbriggen & Morgan, 2006). There is

theoretical (i.e., social cognitive theory; Bandura, 1986, 2002) and empirical evidence that unhealthy romantic themes in media promote unhealthy romantic attitudes and beliefs among the consumers of those media (Holmes, 2007; Segrin & Nabi, 2002).

Further, Bronfenbrenner's (1979; 1989) seminal work suggests that adolescents are shaped by a range of nested, contextual systems whose combined effect is extraordinarily influential in adolescents' development. Besides the above proximal influence from classrooms, peers and teachers, future studies may consider other distal factors such as school characteristics and community norms. Many studies have documented the positive relationship between school or community disadvantage (e.g., higher level of poverty) and elevated students' aggressive behaviors (e.g., Colder, Mott, Levy, & Flay, 2000). Moreover, previous studies give empirical evidence for the moderating role of such contextual factors on intervention efficacy (e.g., CPPRG, 2010). These contextual attributes may explain added variance in educational outcomes beyond individual attributes and class climate. School context may be more distal than class climate, but it is more stable year to year (e.g., Barth et al., 2004). Moreover, more positive school characteristics predict better classroom contexts (Waxman, Anderson, Huang, & Weinstein, 1997). Future relationship education evaluation studies should pay more attention to the fact that classrooms are nested in larger schools that could impact both individuals and classrooms, and schools are embedded in larger communities, which also could influence individuals and school characteristics. More distal environments such as schools often exert a weaker influence than do more proximal settings including classrooms (Barth & Parke, 1996). Therefore, we do not expect findings relating to the distal environments to yield the best outcome after taking into account the classroom environment. However, it is possible that it is easier for teachers at schools with less deviant environments to implement the curriculum because teachers

in schools with more deviant climates may be overwhelmed as they respond to students' daily crises and at the same time implement the curriculum. Therefore, it may be important to detect the broader social climate of the school to know whether teachers have special training needs in order to provide more supportive surroundings.

Conclusion

Based on the current literature we know little about what factors influence program efficacy and for whom (Markman & Rhoades, 2012). Our findings offer an important advancement on program efficacy moderators for youth focused, school-based, relationship education using a true pre-post, test-control research methodology. We used a general curriculum rather than a narrow one designed to target specific relationship outcomes, and it was directed to a normal community sample instead of one that is troubled. Specifically, the current study contributes to the existing literature by treating peer influence, at both individual- and class-levels, as a condition and mechanism of the linkage between relationship education and romantic ideals. It also advances understanding of the role of relationship education in the development of romantic ideals as the result of personal factors (i.e., demographic and dating experiences). This study supports the expected effect of relationship education on adolescents as they decrease faulty relationship beliefs and increase romantic standards. It provides evidence that relationship education may be especially beneficial to those whose deviant peer influence at both the individual- and class-level is more deviant simultaneously at both levels constructs. However, this pattern may have required a classroom context in which the relationship education teacher provided a safe, supportive learning context, which was an un-assessed condition the present study. It also suggests, however, that high deviant peer influence at one but not both levels does not yield desired outcomes, but rather leads to negative or no effects for the intervention. The

findings demonstrate the ecological framework that adolescents' development accounts not just for the personal backgrounds of individuals, but also for different types of peer influences constituting adolescents' social climate. Future research directions should expand to consider more potential influence from individual, class, school, and family when testing the development of romantic ideals and relationship education effects.

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Table1. Descriptive Information (*N*= 1686; Class *N*=98)

		N	Percentage/ *Mean(Sd)*
Sex	Female	1267	77%
	Male	376	23%
Race	Black/African American	413	25%
	White/Caucasian	1138	69%
	Hispanic/Latino, Native American, Asian, other	99	6 %
Age		1646	15.95*(1.25)*
Dating experience	Current dating	823	51%
	Past dating	571	36%
	No dating	210	13%
Grade level	9th Grade	586	35.5%
	10th Grade	429	26%
	11th Grade	307	18.7%
	12th Grade	325	18.8%
Treatment	Test students	960	56.9%
	Control students	726	43.1%
Treatment	Test classes	56	57.14%
	Control classes	42	42.86%
T1 Individual Beliefs	One and only	1648	3.63*(.84)*
	Love is enough	1647	3.77*(.87)*
T1 Individual Standards	Warmth/trustworthiness	1631	4.47*(.81)*
	Intimacy/loyalty	1632	4.68*(.82)*
T1 Individual- level DPI		1630	2.05*(.46)*

Table1 (continued)

		N	Percentage/ *Mean(Sd)*
T1 Class-level Deviant		98	*2.10(.18)*
Peer Influence			
T2 Individual Beliefs	One and only	1570	3.42(.82)
	Love is enough	1570	3.55(.87)
T2 Individual Standards	Warmth/trustworthiness	1517	4.45(.80)
	Intimacy/loyalty	1523	4.63(.80)
T1 Class Beliefs	One and only	98	3.63(.26)
	Love is enough	98	3.79(.30)
T1 Class Standards	Warmth/trustworthiness	98	4.48(.23)
	Intimacy/loyalty	98	4.69(.23)

Table 2: Mean comparison romantic ideals at post-test by participants' gender, race, and romantic relationship experiences.

	One and only		Love is enough		Warmth/trustworthiness		Intimacy/loyalty	
	Mean (*SD*)	T/F Value	Mean (*SD*)	T/F Value	Mean(*SD*)	T/F Value	Mean(*SD*)	T/F Value
Gender								
Female	3.46 (.82)		3.56 (.88)		4.52 (.75)		4.69 (.76)	
Male	3.26 (.80)		3.51 (.86)		4.20 (.91)		4.41 (.90)	
		3.93***		.92		5.71***		5.19***
Race								
Black	3.36[b] (.78)		3.55 (.86)		4.42 (.74)		4.65 (.67)	
White	3.46[a] (.82)		3.55 (.88)		4.47 (.82)		4.63 (.85)	
Other	3.23[b] (.81)		3.47 (.85)		4.29 (.87)		4.53 (.75)	
		4.84**		.34		2.30~		.69
Romantic Experience								
Current	3.50[a] (.82)		3.64[a] (.86)		4.68 (.79)		4.66 (.79)	
Past	3.34[b] (.81)		3.47[b] (.87)		4.42 (.84)		4.60 (.86)	
No	3.32[b] (.78)		3.42[b] (.92)		4.39 (.79)		4.60 (.75)	
		7.83***		8.12***		1.07		1.02

***p<.001, **p< .01, *p< .05, ~p< .10

[ab] Means compared in columns with different superscripts are significantly different (p<.05)

Table 3: Multi-level Models for predicting post-test one and only.

Parameters	M1[a]	M2[b]	M3[c]	M4[d]	M5[e]	M6[f]
Fixed Effects						
Intercept (γ_{00})	3.43***	3.59**	3.58***	3.45***	3.32***	3.55***
Treatment (γ_{01})		-.29***	-.27***	-.27***	-.03	-.28***
Class-level DPI(γ_{02})		.38*	.16	.21	.25	.37*
Treatment × Class-level DPI (γ_{03})			.31	.22	.21	
Individual-level DPI (γ_{10})		-.12**	-.10	-.12	-.12~	-.13**
Treatment × Individual-level DPI (γ_{11})			-.02	-.02	-.01	
Individual × Class-level DPI (γ_{12})			.04	.04	.0001	
Treatment × Individual × Class-level DPI (γ_{13})			-.26	-.26	-.22	
Student T1 one and only (β_{7j})		.44***	.44***	.43***	.43***	.44***
Class T1 one and only(γ_{04})				.14	.14	
Age (γ_{20})				.01	.02	
Gender (γ_{30})				.04	.12	
White (γ_{40})				.05	.04	
Current dating (γ_{50})				.11~	.21*	.09*
Past dating (γ_{60})				.04	.13	
Treatment ×age (γ_{21})					-.01	
Treatment ×gender (γ_{31})					-.13	
Treatment ×white (γ_{41})					.02	
Treatment × current dating(γ_{51})					-.18	
Treatment × past dating (γ_{61})					-.18	
Random Effects						
Intercept(τ_{00})	.062***	.028***	.027***	.026***	.026***	.027***
Residual (σ^2)	.612***	.473***	.471***	.475***	.471***	.472***
ICC	9.20%					
Variance Explained						
Between-class Level						56.45%
Within-class Level						23.04%

***p<.001, **p< .01, *p< .05, ~p< .10

[a] unconditional means Model, [b] the model testing main effects of treatment, individual- and class-level DPI after controlling for pre-test scores , [c] the model testing three-way interactions among treatment, individual- and class-level DPI, [d] the first control Model, [e] the second control Model, [f] the final Model

Table 4: Multi-level Models for predicting post-test love is enough.

Parameters	M1[a]	M2[b]	M3[c]	M4[d]	M5[e]	M6[f]
Fixed Effects						
Intercept (γ_{00})	3.59***	3.70***	3.69***	3.60***	3.48***	3.69***
Treatment (γ_{01})		-.26***	-.22***	-.22***	-.01	-.22***
Class-level DPI(γ_{02})		.21	.16	.15	.19	.16
Treatment × Class-level DPI (γ_{03})			.06	.08	.04	.06
Individual-level DPI (γ_{10})		.02	.10	.09	.09	.10
Treatment × Individual-level DPI (γ_{11})			-.10	-.09	-.09	-.10
Individual × Class-level DPI (γ_{12})			.53	.50	.45	.53
Treatment × Individual × Class-level DPI (γ_{13})			-1.30*	-1.29*	-1.21*	-1.30*
Student T1 love is enough (β_{7j})		.47***	.47***	.46***	.45***	.47***
Class T1 love is enough (γ_{04})				.06	.05	
Age (γ_{20})				-.02	-.03	
Gender (γ_{30})				.01	.10	
White (γ_{40})				.01	-.01	
Current dating (γ_{50})				.11~	.19*	
Past dating (γ_{60})				.05	.11	
Treatment ×age (γ_{21})					.01	
Treatment ×gender (γ_{31})					-.15	
Treatment ×white (γ_{41})					.04	
Treatment × current dating(γ_{51})					-.15	
Treatment × past dating (γ_{61})					-.13	
Random Effects						
Intercept(τ_{00})	.053***	.021***	.020***	.020***	.022***	.020***
Residual (σ^2)	.717***	.562***	.560***	.559***	.559***	.559***
ICC	6.88%					
Variance Explained						
Between-class Level						62.23%
Within-class Level						22.04%

***p<.001, **p< .01, *p< .05, ~p< .10

[a] unconditional means Model, [b] the model testing main effects of treatment, individual- and class-level DPI after controlling for pre-test scores , [c] the model testing three-way interactions among treatment, individual- and class-level DPI, [d] the first control Model, [e] the second control Model, [f] the final Model

Table 5: Multi-level Models for predicting post-test warmth/trustworthiness.

Parameters	M1[a]	M2[b]	M3[c]	M4[d]	M5[e]	M6[f]
Fixed Effects						
Intercept (γ_{00})	4.43***	4.33***	4.32***	4.08***	3.94***	4.16***
Treatment (γ_{01})		.18***	.16***	.17***	.42**	.17***
Class-level DPI(γ_{02})		-.10	-.24	-.16	-.14	
Treatment × Class-level DPI (γ_{03})			.21	.08	.08	
Individual-level DPI (γ_{10})		-.23***	-.26***	-.25***	-.25***	-.21***
Treatment × Individual-level DPI (γ_{11})			.03	.04	.04	
Individual × Class-level DPI (γ_{12})			.03	-.08	-.11	
Treatment × Individual × Class-level DPI (γ_{13})			.62	.60	.65	
Student T1 warmth/trustworthiness (β_{7j})		.22***	.22***	.20***	.20***	.21***
Class T1 warmth/trustworthiness (γ_{04})				.02	.02	
Age (γ_{20})				-.01	-.01	
Gender (γ_{30})				.21***	.31***	.23***
White (γ_{40})				.07	0.9	
Current dating (γ_{50})				.05	.13	
Past dating (γ_{60})				.02	.04	
Treatment ×age (γ_{21})					-.003	
Treatment ×gender (γ_{31})					-.17~	
Treatment ×white (γ_{41})					-.03	
Treatment × current dating(γ_{51})					-.17	
Treatment × past dating (γ_{61})					-.04	
Random Effects						
Intercept(τ_{00})	.031***	.020***	.021***	.022***	.022***	.020***
Residual (σ^2)	.593***	.550***	.549***	.540***	.538***	.540***
ICC	4.97%					
Variance Explained						
Between-class Level						35.48%
Within-class Level						9.27%

***p<.001, **p< .01, *p< .05, ~p< .10

[a] unconditional means Model, [b] the model testing main effects of treatment, individual- and class-level DPI after controlling for pre-test scores , [c] the model testing three-way interactions among treatment, individual- and class-level DPI, [d] the first control Model, [e] the second control Model, [f] the final Model

Table 6: Multi-level Models for predicting post-test intimacy/loyalty.

Parameters	M1[a]	M2[b]	M3[c]	M4[d]	M5[e]	M6[f]
Fixed Effects						
Intercept (γ_{00})	4.62***	4.55***	4.56***	4.38***	4.32***	4.40***
Treatment (γ_{01})		.12*	.09~	.10~	.23	.09~
Class-level DPI(γ_{02})		-.05	-.21	-.13	-.12	-.13
Treatment × Class-level DPI (γ_{03})			.24	.13	.12	.12
Individual-level DPI (γ_{10})		-.25***	-.30***	-.28***	-.29***	-.28***
Treatment × Individual-level DPI (γ_{11})			.05	.05	.06	.06
Individual × Class-level DPI (γ_{12})			-.73	-.85	-.86	-.82
Treatment × Individual × Class-level DPI (γ_{13})			1.24*	1.23*	1.25*	1.23*
Student T1 intimacy/loyalty (β_{7j})		.17***	.17***	.16***	.15***	.16***
Class T1 intimacy/loyalty (γ_{04})				.12	.10	
Age (γ_{20})				-.03	-.04	
Gender (γ_{30})				.20***	.24***	.21***
White (γ_{40})				.01	-.0001	
Current dating (γ_{50})				.02	.10	
Past dating (γ_{60})				.01	.03	
Treatment ×age (γ_{21})					.01	
Treatment ×gender (γ_{31})					-.06	
Treatment ×white (γ_{41})					.03	
Treatment × current dating(γ_{51})					-.16	
Treatment × past dating (γ_{61})					-.05	
Random Effects						
Intercept(τ_{00})	.042***	.037***	.037***	.038***	.037***	.037***
Residual (σ^2)	.573***	.542***	.541***	.533***	.534***	.533***
ICC	6.83%					
Variance Explained						
Between-class level						14.29%
Within-class level						6.98%

***p<.001, **p< .01, *p< .05, ~p< .10

[a] unconditional means Model, [b] the model testing main effects of treatment, individual- and class-level DPI after controlling for pre-test scores , [c] the model testing three-way interactions among treatment, individual- and class-level DPI, [d] the first control Model, [e] the second control Model, [f] the final Model

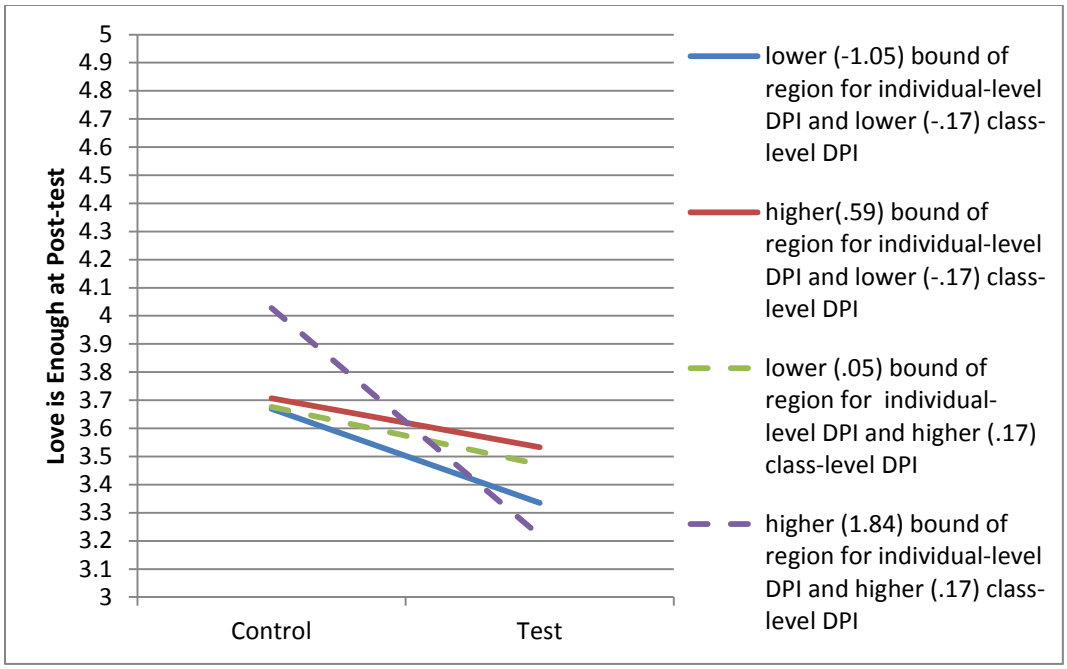

Figure 1: Prototypical plot for the moderating role of individual-level DPI on treatment effects for "love is enough" at low and high values of class-level DPI.

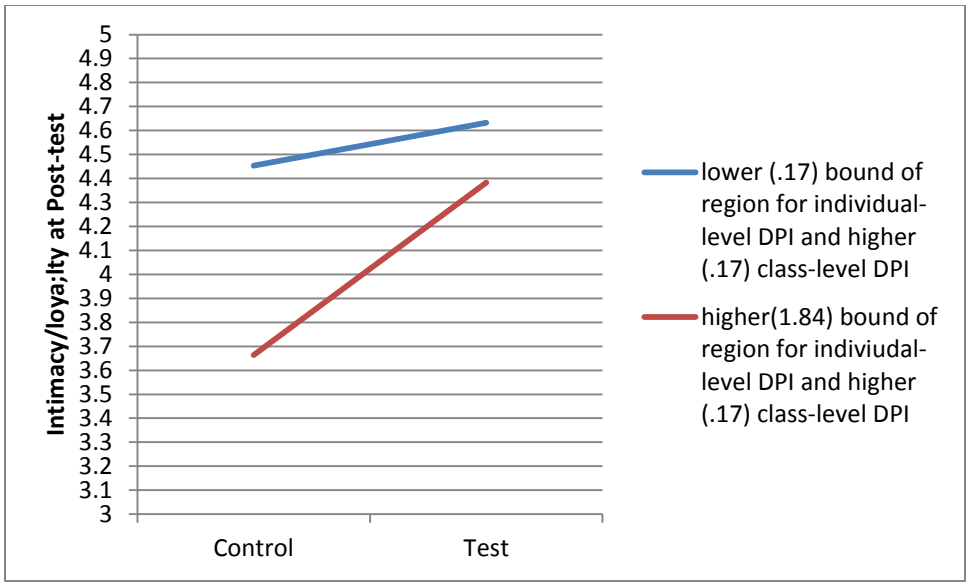

Figure 2: Prototypical plot for the moderating role of individual-level DPI on treatment effects for intimacy/loyalty at high class-level DPI.

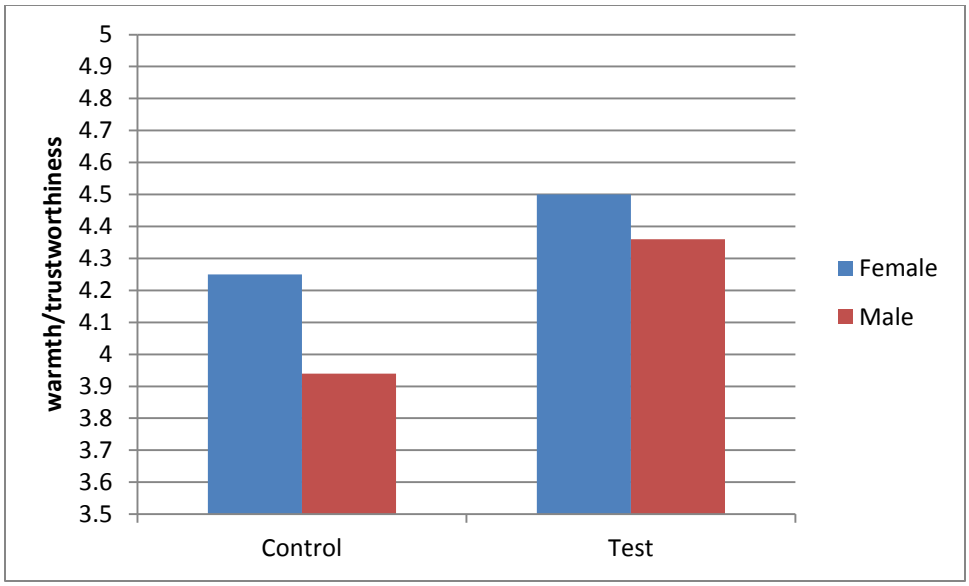

Figure 3. Bar chart for the moderating effect of gender on the treatment warmth/trustworthiness.

Appendix 1. Equations

For readers who prefer hypotheses to be expressed in terms of the relevant equations, the following equations express all the research questions. (To see the three way interaction, Student T1_ Peer influence X Class T1_Peer influence X Treatment, the level 2 equations must be substituted into the level 1 equation.)

At level 1(individual level), the model is specified as

$Y_{ij}=\beta_{0j}+\beta_{1j}\times$ (Student T1_ Peer influence) + β_{2j} (Age) + β_{3j} (Female) + β_{4j} (White)+β_{5j} (Current Dating) + β_{6j} (Past Dating) + $\beta_{7j}\times$ (Student_T1 Ideal) +r_{ij}

At level 2(classroom level), the models are specified as

β_{0j} =γ_{00} + $\gamma_{01}\times$ (Treatment) + $\gamma_{02}\times$ (Class T1_Peer influence)+$\gamma_{03}\times$ (Class T1_Ideal) + γ_{04} × (Class T1_Peer influence ×Treatment) + u_{0j}

β_{1j} =γ_{10} + $\gamma_{11}\times$ (Treatment) + $\gamma_{12}\times$ (Class T1_Peer influence) + $\gamma_{13}\times$ (Class T1_Peer influence ×Treatment)+ u_{1j}

$\beta_{2j=}$ γ_{20} + $\gamma_{21}\times$ (Treatment) + u_{2j}

$\beta_{3j=}$ γ_{30} + $\gamma_{31}\times$ (Treatment) + u_{3j}

$\beta_{4j=}$ γ_{40} + $\gamma_{41}\times$ (Treatment) + u_{4j}

$\beta_{5j=}$ γ_{50} + $\gamma_{51}\times$ (Treatment) + u_{6j}

$\beta_{6j=}$ γ_{760} + $\gamma_{61}\times$ (Treatment) + u_{7j}

Combined equation the models are specified as

Y_{ij}= [γ_{00} + γ_{10}× (Student T1_ Peer influence)]+ [γ_{01} × (Treatment) + γ_{11}× (Treatment × Student T1_ Peer influence)] + [γ_{02} × (Class T1_Peer influence) + γ_{12} × (Class T1_Peer influence × Student T1_ Peer influence)] + [γ_{03}× (Class T1_Peer influence) + + γ_{13} × (Treatment ×Class T1_Peer influence × Student T1_ Peer influence)]+[γ_{04} × (Class T1_Ideal)] +[γ_{20}× (Age) + γ_{21} × (Treatment × Age)] + [γ_{30} × (Female)+ γ_{31} × (Treatment × Female)] +[γ_{40} ×(White) + γ_{41} × (Treatment × White)] +[γ_{50} × (Current Dating)+ γ_{51} × (Treatment × Current Dating)] +[γ_{60} × (Past Dating)+ γ_{61} × (Treatment × Past Dating)]+ [β_{7j}× (Student_T1 Ideal)]+ [u_{0j}+ u_{1j}× (Student T1_ Peer influence) + u_{2j} × (Age) + u_{3j} × (Female)+ u_{4j} × (White)+ u_{5j} × (Dating Current)+ u_{6j} × (Dating Past) +r_{ij}]

In the above equations, Y_{ij} is the individual student's post-test ideal score, and β_{1j} –β_{7j} is the fixed individual-level covariate effect for student's individual peer influence (i.e., perceived close friends' behaviors), demographics, and dating experiences. We expect that β_{1j} –β_{7j} are influenced by different levels of classroom context although the influence are not systematically random. The parameters β_{8j} are fixed individual level covariate effects for the students' pre-test scores which is expected to be independent of the classroom context and, therefore, not included in the level 2 equations. The β_{0j} is the mean individual student's post-test ideal score in classroom j after controlling for everything else.

In the classroom-level equations, β_{0j} is denoted as sum of the following terms: the class level grand mean of the post-test romantic ideal $\gamma_{00,}$ plus the classroom effects $\gamma_{01,}$ $\gamma_{02,}$ $\gamma_{03,}$ γ_{04} and a random effect u_{0j} . The intercept (γ_{00}) in the first classroom level equation can be understood as the estimated average post-test score on an romantic for Black, male students of average age (16

years old) in the control group without current nor past dating experiences and with an average level of deviant close friends participating in a classroom with average level of deviant class social climate and average classroom-level pre-test scores. The four classroom context coefficients (i.e., $\gamma_{01}, \gamma_{02}, \gamma_{03}, \gamma_{04}$) show the effect of the treatment (vs. control), the effect of the average class peer group characteristics, the effect of the average romantic ideal within the class, and the interaction between treatment and the average class peer group characteristics. And β_{1j} is represented as the sum of the following terms: the mean effect across classrooms of the individual peer influence on the post-test romantic ideal γ_{10} (i.e., the slope), plus the classroom effects $\gamma_{11}, \gamma_{12}, \gamma_{13}$ and a random effect u_{1j}. The three classroom environment coefficients show the effect of the classroom environment again in terms of the treatment condition, the class average peer group characteristics and the interaction of these two factors. Similarly, β_{3j}- β_{7j} symbolize the sum of the mean effect across classrooms of the individual peer influence on the post-test ideal γ_{30} - γ_{70} (i.e., the slopes), the effect of treatment γ_{31} - γ_{71}, and random effect u_{3j}-u_{7j}. The coefficient r_{ij} is the individual residual, u_{0j}, and u_{1j}- u_{7j} are classroom level residuals on intercept and slope respectively. In this study u_{1j}- u_{7j} are fixed to be zero because we decided to fix instead of free the slopes of individual student's individual peer influence, demographics, and dating experiences.

Appendix 2. Bivariate correlations among one and only at post-test and level1 and level2 predictors.

	1	2	3	4	5	6	7	8	9	10	11	12
1. T2 One and only	1.00											
2. T1 One and only	.47**	1.00										
	1532											
3. T1 Individual Peer Influence	-.09**	-.10**	1.00									
	1514	1619										
4. Relationship Education [a]	-.17**	-.006	.04	1.00								
	1570	1648	1630									
5.T1 Class Peer Influence	.03	-.03	.36**	.12**	1.00							
	1570	1648	1630	1686								
6. T1 Class One and only	.19**	.30**	-.04	-.02	-.12*	1.00						
	1570	1648	1630	1686	1686							
7. Age	.005	-.04~	07**	.04	.16**	-.11*	1.00					
	1533	1640	1616	1646	1646	1646						
8.Gender[a]	.10**	.15**	-.12**	-.004	-.04	.09**	-.11**	1.00				
	1529	1637	1613	1643	1643	1643	1635					
9.White[b]	.07**	.06**	.03	-.15**	.06*	.04~	-.07**	.03	1.00			
	1535	1644	1620	1650	1650	1650	1642	1639				
10. Current Dating	.10*	.10**	08**	.03	.08***	.07**	.13**	.14**	-.13**	1.00		
	1490	1601	1576	1604	1604	1604	1596	1593	1600			

Appendix 2. (continued)

	1	2	3	4	5	6	7	8	9	10	11	12
11. Past Dating	-.07**	-.06*	.03	.01	-.03	-.07*	-.07*	-.04	11**	-.76*	1.00	
	1490	1601	1576	1604	1604	1604	1596	1593	1600	1604		
12. No Dating	-.05~	-.05*	-.15***	-.06*	-.08**	.003	-.08**	-.14***	.03	-.40***	-.29***	1.00
	1490	1601	1576	1604	1604	1604	1596	1593	1604	1604	1604	

**p < .01,*p < .05, ~p < .10

[a] Relationship Education: *0 = control, 1= treatment.* [b] Gender: *0 = male, 1 = female.* [c] White: *0= Non-White, 1=White,*

[d] Current Dating: *0= No, 1=Yes,* [e] Past Dating: *0= No, 1=Yes*

Appendix 3. Bivariate correlations among love is enough at post-test and level1 and level2 predictors.

	1	2	3	4	5	6	7	8	9	10	11	12
1. T2 Love is enough	1.00											
2. T1 Love is enough	.47**	1.00										
	1531											
3. T1 Individual Peer Influence	.04	.01	1.00									
	1514	1618										
4. Relationship Education [a]	-.15**	-.006	.04	1.00								
	1570	1647	1630									
5. Class Peer Influence	.05~	.02	.36**	.12**	1.00							
	1570	1647	1630	1686								
6. Class Love is enough	.18**	.34**	.02	-.007	.05*	1.00						
	1570	1647	1630	1686	1686							
7. Age	-.06*	-.09**	07**	.04	.16**	-.18*	1.00					
	1533	1639	1616	1646	1646	1646						
8.Gender[a]	.02	.03	-.12**	-.004	-.04	-.03	-.11**	1.00				
	1529	1636	1613	1643	1643	1643	1635					
9.White[b]	.009	-.02	.03	-.15**	.06*	-.02	-.07**	.03	1.00			
	1535	1643	1620	1650	1650	1650	1642	1639				
10. Current Dating	.10*	.11**	08**	.03	.08*	.05**	.13**	.14**	-.13**	1.00		
	1490	1600	1576	1604	1604	1604	1596	1593	1600			

Appendix 3. (continued)

	1	2	3	4	5	6	7	8	9	10	11	12
11. Past Dating	-.07**	-.08*	.03	.01	-.03	-.07*	-.07*	-.04	11**	-.76*	1.00	
	1490	1600	1576	1604	1604	1604	1596	1593	1600	1604		
12. No Dating	-.06*	-.04~	-.15***	-.06*	-.08*	.02	-.08**	-.14***	.03	-.40***	-.29***	1.00
	1490	1600	1576	1604	1604	1604	1596	1593	1604	1604	1604	

**p < .01,*p < .05, ~p < .10

[a] Relationship Education: *0 = control, 1= treatment.* [b] Gender: *0 = male, 1 = female.* [c] White: *0= Non-White, 1=White,*

[d] Current Dating: *0= No, 1=Yes,* [e] Past Dating: *0= No, 1=Yes*

Appendix 4. Bivariate correlations among warmth/trustworthiness at post-test and level1 and level2 predictors.

	1	2	3	4	5	6	7	8	9	10	11	12
1. T2 Warmth/trustworthiness	1.00											
2. T1 Warmth/trustworthiness	.23**	1.00										
	1462											
3. T1 Individual Peer Influence	-.16**	-.13**	1.00									
	1461	1617										
4. Relationship Education [a]	.11**	-.04	.04	1.00								
	1517	1631	1630									
5. Class Peer Influence	-.05*	.003	.36**	.12**	1.00							
	1517	1631	1630	1686								
6. Class Warmth/trustworthiness	.07**	.29**	.003	-.15**	.004	1.00						
	1517	1631	1630	1686	1686							
7. Age	-.04	-.003	07**	.04	.16**	-.03	1.00					
	1481	1617	1616	1646	1646	1646						
8.Gender[a]	.16**	.11**	-.12**	-.004	-.04	.07**	-.11**	1.00				
	1477	1614	1613	1643	1643	1643	1635					
9.White[b]	.04~	.11**	.03	-.15**	06*	.27**	-.07**	.03	1.00			
	1483	1621	1620	1650	1650	1650	1642	1639				
10. Current Dating	.04	.04	08**	.03	08**	.002	.13**	.14**	-.13**	1.00		
	1442	1577	1576	1604	1604	1604	1596	1593	1600			

Appendix 4. (continued)

	1	2	3	4	5	6	7	8	9	10	11	12
11. Past Dating	-.02	-.05~	.03	.01	-.03	.002	-.07**	-.04	.11**	-.76**	1.00	
	1442	1577	1576	1604	1604	1604	1596	1593	1600	1604		
12. No Dating	-.03	.01	-.15***	-.06*	-.08*	-.000	-.08*	-.14*	.03	-.40*	-.29*	1.00
	1442	1577	1576	1604	1604	1604	1596	1593	1604	1604	1604	

**p < .01,*p < .05, ~p < .10

[a] Relationship Education: *0 = control, 1= treatment.* [b] Gender: *0 = male, 1 = female.* [c] White: *0= Non-White, 1=White,*

[d] Current Dating: *0= No, 1=Yes,* [e] Past Dating: *0= No, 1=Yes*

Appendix 5. Bivariate correlations among intimacy/loyalty at post-test and level1 and level2 predictors.

	1	2	3	4	5	6	7	8	9	10	11	12
1. T2 Intimacy/loyalty	1.00											
2. T1 Intimacy/loyalty	.19**	1.00										
	1469											
3. T1 Individual Peer Influence	-.16**	-.08**	1.00									
	1467	1619										
4. Relationship Education [a]	.08**	-.02	.04	1.00								
	1523	1632	1630									
5. Class Peer Influence	-.05*	.02	.36**	.12**	1.00							
	1523	1632	1630	1686								
6. Class Intimacy/loyalty	.08**	.29**	.03	-.07**	.06*	1.00						
	1523	1632	1630	1686	1686							
7. Age	-.06*	-.001	07**	.04	.16**	-.04	1.00					
	1487	1618	1616	1646	1646	1646						
8.Gender[a]	.15**	.10**	-.12**	-.004	-.04	.08**	-.11**	1.00				
	1483	1615	1613	1643	1643	1643	1635					
9.White[b]	-.001	.08**	.03	-.15**	06*	.22**	-.07**	.03	1.00			
	1489	1622	1620	1650	1650	1650	1642	1639				
10. Current Dating	.04	.05~	.08**	.03	.08**	.04	.13**	.14**	-.13**	1.00		
	1449	1580	1576	1604	1604	1604	1596	1593	1600			

Appendix 5. (continued)

	1	2	3	4	5	6	7	8	9	10	11	12
11. Past Dating	-.03	-.05*	.03	.01	-.03	-.03	-.07*	-.04	11**	-.76*	1.00	
	1449	1580	1576	1604	1604	1604	1596	1593	1600	1604		
12. No Dating	-.01	.007	-.15***	-.06*	-.08*	-.01	-.08*	-.14*	.03	-.40*	-.29*	1.00
	1449	1580	1576	1604	1604	1604	1596	1593	1604	1604	1604	

**p < .01,*p < .05, ~p < .10

[a] Relationship Education: *0 = control, 1= treatment.* [b] Gender: *0 = male, 1 = female.* [c] White: *0= Non-White, 1=White,*

[d] Current Dating: *0= No, 1=Yes,* [e] Past Dating: *0= No, 1=Yes*

Appendix 6. Measurements

Please indicate your answer by filling in the blank with the requested information, or checking or circling the choice that fits you best. This is not a "test", but it is important to be as honest as you can.

1. Age:_____

2. Sex: (A) Male (B) Female

3. Race/Ethnicity (Check all that apply):

(A) Black/African American

(B) White/Caucasian

(C) Hispanic/Latino

(D) Native American

(E) Asian American

(F) Other: _____ (Please specify)

4. Dating experience

For each item below, circle the response that best reflects your answer.

A. Are you currently in a dating relationship that has lasted a month or more?

Circle Yes **IF YES: Skip question B and answer the items on this page for**

The *most recent month* of that relationship.

Or No **IF NO TO A: Please answer B next.**

B. If you said NO to A, have you ever been involved in a relationship that lasted a month or more?

Circle Yes **IF YES to B (and No A): Please answer the questions on this**

Page for the *last month* of your previous relationships.

Or No **IF NO to B (and No A):Go to the next page.**

5. Romantic beliefs

When people imagine the person they might marry in their future, they picture different things about the person it might be and the nature of the relationship that would lead to marriage. Think about your own attitudes and indicate how well each of the following statements captures your beliefs.

1 = I Strongly Disagree with the statement
2 = I Disagree a little bit with the statement
3 = I Am Uncertain about how I feel about the statement
4 = I Agree a little bit with the statement
5 = I Strongly Agree with the statement

	Strongly Disagree		Uncertain		Strongly Agree
1.There is only one true love out there who is right for me to marry	1	2	3	4	5
2.Our feelings of love for each other should be sufficient reason to get married	1	2	3	4	5
3. Living together before marriage will improve our chances of remaining happily married	1	2	3	4	5
4. Couples who are too similar have relationships that are dull and boring	1	2	3	4	5
5. There are a number of people in the world to whom I could be happily married	1	2	3	4	5
6. In the end, our feelings of love for each other should be enough to sustain a happy marriage	1	2	3	4	5
7. We will likely be happier in our marriage if we live together first	1	2	3	4	5
8. Being similar to my partner is an important consideration for Me when deciding to get married	1	2	3	4	5
9. Somewhere I have a “soul mate” I should marry, a special partner who is uniquely suited to me and vice versa	1	2	3	4	5
10. As long as we love each other, we should not let any obstacles stand in our way of getting married	1	2	3	4	5
11. It is a good idea for us to live together before getting married as a way of “trying out” our relationship	1	2	3	4	5
12. Our relationship will be stronger if I marry someone who is very much like me in many ways	1	2	3	4	5
13. There is a “one and only” right person in the world for me to marry	1	2	3	4	5
14. Only a fool ever walks away from marrying the person he or she loves deeply	1	2	3	4	5
15. Living together first is a good way of testing how workable our marriage would be	1	2	3	4	5
16. I should marry someone whose personal characteristics and beliefs are opposite from my own	1	2	3	4	5

6. Romantic standards for partners/relationships

Think about your ideal relationship partner. How important is each characteristic in an *ideal partner*?

1 = Very Unimportant
2 = Unimportant to me, but I would not call it "very" unimportant
3 = Neither Unimportant nor Important, I am neutral or cannot decide
4 = Important to me, but I would not rate it "very" Important
5 = Very Important to me

		Very Unimportant		Neutral		Very Important
1.	Understanding	1	2	3	4	5
2.	Supportive	1	2	3	4	5
3.	Considerate	1	2	3	4	5
4.	Kind	1	2	3	4	5
5.	A good listener	1	2	3	4	5
6.	Sensitive	1	2	3	4	5
7.	Adventurous	1	2	3	4	5
8.	Nice body	1	2	3	4	5
9.	Outgoing	1	2	3	4	5
10.	Sexy	1	2	3	4	5
11.	Attractive	1	2	3	4	5
12.	Good lover	1	2	3	4	5
13.	Good job	1	2	3	4	5
14.	Financially secure	1	2	3	4	5
15.	Nice house or apartment	1	2	3	4	5
16.	Appropriate ethnicity	1	2	3	4	5
17.	Successful	1	2	3	4	5
18.	Dresses well	1	2	3	4	5

Now think of your ideal relationship, how important is each characteristic for an *ideal relationship*?

1 = Very Unimportant
2 = Unimportant to me, but I would not call it "very" unimportant
3 = Neither Unimportant nor Important, I am neutral or cannot decide
4 = Important to me, but I would not rate it "very" Important
5 = Very Important to me

		Very Unimportant		**Neutral**		**Very Important**
1.	Honest.....	1	2	3	4	5
2.	Commitment	1	2	3	4	5
3.	Caring	1	2	3	4	5
4.	Trusting	1	2	3	4	5
5.	Support	1	2	3	4	5
6.	Respect	1	2	3	4	5
7.	Exciting	1	2	3	4	5
8.	Challenging	1	2	3	4	5
9.	Humorous	1	2	3	4	5
10.	Fun	1	2	3	4	5
11.	Independence	1	2	3	4	5
12.	Passionate	1	2	3	4	5

7. Deviant Peer Influence

Think about your closest friends. How many of them would you describe in terms of each of the following statements?

1 = None of my friends fit the description
2 = Some of my friends fit the description
3 = Most of my friends fit the description
4 = All of my friends fit the description

	Descriptions of My Closest Friends:	**None**	**Some**	**Most**	**All**
1.	Are trouble makers	1	2	3	4
2.	Work hard at school	1	2	3	4
3.	Will finish high school	1	2	3	4
4.	Will go to college	1	2	3	4
5.	Have sex with their dating partners	1	2	3	4
6.	Are respected by others	1	2	3	4
7.	Are involved in school sports or clubs	1	2	3	4
8.	Are always involved in dating relationships.	1	2	3	4
9.	Drink alcohol	1	2	3	4
10.	Use illegal drugs	1	2	3	4