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LONGITUDINAL RELATIONS BETWEEN PERCEIVED PARENTAL AND PEER
SUPPORT FOR VIOLENT AND NONVIOLENT RESPONSES TO CONFLICT
AND EARLY ADOLESCENT DATING AGGRESSION

A dissertation submitted in partial fulfillment of the requirements for the
Doctor of Philosophy at Virginia Commonwealth University

By: RACHEL C. GARTHE
Master of Science, Developmental Psychology,
Virginia Commonwealth University, 2014

Director: Terri N. Sullivan, Ph.D.
Associate Professor
Department of Psychology

Virginia Commonwealth University
Richmond, Virginia
April 21, 2016

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Abstract

LONGITUDINAL RELATIONS BETWEEN PERCEIVED PARENTAL AND PEER SUPPORT FOR VIOLENT AND NONVIOLENT RESPONSES TO CONFLICT AND EARLY ADOLESCENT DATING AGGRESSION

By Rachel C. Garthe, M.S.

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Virginia Commonwealth University, 2016

Major Director: Dr. Terri N. Sullivan
Associate Professor
Developmental Psychology

High prevalence and the negative legal, health, and psychological consequences of adolescent dating aggression underscore the need to identify risk and protective processes associated with this type of aggression. Studying dating aggression in early adolescence is important, as this is the developmental time frame when most youth are establishing attitudes, beliefs, and norms for dating behaviors. The current study investigated longitudinal associations between perceived parental and peer support for violent and nonviolent responses to conflict and dating aggression perpetration among middle school students. Participants included 1,399 adolescents (52% female) in the sixth ($n = 466$), seventh ($n = 467$), and eighth ($n = 466$) grades. Results showed that peer support for nonviolent responses predicted lower frequencies of subsequent dating aggression among sixth graders, and perceived parental support for nonviolent responses resulted in decreased frequencies of

dating aggression in the seventh and eighth grades. Peer support for violent responses predicted increased dating aggression in the seventh grade, and perceived parental support for violent responses led to higher frequencies of dating aggression in the eighth grade. Additionally, dating aggression predicted changes in adolescent perceptions of parental and peer support for violent and nonviolent responses. No sex differences were found in these models. Lastly, moderation analyses identified two significant interactions. These interactions illustrated that different combinations of parental and peer support for violent and nonviolent responses affected dating aggression perpetration, highlighting the importance of examining mixed messages and combinations of messages from parents and peers. Overall, the findings from the current study indicated that adolescent perceptions of parental and peer support for violent and nonviolent responses to conflict are important risk and protective processes, respectively, that are longitudinally associated with dating aggression. These findings can inform dating violence prevention programs, and stress the importance of adolescent, parental, and peer involvement in these programs.

Longitudinal Relations between Parental and Peer Support for Violent and Nonviolent Responses to Conflict and Early Adolescent Dating Aggression

Adolescent dating aggression is a national public health concern. It encompasses several subtypes of aggression including physical, psychological or emotional, sexual harm, and stalking (Center for Disease Control and Prevention, CDC, 2014). Physical dating aggression includes behaviors such as scratching, slapping, pushing, or choking (Foshee, Bauman, Linder, Rice, & Wilcher, 2007). Psychological or emotional aggression encompasses insults, criticisms, threats, and emotional manipulation (Draucker & Martsolf, 2010). Sexual abuse can involve rape, attempted rape, sexual coercion, and other unwanted sexual acts (Smith & Donnelly, 2001). Stalking also is included in the CDC definition of dating violence, and includes repeated following, harassment, or threats (CDC, 2014; Shorey, Cornelius, & Strauss, 2015).

Dating aggression during adolescence resembles aspects of adult intimate partner violence; specifically how dating aggression is used to control another person (Offenhauer, 2011). However, some aspects of dating aggression tend to look different among early and middle adolescents compared to late adolescents and adults. For example, dating aggression during early and middle adolescence primarily takes place in peer settings (Goncy, Farrell, Sullivan, & Taylor, 2015). During early and middle adolescence, dating activities generally include approaching potential partners and initiating dating activities, with a focus on how dating behaviors impact peer status (Brown, 1999). Most studies of dating aggression in early to middle adolescence have assessed physical and psychological forms of dating aggression (Arriaga & Foshee, 2004; Goncy, Sullivan, Farrell, Mehari, & Garthe, 2016; Simon, Miller, Gorman-Smith, Orpinas, & Sullivan, 2010). The current study focused on these forms of

dating aggression among early adolescents in middle school, and examined longitudinal and bidirectional relations between peer and parent risk and protective processes (i.e., support for violent and nonviolent responses to conflict) and dating aggression perpetration.

It is important to study dating aggression in early adolescence for several reasons. First, this is a period when dating relationships and associated behavior patterns (adaptive and/or maladaptive) are being established. For example, Orpinas, Hsieh, Song, Holland, and Nahapetyan (2013) found that many early adolescents in middle school are dating: 59% of sixth graders, 65% of seventh graders, and 68% of eighth grades reported being in a romantic relationship in the last three months. Second, early adolescence is a time of heightened risk for problem behaviors including aggression, due in part to rapid social-cognitive, emotional, and physical development (Steinberg, 2014). Last, adolescent dating relationships provide a foundation for future romantic relationships (Capaldi & Gorman-Smith, 2003), and aggression in early adolescence can lead to dating aggression into adulthood (Hettrich & O'Leary, 2007; Linder, Crick & Collins, 2002).

Unfortunately, prevalence rates of dating aggression and resulting victimization are high during adolescence. Most prevalence estimates are based on nationally representative samples comprised of high school students (Eaton et al., 2010; Haynie et al., 2013; Hickman, Jaycox, & Aronoff, 2004; Leen et al., 2012); however, some studies have addressed the prevalence of dating aggression among early adolescents (Arriaga & Foshee, 2004; Goncy et al., 2016; Lormand et al., 2013; Simon et al., 2010). In a sample of eighth and ninth graders, 20% reported some form of physical perpetration and 36% reported victimization at some point in their romantic relationships (Arriaga & Foshee, 2004). Lormand et al. (2013) assessed dating victimization among 950 seventh graders and found that 1 in 5 adolescents

reported being physically victimized and almost half experienced nonphysical victimization in the past year. Additionally, Simon et al. (2010) found that among 2,810 sixth graders who reported having a boy or girlfriend in the past three months, 32% of girls and 26% of boys reported perpetrating physical aggression within dating relationships. Orpinas et al. (2013) examined trajectories of physical dating aggression from the sixth through twelfth grade among 588 youth. A fourth of the adolescents reported increasing trajectories of physical dating aggression, starting in the sixth grade. Finally, Goncy et al. (2016) found that 32% of 938 middle school students had experienced both perpetration and victimization in dating relationships, with rates increasing from the sixth to the eighth grade.

Dating aggression during adolescence is associated with immediate physical injury (O’Leary, Smith Slep, Avery-Leaf, & Cascardi, 2008), long-term adjustment difficulties (Holmes & Sher, 2013), and the formation of maladaptive behavior patterns that may persist into late adolescence and adulthood (Capaldi & Gorman-Smith, 2003; Smith, White, & Holland, 2003). Research has found that adolescent dating aggression perpetration is linked with delinquency and aggression in peer contexts (Brendgen, Vitaro, Tremblay, & Wanner, 2002; Lavoie et al., 2002; Simons, Lin, & Gordon, 1998). Dating aggression victimization among adolescents is associated with substance use (Chiodo, Crooks, Wolfe, McIsaac, & Hughes, 2012; Exner-Cortnes, Eckenrode, & Rothman, 2012), internalizing behaviors such as depressive symptoms and suicidal ideation (Chiodo et al., 2012; Exner-Cortnes et al., 2012; Holmes & Sher, 2013), decreased life satisfaction (Callahan, Tolman, & Saunders, 2003), and poor educational outcomes (Holmes & Sher, 2013). Perpetration of adolescent dating aggression and victimization were both associated with risky sexual behaviors (Alleyne-Green, Coleman-Cowger, & Henry, 2012; Chiodo et al., 2012; Exner-Cortnes et al.,

2012; Silverman, Raj, Mucci, & Hathaway, 2001). The deleterious consequences of adolescent dating aggression also can impact later development (Brown et al., 2009; Halpern, Oslak, Young, Martin, & Kupper, 2001), leading to negative legal, health, reproductive, social, and psychological consequences (CDC, 2014; Connolly & Josephson, 2007).

The high prevalence of dating aggression in adolescence and its short- and long-term negative consequences highlight the need to identify proximal risk and protective processes for this behavior, as well as to understand how dating aggression may in turn affect these processes. Early adolescence is a key developmental stage in which to examine parental and peer factors associated with dating aggression, as parents remain important authorities, but peers gain influence on adolescent behavior (Fergusson, Swain-Campbell & Horwood, 2002; Miller-Johnson & Costanzo, 2004). In fact, from a developmental contextualism perspective, parents and peers are two of the most dominant authorities over adolescent behavior (Miller, 2011; Steinberg, 2014). In several studies negative parental and peer processes were associated with higher rates of adolescent dating aggression perpetration (Olsen, Parra, & Bennett, 2010; Vagi et al., 2013). However, Pardini (2008) proposed that additional research is needed to examine the bidirectional nature of socialization influences in adolescence (i.e., those of parent and peer influences on adolescent behavior and those of adolescent behavior on parent and peer influences).

The current study examined longitudinal bidirectional relations between perceived parental and peer support for violent and nonviolent responses to conflict and dating aggression perpetration among early adolescents. Theoretical foundations such as social learning theory, social information processing theory, and socialization theories suggest that reciprocal relations may exist between perceived support for violence and nonviolence from

parents and peers and adolescent behavior (Bandura, 1986; Crick & Dodge, 1994; Grusec, 2002; Grusec & Hastings, 2007; 2015). For example, social information processing theory (Crick & Dodge, 1994) describes how parental and peer factors may influence adolescents' information processing and decision-making (Grusec & Hastings, 2007; 2015). Perceptions of parental and peer support for violent and nonviolent responses to conflict may be part of an adolescent's database of social knowledge, and thus influence aspects of social information processing such as cue interpretation, response decision, and outcome expectancies. Importantly, transactional models (Sameroff, 1975; 2009) and developmental contextualism (Lerner, 1978; 2002) highlight the necessity of studying the bidirectional influence of adolescent relationships (i.e., with parents, peers, and dating partners) on each other over time. Early adolescence is a developmental period where relationships are changing; social knowledge and perceptions about how parents and peers support various responses are malleable. Adolescent behavior, including dating aggression, may be influenced by and influence how an adolescent perceives parental and peer support for violent and nonviolent responses to conflict. Adolescent behavior may change or inform social knowledge within one's database, which may then affect interpretation of social information and subsequent adolescent behavior (Huesmann, 1988).

A few empirical studies found that perceived parental support for violent and nonviolent responses to conflict served as a cause and/or consequence of adolescents' aggressive behavior (e.g., Garthe, Sullivan, & Larsen, 2015; Kliewer et al., 2006; Murray, Haynie, Howard, Cheng, & Simons-Morton, 2013). For example, Kliewer et al. (2006) found that parental coaching to engage in aggressive or proactive actions in response to stressful situations was associated with higher levels of adolescent aggression or prosocial behavior,

respectively. Aggressive behavior also has been associated with higher levels of perceived parental expectations for aggressive solutions among 209 early adolescents (Murray et al., 2013). Finally, in a sample of 520 early adolescents, Garthe et al. (2015) found bidirectional associations between perceived parental support for violence and nonviolence and adolescent effective nonviolent and aggressive behavior over six months. The extant literature suggests that research is needed to further examine longitudinal and bidirectional relations between perceived parental and peer support for violent and nonviolent responses to conflict and adolescent aggression.

Only one cross-sectional study was found that explored relations between parental messages supporting violent and nonviolent responses to conflict and dating aggression perpetration among middle school students (Miller, Gorman-Smith, Sullivan, Orpinas, & Simon, 2009). Among a sample of 2,824 sixth graders, parental support for aggressive solutions was positively associated with dating aggression perpetration, and parental support for nonaggressive solutions was negatively associated with dating aggression perpetration.

The current study contributed to the extant literature in several ways. To my knowledge, no studies have yet explored how parental *and* peer influences are associated with adolescent dating aggression. Nor have studies examined bidirectional and longitudinal relations between parental and peer support for violent and nonviolent responses to conflict and early adolescent dating aggression. Theory and empirical research supports the need for studies focused on these relations over time. The current study also explored grade and sex differences among these study variables, to see if there were developmental differences across middle school. Furthermore, it is important to investigate the congruency of perceived messages from parents and peers in support for violent and nonviolent responses to conflict.

Incongruent messages, or perceived dissonance in behavioral expectations from parents and peers may lead to adjustment difficulties (Lerner, 1986; Spera & Matto, 2007). Thus, the current study also examined how incongruent messages (e.g., parental support for violent responses and peer support for nonviolent responses) may be reciprocally associated with dating aggression perpetration.

Informed by previous literature and theoretical frameworks, the current study had four main objectives: (1) to identify potential reciprocal relations between perceived parental and peer support for violent and nonviolent responses to conflict and adolescent dating aggression perpetration longitudinally across middle school, (2) to assess potential differences in the strength of relations between perceived parental and peer support for violence and nonviolence and adolescent dating aggression perpetration by grade (i.e., sixth, seventh, and eighth grade), (3) to assess potential differences in the strength of relations between perceived parental and peer support for violence and nonviolence and adolescent dating perpetration by sex, and (4) to examine the potential moderating role of parental support for nonviolent responses to conflict on the relation between peer support for violent responses to conflict and dating aggression perpetration across all grades. Also, for aim four, the current study assessed the potential moderating role of peer support for nonviolent responses to conflict on the relation between parental support for violent responses to conflict and dating aggression perpetration across all grades. The overall goal of the proposed project was to enhance understanding of longitudinal and reciprocal relations between these parental and peer processes and adolescent dating aggression perpetration in middle school.

Review of the Literature

In this review of literature, relevant theories and empirical research examining dating relationships, dating aggression, and relationships between parental and peer variables and dating aggression during adolescence are reviewed. First, theories explaining romantic relationships during adolescence are reviewed, including attachment theory, the theory of interpersonal needs, and developmental contextual theories. Next, theories of adolescent dating aggression are explored, including attachment theory, the investment model, feminist theory, gender role conflict theory, and social learning theory. Finally, evidence for reciprocal relations between perceived parental and peer processes and adolescent development and dating aggression are reviewed. Providing a theoretical framework, socialization theories, the social information processing model, and the contextual-congruence model will be examined. Finally, I will review the extant literature that has explored relations between parents, peers, and dating aggression, with a particular focus on relations between adolescent perceptions of parental and peer support for violence and nonviolence and adolescent aggression in peer and dating contexts.

Romantic Relationships During Early Adolescence

Adolescence is a developmental stage characterized by numerous biological, cognitive, emotional, and social changes, including the onset of puberty, the development of sexuality, and the increased need for intimacy. A major adjustment that adolescents face is changes in their relationships with parents, peers, and romantic partners. Adolescents transition from having friendships centered on activities and games to relationships built around concepts such as intimacy, sexuality, responsiveness, and communication (Steinberg, 2014). Also, many adolescents are granted increasing autonomy by their parents and families

(Baumrind, 1991), and spend more time with peers, friends, and romantic partners (Smetana & Metzger, 2008). Adolescents develop increasing romantic preoccupations, such as meeting potential partners, negotiating new dating situations, and learning the norms and expectations of dating (Brown, 1999; Ha et al., 2014; Harper & Welsh, 2007). Dating and romantic relationships become a normative component of adolescence for many youth (Connolly & Goldberg, 1999).

Dating relationships during adolescence can have an array of positive developmental outcomes, including interpersonal growth, better emotional engagement, and understanding one's self in relation to others (Steinberg, 2014). One study found that a large number of adolescents are dating: one-fourth of 12-year olds, one-half of 15-year olds, and more than two-thirds of 18-year old youth reported having a romantic relationship in the previous 18 months (Simon et al., 2010). Connolly and Goldberg (1999) described dating as a central aspect of social life for many adolescents in North America. Also, adolescent dating relationships provide a foundation for future romantic relationships (Capaldi & Gorman-Smith, 2003; Furman & Rose, 2015), highlighting the need to understand dating experiences throughout adolescence.

Early theories of adolescent romantic relationships. A variety of theories are used to understand romantic relationships during adolescence. For example, theories of attachment and interpersonal needs are commonly seen in the literature (Hazan & Shaver, 1987; Sullivan, 1953). Adolescence is the developmental period when attachment needs transition from familial relationships (i.e., parent-adolescent) to romantic relationships (Furman, Simon, Shaffer, & Bouchey, 2002; Hazan & Shaver, 1987). Attachment theory suggests that individuals form internal working models early in life (Bowlby, 1969), providing a

framework for understanding trust and expectations within relationships. Stemming from initial attachment styles early in life, adolescents who are securely attached display comfort in their relationships. Study findings show that a secure attachment style in adolescence was associated with positive romantic relationships in adulthood (e.g., Simpson, Collins, Tran, & Haydon, 2007). Alternatively, insecurely attached adolescents struggled in areas such as depending on their partners for support and with anxiety and being too clingy within their romantic relationships (Connolly & McIsaac, 2009).

Adolescence also is a time when youth are trying to satisfy interpersonal needs (Sullivan, 1953). During pre-adolescence, youth seek increased intimacy in peer and friendship groups. Coinciding with puberty, adolescents seek increased intimacy and to express their sexuality in romantic relationships. Sullivan theorized that one's identity is rooted in having satisfying relationships, or those that meet individual interpersonal needs. Furthermore, Sullivan believed that adolescence was a time for exploring new interpersonal needs, resulting in a variety of dating behaviors. For example, some adolescents may choose to date a variety of partners while others opt to stay in committed, longer-term relationships (Seiffge-Krenke, 2011; Steinberg, 2014; Sullivan, 1953).

Developmental-contextual theories. Developmental-contextual theories of adolescent dating experiences examine romantic relationships from a socio-ecological perspective. From the seminal work of Bronfenbrenner (1979; 1994), who theorized that development must be understood within and across expanding ecological contexts, developmental-contextual theories suggest that romantic relationships are shaped by transactions between the individual and their environment. For example, peers and parents are a part of an individual's microsystem, or the component of one's ecology that has

immediate and ongoing influences on developmental processes. Peers may dictate romantic norms and expectations, although families provide models for relationships and may set rules about the timing of adolescents' entry into dating and the scope of acceptable dating activities (Furman & Rose, 2015). Therefore, according to developmental-contextual theorists, adolescent romantic relationships tend to follow a developmental sequence, influencing and being influenced by mechanisms within one's ecology (Brown, 1999; Connolly, Craig, Goldberg, & Pepler, 2004).

Early developmental-contextual theorists, Furman and Wehner (1994) noted that adolescents progress through stages of romantic relationships, integrating theories of attachment and interpersonal needs. From simple interchanges and casual dating, to stable and committed relationships, individuals seek to fulfill their interpersonal needs for affiliation, sexuality, and attachment. Furman and Wehner (1994) provided a formative framework for understanding the progression of adolescent romantic relationships, which informed Brown (1999) and Connolly and colleagues' (1999; 2009) theories of adolescent romantic relationships. Furman and Wehner (1994) theorized that peers are integrated in adolescent romantic relationships. First, opposite sex peers have *simple interchanges*, which usually coincide with the start of puberty. Next, adolescents move to *casual dating* where they affiliate with peers but also may fulfill sexual needs. Finally, adolescents move to *stable relationships* with the goal of meeting attachment, sexuality, and affiliation needs. Finally, adolescents enter into *committed relationships*, where these needs are typically met. Subsequent theories of adolescent romantic relationships stemmed from attachment, interpersonal and Furman and Wehner's developmental-contextual theory.

Brown's developmental-contextual theory. In 1999, Brown revised Furman and Wehner's (1994) developmental-contextual theory, focusing on the integral role of peers and one's self-identify as a romantic partner. Brown also expanded on Dunphy's (1963) theory of peer groups, which suggested that peers and romantic relationships support individual identity development. According to Brown's theory, peers are both a driving and guiding force in adolescent romantic relationships, illustrating that these relationships are indeed a "social affair" (Brown, 1999, p. 292). In describing the aspects of this theory, Brown selected the term *phases* rather than *stages* as individuals can move bidirectionally and repeatedly through the phases, and movement through each phase is not inevitable for all adolescents.

In the first phase of Brown's model (1999), *the initiation phase*, individuals realize that they desire a romantic or sexual relationship, mainly due to pubertal development. This phase typically is during late childhood or early adolescence. Adolescents move from socializing within same- to mixed-sex groups, and make their initial tentative explorations into dating activities and relationships. In terms of identity exploration, individuals are initially trying to see themselves as potential and effective romantic partners. However, peers remain the driving force behind romantic relationships in the initiation phase. Adolescents are exploring dating relationships, although also trying to maintain their peer group status, making peers the main source of norms and expectations for behaviors surrounding the initiation of romantic relationships. Adolescents also may have heightened awareness and anxiety in their new relationships as dating explorations are under the scrutiny of their peers and friends.

In the second phase, *the status phase*, individuals are beginning to form dyadic romantic relationships (Brown, 1999). This phase typically occurs during early to mid-

adolescence. Adolescents are concerned with how they see themselves in connection to others within their peer network while dating. Individuals are still acutely aware of their peers' opinions and evaluations, which often drive the formation and maintenance of romantic relationships. The status phase parallels the time when adolescents are preoccupied with 'fitting in,' finding their place within peer groups, achieving popularity, and finding acceptance. Thus, group identity is a key task during this phase, meaning that individuals tend to select romantic partners who are within their peer networks or because these romantic partners may enhance their social position. Peers are most influential during this phase. Finally, during this phase, adolescents tend to gain confidence in their romantic competencies, although still being influenced by peer dating norms and expectations.

In the third phase, *the affection phase*, individuals become more comfortable expressing their own individual interpersonal needs, focusing less on their identity within peer groups (Brown, 1999). This phase typically takes place during middle to late adolescence. Although peers and friends may continue to monitor and support romantic relationships, the focus during this phase becomes the enhancement of one's self and one's interpersonal needs within a relationship. Individuals' sense of self may be more developed, accepting their peer status and how their peers view them. Peers take more of a back-seat during this phase, and have less influence on the initiation and maintenance of romantic relationships. Also, romantic relationships tend to be longer during this phase, as intimacy, disclosure and trust increase. Brown (1999) describes relationships during this phase as a "source of passion and preoccupation" for adolescents (p. 297).

Finally, in the fourth phase, *the bonding phase*, individuals seek to have their identity and intimacy needs adequately or fully met within romantic relationships. This phase

typically occurs from late adolescence into young adulthood. Relationships become more enduring and serious. Intimacy, disclosure and trust continue to increase during this phase. Individuals begin to entertain the possibility of long-term commitments. Friends and peers' influence diminishes in these romantic relationships and may be relegated to providing support and guidance when sought (Brown, 1999).

Connolly and colleagues' developmental-contextual theory. Connolly and colleagues (Connolly & Goldberg, 1999; Connolly & McIsaac, 2009) proposed a variation on Brown's (1999) theory, focusing on the idea that romantic relationships can serve as a context for further individual development. This theory highlights the simultaneous development of needs for autonomy and intimacy throughout adolescence and into adulthood. Similar to Brown's theory, Connolly and colleagues also stress the importance of the peer context as the primary social setting in which these needs are developing, evolving, and met.

In the first phase of development, during late childhood to early adolescence, the *infatuation phase*, individuals share their desires to date within the safety of friendship and peer groups. Friends and peers are able to provide support, guidance, and generally share a common interest in dating. Attractions and crushes often do not have any feelings of intimacy attached to them yet. Next, during early to mid-adolescence, in the *affiliative phase*, individuals are a part of mixed-sex peer groups. Dating may take place within a peer group, establishing a supportive context for individuals to explore dating and romantic behaviors. Intimacy needs are found both within friendships and romantic relationships. During mid to late-adolescence, in the *intimacy phase*, romantic relationships become dyadic, building on the skills learned from the previous phases. These relationships have increased emotional

intimacy, and the peer groups' influence declines. Instead, adolescents form deeper levels of intimacy with their romantic partners, increasing levels of disclosure and trust. Lastly, in the *committed phase*, individuals aim to establish an autonomous identity and an intimate relationship simultaneously. Connolly and colleagues (1999; 2009) stressed the importance of peers in allowing individuals to gain relatedness and intimacy through the progression of these phases. Individuals develop intimate relationships, eventually gaining autonomy from their friendships and peer groups.

Each developmental-contextual theory focuses on adolescents' needs (i.e., sexual, intimate, and interpersonal) to obtain increasingly committed and intimate romantic relationships, simultaneous with the development of individual identity and autonomy. During the process of developing romantic relationships, the influence of peers is consistently emphasized (Connolly, Furman, & Konarski, 2000). Throughout the transitions and changes in adolescence, peers are seen as a "stable point of reference" (Connolly et al., 2004, p. 188). Connolly and colleagues work also is influenced by Dunphy's (1963) theory of peer groups, which highlights that same-sex groups merge to form mixed-sex cliques (i.e., small groups of mixed-sex friends). Dunphy posited that initial heterosexual romantic relationships are initiated in the context of these mixed-sex cliques. This premise is supported by empirical findings that adolescents in mixed-sex cliques were more likely to have a romantic relationship than same-sex cliques (Connolly et al., 2000; Connolly & Johnson, 1996), and romantic activities often occurred in mixed-sex cliques (Connolly et al., 2004). Overall, when examining romantic relationships during adolescence, we need to not only understand the progression of dating activities and romantic relationships, but also how peers are interlaced within their formation and maintenance.

The current study focused on adolescent romantic relationships during the first two stages of developmental contextual theories (i.e., those typically occurring during early and mid-adolescence). These relationships tend to be heavily interlaced with peer-level influences. Developmental-contextual theories of adolescent romantic relationships detail the role that peers play in their development and progression. However, we know very little about how parents fit within these models. Some research has demonstrated how parent-adolescent attachment and relationship dynamics may impact adolescents' peer and romantic relationships (Gray & Steinberg, 1999), but we do not know the degree to which parental factors are reciprocally related with peer factors and adolescent dating behaviors. Furman and Rose (2015) suggested that families provide a model for how relationships should look, but peers are more influential in shaping dating norms and expectations. However, more research is needed to understand how parental and peer factors interact to influence adolescent dating relationships.

Adolescent Dating Aggression

Although dating activities and romantic relationships are a normative and central component of many adolescents' social lives, romantic relationships also can be a source of negative emotions, including envy, jealousy, anger, conflict, aggression, and violence. National surveys have found that dating aggression is prevalent among high school (CDC, 2014; Eaton et al., 2010; Haynie et al., 2013) and middle school students (Arriaga & Foshee, 2004; Lormand et al., 2013; Orpinas et al., 2013; Simon et al., 2010). Two commonly used measures to assess dating aggression among adolescents are the Conflict in Adolescent Dating Relationship Inventory (Wolfe et al., 2001) and the Revised Conflict Tactics Scale (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). However, these measures were

developed for older adolescents and adults. The Safe Dates Dating Aggression Scale (Foshee et al., 1996) has been validated for younger adolescents (Foshee et al., 2009; Goncy et al., 2015), and focuses on physical and psychological forms of dating aggression. In the current study, the Safe Dates scale was used to assess dating aggression.

Theories of adolescent dating violence. Adolescent dating aggression is rooted in several theoretical foundations. Foundational theories, including attachment theory (Bowlby, 1969), the investment model (Rusbult, 1983), feminist theory (Christie, 2000; Dobash & Dobash, 1979), gender role conflict theory (O’Neil, 2008), and social learning theory (Bandura, 1986) have been used to explain dating aggression (Burton, Halpern-Fisher, Rankin, Rehm, & Humphreys, 2011; Wekerle & Wolfe, 1999). Each theory will be described in this section, highlighting how a variety of different theories and approaches can be used to understand dating aggression in adolescence.

Attachment Theory. Bowlby’s (1969) theory of attachment can be used to both understand adolescent romantic relationships and explain aggression in the context of these relationships. Attachment theory describes how individuals form internal working models to understand relationships. Individuals who form early insecure attachments may be at a heightened risk for adolescent dating aggression. For example, these individuals may have negative internal working models of beliefs, expectations, and roles within relationships (Wekerle & Wolfe, 1999; Ulloa, Martinez-Arango, & Hokoda, 2014). Research findings showed that insecurely attached adolescents were more likely to perpetrate and/or experience dating aggression within romantic relationships than securely attached adolescents (Grych & Kinsfogel, 2010; Ulloa et al., 2014). For example, among 391 adolescents, ages 14 to 18 (58% White), insecure attachment was positively associated with dating aggression

perpetration and victimization (Grych & Kinsfogel, 2010). Thus, attachment theory highlights the necessity of examining the role of parents in adolescent dating relationships. Parents and early attachment relationships may affect individuals in their formative relationships during adolescence (Grych & Kinsfogel, 2010; Ulloa et al., 2014). Although attachment styles are not assessed in the current study, parent and peer messages in support for violent or nonviolent responses to conflict may inform an individuals' working model in understanding how to behave and respond in romantic relationships.

Investment Model. The investment model (Rusbult, 1983) describes how relationship commitment (i.e., intention to maintain a relationship through attachment and long-term orientation) is derived from investment (i.e., resources tied to a relationship), satisfaction (favorable evaluations of relationship), and fewer perceived alternatives to the relationship. Literature in this area has largely focused on adult relationships, finding that greater investments may increase the risk for abuse in relationships (Rhatigan & Street, 2005). Adolescence is a time for identity development, and youth may strive to achieve this objective by trying to satisfy interpersonal needs (Sullivan, 1953) through their romantic partners (Connolly & McIsaac, 2009). In some cases, this high priority and dependence on romantic relationships may lead youth to withstand abuse or invest in unhealthy relationships (Burton, Halpern-Fisher, Rehm, Rankin & Humphreys, 2013; Grych, Raynor, & Fosco, 2004; Guthrie & Flinchbaugh, 2001). Seiffge-Krenke (2011) reviewed adolescent relationship stress and found that in committed and invested relationships, adolescents may emphasize interdependence with their partner during conflict, more so than resolving that conflict. Expecting an adolescent to discuss a conflict or problem in the relationship may disrupt their feelings of connection and closeness (Seiffge-Krenke, 2011). Ha, Dishion,

Overbeek, Burk & Engels, (2014) stressed the importance of studying adolescent investment models, as adolescents may perceive that they are in high quality relationships, when they could be in destructive or even abusive relationships. Harper and Welsh (2007) also found that high levels of stress and expectations associated with being in romantic relationships led to behaviors that preserved their relationship, even if that meant enduring aggression or controlling behaviors. Therefore, during adolescence, youth may be more likely to prioritize relationships even when at risk for abuse or negative outcomes, due to enhanced feelings of interdependence with their romantic partners (e.g., Baker et al., 2001; Ha et al., 2014; Harper & Welsh, 2007; Connolly & McIsaac, 2009).

Feminist Theory. Feminist theory suggests that males use violence against female partners in order to establish and maintain power and control, in line with the idea that men have traditionally exercised control and power in relationships (Burton et al., 2011; Dobash & Dobash, 1979; Olesen, 2005). Androcentric gender inequalities and social structures can influence individuals at the romantic dyad level, affecting family structure, marriage, and dating behaviors (Komter, 1989). The power differential between males and females also influences norms, attitudes, and beliefs about adolescent dating violence (Wekerle & Wolfe, 1999). For example, intimate partner violence and dating aggression perpetration is more likely to occur among men who are socialized by families and peers to use violence in close relationships (Reyes, Foshee, Niolon, Reidy, & Hall, 2016). Kaura and Allen (2004) found that individuals who were dissatisfied with the amount of control and power within their romantic relationships were more likely to then perpetrate violence. Giordano, Copp, Longmore, and Manning (2016) also found that controlling behaviors contributed to dating aggression perpetration among adolescents, and argued that control is a “centerpiece of the

feminist perspective” (p. 1). From a feminist perspective, research must consider the influence of gender, power and control within romantic relationships, as dating aggression is “fundamentally a gender issue” (Lawson, 2012, p. 579). Dating aggression prevention programs have started to include gender role attitudes, positing that promoting egalitarian gender roles will reduce dating aggression perpetration (Taylor, Stein, Mumford, & Woods, 2013; Tharp et al., 2011).

Gender Role Conflict Theory. Gender role conflict theory is a dimension of feminist theory that examines the role of gender normative behaviors (O’Neil, 2008). Males and females face masculine and feminist ideologies, or one’s adoption of cultural and societal beliefs about gender roles (Beaglaioich, Sarma, & Morrison, 2013). Gender role conflict is characterized by three tenets: 1) devaluation, or a negative assessment of the self or others when conforming to or deviating from gender roles, 2) restrictions, where one constrains oneself or others to stereotypic norms of gender ideologies, and 3) violations, when individuals experience or inflict harm when deviating or conforming to gender role norms (O’Neil, 2008).

Gender norms play a prominent role in shaping adolescent relationships. Social gender norms not only dictate gender-specific behaviors, but they are often reinforced through dating aggression (Volpe, Morales-Aleman, & Teitelman, 2014). For example, in a study of ninth graders, approximately 40% of girls and boys endorsed that it was “okay for a girl to hit her boyfriend,” although less than 20% reported that it was “okay for a boy to hit his girlfriend” (Reeves & Orpinas, 2012). For males, norms supporting dating aggression were associated with higher frequencies of dating aggression perpetration and victimization. These authors conducted focus groups with a subset of 90 adolescents that showed female-to-

male aggression was seen as less offensive than male-to-female aggression (Reeves & Orpinas, 2012). Other studies found that male perpetrators of dating aggression in adolescence were more likely to report greater support of traditional gender norms (Reed, Silverman, Raj, Decker, & Miller, 2011), but males with gender-equitable attitudes were less likely to perpetrate dating violence within their heterosexual relationships (McCauley et al, 2013). A focus group of urban adolescents found that males suggested that men might use violence in order to establish or maintain control over their partners (Johnson et al., 2005). Females suggested that women might sometimes allow violence within their relationship (e.g., being hit), with the interpretation that violence is equated to commitment. Finally, a qualitative study of adolescent girls' relationships found that the majority of the girls thought that controlling behaviors were "often treated lightly and justified as acceptable behavior for each member of the couple" (Volpe, 2014, p. 786). Gender-specific norms and behaviors may contribute to adolescents perceiving controlling and abusive behaviors as normative (Volpe, 2014). All of these findings underscore the need to better understand sex differences in norms and behavior within adolescent romantic relationships, and how gender norms may affect adolescents' views about violence within their romantic relationships (Johnson et al, 2005; Volpe et al., 2014). Together, gender role conflict theory highlights the role that gender and societal norms have on violence and abusive behaviors within romantic relationships (O'Neil, 2008).

Social Learning Theory. Finally, social learning theory is a key theory to understand adolescent dating aggression within the current study. Social learning theory (Bandura, 1986) posited that witnessing or hearing about aggressive acts by others may increase the likelihood that observers would then engage in similar behavior (Jensen, 2009). An individuals' social

environment has a strong influence over behavior. Values, norms, beliefs and knowledge come from one's social environment, and an individual learns behaviors from this mixture of components making up one's social environment. Social learning can include a direct experience (i.e., enactment), learning by engaging in behavior and being reinforced or punished for this behavior, or vicariously learning from witnessing an experience (Mihalic & Elliott, 1997; Olsen et al., 2010). Akers and Jennings (2009) suggested that role models and those with high status and proximity to an individual have the strongest influences on behavior, including parents and peers.

Social learning theory is commonly used to understand how adolescents develop and perpetrate aggressive behaviors within their own relationships. For example, adolescents may observe violent behaviors or hear violent responses from important figures, such as their parents or peers, and model these responses to handle problems in their own relationships. As youth transition into adolescence, verbal messages and responses are a frequently used method by parents to communicate values and expectations, and can significantly influence adolescent's beliefs and behaviors in other settings (Bandura & Walters, 1959; Jensen, 2009). Social learning theory provides a foundation for the idea that modeling, through behaviors and messages, can impact adolescents' perpetration of dating aggression.

Throughout the literature, a great deal of support is found for the role of social learning theory in explaining adolescent dating aggression. For example, a meta-analysis showed that childhood maltreatment was associated with intimate partner violence in adulthood (Jensen, 2009; Stith et al., 2000). Also, Olsen et al. (2010) reviewed articles finding that individuals' witnessing violence were more likely to experience or engage in similar behaviors in dating relationships. Finally, Gray and Steinberg (1999) showed that

parent conflict tactics (e.g., verbal aggression, physical aggression, or avoidance) were linked to how adolescents then handled conflict with their parents and romantic partners. Another study found that youth who witnessed familial violence were at an increased risk for dating aggressive behaviors. These youth were more prone to view aggression as a functional method to resolve problems and conflict (Wekerle & Wolfe, 1999).

The majority of these studies lend support to the intergenerational transmission hypothesis, which suggests that individuals learn aggressive behaviors from prior aggressive relationships and experiences (Wekerle & Wolfe, 1999). In support of this premise, Wekerle and Wolfe (1999) highlighted that experiencing or witnessing violent behaviors places adolescents at risk for engaging in subsequent aggressive behaviors, due to the “messages learned about the functional nature of violence...to express oneself, to solve problems, to control and dominate another” (p. 441).

Social learning theory illustrates how parents and peers may model and offer verbal messages in support for violent or nonviolent responses, which may ultimately affect adolescent dating behaviors. Overall, the variety of theoretical perspectives presented highlight the necessity of understanding risk and protective processes that are associated with adolescent dating aggression. These theories also provide a foundation for understanding how parental and peer factors may be predictors of adolescent behavior.

Relations between Parent and Peer Factors and Adolescent Behavior

In this section, I discuss bidirectional relations between parent and peer factors and adolescent behavior through socialization processes in the context of developmental systems theories (Grusec, 2002; Grusec & Hastings, 2015; Lerner, 1978; 1984; 1986; Sameroff, 1975; 2009). I then discuss the social information-processing model (Crick & Dodge, 1994) to

illustrate how aspects of this model also may support reciprocal relations between parent and peer factors and adolescent behavior. Finally, I examine interactions between parent and peer processes and how these interactions may be reciprocally related to adolescent behavior through the contextual-congruence model of socialization (Spera & Matto, 2007).

Socialization in the context of developmental systems. Developmental systems theories highlight the dynamic, reciprocal interplay between individuals, their social interactions, and contexts (e.g., Bronfenbrenner, 1979; 1994; Lerner, 1986; Sameroff, 2009). For example, Lerner's developmental contextual theory (1978; 2002; Lerner & Castellino, 2002) underscores that individuals play an active role in their own development. Lerner specifically viewed development as taking place within *relationships* between individuals within and across social contexts. Adolescents have a multitude of relationships (e.g., with parents, peers, and dating partners) that comprise specific social networks in various contexts (e.g., home, school, and neighborhood). Parents and peers are embedded within their own social networks and ecology, incorporating a variety of roles and contexts. Collectively, adolescents' interactions within and across these social networks contribute to developmental processes through continuous and dynamic interactions that are bidirectional in nature (Lerner, Rothbaum, Boulos, & Castellino, 2002).

In part, theories of socialization demonstrate how parents and peers contribute to adolescents' attainment of beliefs, values, and behaviors (Maccoby, 2015; Smetana, Robinson, & Rote, 2015). Socialization is defined as the "way in which individuals are assisted in the acquisition of skills necessary to function successfully as members of their social group" (Grusec, 2002, p. 143). Socialization allows for the development of self-

regulation, attitudes and values, coping strategies, and cognitive frameworks for youths' relationships with parents, peers, and romantic partners (Grusec, 2002).

Parents are the primary source of socialization during childhood and early adolescence. Freud initially conceptualized socialization as the process in which youth gained autonomy in accordance with standards put in place by parents (Grusec, 2002). It is necessary for parenting goals to evolve as adolescents mature to promote a sense of autonomy; yet to maintain a high quality relationship including parenting practices that keep parents informed and able to effectively address issues related to adolescents' social and academic endeavors. More generally, parenting styles and practices inform how youth learn norms and behaviors in that adolescents are socialized based on how their parents act and what behaviors they reinforce (Baumrind, 1971). Parents may provide a foundation for healthy romantic relationships in how they communicate, resolve conflict, and seek support within their own intimate partner relationships. Gray and Steinberg (1999) underscored the idea of relational continuity in explaining the influence of socialization processes within the parent-adolescent relationship on adolescent romantic relationships.

Peers also provide a key context for socialization (Smetana et al., 2015), and adolescents may alter or adapt their behaviors and attitudes to fit in with peers and peer groups (Veenstra & Dijkstra, 2012). Selection and socialization are two essential processes for understanding the influence of peers on adolescent behavior. First, selection refers to the propensity for adolescents to affiliate with those who are similar to them, in attitudes, behaviors, and values. Second, socialization refers to the process by which these peer affiliations influence adolescent behavior. The processes of selection and socialization in adolescence are grouped underneath the term homophily and affect the degree to which

adolescents within a particular peer group tend to engage in risk-taking behaviors, aggression, and violence (Bukowski, Castellanos, Vitaro, & Brendgen, 2015; Prinstein & Dodge, 2008). As adolescents often date peers or have relationships entrenched in their peer groups, homophily is found in romantic relationships and influences behaviors among romantic partners (Furman & Simon, 2008). Peer selection and socialization can influence both prosocial and aggressive behavior depending on peers' attitudes, values, and behaviors (Padilla-Walker & Bean, 2009).

Consistent with Lerner's (1986) developmental contextual theory, Sameroff's transactional model (2009) highlights that socialization processes between individuals within relationships are reciprocal such that adolescents are continually influenced by and influence their development. For example, adolescents' perceptions of parental and peer messages (i.e., as supporting nonviolence or violence in conflict situations) may influence their frequency of dating aggression perpetration based on these perceived behavioral expectations and anticipated outcomes (Miller et al., 2009). However, adolescents actively construct their social knowledge and environment, affecting how parents and peers may socialize them (Grusec, 2002; Murray et al., 2013). For example, if an adolescent is aggressive in dating contexts, parents may offer support for nonviolent responses to socialize the adolescent to be less aggressive in future situations. Adolescents' aggressive behavior also may be reinforced or discouraged by peers depending on the degree to which it corresponds to peer group norms. Based on the process of homophily which typically operates within adolescent peer groups, synergy between adolescent perceptions of peer support for violent or nonviolent responses to conflict and the frequency of adolescents' aggressive behavior across peer and

dating contexts is likely and may result in significant reciprocal relations between these variables.

Social information-processing model. Crick and Dodge (1994) described a sequence of steps that informed how individuals process social information, guiding the selection, enactment, and evaluation of responses in social contexts. First, social information is encoded and interpreted – individuals attempt to figure out what is happening and why. Next, guided by past experiences and the current understanding of the situation, individuals clarify their goals and corresponding possible responses to the situation. This is followed by an evaluation of their own self-efficacy to enact given responses and how various responses may work to achieve a desired outcome and be received by others (e.g., peer or parents). Lastly, the chosen response is enacted and evaluated based on its outcomes. At the center of the model is the database, which guides decisions and all of the steps of this model. The database consists of schemas or social knowledge heuristics (i.e., mental shortcuts for making decisions in social situations). Schemas are an individual's organizational system of social knowledge; this information is encoded and organized from previous experiences, allowing individuals the ability to access information quickly to inform decisions. Overall, the model is cyclical in nature, which suggests that subsequent interactions are informed by the previous processing of social information.

Huesmann (1988) further noted that from schemas, individuals develop scripts, which guide behavior in social situations. On one hand, adolescents' perceptions of messages from parents and peers may influence the formation of scripts for how to behave in social scenarios. Thus, these messages may inform: a) adolescents' perceptions of the degree to which parents and peers support violent or nonviolent responses to conflict, and b) the

development of scripts about how to respond in violent or nonviolent ways in specific social situations. These scripts may then influence cues that are perceived, goals and response options that are considered, and ultimately the behavior that is enacted. Conversely, scripts are “reevaluated and refined after they have been behaviorally enacted” in ongoing social interactions (Fontaine & Dodge, 2009, p. 120). Thus, adolescents may be influenced to perpetrate or not perpetrate dating aggression based on perceived parental and peer support for violence and/or nonviolence. If parents and peers subsequently reinforce their resulting behavior, it may further strengthen supporting perceptions and related scripts. As the model is cyclical in nature, adolescents also may perceive parental and peer support for violent and nonviolent responses in ways that parallel their own behaviors (Murray et al., 2013). However, if there is a discrepancy between their behavior and its perceived support by parents and peers, this may weaken and erode existing scripts about anticipated support for these behavioral responses.

Contextual-congruence model of socialization. The relative strength of parent versus peer influences on adolescent behavior also is important to address. In considering parent and peer messages, congruent messages may work in an additive way to strengthen adolescent behavior (Bronfenbrenner & Morris, 1998; Spera & Matto, 2007). However, a mismatch (or lack of goodness of fit) in values or perceived behavioral expectations of parents and peers may lead to adjustment difficulties (Lerner, 1986; Spera & Matto, 2007). For example, if an adolescent perceives parents are suggesting handling a problem situation with one method (i.e., nonviolent response) and a peer is suggesting another method (i.e., violent response), the lack of goodness of fit between perceptions within one’s system of relationships may influence problematic adolescent behavior (Bronfenbrenner & Morris,

1998; Kumar, 2006; Tyler et al., 2010). In such situations, the relative influence of perceived parent versus peer messages may be swayed by developmental considerations as younger adolescents may be more likely than older adolescents to be influenced by parents (Padilla-Walker, 2006; Spera & Matto, 2007).

Spera and Matto (2007) underscored the importance of congruency across socialization contexts in that: “children who experience higher levels of congruence across social contexts will be more likely to behaviorally and socially commit to those social contexts toward which they feel congruence” (p. 552). These researchers proposed the contextual-congruence model of socialization, which considers the level of congruency across youths’ socialization sources and examines how they interact to influence youths’ behavior. For example, when presented with discrepant and incongruent values and goals across socialization sources (e.g., parents and peers), youth may struggle to figure out whose values they should internalize. During adolescence, peer and parent socialization forces intersect, potentially creating a sense of dissonance if messages are incongruent (Spera & Matto, 2007). In these cases, adolescents may incorporate and integrate aspects of both messages, adjust their perceptions of the messages so they are more congruent, or fragment the messages by attaching congruent messages to relevant situations. In contrast, when parents and peers share similar values and expectations, adolescents are better able to fuse values and messages across social contexts (Phelan, Davidson, & Cao, 1991).

Sameroff (2009) posited that changes in meaning systems occur when individuals are faced with contradictions in messages about how to act, and mixed messages may stimulate adolescents to change their behavior. Kuczynski and Del Mol (2015) also hypothesized that adolescents reciprocally affect and are affected by the processing messages from

socialization agents. Naturally, socialization processes lead to external and internal contradictions and incongruence (Riegel, 1976), and youth are continually adapting and consolidating messages that inform their behavior (Kuczynski, Parkin, & Pitman, 2015).

Due to the novelty of the current study, it is difficult to hypothesize how adolescents' perceptions of conflicting viewpoints between parent and peer support for nonviolence versus violence may influence the frequency of adolescent dating aggression perpetration. Theoretical models highlight the importance of examining these incongruent messages, and one empirical paper demonstrated that parents might change their parenting behaviors based on incongruent messages provided by peers and the media (Padilla-Walker, 2006). However, further examination of interactions between perceptions of peer and parent messages and adolescent dating aggression perpetration is needed.

Parents, Peers, and Adolescent Dating Aggression

A large literature exists on relations between parental and peer risk processes and adolescent behavior (Steinberg, 2014); however, research examining parental and peer processes and adolescent dating aggression is just starting to flourish. Olsen et al. (2010) reviewed familial and peer risk factors for adolescent and young adult dating violence. The main familial risk factors for adolescent dating aggression included interparental violence, child abuse, and negative parent-child interactions. With regard to peer risk factors, being a part of a peer group that promoted aggression increased the likelihood of peer victimization and dating aggression (Olsen et al., 2010). A comprehensive review by Leen et al. (2012) identified seven articles that presented peer risk factors for adolescent dating violence, including having friends who experience and perpetrate dating violence, and having aggressive friends. Finally, a qualitative review of 19 studies by Vagi et al. (2013) found an

array of both familial risk factors (e.g., aversive family communication, exposure to familial violence, parent-child hostility, harsh parenting practices, negative parent-child relations, physical abuse, and marital conflict), and peer risk factors (e.g., engagement in peer violence and antisocial behaviors, friends involved in dating violence, and poor friendship quality) for adolescent dating violence. Although a variety of risk and protective processes have been identified in the literature, little research has explored how perceived parent and peer support for violence and nonviolence relates to adolescent dating aggression (see Miller et al., 2009 for an exception). However, these perceptions may be incorporated into adolescents' developing sense of identity, ultimately informing the likelihood of aggressive or nonaggressive behaviors within other relationships, and therefore are important risk and protective processes to consider.

Developmental contextual theories of adolescent romantic relationships highlight that peers are intertwined heavily in the progression of dating relationships in adolescence. A meta-analysis of 27 articles by Garthe, Sullivan, and McDaniel (2016) focused on three distinct peer risk factors for adolescent dating aggression including peers' involvement in violent dating behaviors, peer aggressive or antisocial behavior, and being rejected or victimized by peers. All three were significantly related to adolescent dating violence. The results of this meta-analysis suggested that peers play a powerful role in influencing dating aggression behaviors. First, according to social learning theory (Bandura, 1986), adolescents may see how their peers and friends are handling conflict, perhaps through violence, and may use these behaviors as an example of how to handle their own relationship conflicts. Second, through the theory of homophily (Prinstein & Dodge, 2008), adolescents may prefer peers and romantic partners who engage in similar behaviors (e.g., aggression). Last, the social

augmentation hypothesis (Dishion, Piehler, & Myers, 2008) suggests that adolescents who struggle to have positive peer experiences (i.e., are victimized by their peers) might then be more inclined to socialize or date deviant or aggressive peers. This meta-analysis illustrated the strong negative influence peers can have on adolescent dating relationships.

Although peers have been considered in theoretical underpinnings of adolescent romantic relationships, parents are largely missing from these theories. In addition, considerably less research has examined how parental processes that may reduce or deter adolescent dating aggression. Some protective processes for adolescent dating aggression have been identified. For example, normative beliefs supporting nonviolence may lead to nonviolent behaviors in dating relationships (Sullivan et al., 2012). A few studies found that positive parenting behaviors (e.g., parental monitoring and high quality parent-adolescent relationships) were associated with lower levels of dating victimization (Crockett & Randall, 2006; East & Hokoda, 2015; Leadbeater, Banister, Ellis, & Yeung, 2008; Maas, Fleming, Herrenkohl, & Catalano, 2010). A study by Garrido and Taussig (2013) found that among early adolescents, positive parenting practices and prosocial peer relationships moderated the relation between exposure to intimate partner violence among parents and adolescent dating aggression perpetration. Finally, Richards, Branch and Ray (2014) found that having supportive friends was associated with lower frequencies of dating aggression perpetration and victimization; familial support was not associated with adolescent dating aggression in this study. However, although some individual, familial, and peer risk factors have been identified, there is a need to better understanding how parental and peer factors can deter adolescents from perpetrating dating aggression.

Parental and Peer Support for Violent and Nonviolent Responses

Studies have examined roles that parents and peers play in the development of adolescent dating aggression (Olsen et al., 2010). Yet, little is known about how perceived parental and peer support for violent and nonviolent responses is associated with adolescent dating aggression. Most literature in this area has explored links between perceived parental messages supporting violent responses and adolescent aggressive behaviors. In a sample of 8,865 sixth, seventh and eighth graders (66% Hispanic; 19% African American), Orpinas, Murray, and Kelder (1999) found that parental support for fighting was positively associated with aggression, fighting, weapon carrying and injuries due to fighting. Although other parenting variables (e.g., parental monitoring, parent-adolescent relationships, and family structure) explained some of variance within these relations, perceived parental support for fighting had the strongest relation to adolescent aggressive behavior (Orpinas et al., 1999). Solomon, Bradshaw, Wright, and Cheng (2008) also found similar results in their cross-sectional sample of children ages 12 to 17 and one of their caregivers (89% African American), recruited from inner-city emergency departments for assault-related injuries. Both youth and parent attitudes about fighting were positively associated with aggressive behavior, fighting, and school suspension. Finally, among 168 youth ages 10 to 15 and their caregivers who were recruited from emergency departments following peer assault injuries (100% African American), youth who perceived that their parents supported fighting were more likely to have retaliatory attitudes (Copeland-Linder et al., 2007).

Similar findings were revealed in three longitudinal efforts (Garthe et al., 2015; Kliwer et al, 2006; Murray et al., 2013). Among 101 African American adolescents (ages 10 to 13) and their maternal caregivers, caregiving coaching suggestions that involved

aggressive actions were associated with higher frequencies of adolescent aggressive coping behaviors. However, suggestions by parents to use prosocial behaviors were positively associated with frequencies of prosocial adolescent coping behaviors (Kliewer et al., 2006). Two additional studies focused on bidirectional relations between perceived parental support for aggression and adolescent behavior. Murray et al. (2013) examined a sample of 209 sixth graders (96% African American) and found that adolescent aggressive behaviors were associated with higher perceived parental expectations for aggressive solutions; however, the reciprocal relation was not significant. Garthe et al. (2015) examined reciprocal longitudinal associations between perceptions of parental support for violent *and* nonviolent responses to conflict and adolescent aggressive and effective nonviolent behaviors among 520 adolescents ages 10 to 14 (67% African American). Study findings showed that perceived parental support for violent responses to conflict was positively associated with aggressive behaviors and negatively associated with effective nonviolent behaviors. Also, effective nonviolent behaviors were positively associated with perceived parental support for nonviolent responses.

Of the extant literature, only one cross-sectional study examined associations between perceived parental support for violent and nonviolent responses to conflict and dating aggression (Miller et al., 2009). In a sample of 2,284 (48% African American; 21% Latino) sixth graders, perceived parental support for aggressive responses was positively associated with the perpetration of physical dating aggression. For females only, perceived parental support for nonaggressive responses to conflict was negatively associated with the perpetration of physical dating aggression. Future research is needed to extend these findings longitudinally across middle school, and to incorporate perceptions of peer support for

violent and nonviolent responses. In Miller et al. (2009) and the current study, adolescent perceptions of parental and peer support for violent and nonviolent responses measure parental or peer support for responses in aggressive or conflictual situations. These measures are not specifically assessing violent or nonviolent responses to conflict in romantic relationships. However, as adolescents are gaining the cognitive tools to grapple with their own response options, they are still relying heavily on schemas and scripts that are informed by the socialization of parental and peer support for a variety of behaviors. Thus, adolescents may translate and apply knowledge and scripts used in general aggressive or conflictual situations to their emerging romantic relationships or within their dating contexts.

Finally, only one study to date has examined parental *and* peer support for violent and nonviolent responses to conflict (Farrell et al., 2012). In a sample of 477 sixth graders from urban (83% African American) and county (45% Caucasian, 40% African American) school districts, perceived peer and parental support for violent responses to conflict was associated with several forms of aggressive behavior (i.e., physical, nonphysical and relational). Perceived peer and parental support for nonviolent responses to conflict also was associated with lower frequencies of aggressive behaviors. Additionally, perceived parental and peer support for violent responses to conflict was associated with adolescent beliefs supporting fighting or that fighting was sometimes necessary. These results suggest that it is important to examine perceptions of both parental and peer support for violent and nonviolent responses to conflict, as both may contribute to adolescent beliefs and behaviors. Future research would benefit from exploring these variables longitudinally and the extension to other relationships (e.g., romantic and dating).

When examining parental support for violent and nonviolent responses, the context in which these responses are given also must be considered. Kliewer et al. (2006) stated that stressors such as exposure to violence and low socioeconomic status might cultivate a sense of strain, and in turn affect parental responses. For example, parents may be more likely to support violent versus nonviolent responses to conflict in some circumstances, as aggression may be seen as necessary to deal with threatening situations within this context (Farrell et al., 2005). Furthermore, socioeconomic status and context also may affect levels of dating aggression (Dardis, Dixon, Edwards, & Turchik, 2015; Foshee et al., 2008). The intersection between parental and peer influences supporting violent and nonviolent responses on adolescent dating aggression also needs to be examined, specifically within ethnic minority, urban youth, who may be at higher risk for exposure to dating aggression (Dardis et al., 2015; Offenhauer, 2011).

Statement of the Problem

The high prevalence of and negative consequences associated with adolescent dating aggression underscores the need to better understand risk and protective processes associated with this type of aggression. Adolescent dating aggression is a serious public health concern that may have long-lasting impacts on development and relationships beyond adolescence and into adulthood (Capaldi & Gorman-Smith, 2003; Hettrich & O’Leary, 2007; Smith et al., 2003). It is important to identify influences of dating aggression in early adolescence, as youth are starting to negotiate and establish norms for dating behaviors during this developmental period (Connolly & Goldberg, 1999). During early adolescence, and from a developmental contextualism perspective, parents and peers are two of the most influential socializing agents for adolescent behavior (Lerner, 2002; Steinberg, 2014), specifically

aggression (Gorman-Smith, Tolan, & Henry, 2000; Miller-Johnson & Costanzo, 2004). Additionally, socialization theories, social information processing theories, and developmental contextualism suggest that support for violent and nonviolent responses to conflict from parents and peers may bidirectionally influence adolescent behaviors. Research shows that parents' support for violent and nonviolent responses to problem situations were positively associated with adolescents' peer-based aggressive behaviors (Farrell, Henry, Mays, & Schoeny, 2011; Farrell et al., 2012; Garthe et al., 2015; Kliewer et al., 2006; Orpinas et al., 1999), and dating aggression perpetration (Miller et al., 2009). However, the influence of peer support for violent and nonviolent responses to conflict on adolescent behavior is poorly understood. Identifying and understanding these bidirectional relations is important to inform prevention work and promote healthy relationships.

The current study investigated bidirectional longitudinal associations between parental and peer support for violent and nonviolent responses to conflict and adolescent dating aggression perpetration. It addressed several gaps in the extant literature by: (a) considering the influence of two major socializing agents during adolescence: parents and peers, and (b) examining parent and peer support for both violent and nonviolent responses to conflict. Little research to date has examined both parental and peer influences on dating aggression, and most has not assessed the relation between support for nonviolence and dating aggression. Several theories also highlight the necessity to investigate bidirectional relations between parental and peer factors and adolescent behavior. Finally, the contextual-congruence model illuminates the importance of looking at how incongruent messages (e.g., parental support for violent responses and peer support for nonviolent responses) may be related to adolescent dating aggression. Furthermore, the current study used longitudinal data

spanning the middle school years, and included a sample of youth living in disadvantaged neighborhoods. The current study informs prevention programs and developmental theory by identifying how parental and peer support for violent and nonviolent responses to conflict were reciprocally and longitudinally related to adolescent dating aggression.

Aims and Hypotheses

Informed by theoretical frameworks and previous literature, the proposed project had four specific objectives:

- I. To examine the extent to which parental and peer support for violent and nonviolent responses to conflict are predictors and/or consequences of early adolescent dating aggression perpetration across sixth, seventh and eighth grade.
 - a. First, I hypothesized that parental and peer support for nonviolent responses would be negatively associated with dating aggression perpetration across middle school.
 - b. Second, I hypothesized that parental and peer support for violent responses would be positively associated with dating aggression perpetration across middle school.

Within these hypotheses, I also examined bidirectional associations. Based on the premise of homophily, I hypothesized that adolescent perceptions of peer support for violent or nonviolent responses would predict higher or lower frequencies of dating aggression, respectively, and that these relations would be reciprocal over time. Thus, I anticipated that there would be a synchronous and cyclical relation between adolescent behavior and perceived peer support of behavior over time. However, less

is known about how adolescent behavior may contribute to perceived parental messages supporting violence or nonviolence. Due to the paucity of theory and research in examining reciprocal relations between these constructs, no specific hypotheses were proposed.

- II. To examine whether the strength of relations between perceived parent and peer support for violent and nonviolent responses to conflict and adolescent dating aggression perpetration differed by grade.
 - a. As peer influences intensify during adolescence (Steinberg, 2014), I hypothesized that the strength of relations between perceived peer support for nonviolence and dating aggression perpetration would increase from the sixth to the eighth grade. As parents remain a strong source of socialization during adolescence (Grusec, 2002; Spera & Matto, 2007; Steinberg, 2014), I hypothesized that relations between perceived parental support for nonviolence and dating aggression perpetration would remain significant across middle school.
 - b. The same results were hypothesized for relations between peer and parental support for violent responses and dating aggression.
- III. To examine whether the strength of relations between perceived parental and peer support for violent and nonviolent responses to conflict and adolescent dating aggression perpetration differed by sex.
 - a. Due to the overall lack of research on sex differences for these relations, longitudinal analyses of relations between perceived parental and peer support for nonviolent and violent responses and dating aggression were exploratory.

- IV. To examine the potential moderating role of parental support for nonviolent responses on the relation between peer support for violent responses and dating aggression perpetration. The same analysis was run to test the moderating role of peer support for nonviolent responses on the relation between parental support for violent responses and dating aggression perpetration.
- a. For both tests of incongruence (parental support for nonviolence and peer support for violence, and peer support for nonviolence and parental support for violence), the contextual-congruence model of socialization (Spera & Matto, 2007) supported the premise that incongruence may place adolescents at risk for problem behaviors. However, based on the lack of empirical research in this area, no specific hypotheses were proposed.

Method

Participants

Participants were 1,399 students (52% female) from sixth, seventh and eighth grades at three middle schools. The sample was split evenly with 466 sixth graders, 467 seventh graders, and 466 eighth graders. A total of 88% of the participants identified themselves as African American or Black, 4% as European American or White, 8% as Other/Multiracial; and 14% identified a Hispanic ethnicity. With regard to family structure, 24% of the sample reported living with two biological parents, 43% with a single parent, 21% with a single parent and stepparent, and 12% in another family structure (e.g., with foster/adoptive parents or other relatives).

Study Design, Setting, and Procedure

Analyses for the present study were conducted on longitudinal data (2010-2015) collected as part of a CDC-funded National Center of Excellence in Youth Violence Prevention (VCU-YVPC) grant. Participants included students from three urban public middle schools in Richmond, Virginia. About a third of the city population lives below poverty level (US Census Bureau, 2011) and are exposed to high violent crime rates (Neighborhood Scout, 2014). Additionally, Gonyea et al. (2016) found that dating aggression perpetration and victimization was prevalent among this sample of middle school students.

The VCU-YVPC project involved the implementation of positive youth development programs, and the collection of data on youth violence and related risk factors. The positive youth development programs included a universal school-based intervention (i.e., Olweus Bullying Prevention Program) and selective family interventions for high-risk adolescents (e.g., Staying Connected with Your Teen). The intervention components were evaluated through a multiple-baseline design. A random sample of students from all three grades was recruited during the first year of the project. Each year a new sample of sixth grade students was recruited along with seventh and eighth grade students to replace those who left the school. By the end of 2015, there were seven cohorts of students. Although data are collected four times each year (fall, winter, spring, summer) individual students were randomly assigned to complete two of the four assessments each year of participation. Missingness by design is a way to effectively handle longitudinal data collection, as it can be used to reduce participant fatigue and testing effects that could occur if each student completed all four assessment waves in a year, while also providing a large sample. This design also allows for a pattern of data missing completely at random (MCAR), or planned missingness, which

does not affect the precision of parameter estimates (Brown, Indurkha, & Kellam, 2000), and can lead to a higher quality of data (Little, 2013). Student participation was voluntary, and they could discontinue or limit participation at any time. During assessment, participants completed self-administered audio-assisted measures on computers, allowing them to read and hear the questions. Participants completed measures at school during the academic year and at their homes during the summer. All procedures were approved by the VCU-IRB, which included obtaining parental permission and student assent prior to data collection.

For the current study, a longitudinal data set was used. It included independent samples of sixth, seventh and eighth grade students and four waves of data for each sample (i.e., fall, spring, winter, and summer within each grade). One wave of data was randomly selected from each student so that there was balance across grades. This design allowed for a multiple group (e.g., by grade) longitudinal (by waves within school year) design. Students were included in this sample if they indicated that they endorsed having a dating partner for at least one wave of data.

Measures

Parental support for violent and nonviolent responses. Parental support for violent and nonviolent responses to conflict was assessed using a revised Parental Messages about Fighting and Nonviolence scale (Farrell et al., 2006; Orpinas et al., 1999). The earlier version of this scale (Orpinas et al., 1999) was modified based on qualitative and quantitative studies examining problematic situations of urban, African American youth (Farrell et al., 2006, 2010). The adapted measure included 11 items assessing adolescents' perceptions of the likelihood of their parent supporting violent or nonviolent responses. Six items assessed parental support for fighting (e.g., "It's okay to fight if someone else starts it") and five items

assessed parental support for nonviolent responses (e.g., “Stay calm and don’t let it bother you when someone says something disrespectful to you”). Items were rated on a 4-point scale where 1 = *very unlikely* and 4 = *very likely*. Random cross-sectional reliabilities from this dataset are reported for the parental support for fighting ($\alpha = .78$) and nonviolent responses ($\alpha = .88$) subscales.

Peer support for violent and nonviolent responses. Peer support for violent and nonviolent responses was assessed using the Peer Support for Aggression and Nonviolence Scale (Farrell et al., 2007, 2008). This measure was developed from work evaluating the effectiveness of a violence prevention program (Farrell, Meyer, & White, 2001). The measure was also developed from work examining scenarios of difficult situations for urban, African American youth (Farrell et al., 2006), how youth may respond to these situations (Farrell et al., 2007), and how well the response options may work (Farrell et al., 2007). The scale presents six scenarios of problem situations (e.g., “You see two people are about to start a fight”). Each scenario includes two types of responses: (1) a response supporting nonviolence (e.g., “What would your friends think if you went to get an adult?”), and (2) a response supporting violence (e.g., “What would your friends think if you cheered on the fight?”). For each responses supporting nonviolence or violence, adolescents then selected one of three expected peer reactions: 1) a positive reaction (e.g., “They would think I was cool”), 2) a neutral reaction (e.g., “They would not care”), or 3) a negative reaction (e.g., “They would think I should have stayed out of it”). Random cross-sectional reliabilities from this dataset are reported for the peer support for aggression ($\alpha = .75-.76$) and nonviolent responses ($\alpha = .75-.78$) subscales.

Dating aggression perpetration. Dating aggression perpetration was assessed using a modified version of the Safe Dates - Dating Violence Scale (Foshee et al., 1996). Participants were asked to report occurrences of perpetration in the last three months. Only participants who indicated they had a boyfriend or girlfriend in the last 3 months completed the measure. Ten items, including six physical (e.g., “Pushed or shoved him or her”) and four psychological (e.g., “Did something just to make him or her jealous) perpetration items were included in a composite scale. Participants rated items on a scale of 0 = *never* to 3 = *10 or more times*, and higher scores indicated higher levels of dating aggression perpetration. A paper established measurement properties of this scale and found support for combining psychological and physical aggression items into a single score (Goncy et al., 2015). Therefore, a composite score of dating aggression was used. Random cross-sectional reliabilities from this dataset were ($\alpha = .88$) for this measure.

Covariates. Covariates included gender, intervention condition and a composite measure of dating victimization. Due to the likelihood that perpetration and victimization co-occur (Giordano, Soto, Manning, & Longmore, 2010; O’Leary et al., 2008), I controlled for dating aggression victimization, which also was assessed with the Safe Dates – Dating Violence Scale (Foshee et al., 1996), and included 10 items assessing physical (e.g., “Punched or hit you with something that could hurt”, 6-items) and psychological (e.g., “Said things to hurt your feelings on purpose”, 4-items) victimization. Participants rated items on a scale of 0 = *never* to 3 = *10 or more times*. Higher scores indicated higher levels of victimization ($\alpha = .81$).

Data Analyses

Analyses for all study aims were run in *MPlus 7.3* (Muthén & Muthén, 2013). Analyses were based on maximum likelihood estimation with robust standard errors (MLR). MLR computes mean-adjusted maximum likelihood estimates for non-normally distributed continuous data (Muthén & Muthén, 2012). Full information maximum likelihood (FIML) estimation was used to include all available data (Wang & Wang, 2012), due to the nature of data being missing completely at random (MCAR) via missingness by design. All analyses included the covariates (i.e., sex, dating aggression victimization, and intervention condition) unless otherwise specified. Model fit was assessed with the Comparative Fit Index (CFI) and the Root Mean Square Error of Approximation (RMSEA). Values between 0.90-0.95 or above for the CFI, and 0.05 or below for the RMSEA (McArdle & Nesselrode, 2014; Wang & Wang, 2012) indicate that the model adequately fits the data. The CFI compares the specified model to the null model. The null model assumes zero covariance among the observed variables; thus, the CFI indicates the ratio of improvement from the null to the specified model (Wang & Wang, 2012). The RMSEA assesses the lack of fit of the specified model to the population, adjusting for the model degrees of freedom. Additionally, the RMSEA provides a 90% confidence interval for the calculated RMSEA value (Wang & Wang, 2012).

Hypothesis I

For Hypothesis I, part A, a longitudinal cross-lagged panel model was used to examine associations between parental and peer support for nonviolent responses to conflict and dating aggression perpetration (see Figure 1). For Hypothesis I, part B, a similar model was run to test associations between parental and peer support for violent responses to

conflict and dating aggression perpetration. These two models tested how parental and peer support for violent and nonviolent responses to conflict, respectively, were reciprocally and longitudinally related to early adolescent dating aggression perpetration across four waves of data, spanning one year. Longitudinal panel models require a series of models to be run and tested to determine which path coefficients can or cannot be constrained (see Appendix B). In the current study, an unconstrained model was first run to assess baseline fit of the model where all path coefficients were allowed to vary. Next, this unconstrained model was compared to a series of constrained models in which autoregressive or stability path coefficients were constrained for each variable to be equal in order to test for stability across time. The unconstrained and constrained models were compared using the Satorra-Bentler Chi-Square (S-B $\Delta\chi^2$) difference test and a comparison of fit indices (i.e., CFI and RMSEA). A non-significant χ^2 difference test indicates that the constrained model fits the data more parsimoniously than the unconstrained model (Kelloway, 2015). Thus, in comparing the unconstrained model to the constrained model, a non-significant χ^2 difference test and minimal change in model fit suggests that the autoregressive path coefficients can be constrained to be equal across time. For variables in which the autoregressive paths were constrained to be equal, cross-lagged path coefficients were then regressed on these constrained autoregressive paths to determine if they could be constrained. Again, models in which these cross-lagged path coefficients were unconstrained versus constrained were compared based on the Satorra-Bentler Chi-Square (S-B $\Delta\chi^2$) difference test and a comparison of fit indices. This entire series of tests inform the final model, which includes the autoregressive and cross-lagged paths that were unconstrained and/or constrained across time.

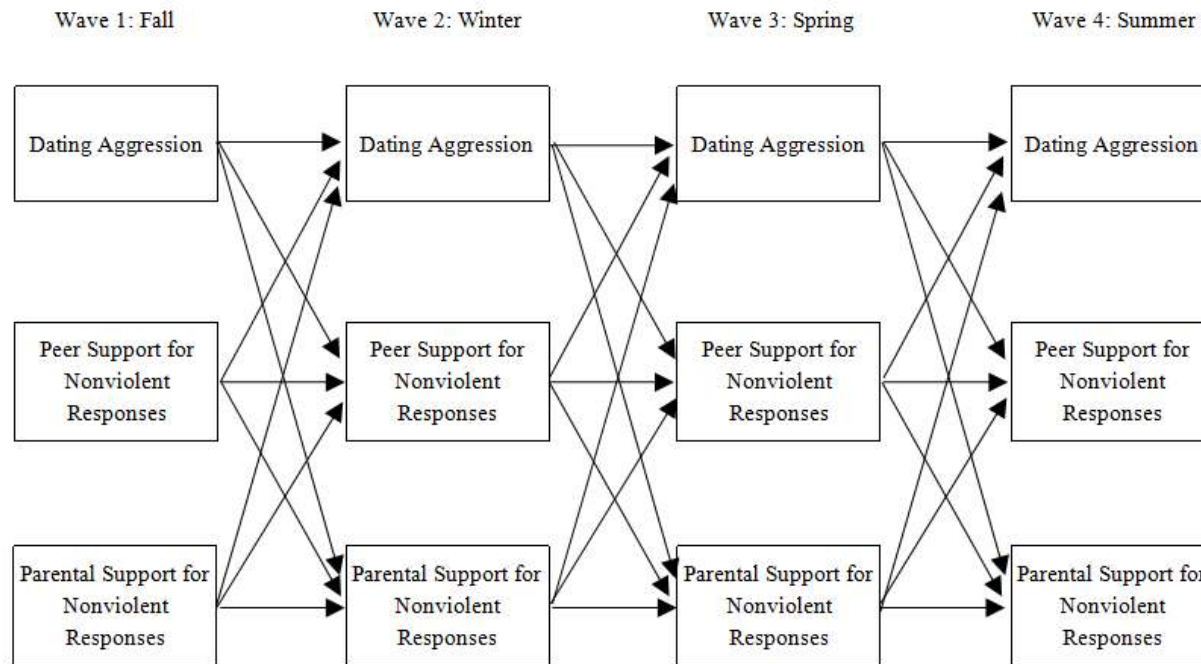


Figure 1. Cross-lagged panel model examining the longitudinal relations between dating aggression and perceived parental and peer support for nonviolent responses to conflict. The same model was used for dating aggression and perceived parental and peer support for violent responses to conflict. Covariates and correlations between measures within each wave were included but not shown in the figure to reduce complexity.

Hypothesis II

Hypothesis II examined the degree to which the strength of relations between perceived parental and peer support for nonviolent responses to conflict and adolescent dating aggression differed by grade. Using the baseline model for Hypothesis I, multiple group analyses were run by grade (sixth, seventh, and eighth) to see if the strength of relations between paths varied by grade. These analyses also followed a series of steps (see Appendix C). First, an unconstrained model, where path coefficients were allowed to vary by grade, was compared to a constrained model, where individual path coefficients were constrained to be equal across grade. If the constrained model showed a significant χ^2 difference test or a decrease in model fit, this indicated that there were significant differences in the strength of relations between study variables by grade. Next, as outlined by Kelloway (2015), a series of tests were run to constrain each parameter to equality one at a time. This process allows the identification of the specific parameters that differed or did not differ across groups.

In the current study, a series of tests were run examining equality constraints on paths among groups: a) sixth versus seventh grade, b) sixth versus eighth grade, and c) seventh versus eighth grade. Wald's tests were used to determine if each equality constraint significantly decreased the fit of the model. First, equality constraints were tested on each of the autoregressive path coefficients across the groups. Second, equality constraints were tested on each of the cross-lagged paths. Similar to prior analyses, if the autoregressive paths differed across grade and could not be constrained to be equal, then the cross-lagged path coefficients regressed on those variables were not tested for equality. Third, if the autoregressive or cross-lagged path coefficients showed equality across groups, then these

paths were tested for stability across time by comparing the models via the χ^2 difference test and comparison of fit indices. Last, a final model was run to examine the grade differences within the models. This process was repeated to assess the degree to which the strength of relations between perceived parent and peer support for violent responses to conflict and adolescent dating aggression differed by grade.

Hypothesis III

Hypothesis III assessed whether the strength of relations between perceived parental and peer support for violent and nonviolent responses to conflict and adolescent dating aggression perpetration differed by sex. Using the models for Hypothesis I, multiple group analyses were run to assess sex differences among all paths in the model. The same procedures that were outlined for the multiple group analyses for Hypothesis II also were used to assess sex differences.

Hypothesis IV

This hypothesis assessed the potential moderating role of perceived parental support for nonviolent responses to conflict on the relation between perceived peer support for violent responses to conflict and dating aggression perpetration. A centered predictor variable (peer support for violent responses), a centered moderator variable (parental support for nonviolent responses) and a moderator X predictor interaction term (parental support for nonviolent responses X peer support for violent responses) were entered as exogenous variables at each of the four waves of data. These variables were used to predict changes in the outcome variable, dating aggression perpetration, at each subsequent wave (see Figure 2).

The same analysis was run to test the moderating role of perceived peer support for nonviolent responses on the relation between perceived parental support for violent responses

and dating aggression perpetration. This model examined moderating effects by treating the centered moderator variable (peer support for nonviolent responses), predictor variable (parental support for violent responses) and moderator x predictor interaction (peer support for nonviolent responses X parental support for violent responses) as exogenous variables at each wave and using them to predict changes in the outcome, dating aggression perpetration, at each subsequent wave.

For both models, unconstrained models were compared to constrained models (via autoregressive path coefficients and cross-lagged path coefficients) through χ^2 difference tests and a comparison of model fit.

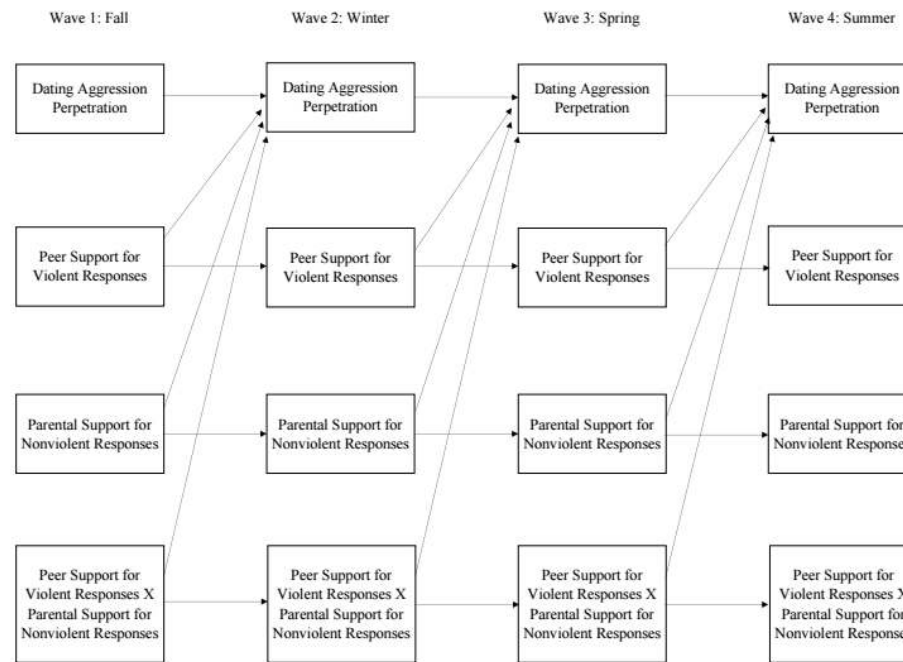


Figure 2. Cross-lagged panel model examining the longitudinal relations between peer support for violent responses (predictor), parental support for nonviolent responses (moderator), peer support for violent responses X parental support for nonviolent responses (interaction) and dating aggression perpetration (outcome). The same model was used to test the longitudinal relations between parental support for violent responses (predictor), peer support for nonviolent responses (moderator), parental support for violent responses X peer support for nonviolent responses (interaction) and dating aggression perpetration (outcome). Covariates and correlations between measures within each wave were included, but not shown in the figure to reduce complexity.

Results

Descriptive Statistics

Means, standard deviations, and correlations were run for all study variables (see Table 1). Each study variable (i.e., dating aggression perpetration and parental and peer support for nonviolent and violent responses) was positively correlated with itself across all waves. At wave 1, dating aggression perpetration was negatively associated with parental ($r = -.20$) and peer ($r = -.10$) support for nonviolent responses. At wave 2, dating aggression perpetration was positively associated with parental support for violent responses ($r = .18$), and negatively associated with parental ($r = -.19$) and peer ($r = -.19$) support for nonviolent responses. At wave 3, dating aggression perpetration positively associated with peer support for violent responses ($r = .17$), and negatively associated with parental ($r = -.23$) and peer ($r = -.15$) support for nonviolent responses. Finally, at wave 4, dating aggression perpetration was positively associated with parental ($r = .25$) and peer ($r = .13$) support for violent responses, and negatively associated with parental ($r = -.23$) and peer ($r = -.11$) support for nonviolent responses.

Table 1

Descriptive Statistics and Correlations for Dating Aggression Perpetration and Peer and Parental Support for Nonviolent and Violent Responses to Conflict across All Four Waves

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
1. DA W1	-																			
2. PaNV W1	-.20*	-																		
3. PeNV W1	-.10*	.32*	-																	
4. PaV W1	.07	-.21*	.05	-																
5. PeV W1	.06	-.27*	-.63*	.20*	-															
6. DA W2	.51*	-.29*	-.04	-.01	.03	-														
7. PaNV W2	.07	.53*	.17*	-.08	-.14*	-.19*	-													
8. PeNV W2	-.21*	.28*	.66*	-.11*	-.51*	-.19*	.30*	-												
9. PaV W2	.09	.02	-.08	.34*	.19*	.18	.28*	-.07	-											
10. PeV W2	-.03	-.30*	-.42*	.01	.55*	.07	-.18*	-.57*	.17*	-										
11. DA W3	.20*	-.14*	-.07	-.25*	.24*	.34*	-.19*	-.19*	.18*	.04	-									
12. PaNV W3	-.27*	.52*	.22*	.09*	-.27*	-.19*	.41*	.21*	-.13*	-.25*	-.23*	-								
13. PeNV W3	-.04	.28*	.67*	-.08	-.48*	-.23*	.20*	.58*	-.11*	-.40*	-.15*	.27*	-							
14. PaV W3	.27*	.19*	-.04	.53*	.13*	.03	.08	.05	.41*	.06	.02	-.25*	-.05	-						
15. PeV W3	.06	-.30*	-.45*	.11*	.58*	.04	-.25*	-.44*	.15*	.60*	.17*	-.23*	-.44*	.12*	-					
16. DA W4	.23*	-.14*	-.14*	.01	.26*	.21*	-.19*	-.23*	.02	.01	.36*	-.30*	-.16*	-.07	.17*	-				
17. PaNV W4	-.12*	.45*	.18*	.06	-.31*	-.05	.42*	.14*	.10*	-.22*	-.30*	.36*	.21*	.01	-.15*	-.23*	-			
18. PeNV W4	-.20*	.18*	.58*	-.05	-.51*	-.13*	.15*	.53*	-.06	-.43*	-.16*	.22*	.65*	.02	-.45*	-.11*	.25*	-		
19. PaV W4	.04	-.04	-.12*	.36*	.08	.01	.05	-.06	.48*	.10	-.08	-.01	-.44*	.41*	.09	.25*	.33*	-.05	-	
20. PeV W4	.18*	-.32*	-.50*	.04	.64*	.01	-.22*	-.34*	.10*	.44*	.19*	-.25*	-.15*	.01	.60*	.13*	-.24*	-.60*	.14*	-
Mean	0.13	2.76	0.17	2.46	-0.06	0.13	2.68	0.12	2.42	-0.01	0.12	2.57	0.12	2.45	0.01	0.12	2.74	0.17	2.47	-0.08
SD	0.57	0.61	0.58	0.82	0.53	0.52	0.67	0.63	0.81	0.51	0.52	0.64	0.61	0.82	0.48	0.44	0.60	0.58	0.80	0.48
Range	0-3	1-4	(-1)-0	1-4	(-1)-0	0-3	1-4	(-1)-0	1-4	(-1)-0	0-3	1-4	(-1)-0	1-4	(-1)-0	0-3	1-4	(-1)-0	1-4	(-1)-0

Notes. DA = Dating aggression perpetration; PaNV = Perceived parental support of nonviolent responses; PeNV = Perceived peer support of nonviolent responses; PaV = Perceived parental support of violent responses; PeV = Perceived peer support of violent responses. W1 = wave 1 (fall); W2 = wave 2 (winter); W3 = wave 3 (spring); W4 = wave 4 (summer). $N = 1,399$.

* $p < .001$ based on a Bonferroni correction using a Type I error rate of $p < .10$.

Longitudinal Relations between Dating Aggression Perpetration and Perceived Support for Nonviolent Responses from Parents and Peers

A series of analyses in *Mplus 7.3* were conducted to assess relations between dating aggression perpetration and perceived parental and peer support for nonviolent responses to conflict across Waves 1 to 4 (see Table 2). An unconstrained model was first run where all path coefficients were allowed to vary across Waves 1 to 4. This model fit the data adequately, $\chi^2(49) = 111.77, p < .001$, RMSEA = 0.03 (90% Confidence Interval: 0.02-0.04), and CFI = 0.92. The unconstrained model was then compared to each of the following constrained models in which autoregressive path coefficients were constrained to be equal across Waves 1 to 4 for: (a) dating aggression perpetration, (b) peer support for nonviolent responses to conflict, and (c) parental support for nonviolent responses to conflict. Comparisons included the Satorra-Bentler Chi-Square difference test (S-B $\Delta\chi^2$) and fit indices (i.e., CFI and RMSEA).

For dating aggression perpetration, the constrained model (i.e., with path coefficients constrained to be equal between adjacent waves of dating aggression) resulted in a significant χ^2 difference test, (S-B $\Delta\chi^2(2) = 41.44, p < .001$), although the fit indices remained adequate. This finding suggested that the stability of dating aggression changed over time. Dating aggression in Wave 1 was not associated with dating aggression in Wave 2 ($\beta = -0.15, p = 0.39$), but from Wave 2 to Wave 3 ($\beta = 0.32, p < .001$) and Wave 3 to Wave 4 ($\beta = 0.39, p < .001$) scores of dating aggression were related over time. Similarly, for parental support for nonviolent responses, the constrained model showed a significant decrease in fit as indicated by a significant χ^2 difference test, (S-B $\Delta\chi^2(2) = 8.69, p < .05$) and decrease in the CFI from 0.92 to 0.91. Parental support for nonviolent responses was positively related across Waves 1

to 4, but showed variation in the strength of these relations (Wave 1 to 2, $\beta = 0.55$; Wave 2 to 3, $\beta = 0.25$; Wave 3 to 4, $\beta = 0.30$). For peer support for nonviolent responses, the constrained model was supported based on a non-significant χ^2 difference test and little change in the fit indices, suggesting that constraining these autoregressive path coefficients did not significantly decrease the fit of the model. Thus, based on these analyses, autoregressive paths between dating aggression perpetration and parental support for nonviolent responses were left unconstrained and the autoregressive paths between peer support for nonviolent responses were constrained.

This model (i.e., with autoregressive paths constrained for peer support for nonviolent responses and unconstrained for parental support for nonviolent responses and dating aggression) was then compared to a series of models in which the following cross-lagged paths were constrained: a) dating aggression to peer support for nonviolent responses, and b) parental support for nonviolent responses to peer support for nonviolent responses. It is important to note that if the autoregressive paths could not be constrained to be equal across time (i.e., parental support for nonviolent responses and dating aggression perpetration), then the cross-lagged paths regressed on those variables were not tested for equality. Both models in which the cross-lagged paths were constrained were supported based on the non-significant χ^2 difference tests and little change in the fit indices (see Table 2). Thus, the final model included unconstrained path coefficients with exception of constrained path coefficients between: a) autoregressive path coefficients for peer support for nonviolent responses, and b) cross-lagged path coefficients from dating aggression to peer support for nonviolent responses, and from parental support for nonviolent responses to peer support for

nonviolent responses. The final model fit the data adequately, $\chi^2(55) = 119.99, p < .001$, RMSEA = 0.03 (90% Confidence Interval: 0.02-0.04), and CFI = 0.92.

All standardized paths for this final model are reported in Figure 3. Perceived parental support for nonviolent responses predicted subsequent decreases in dating aggression perpetration from Wave 1 to 2, ($\beta = -0.10, p = .04$) and from Wave 2 to 3 ($\beta = -0.14, p = .02$). Perceived peer support for nonviolent responses at Wave 3 led to decreased dating aggression perpetration at wave 4 ($\beta = -0.20, p < .001$). Higher frequencies of dating aggression perpetration at Wave 1 resulted in lower levels of perceived parental support for nonviolent responses at Wave 2 ($\beta = -0.17, p < .001$). Lastly, perceived peer support for nonviolent responses at Wave 2 predicted subsequent changes in perceived parental support for nonviolent responses at Wave 3 ($\beta = 0.17, p = .02$).

Table 2

Comparisons of an Unconstrained Model versus Constrained Autoregressive and Cross-lagged Panel Models (for longitudinal relations between dating aggression and parental and peer support for nonviolent responses)

			χ^2 Value	<i>df</i>	RMSEA	CFI
Autoregressive Path Tests		Unconstrained Model	111.77	49	0.03 (0.02-0.04)	0.92
	A. DA	Constrained Model	144.06	51	0.03 (0.02-0.04)	0.92
		S-B $\Delta\chi^2$	41.44**			
	B. PeNV	Constrained Model	116.11	51	0.03 (0.02-0.04)	0.92
		S-B $\Delta\chi^2$	4.38			
	C. PaNV	Constrained Model	120.46	51	0.03 (0.02-0.04)	0.91
		S-B $\Delta\chi^2$	8.69*			
	Final Autoregressive Model	Constrained Model	116.11	51	0.03 (0.02-0.04)	0.92
Cross-lagged Path Tests	A. DA → PeNV	Constrained Model	119.69	53	0.03 (0.02-0.04)	0.92
		S-B $\Delta\chi^2$	3.30			
	B. PaNv → PeNV	Constrained Model	121.86	53	0.03 (0.02-0.04)	0.92
		S-B $\Delta\chi^2$	5.75			
	Final Model	Constrained Model	119.99	55	0.03 (0.02-0.04)	0.92

Note. *df* = degrees of freedom. DA = Dating aggression perpetration; PaNV = Perceived parental support of nonviolent responses; PeNV = Perceived peer support of nonviolent responses. S-B $\Delta\chi^2$ = Satorra-Bentler Chi-Square difference test.

* $p < .05$; ** $p < .001$.

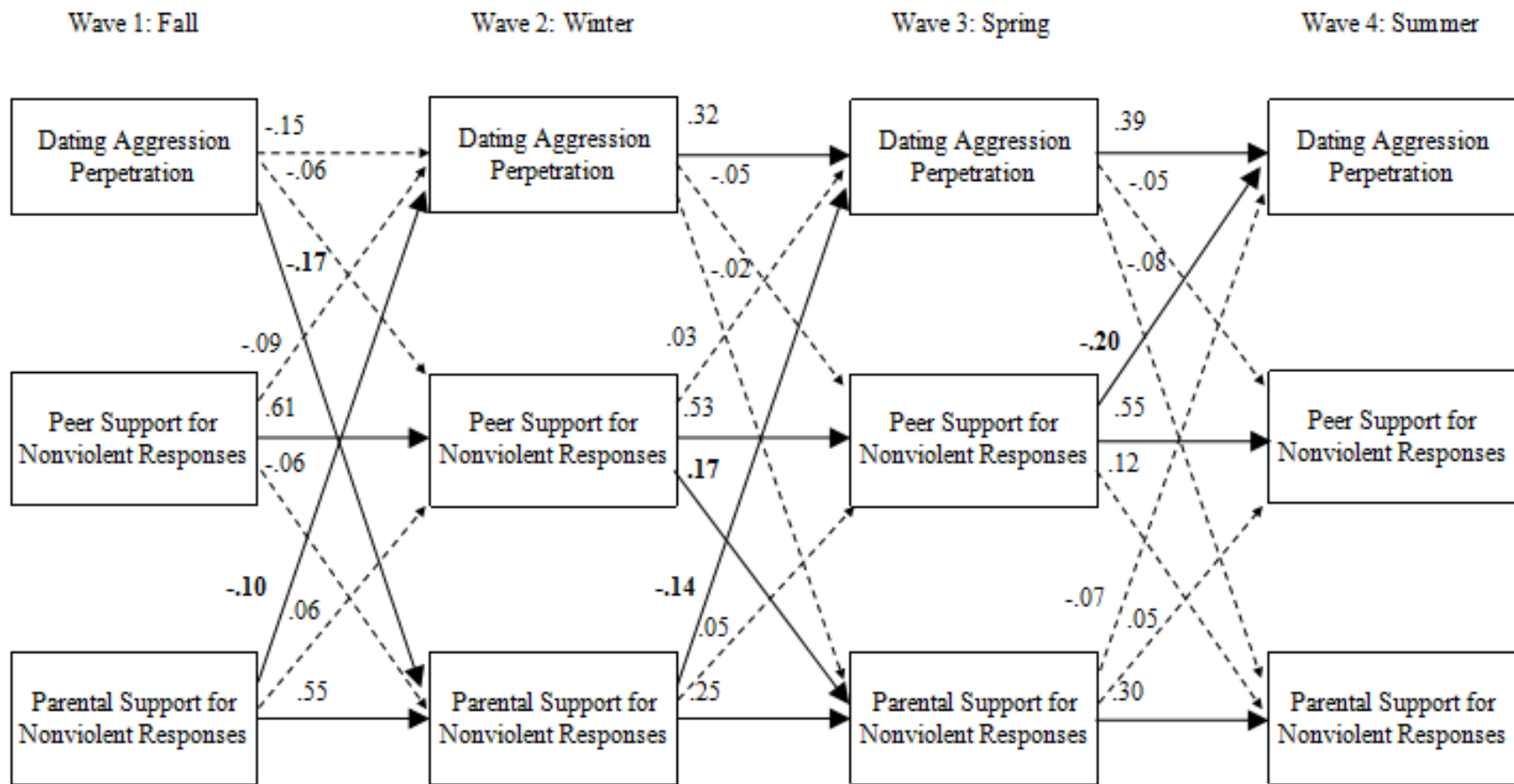


Figure 3. Longitudinal relations between dating aggression perpetration and perceived support for nonviolent responses from parents and peers. $\chi^2(55) = 119.99, p < .001$, RMSEA = 0.03 (90% Confidence Interval: 0.02-0.04), and CFI = 0.92. Betas (β) are shown. Correlations between variables within each wave and covariates were included in the model, but are not shown in the figure to reduce complexity. The dotted lines represent a non-significant path; the solid lines indicate a significant path.

Longitudinal Relations between Dating Aggression Perpetration and Perceived Support for Violent Responses from Parents and Peers

A series of analyses in *Mplus 7.3* were conducted to assess relations between dating aggression perpetration and perceived parental and peer support for violent responses across Waves 1 to 4 (see Table 3). An unconstrained model was run in which path coefficients for all study variables across Waves 1 to 4 were allowed to vary. This model fit the data adequately, $\chi^2(49) = 106.40$, $p < .001$, RMSEA = 0.03 (90% Confidence Interval: 0.02-0.04), and CFI = 0.91. This unconstrained model was then compared to each of the following constrained models where autoregressive to be equal across Waves 1 to 4 for: (a) dating aggression perpetration, (b) peer support for violent responses, and (c) parental support for violent responses. Comparisons included the Satorra-Bentler Chi-Square difference test ($S-B\Delta\chi^2$) and fit indices (i.e., CFI and RMSEA).

As shown in Table 3, for dating aggression perpetration, the unconstrained model was favored based on a significant χ^2 difference test, ($S-B\Delta\chi^2(2) = 55.81$, $p < .001$), a decrease in the CFI from 0.91 to 0.87, and an increase in the RMSEA from 0.03 to 0.04, suggesting variations in the stability of this variable over time. From Wave 1 to 2, dating aggression was not significantly related ($\beta = -0.14$, $p = .40$), but was positively related from Waves 2 to 3 ($\beta = 0.32$, $p < .001$) and Waves 3 to 4 ($\beta = 0.38$, $p < .001$). Comparisons of the unconstrained versus constrained models for both peer and parental support for violence supported the constrained model based on non-significant χ^2 difference tests and no change in fit indices. Therefore, autoregressive paths were constrained to be equal across the four waves for parental (B held constant at 0.35, $p < .001$) and peer (B held constant at 0.48, $p < .001$) support for violent responses, but were left unconstrained for dating aggression perpetration.

This final autoregressive model (i.e., autoregressive path coefficients constrained for parental and peer support for violent responses and unconstrained for dating aggression perpetration) was then compared to following models with cross-lagged paths constrained to be equal across Waves 1 to 4 for: (a) dating aggression to peer support for violent responses, (b) dating aggression to parental support for violent responses, (c) peer to parental support for violent responses, and (d) parental to peer support for violent responses. Comparisons of the final autoregressive model to each constrained cross-lagged model supported the constrained model in all cases based on the non-significant χ^2 difference tests and little change in the fit indices. The final model fit the data adequately, $\chi^2 (61) = 115.26, p < .001$, RMSEA = 0.03 (90% Confidence Interval: 0.02-0.04), CFI = 0.92. However, none of the cross-lagged paths were significant (see Figure 4).

Table 3

Comparisons of an Unconstrained Model versus Constrained Autoregressive and Cross-lagged Panel Models (for longitudinal relations between dating aggression and parental and peer support for violent responses)

			χ^2 Value	<i>df</i>	RMSEA	CFI
Autoregressive Path Tests		Unconstrained Model	106.40	49	0.03 (0.02-0.04)	0.91
	A. DA	Constrained Model	137.28	51	0.04 (0.03-0.04)	0.87
		S-B $\Delta\chi^2$	55.81**			
	B. PeV	Constrained Model	108.22	51	0.03 (0.02-0.04)	0.91
		S-B $\Delta\chi^2$	2.28			
	C. PaV	Constrained Model	107.39	51	0.03 (0.02-0.04)	0.91
		S-B $\Delta\chi^2$	2.02			
	Final Model	Constrained Model	109.32	53	0.03 (0.02-0.04)	0.91
Cross-lagged Path Tests						
	A. DA → PeV	Constrained Model	109.78	55	0.03 (0.02-0.04)	0.91
		S-B $\Delta\chi^2$	0.46			
	B. DA → PaV	Constrained Model	109.93	55	0.03 (0.02-0.04)	0.91
		S-B $\Delta\chi^2$	0.51			
	C. PeV → PaV	Constrained Model	110.49	55	0.03 (0.02-0.04)	0.91
		S-B $\Delta\chi^2$	0.23			
	D. PaV → PeV	Constrained Model	112.22	55	0.03 (0.02-0.04)	0.91
		S-B $\Delta\chi^2$	2.51			
	Final Model	Constrained Model	115.26	61	0.03 (0.02-0.04)	0.92

Note. *df* = degrees of freedom. DA = Dating aggression perpetration; PaV = Perceived parental support of violent responses; PeV = Perceived peer support of violent responses. S-B $\Delta\chi^2$ = Satorra-Bentler Chi-Square difference test.

** $p < .001$.

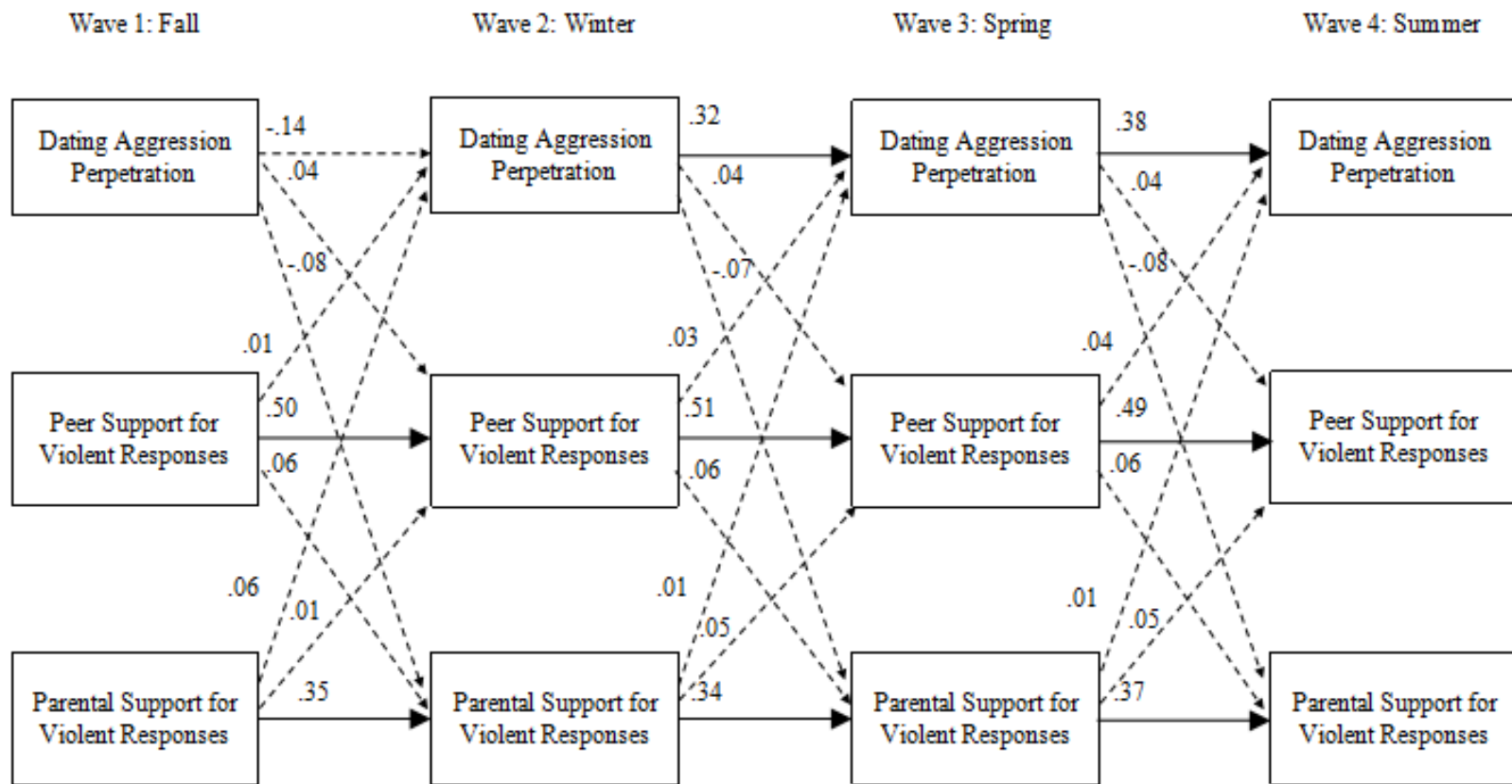


Figure 4. Longitudinal relations between dating aggression perpetration and perceived support for violent responses from parents and peers. $\chi^2(61) = 115.26, p < .001, RMSEA = 0.03$ (90% Confidence Interval: 0.02-0.04), CFI = 0.92. Betas (β) are shown. Correlations between variables within each wave and covariates were included in the model, but are not shown in the figure to reduce complexity. The dotted lines represent a non-significant path; the solid lines indicate a significant path.

Grade Differences among Relations between Dating Aggression Perpetration and Parental and Peer Support for Nonviolent Responses

To test for grade differences, an unconstrained model was initially run, where all paths were allowed to vary by grade. The unconstrained model fit the data adequately, $\chi^2(120) = 193.85, p < .001$, RMSEA = 0.04 (90% Confidence Interval: 0.03-0.05), CFI = 0.93. Next, a constrained model was run where all paths were constrained to be equal across grade. Comparison of the constrained to the unconstrained model favored the unconstrained model based on the significant χ^2 difference test, (S-B $\Delta\chi^2$ (54) = 100.43, $p < .01$), and a decrease in the CFI from 0.93 to 0.89 in the constrained model. These results suggested that there were significant differences in the strength of relations between study variables by grade.

Next, a series of tests were run to constrain each path coefficient to equality one at a time among the following groups: (a) sixth versus seventh grade, (b) sixth versus eighth grade, and (c) seventh versus eighth grade. Wald's tests were used to determine whether each equality constraint significantly decreased the fit of the model. From this series of tests, autoregressive paths for dating aggression could not be constrained to be equal across any of the grades. Thus, none of the cross-lagged paths regressed on dating aggression were constrained in the final model to be equal. The autoregressive path coefficients for peer support for nonviolent responses could not be constrained to be equal for the seventh versus eighth grade group. From Wave 2 to 3, cross-lagged path coefficients from peer to parent support for nonviolent responses could not be constrained to be equal for the sixth versus eighth grade group, nor could the path coefficients from dating aggression to parental support for nonviolent responses. Finally, the cross-lagged coefficients for the seventh versus eighth

grade group from dating aggression to both parental support for nonviolent responses and peer support for nonviolent responses could not be constrained to be equal across Wave 1 to 2 and Wave 2 to 3. These paths were allowed to freely estimate by grade in the next model. The model with the above constraints fit the data adequately, $\chi^2(138) = 214.83, p < .001$, RMSEA = 0.03 (90% Confidence Interval: 0.03-0.04), CFI = 0.93.

Models were then tested to examine the consistency of the paths over time. Perceived parental support for nonviolent responses showed equality by grade in prior analyses, so a model was run to see if these autoregressive paths could be constrained to be equal over the four waves. This model showed a decrease in fit, based on a significant χ^2 difference test (S-B $\Delta\chi^2(2) = 8.32, p < .05$), a decrease in the CFI from 0.93 to 0.92, and an increase in the RMSEA from 0.03 to 0.04 in the constrained model. The cross-lagged paths were not tested for equality over time, since none of the autoregressive paths were constrained to be equal over time or across grades. The final constrained model resulted in adequate fit, $\chi^2(138) = 214.83, p < .001$, RMSEA = 0.03 (90% Confidence Interval: 0.03-0.04), CFI = 0.93, with significant grade differences.

For sixth graders, perceived peer support for nonviolent responses at Wave 3 predicted subsequent changes in dating aggression perpetration at Wave 4 ($\beta = -0.47, p < .001$). Dating aggression at Wave 2 predicted subsequent changes in perceived parental support for nonviolent responses at Wave 3 ($\beta = -0.24, p = .03$). Also, perceived parental support for nonviolent responses at Wave 1 predicted changes in perceived peer support for nonviolent responses at Wave 2 ($\beta = 0.21, p = .02$), and perceived peer support for nonviolent responses at Wave 2 predicted increased parental support for nonviolent responses at Wave 3 ($\beta = 0.24, p = .03$). For seventh graders, perceived parental support for

nonviolent responses at Wave 1 predicted changes in dating aggression perpetration at Wave 2 ($\beta = -0.20, p = .02$). Dating aggression at Wave 1 led to subsequent decreases in perceived parental support for nonviolent responses at Wave 2 ($\beta = -0.18, p = .03$). Finally, among eighth graders, perceived parental support for nonviolent responses at Wave 2 predicted subsequent changes in dating aggression perpetration at Wave 3 ($\beta = -0.28, p = .02$). Dating aggression perpetration at Wave 1 resulted in decreased levels of perceived peer support for nonviolent responses at Wave 2 ($\beta = -0.24, p = .04$). Dating aggression predicted changes in perceived parental support for nonviolent responses from Wave 1 to 2 ($\beta = -0.14, p = .04$), Wave 2 to 3 ($\beta = 0.32, p = .04$), and Wave 3 to 4 ($\beta = -0.29, p = .03$). Perceived parental support for nonviolent responses predicted changes in perceived peer support for nonviolence from Wave 1 to Wave 2 ($\beta = 0.24, p = .01$) and from Wave 2 to Wave 3 ($\beta = 0.33, p = .02$). Finally, perceived peer support for nonviolent responses at Wave 2 predicted changes in perceived parental support for nonviolent responses at Wave 3 ($\beta = 0.31, p = .01$). All significant paths by grade are illustrated in Figure 5.

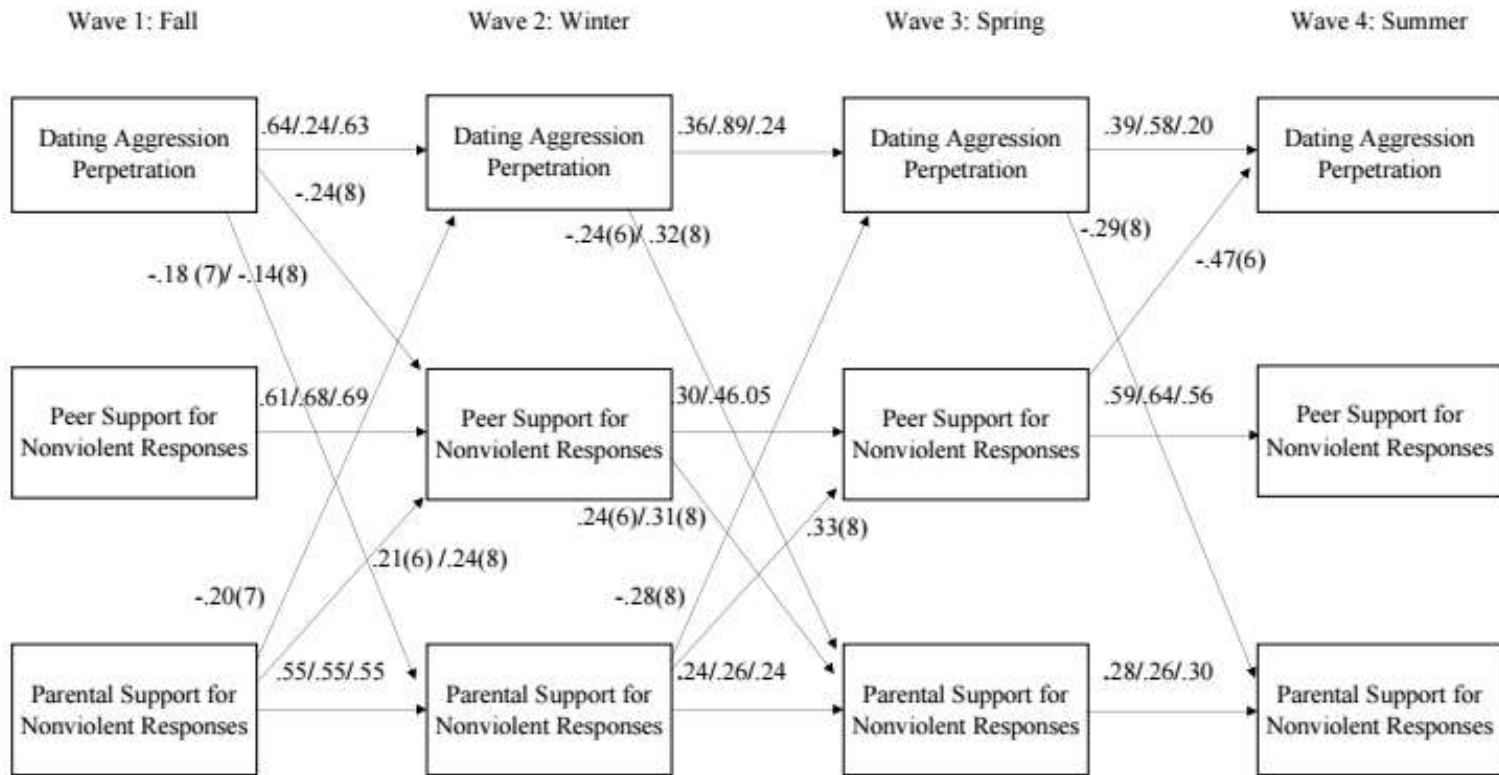


Figure 5. Longitudinal relations between parental and peer support for nonviolent responses and dating aggression by grade. Only significant cross-lagged paths and Betas (β) are shown, and indicated by grade in parentheses. $\chi^2(138) = 214.83, p < .001$, RMSEA = 0.03 (90% Confidence Interval: 0.03-0.04), CFI = 0.93. Betas are displayed in order of grade (6th/ 7th/ 8th grade). Correlations between variables within each wave and covariates were included in the model, but are not shown in the figure to reduce complexity.

Grade Differences among Relations between Dating Aggression Perpetration and Parental and Peer Support for Violent Responses

To assess grade differences, an unconstrained model was run where all paths were allowed to vary by grade for relations between dating aggression perpetration and parental and peer support for violent responses. The unconstrained model fit the data adequately, $\chi^2(120) = 227.43, p < .001$, RMSEA = 0.04 (90% Confidence Interval: 0.04-0.05). However, the CFI was slightly below the suggested cutoff, CFI = 0.88. Next, a constrained model was run where individual path coefficients were constrained to be equal across grade. A comparison of these models favored the unconstrained model based on a significant χ^2 difference test, (S-B $\Delta\chi^2$ (54) = 83.91, $p < .01$), and decrease in the CFI from 0.88 to 0.85. These results suggested that there were significant differences in the strength of relations between study variables by grade.

Next, a series of tests in which each parameter was constrained to equality one at a time. The same process was used as the prior section: (1) a series of tests were run examining equality constraints on path coefficients by groups, and (2) Wald's tests were used to examine if each equality constraint significantly decreased the fit of the model. Results indicated the autoregressive paths for dating aggression could not be constrained to be equal across any of the grades. Thus, none of the cross-lagged paths regressed on dating aggression were constrained to be equal. For the sixth versus seventh grade group, the cross-lagged paths from dating aggression to parental support for violence could not be constrained to be equal from wave 3 to 4. These paths were allowed to freely estimate by grade in the next model. The model incorporating these unconstrained and constrained paths fit the data

adequately, $\chi^2(154) = 256.70, p < .001$, RMSEA = 0.04 (90% Confidence Interval: 0.03-0.05), CFI = 0.90.

Models were then tested to examine the consistency of the model over time. Perceived parental and peer support for violent responses showed equality by grade in previous analyses, so a model was run to see if these autoregressive paths could be constrained to be equal over the four waves of data. This model fit the data adequately, $\chi^2(158) = 261.59, p < .001$, RMSEA = 0.04 (90% Confidence Interval: 0.04-0.05), CFI = 0.90, and the χ^2 difference test was non-significant. Thus, these paths were constrained to be equal across time in the final model.

Finally, cross-lagged paths that showed no variation by grade (dating aggression to peer support for violent responses, parental to peer support for violent responses, and peer to parental support for violent responses) were tested to see if they could be constrained to be equal over the four waves of data. This final model fit the data adequately, $\chi^2(164) = 265.53, p < .001$, RMSEA = 0.04 (90% Confidence Interval: 0.04-0.05), CFI = 0.90, and the χ^2 difference test was non-significant.

No significant paths were found for sixth graders. For seventh graders, perceived peer support for violent responses at Wave 1 predicted increased frequencies of dating aggression perpetration at Wave 2 ($\beta = 0.21, p = .02$). Dating aggression perpetration also predicted subsequent changes in perceived parental support for violent responses from Wave 3 to 4, ($\beta = -0.45, p < .001$). For eighth graders, perceived parental support for violent responses predicted subsequent changes in dating aggression from Wave 1 to 2, ($\beta = 0.25, p = .02$). All paths are illustrated in Figure 6.

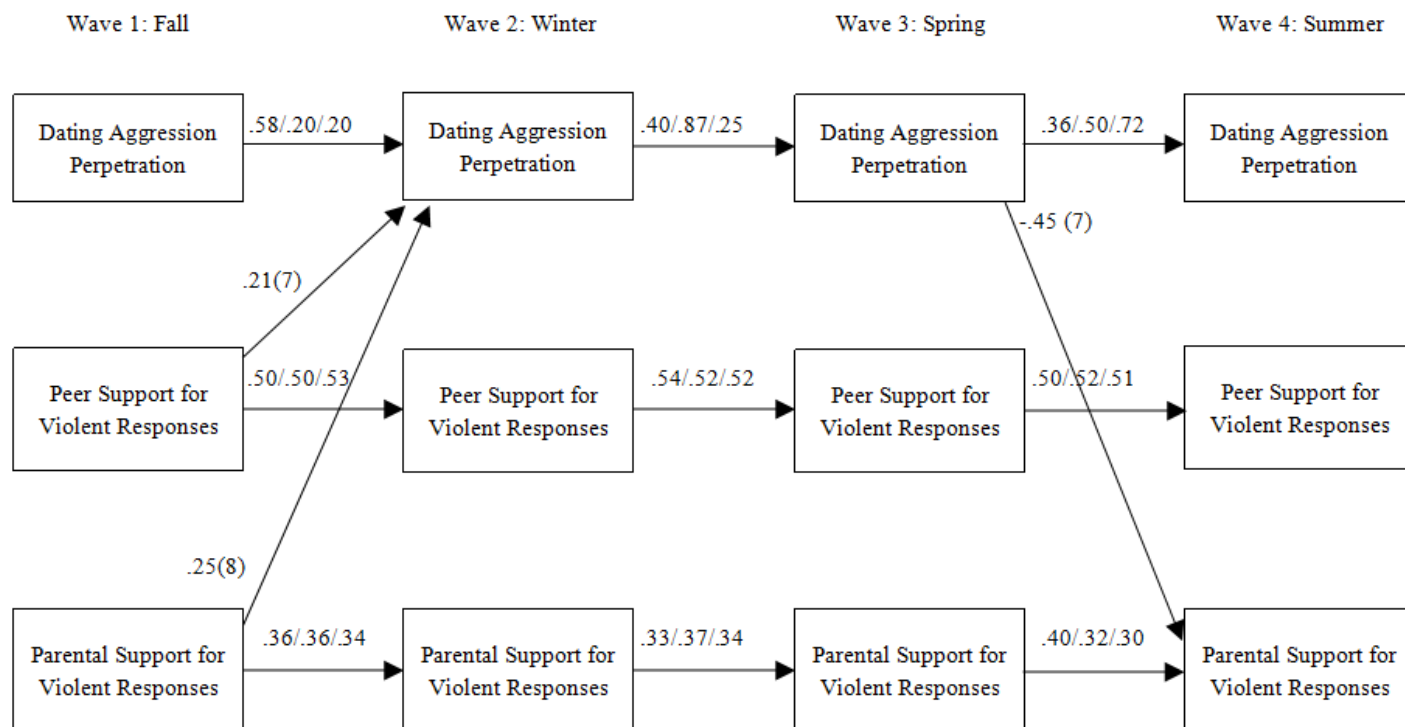


Figure 6. Longitudinal relations between parental and peer support for violent responses and dating aggression by grade. Only significant cross-lagged paths and Betas (β) are shown, and indicated by grade in parentheses. $\chi^2(164) = 265.53, p < .001$, RMSEA = 0.04 (90% Confidence Interval: 0.04-0.05), CFI = 0.90. Betas are displayed in order of grade (6th/7th/8th grade). Correlations between variables within each wave and covariates were included in the model, but are not shown in the figure to reduce complexity.

Sex Differences among Relations between Dating Aggression Perpetration and Parental and Peer Support for Nonviolent Responses

Mean level differences in study variables were run by sex in *MPlus* to account for all missing data. No mean level differences were found between boys and girls for dating aggression perpetration, or parental and peer support for nonviolent responses at any of the four waves. Next, multiple group analyses were run to assess whether the strength of relations between perceived parental and peer support for nonviolent responses to conflict and dating aggression perpetration differed by sex. First, an unconstrained model (i.e., where path coefficients were allowed to vary by sex) was compared to a constrained model (i.e., where path coefficients were constrained to be equal across sex) using the Satorra-Bentler Chi-Square (S-B $\Delta\chi^2$) difference test and assessing model fit indices. The unconstrained model fit the data adequately, $\chi^2(80) = 147.62$, $p < .001$, RMSEA = 0.04 (90% Confidence Interval: 0.03-0.04), CFI = 0.93. The constrained model resulted in a slightly improved fit: $\chi^2(107) = 173.99$, $p < .001$, RMSEA = 0.03 (90% Confidence Interval: 0.02-0.04), CFI = 0.93, and the χ^2 difference test also indicated that these constraints did not significantly decrease the fit of the model, (S-B $\Delta\chi^2(27) = 25.71$), suggesting that there were not significant differences in the strength of relations among study variables by sex.

Sex Differences among Relations between Dating Aggression Perpetration and Parental and Peer Support for Violent Responses

Mean level differences were run by sex in *MPlus* to account for all missing data. No mean level differences in variables were found between boys and girls for dating aggression perpetration, or parental and peer support for violent responses at any of the four waves. Multiple group analyses were run to assess whether the strength of relations between

perceived parental and peer support for violent responses to conflict and dating aggression perpetration differed by sex. First, an unconstrained model (i.e., where path coefficients were allowed to vary by sex) was compared to a constrained model (i.e., where path coefficients were constrained to be equal across sex) using the Satorra-Bentler Chi-Square (S-B $\Delta\chi^2$) difference test and assessing model fit indices. The unconstrained model fit the data adequately, $\chi^2(80) = 132.25, p < .001, RMSEA = 0.03$ (90% Confidence Interval: 0.02-0.04), CFI = 0.93. The constrained model also resulted in an adequate fit: $\chi^2(107) = 168.70, p < .001, RMSEA = 0.03$ (90% Confidence Interval: 0.02-0.04), CFI = 0.93, and the χ^2 difference test indicated that these constraints did not significantly decrease the fit of the model, (S-B $\Delta\chi^2(27) = 36.22$), suggesting that there were not significant differences in the strength of relations among study variables by sex.

Moderating Role of Perceived Parental Support for Nonviolent Responses on Relations between Perceived Peer Support for Violent Responses and Dating Aggression

The moderating role of perceived parental support for nonviolent responses to conflict on the relation between perceived peer support for violent responses to conflict and dating aggression perpetration was assessed. Centered predictor (peer support for violent responses), centered moderator (parental support for nonviolent responses) and interaction (parental support for nonviolent responses X peer support for violent responses) variables were used in the analyses as exogenous variables at each wave. First, an unconstrained model was compared to a model in which all autoregressive path coefficients were constrained to be equal. The unconstrained model fit the data adequately, $\chi^2(78) = 136.83, p < .001, RMSEA = 0.02$ (90% Confidence Interval: 0.01-0.03), and CFI = 0.91. The constrained model fit the data adequately, $\chi^2(86) = 146.17, p < .001, RMSEA = 0.02$ (90% Confidence Interval: 0.01-

0.03), and CFI = 0.91, and the χ^2 difference test was not significant, which suggested that this constrained model fit the data more parsimoniously (see Table 4).

Next, because the dating aggression autoregressive paths were constrained to be equal across time, all cross-lagged paths to dating aggression were tested to see if they could be constrained to be equal. These cross-lagged paths included: (a) peer support for violent responses to dating aggression, (b) parental support for nonviolent responses to dating aggression, and (c) peer support for violent responses to dating aggression X parental support for violent responses to dating aggression. As shown in Table 4, constrained cross-lagged paths from peer support for violent responses to dating aggression had a non-significant χ^2 difference test, but showed a decrease in the CFI from 0.91 to 0.90, so these paths were allowed to vary in the final model. Comparison of constrained and unconstrained cross-lagged paths from parental support for nonviolent responses to dating aggression supported the constrained model based on a non-significant χ^2 difference test and similar fit to the baseline model. Finally, the interaction term to dating aggression cross-lagged paths could not be constrained to be equal across time based on a significant χ^2 difference test, (S-B $\Delta\chi^2$ (2) = 20.06, $p < .01$), and a decrease in the CFI from 0.91 to 0.89. Thus, the final model had all autoregressive paths constrained, and the cross-lagged paths from parental support for nonviolent responses to dating aggression constrained. This model had an adequate fit, χ^2 (88) = 149.14, $p < .001$, RMSEA = 0.02 (90% Confidence Interval: 0.01-0.03), CFI = 0.91.

Table 4

Comparisons of an Unconstrained Model versus Constrained Autoregressive and Cross-lagged Panel Models (for longitudinal relations between peer support for violent responses, parental support for nonviolent responses, peer support for violent responses X parental support for nonviolent responses and dating aggression perpetration)

			χ^2 Value	df	RMSEA	CFI
Autoregressive Path Tests	Unconstrained Model		136.83	78	0.02 (0.01-0.03)	0.91
	All autoregressive paths	Constrained Model	146.17	86	0.02 (0.01-0.03)	0.91
		S-B $\Delta\chi^2$	10.30			
Cross-lagged Path Tests	PeV → DA (predictor)	Constrained Model	150.53	88	0.02 (0.02-0.04)	0.90
		S-B $\Delta\chi^2$	4.36			
	PaNV → DA (moderator)	Constrained Model	149.14	88	0.02 (0.01-0.03)	0.91
		S-B $\Delta\chi^2$	2.97			
	PeVxPaNV → DA (interaction)	Constrained Model	159.72	88	0.02 (0.02-0.03)	0.89
		S-B $\Delta\chi^2$	20.06**			
	Final Model	Constrained Model	149.14	88	0.02 (0.01-0.03)	0.91

Notes. *df* = degrees of freedom. DA = Dating aggression perpetration; PaV = Perceived parental support of violent responses; PeV = Perceived peer support of violent responses. S-B $\Delta\chi^2$ = Satorra-Bentler Chi-Square difference test.

** $p < .001$.

All standardized paths are shown in Figure 7. Several main effects were found. First, peer support for violent responses at Wave 1 predicted increased frequencies of dating aggression perpetration at Wave 2, ($\beta = 0.19, p = .01$). Parental support for nonviolent responses predicted subsequent changes in dating aggression perpetration from Wave 1 to 2, ($\beta = -0.10, p = .01$), Wave 2 to 3 ($\beta = -0.09, p = .01$), and Wave 3 to 4 ($\beta = -0.10, p = .01$).

Two interaction effects were found. From Wave 1 to 2 ($\beta = -0.21, p = .01$), at high levels of peer support for violent responses, youth who perceived lower levels of parental

support for nonviolent responses reported higher frequencies of dating aggression perpetration as compared to youth who perceived higher levels of parental support for nonviolent responses (see Figure 8a). At low levels of peer support for violent responses, there was little variability in the frequency of dating aggression perpetration as a function of low versus high levels of parental support for nonviolent responses. From Wave 3 to 4 ($\beta = 0.17, p = .03$), at high levels of peer support for violent responses, higher versus lower levels of perceived parental support for nonviolent responses were associated with higher frequencies of dating aggression perpetration (see Figure 8b). In contrast, at low levels of peer support for violent responses, lower versus higher levels of parental support for nonviolent responses were associated with higher frequencies of dating aggression perpetration.

For both interactions, the cutoff for the upper end of the plotted scores was set at the 75th percentile, while the lower end was set at the 25th percentile. Also, in both interactions, the simple slopes were not significant, meaning that while the slopes were different from each other (parental support versus peer support), they were not significant from zero. Thus, the conclusions drawn from these moderation analyses are somewhat speculative. However, the results do highlight the importance of further examining the combinations of perceived messages that an adolescent is receiving from parents and peers.

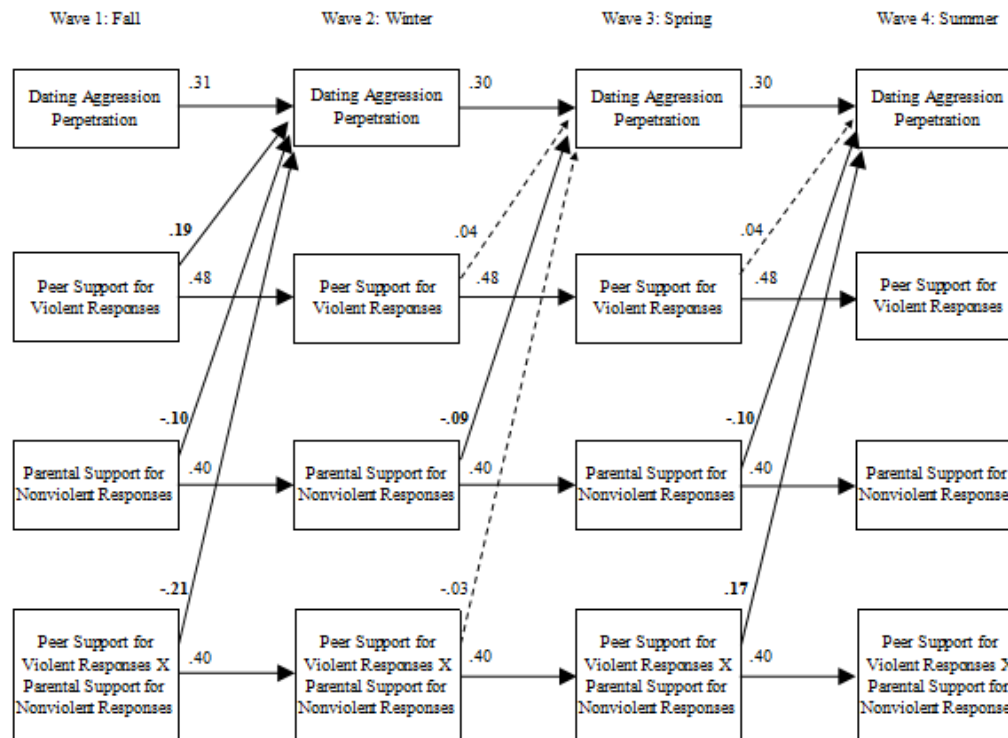


Figure 7. The moderating role of perceived parental support for nonviolent responses to conflict on the relation between perceived peer support for violent responses to conflict and dating aggression perpetration. $\chi^2(88) = 149.14, p < .001$, RMSEA = 0.02 (90% Confidence Interval: 0.01-0.03), CFI = 0.91. Significant Betas (β) are shown in bold. Correlations between variables within each wave and covariates were included in the model, but are not shown in the figure to reduce complexity. The dotted lines represent a non-significant path; the solid lines indicate a significant path.

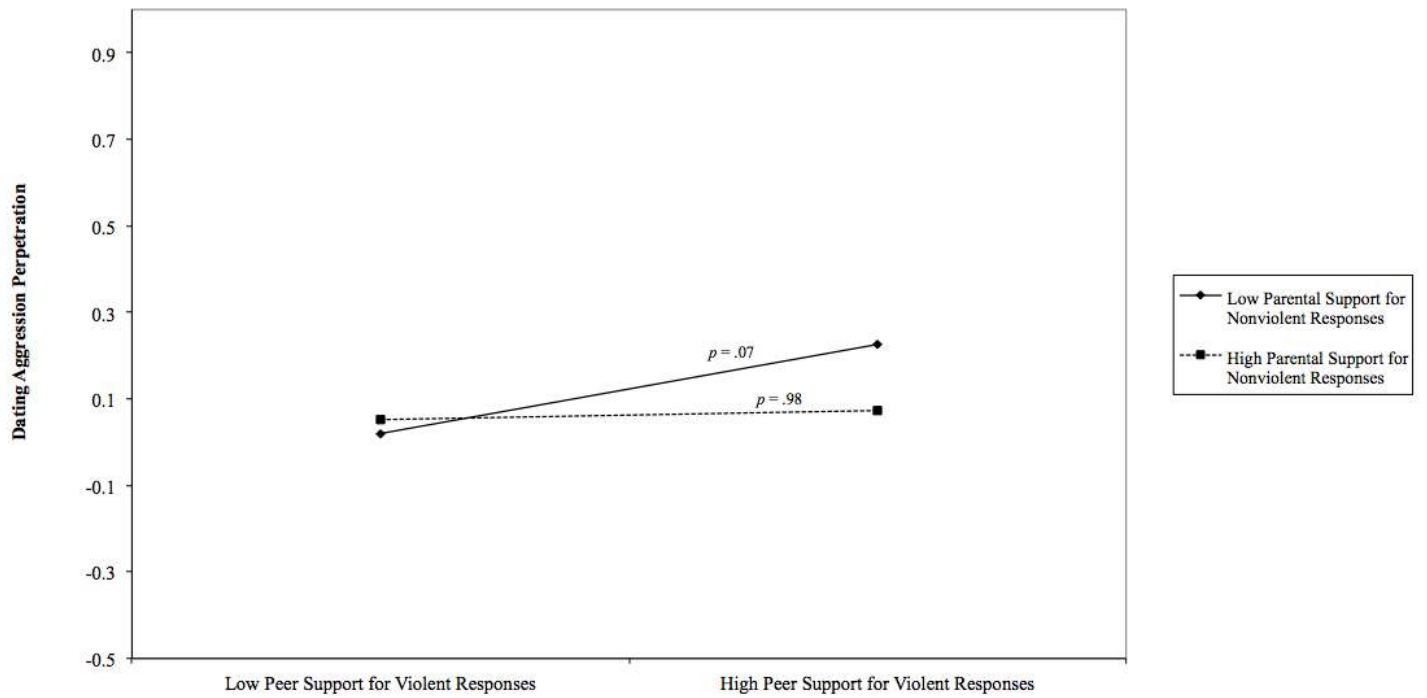


Figure 8A. Significant interaction (peer support for violent responses X parental support for nonviolent responses) on dating aggression perpetration at Waves 1-2.

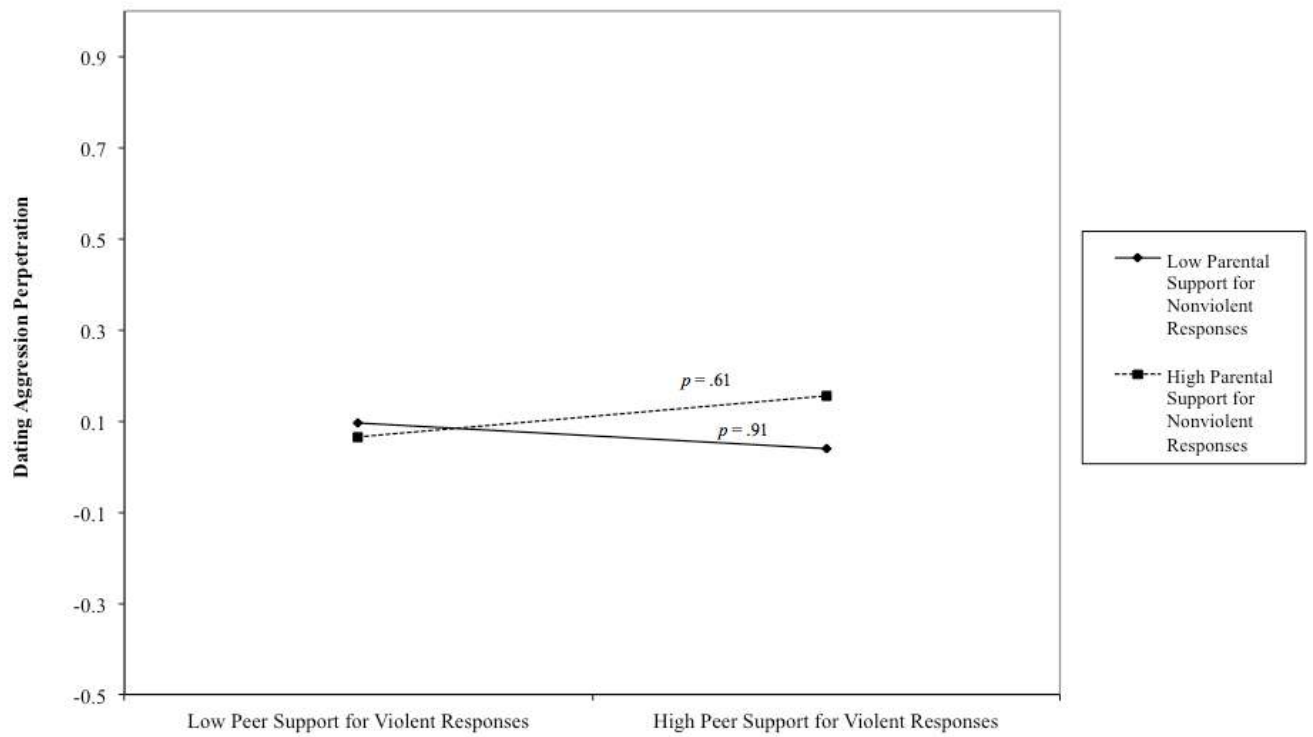


Figure 8B. Significant interaction (peer support for violent responses X parental support for nonviolent responses) on dating aggression perpetration at Waves 3-4.

Moderating Role of Peer Support for Nonviolent Responses on Relations between Perceived Parental Support for Violent Responses and Dating Aggression

The same analysis was run to test the moderating role of peer support for nonviolent responses on the relation between parental support for violent responses and dating aggression perpetration. The same data preparation (e.g., centering exogenous variables) took place as in the previous section. The unconstrained model fit the data adequately, $\chi^2 (78) = 140.63$, RMSEA = 0.03 (90% Confidence Interval: 0.02-0.03), although the CFI was slightly below the suggested cutoff, CFI = 0.89. Next, tests were conducted on each of the four autoregressive paths to see if any could be constrained to be equal across waves. As shown in Table 5, all of the autoregressive paths could be constrained to be equal, except for parental support for violent responses based on a decrease in the CFI from 0.89 to 0.88.

Next, as the dating aggression autoregressive paths were constrained to be equal across time, all cross-lagged paths to dating aggression were tested to see if they could be constrained to be equal. These cross-lagged paths included: (a) parental support for violent responses to dating aggression, (b) peer support for nonviolent responses to dating aggression, and (c) parental support for violent responses to dating aggression X peer support for nonviolent responses to dating aggression. As shown in Table 6, all cross-lagged paths could be constrained to be equal across time based on non-significant χ^2 difference tests and no reductions in model fit. Thus, the final model had all autoregressive paths constrained (except peer support for violent responses), and all of the cross-lagged paths to dating aggression constrained. This model resulted in adequate fit, $\chi^2 (90) = 151.50$, $p < .001$, RMSEA = 0.02 (90% Confidence Interval: 0.02-0.03), CFI = 0.90.

As shown in Figure 9, only one main effect was found to be significant. Peer support for nonviolent responses to conflict predicted subsequent changes in dating aggression perpetration from Wave 1 to 2 ($\beta = -0.10, p < .001$), Wave 2 to 3 ($\beta = -0.09, p < .001$), and Wave 3 to 4 ($\beta = -0.10, p < .001$). No other main or interaction effects were found.

Table 5

Comparisons of an Unconstrained Model versus Constrained Autoregressive and Cross-lagged Panel Models (for longitudinal relations between parental support for violent responses, peer support for nonviolent responses, parent support for violent responses X peer support for nonviolent responses and dating aggression perpetration)

			χ^2 Value	<i>df</i>	RMSEA	CFI
Autoregressive Path Tests		Unconstrained Model	140.63	78	0.03 (0.02-0.03)	0.89
	Dating Aggression	Constrained Model	143.82	80	0.02 (0.02-0.03)	0.89
		S-B $\Delta\chi^2$	3.36			
	PaV	Constrained Model	146.2	80	0.02 (0.02-0.03)	0.88
		S-B $\Delta\chi^2$	4.74			
	PeNV	Constrained Model	142.52	80	0.02 (0.02-0.03)	0.89
		S-B $\Delta\chi^2$	2.62			
	PaVxPeNV	Constrained Model	144.17	80	0.02 (0.02-0.03)	0.90
		S-B $\Delta\chi^2$	3.21			
Cross-lagged Path Tests	PaV → DA (predictor)	Constrained Model	147.67	86	0.02 (0.02-0.03)	0.90
		S-B $\Delta\chi^2$	3.54			
	PeNV → DA (moderator)	Constrained Model	145.69	86	0.02 (0.02-0.03)	0.90
		S-B $\Delta\chi^2$	0.26			
	PaVxPeNV → DA (interaction)	Constrained Model	146.48	86	0.02 (0.02-0.03)	0.90
		S-B $\Delta\chi^2$	2.18			
	Final Model	Constrained Model	151.50	90	0.02 (0.02-0.03)	0.90

Notes. *df* = degrees of freedom. DA = Dating aggression perpetration; PaV = Perceived parental support of violent responses; PeNV = Perceived peer support of nonviolent responses. S-B $\Delta\chi^2$ = Satorra-Bentler Chi-Square difference test.

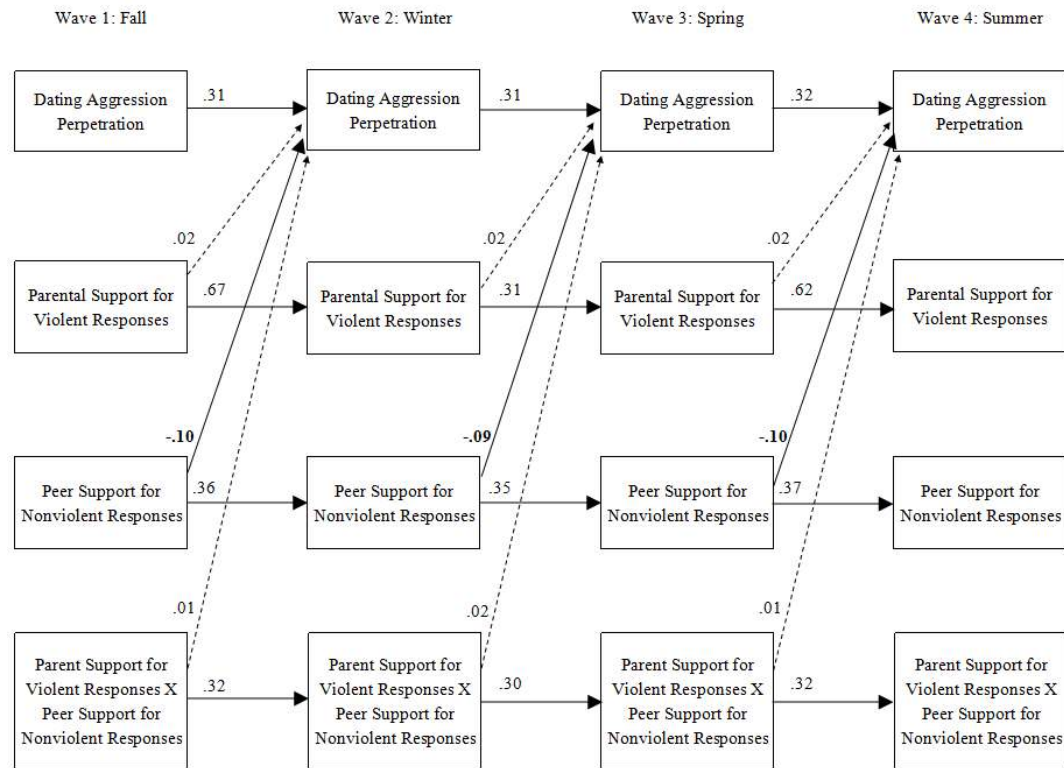


Figure 9. The moderating role of perceived peer support for nonviolent responses to conflict on the relation between perceived parental support for violent responses to conflict and dating aggression perpetration. $\chi^2(90) = 151.50, p < .001$, RMSEA = 0.02 (90% Confidence Interval: 0.02-0.03), CFI = 0.90. Significant Betas (β) are shown in bold. Correlations between variables within each wave and covariates were included in the model, but are not shown in the figure to reduce complexity. The dotted lines represent a non-significant path; the solid lines indicate a significant path.

Discussion

The frequent occurrence and negative outcomes associated with dating aggression perpetration in early adolescence underscore the need to identify risk and protective processes associated with this outcome (Exner-Cortens et al., 2012; Goncy et al., 2016). Developmental-contextual and socialization theories highlight the role that parents and peers play in early adolescence to increase or decrease the frequency of dating aggression (Brown, 1999; Connolly & McIsaac, 2009; Grusec, 2002; Grusec & Hastings, 2015). In addition, empirical findings showed that parental support for violent and nonviolent responses to conflict was positively and negatively associated, respectively, with adolescent aggression in peer (Farrell et al., 2011; 2012; Garthe et al., 2015; Kliewer et al., 2006), and dating contexts (Miller et al., 2009). Extending this line of research, the current study examined longitudinal and reciprocal relations between early adolescents' perceptions of parental and peer support for violent and nonviolent responses to conflict and dating aggression perpetration, as well as potential differences in the strength of these relations by grade and sex over four waves of data spanning one year. The current study also assessed the potential moderating effects of: (a) parental support for nonviolent responses on relations between peer support for violent responses and dating aggression perpetration, and (b) peer support for nonviolent responses on relations between parental support for violent responses and dating aggression perpetration.

Relations between Perceived Parental and Peer Support for Nonviolent Responses and Dating Aggression Perpetration

Hypotheses regarding the longitudinal relations between parental and peer support for nonviolent responses and dating aggression perpetration were largely supported. However,

the pattern of findings was not consistent across time and or grade levels. For the full sample, parental support for nonviolent responses predicted decreases in dating aggression perpetration from Wave 1 to 2 and Wave 2 to 3. Additionally, peer support for nonviolent responses predicted subsequent decreases in dating aggression from Wave 3 to 4. These results suggest that both perceptions from both parents and peers supporting nonviolent responses to conflict are protective processes that decrease the frequency of dating aggression perpetration in middle school. These findings also are consistent with research that found parental and/or peer support for nonviolent responses was negatively associated with aggressive behaviors (e.g., Garthe et al., 2015; Kliewer et al., 2006). Only one study to date has found a significant relation between parental support for nonviolent responses and dating aggression in a concurrent effort among sixth grade girls but not boys (Miller et al., 2009). The current study extends this extant literature by showing that over the course of a year, adolescent dating aggression perpetration was impacted by perceptions of both parental and peer support for nonviolent responses. Socialization by parents and peers impacts adolescent attitudes, values, and cognitive frameworks for relationships (Grusec, 2002), and youths' perceptions of *both* parent and peer socialization processes (e.g., parent and peer messages related to violence) may be particularly important influences on the dynamics of adolescent dating relationships.

For the full sample, dating aggression perpetration predicted decreased adolescent perceptions of parental support for nonviolent responses from Wave 1 to 2. Several existing models provide theoretical support that socialization processes are reciprocal in nature (Lerner, 1986; Sameroff, 2009), and the current study found that dating aggression perpetration may affect perceptions of parental support for nonviolent responses. Some

theoretical work has shown that adolescent behavior may affect peer relations, through processes of homophily, or the idea that adolescents tend to select friends or peers that have similar beliefs and behaviors. However, little work has explored how adolescent behavior may affect perceptions of parental support. The current study found that adolescent behavior (i.e., dating aggression) predicted decreases in their perceptions of parental support for nonviolent responses. In other words, when an adolescent displays dating aggression perpetration, they may be less likely to perceive parental support for nonviolent responses. There are a few potential explanations for this finding. Adolescents who engage in dating aggression perpetration may be less likely to seek out or attend to parental messages supporting nonviolent responses over time. As adolescents tend to affiliate with peers who are like-minded, they may be attuned and more heavily ascribe to peer versus parental messages regarding violence. Alternatively, adolescents may not want to perceive support that is different than their aggressive behaviors, or they may not have parents offering this kind of support. Overall, these results highlight that the bidirectional relation between adolescent behavior and perceptions of parental support is important to investigate.

Comparisons by grade. Subsequent exploratory analyses found some significant differences in the relations between parental and peer support for nonviolent responses to conflict and dating aggression perpetration by grade. Parental support for nonviolent responses predicted lower frequencies of dating aggression among seventh graders from Wave 1 to 2 and eighth graders from Wave 2 to Wave 3, whereas peer support for nonviolent responses predicted lower frequencies of dating aggression among sixth graders from Wave 3 to Wave 4. The finding for sixth graders suggested that these students might rely more on perceptions of peer support for nonviolent responses once they have transitioned and adjusted

to the middle school context, and when their peer groups and relationships are more developed (Steinberg, 2014).

Interestingly, perceptions of parental support for nonviolent responses did not affect behaviors in dating relationships until seventh and eighth grade. Developmental-contextual theories suggest that peers are the strongest contributors to dating behaviors and norms (Brown, 1999) and that peer influences on behavior increase during adolescence. However, the findings from the current study suggest that adolescents' perceptions of their parents' messages surrounding nonviolent responses may hold relatively more weight for older middle school students than perceptions of their peers' support for nonviolent responses. As significant relations between study variables for seventh and eighth graders occurred at the beginning of the school year, it is possible that the influence of these parental messages is stronger when peer groups are restructuring during this timeframe. More generally, the current study findings suggest that theories used to understand adolescent romantic relationships need to consider the role that perceptions of both peers and parents have on adolescent behavior.

As previously stated, there is a paucity of research in understanding how adolescent dating aggression predicts changes in perceptions of parental and peer support for nonviolent responses to conflict. In the full sample, results indicated that adolescent behavior might drive perceptions of parental support for nonviolent responses; however, grade differences also emerged for these relations. First, adolescent dating aggression predicted decreased perceptions of peer support for nonviolent responses among eighth graders from Wave 1 to Wave 2. This finding is consistent with theories addressing peer socialization processes. Prinstein and Dodge (2008) discussed the idea of homophily, or that adolescents tend to

select friends or peers who have similar beliefs and behaviors. Thus, in line with the idea of homophily, if an adolescent engages in dating aggression, they would be less likely to have friends who support nonviolent responses. Adolescents who engage in dating aggression perpetration also may be more likely to perceive peer support that is in line with their behaviors.

Second, dating aggression predicted changes in perceptions of parental support for nonviolent responses among eighth graders across all four waves. However, this relation was negative from Wave 1 to Wave 2, positive from Wave 2 to Wave 3, and negative from Wave 3 to Wave 4. There are several interpretations of these varying findings. First, if an adolescent displays dating aggression, they may be less likely to perceive support for nonviolent responses from parents because they may be attuned to parental support that is different than their current behavior, in line with the idea of homophily. Thus, they may be less likely to seek out parent views or be less attentive and responsive when these viewpoints are presented. At the same time, parents of adolescents who engage in dating aggression may offer more messages supporting nonviolent responses in attempts to curtail this behavior. Parents could be offering more solutions that are nonviolent if they see that their adolescent is engaging in aggressive behaviors, thus enhancing an adolescent's perception of parental support for nonviolence. Although these findings are inconclusive in understanding how perceptions of parental support for nonviolent responses and dating aggression are related, it does encourage researchers to consider how adolescent behavior affects adolescent perceptions and belief systems. Fontaine and Dodge (2009) highlighted that adolescent perceptions and scripts are re-evaluated after behavioral enactment; thus, adolescent perceptions may change over the course of the year. Specifically, adolescent dating

aggression may alter adolescent's perceptions of parental support for nonviolence: they may perceive messages from parents that parallel their behavior, or in response to their behavior, adolescents may perceive parental messages that wish to change that behavior. In the current study, dating aggression predicted changes in parental and peer support for nonviolent responses at varying waves across grades. Adolescents may be continually grappling with how to fit parental and peer messages into their existing and modified schemas for how to handle conflictual situations (Huesmann & Guerra, 1997). Future research is necessary to investigate and better understand these specific grade differences.

Comparisons by sex. Exploratory analyses revealed no differences in relations between parental or peer support for nonviolent responses and dating aggression perpetration by sex. Studies have found that females may seek more support from parents and peers than males (Giordano, Longmore, & Manning, 2006; Rose & Rudolph, 2006), and one prior cross-sectional study found that among females, perceived parental support for nonviolence was negatively associated with dating aggression (Miller et al., 2009). However, the current study extended this prior study by examining parental and peer support for nonviolent responses and examining these study variables longitudinally, finding no differences among model paths by sex. This finding of invariance by sex highlights similar influences of perceived parental and peer support for nonviolent responses to conflict on dating aggression perpetration across time for both male and female adolescents. Future research should consider looking at variables such as the norms and motivations behind dating aggression perpetration, as these variables may be important predictors of dating aggression in females and males (Johnson et al., 2005).

In summary, the current study found that perceptions of parental and peer support for nonviolent responses predicted changes in dating aggression perpetration. These relations were invariant by sex, but were specific by grade, highlighting important developmental considerations. Adolescent dating aggression also may alter perceptions of parental and peer support for nonviolent responses across middle school.

Perceived Parental and Peer Support for Violent Responses and Dating Aggression

None of the hypothesized paths between perceived parental and peer support for violent responses and dating aggression were significant for the full sample. These findings were in contrast to positive relations between parental support for violent responses and dating (e.g., Miller et al., 2009) and peer-based aggression (e.g., Garthe et al., 2015; Kliewer et al., 2006). However, no studies to date had examined perceptions of both parental and peer support for violent responses and dating aggression. Also, the measure used in the current study asked adolescents about messages about violent and nonviolent responses in the general context. Youth who perceive support from parents or peers about these violent responses may not have yet translated these responses into other contexts (i.e., romantic relationships), as many adolescents are in the formative stages of these relationships. Future research should examine parental and peer support for violent responses, specifically in the dating context.

Comparisons by grade. The current study found several significant relations between perceptions of parental and peer support for violent responses and dating aggression when examined by grade. First, perceptions of peer support for violent responses predicted changes in dating aggression from Wave 1 to Wave 2 among seventh graders. This finding highlights the role that peer support for violent responses may play in dating relationships,

specific to grade. Some literature has examined how peer relationships change over the course of middle school (Hardy, Bukowski, & Sippola, 2002). There are many changes in peer relationships during middle school that foster growth, but these changes in peer relationships may also create a sense of vulnerability to aggression (Leadbeater, 2013). In the seventh grade, adolescents may be at the peak of these developmental processes in middle school, and at this mid-point, they may be more susceptible to peer support for violent responses. However, more research is needed to probe this finding among seventh graders, as only one path illustrated that perceptions of peer support for violent responses predicted changes in dating aggression.

Additionally, the results indicated that parental support for violent responses predicted changes in dating aggression from Wave 2 to 3 among eighth graders. From this finding, again we see the importance of adolescent perceptions of *parental* support for responses into the eighth grade. Developmental-contextual theories highlight the role of peers in dating relationships during middle adolescence, but the current study found again that perceptions of parental support for violent responses may hold more weight for adolescents than perceptions of peer support for violent responses. Finally, from Wave 3 to 4 among seventh graders, dating aggression predicted changes in perceptions of parental support for violent responses. In other words, if adolescents are engaging in dating aggression, they may perceive that parents are then offering less support for violent behaviors. Future research is necessary to truly understand how perceptions of parental and peer support for violent responses are bidirectionally associated with dating aggression during early, middle and late adolescence. For example, relations emerged only for seventh and eighth graders in this

model, suggesting that support for violence may uniquely be associated with dating aggression once middle school relationships are more developed.

Comparisons by sex. The current study did not find significant differences among paths for the entire sample by sex. Across both models, sex did not impact the longitudinal relations between perceived parental and peer support for violent and nonviolent responses and dating aggression, although grade differences highlighted important developmental considerations. Previous research has highlighted that sex may play an important role in adolescent relationships, particularly that females may adopt more aggressive scripts when they begin romantic relationships (Connolly et al., 2015). However, during early adolescence youth are still most heavily influenced by their peers' opinions and evaluations about their relationships. Sex differences may not emerge until romantic relationships are more developed with dyadic influences and less nested within peer influence (Connolly & McIsaac, 2009; Feiring, 1999).

Thus, across the two models (i.e., support for violent responses and support for nonviolent responses), the current study found important developmental considerations. First, the current study found that perceptions of peer support for violent or nonviolent responses may have the strongest impact at the end of sixth grade and into seventh grade. Second, perceptions of parental support for violent or nonviolent responses may have the strongest impact from seventh into eighth grade. Third, adolescent dating aggressive behaviors affected their perceptions of parental and peer responses to conflict. Their behavior may be more likely to affect their schemas and perceptions from parents and peers about how to handle conflictual situations in dating relationships. All of these findings have important implications for prevention programs, specifically in understanding the timing and focus of

these programs. For example, it may be more beneficial to teach adolescents, peers, and parents about effective and nonviolent responses in the sixth grade before they are heavily influenced by perceptions of parental and peer support for violent responses. Alternatively, it may also be beneficial to intervene in middle school for peer-adolescent and parent-adolescent relationships. It also may be beneficial to target adolescent behavior directly in middle school, teaching youth how to navigate romantic relationships and cope with frustrations, as behavior may be likely to drive their perceptions of support for violent and nonviolent responses from parents and peers. Furthermore, there were positive relationships between parental and peer support for nonviolent responses. In other words, if adolescents perceive that a parent is supporting nonviolent responses, then they also may be more likely to perceive a peer is supporting nonviolent responses. Prevention programs should target reaching parents and peers, as perceptions from one socialization agent may affect perceptions from the other socialization agents, and ultimately affect dating aggression.

Congruent and Incongruent Perceptions of Messages from Parents and Peers

Spera and Matto (2007) theorized that youth who experience congruency across social contexts (e.g., parents and peers) are more likely to display consistent behavior. Thus, the contextual-congruence model of socialization highlighted the importance of congruent values and goals on adolescent development. Incongruency in socialization processes may lead to contradictory behaviors (Kuczynski et al., 2015). However, this theory has not been widely tested (see Padilla-Walker, 2006 as an exception). The current study expanded this theoretical understanding of the contextual-congruence model of socialization, while also contributing to the literature in this area.

The current study found two significant interactions (i.e., peer support for violent responses with parental support for nonviolent responses) on dating aggression across different waves. Both interaction findings offer a speculative understanding to the contextual-congruence model of socialization. First, from Wave 1 to Wave 2, when adolescents perceived high levels of peer support for violent responses and low levels of parental support for nonviolent responses, they were more likely to be engaged in dating aggression perpetration in comparison to adolescents who perceived high levels of peer support for violent responses and high levels of parental support for nonviolent responses. In other words, when an adolescent perceived congruency of support for violent responses (or lack of nonviolent responses) from parents and peers, they were then likely to engage in aggressive behaviors in their romantic relationships. Researchers have theorized that congruent messages may work to strength adolescent behavior (Bronfenbrenner & Morris, 1998; Spera & Matto, 2007). This finding suggests that when adolescents perceive congruency from parents and peers in support of violent responses, this may strengthen the likelihood that they will engage in aggressive behaviors. However, it is also important to note that perceptions of low levels of parental support for nonviolent responses does not mean that parents are necessarily supporting violent responses, but that maybe they are not deterring violent responses to conflict.

From Wave 3 to Wave 4, youth who endorsed high levels of perceived peer support for violent responses and high levels of perceived parental support for nonviolent responses had higher levels of dating aggression perpetration as compared to adolescents who perceived high levels of peer support for violent responses and low levels of parental support for nonviolent responses. Additionally, adolescents who endorsed low levels of perceived

peer support for violent responses, and lower versus higher levels of perceived parental support for nonviolent responses had greater levels of dating aggression. In other words, incongruent perceptions were associated with increased levels of dating aggression. These findings suggest that incongruent messages (parents supporting nonviolent responses while peers are supporting violent responses) may increase dating aggressive behaviors.

Conflicting viewpoints between parental and peer support may cloud an adolescent's ability to decide which message (violent or nonviolent) to adhere to in a conflictual situation. If an adolescent enters middle school with parental support for nonviolent responses, amidst perceiving peer support for violent responses, youth may struggle with which message they should adhere to. Parents still provide a foundation for adolescent relationships and belief systems, while peers are of increasing socialization (Grusec, 2002). However, incongruent messages were not associated with greater levels of dating aggression from Wave 1 to 2.

Due to the reverse direction of these findings and the non-significant simple slopes, my conclusions are tentative. Yet, these results do suggest that research should consider the combinations of messages from parents and peers. The current study found that perceptions from both parents and peers are affecting adolescent dating aggression. Thus, prevention programs need to target the multitude of social contexts that adolescents may be receiving messages about violence, in order to have individuals across these social contexts consistently promote effective, nonviolent response options.

Limitations

The current study had several strengths, including a longitudinal design and a diverse sample of sixth, seventh and eighth graders. However, it was not without limitations. First, the current study assessed adolescent perceptions of parental and peer support for violent and

nonviolent responses to conflict, but these responses were assessed within a general peer context (e.g., “If someone hits you, it’s self-defense to hit them back”). Due to the nature of early adolescent relationships, many of these relationships take place in peer contexts. Peers and parents also are intertwined into many aspects of adolescent romantic relationships, so it is assumed that early adolescents may translate messages about violence in general to context or relationships specific circumstances. However, future research would benefit from examining messages specific to romantic relationship conflicts.

Another limitation relates to the fact that the data used in the current study were from a larger intervention study. The intervention components of the study did not specifically address dating aggression; however, it cannot be ignored that the intervention may have affected the variables in the current study. Additionally, the proposed project used self-report data. Although this is a limitation, one novel aspect of this study comes from the adolescent perception of parental and peer support for violent and nonviolent responses. Some research has found that parent-reports of attitudes about violence are not related to adolescent behavior, suggesting that youth’s perceptions play a more important role (Copeland-Linder et al., 2007). Future research may wish to consider parental, peer, and adolescent perceptions of support for violent and nonviolent responses to conflict. Additionally, the measures used to assess parental and peer responses to conflict did not specify which parent or guardian the adolescent was perceiving particular support for responses from, or whether some or all of their peers support these violent or nonviolent responses. The measures do not capture the variability that adolescents may perceive from multiple parents/guardians, peers or friends. Future research should seek to develop ways to measure the sense of congruency adolescents experience in receiving messages in support of violent or nonviolent responses.

Future research also should examine these variables across youth with more varied SES and within different context. Previous research has highlighted that the use of parental messages in support of violent responses may be more prevalent among low-income families and/or families exposed to violence (Farrell et al., 2010; Kliwer et al., 2006). Dating aggression may also be higher among adolescents living in low-income urban neighborhoods (Dardis et al., 2015; Foshee et al., 2008). The current study focused on a sample of urban adolescents from families with low SES, and future research should work to examine these research questions with more diverse samples of adolescents.

Additionally, the study did not take into account that some adolescents may not perceive many messages about violence or nonviolence from their parents or peers. If adolescents are not faced with stressful or conflictual situations yet, they may not have perceptions about what their parents or peers may support in terms of responding violently or nonviolently. Lastly, the current study also did not control for peer-based aggression. Conclusions about the effect of perceived parental and peer support for violent and nonviolent responses on dating aggression cannot be made over and above the effect of peer-based aggression.

Future Directions

Future research would benefit from examining these variables with multiple theoretical perspectives to better understand the dynamics of adolescent dating aggression. For example, during early adolescence, there is an acceleration of gender-based socialization that can result in sex differences in the dynamics of peer, parent and romantic relationships (Feiring, 1999; Leaper & Bigler, 2011). Perceptions of parenting may differ in salience for each sex (Davies & Windle, 1997), as well as peer relationships (Connolly et al., 2015;

Giordano et al., 2006). Future research would benefit from examining study variables by sex across adolescence, while also considering the role of gender beliefs and norms. Research has highlighted the role of gender norms between beliefs about aggression and dating aggression (e.g., McCauley et al., 2013; Reeves & Orpinas, 2012; Reyes et al., 2016). Gender norms, considered from a feminist or conflict role theory perspective, may provide a better lens into how sex contributes to perceptions of parental and peer support for violent responses and dating aggression. Although sex differences were not found in the current study, future research also may probe sex differences within grade-level examinations. Sex differences may emerge at varying time points during middle school due to the changing nature of gender-based socialization and sex differences in romantic relationships during early adolescence.

Furthermore, I was not unable to test variables such as power and control within these adolescent romantic relationships, nor was I able to see how gender roles and norms were actually reinforced within relationships. Controlling behaviors and anger may also contribute to dating aggression (Burton et al., 2013; Giordano et al., 2016; Johnson et al., 2005), and adolescents who struggle with aspects of relationship power may experience lower relationship quality (Bentley, Galliher, & Ferguson, 2007). Future research would benefit from taking a feminist and gender role conflict theory approach, investigating how these ideas of power, control and gender norms may contribute to dating aggression. For example, does dissatisfaction with power and control within a relationship affect dating aggression during adolescence? Do parents and peers support responses in terms of maintaining power and control within relationships? And, how may gender roles and the reinforcement of gender roles by parents and peers affect dating aggression perpetration? Several prevention

programs focus on promoting equalitarian gender roles (e.g., Taylor et al., 2013; Tharp et al., 2011), making future research in this area crucial.

The current study assessed some of the social and cognitive processes that affect and may be affected by adolescent dating aggression; however, it would be beneficial to examine other types of processes on adolescent behavior. For example, emotion regulation and individual characteristics also may affect how an adolescent behaves in a romantic relationship (Musher-Eizenman et al., 2004; Reyes et al., 2016). Reyes et al. (2015) found that higher levels of individual beliefs supporting aggression (i.e., cognitive process) and emotion/anger dysregulation (i.e., emotional process) were longitudinally associated with dating aggression among adolescents. Attachment quality (Ulloa et al., 2014), mental health problems (Foshee et al., 2015), and a variety of other individual characteristics also are associated with adolescent dating aggression (for a review see Vagi et al., 2013).

Developmental contextual theories have largely ignored the role that parents may play in adolescent dating relationships (e.g., Brown, 1999), and the current study provided evidence that perceptions of parental support for nonviolent and violent responses predicted changes in dating aggression among middle school students. It also found that perceptions of parental support showed continued influence on dating aggression into the seventh and eighth grades, above perceptions of peer support. The measures used in the current assessed general messages about violence and nonviolence; future research would benefit from examining messages specifically about dating violence and nonviolence from parents and peers. Perhaps messages about violence and nonviolence from peers in the context of dating relationships would be more strongly related to dating aggression than messages from parents.

However, the current study suggests that perceptions of parental *and* peer support for nonviolent responses about conflictual situations are still important for understanding adolescent dating aggression across middle school. Due to the novelty of romantic relationships during middle school, early adolescents may rely more heavily on parental and peer messages about more general solutions to problems. These findings are important for prevention programs, understanding that we not only need to target perceptions of peer support for nonviolent responses, but also that we still need to consider perceptions of parental support for nonviolent responses across middle school.

It would also be interesting to explore how the quality of parent-adolescent and peer-adolescent relationships may affect relations between study variables. Recent research has found that better family functioning, along with perceptions of parental support for nonviolence, may reduce an adolescent's involvement in aggressive behaviors (Kramer-Kuhn & Farrell, 2016). Other research indicated that familial involvement (Crockett & Randall, 2006; Sabina, Cuevas, Cotignola-Pickens, 2016) and parental monitoring (East & Hokoda, 2015; Leadbeater et al., 2008) are associated with less adolescent dating aggression. Prosocial peer and parent relationships also may mitigate dating aggression during adolescence (Foshee et al., 2013; Garrido & Taussig, 2013). Additional studies are needed to consider the quality of parenting and peer relationships, in conjunction with support for violent and nonviolent responses, and their bidirectional relationship with dating aggression.

The current study contributed to research examining how the congruency and incongruency of messages from parents and peers may influence adolescent dating aggression. Although the findings in the current study were not conclusive, the significant moderations suggested that the mixture of messages from parents and peers may have an

influence on adolescent dating aggression. Future research should examine how the incongruency of messages from parents, and how the incongruency of messages from peers also may affect dating aggression. Lindstrom Johnson, Finigan, Bradshaw, Haynie and Cheng (2013) found that parents often give mixed messages to adolescents about how to handle violent situations. So, if a parent endorses support for both violent and nonviolent responses, this incongruency from a parent may also impact dating aggression. Additionally, if a parent endorses nonviolent responses, but models a violent response in his or her own words or actions, this may also create a sense of dissonance for adolescents. Lastly, it would be interesting to test congruency of messages from adolescents with two parents. If one parent is endorsing one type of response, while the other parent is endorsing the opposite, this incongruency also may negatively impact adolescent outcomes. Future research would benefit from better understanding these processes of congruency in messages.

Although adolescents may perceive parents and peers are endorsing support for violent responses, they also may be internalizing these socialization messages in a variety of ways. For example, Farrell et al. (2012) examined patterns of adolescent belief patterns about violent and nonviolent responses, and found that the majority of adolescents endorsed beliefs against aggression (31%) or beliefs that violence is sometimes necessary or inevitable (41%); only 28% endorsed support for aggression across multiple contexts. Padilla-Walker and Carlo (2007) and Hardy, Carlo, and Roesch (2010) also found that adolescent values mediated the relation between parental and peer expectations for prosocial behaviors and prosocial behaviors. More studies are needed to examine how perceptions of parental and peer support for violent responses affects an adolescent's belief and value system related to their viewpoints about violent and nonviolent responses to conflict.

Finally, it is important for research in the area of dating aggression to expand by examining diverse couples (e.g., gay, lesbian, and bisexual partner relationships; Dank, Lachman, Zweig, & Yahner, 2014; Freedner, Freed, Yang, & Austin, 2002) and other subtypes of relationship aggression (e.g., relational and cyber; Borrajo, Gomez-Guadix, & Calvete, 2015; Temple et al., 2016; Zweig, Dank, Yahner, & Lachman, 2013). Also, it is important to consider the measurement of dating aggression during adolescence to make sure we are assessing relevant behaviors and definitions (Teen Dating Violence Measurement Meeting Summary, NIJ, 2015). Sullivan et al. (2010) also proposed that researchers should consider dating problems rather than dating aggression, as this approach may be more relevant to understanding the early developmental stages of romantic relationships.

Implications

Several future research and policy directions emerged from the current study. First, findings may inform existing prevention programs and the development of new programs. As adolescents get older, their norms and beliefs become more firmly established (Huesman & Guerra, 1997), making it important to target adolescents as they enter middle school. Recent evaluations of prevention programs highlight the need for the focus of programs to be on promoting healthy relationship characteristics (rather than only focusing on reducing processes of risk) (Debnam, Howard, & Garza, 2014). A few dating aggression prevention programs discuss the importance of including parents and peers (e.g., *Safe Dates*, Foshee et al., 2012 and *Start Strong*, Miller et al., 2015), but few have been empirically tested. Programs should target adolescents and their parents and peers, as adolescents' perceptions of parental and peer responses influence dating aggression throughout middle school. Future programs also would benefit from focusing on aspects of communication between

adolescents and their parents and peers. An evaluation of *Start Strong* found that parent-adolescent communication had important and lasting effects on adolescent relationships (Miller et al., 2015). Adolescents perceive a variety of response options (i.e., violent and nonviolent responses) from parents and peers. Programs should focus on teaching effective nonviolent responses to conflict, as well as healthy coping strategies (e.g., Kliever et al., 2006; Rothman, Bair-Merritt, & Tharp, 2015), so that adolescents are receiving congruent messages supporting nonviolent responses from parents and peers about how to handle conflictual situations.

As gender role conflict theory suggests, adolescents may perceive certain gender-specific behaviors as normative and not see these behaviors as warning signs of dating aggression (Johnson et al., 2005; Volpe et al., 2014). Prevention and intervention work should target teaching adolescents how to identify warning signs and develop healthy relationship behaviors. Volpe et al. (2014) suggested that nurses and mental health practitioners are key figures in delivering violence prevention skills to adolescents, teaching adolescents how to identify the warning signs, and providing them with the opportunity to discuss relationship conflicts and concerns. Programs should target boys' and girls' schemas about relationships, as well as education about sexism, gender roles and norms, and healthy relationship behaviors (Lee, Begun, DePrince, & Chu, 2016).

Recent evaluations of dating aggression prevention program among adolescents have also found that peer facilitation (with the assistance of teachers and adult coordinators) may also be beneficial for teaching healthy relationship behaviors (e.g., Connolly et al., 2015; Cramer, Ross, McLeod, & Jones, 2015; McLeod, Jones, & Cramer, 2015). The current study provides empirical support for the importance of targeting peers. For example, perceptions of

peer support for nonviolent and violent responses showed longitudinal relations with dating aggression during middle school. If programs had peer facilitators, adolescents may perceive that their peers are supporting more nonviolent, effective relationship strategies. Rothman et al. (2015) stressed the importance of moving dating aggression prevention programs beyond the individual level, and adding strong peer and parental components may be valuable extensions to existing programs.

Prevention programs also may consider the utility of using social media, the Internet or phone applications to teach healthy relationships skills and prevent dating aggression. A few researchers have found that Internet-based programs may be useful in preventing mental health problems among adolescents (Cearl & Christensen, 2010; Robinson et al., 2016). Also, a recent program found support for the use of an online program for teen dating violence prevention among high school students (Levesque, Johnson, Welch, Prochaska, & Paiva, 2016). The use of social media may be a powerful method for health communication, especially for adolescents (Baker & Carreno, 2015; Jha, Lin, & Savoia, 2016). Baker and Carreno (2015) highlighted the intersection between peers, technology use and dating aggression, and research is needed to investigate how researchers can use social media or technology within prevention programs.

Finally, there has been much movement in governmental policy to prevent adolescent dating aggression, as involvement in dating aggression during adolescence increases one's likelihood of also being involved in intimate partner violence in adulthood (Gomez, 2011). Researchers are calling for multipronged policy and prevention approaches (DeGue et al., 2014; Lippy & DeGue, 2016; Rothman et al., 2015; Tharp et al., 2011). Some states are requiring dating aggression prevention programs in schools, or at least requiring schools to

have policies that address dating aggression. Strong state policies may help reduce the prevalence of adolescent dating aggression (Hoefler, Black, & Ricard, 2015). It is important for health care workers, social workers, and counselors to know the current policies within their states to best assist victims of dating aggression. Due to the increased movement for dating aggression policies that pertain to adolescents, research is crucial to continue informing future directions for prevention programs and interventions.

Conclusions

The current study made several important contributions to the literature. First, results indicated that adolescent perceptions of parental and peer support for nonviolent responses are longitudinally associated with adolescent dating aggression, and these relationships varied by grade. Second, adolescent behavior (e.g., adolescent dating aggression) influenced their own perceptions of parental and peer support for violent and nonviolent responses, illustrating how adolescents play an active role in shaping their perceptions and future behaviors. Third, it highlighted how different combinations of perceived parental and peer support for violent and nonviolent responses may increase an adolescent's frequency of dating aggression.

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Appendix A: Measures

Parental Support for Violent and Nonviolent Responses

Parental Messages about Fighting and Nonviolence (Farrell et al., 2010)

Response options:

1 = *very unlikely*, 2 = *somewhat unlikely*, 3 = *somewhat likely*, 4 = *very likely*

Instructions:

How likely would your parents be to tell you...

Support for Violent Responses Items:

1. If you don't fight some teens, they'll just keep picking on you.
2. If someone hits you, it's self-defense to hit them back.
3. If someone else throws the first punch, you shouldn't walk away.
4. Sometimes a person doesn't have any choice but to fight.
5. It's okay to fight someone if they say bad things about someone in your family.
6. It's okay to fight if someone else starts it.

Support for Nonviolent Responses Items:

1. If someone wants to fight you – walk way.
2. Stay calm and don't let it bother you when someone says something disrespectful to you.
3. If someone wants you to fight, just tell them you don't want to.
4. Tell an adult at school, like the teacher or principal, if you're having a problem with another teen.
5. There are better ways to solve most problems than by fighting.

Peer Support for Violent and Nonviolent Responses

Peer Support for Aggression and Nonviolence Scale (Farrell et al., 2006; 2007; 2008)

Response options:

Responses are on a scale from 1 to 3, varying by item. Response choices reflect a positive, negative and neutral peer reaction to each item.

Instructions:

What would your friends think if you [response]...

Support for Aggression items:

1. Kids fighting – cheered on the fight.
2. Kid making fun of you – started a fight.
3. Students boosting up a fight – threw the first punch.
4. Blamed for rumor – argued and got into a fight.
5. Disrespectful about family – told them to stop.
6. Kids at school tease – asked friends to help you beat up the other teens.

Support for Nonviolent Behavior items:

1. Kids fighting – went to get a teacher.
2. Kids making fun of you – quit playing ball and left.
3. Students boosting up a fight – tried to talk calmly.
4. Blamed for rumor – talked it out.
5. Disrespectful about family – ignored them and didn't let it bother you.
6. Kids at school tease – asked an adult for help.

Dating Violence

Dating Violence Scale (DVS, Foshee et al., 1996)

Response options:

1 = *never*, 2 = *1-3 times*, 3 = *4-9 times*, 4 = *10 or more times*, 5 = *skip*

Instructions:

In the last three months, how often have you done the following things to a boyfriend or girlfriend? (perpetration)

In the last three months, how often has a boyfriend or girlfriend done the following things to you? (victimization)

Dating Violence Perpetration items:

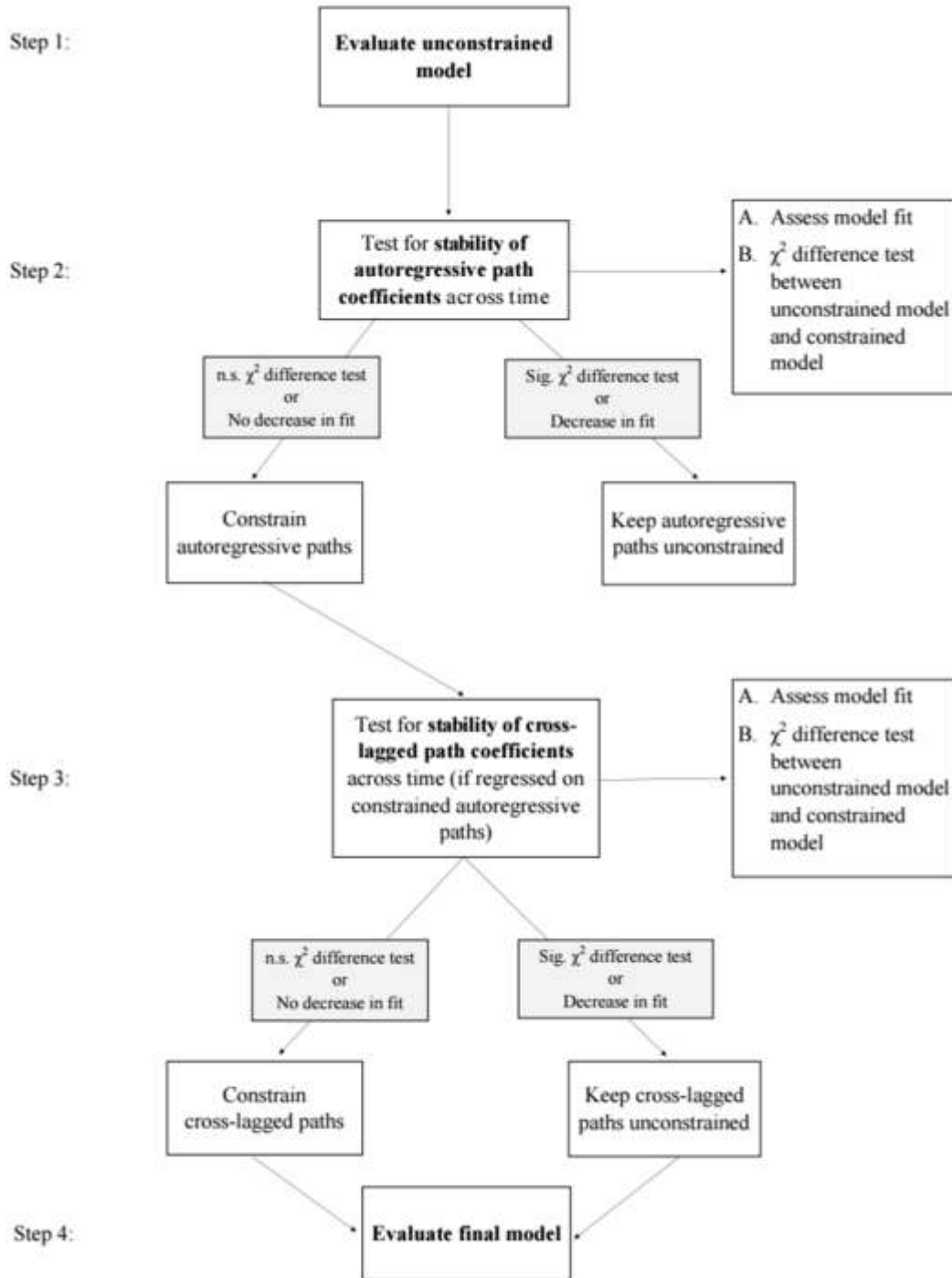
1. Damaged something that belonged to him or her.
2. Said things to hurt his or her feelings on purpose.
3. Threatened to hit or throw something at him or her.
4. Scratched him or her.
5. Would not let him or her do things with other people.
6. Did something just to make him or her jealous.
7. Pushed or shoved him or her.
8. Threw something at him or her that could hurt.
9. Punched or hit him or her with something that could hurt.
10. Kicked him or her.

Dating Violence Victimization items (used as a covariate):

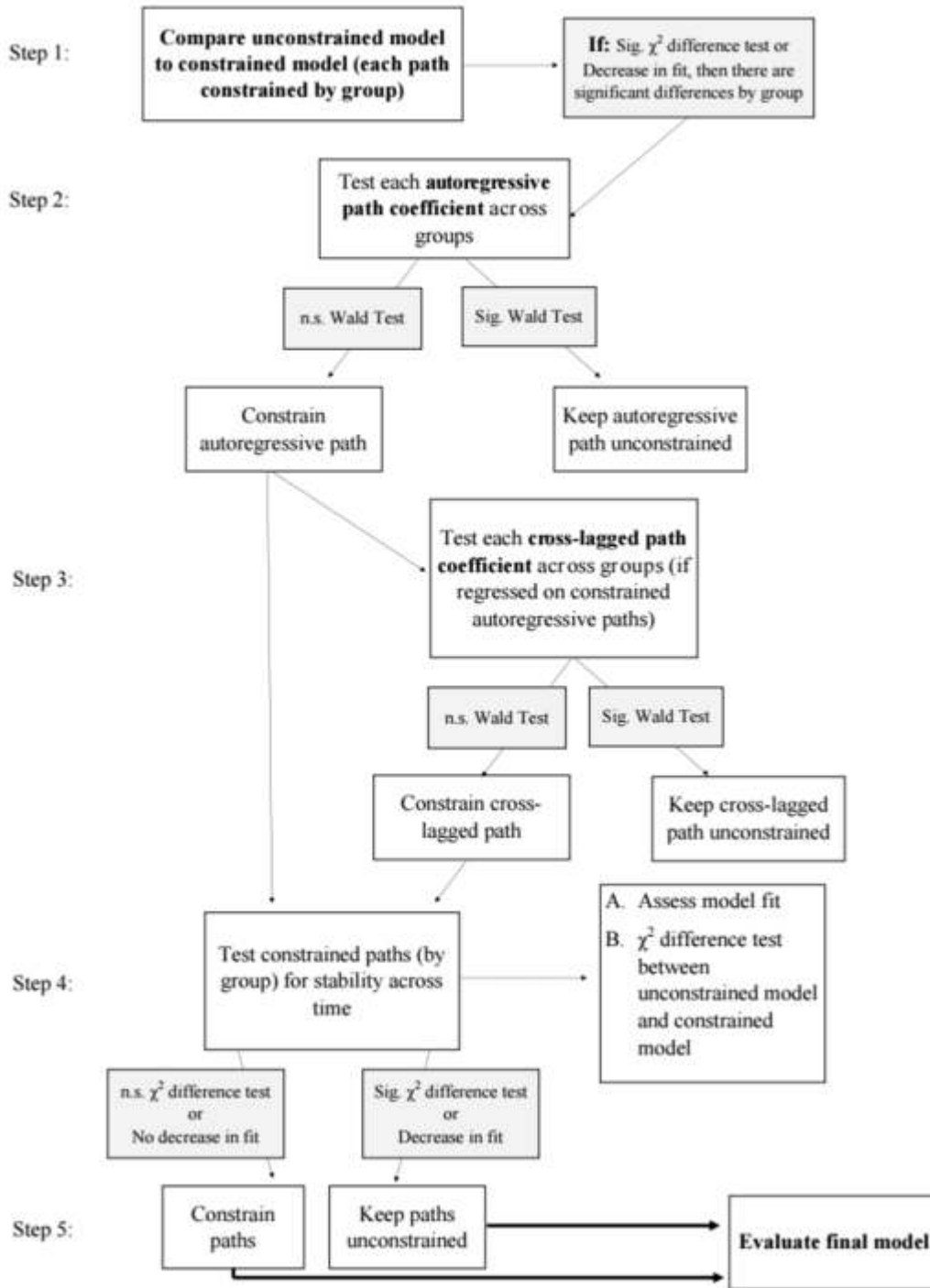
1. Damaged something that belonged to you.
2. Said things to hurt your feelings on purpose.

3. Threatened to hit or throw something at you.
4. Scratched you.
5. Would not let you do things with other people.
6. Did something just to make you jealous.
7. Pushed or shoved you.
8. Threw something at you that could hurt.
9. Punched or hit you with something that could hurt.
10. Kicked you.

Appendix B: Data Analysis Procedures for Cross-lagged Panel Models



Appendix C: Data Analysis Procedures for Multiple Group Models



Curriculum Vita

Rachel Cheree Garthe was born on February 23, 1990, in Peru, Illinois. She graduated from LaSalle-Peru Township High School, LaSalle-Peru, Illinois in 2008. She received her Bachelor of Arts in Psychology from North Central College, Naperville, Illinois in December, 2011. She received a Master of Science in Psychology from Virginia Commonwealth University, Richmond, Virginia in May, 2014.