A Review of the Findings from Project D.A.T.E.:

Risky Relationships and Teen Dating Violence Among At-Risk Adolescents

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Abstract

Statement of Purpose: Teen dating violence is linked to numerous longstanding consequences, such as delinquency, risky sexual behavior, and adult partner violence. Thus, research exploring adolescents' trajectories into and out of violent relationships is important for developing effective prevention and intervention programs to promote healthy teen relationships. Prior research has generally been restricted to normative, school-based samples that may not capture the unique experiences of youth who are already most likely to experience negative relationship outcomes. The purpose of Project D.A.T.E. (Demand Appreciation, Trust, and Equality) was to address gaps in current research by focusing on romantic relationship experiences among *at-risk adolescents*.

Goals and Objectives: We investigated risk and protective factors related to teen dating violence and positive relationship outcomes within a single relationship and across multiple relationships. We also explored how early abusive relationships impact trajectories into later abusive relationships, and how age gaps between romantic partners might contribute to victimization and other negative outcomes.

Participants. Participants included 223 adolescents (58% female, 61% African-American) who (1) were between 13 and 18 years old, (2) answered yes to "Have you ever 'dated someone' or been in a romantic relationship that lasted at least 1 month?", and (3) received community-based services (e.g., foster care, alternative schooling) or low-income services (e.g., free or reduced lunch, low-income housing).

Methods. Participants completed two waves of two-hour, in-person, self-report interviews that took place about a year apart. In each interview, participants answered questions about socio-demographics, family, and schooling. Most of the interview, however, addressed issues of abuse, intimacy, and health within up to three romantic relationships (thus, up to six

relationships total across two waves of data collection). We used assessments shown to be valid and reliable for adolescents.

Results: Teens in our at-risk sample reported high levels of dating abuse, risky sexual behavior, and deviance within their romantic relationships. Abuse victimization and perpetration were highly correlated, with patterns largely the same for boys and girls, suggesting reciprocal or "common couple" violence rather than one-sided intimate terrorism. Risk factors for dating violence were similar whether considering single or multiple relationships. However, dynamic risk factors (e.g., depression, peer delinquency) appeared to be more powerful than historical factors (e.g., sexual debut, child maltreatment). Relationship-specific risk factors like dyadic deviancy and intimacy related significantly to dating violence, indicating that teens may view abusive relationships as serious and committed. In addition, dating abuse *by* partners and *toward* partners was relatively stable across time. For most teens, experiencing abuse in their *first ever* romantic relationship placed them at great risk for a trajectory of future abuse. Finally, age gaps between partners were related to negative outcomes regardless of the younger partner's age or gender. This link between partner age gaps and poor outcomes was best explained by older and younger partners' risky lifestyles, *not* power inequalities within the relationship.

Conclusions: Low-income, service-receiving adolescents showed high rates of abuse in their *earliest* relationships, and then continued to be significantly at risk for abuse in subsequent relationships—despite describing these relationships as positive in many ways. Thus, there is a clear need for prevention and intervention efforts targeting such at-risk youth that focus more on relationship *quality* than simply the presence or absence of abuse. Initial Project D.A.T.E. results suggest that future research needs to investigate the *context* of teen dating violence (events before and after, whether a partner was frightened, etc.) to understand how youth perceive these

relationships. A nuanced understanding of the context of abuse is crucial since youth are unlikely to seek help if their perceptions of “dating violence” diverge from definitions used by service providers and law enforcement.

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PROBLEM AND PURPOSE

Adolescence is when youth learn to initiate, maintain, and dissolve romantic relationships. While positive relationship experiences are linked to a number of positive outcomes (e.g., Karney, Beckett, Collins, & Shaw, 2007), negative relationship experiences—including *teen dating violence*—are linked to numerous short- and long-term negative outcomes. For example, teens involved in dating abuse are more likely to experience depression, delinquency, substance use, academic failure, and risky sexual behavior such as early sexual debut and unprotected sex (e.g., Manlove, Ryan, & Franzetta, 2004). In addition, research suggests that youth who experience dating abuse during adolescence may be set on a negative trajectory that includes intimate partner violence as adults (e.g., Gómez, 2011). Teen dating violence is a phenomenon that may be falling through the cracks between the adult and juvenile justice systems (Zosky, 2010). While there currently exist clear policies for dealing with adult intimate partner violence (e.g., mandatory arrest laws), teen relationship violence occurs largely hidden from the legal radar (Zosky, 2010).

Given the potential severe and longstanding consequences of teen dating violence, research exploring adolescents' trajectories into and out of violent relationships is important for developing effective prevention and intervention programs to promote healthy conflict resolution within teen relationships. Despite a burgeoning body of literature on teen dating violence, research has generally been restricted to normative samples of high school or college students (e.g., the Youth Risk Behavior Survey). This population-based research may not capture the unique experiences of youth who are already on an at-risk trajectory and therefore most likely to experience negative relationship outcomes *and* most likely to come in contact with service

providers. Therefore, the purpose of Project D.A.T.E. (Demand Appreciation, Trust, and Equality) was to provide insight into gaps in current research on adolescent romantic relationships by focusing on outcomes among *at-risk adolescents*.

RESEARCH QUESTIONS

(1) What risk and protective factors are related to teen dating violence and positive relationship outcomes within a single target relationship?

In the literature, a myriad of risk factors across a variety of domains of past and present functioning have been associated with teen dating violence (e.g., Foshee, Benefield, Ennett, Bauman, & Suchindran, 2004). However, there is a paucity of research designed to investigate the factors associated with dating abuse among at-risk youth who are already likely to experience negative outcomes. Moreover, the inter-relations *between* many of these empirically-supported risk factors have yet to be examined. In addition, little prior research has examined protective factors that buffer against dating abuse or encourage formation of healthy teen relationships (e.g., Pepler, 2012). Therefore, this study examined the risk *and* protective factors related to dating abuse *and* positive relationship outcomes within an at-risk sample.

(2) What factors are associated with abuse across multiple relationships, and do early abusive relationships increase the likelihood youth will continue to experience abuse in future relationships?

Given that involvement in more than one abusive relationship exposes teens to greater cumulative risk (e.g., Gómez, 2011), it is valuable to know what differentiates those who go on to become involved in multiple abusive relationships from those who experience abuse in just a single relationship. However, little research has examined teens' trajectories from one abusive relationship to another. We add to the literature by investigating the specific risk factors for

involvement in *multiple* abusive relationships, as well as how abuse in one relationship relates to abuse in subsequent relationships.

(3) How are relationship-level characteristics associated with relationship abuse?

Recent research focused on the dyadic interplay between partners, taking the individual relationship itself as the unit of analysis, has uncovered two themes on how relationship-level characteristics relate to dating abuse: Relationships with (1) greater intimacy and (2) where both partners are engaged in delinquent behavior are more prone to dating abuse (e.g., Giordano, Soto, Manning, & Longmore, 2010; Vézina & Hébert, 2007). We have built upon these prior results by investigating whether intimacy or deviance in teen relationships is more strongly associated with abuse within an at-risk sample.

(4) Are adolescents at greater risk for victimization and negative reproductive health outcomes if they date older partners, and if so, why?

Statutory rape laws aim to prevent intimate relationships between youth and older partners, and this goal appears warranted by research demonstrating a host of negative victimization and reproductive health outcomes for teens that date older partners (e.g., Young & d'Arcy, 2005). However, uncertainty regarding *for whom?* and *why?* partner age gaps are associated with negative outcomes has made this prior research difficult to translate into meaningful practices, policies, and laws to protect adolescents from potentially harmful relationships with older partners. Therefore, we examined how younger partner age and gender impact the link between partner age gaps and negative outcomes, as well as explored some theoretical explanations for *why* this link exists.

RESEARCH DESIGN

Participants:

Participants included 223 adolescents (58% female). To be included, participants had to meet the following three eligibility criteria: (1) were between 13 and 18 years old, (2) answered yes to "Have you ever 'dated someone' or been in a romantic relationship that lasted at least 1 month?", and (3) received community-based services (e.g., foster care, alternative schooling) and/or low-income services (e.g., free or reduced lunch, low-income housing). The sample was predominately low-income, with 86% reporting they received free or reduced lunch, and 86% of the sample was involved in community-based services earmarked for at-risk youth. The sample was ethnically diverse, with participants self-identifying as African American (61%), Caucasian (22%), biracial/multi-ethnic (14%), Latina/Latino (3%), and other (1%).

Procedures:

A sample of low-income, service-receiving participants were selected to examine romantic relationship outcomes specifically for the youth most at-risk for negative experiences and thus the primary targets of prevention and intervention programs. The Project D.A.T.E. research team collaborated with a number of local agencies that provide services to at-risk adolescents in and around Central Virginia, such as the Virginia Department of Social Services, the Virginia Department of Juvenile Justice, and alternative schooling programs. In addition, the Project D.A.T.E team distributed flyers door-to-door in local low-income neighborhoods. As the study progressed, participants started to refer their service-receiving peers.

Youth eligible to participate in Project D.A.T.E. completed two waves of two-hour in-person interviews that took place about a year apart. Participants chose the location of their interviews, most of which took place in participants' homes. Of those who participated in wave 1, 95% also participated in wave 2. We obtained written consent from parents and written assent from teens prior to study enrollment. Teens also received a $50 gift card at each interview.

As part of each self-report interview, participants were first asked about basic socio-demographics, including family and school experiences. The majority of each interview, however, was focused on participants' romantic relationships. Using a Life History Calendar, participants were asked to think back to up to three romantic relationships that lasted a month or longer (thus, up to six relationships across two waves of data collection). The majority of the interview was then spent answering questions specific to each romantic relationship. When possible, we measured constructs using assessment tools that have been shown to be valid and reliable for adolescents in past literature.

KEY FINDINGS

Descriptive Findings:

Across the two waves, the majority of youth described involvement in multiple romantic relationships, with over 90% of participants providing data for two or more relationships and over a third of participants providing data for four or more relationships. For three-quarters of participants, Project D.A.T.E. captured their *first ever* romantic relationship.

Rates of dating abuse were much higher in this at-risk sample than in previous surveys of population-based samples. For example, within teens' earliest reported relationship, 41% of participants reported perpetrating at least one act of physical abuse, 83% reported perpetrating at least one act of emotional abuse, and 16% reported perpetrating at least one act of sexual abuse. Rates were similar for victimization. Although teens were much more likely to endorse less serious than more serious forms of abuse, 16% of youth reported being injured by their first partner (e.g., breaking a bone, feeling pain the next day because of a fight) and 11% reported injuring their partner.

Moreover, data from Project D.A.T.E. provides further evidence for the idea that the romantic relationships of teens are not as shallow, fleeting, or inconsequential as once thought. The average length of a relationship was about 9 months, with most teens rating even their first ever relationship as “very serious” or “moderately serious.” About 48% of boys and 43% of girls reported engaging in sexual intercourse with their first ever romantic partner, with 65% of youth reporting having had intercourse by age 14 or younger. Therefore, this at-risk sample was also more sexually precocious and experienced than population-based samples.

(1) What risk and protective factors are related to teen dating abuse and positive relationship outcomes within a single target relationship?

A. Perpetrating and being the recipient of abuse were highly correlated, meaning participants were likely to either be both a perpetrator and a victim, or neither a perpetrator nor a victim. Boys and girls reported similar levels of victimization. In general, risk factors for dating abuse put boys and girls equally at risk for partner abuse.

B. The myriad risk factors related to dating abuse in this study could be statistically reduced to four broad factors: Sexual History, Family Background, Self-Regulation, and Social Environment. Dynamic risk factors currently at play in a teen’s dating life, such as depression or peer delinquency, had much stronger associations to dating abuse than static risk factors, such as early sexual debut or childhood maltreatment. Results support a state-dependence model of risk where static risk factors set the stage for exposure to more powerful dynamic risk factors that promote dating violence.

C. Teens’ coping style was consistently related to both positive and negative relationship outcomes. An active coping style was associated with positive relationship outcomes like

negotiation, while an avoidant coping style was associated with less negotiation and greater dating abuse.

(2) What factors are associated with abuse across multiple relationships, and do early abusive relationships increase the likelihood youth will continue to experience abuse in future relationships?

A. A majority of participants reported involvement in more than one relationship that was either physically or emotionally abusive. Overall, the risk and protective factors associated with involvement in *multiple* abusive relationships were similar to those associated with dating abuse in a single target relationship.

B. Dating abuse *by* partners and *toward* partners were both relatively stable across teens' earliest three relationships. This stability is consistent with the hypothesis that teens carry patterns of aggression learned in earlier relationships into later relationships.

C. Teens who *perpetrated* abuse in early relationships were more likely to be *victims* of abuse in later relationships, even after accounting for initial levels of victimization. The reverse was also partly true: Teens who were *victims* of emotional (but not physical) abuse in their second relationships were more likely to be *perpetrators* of abuse in their third relationships. For many teens, experiencing abuse in their *first ever* romantic relationship appeared to start them on a trajectory of future abuse.

(3) How are relationship-level characteristics associated with relationship abuse?

A. Overall, participants' relationships were characterized by high levels of intimacy: The average relationship lasted about 9 months, involved sexual intercourse, and was rated as "serious." In addition to being highly intimate, participants' relationships were also

highly deviant, with over half of dating dyads engaged in substance use and approximately three-quarters engaged in delinquency.

B. Greater relationship-level intimacy *and* greater relationship-level deviancy were associated with dating abuse, including sexual victimization and perpetration. However, deviancy was much more consistently associated with dating abuse outcomes than intimacy across time and relationships. Results support a lifestyles and routine activity framework, whereby teens' antisocial behavior with delinquent partners is a key risk factor for experiencing abuse.

(4) Are adolescents at greater risk for victimization and negative reproductive health outcomes if they date older partners, and if so, why?

A. A majority of participants (70%) dated a partner who was at least one year older, with 14% of participants dating a partner who was at least four years older. Although, on average, girls dated older partners than boys, boys still reported dating older partners.

B. Our at-risk participants, in general, reported poor sexual health: Less than 60% reported that they used protection during sex "all the time," and about 20% of participants reported that they contracted a sexually transmitted infection or that they (or their partner) became pregnant during the target relationship.

C. Larger partner age gaps were associated with poorer sexual health, including greater probability of engaging in sexual intercourse, decreased use of protection, and increased probability of contracting an STI or becoming pregnant. Larger partner age gaps were also associated with greater physical, emotional, and sexual victimization.

D. These associations between partner age gap and negative health outcomes were just as strong for younger vs. older teens, and for girls vs. boys.

E. Although common wisdom assumes that dating an older partner is problematic because the older partner wields greater power in the relationship, our results do not support this contention: Partner age gaps were *not* associated with lack of negotiation or dissatisfaction with decision-making within the relationship. Instead, participants' and their partners' *risky lifestyles* appeared to mediate the relationship between partner age gaps and negative health outcomes. The quality of lifestyle that older partners tended to live, namely their greater involvement in substance use and delinquency, appeared to render adolescent partners vulnerable to abusive victimization.

CONCLUSIONS AND IMPLICATIONS FOR POLICY AND PRACTICE

A. Our study demonstrates that teen dating abuse is often reciprocal and rarely is there a clear dichotomy between perpetrator and victim. While these results align with the results of prior research (e.g., Moffitt & Caspi, 1999), the reciprocal nature of abuse in our teens' relationships flies in the face of traditional conceptions of relational abuse as *intimate terrorism* (Johnson, 1995), where the male attempts to achieve power and control over the female through abuse and intimidation. For the vast majority of teens in our sample, patterns of dating abuse appear to map more closely onto what Johnson (1995) terms *common couple violence,* abuse that springs up *between* partners in the course of a disagreement and is *not* part of a pattern of coercion (Johnson, 1995). However, many teen dating abuse prevention programs use language adopted from the intimate terrorism framework (e.g., Pence & Paymar, 1993). Therefore, teen dating abuse prevention and intervention programs need to define abusive relationships in a way that maps onto teens' lived experience, or teens will be unlikely to recognize that their relationship is problematic and seek help. Addressing teen dating abuse as a pattern of behaviors that can *co-occur* between partners and *re-occur* across

multiple relationships may be more important than focusing on how to avoid a single stereotypical perpetrator.

B. In general, the lack of gender differences in patterns of risk and violence supports past calls for more research, programming, and policies aimed at preventing teen dating abuse and other health risks among low-income, at-risk adolescent *boys*, not just girls (e.g., Dixon & Graham-Kevan, 2011).

C. *Static* risk factors for dating abuse, like young age at first sex or childhood maltreatment, may be used to flag high-risk teens for targeted interventions designed to make the most of scarce resources. However, such fixed, historical risk factors cannot themselves be a locus for intervention. Encouragingly, though, our research suggests that *dynamic* risk factors currently at play in a teens' life, like academic disengagement and delinquent peers, are more potent indicators of dating abuse. Such dynamic risk factors might represent a fertile domain for intervention to reduce teen dating abuse (Douglas & Skeem, 2005). For example, our research suggests that interventions focused on improving coping and emotion regulation could potentially reduce dating abuse and increase positive outcomes in teens' relationships.

D. Because our study results suggest that dyadic delinquency is a consistent relationship-level risk factor for dating abuse, findings support the development of interventions focused on at-risk youth in juvenile detention centers (e.g., *Expect Respect*; Ball, Kerig, & Rosenbluth, 2009). The juvenile justice system may be a fruitful resource for screening teens in need of treatment for relationship abuse trauma, as well as prevention and invention services for abusive relationships.

E. Given that our results suggest that partner age gaps, *not* younger partner age, are associated with greater health risks, programming and laws designed to reduce negative sexual health

outcomes and partner victimization among adolescents might be most effective if focused on age gaps between partners. Results call into question many statutory rape laws across the U.S. that still define sexual activity with youth as illegal based solely on the younger partner's age (e.g., "age of consent" laws). Instead, results support movements toward laws that take into consideration partner age gaps**.**

F. Results provide evidence in favor of considering older partners' involvement in substance use and delinquency when determining whether to prosecute in cases of statutory rape, given that older partners' risky lifestyles helped to explain links from partner age gaps to emotional, physical, and sexual abuse.

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

A. A caveat on our finding of high concordance between victimization and perpetration is that our data is all self-report from teens reporting about their own *and* their partners' dating abuse. Therefore, our data is prone to memory and reporting bias, and high concordance between victimization and perpetration may be an artifact of the study design. Future research into patterns of victimization and perpetration may be aided by gathering data from *both* partners. Such information will aid more nuanced research into different typologies of teen dating violence (e.g., Johnson, 1995). For instance, some couples may engage in egalitarian (though still unhealthy) fighting, while for others there is really one perpetrator and the other partner's abuse scores reflect self-defense. If this is the case, these different typologies may come with varying risk and protective factors as well as trajectories.

B. Although this study provides strong evidence for stability of abuse across multiple relationships, we do not know how to help youth break away from an abusive relationship trajectory or encourage them to seek help for these negative relationships. Importantly,

although the Conflict Tactics Scale-2 (Straus et al., 1996) is a commonly used measure in intimate partner violence research, it is a quantitative measure that only records *how many times* a particular abusive act was received or perpetrated within a relationship. However, the CTS-2 provides no information about what happened before or after the abusive episodes, whether the teen was frightened or upset by the abuse, whether an act of perpetration was viewed as self-defense, whether there was a mismatch in power, etc. In order to address why abuse tends to persist across relationships and how we can help youth end this cycle, future research needs to focus on *context surrounding abusive incidents*, definitions, and help seeking related to abuse, which means qualitative questions or novel quantitative measures designed to get at the context of an abusive act and teens' interpretation of that violence.

C. Because the CTS-2 asks how many times a particular act *ever* occurred within a particular relationship, another limitation of the study is that we have no data on the trajectory of dating abuse *within* relationships. In order to explore abuse trajectories *within* relationships rather than merely across relationships, more longitudinal research with short gaps between waves—on the order of one wave a month—is needed to explore temporal patterns of abuse within relationships.

D. Although Project D.A.T.E. is a longitudinal study, a current limitation is that only two waves of data have been collected. Future research into teen dating abuse should include multiple waves of data collection to allow for mediation analyses to explore potential explanatory mechanisms leading to dating abuse, as well as to explore long-term outcomes of teen dating abuse (such as job satisfaction, educational attainment, parenting, etc.). In addition, longer-term longitudinal research capturing teens' transition from adolescence to young adulthood can help us understand how developmental trends (such as an age-related desistance from

delinquency; e.g., Farrington, Ttofi, & Coid, 2009) relate to changes or stability in partner abuse.

E. This study indicates the need to further explore how teens make and maintain *positive* romantic relationships. Particularly, the ties between intimacy (e.g., how long the relationship is, how serious teens view their relationships) and dating abuse cast doubt on how emotional closeness can be considered a positive outcome at all. Future research needs to explore emotional closeness in a more complex way to aid understanding of how at-risk youth form healthy relationships that protect against dating abuse.

F. This study identified age gaps as a more important factor for poor health outcomes than the young age of the adolescent partner, but to better inform statutory rape policies and laws, future research is needed to determine the age gap cutoffs that are most strongly related to negative health outcomes. Today, states vary largely in how they define illegal versus legal sexual relationships for teens, and very little methodologically rigorous research exists to help states approach consensus about the contexts under which youth are competent to consent to sexual activity.

FINAL REMARKS

Overall, this study contributes in many theoretical and practical ways to the literature on adolescent romantic relationship outcomes, providing insight into the many individual, family, peer, and relationship-level factors that place adolescents at-risk for experiencing abuse within a single romantic relationship and across relationships. Although there are many more important questions that can be tested using the Project D.A.T.E. data, these initial results highlight a few clear overarching messages. First, studying romantic relationships among at-risk teens appears to have real practical value. Low-income, service receiving adolescents demonstrated high rates of

abuse in their *earliest* relationships, and then continued to be significantly at risk for abuse in subsequent relationships. Thus, there is a clear need for prevention and intervention efforts targeting low-income, service receiving youth. The use of early screenings and prevention or remedial programming in service organizations targeting at-risk youth might help to identify and treat partner abuse at an early age. Second, despite high rates of abuse, at-risk youth also rated their romantic relationships as being positive in many ways, for example they were highly satisfied with the relationships, rated them as very serious, and remained in the relationship for long periods of time. Focusing on the quality of relationships as a whole rather than simply screening for the presence or absence of abuse might be a more effective intervention approach, as youth do not seem to perceive their relationships dichotomously as "good" or "bad" based upon the presence of abuse alone.

As such, initial Project D.A.T.E. findings have provided insight into valuable future research pathways, specifically suggesting that further investigation into the *context* surrounding relationship abuse is imperative. Obtaining better information concerning the events preceding and following violent incidents, as well as the perspective of *both* partners within the dyad, would provide necessary depth to our understanding of how youth perceive teen dating abuse. This has direct implications for teens' help-seeking behavior, as teens' perceptions of and experiences with teen dating abuse may diverge from common language used to describe relationship abuse among service providers, police, and the legal system. Indeed, individuals will not seek help for an abusive relationship if they do not perceive a problem (Foshee, 1996). The next steps for Project D.A.T.E. are to better understand to whom youth turn for help, when they seek help, and how they define and perceive teen dating abuse so as to better know how to encourage help seeking behaviors in both victims and perpetrators of abuse.

Chapter 1: Introduction to Project D.A.T.E.: Demand Appreciation, Trust, and Equality

STATEMENT OF THE PROBLEM

Most youth learn to initiate, maintain, and dissolve romantic relationships during mid-to-late adolescence, and these experiences are important for adolescents' development (Collins, 2003). Positive relationships during adolescence provide youth with opportunities to develop and practice the skills needed for healthy adult relationships and have been associated with a number of positive health outcomes (Karney, Beckett, Collins, & Shaw, 2007). In contrast, negative experiences within the context of romantic relationships – including violence and victimization – have been shown to have negative short- and long-term effects on adolescents' health and functioning. For example, teens who experience dating violence are more likely to suffer from depressed mood, suicidal thoughts, drug use, and to experience negative academic outcomes such as poor grades or failure to graduate (Ackard, Eisenberg, & Neumark-Sztainer, 2007; Banyard & Cross, 2008; Ackard & Neumark-Sztainer, 2002; Roberts, Klein, & Fisher, 2003). Violence and abuse within adolescent relationships have also been linked with a host of concerning sexual behaviors, such as earlier sexual debut, unwanted or less wanted sex, and unprotected sex (Alleyne, Victoria, Crown, Gibbons, & Vines, 2011; Manlove, Ryan, & Franzetta, 2004; Walton et al., 2010). Finally, youth who experience violence within the context of their romantic relationships may also be more likely to experience intimate partner violence as adults (Gómez, 2011; Smith, White, & Holland, 2003).

Given the potential severity of the consequences of teen dating abuse, research delineating adolescents' trajectories into and out of violent relationships is important for developing effective prevention and intervention programs to promote healthy conflict resolution and negotiation within teenage relationships. Despite the growing body of literature on

adolescent dating abuse, recent reviews (e.g., Lewis & Fremouw, 2001; Vèzina & Hèbert, 2007) and program evaluations (e.g., Hickman, Jaycox, & Aronoff, 2004) have suggested glaring gaps in our knowledge. Moreover, the majority of what we know about adolescent dating violence stems from research conducted with school-based samples or college students, often leaving out youth who are on an at-risk trajectory and most likely to experience negative relationship outcomes (Hickman, et al., 2004). The purpose of Project D.A.T.E. (Demand Appreciation, Trust, and Equality) was to provide insight into four gaps in current research on adolescent romantic relationships, particularly focusing on outcomes among low-income, at-risk adolescents between the ages of 13 and 18. Specifically, chapters 2 through 5 of this report contribute to past literature on adolescent romantic relationships by examining: (1) what risk and protective factors are related to teen dating abuse and positive relationship outcomes? (2) what risk and protective factors are associated with experiencing and perpetrating abuse *across* relationships, and do early abusive relationships increase the likelihood youth will continue to experience and perpetrate abuse in future relationships? (3) how are relationship-level characteristics associated with relationship abuse? and (4) are adolescents at greater risk for victimization and negative reproductive health outcomes if they date older partners, and if so, why?[†]

LITERATURE REVIEW

Although the focus on *teen* dating abuse is relatively new within psychology (Adelman & Kil, 2007), research has burgeoned in the last 15 years and reveals some consistent findings.

[†] A note on terminology: The terms "violence" and "abuse" sometimes connote meanings that are overlapping and other times divergent, depending on the common vernacular of the audience. We have found that, while some practitioners use the term "violence" to mean severe and "abuse" to mean less severe physical violence, others use the term "abuse" to convey a relationship defined through power and coercion. The academic literature is similarly unclear, with most papers using the terms interchangeably (e.g. Mulford & Giordano, 2008; Halpern, Oslak, Young, Martin, & Kupper, 2000; Roberts & Klein, 2003). In this report, we have selected the term "abuse" as it is a more consistent descriptor for our outcomes (i.e. emotional and sexual abuse).

First, dating violence is a common problem in adolescent relationships and is a serious health concern in the United States. The Centers for Disease Control and Prevention estimate that approximately 10% of students in grades 9-12 across the U.S. have experienced physical dating violence in the past 12 months, with those estimates nearing 19% in some localities (Centers for Disease Control and Prevention, 2010). When verbal or emotional abuse is included, nearly one in four adolescents report having experienced dating violence, and 8% report experiencing sexual dating violence (Foshee et al., 1996). Research also consistently demonstrates that boys and girls report being victims and perpetrators of teen dating abuse, and quite often dating violence is reciprocal within adolescent relationships (Foshee, 1996; Foshee et al., 1996; Malik, Sorenson, & Aneshensel, 1997). As a result, the need for gender-inclusive models of teen dating abuse is now well recognized (Dixon & Graham-Kevan, 2011; Pepler, 2012). Many researchers are beginning to advocate for the use of developmental and ecological models to examine how multiple-level (e.g., individual, family, peer) risk and protective factors impact whether youth develop, or fail to develop, the capacity for healthy romantic relationships as they transition throughout adolescence and into adulthood (Connolly & McIsaac, 2011; O'Leary & Smith Slep, 2012; Pepler, 2012).

Despite these initial consistent messages emerging from research on teen dating abuse, there is much to be learned about how and why some youth experience positive, health-promoting relationships in adolescence whereas others become involved in unhealthy, oftentimes violent relationships. The current study, Project D.A.T.E., was developed to address four gaps in existent literature on teen dating abuse. First, much research on teen dating abuse has focused on adolescents recruited from high schools or nationally representative samples and the majority of research has examined college samples (Hickman, et al., 2004). As a result, researchers,

practitioners, and policy makers know very little about the development of dating violence for youth who are already on an at-risk trajectory as they initiate dating relationships in adolescence. In order to address this gap, Chapter 2 of this report presents results from Project D.A.T.E. examining risk and protective factors associated with both (a) *unhealthy* relationship outcomes, namely victimization and perpetration of partner abuse, and (b) *healthy* relationship outcomes, namely negotiation and caring, among a sample of low-income, service receiving adolescents.

Next, research has demonstrated that once youth experience dating violence in one relationship, they are at increased odds for victimization in future romantic relationships (Smith, White, & Holland, 2003). However, not *all* youth experience violence in subsequent relationships. Unfortunately, little empirical research has investigated risk factors for recurrent victimization and perpetration of partner violence over the course of adolescence. One study suggests that the more risk factors youth display, the more likely they are to experience a continuity of violence across relationships (Williams, Connolly, Pepler, Craig, & Laporte, 2008). Thus, Chapter 3 of this report explores risk and protective factors associated with involvement in *multiple* abusive relationships and examines trajectories of abuse across youths' relationships.

Third, after reviewing 61 empirical articles on romantic relationship victimization among young women between ages 12 and 24, Vèzina and Hèbert (2007) noted the paucity of research investigating how relationship contexts might influence the quality of youths' romantic relationships. To address this, we tested how various relationship-level characteristics (e.g., seriousness, sexual activity, relationship length, involvement in substance use and delinquency during the relationship) relate to dating abuse and victimization for at-risk youth. Chapter 4 not only examines which relationship-level qualities might be associated with relationship abuse among at-risk teens in our sample, but also expands the current literature by asking which

qualities matter *most*. Chapter 4 explores both intimacy characteristics and deviant relationship contexts to examine which type of relationship context is most associated to various subtypes of abuse.

Fourth, this research addresses recent calls for examining how intimate involvement with older partners might relate to poor functioning and development among high-risk adolescents (Hines & Finkelhor, 2007; Vèzina and Hèbert, 2007). Research has documented that adolescent girls who date older partners are at increased risk for early sexual involvement, unwanted or forced sex, decreased contraceptive use, teenage pregnancy, contraction of STDs, and externalizing behaviors such as substance use and delinquency (Begley, Crosby, DiClemente, Wingood, & Rose, 2003; Manlove, Moore, Liechty, Ikramullah, & Cottingham, 2005; Mezzich, Tarter, Giancola, Lu, Kirisci, & Parks, 1997; Young & d'Arcy, 2003). Adolescents on an at-risk trajectory are at great risk for becoming involved with older partners, perhaps because older romantic partners might fulfill the role of financial and emotional caretaker (see Hines & Finkelhor, 2007). Surprisingly, the relationship between partner age differences and experiencing violence in relationships has seldom been explored, particularly among boys, and very little is known about *why* dating older partners might matter. Chapter 5 summarizes findings from Project D.A.T.E. examining links from partner age gaps to victimization by partners and negative sexual health outcomes. Project D.A.T.E. findings contribute to the literature by not only demonstrating a link between age gaps and health risks, but also investigating *why* partner age differences might relate to dating abuse, testing whether age gaps continue to matter after accounting for younger partner age, and investigating whether both boys and girls experience negative outcomes in relationships with older partners.

METHOD

Participants:

Participants included 223 adolescents (57.8% female). To be included, participants had to meet the following three eligibility criteria: (1) were between 13 and 18 years old, (2) answered yes to "Have you ever 'dated someone' or been in a romantic relationship that lasted at least 1 month?", and (3) participated in community-based services (e.g., foster care or alternative schooling) and/or received low-income services (e.g., free or reduced lunch or low-income housing). Participants self-identified as African American (61.4%), Caucasian (21.5%), Bi-racial/Multi-ethnic (13.5%), Latina/Latino (2.5%), and other (1.1%). The demographics of our sample are roughly consistent with those of service-receiving youth in the community (City of Charlottesville, 2006). Low-income, service receiving participants were selected so as to examine romantic relationship outcomes specifically for the youth who are at-risk for negative experiences and thus, the primary targets of prevention and intervention programs. Indeed, participants reported high levels of psychosocial risk. The majority of teens, 66.5%, met the service-involvement criteria due to involvement in the local Department of Juvenile Justice (DJJ), Department of Social Services (DSS), community-based programs serving predominately DJJ or DSS involved youth, or alternative schooling. Another 19.5% were involved in afterschool programming targeting at-risk youth, and the remaining 14% were involved in services for low-income families, such as low-income housing. The sample is predominately low-income, with 86.1% reporting they received free or reduced lunch at the time of the interview. Living arrangements at the time of data collection were diverse: 30.9% with biological mother only, 15.2% with biological mother and mother's partner, 12.1% with biological mother and biological father, 9.4% with foster parents, 4.5% in a group home, 3.1% with biological father and father's partner, 2.7% with biological father only, and the remaining 22.0% with an

"other" living arrangement which most often included aunts, uncles, grandparents, sisters, and/or friends. See Table 1.0 for more demographic information.

Table 1.0: Demographic Characteristics Reported During the First Project D.A.T.E. Interview

	Total Sample N = 223		Boys N = 94		Girls N = 129	
	M (*SD*)	%	*M* (*SD*)	%	*M* (*SD*)	%
Age	16.44 (1.61)		16.27 (1.57)		16.57 (1.64)	
13 years old		9.0		8.5		9.3
14 years old		15.7		19.1		13.2
15 years old		12.6		11.7		13.2
16 years old		19.7		23.4		17.1
17 years old		23.8		25.5		22.5
18 years old		19.3		11.7		24.8
Ethnicity						
Caucasian		21.5		22.3		20.9
African American		61.4		58.5		63.6
Bi or multi-ethnic		13.5		18.1		10.1
Latino/Latina		2.5		0.0		3.9
Other		1.1		1.1		1.6
% ever had option of free lunch		86.1		87.2		85.3
Number of adults living with youth	1.86 (0.88)		1.84 (0.84)		1.88 (0.91)	
1 adult		36.6		36.4		36.8
2 adults		46.0		44.3		47.2
3 or more adults		16.9		18.1		16.0
Living Arrangement						
Both biological parents		12.1		14.9		10.1
Biological mother		30.9		27.7		33.3
Biological mother and her partner		15.2		16.0		14.7
Biological father		2.7		3.2		2.3
Biological father and his partner		3.1		3.2		3.1
Foster parents		9.4		8.5		10.1
Group home		4.5		6.4		3.1
Other (relatives, friends)		22.0		20.2		23.3
Interaction with Parents						
% biological mother considered mother figure		70.9		77.7		65.9
% talks to biological mother almost everyday		72.2		70.2		73.6
% biological father considered father figure		54.2		55.8		53.0
% talks to biological father almost everyday		26.7		29.0		25.0
Maltreatment History						
% self-reported neglect by adult caregivers		86.1		90.4		82.9
% self-reported physical abuse by adult caregivers		58.7		71.3		49.6

Procedures:

To recruit at-risk teens, the Project D.A.T.E. research team collaborated with a number of local agencies that provide services to at-risk adolescents in and around Central Virginia, including the Virginia Department of Social Services, the Virginia Department of Juvenile Justice, alternative schooling programs, and multiple low-income housing developments. Some service providers screened adolescents for eligibility, and provided the research team with guardian and participant contact information for eligible and interested participants. Other service providers distributed flyers to adolescents, which described the study as a research project concerning the best and worst parts of teen dating. Flyers were explicit regarding two of the three criteria for selection into the study. Specifically, that youth (1) were between the ages of 13 and 18 years old, and (2) answered 'yes' to the question, "Have you ever dated someone or been in a romantic relationship that lasted one month or longer?" The third criterion, that youth received community services and/or free or reduced lunch, was not included on flyers provided by service agencies to youth, as those youth were sure to meet that criterion. Flyers were also distributed broadly in the community (handed out door to door in low-income housing areas, as well as posted in the windows of surrounding businesses). Community flyers included a third criterion that stated, "Do you receive free lunch at school?" Youth then decided on their own whether or not to contact the research team, at which point they were screened for eligibility by a Project D.A.T.E. team member and could choose to schedule an interview. As the study progressed, participants started to refer their service-receiving peers.

Youth eligible to participate in Project D.A.T.E. completed two, 2-hour in-person assessments that took place about a year apart. Wave 1 data collection began in the spring of

2010 and continued for approximately 15 months. Wave 2 data collection took place between 12 and 23 months after the initial interview, with 94.3% taking place within 13 months after the first interview. Of those who participated in wave 1, 94.6% (n = 211) agreed to participate in wave 2. At both the first (wave 1) and second (wave 2) assessments, participants chose the location of their interviews, most of which took place in participants' homes, a friend's home, or somewhere else in the community (e.g., a library, park). Interviewers were graduate students or advanced undergraduate students who received extensive training prior to conducting interviews. Training included: (1) observing two interviews conducted by a more experienced interviewer, (2) conducting a supervised interview, and (3) participating in weekly debriefing meetings where interviewers had the opportunity to discuss any concerns, receive input from fellow interviewers, and ensure consistency in interview style and administration. Interviewers were always gender-matched to the adolescents being interviewed in an effort to make participants feel comfortable.

As part of each self-report assessment, participants were first asked about basic socio-demographics, including family and school experiences. The majority of each interview, however, was focused on participants' experiences within up to three romantic relationships. Using a Life History Calendar, participants were asked to think back to the start and end dates (month, year) of up to three romantic relationships that lasted a month or longer. If they reported dating more than three partners, they were asked to tell the interviewer about the current or most recent relationship and the two relationships they considered to be the most "memorable" because of really bad or really good things that happened during them. The majority of the interview was then spent answering questions specific to each romantic relationship.

Prior to each interview, adolescents provided written assent and a parent or guardian provided written consent for all participants under age 18. Those participants aged 18 or older

provided written consent. In exchange for their time, participants received a $50 gift card at each interview. Project D.A.T.E. was approved by the University of Virginia IRB, Virginia Department of Social Services IRB, and Virginia Department of Juvenile Justice IRB. A Privacy Certificate was approved from NIJ to ensure participants' confidentiality and protect against any use of the data, including court subpoena.

Measures:

The assessments administered during wave 1 and wave 2 interviews are summarized in Table 1.1. When possible, we measured constructs using assessment tools that have been shown to be valid and reliable in past literature. More information about the measures (e.g., exact question wordings, descriptive statistics) can be found in the Project D.A.T.E. data archival. As demonstrated in Table 1.1, most measures demonstrated acceptable to good reliability within this at-risk sample (see Cronbach's alphas, where higher numbers indicate better scale reliability). Prior to all analyses described in Chapters 2 through 5, variables were checked for normality assumptions, and when necessary, variables were transformed (most often using log-transformations) and/or outlier cases were trimmed.

Table 1.1: Project D.A.T.E. Measures at Wave 1 and Wave 2

	Measure Title	Measure Description	Waves Used and Rationale for Inclusion/Exclusion (when applicable)	Sample Items and Scale	Citation and Alphas
			Socio-Demographic Variables		
1.	Sex	Reported gender of the participant.	Waves 1 and 2.	*Report Sex of Participant* **Scale**: Raw	Developed by PI
2.	Age of participant at Wave I	Reported the age of the participant at Wave 1 of the study.	Wave 1.	*Report Age of Participant at W1* **Scale**: Raw	Developed by PI
3.	Religiosity	Assessed the participants' level of religious devotion.	Waves 1 and 2. Assessed at both waves to account for possible changes over time.	*How religious do you currently think of yourself?* **Scale**: 1: Not at all religious; 5: Extremely religious	Developed by PI

4.	Family Affluence Scale	Developed to measure affluence of participants' families. For youth who lived in multiple homes or residential placements, they were instructed to answer in regards to the family they had lived with the longest over the past year.	Wave 2. This scale was added at wave 2 as a more sensitive measure of family income, to supplement wave 1 socio-demographic questions limited to receiving free/reduced lunch at school.	*How many vehicles (e.g. cars, vans, trucks) does your family own?* **Scale**: Raw coded as 0: None; 2: Two or more *During the past 12 months, how many times did you travel away on vacation with your family?* **Scale**: Raw coded as 0: Not at all; 3: More than 2 times *How many computers does your family own? (Count iPads and netbooks.)* **Scale**: Raw coded as 0: None; 3: More than 2 *How many bedrooms are in your home?* **Scale**: Raw *Do you have your own bedroom for yourself?* **Scale**: 0:No; 1: Yes	Boyce, W., Torsheim, T., Currie, C., &Zambon, A. (2006); Currie, C., Malcho, M., Boyce, W., Holstein, B., Torsheim, T., & Richter, M. (2008) Alphas: Wave I: N/A Wave II: .75

School Level Variables

5.	Behavioral Engagement subscale	Assessed for effort, attention, and persistence while initiating and participating in learning activities.	Waves 1 and 2. Assessed at both waves to account for possible changes over time.	*I try hard to do well in school; I pay attention in class; In class, I work as hard as I can.* **Scale**: 1: not at all true, 4: very true	Ellen A. Skinner, Thomas A. Kindermann, and Carrie J. Furrer. (2009) Alphas: Wave I: .77 Wave II: .78
6.	Behavioral Disaffection subscale	Evaluated lack of effort and withdrawal from learning activities while in the classroom.	Waves 1 and 2. Assessed at both waves to account for possible changes over time.	*When I'm in class, I just act like I'm working; I don't try very hard in school; In class, I do just enough to get by.* **Scale**: 1: not at all true, 4: very true	Ellen A. Skinner, Thomas A. Kindermann, and Carrie J. Furrer. (2009) Alphas: Wave I: .68 Wave II: .70

7.	Math Self-Concept subscale in Self Description Questionnaire II - Short (SDQII-S)	Measured academic self-concept of adolescents in relation to mathematical ability.	Wave 2. This measure was added to the school-level variables at wave 2 in order to gain a more nuanced perspective of teens' perceived academic strengths and weaknesses.	*MATH is one of my best subjects; I have always done well in MATH; I do badly on tests in MATH.* **Scale**: 1: false, not like me at all, 6: true, very much like me	Marsh, H. W., Ellis, L. A., Parada, R. H., Richards, G., & Heubeck, B. G. (2005) Alphas: Wave I: N/A; Wave II: .87
8.	Verbal Self-Concept subscale in Self Description Questionnaire II - Short (SDQII-S)	Measured academic self-concept of adolescents in relation to verbal ability.	Wave 2. This measure was added to the school-level variables at wave 2 in order to gain a more nuanced perspective of teens' perceived academic strengths and weaknesses.	*I am hopeless in ENGLISH classes; Work in ENGLISH class is easy for me; I get good grades in ENGLISH.* **Scale**: 1: false, not like me at all, 6: true, very much like me	Marsh, H. W., Ellis, L. A., Parada, R. H., Richards, G., &Heubeck, B. G. (2005) Alphas: Wave I: N/A; Wave II: .91

9.	Academic Self-Concept subscale in Self Description Questionnaire II - Short (SDQII-S)	Measured general academic self-concept of adolescents.	Wave 2. This measure was added to the school-level variables at wave 2 in order to gain a more nuanced perspective of teens' perceived academic strengths and weaknesses.	*I get bad grades in most SCHOOL SUBJECTS; I learn things quickly in most SCHOOL SUBJECTS; I am good at most SCHOOL SUBJECTS.* **Scale**: 1: False, not like me at all; 6: True, very much like me	Marsh, H. W., Ellis, L. A., Parada, R. H., Richards, G., &Heubeck, B. G. (2005) Alphas: Wave I: N/A; Wave II: .77
			Family Level Variables		
10.	Positive Childrearing subscale from Family Background Questionnaire	Assessed recollection of *positive* childrearing/parenting practices of mother and father.	Wave 1. *Measures 10-13 pertain to participants' early childhood and were therefore included only at wave 1.	*Showed you affection (for example, hugged you, said "I love you"); Showed you affection (for example, hugged you, said "I love you").* **Scale**: 0: Never happened; 3: Happened often or very often	Melchert, T. P., & Sayger, T. V. (1998). Melchert, T. P. (1998) Alphas: Wave I: .86; Wave II: N/A

11.	Child Neglect subscale from Family Background Questionnaire	Assessed recollections of childhood *neglect* by mother and father.	Wave 1. *	*Kept your home clean; Made sure you got proper medical attention (for example, took you to the doctor when you were sick, gave you medicine when you needed it, etc.); Provided proper supervision for you when he/she was absent (for example, got a babysitter)* **Scale**: 0: Never happened; 3: Happened often or very often	Melchert, T. P., &Sayger, T. V. (1998). Melchert, T. P. (1998) Alphas: Wave I: .73; Wave II: N/A
12.	Child Emotional Abuse subscale from Family Background Questionnaire	Assessed recollection of childhood *emotional* abuse by mother and father.	Wave 1. *	*Spoke to you in a very hostile, critical, or sarcastic tone of voice; Spoke to you in a very hostile, critical, or sarcastic tone of voice.* **Scale**: 0: Never happened; 3: Happened often or very often	Melchert, T. P., &Sayger, T. V. (1998). Melchert, T. P. (1998) Alphas: Wave I: .88; Wave II: N/A

13.	Child Physical Abuse subscale from Family Background Questionnaire	Assessed recollection of childhood *physical* abuse by mother and father.	Wave 1. *	*Hit, punched or kicked you.; Hit, punched or kicked you; Spanked you very strongly.* **Scale**: 0: Never happened; 3: happened often or very often	Melchert, T. P., &Sayger, T. V. (1998). Melchert, T. P. (1998) Alphas: Wave I: .75; Wave II: N/A
14.	Parental Monitoring Scale	Assessed participants' perceptions of their parents' knowledge of their activities outside of the home.	Wave 1 and Wave 2. Assessed at both waves to account for possible changes over time. At wave 2, participants were instructed to report on the past 12 months only (or since his/her last interview).	*My parent(s) (legal guardian) usually know what I'm doing after school; My parent(s) (legal guardian) know how I spend my money; When I go out at night, my parent(s) (legal guardian) know where I am.* **Scale**: 1: almost never or never, 5: almost always or always	Small, S. A. & Kerns D. (1993) Alphas: Wave I: .87; Wave II: .90

15.	Parent Communication Subscale of the Inventory of Parent and Peer Attachment	Assessed how much participants rely on their parents given certain circumstances; a measure of parental attachment.	Wave 1 and Wave 2. Assessed at both waves to account for possible changes over time. At wave 2, participants were instructed to report on the past 12 months only (or since his/her last interview).	*I can't depend on my parents to help me solve a problem; I like to get my parents' view on things I am worried about; My parents can tell when I'm upset about something.* **Scale**: 0: never true, 2: almost always true	Armsden, G.C. & Greenberg, M.T. (1987); Gullone, E. & Robinson, K. (2005) Alphas: Wave I: .828; Wave II: .86
16.	Witnessing Parental Violence	Measured the frequency that participants witnessed abuse perpetrated by or towards their parent(s).	Wave 1 and Wave 2. Assessed at both waves to account for possible changes over time. At wave 2, participants were instructed to report on the past 12 months only (or since his/her last interview).	*How many times have you seen your father get hit by a romantic partner; How often has your mother insulted or sworn at a romantic partner?* **Scale**: 1: Never; 4: 10+ times	Two questions taken from Arriaga & Foshee (2004); remaining questions developed by PI Alphas: Wave I: .804; Wave II: .919
			Peer Level Variables		

17.	Friend's Delinquent Behavior – Denver Youth Study – Revised	Assessed participants' knowledge of their friends' involvement in vandalism, violence, and drug use in the past 12 months.	Waves 1 and 2. Assessed at both waves to account for possible changes over time. At both waves, participants were instructed to report on the past 12 months only.	*In the past twelve months: How many of your friends have sold drugs; Been in a physical fight? Have carried a weapon, like a knife, gun, or brass knuckles?* **Scale**: 1: None; 4: All	Institute of Behavioral Sciences. (1987) Dahlbert, L.L., Toal, S.D. Swahn, M. Behrens, C.D. (2005) Alphas: Wave I: .812; Wave II: .842
18.	Witnessing Peer Dating Violence	Measured exposure to friends' teen dating abuse in the past 12 months.	Wave 2 Questions (2) concerning peer dating abuse were added at wave 2 after preliminary wave 1 analyses suggested the importance of peer influence in other domains (e.g. delinquency)	*In the past 12 months, how many of your friends have hit or shoved (or been hit or shoved by) a romantic partner?* **Scale**: 1: None; 4: All	Developed by PI Alpha: Wave II: N/A
			Neighborhood Variables		

19.	Negative Neighborhood subscale from Peer Delinquency – Denver Youth Study-Revised (DYS-R)	Measured the extent of negative behavior in the neighborhood of the participant.	Wave 2. Measures pertaining to participants' neighborhoods were added at wave 2 in light of emerging research suggesting the important role of neighborhood quality as it pertains to teens' risky lifestyles and dating abuse (Gover, 2004).	*In the <u>past 6 months</u>, how much of the following has been in your neighborhood? Drug dealing? Shooting? Businesses closing? Graffiti and/or vandalism?* **<u>Scale</u>**: 0: None; 2: A lot	Hadley-Ives, E., Stiffman, A. R., Elze, D., Johnson, S. D., & Dore, P. (2000) Alphas: Wave I: N/A; Wave II: .819
20.	Collective Efficacy	Designed to measure neighborhood unity and cohesion.	Wave 2. Measures pertaining to participants' neighborhoods were added at wave 2 in light of emerging research suggesting the important role of neighborhood quality as it pertains to teens' risky lifestyles and dating abuse (Gover, 2004).	*People in this neighborhood do not share the same values; People in the neighborhood can be trusted; This is a close-knit neighborhood.* **<u>Scale</u>**: 1: Strongly Disagree; 5: Strongly Agree	Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997) Alphas: Wave I: N/A; Wave II: .772
			Mental Health and Participant Perceptions		

21.	Normalcy Questionnaire	Designed to assess the extent to which participants normalize (find commonplace and/or morally acceptable) physical and emotional aggression toward a partner.	Wave 2. After preliminary wave 1 analysis, the research team found high concurrence of reported victimization and perpetration. In addition, interviewers were left with the impression that many participants considered some amount of abusive behavior standard to romantic relationships. As such, this measure was developed by the PI and research team, piloted, and ultimately employed in an effort to quantify teens' understanding of "normal" relationship aggression.	*Most couples push or shove each other sometimes; Most couples* don't *experience violence in their relationships; Sometimes, even the person you love deserves to be slapped.* **Scale**: 1: strongly disagree, 6: strongly agree	Developed by PI Alphas: Wave I: N/A Wave II: .77

22.	HANDS Depression Inventory	Used to predict the possibility that an individual has a depressive disorder that may require treatment.	Wave 2. **Measures 22-25 replaced wave 1 assessments of early childhood. Measures pertaining to participants' mental health and wellbeing were added in wave 2 to explore linkages to abuse outcomes (e.g. Banyard & Cross, 2008).	*Been feeling low in energy, slowed down?; Poor appetite?; Been feeling blue?; Had feelings of worthlessness?* **Scale**: 0: never or little of the time, 3: all of the time	Baer, L., et al. (2000) Alphas: Wave I: N/A; Wave II: .84
23.	Hope: Pathways subscale	Designed to measure participants' perceived ability to identify workable routes to goal attainment.	Wave 2. **	*I can think of many ways to get out of a jam; There are lots of ways around any problem; Even when others get discouraged I know I can find a way to solve the problem.* **Scale**: 1: Definitely False; 4: Definitely True	Snyder, C. R., et al. (1991) Alphas: Wave I: N/A; Wave II: .68

24.	Hope: Agency subscale	Designed to measure participants' perceived sustained efforts to reach their goals.	Wave 2. **	*I've been pretty successful in life; I energetically pursue my goals; I meet the goals that I set for myself.* **Scale**: 1: Definitely False; 4: Definitely True	Snyder, C. R., et al. (1991) Alphas: Wave I: N/A; Wave II: .75
25.	Satisfaction with life	Assessed participants' satisfaction with their life as a whole.	Wave 2. **	*In most ways my life is close to my ideal; I am satisfied with my life; If I could live my life over, I would change almost nothing.* **Scale**: 1: Strongly Disagree; 7: Strongly Agree	Pavot, W. & Diener, E. (1993). Alphas: Wave I: N/A; Wave II: .843
			Sexual Background		
26.	Age of Sexual Debut	Assessed the age in which participants first engaged in consensual sexual intercourse.	Waves 1 and 2. Assessed at both waves primarily to capture the age of sexual debut for participants who had not engaged in sexual activity at wave 1.	*How old were you when you had consensual sexual intercourse for the first time, if ever? Consensual means you were not forced and you agreed to have sex.* **Scale**: Raw	Developed by PI

27.	Lifetime number of sexual partners	Assessed the total number of consensual sexual partners.	Waves 1 and 2. Assessed at both waves to account for possible changes over time.	*How many people have you had consensual sex with? In your lifetime?* **Scale**: Raw	Developed by PI
			Relationship Variables		
28.	Length of Relationship	Measured the length of each of the participants' romantic relationships.	Waves 1 and 2. Assessed for each reported relationship. When participants reported breakups lasting less than one month and with no additional relationships before reconciliation, length of relationship was established as the sum of the time spent dating. If breakups were long and included dating other people, participants were asked to report the length of the most recent or current time spent dating that partner.	*How long did the relationship last?* **Scale**: Raw	Developed by PI

29.	Seriousness of Relationship (by relationship)	Assessed the level of seriousness of each relationship.	Waves 1 and 2. Assessed for every reported relationship.	*How serious was/is your relationship with this partner?* **Scale**: 1: Not at all serious; 4: Very serious	Developed by PI
30.	Partner Age Gaps	Designed to measure the age differences between partners in each relationship.	Waves 1 and 2. Assessed for every reported relationship.	*Calculated by standardizing both younger and older partner ages and then subtracting younger partner ages from older partner ages.* **Scale**: Raw	De Los Reyes & Kazdin (2004).
31.	Consensual Sexual Intercourse with Partner (by relationship)	Assessed if the participant ever engaged in consensual sexual intercourse within each relationship.	Waves 1 and 2. Assessed for every reported relationship.	*Did you ever have consensual sexual intercourse with this partner?* **Scale**: 0: No; 1: Yes	Developed by PI
32.	Use of Protection against pregnancy and/or sexually transmitted infections	Measured participants' reports of the use of protection against pregnancy and/or sexually transmitted infections within each relationship.	Waves 1 and 2. Assessed for every reported relationship.	*How often did you use protection against [pregnancy and/or] STDs/STIs with this partner?* **Scale**: 0: Never; 4: All of the Time; -9: N/A	Developed by PI

33.	Contraction of STI OR Pregnancy resulted from sexual intercourse	Measured if the participant contracted either a STI or became pregnant (or impregnated their partner) during each relationship.	Waves 1 and 2. Assessed for every reported relationship.	*Did you ever get an STD during the relationship?* **Scale**: 0: No; 1: Yes	Developed by PI
34.	Negotiation subscale from Conflict Tactic Scale	Evaluated the extent of conflict resolution and decision-making techniques within each relationship.	Waves 1 and 2. Assessed for every reported relationship, by and towards each partner.	*I showed my partner I cared even when we disagreed; I explained my side of a disagreement to my partner; My partner explained his side of a disagreement to me.* **Scale**: 0: Never; 3:10+ times	Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). Foshee, V. A., Benefield, T. S., Ennett, S. T., Bauman, K. E., & Suchindran, C. (2004) Alphas: Wave I: By Partner .77; Toward Partner .80 Wave II: By Partner .77; Toward Partner .82

Relationship Abuse Variables					
35.	Physical Abuse subscale from Conflict Tactics Scales (CTS)	***Measures 35-37 include subscales from the Conflict Tactics Scale (CTS). The CTS measures victimization and perpetration of different types of domestic violence, while excluding the attitudes, emotions, and cognitive appraisal of these behaviors. This particular subscale of the CTS measured the *frequency* of **physical abuse** perpetrated by and towards participants in every relationship at each wave of the study.	Waves 1 and 2. Assessed for every reported relationship. If participants were reporting on relationships extending from the previous interview, they were instructed to report on the past 12 months only (or since his/her last interview).	*I threw something at my partner that could hurt; My partner threw something at me that could hurt; I pushed or shoved my partner; My partner pushed or shoved me; I passed out from being hit on the head by my partner in a fight; My partner passed out from being hit on the head by me in a fight; I grabbed my partner; My partner grabbed me.* **Scale**: 0: Never; 3: 10+ times	Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). Foshee, V. A., Benefield, T. S., Ennett, S. T., Bauman, K. E., &Suchindran, C. (2004). Alphas: See table below

	Wave I	Wave II
By Partner	.86	.86
Toward Partner	.86	.86

36.	Emotional Abuse: Assessed using psychological aggression subscale from Conflict Tactics Scales (CTS) and The Safe Dates measure of Psychological Aggression (SD)	*** This particular subscale of the CTS measured the *frequency* of **emotional abuse** perpetrated by and towards participants in every relationship at each wave of the study. Additionally, emotional abuse was assessed using another measure of psychological/emotional abuse perpetrated by and towards participants. Reported alphas reflect the combination of these two measures to create a more comprehensive measure of 'emotional abuse.'	Waves 1 and 2. Assessed for every reported relationship. If participants were reporting on relationships extending from the previous interview, they were instructed to report on the past 12 months only (or since his/her last interview).	*I said things to hurt my partner's feelings on purpose; My partner said things to hurt my feelings on purpose; I threatened to start dating someone else; My partner threatened to start dating someone else; I made my partner describe where they were every minute of the day; My partner made me describe where I was every minute of the day* **Scale**: 0: Never; 3: 10+ times	CTS: Straus, M. A., Hamby, S. L., Boney-McCoy, S., &Sugarman, D. B. (1996). SD: Foshee, V. A. (1996). Foshee, V. A., Benefield, T. S., Ennett, S. T., Bauman, K. E., &Suchindran, C. (2004). Alphas: Wave I: By Partner .86; Toward Partner .86 Wave II: By Partner .87; Toward Partner .86

37.	Sexual Coercion subscale in Conflict Adolescent Dating Relationships Inventory (CADRI)	Assessed whether participants had ever perpetrated or received four different forms of **sexual abuse** in every relationship at each wave of the study.	Waves 1 and 2. Assessed for every reported relationship. If participants were reporting on relationships extending from the previous interview, they were instructed to report on the past 12 months only (or since his/her last interview).	*I kissed my partner when he/she didn't want me to; My partner kissed me when I didn't want him/her to; I touched my partner sexually when he/she didn't want me to; My partner touched me sexually when I didn't want him/her to; I threatened my partner in an attempt to have sex with him/her; My partner threatened me in an attempt to have sex with me; I forced my partner to have sex when he/she didn't want to; My partner forced me to have sex when I didn't want to* **Scale**: 0: Never; 3: 10+ times *Dichotomous Variables	Wolfe, D. A., Scott, K., Reitzel-Jaffe, D., Wekerle, C., Grasley, C., & Straatman, A. (2001). Alphas Wave I: By Partner .66; Toward Partner .48 Wave II: By Partner .59; Toward Partner .49
				Relationship Delinquency and Offending Variables	

38.	Self-Report of Offending Scale (SRO)	Measured the self-reported disclosure of engagement in antisocial behavior, in non-violent and violent offenses, for both participant and partner across relationships.	Waves 1 and 2. Assessed for every reported relationship. If participants were reporting on relationships extending from the previous interview, they were instructed to report on the past 12 months only (or since his/her last interview).	*Run away from home? ; Sell hard drugs other than pot, such as heroin, cocaine, ecstasy or others? ; Steal or try to steal a car or a motorcycle to keep or sell?* **Scale**: 0: No; 1: Yes	Elliott D.S., & Huizinga, D. (1989). Farrington, D.P., Loeber, R., Stouthamer-Loeber, M., van Kammen, W.B., & Schmidt, L. (1996) Jolliffe, D., Farrington, D.P., Hawkins, D.J., Catalano, R., Hill, K.G., & Kosterman, R. (2003) Thornberry, T.P., & Krohn, M.D. (2000). Wave I: Alphas ranged from .308 to .767, for both participant and partner, across three relationships Wave II: Alphas ranged from .280 to .808, for both participant and partner, across three relationships

39.	Substance Use Scales (SU)	Measured participants' and partners' use of substances such as cigarettes, alcohol, and marijuana.	Waves 1 and 2. Assessed for every reported relationship. If participants were reporting on relationships extending from the previous interview, they were instructed to report on the past 12 months only (or since his/her last interview).	*You were smoking cigarettes? If so, how often were you smoking? ; Your partner was smoking cigarettes? If so, how much was he/she smoking? ; You were drinking alcohol? If so, how often were you drinking? ; You were smoking weed? If so, how often were you smoking weed?* **Scale**: 0: Never; 3: 10+ days/month	Wave I: Alphas ranged from .665 to .780, for both participant and partner, across three relationships Wave II: Alphas ranged from .67 to .81, for both participant and partner, across three relationships

DESCRIPTIVE FINDINGS

During both wave 1 and wave 2 of Project D.A.T.E. interviews, participants were asked to report on up to 3 romantic relationships, and thus could have provided data on up to 6 romantic relationships total. At the first interview (wave 1), the majority of participants (78.5%) had already been romantically involved with more than 1 partner in a relationship that lasted a month or longer, but only about a quarter of the sample had been involved in four or more relationships. Specifically, 21.5% had been involved in only one romantic relationship, 33.2% in two relationships, 21.1% in three relationships, and 24.2% in four or more relationships. Only a few youth chose not to provide data on up to three of these early romantic relationship experiences. Thus, for many youth the wave 1 interview data captured *all* of their romantic relationship experiences prior to enrolling in Project D.A.T.E. The relationship characteristics for youths' "Relationship 1" presented in Table 1.2 represent adolescents' *first-ever* relationship lasting a month or longer for 74.4% of participants.

At wave 2, participants were asked to report on up to three romantic relationships since wave 1, so as to collect information about youths' transitions between their relationships throughout adolescence. Across wave 1 and wave 2, Table 1.2 shows that all participants reported on at least one relationship (as being in at least one relationship was a criterion for study inclusion), 203 participants (91.0%) reported on 2 relationships, 151 participants (67.7%) reported on three relationships; descriptive data from wave 2 are not presented in Table 1.2, but another 75 participants (33.6%) reported on four relationships, 37 participants (16.6%) reported on five relationships, and only 10 participants (4.5%) provided data on six relationships. Thus, Project D.A.T.E. data are unique within the field of research on adolescent dating abuse because

this is one of the first studies we know of to map out romantic relationship trajectories beginning, for most youth, at their *first ever* romantic relationship.

Rates and Meaning of 'Abuse' in our Sample. Our study reveals that many of these adolescents are no strangers to abusive romantic relationships. Table 1.2 demonstrates that rates of abuse in teens' early relationships were quite high, with 40.5% of participants perpetrating at least one act of physical abuse, 82.7% perpetrating at least one act of emotional abuse, and 16.4% perpetrating at least one act of sexual abuse in their earliest reported relationship. Also as part of this earliest reported relationship, 40.5% of participants were victims of at least one physically abusive act, 86.4% were victims of emotional abuse, and 30% reported experiencing sexual abuse by their partner. Girls were not just victims, but also seemed to be aggressors with respect to these violent and abusive acts as illustrated by Table 1.2 (see more details on gender differences in Chapter 2). Indeed, correlations between abuse perpetrated and received by the male versus female partner in each relationship youth reported on were high (e.g., in earliest three relationships, *r*s range from .67 to .76 for physical abuse; .85 to .86 for emotional abuse; and .55 to .74 for sexual abuse). Thus, abuse among this at-risk sample tended to be reciprocal.

Importantly, adolescents were coded as experiencing emotional, physical, or sexual abuse even if they reported that only one type of abusive act occurred at one point in time. That is to say, measures related to abuse assessed the *frequency* of each kind of incident, thus participants who endorsed one physically abusive act were coded as having experienced physical abuse within a relationship. The less serious forms of emotional (e.g., yelling at or insulting in front of others), physical (e.g., slapped, threw something at my partner that could hurt), and sexual abuse (kissed me when I didn't want him/her to) were much more likely to be endorsed than more serious forms of abuse. As shown in Table 1.2, rates of partner injury were much lower than

emotional and physical abuse rates, for example 15.9% of youth reported being injured by their first romantic partner (e.g., receiving a sprain, bruise, or cut, breaking a bone, feeling pain the next day because of a fight) and 10.5% reported injuring this partner. Worth noting, while endorsement of injury items was too low to perform gender-specific analyses, it does *not* appear to be the case that girls were the victim of more severe physical abuse in our sample. Therefore, 'abuse' in the current research is generally referring to *high rates* of *less severe* abuse that tended to be reciprocal in nature.

Nonetheless, rates of abuse and injury do appear quite high in this sample of at-risk youth relative to school-based samples of adolescents. For example, based on data from the Youth Risk Behavior Surveillance conducted nationwide among 9th through 12th grade students, only 9.4% of students reported having been hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend (Center for Disease Control, 2010). Among these low-income, service receiving teens that are already subject to significant risk for difficult transitions to adulthood, these early experiences with aggression in the context of a romantic relationship are likely to exacerbate their risk for poor developmental outcomes.

Moreover, data from Project D.A.T.E. provide further evidence for the idea that the romantic relationships of teens are not as shallow, fleeting, or inconsequential as once thought. Although there was a great deal of variation in relationship length, on average adolescents' first reported relationship lasted 9.47 months (see Table 1.2) with 45.3% of adolescents reporting the relationship lasted six months or longer and 31.4% of youth reporting their relationship lasting ten months or longer. When asked to report on the seriousness of their *earliest* relationship, 38.4% described the relationship as *very* serious and another 28.8% as *moderately* serious.

Adolescents also reported high rates of physical intimacy even during their earliest relationships, with 47.9% of boys and 42.9% of girls reporting engaging in sexual intercourse with their earliest romantic partner (see Table 1.2). In general, the at-risk youth enrolled in Project D.A.T.E. seem to be sexually experienced at a rate that is higher than their less risky peers. By the time of participants' first interview (i.e., at wave 1), 73.1% (n = 163) of participants reported having had consensual sexual intercourse with at least one person once in their lifetimes. Of 153 people who reported on age at first sex during their first interview, 20.3% engaged in sex at age 12 or younger, 20.9% at age 13, 23.5% at age 14, 17.6% at age 15, and 17.6% at age 16 or older. Thus, within this at-risk sample 64.7% of youth engaged in sexual intercourse at age 14 or younger, whereas most adolescents tend to engage in first sexual intercourse between ages 15 and 17 (Zimmer-Gembeck & Helfand, 2008).

Overall, the relatively high rates of partner intimacy, abuse, and injury within this at-risk sample document the importance of examining romantic relationship outcomes among low-income, service receiving youth. Our results suggest that these youth enter into their earliest romantic relationships at great risk for negative experiences, yet perceive these relationships quite positively. Much research has documented that poor health outcomes that tend to follow negative, particularly violent, experiences in early relationships, therefore rendering these youth at significant risk as they mature into adults (Banyard & Cross, 2008; Ackard & Neumark-Sztainer, 2002; Roberts et al., 2003). The findings presented in Chapters 2 through 5 provide numerous examples of the ways in which Project D.A.T.E. data can help to understand romantic relationship experiences among at-risk youth, the various risk and protective factors that are associated with the quality of these relationships, and how experiences within romantic relationships change as youth mature. These initial results from Project D.A.T.E. are our first

foray into the critical undertaking of better understanding why and for whom abuse occurs among at-risk youth, which is an essential step in being able to prevent, identify, and treat inter-partner abuse for adolescents most at-risk for experiencing it.

Table 1.2: Characteristics of Youths Earliest 3 Relationships – Using Data across Wave 1 and Wave 2

	Total Sample		Boys		Girls		Gender Comparison
	M (*SD*)	%	*M* (*SD*)	%	*M* (*SD*)	%	
Characteristics of Romantic Relationship 1 (N = 223, 94 boys, 129 girls)							
Participant age	13.79 (1.66)		13.78 (1.64)		13.80 (1.68)		☐
Partner age	14.65 (2.25)		14.02 (2.17)		15.12 (2.20)		☐
Age difference	0.87 (1.62)		0.24 (1.36)		1.32 (1.66)		☐
Length of relationship (months)	9.47 (11.76)		6.85 (6.76)		11.39 (14.07)		☐
% same-sex partners		2.2		2.1		2.3	
% had sex with this partner		45.0		47.9		42.9	
Physical Abuse by Partner	0.19 (0.37)		0.15 (0.30)		0.21 (0.41)		☐
% 1+ acts of abuse		40.5		36.2		43.7	
Physical Abuse toward Partner	0.18 (0.38)		0.10 (0.26)		0.24 (0.44)		☐
% 1+ acts of abuse		40.5		31.9		46.8	
Emotional Abuse by Partner	0.54 (0.56)		0.50 (0.56)		0.57 (0.56)		☐
% 1+ acts of abuse		86.4		83.0		88.9	
Emotional Abuse toward Partner	0.52 (0.57)		0.43 (0.52)		0.59 (0.60)		☐
% 1+ acts of abuse		82.7		78.7		85.7	
Sexual Abuse by Partner	0.15 (0.32)		0.16 (0.35)		0.15 (0.30)		☐
% 1+ acts of abuse		30.0		29.8		30.2	
Sexual Abuse toward Partner	0.07 (0.19)		0.08 (0.19)		0.06 (0.18)		☐
% 1+ acts of abuse		16.4		20.2		13.5	
% Injury by Partner		15.9		16.7		14.9	
% Injury to Partner		10.5		12.7		7.4	
Characteristics of Romantic Relationship 2 (N = 203, 90 boys, 113 girls)							
Participant age	14.90 (1.60)		14.81 (1.59)		14.96 (1.61)		☐
Partner age	15.70 (2.32)		14.92 (2.20)		16.32 (2.21)		☐

Age difference	0.80 (1.71)		0.11 (1.47)		1.35 (1.69)		☐
Length of relationship (months)	7.01 (7.28)		5.81 (6.19)		7.97 (7.94)		☐
% same-sex partners		2.5		2.2		2.7	
% had sex with this partner		51.5		54.4		49.1	
Physical Abuse by Partner	0.15 (0.31)		0.16 (0.27)		0.14 (0.31)		☐
% 1+ acts of abuse		41.1		45.6		37.5	
Physical Abuse toward Partner	0.16 (0.31)		0.08 (0.18)		0.22 (0.37)		☐
% 1+ acts of abuse		42.6		32.2		50.9	
Emotional Abuse by Partner	0.51 (0.54)		0.47 (0.48)		0.54 (0.58)		☐
% 1+ acts of abuse		85.6		82.2		88.4	
Emotional Abuse toward Partner	0.50 (0.51)		0.40 (0.43)		0.58 (0.56)		☐
% 1+ acts of abuse		81.2		75.6		85.7	
Sexual Abuse by Partner	0.18 (0.33)		0.20 (0.34)		0.16 (0.33)		☐
% 1+ acts of abuse		32.7		35.6		30.4	
Sexual Abuse toward Partner	0.07 (0.16)		0.08 (0.16)		0.07 (0.16)		☐
% 1+ acts of abuse		21.3		24.4		18.7	
% Injury by Partner		11.4		8.9		14.4	
% Injury to Partner		6.3		7.1		6.7	
Characteristics of Romantic Relationship 3 (N = 151, 73 boys, 78 girls)							
Participant age	15.79 (1.70)		15.75 (1.61)		15.82 (1.79)		☐
Partner age	16.62 (2.76)		15.66 (1.96)		17.51 (3.09)		☐
Age difference	0.83 (2.17)		-0.10 (1.28)		1.69 (2.47)		☐
Length of relationship (months)	5.87 (5.40)		5.15 (4.39)		6.56 (6.16)		☐
% same-sex partners		2.6		2.7		2.6	
% had sex with this partner		58.7		61.6		55.8	
Physical Abuse by Partner	0.13 (0.27)		0.13 (0.25)		0.12 (0.28)		☐
% 1+ acts of abuse		34.7		41.1		28.6	
Physical Abuse toward Partner	0.13 (0.30)		0.05 (0.11)		0.21 (0.39)		☐
% 1+ acts of abuse		34.7		23.3		45.5	

Emotional Abuse by Partner	0.42 (0.46)		0.44 (0.41)		0.41 (0.50)		☐
% 1+ acts of abuse		82.7		84.9		80.5	
Emotional Abuse toward Partner	0.40 (0.46)		0.31 (0.33)		0.48 (0.53)		☐
% 1+ acts of abuse		83.3		82.2		84.4	
Sexual Abuse by Partner	0.20 (0.43)		0.20 (0.38)		0.19 (0.47)		☐
% 1+ acts of abuse		32.0		37.0		27.3	
Sexual Abuse toward Partner	0.12 (0.30)		0.09 (0.15)		0.15 (0.39)		☐
% 1+ acts of abuse		26.0		30.1		22.1	
% Injury by Partner		4.0		6.5		5.5	
% Injury to Partner		4.5		9.1		4.1	
Note. Raw mean scores are presented. Emotional, physical, and sexual abuse were measured on a scale ranging from 0 (*never*) to 3 (*10 or more times*). ☐Denotes significance at the .05 level							

DISCUSSION AND REPORT OVERVIEW:

The Many Uses of Project D.A.T.E. Data

The Project D.A.T.E. data is unique in that they allow us to examine (a) concurrent romantic relationship experiences at two points in time (i.e., wave 1 and wave 2), (b) relative changes that might occur in youths' current or most recent romantic relationship characteristics between wave 1 and a year later at wave 2, and (c) relative changes that occur as youth transition from their chronologically *earliest* (i.e., *first ever* for nearly 75% of the sample) romantic relationships to multiple future romantic relationships. Moreover, having data on multiple relationships across adolescence allows for an in-depth examination of specific risk factors that might not occur frequently and thus are difficult to capture and examine with just a cross-sectional snapshot of adolescents' relationships. This report presents results from Project D.A.T.E. at each level of these analyses.

Specifically, to answer questions about general risk and protective factors for dating abuse and romantic partner negotiation and caring, research presented in Chapter 2 uses two levels of analysis: concurrent relationship experiences within wave 2 alone, as well as relative increases in either dating abuse or positive relationship outcomes from wave 1 to wave 2. That is, assessing the same romantic relationship outcomes across two waves of data allowed for us to control for initial levels of abuse or negotiation, and examine whether various risk and protective factors predict relative change over time. Next, the studies presented in Chapter 3 address abuse across multiple relationships in two ways: (1) by investigating the risk and protective factors associated with involvement in multiple abusive relationships, and (2) by examining how abuse in one relationship relates to abuse in subsequent relationships. These analyses take advantage of

the unique availability of romantic relationship data across multiple relationships, beginning for most (~75%) participants with the first partner they ever dated for a month or longer.

The studies presented in Chapter 4 capitalize on the two time points of data available on participants' relationship experiences to investigate whether results replicate over time. Specifically, we examined which types of relationship-specific contexts relate to abuse, and whether these same associations bear out at both waves of data. Lastly, the research in Chapter 5 provides an in-depth analysis of partner age gaps as a risk factor for poor sexual health and victimization in romantic relationships. Even among large samples of youth, age gaps between partners seem to be relatively small if only one relationship is examined. Table 1.2 illustrates this as well, i.e., across any one relationship, age gaps between partners are quite small. However, Project D.A.T.E. data allow us to look across multiple relationships and examine the relationship that involved the largest age gap between them and an older partner.

While the Project D.A.T.E. methods allow us to investigate romantic relationships in rich and novel ways, the data are not without limitations. Several key limitations exist that tend to be present in nearly all research on teen dating violence to date: (1) all data are based on self-report assessments, and (2) oftentimes youth reported retrospectively on romantic relationships that ended prior to their assessment. For example, only 52% of youth were currently dating their most recent partner at wave 1 and 62.4% were currently dating their most recent partner at wave 2. Moreover, nearly all (85.6%) youths' reports of their *earliest* romantic relationship were based on relationships that had since ended. Therefore, our data are prone to memory and reporting bias, and high correlations between participants' and their partners' involvement in abusive behaviors as well as other health risk-taking behaviors (e.g., delinquency, substance use) may be an artifact of self-report method bias. Only a few studies have examined concordance rates

between partners' reports of abuse within romantic relationships- and most often among young adults. One study conducted specifically among late-adolescent dating couples found varying levels of agreement, with a high of about 70% agreement (Schnurr, Lohman, & Kaura, 2010). Future research into patterns of victimization and perpetration may be aided by gathering data at more frequent time intervals and from both partners.

An additional limitation of the study is the lack of assessed context surrounding reported abuse experiences. The issue of measuring context is a common problem among researchers of romantic relationship abuse. To be able to compare perpetration and victimization rates to past work in this area, we administered subscales from the Conflict Tactics Scale (CTS), Conflict in Adolescent Dating Relationships Inventory (CADRI), and The Safe Dates Measure of Psychological Aggression as our primary tools to measure relationship abuse and negotiation. These inventories are commonly used, validated measures of dating abuse and romantic relationship quality (Straus, Hamby, Boney-McCoy, & Sugarman, 1996; Foshee, et al., 2004; Wolfe, Scott, Reitzel-Jaffe, Wekerle, Grasley, &Straatman, 2001; Foshee, 1996). However, they do not capture the specific context surrounding each abusive incident endorsed by the participant.

Given this larger issue in the field, we did make an effort to add context-specific questions to the protocol. While time limits prohibited adding context questions for *every* abuse item, we were able to add qualitative, contextual items after assessing abuse frequencies, for each relationship discussed at wave 2. We asked teens: *"Thinking about the different parts of your relationship that we just discussed, what do you think is the* worst *thing that your partner ever did to you?"* and similarly *"What do you think is the* worst *thing that you ever did to your partner?"* For each of the "worst things" described, we asked whether the abusive act was in

self-defense, whether either or both partners were intoxicated at the time of the incident, and whether the incident occurred privately or publicly. However, these items did not seem to adequately capture context surrounding the *most violent* episodes of teens' relationships. Instead, teens often interpreted the questions as the 'most *hurtful* thing' that each partner did to the other, and more often described incidents of cheating and lying. For instance, only 16 (21%) youth who experienced physical abuse by their partner in their current or most recent relationship reported a physically abusive act as the worst thing that their partners ever did to them. While we lack assessed context for each abusive incident, the data pertaining to abuse within each relationship (as opposed to across teens' lifetimes) provide important insight into the context of the *relationships* in which abuse may or may not have occurred. Chapters 4 and 5 focus specifically on relationship contexts related to abuse and health outcomes.

The issue of context further extends to the concern of assessing power, control, and relationship inequality, to understand whether abuse was perpetrated in an effort to control or manipulate the other partner. An important consideration here is how control may differ in adolescent versus adult romantic relationships. Unlike in many adult relationships, adolescent relationships usually do not contain elements of financial dependence or cohabitation. For example, in participants' current or most recent relationships at wave 2 (i.e. when participants were *oldest*), only 13.40% of teens reported having to financially depend on their partner at any point, and only 14.43% of teens reported cohabiting with their partner at any point. Thus, a major form of power and control present in adult relationships is, for the vast majority of teens, not even a factor in adolescent relationships. Similarly, adolescent relationships often function within a framework of supervision not present in adult relationships. In our sample, within teens' current or most recent relationship at wave 2, 27% of teens reported that they never or rarely

spent time alone with their partner. Even when teens are not actively supervised, adults are often present (e.g. are in another room in the house), and/or may be the sole means of transportation for younger adolescents to spend time with their partners. In these ways, adolescent relationships are fundamentally different than adult relationships, and typical indicators of controlling behavior may not be applicable.

Further, while we were not able to assess power imbalances or control contexts of each abusive incident, we did ask teens about their perceptions of equality or balance in regards to decision-making within the overall relationship. The vast majority of teens reported that decision-making in their relationship was divided equally. For instance, among teens' current or most recent relationship at wave 1, 69.5% of participants reported that they and their partners equally decided which friends to see and when; 62.3% said they equally initiated sexual activity; and 72.6% said that decisions of how to spend time together were divided equally. Within the teens' current or most recent relationship at wave 2, 69.01% of participants stated that they were somewhat or very satisfied at the way in which they and their partners divided decisions. This finding suggests that, based upon perceptions, very few participants felt their relationships were not equal.

Lastly, it is worth noting that abuse experiences devoid of control and coercion also have meaningful and long-lasting consequences. Understandably, practitioners and advocates who are confronted with cases of severe violence are often most concerned with this type of abusive relationship (often referred to as intimate partner terrorism (Johnson, 1995)). However, as previously discussed, even perpetrators and victims of less severe abuse are more likely to experience negative outcomes, including depression, fewer positive experiences, and delinquent behavior (Ackard, et al., 2007; Banyard & Cross, 2008; Roberts, et al., 2003; Sears & Byers,

2010). Thus, the model of abuse presented in the current research reflects important linkages to negative outcomes that can be long-lasting and alter the course of healthy development.

Despite limitations, the results presented in Chapters 2 through 5 contribute in many theoretical and practical ways to the literature on adolescent romantic relationship outcomes, providing insight into the many individual, family, peer, and relationship-level factors that place adolescents at-risk for experiencing abuse within a single romantic relationship and across relationships. Although there are many more important questions that can be tested using the Project D.A.T.E. data, these initial results highlight a few clear overarching messages. First, studying romantic relationships among at-risk teens appears to have real practical value. Low-income, service receiving adolescents demonstrated high rates of abuse in their ***earliest*** relationships, and then continued to be significantly at risk for abuse in subsequent relationships. Thus, there is a clear need for prevention and intervention efforts targeting low-income, service receiving youth. The use of early screenings and prevention or remedial programming in service organizations targeting at-risk youth might help to identify and treat partner abuse at an early age. Second, despite high rates of abuse, at-risk youth also rated their romantic relationships as being positive in many ways, for example, they were highly satisfied with the relationships, rated them as very serious, and remained in the relationship for long periods of time. Focusing on the quality of relationships as a whole rather than simply screening for the presence or absence of abuse might be a more effective intervention approach, as youth do not seem to perceive their relationships dichotomously as “good” or “bad” based upon the presence of abuse alone.

As such, initial Project D.A.T.E. findings have provided insight into valuable future research pathways, specifically suggesting that further investigation into the context surrounding relationship abuse is imperative. Obtaining better information concerning the events preceding

and following violent incidents, as well as the perspective of *both* partners within the dyad, would provide necessary depth to our understanding of how youth perceive teen dating abuse. This has direct implications for teens' help-seeking behavior, as teens' perceptions of and experiences with teen dating abuse may diverge from common language used to describe relationship abuse among service providers, police, and the legal system. Indeed, individuals will not seek help for a violent relationship if they do not perceive a problem (Foshee, 1996). The next steps for Project D.A.T.E. are to better understand to whom youth turn for help, when they seek help, and how they define and perceive teen dating abuse so as to better know how to encourage help seeking behaviors in both victims and perpetrators of abuse.

Chapter 2: Risk and Protective Factors Related to Teen Dating Abuse and Positive Relationship Outcomes

STATEMENT OF THE PROBLEM

Because teen dating abuse is a serious public health concern associated with numerous negative consequences (CDC, 2006; Raiford, Wingood, & DiClemente, 2007; Silverman, Raj, Mucci, & Hathaway, 2001), a clear understanding of the risk and protective factors associated with dating abuse is vital for the development of effective prevention and treatment programs. Risk factors that aggravate dating abuse have received the most attention in the literature, although researchers have also begun to turn their eye to protective factors that mitigate dating abuse (Pepler, 2012). However, the majority of prior research into risk and protective factors for teen dating abuse has been restricted to normative or school-based samples, rather than youth who are already on an at-risk trajectory for negative outcomes.

While reducing dating abuse in teen romantic relationships is critical, helping teens develop *healthy* (rather than merely non-abusive) relationships is also very important. Research documents that positive interactions with romantic partners in adolescence can predict healthy adulthood relationship outcomes (Karney, Beckett, Collins, & Shaw, 2007). Yet researchers have devoted comparatively little attention to determining the factors that *promote* positive romantic relationship outcomes for teens rather than *protecting* them from negative outcomes. The current study addresses gaps in past literature by examining risk and protective factors associated with both teen dating abuse and positive romantic relationship outcomes among at-risk teens.

LITERATURE REVIEW

What risk factors are associated with teen dating abuse?

Identifying risk factors associated with teen dating abuse is important to guide prevention and intervention efforts, as well as legal and public health policy. Researchers have already documented multiple risk factors associated with dating abuse. For example, child maltreatment and witnessing interpersonal violence have shown consistent and robust associations with involvement in abusive romantic relationships (Foshee, et al., 2004; Wolfe, Scott, Wekerle, & Pittman, 2001). Furthermore, increased depression and suicidal behavior in adolescents appears related to victimization within dating relationships (Ackard, et. al, 2007; Roberts, et al., 2003). Not surprisingly, Malik, Sorenson and Aneshensel (1997) found that holding attitudes conducive to dating abuse (i.e., that abuse is justified in at least some situations) has been associated with both perpetration and victimization. Sexual risk-taking, such as early sexual activity and having multiple sexual partners, also seems related to abuse in adolescent romantic relationships (Howard & Wang, 2003). Other research suggests the substance use and delinquent activity of adolescents' *peers* contributes to dating abuse (e.g., Howard, Qiu, & Boekeloo, 2003). In addition, having friends involved in abusive dating relationships is associated with abuse in one's own relationship (Foshee, Linder, MacDougall, & Bangdiwala, 2001; Foshee et al., 2004).

In sum, myriad risk factors have been linked to teen dating abuse in the research literature, at least for low-risk teens from normative samples. These risk factors span multiple domains in a teen's life, consistent with Bronfenbrenner's (1979) Ecological Systems Theory, which proposes that multiple spheres of influence, from those most proximal to those most distal from the teen, can influence development. Encouragingly, Ecological Systems Theory suggests interventions staged at various spheres of influence in a teen's life might be successful at reducing dating abuse.

What factors protect teens from dating abuse, or promote positive outcomes in adolescent romantic relationships?

Little is known about what *protects* teens from experiencing relationship abuse, and even less is known about what *promotes* healthy romantic relationships for adolescents. As awareness of the problem of teen dating abuse grows, various researchers and organizations have developed prevention programs with the goal of reducing teen dating abuse and its consequences (CDC, 2008; DeGrace & Clark, 2012; Foshee, Bauman, & Linder, 1999; Foshee et al., 2004). Although such programs have positive intent, few of their interventions for reducing dating abuse have any empirical support. Similarly, the Centers for Disease Control and Prevention have published recommendations for promoting respectful, nonviolent adolescent relationships (CDC, 2008). Their recommendations (e.g., shared decision-making, belief in your partner's autonomy) are intuitively appealing, but there is little empirical research establishing that such factors actually contribute to positive relationship outcomes among teens.

Despite the paucity of research, two factors have emerged in the literature as protective against dating abuse and promotive of positive relationship outcomes among teens: (1) positive ways of coping with stress and (2) strong social support. Regarding coping with stress, teens involved in abusive relationships are more likely to have witnessed interpersonal violence in the home or among their peers (Foshee et al., 2004), suggesting both poor models of coping in the teens' environment and higher baseline stress. Additionally, teens are more susceptible to the effects of stress than adults and are more likely to act impulsively in the face of challenging situations such as romantic partner conflict (Steinberg & Scott, 2003). If teens are able to effectively cope with the stress brought on by romantic partner conflict, they may be more likely

to choose alternative, problem-focused strategies that lead to positive outcomes rather than abusive behaviors.

In addition to coping with stress, social support is another factor research suggests might protect against dating abuse and promote positive relationship outcomes among teens. Social support might be important because caring relationships with prosocial peers and adults may encourage teens to seek help when they find themselves in an abusive relationship. Research has shown that adolescents are hesitant to seek help for problems like dating abuse due to anticipated stigmas, poor knowledge about useful resources, and poor ability to identify exactly when help may be needed (Ashley & Foshee, 2005; Baldero & Fallon, 1995). However, when teens do seek help, research suggests that they prefer informal sources like family and friends over formal sources like social services or law enforcement. Accordingly, research suggests that social support from prosocial adults, caregiver engagement in abuse prevention, and positive relationships with paternal figures might reduce abuse and promote positive relationship outcomes among adolescents (Foshee et al., 2012; Magdol, Moffitt, Caspi, & Silva, 1998).

To build upon this theory and research, we investigated whether coping styles and social support related to decreased dating abuse and increased negotiation. In addition, we investigated numerous other potential protective and promotive factors that have yet to be systematically studied among at-risk youth, including perceived parenting practices, neighborhood collective efficacy, educational self-concept, participation in religious services, dispositional hope, and satisfaction with life.

Overall, we expect risk and protective factors in our at-risk sample to be similar to those already documented among low-risk adolescents. However, higher-risk adolescents might display varying patterns and severity of these factors that can only be captured by examining a

subset of youth who are on at at-risk trajectory. Therefore, this research is important because different prevalence rates and patterns of risk and protective factors among at-risk youth might require more comprehensive or targeted approaches to prevent and intervene in abusive relationships among teens that are already at higher risk.

RESEARCH QUESTIONS

We addressed four major research questions in this chapter. First, we examined the nature of relationship abuse among this at-risk sample, testing whether relationship abuse tends to be uni- or bi-directional between partners and examined whether boys or girls are more likely to be perpetrators or victims of dating abuse. Second, we examined the relative importance of various individual, family, peer, and neighborhood level *risk* factors associated with *increased* dating abuse. Third, we examined *protective* factors associated with *decreased* dating abuse. Lastly, we examined what *promotive* factors are associated with *positive* outcomes within teen relationships, namely negotiation skills.

This chapter addresses general risk and protective factors across many domains that may be related to positive and negative relationship outcomes *within a single target relationship* (teens' most recent relationship in wave 2 of data collection). In contrast, Chapter 3 investigates risk factors for abuse across *multiple relationships*, and Chapter 4 investigates *relationship-level* risk factors only.

METHOD

Participants:

Participants included a subsample of 194 adolescents (59% female) enrolled in Project D.A.T.E. that reported having at least one romantic relationship in wave 2. This subsample was chosen specifically to examine whether proposed risk and protective factors can account for

relative changes in dating outcomes between wave 1 and wave 2 of data collection. Please refer to Chapter 1 for a more comprehensive review of the project D.A.T.E. sample and data collection procedures.

See Table 2.0 below for a brief summary of the many risk factors, protective factors, relationship outcomes, and control variables used in the analyses in this chapter. For a fuller description of each measure (including citations, alphas, and sample items), please see the complete list of study measures in Table 1.1 in Chapter 1. Table 2.0 also includes information about the waves of data collection in which each measure was administered. See Chapter 1 for a note about why particular measures were administered only at wave 1, only at wave 2, or at both waves of data collection.

For this chapter, if measures were administered in both waves, data from wave 2 was preferred and used in analyses. A majority of potential risk and protective factors were administered only in wave 2. In addition, although the risk factor of age at first sex was collected in both waves, the data from wave 2 is more informative because 33 participants (14.8% of the sample) reported having consensual sexual intercourse for the first time between wave 1 and wave 2. Participants who reported “I have never had consensual sexual intercourse” were considered missing data, since sexual abstinence carries a very different meaning in terms of risk for a 13-year-old participant vs. an 18-year-old participant (see, Kraemer et al., 1997). Therefore, since much data was available only at wave 2 and some was more informative at wave 2, wave 2 data is preferred in this chapter for consistency. Only data on childhood neglect, childhood emotional abuse, and childhood physical abuse is from wave 1, since data on these measures was collected only in wave 1. Therefore, this chapter addresses primarily concurrent risk and protective factors rather than prospective risk and protective factors.

Table 2.0: Summary of Study Measures Used in Chapter 2 Analyses, For More Details See Table 1.1in Chapter 1

Construct	Brief Description of Measure	Scoring	Assessed Wave 1?	Assessed Wave 2?	Wave Used in Ch. 2:	Modifications to Variable
		Risk Factors				
Family Background						
Witnessing Parental Relationship Abuse	Frequency of seeing mother and father figures perpetrate or receive relationship abuse	Scored 1-4 (witnessed more parental abuse)	✓	✓	Wave 2	Mean of father and mother perpetration and victimization scores; log-transformed to approach normality
Childhood Neglect	Frequency of neglect by mother and father figures	Scored 0-3 (experienced more neglect)	✓	✓	Wave 1	Mean of father and mother scores
Childhood emotional abuse	Frequency of emotional abuse by mother and father figures	Scored 0-3 (experienced more emotional abuse)	✓	✓	Wave 1	Mean of father and mother scores; log-transformed to approach normality
Childhood Physical Abuse	Frequency of physical abuse by mother and father figures	Scored 0-3 (experienced more physical abuse)	✓	✓	Wave 1	Mean of father and mother scores; log-transformed to approach normality
Self-Regulation						

Depression	Frequency of depressive symptoms in the last two weeks	Scored 0-3 (experienced depressive symptoms more often)		✓	Wave 2	Log-transformed to approach normality
Behavioral Disaffection in School	Agreement with statements describing disaffection with learning	Scored 1-4 (greater disaffection with learning)	✓	✓	Wave 2	
Social Environment						
Peer Delinquency	Proportion of friends engaging in delinquent behaviors in the past 12 months	Scored 1-4 (greater proportion of friends engaging in delinquency)	✓	✓	Wave 2	
Witnessing Peer Dating Abuse	Proportion of friends perpetrating or receiving dating abuse in the past 12 months	Scored 1-4 (greater proportion of friends engaging in dating abuse)		✓	Wave 2	Mean of perpetration and victimization scores
Negative Neighborhood Quality	Frequency of negative occurrences in neighborhood in the past 6 months	Scored 0-2 (experienced more negative neighborhood occurrences)		✓	Wave 2	

Attitudes Toward Relationship Abuse	Agreement with statements that relationship abuse is both normal and morally acceptable	Scored 1-6 (greater acceptance of normality and morality of relationship abuse)		✓	Wave 2	
Sexual History						
Age at First Sex	Participants report, "How old were you when you had consensual sexual intercourse for the first time, if ever?"	Age in years	✓	✓	Wave 2	Participants who report never having had consensual sexual intercourse are excluded; trimmed 4 values under 10 years of age to 10 (a score of 10 years of age now = "10 or younger")
Partner Age Gap at First Sex	Participants report, "How old was the person you first had sexual intercourse with?"	Standardized age gap = standardized partner's age – standardized participant's age		✓	Wave 2	Participants who report never having had consensual sexual intercourse are excluded; trimmed 1 value under 10 years of age to 10 (a score of 10 years of age now = "10 or younger")
Lifetime Number of Sexual Partners	Participants report, "How many people have you had consensual sex with in your lifetime?"	Number of partners	✓	✓	Wave 2	Trimmed 13 values over 12 to 12 (a score of 12 partners now = "12 or more partners")

Protective Factors					
Parental Monitoring	Frequency of parental monitoring behaviors in the past year	Scored 1-5 (higher frequency of parental monitoring behaviors)	✓	✓	Wave 2
Parental Communication	Quality of communication with parent teen most relies on	Scored 0-2 (higher quality communication with parent)	✓	✓	Wave 2
Coping Strategies	Preference for various coping strategies, grouped into emotion-focused coping, problem-focused coping, and dysfunctional coping	Scored 1-4 (greater preference for a particular coping strategy)		✓	Wave 2
Hope	Agreement with statements characteristic of dispositional hope	Scored 1-4 (greater hope)		✓	Wave 2
Satisfaction with Life	Agreement with statements endorsing high satisfaction with life	Scored 1-7 (greater satisfaction with life)		✓	Wave 2

Collective Efficacy in the Neighborhood	Agreement with statements about the level of social cohesion and trust in teen's neighborhood	Scored 1-5 (greater collective efficacy)		✓	Wave 2	
Academic Self-Concept	Agreement with statements about how successful teen is in school	Scored 1-6 (higher academic self-concept)		✓	Wave 2	
Relationship Outcomes						
Dyadic Physical Abuse	Frequency of physical abuse behaviors in a particular relationship (items from CTS-2)	Scored 0 -3 (more frequent abuse)	✓	✓	Wave 1 & 2	Mean of perpetration and victimization scores combined for dyadic abuse; log-transformed to approach normality
Dyadic Emotional Abuse	Frequency of physical abuse behaviors in a particular relationship (items from CTS-2 and Safe Dates)	Scored 0-3 (more frequent abuse)	✓	✓	Wave 1 & 2	Mean of perpetration and victimization scores combined for dyadic abuse; log-transformed to approach normality
Sexual Victimization	Yes/no sexual victimization in a particular relationship (items from CADRI)	1 (any sexual victimization) or 0 (no sexual victimization)	✓	✓	Wave 1 & 2	Collected as frequency of abuse, but dichotomized due to low endorsement

Sexual Perpetration	Yes/no sexual perpetration in a particular relationship (items from CADRI)	1 (any sexual perpetration) or 0 (no sexual perpetration)	✓	✓	Wave 1 & 2	Collected as frequency of abuse, but dichotomized due to low endorsement
Dyadic Negotiation	Frequency of negotiation and caring behaviors in a particular relationship (items from CTS-2)	Scored 0-3 (more frequent negotiation and caring) 3	✓	✓	Wave 1 & 2	Mean of negotiation by and toward partner scores combined for dyadic negotiation
Control Variables						
Gender		0: female, 1: male	✓	✓	Wave 2	
Relationship Length	Participants give start and end dates for relationship on a Life History Calendar	In months	✓	✓	Wave 2	Trimmed one value over 50 months to 50 (a score of 50 now = "50 or more months")
Participant age	Calculated as participants' interview date minus birth date	In years	✓	✓	Wave 2	

RESULTS

What does dating abuse look like among at-risk teens?

Victimization and perpetration were highly correlated within our sample. For participants' most recent relationship in wave 2, mean levels of physical victimization and perpetration (log-transformed to approach normality) were correlated at $r = .74$ ($p < .001$), and mean levels of emotional victimization and perpetration (also log-transformed) were correlated at $r = .88$ ($p < .001$). Due to low endorsement of sexual abuse in this sample, dichotomous sexual abuse scores rather than mean scores are considered here (i.e., none/any sexual victimization, none/any sexual perpetration). Also recall that, as explained in detail in Chapter 1, the most commonly endorsed sexual abuse items involved unwanted kissing, while unwanted sexual touching, forced sexual intercourse, and threats in an attempt to coerce sexual intercourse were rarely endorsed. With the caveat that most sexual abuse in this sample was unwanted kissing rather than more severe forms of abuse, dichotomous sexual victimization and perpetration were correlated at $\Phi = .68$ ($p < .001$).

The high concordance between physical and emotional victimization and perpetration justified averaging participants' mean scores of abuse by and toward their partner into a single measure of dyadic dating abuse within that relationship (which was then log-transformed to approach normality). Within participants' most recent relationship in wave 2, 48.5% of participants reported at least one act of physical abuse, and 91.2% of participants reported at least one act of emotional abuse. Although there was also high concordance between sexual victimization and perpetration in this sample, we analyzed sexual victimization and perpetration separately in this chapter for two reasons: (1) to conform to norms in the literature, and (2) because sexual abuse is conceptually distinct from physical or emotional abuse in terms of its

tendency to be dyadic (i.e., while a shouting match or physical fight might involve both partners, it is more difficult to imagine a scenario involving bidirectional sexual abuse between partners). Within participants' most recent relationship in wave 2, 23.2% of participants reported any sexual victimization, and 23.2% of participants reported any sexual perpetration.

Gender Differences. In their most recent relationship in wave 2, boys and girls were equally likely to report *receiving* physical, emotional, and sexual abuse, controlling for relationship length and participant age. However, girls were significantly more likely to report *perpetrating* physical and emotional abuse compared to boys at the $p < .01$ level (see Tables 2.1 and 2.2 below). Girls' reported amount of physical perpetration was .52 standard deviations above boys', and girls' reported amount of emotional perpetration was .46 standard deviations above boys'. In contrast, boys were significantly more likely to report perpetrating sexual abuse compared to girls at the $p < .05$ level (see Table 2.3 below). Boys were 2.12 times more likely to report perpetrating sexual abuse (i.e., mostly unwanted kissing) than girls.

Tables 2.1 and 2.2 also show that relationship length is consistently significantly related to physical and emotional dating abuse, such that participants who report longer dating relationships also tend to report greater levels of abuse.

Table 2.1: Associations Between Gender and Physical Abuse for Most Recent Relationship in Wave 2

	Physical Victimization		Physical Perpetration	
	Step 1	Step 2	Step 1	Step 2
Step 1				
Relationship Length	0.30***	0.31***	0.36***	0.33***
Participant Age	0.09	0.10	-0.07	-0.08
Step 2				
Participant Gender		0.11		-0.22**
N	194	194	194	194
ΔR^2		0.01		0.05**
Final model R^2	0.12***	0.13***	0.12***	0.16***

Note. Standardized beta coefficients are shown.
Female = 0, Male = 1. **p < .01, ***p < .001.

Table 2.2: Associations Between Gender and Emotional Abuse for Most Recent Relationship in Wave 2

	Emotional Victimization		Emotional Perpetration	
	Step 1	Step 2	Step 1	Step 2
Step 1				
Relationship Length	0.41***	0.42***	0.42***	0.40***
Participant Age	-0.05	-0.05	-0.08	-0.09
Step 2				
Participant Gender		0.01		-0.18**
N	194	194	194	194
ΔR^2		0.00		0.03**
Final model R^2	0.16***	0.16***	0.16***	0.19***

Note. Standardized beta coefficients are shown.
Female = 0, Male = 1. **p < .01, ***p < .001.

Table 2.3: Associations Between Gender and Sexual Abuse for Most Recent Relationship in Wave 2

	Sexual Victimization		Sexual Perpetration	
	Step 1	Step 2	Step 1	Step 2
Step 1				
Relationship Length	2.57*	2.67*	1.92	2.22
Participant Age	0.89***	0.89***	0.91***	0.88***
Step 2				
Participant Gender		1.22		2.12*
N	194	194	194	194
ΔR^2		0.01		0.02
Final model R^2	0.37***	0.38***	0.36***	0.38***

Note. Logistic regression for dichotomous sexual abuse variables. Odds ratios and Nagelkerke R^2 are presented. No significance values available for ΔR^2.
Female = 0, Male = 1. *$p < .05$, **$p < .01$, ***$p < .001$.

What are the risk factors associated with dating abuse in a single target relationship among at-risk teens?

We asked participants about multiple empirically-selected potential risk factors for teen dating abuse. As an initial investigation into which risk factors might be associated with increased dating abuse, we calculated partial correlations between potential risk factors across multiple domains and dating abuse, controlling for participant gender, relationship length, and participant age (see Table 2.4 below).

Table 2.4: Partial Correlations Between Potential Risk Factors and Dating Abuse for Most Recent Relationship in Wave 2

	Dyadic Physical Abuse	*Dyadic Emotional Abuse*	*Sexual Victimization*	*Sexual Perpetration*
Potential Risk Factors				
Family background				
Witnessing Parental Relationship Abuse	.21*	.27**	.18*	.15†
Childhood Neglect[a]	.01	.06	.00	-.10
Childhood Emotional Abuse[a]	.15†	.13	.06	.04
Childhood Physical Abuse[a]	.04	.01	.09	.00
Self-Regulation				
Depression	.31***	.35***	.16†	.19*
Behavioral Disaffection in School	.16†	.14†	.12	-.01
Social Environment				
Peer Delinquency	.24**	.17†	.05	.07
Witnessing Peer Dating Abuse	.35***	.36***	.15†	.11
Negative Neighborhood Quality	.41***	.41***	.04	.01
Attitudes Toward Relationship Abuse	.35***	.37***	.14	.10
Sexual History				
Age at First Sex	-.21*	-.24**	-.07	-.09
Partner Age Gap at First Sex	.19*	.21*	-.01	.02
Lifetime Number of Sexual Partners	.14†	.22**	.08	.06

Note. Controls include participant gender, relationship length, and participant age. Sexual victimization and sexual perpetration are dichotomous outcomes.

†$p < .1$, *$p < .05$, **$p < .01$, ***$p < .001$.

[a] Data on this risk factor from wave 1. Data on all other risk factors from wave 2.

All potential risk factors were at least marginally significantly correlated to at least one dating abuse outcome except for childhood neglect and childhood physical abuse. Given the

large number of risk factors that were significantly correlated to dating abuse (and inter-correlated with each other), we conducted a Principal Components Analysis (PCA) in order to reduce the many risk factors into a smaller number of explanatory components. PCA achieves parsimony by explaining the maximum amount of common variance among inter-correlated items using the smallest number of explanatory constructs.

A PCA with oblique rotation was conducted on the 11 significant or marginally significant risk factors shown in Table 2.4 above. Oblique rotation was selected in order to allow for correlation among the extracted components, since risk factors for dating abuse are theoretically likely to be correlated with one another. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis at KMO = .728 ("good" according to Kaiser, 1974). Bartlett's test of sphericity, $\chi^2(55) = 403.55$, $p < .001$, indicated that the correlations between items were sufficiently large for PCA. An initial analysis was run to obtain eigenvalues for each component in the data. Four components had eigenvalues over Kaiser's criterion of 1 and in combination explained 63.63% of the variance. The scree plot was slightly ambiguous and showed inflexions that would justify retaining two and four components. Given the convergence of the scree plot and Kaiser's criterion on four components, four components were retained in the final analysis. Table 2.5 shows the factor loadings after rotation. The risk factors that cluster on the same components suggest that Component 1 represents Social Environment, Component 2 represents Sexual History, Component 3 represents Family Background, and Component 4 represents Self-Regulation. Note that for Social Environment, Family Background, and Self-Regulation, a higher component score indicates greater risk of dating abuse, while for Sexual History, a lower component score indicates greater risk of dating abuse.

Table 2.5: Pattern Matrix, Principal Components Analysis of Risk Factors for Dating Abuse

	Oblimin Rotated Component Loadings				
	Social Environment	*Sexual History*	*Family Background*	*Self-Regulation*	N *for analysis*
Risk Factors					
Witnessing Peer Dating Abuse	**.82**	.04	.14	-.06	210
Attitudes Toward Relationship Abuse	**.78**	.08	-.27	.13	211
Negative Neighborhood Quality	**.69**	-.08	.14	-.12	208
Peer Delinquency	**.42**	-.33	.20	.21	210
Age at First Sex	.02	**.90**	.15	-.04	170
Lifetime Number of Sexual Partners	.01	**-.70**	.08	-.25	223
Partner Age Gap at First Sex	.04	**-.65**	.24	.33	170
Childhood Emotional Abuse	-.08	-.02	**.85**	-.06	223
Witnessing Parental Relationship Abuse	.28	-.08	**.65**	-.01	210
Behavioral Disaffection in School	.07	-.28	-.09	**-.71**	211
Depression	-.01	.23	.39	**-.65**	211

Note. Direct oblimin rotation with Kaiser normalization. Component loadings greater than .40 appear in bold.

To assess the relative contributions of these four risk components to teen dating abuse, we conducted a series of hierarchical linear regressions with the components as independent variables and dating abuse as the dependent variable. After controlling for participant gender, relationship length, and participant age, risk components were entered hierarchically in the order of least to greatest correlation with the dating abuse outcome in question. For dyadic physical abuse and dyadic emotional abuse (see Tables 2.4 and 2.5 below), each component was significantly related to dating abuse when first entered into the regression. However, in the final

step, when all components were entered into the regression, only Self-Regulation and Social Environment remained statistically significant. The full models accounted for R^2 = 37% of the variance for physical abuse and R^2 = 41% of the variance for emotional abuse. For sexual victimization (see Table 2.6 below), only Social Environment and Self-Regulation were significantly related to victimization when first entered into the regression, and only Self-Regulation remained statistically significant in the final step. For sexual perpetration (see table 2.7 below), only Self-Regulation was significantly related to perpetration. The full models accounted for Nagelkerke R^2 = 45% of the variance for sexual victimization and Nagelkerke R^2 = 39% of the variance for sexual perpetration.

In addition, after controlling for the level of dating abuse in participants' most recent relationship in *wave 1*, only Self-Regulation and Social Environment are significantly related to dyadic physical and emotional abuse in participants' most recent relationship in *wave 2*. In other words, only Self-Regulation and Social Environment were related to *relative increases* in dyadic physical and emotional abuse from wave 1 to wave 2. Similarly, only Self-Regulation was significantly related to relative increases in sexual victimization from wave 1 to wave 2; Social Environment was marginally significantly related (p = .06). No risk component was significantly related to relative increases in sexual perpetration from wave 1 to wave 2, but Self-Regulation was marginally significantly related (p = .06). See Table 2.8 below.

In sum, then, Self-Regulation and Social Environment appear to be more powerful risk components for dating abuse as compared to Sexual History and Family Background.

Table 2.4: Associations Between Risk Components and Dyadic Physical Abuse for Most Recent Relationship in Wave 2

	Dyadic Physical Abuse				
	Step 1	*Step 2*	*Step 3*	*Step 4*	*Step 5*
Step 1					
Gender	-0.04	-0.07	-0.07	-0.13	-0.10
Relationship Length	0.35***	0.36***	0.36***	0.42***	0.37***
Age	0.02	0.00	0.00	-0.02	0.02
Step 2					
Sexual History		-0.18*	-0.14	0.15*	-0.07
Step 3					
Family Background			0.17*	0.16*	0.08
Step 4					
Self-Regulation				0.26**	0.20**
Step 5					
Social Environment					0.38***
N	194	166	166	166	166
ΔR^2		0.03*	0.03*	0.06**	0.12***
Final model R^2	0.13***	0.16***	0.19***	0.25***	0.37***

Note. Standardized beta coefficients are shown.

Female = 0, Male = 1. *p < .05, **p < .01, ***p < .001.

Table 2.5: Associations Between Risk Components and Dyadic Emotional Abuse for Most Recent Relationship in Wave 2

	Dyadic Emotional Abuse				
	Step 1	*Step 2*	*Step 3*	*Step 4*	*Step 5*
Step 1					
Gender	-0.08	-0.07	-0.13	-0.19*	-0.16*
Relationship Length	0.41***	0.44***	0.42***	0.48***	0.43***
Age	-0.07	-0.10	-0.08	-0.11	-0.07
Step 2					
Family Background		0.18*	0.14	0.14	0.06
Step 3					
Sexual History			-0.18*	-0.19*	-0.11
Step 4					
Self-Regulation				0.25**	0.20**
Step 5					
Social Environment					0.36***
N	194	166	166	166	166
ΔR^2		0.03*	0.03*	0.06**	0.11***
Final model R^2	0.17***	0.21***	0.23***	0.29***	0.41***

Note. Standardized beta coefficients are shown.

Female = 0, Male = 1. *p < .05, **p < .01, ***p < .001.

Table 2.6: Associations Between Risk Components and Sexual Victimization for Most Recent Relationship in Wave 2

	Sexual Victimization				
	Step 1	*Step 2*	*Step 3*	*Step 4*	*Step 5*
Step 1					
Gender	1.45	1.27	1.40	1.45	1.10
Relationship Length	2.97*	2.91*	3.16*	2.90*	4.18**
Age	0.88***	0.88***	0.88***	0.87***	0.86***
Step 2					
Sexual History		0.83	0.88	0.97	0.92
Step 3					
Family Background			1.29	1.16	1.21
Step 4					
Social Environment				1.54*	1.43
Step 5					
Self-Regulation					1.89**
N	194	166	166	166	166
ΔR^2		0.00	0.01	0.03	0.05
Final model R^2	0.36	0.36	0.37	0.40	0.45

Note. Logistic regression for dichotomous sexual victimization variable. Odds ratios and Nagelkerke R^2 are presented. No significance values available for ΔR^2.
Female = 0, Male = 1. *p < .05, **p < .01, ***p < .001.

Table 2.7: Associations Between Risk Components and Sexual Perpetration for Most Recent Relationship in Wave 2

	Sexual Perpetration				
	Step 1	*Step 2*	*Step 3*	*Step 4*	*Step 5*
Step 1					
Gender	2.05	1.85	2.03	2.10	1.71
Relationship Length	2.05	2.01	2.17	2.06	2.74*
Age	0.89***	0.89***	0.87***	0.87***	0.87***
Step 2					
Sexual History		0.85	0.90	0.96	0.91
Step 3					
Family Background			1.33	1.26	1.29
Step 4					
Social Environment				1.27	1.18
Step 5					
Self-Regulation					1.65*
N	194	166	166	166	166
ΔR^2		0.01	0.01	0.01	0.04
Final model R^2	0.32	0.33	0.34	0.35	0.39

Note. Logistic regression for dichotomous sexual victimization variable. Odds ratios and Nagelkerke R^2 are presented. No significance values available for ΔR^2.
Female = 0, Male = 1. *p < .05, **p < .01, ***p < .001.

Table 2.8: Associations Between Risk Components and Relative Increases in Dating Abuse from Wave 1 to Wave 2

	Dyadic Physical Abuse		Dyadic Emotional Abuse		Sexual Victimization		Sexual Perpetration	
				Step 5 (Full Model)				
Step 1								
Gender		-0.05		-0.14*		0.87		1.79
Relationship Length		0.27***		0.37***		2.81		1.67
Age		0.00		0.10		0.84***		0.84***
Wave 1 Abuse		0.35***		0.27***		4.45**		12.97***
Step 2								
	Sexual History	-0.01	Family Background	0.01	Sexual History	0.93	Sexual History	1.01
Step 3								
	Family Background	0.04	Sexual History	-0.07	Family Background	1.06	Family Background	1.05
Step 4								
	Self-Regulation	0.16*	Self-Regulation	0.18**	Social Environment	1.51†	Social Environment	1.35
Step 5								
	Social Environment	0.34***	Social Environment	0.33***	Self-Regulation	1.77*	Self-Regulation	1.56†
N		166		166		166		166
Final model R^2		0.47		0.47		0.58		0.58

Note. Full model only of each hierarchical linear model shown for simplicity. Risk components are entered in order of least to greatest partial correlation with the dating abuse outcome in question, which is why the order of components in Steps 2-5 varies according to abuse outcome. Standardized beta coefficients are presented for dyadic physical and emotional abuse. Odds ratios and Nagelkerke R^2 are presented for dichotomous sexual victimization and perpetration.

Female = 0, Male = 1. $^{\dagger}p \leq .06$, $*p < .05$, $**p < .01$, $***p < .001$.

Gender Differences. Boys and girls showed similar overall levels of risk on the risk components of Social Environment and Family Background, controlling for relationship length and participant age. However, boys had significantly greater overall levels of risk on the risk components of Sexual History and Self-Regulation at the $p < .001$ and $p < .01$ level, respectively (see Table 2.9 below). On average, boys' Sexual History scores were .65 standard deviations below girls' Sexual History scores (indicating greater risk, since Sexual History is negatively correlated with dating abuse). On average, boys' Self-Regulation scores were .46 standard deviations above girls' Self-Regulation scores (indicating greater risk, since Self-Regulation is positively correlated with dating abuse).

Table 2.9: Associations Between Gender and Overall Level of Risk for Risk Components

	Social Environment		Sexual History		Family Background		Self-Regulation	
	Step 1	*Step 2*	*Step 1*	*Step 2*	*Step 1*	*Step 2*	*Step 1*	*Step 2*
Step 1								
Relationship Length	0.08	0.09	-0.02	-0.06	-0.11	-0.12	-0.25**	-0.22**
Participant Age	-0.07	-0.07	0.07	0.05	0.12	0.12	0.10	0.10
Step 2								
Participant Gender		0.00		-0.31***		-0.09		0.22**
N	166	166	166	166	166	166	166	166
ΔR^2		0.00		0.10***		0.01		0.05**
Final model R^2	0.01	0.01	0.00	0.10	0.02	0.03	0.06	0.11

Note. Standardized beta coefficients are shown.

Female = 0, Male = 1. **$p < .01$, ***$p < .001$.

Whether or not boys and girls have similar or varying overall levels of risk across the four risk components, gender might be a moderator of the relationship between risk components and dating abuse outcomes. In other words, boys and girls might show a different strength or direction of association between a particular risk component and a dating abuse outcome. We conducted a series of hierarchical linear regressions to investigate this possibility, with the controls of participant gender, relationship length, and age entered in Step 1, the risk component in Step 2, and the interaction term between participant gender and the risk component in Step 3. The outcome variables were dyadic physical abuse, dyadic emotional abuse, sexual victimization, and sexual perpetration for participants' most recent relationship in wave 2. In the majority of cases, the associations between the risk components and dating abuse outcomes did *not* differ by gender. The only exception was the Social Environment component for the dyadic physical abuse outcome (β = -0.23, p = .01, where female = 0 and male = 1). The significant interaction term indicates that girls are more sensitive to a negative social environment than boys in terms of experience dyadic physical abuse. In other words, at any given level of Social Environment risk, a girl is likely to be experiencing more dyadic physical abuse than a boy. See Figure 2.1 below for a plot of this interaction.

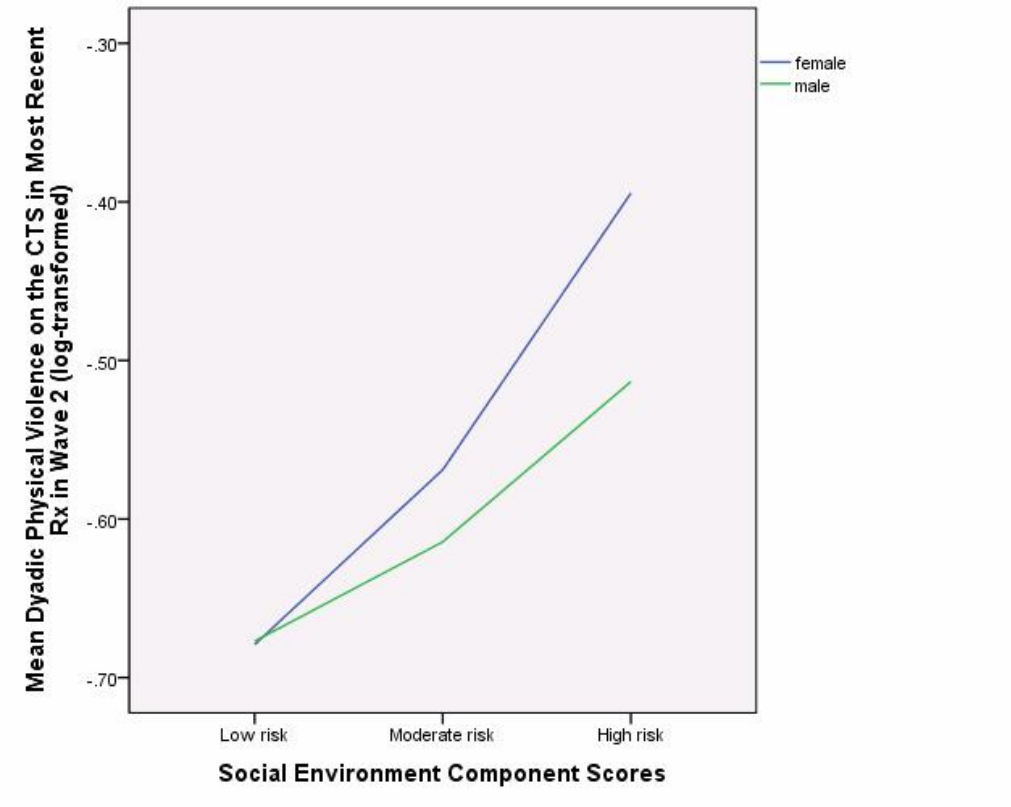

Figure 2.1: Gender as a moderator of the association between Social Environment and dyadic physical abuse

Post-hoc analyses exploring relationships among risk components. To briefly summarize, this study identified 11 separate risk factors for dating abuse that can be reduced into four components: Social Environment, Sexual History, Family Background, and Self-Regulation. Of these four components, the dynamic risk factors (Social Environment, Self-Regulation) that are currently at play in a teen's life appear to be more important than the static risk factors (Sexual History, Family Background) that are largely fixed and historical relative to a teen's current dating life. Historical risk factors may set the stage for teens' exposure to the dynamic risk factors that seem to have a more powerful direct influence on dating abuse. For example, parental dysfunction has been shown to set the stage for negative peer involvement (Dishion et al., 1991), since witnessing parental abuse can establish abusive relationship schemas for teens

that make them more likely to associate with peers involved in dating abuse. In other words, dynamic risk factors may mediate the relationship between static risk factors and dating abuse.

To investigate this possibility, we conducted mediation analyses testing whether the dynamic risk factors mediate the relationship between the static risk factors and dating abuse outcomes within a single target relationship (participants' most recent relationship in wave 2). We investigated mediation *only* for the outcomes of dyadic physical and emotional abuse, since the static risk components were not significantly related to sexual abuse (refer to Tables 2.6 and 2.7, previously presented).

In order for this proposed mediation—from static risk factors to physical and emotional abuse via dynamic risk factors—to occur, the following two prerequisites must be met (Baron & Kenny, 1986; MacKinnon, 2008):

(1) The static risk factors must be associated with the dynamic risk factors (i.e., the potential mediators). To test this, we conducted partial correlations between the static and dynamic risk factors, controlling for participant gender, relationship length, and participant age. The static risk factors were significantly associated with Social Environment ($r_{partial}$ with Sexual History = -.25, p = .001; $r_{partial}$ with Family Background = .25, p = .003). However, the static risk factors were *not* significantly associated with Self-Regulation ($r_{partial}$ with Sexual History = .05, *ns*; $r_{partial}$ with Family Background = .01, *ns*). Therefore, we can test Social Environment, but not Self-Regulation, as a potential mediator.

(2) Potential mediators must in turn be associated with dating abuse outcomes. We already established that Social Environment, the potential mediator, is indeed

associated with physical abuse and emotional abuse outcomes (refer to Tables 2.4 and 2.5, previously presented).

With these prerequisites for mediation established, we examined mediation models from the static risk factors of Sexual History and Family Background to physical abuse and emotional abuse outcomes, via the potential mediator of Social Environment (see Figure 2.2 below). Analyses were conducted in SPSS via bootstrapping using the script provided by Preacher and Hayes (2008). Results are presented in Table 2.10 below. Note that, since the indirect effects (the a x b paths) have 95% confidence intervals that do not cross zero, the indirect effects are significant at the $\alpha = .05$ level.

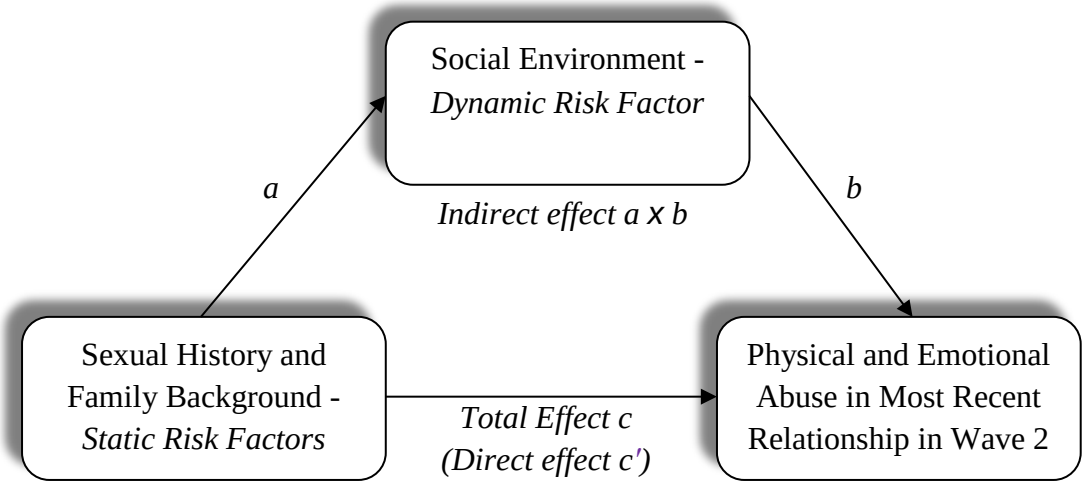

Figure 2.2: Schematic of proposed mediation from the static risk factors of Sexual History and Family Background to physical abuse and emotional abuse outcomes, via the potential mediator of Social Environment

Table 2.10: Social Environment as a Mediator of the Relationship Between Static Risk Factors and Dating Abuse Outcomes (Coefficients Correspond to Figure 2.2)

	a	*b*	*c′* (*c* total)	Indirect *B* (95% CI)	R^2
Sexual History					
Physical Abuse	-0.27**	0.11***	-0.02 (-0.05*)	**-0.03** (-0.05, -0.01)	0.31***
Emotional Abuse	-0.27**`	0.12***	-0.03 (-0.06**)	**-0.03** (-0.06, -001)	0.39***
Family Background					
Physical Abuse	0.27**	0.11***	0.03 (0.06**)	**0.03** (0.01, 0.06)	0.31***
Emotional Abuse	0.27**	0.12***	0.03 (0.06**)	**0.03** (0.01, 0.06)	0.39***

Note. Unstandardized coefficients are shown. Indirect *B*s were calculated using bootstrapping (*n* = 5,000 resamples); bias corrected and accelerated confidence intervals are reported. Bolded indirect effects indicate the 95% CI does not cross 0, thus $p < .05$. Covariates (not shown) include participant gender, relationship length, and participant age.
*$p < .05$, **$p < .01$, ***$p < .001$.

Table 2.10 reveals two main findings: First, there were significant indirect effects from the static risk factors to physical and emotional abuse via Social Environment. Thus, results were consistent with the meditational hypothesis that teens who have certain historical risk factors (e.g., witnessed parental relationship abuse, had first sex at an early age) are more likely to have a negative Social Environment (e.g., have friends involved in dating abuse, have attitudes tolerant of dating abuse), and, in turn, this association between historical risk and Social Environment explained the association between historical risk and experiencing physical and emotional dating abuse. Second, the indirect effects of Social Environment fully explained the links between historical risk and physical and emotional dating abuse, such that after accounting for Social Environment, historical risk no longer related to experiencing dating abuse (see *c′* values in Table 2.10).

What protective factors are associated with less physical, emotional, and sexual abuse among at-risk teens? What promotive factors are associated with greater partner negotiation among at-risk teens?

As with participants' reports of abusive victimization and perpetration, participants' self-reported negotiation *by* partners and *toward* partners were highly correlated within our sample. For participants' most recent relationship in wave 2, negotiation by and toward partners were correlated at $r = .83$ ($p < .001$), which justified averaging participants' mean scores of negotiation by and toward their partner into a single measure of dyadic negotiation within that relationship. The resulting dyadic negotiation variable had acceptable skew and kurtosis, so it was not log-transformed.

Among the various potential protective and promotive factors we investigated were three styles of coping with stress that are commonly studied in psychological research: problem-focused coping, emotion-focused coping, and dysfunctional coping (Carver, 1997). Problem-focused coping consists of addressing the cause of the stress in practical ways in order to directly reduce the stress (e.g., "I come up with a strategy about what to do;" "I get help and advice from other people"). Emotion-focused coping consists of trying to reduce the negative emotions associated with stress (e.g., "I say things to let my unpleasant feelings escape;" "I turn to work or other activities to take my mind off things"). Dysfunctional coping is essentially non-coping, consisting of avoidance, denial, or problem behaviors (e.g., "I refuse to believe that it has happened;" "I use alcohol or drugs to help me get through it").

As an initial step to investigate potential protective and promotive factors, we examined partial correlations between numerous theoretically-selected or exploratory factors and (1) negotiation and (2) dating abuse outcomes, controlling for participant gender, relationship length,

and participant age. As shown in Table 2.11 below, parent communication, parental monitoring, emotion-focused coping, problem-focused coping, and dispositional hope emerged as promotive factors, given their significant correlation with dyadic negotiation. In addition, social support quality, neighborhood collective efficacy, academic self-concept, and satisfaction with life emerged as protective factors, given their significant or marginally significant *negative* correlation with dyadic physical or emotional abuse. Furthermore, academic self-concept and neighborhood collective efficacy were also negatively related to sexual victimization suggesting a protective effect from being the recipient of sexual abuse. For perpetrating sexual abuse, we found a negative correlation between parental monitoring, social support quality, and academic self-concept. Emotion-focused coping and dysfunctional coping showed significant *positive* correlations with all three forms of dating abuse, meaning these coping styles are risk factors rather than protective factors for dating abuse. Note that the role of emotion-focused coping in teen romantic relationships is mixed: emotion-focused coping is related to both increased negotiation (a positive outcome) and increased dating abuse (a negative outcome).

Table 2.11: Partial Correlations Among Potential Protective/Promotive Factors, Negotiation, and Dating Abuse for Most Recent Relationship in Wave 2

	Dyadic Negotiation	*Dyadic Physical Abuse*	*Dyadic Emotional Abuse*	*Sexual Victimization*	*Sexual Perpetration*
Family and Social Support					
Parent Communication	.20**	.05	.06	.04	.02
Parental Monitoring	.16*	-.07	-.10	-.12	-.20**
Social Support Quality	.06	-.16*	-.13†	-.04	-.23**
Neighborhood Collective Efficacy	.06	-.13†	-.19*	-.18*	-.09
Education					
Behavioral Engagement	.13	-.02	-.04	-.08	-.12
Academic Self-Concept	.14†	-.13†	-.14†	-.22**	-.22**
Verbal Self-Concept	.00	-.01	.03	-.12†	-.07
Math Self-Concept	.06	-.01	-.02	-.03	-.06
Religion	.08	-.05	-.07	.01	-.08
Self-Regulation					
Emotion-Focused Coping	.23**	.17*	.22**	.21**	.11
Problem-Focused Coping	.38**	.09	.12	.11	.05
Dysfunctional Coping	.07	.27**	.30**	.13†	.26***
Hope	.26**	-.03	.01	-.07	-.05
Satisfaction with Life	.06	-.15*	-.14†	-.08	-.04

Note. Controls include participant gender, relationship length, and participant age. All data are from wave 2 of data collection.
†$p < .1$, *$p < .05$, **$p < .01$, ***$p < .001$

What promotive factors are associated with relative increases in partner negotiation over time?

Since relatively little research has examined promotive factors that lead to positive relationship outcomes for teens, we examined the promotive factors that emerged in Table 2.11 in greater detail, to determine which factors were related to *relative increases* in negotiation from

wave 1 to wave 2. To answer this question, we conducted a series of hierarchical linear regressions to test the associations between the promotive factors and partner negotiation in participants' most recent relationship in *wave 2*, after controlling for the level of partner negotiation in participants' most recent relationship in *wave 1*. In step 1 of these regressions, control variables (participant gender, relationship length, and participant age) and partner negotiation at wave 1 are entered. In step 2 of these regressions, the promotive factors of interest are entered, with a separate regression being run for each domain of functioning in Table 2.11. Step 2 in Tables 2.12 to 2.14 below indicate that relationship length is consistently significantly related to partner negotiation, such that participants who report longer dating relationships also tend to report greater levels of partner negotiation.

Tables 2.12 shows that the family-level factors of parent communication and parental monitoring are *not* related to relative increases in partner negotiation from wave 1 to wave 2. Tables 2.13 and 2.14 show that dispositional hope and problem-focused coping style are indeed related in relative increases in partner negotiation from wave 1 to wave 2. In other words, teens who were more hopeful and demonstrated an active form of coping that addresses problems directly were more likely to show increased negotiation in their romantic relationships over time. Note in step 2 in Table 2.14 that even though emotion-focused coping is significantly partially correlated to wave 2 negotiation, there is no longer a significant relationship between emotion-focused coping and negotiation once problem-focused coping is included in the model. This indicates the unique contribution of problem-focused coping to partner negotiation, over and above emotion-focused coping. This may be due to the mixed role of emotion-focused coping in teen romantic relationships, in that this coping style is related both to increased negotiation and to increased abuse.

Overall, then, dispositional hope and problem-focused coping emerge as the most powerful promotive factors related to relative increases in partner negotiation over time.

Table 2.12: Associations Between Family Factors and Relative Increases in Negotiation from Wave 1 to Wave 2

	Dyadic Negotiation	
	Step 1	*Step 2*
Step 1		
Participant Gender	.05	.08
Relationship Length	.14	.14*
Participant Age	-.14	-.11
Wave 1 Negotiation	.41***	.39***
Step 2		
Parent Communication		.09
Parent Monitor		.08
N	193	193
Step 2 ΔR^2		.02
Final model R^2	.20***	.22***

Note. Standardized beta coefficients are shown.
Female = 0, Male = 1. *p < .05, **p < .01, ***p < .001.

Table 2.13: Associations Between Hope and Relative Increases in Negotiation from Wave 1 to Wave 2

	Dyadic Negotiation	
	Step 1	*Step 2*
Step 1		
Participant Gender	.05	.06
Relationship Length	.15*	.14*
Participant Age	-.13	-.13
Wave 1 Negotiation	.41***	.38***
Step 2		
Dispositional Hope		.20**
N	193	193
ΔR^2		.04**
Final model R^2	.20***	.24***

Note. Standardized beta coefficients are shown.
Female = 0, Male = 1. *p < .05, **p < .01, ***p < .001.

Table 2.14: Associations Between Promotive Coping Styles and Relative Increases in Negotiation from Wave 1 to Wave 2

	Dyadic Negotiation	
	Step 1	*Step 2*
Step 1		
Participant Gender	.05	.10
Relationship Length	.15*	.14*
Participant Age	-.13	-.12
Wave 1 Negotiation	.41***	.35***
Step 2		
Emotion-Focused Coping		-.03
Problem-Focused Coping		.33***
N	193	193
Step 2 ΔR^2		.09***
Final model R^2	.20***	.29***

Note. Standardized beta coefficients are shown.
Female = 0, Male = 1. *p < .05, **p < .01, ***p < .001.

Post-hoc analyses: Are poor coping styles associated with dating abuse? Given the finding that problem-focused coping was a powerful promotive factor associated with relative increases in partner negotiation over time, we wanted to examine whether other, less adaptive coping styles also had powerful associations to relationship outcomes for teens. Specifically, given the association between dating abuse and emotion-focused and dysfunctional coping styles (see Table 2.11, previously presented), we wanted to test whether these less adaptive coping styles were associated with relative *increases* in physical, sexual, and emotional abuse over time. As Tables 2.15 and 2.16 shows, dysfunctional coping was indeed associated with relative increases in dyadic physical and emotional abuse over time as well as perpetrating sexual abuse, while emotion-focused coping was not. Again, dysfunctional coping may be more strongly related to dating abuse than emotion-focused coping due to the mixed role of emotion-focused coping, in that this coping style is related both to increased negotiation and to increased abuse.

This result confirms the powerful role of coping styles in teens' romantic relationships: Teens who use an adaptive coping style like problem-focused coping show relative increases in partner negotiation over time, while teens who use dysfunctional coping techniques show relative increases in dating abuse over time.

Table 2.15: Associations Between Dysfunctional Coping Style and Relative Increases in Dating Abuse from Wave 1 to Wave 2

	Dyadic Physical Abuse		*Dyadic Emotional Abuse*	
	Step 1	*Step 2*	*Step 1*	*Step 2*
Step 1				
Participant Gender	.00	.01	-.07	-.06
Relationship Length	.15*	.17*	.18**	.20**
Participant Age	-.03	-.06	-.16*	-.20**
Wave 1 Abuse	.48***	.43***	.41***	.35***
Step 2				
Dysfunctional Coping		.21**		.26***
Emotion-Focused Coping		.12		.11
N	193	193	193	193
ΔR^2		.06***		.09***
Final model R^2	.30***	.36***	.27***	.36***

Note. Standardized beta coefficients are shown.

Female = 0, Male = 1. *$p < .05$, **$p < .01$, ***$p < .001$.

Table 2.16 Associations Between Dysfunctional Coping Style and Relative Increases in Sexual Abuse from Wave 1 to Wave 2

	Sexual Victimization		*Sexual Perpetration*	
	Step 1	*Step 2*	*Step 1*	*Step 2*
Step 1				
Participant Gender	1.72	1.96	3.44*	4.44*
Relationship Length	1.03*	1.04*	1.02	1.04
Participant Age	.83***	.70***	.81***	.69***
Wave 1 Abuse	2.94	2.88	13.86***	12.05**
Step 2				
Dysfunctional Coping		1.57		5.57**
Emotion-Focused Coping		2.14		.66
N	193	193	193	193
ΔR^2		.02		.03*
Final model R^2	.74***	.76***	.77***	.80***

Note. Logistic regression for dichotomous sexual abuse variables. Odds ratios and Nagelkerke R^2 are presented. No significance values available for ΔR^2. Female = 0, Male = 1. *$p < .05$, **$p < .01$, ***$p < .001$.

DISCUSSION OF FINDINGS

Within this at-risk sample, most teens reported perpetrating and receiving similar amounts of dating abuse within a single target relationship (participants' most recent relationship in wave 2 of data collection). In other words, teens were likely to report being neither a perpetrator nor a victim of dating abuse, or being both a perpetrator and a victim of dating abuse. In addition, while boys and girls reported similar levels of victimization, girls were more likely to report physical and emotional perpetration, while boys were more likely to report sexual perpetration. These findings suggest that teen dating abuse is often reciprocal, rarely is there a clear dichotomy between perpetrator and victim, and that both boys and girls can be perpetrators of dating abuse.

We identified 11 separate risk factors for teen dating abuse across a variety of domains for our at-risk sample, all of which have been previously linked to dating abuse among normative samples in the literature. These myriad risk factors for dating abuse could be reduced to four components: Social Environment, Sexual History, Family Background, and Self-Regulation. While many prior studies with low-risk, school-based samples have found differing patterns of risk among boys and girls (e.g., Foshee et al., 2004; Foshee et al., 2001), this study is notable for finding relatively few differences in patterns of risk among boys and girls. Boys showed somewhat higher baseline levels of risk on Sexual History and Self-Regulation, while girls were more sensitive to a negative Social Environment than boys. Otherwise, though, the patterns of risk on the four components were the same among boys and girls. The general equivalence we found between boys and girls may be due to this sample's high base rates of risk and dating abuse.

Of the four risk components, the dynamic risk factors (Social Environment, Self-Regulation) that are currently at play in a teen's life appear to be more important than the static risk factors (Sexual History, Family Background) that are largely fixed and historical relative to a teen's current dating life. Strikingly, childhood neglect and physical abuse were not significantly related to dating abuse, and childhood emotional abuse was only weakly related. This finding of the relatively higher potency of dynamic vs. static risk factors accords with forensic violence risk assessment research outside of the domain of intimate partner violence (e.g., Douglas & Skeem, 2005). Specifically, the finding that Social Environment (which contains two peer-level risk factors, peer delinquency and witnessing peer dating abuse) is a more important risk factor for dating abuse than Family Background accords with developmental research emphasizing the increasing role of peers and decreasing role of parents in adolescence, particularly in contribution to delinquent or aggressive outcomes (Deutsch et al., 2012).

Mediation analyses showed that in at least some cases, historical risk factors may set the stage for greater exposure to the more potent dynamic risk factors at play in a teens' current dating life. Specifically, a poor Social Environment (consisting of peer factors, neighborhood factors, and attitudes conducive to dating abuse) fully explained the links between historical risk factors (Family Background and Sexual History) and physical and emotional dating abuse. In other words, static risk factors may put a teen at greater risk for experiencing dynamic risk factors, and these dynamic risk factors are primarily responsible for driving current relationship abuse. This interplay between static and dynamic risk factors corresponds to a state-dependence model of experiencing violence, where early negative experiences can change an individual or their social context in such a way as to make them more likely to experience violence in the future (Halpern, Spriggs, Martin, & Kupper, 2009).

We identified four protective factors that were associated with less dating abuse within a single target relationship: high-quality social support, a neighborhood with high collective efficacy, a positive academic self-concept, and high satisfaction with life. We also identified five promotive factors that were associated with greater negotiation within a single target relationship: high parent communication, high parental monitoring of teens' activities, emotion-focused coping style, problem-focused coping style, and dispositional hope about the future. Problem-focused coping and dispositional hope were the most potent promotive factors in that they were associated with relative increases in partner negotiation over time. Conversely, dysfunctional coping was associated with relative increases in dating abuse over time.

Clearly, results from this study suggest that teens' methods of coping with stress—such as the stress of partner conflict within a romantic relationship—are crucial for understanding both positive and negative outcomes in teen dating. Teens who used problem-focused coping methods (e.g., "I come up with a strategy about what to do;" "I get help and advice from other people") showed relatively more partner negotiation over time, while teens who used dysfunctional coping methods (e.g., "I refuse to believe that it has happened;" "I use alcohol or drugs to help me get through it") showed relatively more dating abuse over time. These relative increases in dating abuse suggest that teens keep relying on the same coping strategies in spite of abusive outcomes. Emotion-focused coping (e.g., "I say things to let my unpleasant feelings escape;" "I turn to work or other activities to take my mind off things") was related both to partner negotiation and to dating abuse, which suggests that this coping style is adaptive in some situations but not in others.

A next step to understanding the role of coping styles in teens' romantic relationships is pinpointing the origins and development of these coping styles. Given that, in this sample, teens

in abusive relationships were more likely to have witnessed parental partner abuse and peer dating abuse, poor prior models of coping with stress and conflict may influence the development of teens' maladaptive coping styles that lead to increased dating abuse.

IMPLICATIONS FOR POLICY AND PRACTICE

Our findings that (1) dating abuse is largely dyadic, and (2) that boys are equally likely (and in some cases, more likely) to be victims as compared to girls have important implications for dating abuse interventions. Many teen dating abuse prevention programs use language adopted from the broader adult domestic violence sphere, suggesting that power and control are necessary ingredients in an unhealthy or abusive relationship, and that men are the prototypical perpetrators and women are the prototypical victims. Although such dynamics may be at play in some teen relationships, our data suggest that a large proportion, if not the majority, of the physical and emotional dating abuse that teens experience is reciprocal. Even sexual abuse (which in this study consisted almost entirely of unwanted kissing rather than more severe forms of abuse) showed moderately high concordance between teens' reports of victimization and perpetration.

Our finding that current, dynamic risk factors (like negative peer associations and school disengagement) appear to be more strongly related to dating abuse than historical, static risk factors (like childhood maltreatment or early sexual debut) has encouraging implications for dating abuse intervention. Static factors may be used to flag high-risk teens for targeted interventions. For example, a teen reporting early first sex or many sexual partners during any contact with health professionals or social services might be screened for dating abuse. However, since static risk factors are by definition fixed and unchangeable, such historical influences do not represent a fertile domain for intervention. However, since our research suggests that

dynamic risk factors have more potent associations with dating abuse (and that, at least in some cases, dynamic risk factors mediate the relationship between static risk factors and dating abuse), these dynamic risk factors *do* represent a fertile domain for intervention (Douglas & Skeem, 2005). For example, interventions focused on reducing negative peer associations or attitudes tolerant of relationship abuse could be powerful ways to reduce dating abuse.

Our finding that teens' methods of coping with stress have strong associations with both positive and negative relationship outcomes also has implications for intervention. Research has clearly shown that adolescents have difficulty regulating themselves in stressful or emotionally charged situations. Because of poor executive functioning, adolescents tend to be more impulsive, suggestible, and likely to value short-term gains over long-term consequences (Reppucci, 1999; Steinberg et al., 2009; Steinberg & Scott, 2003). Given teens' developmental difficulties in handling stressful situations compared to adults, interventions emphasizing problem-focused coping skills (e.g., "I come up with a strategy about what to do;" "I get help and advice from other people") may be promising ways to reduce *teen* dating abuse specifically. Such interventions could teach teens to slow down and recognize possible alternative solutions to the romantic partner conflict, rather than acting impulsively while emotionally aroused.

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

As discussed in Chapter 1, one caveat is that our data are all from teens' self-report and so are prone to memory distortions and self-presentation bias. Thus, the high concordance between abusive victimization and perpetration observed in this study may be an artifact of the study design. For example, our finding that girls report perpetrating more physical and emotional abuse than boys may be influenced by boys' self-presentation concerns in admitting to abusing a girl (although much previous research has also found higher reported perpetration among girls in

school-based samples, especially for “low-level” abuse such as slapping, biting, throwing something, etc; e.g., Archer, 2002).

Another limitation is the lack of information about context or interpretation of dating abuse afforded by our outcome measures—primarily the CTS-2, but also including some items from the Safe Dates measure and CADRI. Although the CTS-2 is the most commonly used measure in intimate partner violence research, it is a quantitative measure that only records *how many times* a particular abusive act was received or perpetrated within a relationship. However, the CTS-2 provides no information about what happened before or after the abusive episode, whether the teen was frightened or upset by the abuse, whether an act of perpetration was viewed as self-defense, or whether the teen considers the act as bad treatment. Future research needs to include qualitative questions or novel quantitative measures to get at the context of an abusive act and teens’ interpretation of that abuse. Such nuanced, contextual data could guide teen dating abuse intervention programs to truly map onto teens’ lived experiences.

Along these lines, because the CTS-2 asks how many times a particular act *ever* occurred within a particular relationship, another limitation is that we have no data on the trajectory of dating abuse *within* relationships. For example, relationship length was a significant control variable in almost all analyses, with longer relationships associated with greater dating abuse (and greater partner negotiation). However, the interpretation of this finding is not immediately clear. It might be the case that dating abuse is equally likely to occur at any point in a relationship, and so a longer relationship means more opportunity for exposure to abuse. However, it might also be the case that dating abuse is less likely at the beginning of a relationship and more likely later on, or that dating abuse is associated with relationship milestones (such as having sex or breaking up) that tend to occur later in a relationship.

Furthermore, individual differences likely influence whether a teen stays in a romantic relationship once abuse occurs, further complicating the association between relationship length and dating abuse. In order to explore abusive trajectories *within* relationships rather than merely across relationships, more longitudinal research with short gaps between waves is needed. With a median relationship length of 6 months for teens' most recent relationship in wave 2, short-wave longitudinal data collection every month or several months is necessary to explore temporal patterns of abuse *within* relationships.

Finally, although Project D.A.T.E. is a longitudinal study, a current limitation is that only two waves of data have been collected. Several risk factors (e.g., witnessing peer dating abuse, depression) were only included in wave 2, and so any associations between those risk factors and dating abuse outcomes is necessarily cross-sectional. The Principal Components Analysis demonstrated how much risk factors for dating abuse tend to cluster together, yet the unidirectional and bidirectional effects of these risk factors on one another, and on dating abuse outcomes, is unclear (Douglas & Skeem, 2005). For example, depression is strongly associated with dating abuse, but it is unclear whether depression puts teens at risk for entering into negative relationships, dating abuse causes depression, a third variable (like childhood maltreatment) causes both depression and dating abuse independently, or some bidirectional combination of these possibilities. Mediation analyses (like the analyses in this chapter examining the mediating role of social environment on the associations between historical risk factors and dating abuse) can begin to tease apart the inter-correlations among risk factors to pinpoint causal risk factors ripe for intervention efforts. Ideally, mediation in observational studies will be conducted across at least three waves of data collection to establish temporal precedence among the predictor, mediator, and outcome variables (MacKinnon, Fairchild, &

Fritz, 2007). Therefore, future research into teen dating abuse should include at least three waves of data collection to allow for mediation analyses to explore potential causal mechanisms. Multi-wave longitudinal studies would also be able to explore long-term outcomes of teen dating abuse (such as job satisfaction, educational attainment, parenting quality, etc.).

Chapter 3: Which Trajectories are Associated with Experiencing and Perpetrating Abuse Across Relationships?

STATEMENT OF THE PROBLEM

While not all youth who experience abuse in one relationship go on to experience it in subsequent relationships, many do. Teens who experience abuse within the context of one romantic relationship might be more susceptible to reoccurring abuse as they transition between partners, even through adulthood (Gómez, 2011; Smith, et al., 2003). This progression of abuse is not surprising given that involvement in abusive romantic relationships is associated with a host of negative health, behavioral, and developmental outcomes (Ackard, et al., 2007). Regardless of whether these outcomes precede or are a result of the first abusive relationship, they certainly impact youth's decisions and behaviors in future relationships (Wekerle & Wolfe, 1999).

Given the long list of negative behaviors and outcomes associated with involvement in even one abusive relationship, a very valid goal for prevention and treatment programs (in addition to primary prevention) would be to help youth who have already had one unhealthy relationship avoid future unhealthy relationships. Unfortunately, little empirical research has investigated risk factors for recurrent victimization and perpetration. This study addresses this issue in two ways: (1) by investigating the risk and protective factors associated with involvement in multiple abusive relationships, and (2) by examining how abuse in one relationship relates to abuse in subsequent relationships.

LITERATURE REVIEW

Though a fair amount of research has been conducted examining risk factors for recurrent abuse in the *same* relationship (e.g., Catteano & Goodman, 2005; Sonis & Langer, 2008), there is

a paucity of research on the factors that may contribute to involvement in multiple abusive relationships, especially among adolescents. Unfortunately, many people who experience abuse in one relationship go on to experience it in another. For example, in their study of 179 abused women, Kemp, Green, Hovanitz, and Rawlings (1995) reported that 41% had experienced more than one physically violent relationship. In one of the few studies addressing multiple violent relationships among adolescents, Williams and colleagues (2008) surveyed 621 Canadian high school students and found that about 13% reported dating aggression across two different relationships. In fact, involvement in one abusive relationship may put individuals at a higher risk for involvement in future abusive relationships. For instance, Gómez (2011) found that, for men, being a victim of either mild or severe dating violence during adolescence increased their odds of both receiving and perpetrating intimate partner violence as adults. For women, severe (but not mild) teen dating violence victimization was a significant predictor of both victimization and perpetration in an adult relationship (Gómez, 2011).

For some, involvement in an abusive relationship may be an isolated incident that is preceded and/or followed by healthier relationships. For others, teen dating violence (and subsequently adult intimate partner violence) may become habitual, or at least a common experience across multiple partners. While there is no question that in order to prevent teen dating violence, it is important that research addresses those factors that predict involvement in even one incident of dating abuse. It is also valuable to know what differentiates those who go on to become involved in multiple abusive relationships from those who experience one or no violent relationship. In one study of adult women, Coolidge and Anderson (2002) found that those who had been in multiple abusive relationships had higher rates of certain personality disorders, depression, and posttraumatic stress disorder than those who had been in only one or

none. However, it is difficult to conclude whether these personality profiles were present before they had been involved in these relationships and thus may have had an effect on their choice of partners, or if involvement in multiple abusive relationships simply leads to more psychopathology. In a study of adolescents, Gray and Foshee (1997) found that youth involved in mutual dating violence had significantly more violent dating partners in the past than those who were classified as perpetrators only. Gray and Foshee (1997) hypothesized that these mutually violent adolescents have learned patterns of dealing with conflict, at least in part, from past dating experiences. Though their study looked retrospectively at past relationships, it may be that certain types of abusive relationships are more likely to be repeated in the future as well. Williams et al. (2008) examined physical aggression in adolescent relationships and found that youth who had been in two different violent relationships had higher cumulative risk than those with either one or no violent relationships. Additionally, among those with high acceptance of dating aggression, peer aggression and delinquency significantly predicted involvement in multiple violent relationships. Among those with low acceptance of dating aggression, negative relationship characteristics predicted recurrent aggression.

While experiencing dating abuse in at least one relationship may set youth up for a pattern of abusive relationships, there is clearly more to it than that. Youth who end up in multiple abusive relationships may have different risk and protective profiles than youth who do not. The current study examines both how risk and protective factors relate to involvement in multiple abusive relationships, and how abuse in one relationship relates to abuse in subsequent relationships.

RESEARCH QUESTIONS

This chapter has four main objectives. First, we examine the nature of recurrent abuse in this low-income service-receiving sample. We determine the prevalence of recurrent physical and emotional abuse across participants' earliest three relationships and determine whether there are any gender differences. Second, we explore whether there are individual, family, peer, and neighborhood level risk factors associated with increased likelihood of experiencing recurrent inter-partner physical or emotional abuse. Third, we examine whether there are protective factors associated with a decreased likelihood of experiencing recurrent inter-partner physical or emotional abuse. We expected that those risk and protective factors that had a significant association with abuse in *one* romantic relationship would similarly be associated with abuse in *more than one* such relationship.

Finally, we explore whether involvement in one abusive romantic relationship is associated with increased likelihood of being involved in subsequent abusive romantic relationships. Because the literature (Halpern, Spriggs, Martin, & Kupper, 2009, Kemp, Green, Hovanitz, &Rawlings, 1998; Williams, Connolly, Pepler, Craig, & Laporte, 2008) suggests that involvement in one abusive relationship may be associated with increased odds for abuse in subsequent relationships, we predicted that there would be significant associations between abuse in adolescents' earliest relationship and abuse in their second relationship. We expected a similar pattern of associations between abuse in relationships two and three. We expected this to hold for both abuse *by* and *toward* one's romantic partner (RP). Further, we anticipated significant pathways between victimization and perpetration both within the current relationship and across relationships. See Figure 3.1 for our hypothesized model.

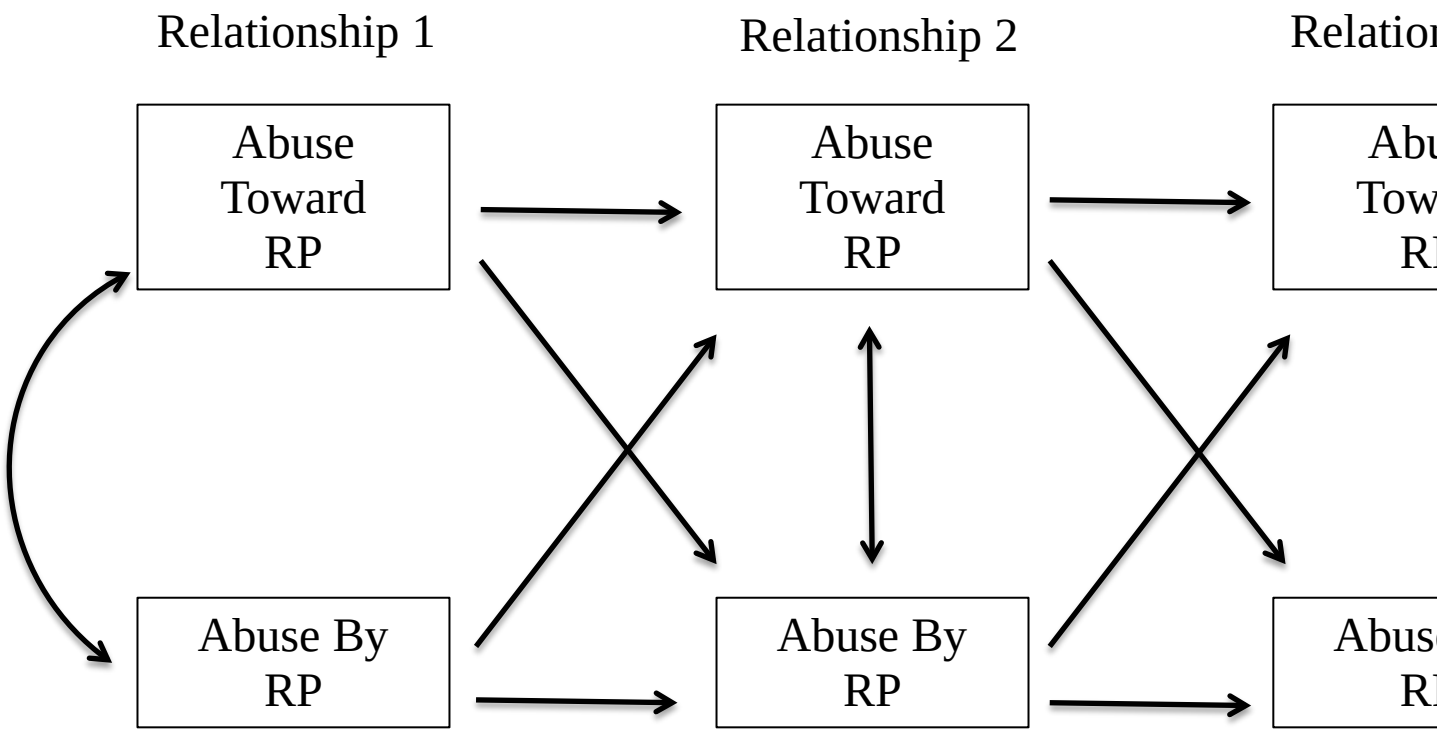

Figure 3.1. Hypothesized model of abuse across three relationships.

METHOD

Participants:

For these analyses we used the full sample of 223 participants (57.9% female). Please see Chapter 1 for a detailed description of participant sampling and demographics.

Table 3.1 below provides a summary of the risk and protective factors, control variables, and outcomes used in this chapter. For each measure, this table provides a brief description, the scoring, the wave in which the variable was assessed, and the manner by which the variable was modified if doing so was required. In this chapter, if a measure was administered in both wave 1 and wave 2, the wave 1 variable was used in the analyses. The exceptions to this rule are age and age at first sex. Wave 2 data was used for age at first sex because 33 participants reported

having had sexual intercourse for the first time between waves 1 and 2. For a more detailed description of the relevant measures, please refer to Table 1.1 in chapter 1.

Table 3.1: Summary of Study Measures Used in Chapter 2 Analyses, For More Details See Table 1.1 in Chapter 1

Construct:	Brief Description of Measure	Scoring	Assessed Wave 1?	Assessed Wave 2?	Wave Used in Ch. 3:	Modifications to Variable
		Risk Factors				
		Family Background				
Witnessing Parental Relationship Violence - Mother	Frequency of seeing mother figure perpetrate or receive relationship violence	Scored 1-4 (witnessed more parental violence)	✓	✓	Wave 1	Mean of mother perpetration and victimization scores; log-transformed to approach normality
Childhood Neglect	Frequency of neglect by mother and father figures	Scored 0-3 (experienced more neglect)	✓	✓	Wave 1	Mean of father and mother scores
Childhood emotional abuse	Frequency of emotional abuse by mother and father figures	Scored 0-3 (experienced more emotional abuse)	✓	✓	Wave 1	Mean of father and mother scores; log-transformed to approach normality
Childhood Physical Abuse	Frequency of physical abuse by mother and father figures	Scored 0-3 (experienced more physical abuse)	✓	✓	Wave 1	Mean of father and mother scores; log-transformed to approach normality
		Self-Regulation				

Depression	Frequency of depressive symptoms in the last two weeks	Scored 0-3 (experienced depressive symptoms more often)		✓	Wave 2	Log-transformed to approach normality
Behavioral Disaffection in School	Agreement with statements describing disaffection with learning	Scored 1-4 (greater disaffection with learning)	✓	✓	Wave 2	
		Social Environment				
Peer Delinquency	Proportion of friends engaging in delinquent behaviors in the past 12 months	Scored 1-4 (greater proportion of friends engaging in delinquency)	✓	✓	Wave 1	
Witnessing Peer Relationship Violence	Proportion of friends perpetrating or receiving relationship violence in the past 12 months	Scored 1-4 (greater proportion of friends engaging in relationship violence)		✓	Wave 2	Mean of perpetration and victimization scores
Negative Neighborhood Quality	Frequency of negative occurrences in neighborhood in the past 6 months	Scored 0-2 (experienced more negative neighborhood occurrences)		✓	Wave 2	

Attitudes Toward Relationship Violence	Agreement with statements that relationship violence is both normal and morally acceptable	Scored 1-6 (greater acceptance of normality and morality of relationship violence)		✓	Wave 2	
		Sexual History				
Age at First Sex	Participants report, "How old were you when you had consensual sexual intercourse for the first time, if ever?"	Age in years	✓	✓	Wave 2	Participants who report never having had consensual sexual intercourse are excluded; trimmed 4 values under 10 years of age to 10 (a score of 10 years of age now = "10 or younger")
Partner Age Gap at First Sex	Participants report, "How old was the person you first had sexual intercourse with?"	Standardized age gap = standardized partner's age – standardized participant's age		✓	Wave 2	Participants who report never having had consensual sexual intercourse are excluded; trimmed 1 value under 10 years of age to 10 (a score of 10 years of age now = "10 or younger")
Lifetime Number of Sexual Partners	Participants report, "How many people have you had consensual sex with in your lifetime?"	Number of partners	✓	✓	Wave 2	Trimmed 13 values over 12 to 12 (a score of 12 partners now = "12 or more partners")

Protective Factors					
Parental Monitoring	Parental Monitoring Scale	Scored 1 -5; ***higher scores = more parent monitoring***	✓	✓	Wave 1
Parental Communication	Parent Communication subscale of the Inventory of Parent and Peer Attachment	Scored 0 – 2; ***higher scores = more parental communication with youth***	✓	✓	Wave 1
Hope: Pathways	Dispositional Hope - Pathways subscale; assesses perceived ability to attain goals	Scored 1 – 4; ***higher scores = more hope***		✓	Wave 2
Hope: Agency	Dispositional Hope - Agency subscale; assesses perceived effort to attain goals	Scored 1 – 4; ***higher scores = more hope***		✓	Wave 2
Satisfaction with Life	Satisfaction with Life Scale	Scored 1 – 7; ***higher scores = more satisfaction***		✓	Wave 2

Collective Efficacy in the Neighborhood	Collective Efficacy subscale of the Social Cohesion and Trust scale	Scored 1 – 5; ***higher scores = more collective efficacy***		✓	Wave 2	
Academic Self-Concept	Self Description Questionnaire	Scored 1 – 6; ***higher scores =higher academic self-concept.***		✓	Wave 2	
Relationship Outcomes						
Physical Abuse - *First, Second, and Third Romantic Relationships*	Conflict Tactics Scale – physical abuse subscale	Scored 0 – 3; ***higher scores =more frequent physical abuse*** ; Averaged reports of abuse toward and by partners	✓	✓	Wave 1 & 2	Mean scores for perpetration and victimization were kept separate; scores were trimmed at 2 standard deviations above the mean.
Emotional Abuse - *First, Second, and Third Romantic Relationships*	Safe Dates Emotional Abuse subscale and a few items from Conflict Tactics Scale	Scored 0 – 3; ***higher scores =more frequent emotional abuse***; Averaged reports of abuse toward and by partners	✓	✓	Wave 1 & 2	Mean scores for perpetration and victimization were kept separate; scores were trimmed at 2 standard deviations above the mean.

Control Variables					
Gender		0: female, 1: male	✓	✓	Wave 2
Participant age	Calculated as participants' interview date minus birthdate	In years	✓	✓	Wave 2
Total Number of Relationships	Participants' total number of reported relationships		✓	✓	Waves 1 & 2

RESULTS

What is the nature of recurrent inter-partner physical and emotional abuse among at-risk teens?

Descriptive Analyses. We examined rates of recurrent inter-partner physical, emotional, and sexual abuse within the context of a romantic relationship in this low-income service-receiving sample. In each wave, participants discussed up to three romantic partners resulting in a possible total of up to six such relationships. On average, participants discussed approximately 3 romantic partners (M = 3.69, SD = 1.28) across both waves. Over two thirds of our at-risk sample (71.30%) were involved in at least one physically abusive relationship and just over half reported (52.02%) being involved in more than one physically abusive relationship. An overwhelming number of participants (97.31%) reported experiencing emotional abuse in at least one relationship, and 84.75% of participants were involved in more than one emotionally abusive relationship. In this sample, few participants had experienced either sexual abuse victimization (12.56% or 28 participants) or perpetration (18.39% or 41 participants) of any kind (including unwanted kissing) in more than one relationship. Consequently, analyses involving recurrent sexual abuse outcomes are not considered here.

Gender Differences. We asked whether there were gender differences with respect to the total number of abusive romantic relationships reported. We discovered that there were no differences between boys and girls, after controlling for age and the total number of romantic relationships, with respect to the number of relationships in which they were on the receiving end of physical and emotional abuse and perpetrating emotional abuse (See Tables 3.2 and 3.3). However, girls reported perpetrating physical abuse in more relationships as compared with boys (See Table 3.2).

Table 3.2 Associations Between Recurrent Inter-Partner Physical Abuse and Gender

	Recurrent Inter-Partner Physical Abuse			
	Victimization		Perpetration	
	Step 1	Step 2	Step 1	Step 2
Age	0.15*	0.15*	0.12	0.10
Total # of Relationships	0.31***	0.31***	0.23***	0.28***
Sex		-0.01		-0.25***
N	210	210	210	210
ΔR^2		0.00		0.06***
Final Model R^2	0.12**	0.12**	0.07**	0.13**

Standardized beta coefficients, Sex (Female: 0, Male: 1)
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.3. Associations Between Recurrent Inter-Partner Emotional Abuse and Gender

	Recurrent Inter-Partner Emotional Abuse			
	Victimization		Perpetration	
	Step 1	Step 2	Step 1	Step 2
Age	0.03	0.03	0.03	0.02
Total # Relationships	0.74***	0.75***	0.68***	0.69***
Sex		-0.04		-0.07
N	210	210	210	210
ΔR^2		0.00		0.01
R^2	0.55	0.55	0.46	0.47

Standardized beta coefficients, Sex (Female: 0, Male: 1)
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Preliminary Analyses. Factor analyses, using STATA version 12.1, were conducted in order to reduce the total number of outcome variables from twelve to four. We did separate analyses in order to create factor scores for recurrent physical victimization, recurrent physical perpetration, recurrent emotional victimization and recurrent emotional perpetration. Factor scores were calculated using an analog of regression scoring, meaning it produced the means of latent variables conditional on the observed variables used in the model. Each factor score consisted of the mean scores for physical or emotional abuse (by or toward a partner) for

participants' reported first, second and third romantic relationship. Sampling adequacy for the analysis was verified using the Kaiser-Meyer-Olkin measure with KMO scores at 0.665 and above (*mediocre* according to Kaiser, 1974). Moreover, Bartletts' tests of sphericity with chi-square values significant at $p < .001$, indicated that the items for each factor score were sufficiently correlated for analysis. We examined the fit indices for each of the four models. As these models were fully saturated, each model represented the best possible fit to the data. Furthermore, reliability for each construct was measured using Cronbach's alpha. Reliability scores were greater than or equal to 0.65 for recurrent physical abuse and 0.73 for recurrent emotional abuse.

Next, we examined bivariate correlations between potential risk factors and protective factors and recurrent inter-partner physical and emotional abuse. Table 3.4 summarizes these analyses.

Table 3.4 Bivariate Correlations between Recurrent Inter-Partner Abuse and Risk and Protective Factors and Descriptive Statistics

	Recurrent Physical Perpetration	Recurrent Physical Victimization	Recurrent Emotional Perpetration	Recurrent Emotional Victimization	Means(SD)
Re PA Perpetration	1				0(0.13)
Re PA Victimization	0.76**	1			0(0.15)
Re EA Perpetration	0.76**	0.67**	1		0(0.33)
Re EA Victimization	0.71**	0.78**	0.88**	1	0(0.33)
Risk Factors					
Depression	0.11	0.19*	0.21**	0.26**	0.58(1.12)
Acceptance of Violence	0.3**	0.25**	0.31**	0.22**	2.54(0.74)
Age Diff at 1st Sex	0.25**	0.28**	0.23**	0.26**	1.18(1.48)
# Lifetime Partners	-0.01	0.21*	0.09	0.2*	4.83(3.21)
Age at Sexual Debut	-0.03	-0.15†	-0.06	-0.15†	14.56(1.61)
Peer Delinquency	0.26**	0.41**	0.32**	0.37**	1.95(0.59)
Witnessing Peer Violence	0.3**	0.34**	0.35**	0.36**	1.62(0.72)
Childhood Neglect	-0.03	0.01	0.01	0.02	0.57(0.55)
Childhood Emotional Abuse	0.2**	0.22**	0.29**	0.33**	0.59(0.55)
Childhood Physical Abuse	0.05	0.08	0.13	0.17*	-2.36(1.95)
Witnessing Parental Violence	0.2**	0.25**	0.21**	0.24**	0.41(0.35)
Behavioral Disaffection	0.13	0.2**	0.12	0.12	2.31(0.57)

Negative Neighborhood	0.17*	0.27**	0.29**	0.3**	0.39(0.42)
Protective Factors					
Parental Communication	0.06	-0.03	-0.01	-0.04	1.47(0.40)
Parental Monitoring	-0.12	-0.25**	-0.15**	-0.24**	3.87(0.83)
Social Support	-0.07	-0.16**	-0.16**	-0.19**	4.46(0.4)
Collective Efficacy	-0.17**	-0.21*	-0.21**	-0.25**	3.31(0.84)
Behavioral Engagement	-0.02	-0.09	-0.08	-0.05	3.38(0.5)
Academic Self-Concept	-0.02	-0.11	-0.02	-0.08	4.7(0.84)
HOPE: Agency	-0.01	-0.1	0.01	-0.03	3.27(0.51)
HOPE: Pathways	0.01	-0.02	0.05	0.01	3.14(0.5)
Life Satisfaction	-0.16*	-0.28**	-0.14†	-0.22**	4.8(1.33)

†p = .05, *p < .05, **p < .01

Which risk factors are associated with experiencing recurrent inter-partner physical or emotional abuse?

As explained in Chapter 2, the large number of risk factors warranted the use of Principal Components Analysis (PCA) to reduce the total number of factors analyzed. There were 12 significantly correlated risk factors. A PCA was conducted on these items with oblique rotation (Crawford-Ferguson). Oblique rotation was deemed appropriate because the components are theoretically likely to be correlated with each other. The Kaiser-Meyer-Olkin measure was used to verify the adequacy for the analysis. At KMO = .659 (*mediocre* according to Kaiser, 1974) and with KMO values for individual items above .56, which is above the minimum acceptable value of .5, sample was sufficiently adequate for analysis. Moreover, Bartlett's test of sphericity,

$\chi^2(66) = 391.69$, $p < .001$, indicated that correlations between items were sufficiently large for PCA. Table 3.5 presents the correlations among potential risk factors.

Table 3.5 Bivariate Correlations Among Potential Risk Factors

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1												
2	0.08	1											
3	-0.11	0.09	1										
4	0.09	0.10	0.23**	1									
5	0.09	-0.12	-0.36**	-0.05**	1								
6	0.16*	0.08	0.15*	0.32**	-0.37**	1							
7	0.13	0.44**	0.20*	0.19*	-0.11	0.30**	1						
8	0.09	0.11	-0.02	0.20*	-0.27**	0.21**	0.10	1					
9	0.24**	-0.01	0.13	0.11	-0.03	0.36**	0.22**	0.27**	1				
10	0.18*	0.01	0.07	0.08	-0.01	0.26**	0.15*	0.23**	0.57**	1			
11	0.05	0.12	0.20*	0.03	-0.04	0.22**	0.33**	0.28**	0.49**	0.32**	1		
12	0.19**	0.19*	0.14	0.16*	-0.18*	0.20**	0.12	0.09	0.05	0.05	0.08	1	
13	0.16*	0.25**	0.26**	0.17*	-0.15†	0.28**	0.44**	0.13	0.15*	0.04	0.16*	0.13†	1

1. Depression
2. Acceptance of Violence
3. Age Diff 1st
4. Lifetime # Partners
5. Age at 1st Sex
6. Peer Delinquency
7. Witnessing Peer Violence
8. Childhood Neglect
9. Childhood Emotional Abuse
10. Childhood Physical Abuse
11. Witnessing Mother's Violence
12. Behavioral Disaffection
13. Negative Neighborhood

†p=.05,*p<.05,**p<.01

Initial analyses revealed four components with eigenvalues greater than Kaiser's criterion of 1. These components taken together explain 60.00% of the variance. The scree plot was slightly ambiguous but showed inflections that would justify three or four components. Four components were retained in the final analysis based upon the information provided in the scree plot and Kaiser's criterion. Table 3.6 presents the factor loadings after the rotation. The items that cluster on the same components suggest that component 1 represents Family Background, component 2 represents Sexual History, component 3 represents Social Environment, and component 4 represents Self-Regulation.

Table 3.6 Pattern Matrix, Principal Components Analysis of Risk Factors for Dating Abuse

	Crawford-Ferguson Rotated Component Loadings			
	Family Background	Sexual History	Social Environment	Self-Regulation
Significant Risk Factors				
Depression	.15	-.11	.04	**.71**
Acceptance of Violence	-.14	-.09	**.58**	.08
Age Difference at 1st Sex	-.01	**.40**	.15	-.31
Lifetime # of Sex Partners	-.02	**.52**	-.05	.23
Age at 1st Sex	.07	**-.62**	.03	.01
Peer Delinquency	.24	.35	.03	.19
Witnessing Peer Violence	.08	-.01	**.60**	-.07
Childhood Emotional Abuse	**.61**	.03	-.02	.04
Childhood Physical Abuse	**.57**	-.03	-.08	.06
Witnessing Mom's Violence	**.41**	-.01	.24	-.30
Behavioral Disaffection in School	-.13	.17	.14	**.44**
Negative Neighborhood Quality	.02	.09	**.45**	.08

Note: Crawford-Ferguson (kappa = 1) rotation with Kaiser normalization. Component loadings over .40 appear in bold. N = 163

Tables 3.7 and 3.8 summarize the hierarchical regression analyses demonstrating the relationships between selected risk factors and recurrent abusive relationships. Specifically, we examined Self-Regulation, Family Background, Sexual History, and Social Environment as potential correlates of recurrent victimization and perpetration of physical and emotional abuse.

Table 3.7 presents the relationships between risk factors and recurrent inter-partner physical abuse. In Step 1, we entered sex, age, and total number of relationships into the model as controls. When first placed in the model, being older was associated with a higher likelihood of being victimized in multiple physically abusive relationships but not with perpetrating such abuse. However, this association fell to non-significance after accounting for Self-Regulation in Step 2. Results in Step 2 suggest that Self-Regulation is associated with a higher likelihood of being victimized by repeated physical abuse but not the perpetration of it. But, this association becomes non-significant in the final model. Steps 3, 4, and 5 illustrate the positive relationships between recurrent inter-partner physical abuse and having a difficult family background, risky sexual history, and negative social environment, respectively. In the final models in which all of the components were entered, only Sexual History and Social Environment remained statistically significant. Participants who reported having risky sexual histories and negative social environments were at increased risk of both victimization and perpetration of physical abuse across multiple romantic relationships.

Table 3.7 Associations between Risk Factors and Recurrent Inter-Partner Physical Abuse

	Recurrent Inter-Partner Physical Abuse									
	Victimization					*Perpetration*				
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 1	Step 2	Step 3	Step 4	Step 5
Sex	-0.06	-0.15	-0.14	-0.23**	-0.18*	-0.27***	-0.35***	-0.35***	-0.42***	-0.36***
Age	0.19**	0.09	0.09	0.10	0.11	0.09	0.02	0.01	0.02	0.03
Total # Relationships	0.07	0.04	-0.03	-0.11	-0.10	0.01	-0.01	-0.06	-0.12	-0.11
Self-Regulation		0.17*	0.17*	0.15*	0.12		0.14	0.13	0.12	0.09
Family Background			0.22**	0.17*	0.12			0.19*	0.16*	0.10
Sexual History				0.38***	0.30***				0.27***	0.19*
Social Environment					0.25**					0.25**
N	210	162	162	162	162	210	162	162	162	162
ΔR^2		0.01	0.04**	0.012***	0.05**		0.04	0.03*	0.06**	0.05**
Final Model R^2	0.04*	0.05	0.10*	0.22***	0.27***	0.09***	0.12***	0.15***	0.22***	0.27***

Standardized beta coefficients

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Parallel analyses examining associations between potential risk factors and recurrent inter-partner emotional abuse are presented in Table 3.8. Of the control variables, only age was significantly associated with victimization and gender with perpetration as illustrated by Step 1 for each construct. Self-Regulation manifested a positive relationship with recurrent physical victimization when entered in Step 2 but fell to non-significance when the remaining components were added into the full model. Similarly, the significant positive association between Family Background and recurrent victimization and perpetration of emotional abuse illustrated by Step 3 became non-significant when the final component was added to the full model in the final step. Steps 4 and 5 demonstrate that those participants who reported a risky sexual history and a negative social environment were at increased risk of both being victimized by and perpetrating recurrent emotional abuse.

Table 3.8 Associations between Risk Factors and Recurrent Inter-Partner Emotional Abuse

	Recurrent Inter-Partner Emotional Abuse									
	Victimization					*Perpetration*				
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 1	Step 2	Step 3	Step 4	Step 5
Sex	-0.08	-0.16	-0.16*	-0.23**	-0.19*	-0.19**	-0.27**	-0.26***	-0.32***	-0.26**
Age	0.20**	0.10	0.09	0.10	0.11	0.11	0.03	0.02	0.03	0.04
Total # of Relationships	0.11	0.09	0.00	-0.06	-0.06	0.12	0.13	0.06	0.01	0.02
Self-Regulation		0.16*	0.16*	0.15*	0.13		0.15	0.15	0.14	0.11
Family Background			0.30***	0.27***	0.23**			0.26**	0.23**	0.17*
Sexual History				0.31***	0.25**				0.22**	0.13
Social Environment					0.19*					0.26***
N	210	162	162	162	162	210	162	162	162	162
ΔR^2		0.01	0.09***	0.08**	0.03*		0.03	0.06**	0.04**	0.06**
Final Model R^2	0.05**	0.06*	0.15***	0.23***	0.26***	0.06**	0.09**	0.15***	0.19***	0.24***

Standardized beta coefficients

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Which protective factors are associated with experiencing decreased amounts of recurrent inter-partner physical or emotional abuse?

Table 3.9 presents the bivariate correlations between potential protective factors. Only those factors that were significantly correlated with our outcomes were considered for additional analyses (See Table 3.4).

Table 3.9 Bivariate Correlates Between Potential Protective Factors

	1	2	3	4	5	6	7	8	9
1. Parental Communication	1								
2. Parental Monitoring	0.39**	1							
3. Social Support	0.1	0.25**	1						
4. Collective Efficacy	0.09	0.12	0.12	1					
5. Behavioral Engagement	0.14	0.34**	0.18**	0.07	1				
6. Academic Self-Concept	0.05	0.16*	0.18**	0.11	0.58**	1			
7. HOPE: Agency	0.15	0.26**	0.25**	0.07	0.51**	0.47**	1		
8. HOPE: Pathways	0.05	0.05	0.19**	-0.06	0.22**	0.3**	0.54**	1	
9. Life Satisfaction	0.1	0.26**	0.17**	0.25**	0.28**	0.22**	0.46**	0.2**	1

*p < .05, **p < .01

We conducted a series of hierarchical regressions in order to determine which factors were associated with a decreased likelihood of experiencing recurrent inter-partner physical or emotional abuse. Tables 3.10 and 3.11 summarize the hierarchical regression analyses demonstrating the relationships between recurrent inter-partner physical abuse and those factors with the potential to protect against such abuse. As illustrated by Table 3.10, we examined social support, collective efficacy, parental monitoring, and life satisfaction as potential correlates of recurrent physical abuse victimization. In Step 1, we entered the controls and found that age was significantly positively correlated with recurrent victimization. Step 2 revealed that social support was significantly negatively correlated with recurrent physical victimization; however, this relationship became non-significant when additional predictors were added to the model. In Step 3, collective efficacy emerged as a significant correlate of recurrent physical victimization, such that higher collective efficacy was associated with less physical victimization across relationships. However, this relationship falls to non-significances when other correlates were added in the final model. Steps 4 and 5 demonstrate the significance of parental monitoring and satisfaction with life as correlates with recurrent physical victimization. In the final model, parental monitoring and life satisfaction were the only remaining significant correlates such that higher reported parental monitoring and life satisfaction were associated with decreasing the likelihood of being physically victimized in multiple romantic relationships.

Table 3.10 Associations Between Protective Factors and Recurrent Inter-Partner Physical Victimization

	Recurrent Inter-Partner Physical Abuse				
	Victimization				
	Step 1	Step 2	Step 3	Step 4	Step 5
Sex	-0.06	-0.06	-0.05	-0.09	-0.08
Age	0.19**	0.18**	0.17*	0.11	0.09
Total # of Relationships	0.07	0.04	0.04	0.02	-0.02
Social Support		-0.14*	-0.12	-0.09	-0.07
Collective Efficacy			-0.18**	-0.16*	-0.12
Parental Monitoring				-0.20**	-0.16*
Life Satisfaction					-0.20**
N	210	210	208	208	208
ΔR^2		0.02*	0.03**	0.03**	0.03**
R^2	0.04*	0.06*	0.09**	0.13***	0.16***

Standardized beta coefficients
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.11 summarizes the relationships between recurrent perpetration of physical abuse and parental monitoring, collective efficacy, and satisfaction with life. After accounting for the controls, parental monitoring emerged as the single significant correlate of recurrent perpetration of physical abuse. Higher amounts of parental monitoring were associated with decreased amounts of recurrent perpetration of physical abuse. Contrary to what we found with respect recurrent victimization, results as shown in Steps 3 and 4 suggest that there were no significant associations between collective efficacy, life satisfaction and recurrent physical victimization.

Table 3.11 Associations Between Protective Factors and Recurrent Inter-Partner Physical Perpetration

	Recurrent Inter-Partner Physical Abuse			
	Perpetration			
	Step 1	Step 2	Step 3	Step 4
Sex	-0.27***	-0.32***	-0.31***	-0.31***
Age	0.09	0.03	0.02	0.01
Total # of Relationships	0.01	-0.01	-0.01	-0.03
Parental Monitoring		-0.18*	-0.18*	-0.16*
Collective Efficacy			-0.11	-0.09
Life Satisfaction				-0.11
N	210	210	208	208
ΔR^2		0.03*	0.028*	0.01
R^2	0.09***	0.11***	0.13***	0.14***

Standardized beta coefficients
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.12 presents the associations between recurrent inter-partner emotional abuse and life satisfaction, social support, parental monitoring and collective efficacy. As with the previous analyses, we controlled for sex, age, and total number of relationships, and we found that age and gender were associated with recurrent victimization and perpetration, respectively. Satisfaction with life was added in Step 2 and was not significantly associated with either victimization or perpetration. Social support, added in Step 3, was significantly negatively associated with both victimization and perpetration of recurrent emotional abuse, but it became non-significant when additional correlates were added to the model. In Step 4 parental monitoring emerged as a significant negative correlate of victimization but not for perpetration of recurrent emotional abuse. In particular, higher amounts of parental monitoring were associated with decreased likelihood of experiencing recurrent emotional victimization. Finally, the addition of collective efficacy completed the final model, and it was significantly negatively associated with both victimization and perpetration of recurrent emotional abuse.

Table 3.12 Associations Between Protective Factors and Recurrent Inter-Partner Emotional Abuse

	Recurrent Inter-Partner Emotional Abuse									
	Victimization					*Perpetration*				
	Step 1	Step 2	Step 3	Step 4	Step 5	Step 1	Step 2	Step 3	Step 4	Step 5
Sex	-0.08	-0.07	-0.08	-0.11	-0.10	-0.19**	-0.18**	-0.19**	-0.21**	-0.21**
Age	0.20**	0.17*	0.17*	0.12	0.11	0.11	0.10	0.10	0.06	0.05
Total # of Relationships	0.11	0.07	0.04	0.03	0.04	0.12	0.10	0.07	0.06	0.07
Life Satisfaction		-0.18*	-0.16*	-0.13	-0.10		-0.10	-0.08	-0.06	-0.03
Social Support			-0.15*	-0.12	-0.11			-0.14*	-0.12	-0.10
Parental Monitoring				-0.15*	-0.16*				-0.12	-0.13
Collective Efficacy					-0.17*					-0.15*
N	210	210	210	210	208	210	210	210	210	208
ΔR^2		0.03*	0.02*	0.02*	0.04**		0.01	0.02*	0.01	0.03*
Final Model R^2	0.05**	0.08**	0.10***	0.12***	0.16***	0.06**	0.07**	0.08**	0.09**	0.12***

Standardized beta coefficients

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

What Are the Trajectories of Abuse Across Relationships?

We examined the associations between experiencing and receiving abuse across three relationships using path analyses in Mplus (Muthén & Muthén, 1998 - 2010). All participants reported on at least one relationship, and as discussed in Chapter 1, for nearly 75% of the sample the first relationship was their *first ever* relationship lasting a month or longer. Only 203 participants reported on two relationships and 151 participants reported on three relationships. (For more descriptive information on these relationships, refer to Table 1.2 in Chapter 1 .) To handle missing data, we used Full Information Maximum Likelihood (FIML) in Mplus. FIML is widely cited as an appropriate method for handling missing data and has been shown to provide equivalent or less biased parameter estimators than other commonly used procedures (Enders, 2001).

Partner emotional and physical abuse were analyzed in separate path analysis models. In both models, we controlled for associations between abuse in Relationship 3 and sex, age, and length of relationship 3. Due to the large correlation between age at the start of Relationship 2 and age at the start of Relationship 3, we only included sex and length of the relationship as control measures when examining abuse in Relationship 2. See Table 3.11 for correlations between all variables.

Table 3.13: Correlations between Physical Abuse Items and Controls.

Variables	1	2	3	4	5	6	7	8	9	10
1. Physical Abuse By Partner 1	1									
2. Physical Abuse Toward Partner 1	0.82	1								
3. Physical Abuse By Partner 2	0.46	0.45	1							
4. Physical Abuse Toward Partner 2	0.46	0.57	0.74	1						
5. Physical Abuse By Partner 3	0.49	0.43	0.47	0.41	1					
6. Physical Abuse Toward Partner 3	0.36	0.42	0.32	0.49	0.75	1				
7. Sex	-0.09	-0.21	0.07	-0.23	0.06	-0.27	1			
8. Length of Relationship 2	0.10	0.15	0.26	0.27	0.16	0.09	-0.16	1		
9. Length of Relationship 3	0.05	0.04	0.14	0.19	0.17	0.28	-0.14	0.22	1	
10. Age at Relationship 3	0.16	0.17	0.16	0.14	-0.01	-0.03	-0.06	0.30	-0.05	1

Results are presented in Figure 3.2 and illustrate that there was a great deal of stability in both physical abuse by partners and toward partners across youths' earliest three relationships. Moreover, we can see that participants who perpetrated abuse toward romantic partners in Relationships 1 and 2 reported relative increases in physical victimization in Relationships 2 and 3, respectively, after accounting for initial levels of physical victimization in earlier relationships. See Table 3.13 for model fit statistics. Ideally, X^2 would be non-significant, Comparative Fit Index (CFI) would be .96 or higher, Standardized Root Mean Square Residual (SRMR) would be .05 or lower. In addition for an excellent, good, or acceptable fit, Root Mean Square Error of Approximation (RMSEA) would be .01, .05, or .08 respectively. The fit statistics

in Table 3.14 illustrate that the hypothesized model for physical abuse across youths' earliest first three relationships is an okay fitting model but not an excellent fitting model. Nonetheless, the model is accounting for a significant amount of variance (see R^2 values, all *p*'s < .05) in perpetration of physical abuse and victimization in relationships 2 and 3.

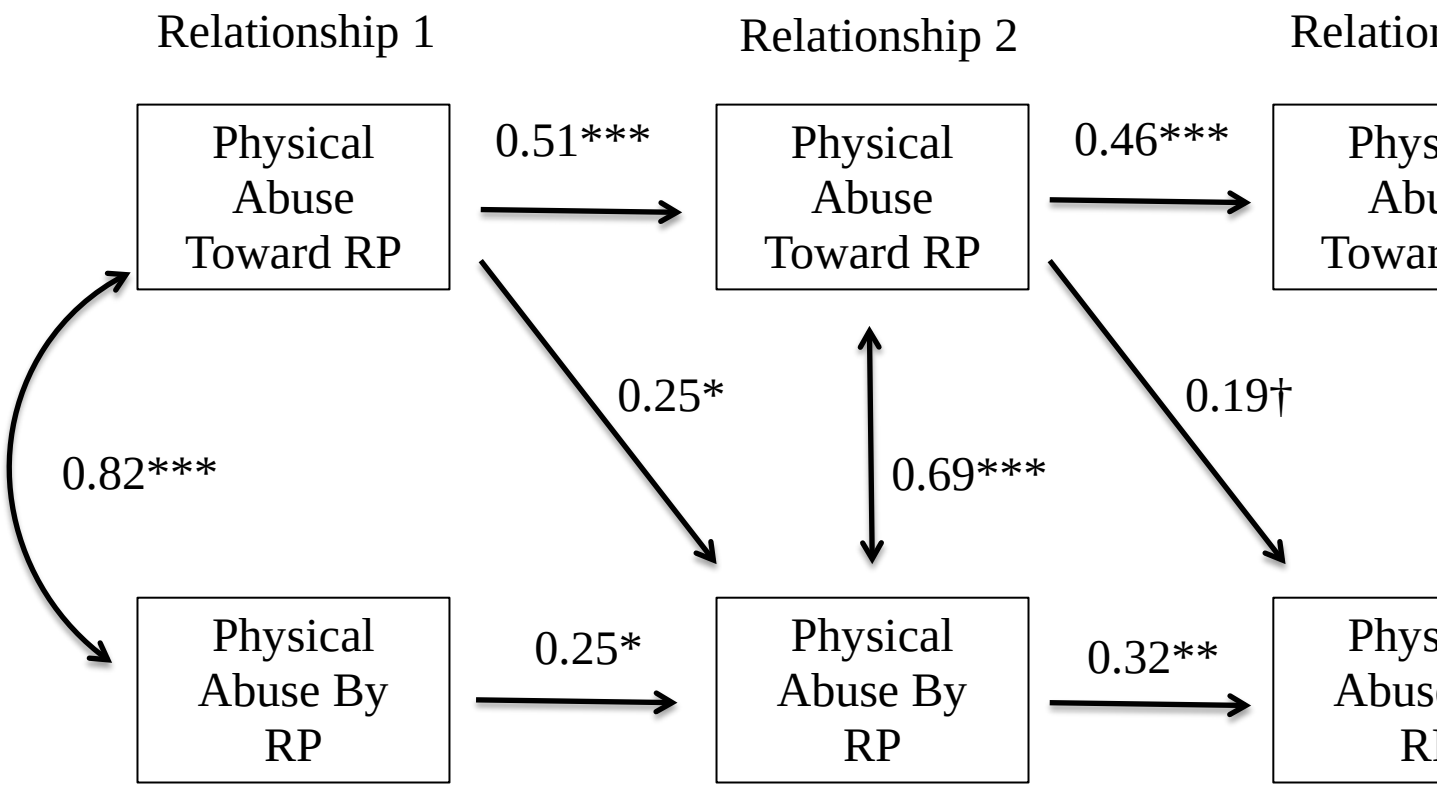

Figure 3.2. Path analysis for physical abuse controlling for age, sex, and length of relationship. "RP" = Romantic Partner

Table 3.14: Model Fit Statistics for Path Analyses of Abuse Across Multiple Relationships

	R^2	$X^2(df)$	*p*-value	CFI	SRMR	RMSEA(90% CI)
Physical Abuse Model	-	34.67(10)	0.00	0.95	0.05	0.11(0.07 – 0.14)
Toward RP, Relationship 2	0.34	-	-	-	-	-
By RP, Relationship 2	0.37	-	-	-	-	-
Toward RP, Relationship 3	0.31	-	-	-	-	-
By RP, Relationship 3	0.24	-	-	-	-	-
Emotional Abuse Model	-	12.22(10)	0.27	1.00	0.03	0.03(0.00 – 0.08)
Toward RP, Relationship 2	0.35	-	-	-	-	-
By RP, Relationship 2	0.32	-	-	-	-	-
Toward RP, Relationship 3	0.40	-	-	-	-	-
By RP, Relationship 3	0.31	-	-	-	-	-

Note. "RP" = Romantic Partner.

Next, Figure 3.3 illustrates the pathways that emerged in our hypothesized path analysis model for emotional abuse. Similar to the physical abuse model, when we examined emotional abuse, there was significant relative stability across relationships in levels of emotional victimization and perpetration of emotional abuse (see Figure 3.2). After accounting for that stability, we found that participants who had perpetrated abuse in Relationships 1 and 2, had relative increases in victimization in Relationships 2 and 3, respectively. See Table 3.15 for correlations and Table 3.14 for fit statistics. The fit statistics for the emotional abuse hypothesized path analysis were excellent, and the R2 values illustrate that a significant amount of variance in both perpetration and reception of emotional abuse was accounted for by youths' emotional victimization in earlier relationships. In addition, emotional abuse *by* youths' second romantic partner was significantly associated with relative increases in youths' reports of subsequent emotional abuse *toward* their third romantic partners.

Table 3.15: Correlations between Emotional Abuse Items and Controls.

Variables	1	2	3	4	5	6	7	8	9	10
1. Emotional Abuse By Partner 1	1									
2. Emotional Abuse Toward Partner 1	0.86	1								
3. Emotional Abuse By Partner 2	0.49	0.49	1							
4. Emotional Abuse Toward Partner 2	0.47	0.51	0.88	1						
5. Emotional Abuse By Partner 3	0.36	0.35	0.44	0.50	1					
6. Emotional Abuse Toward Partner 3	0.34	0.37	0.45	0.59	0.83	1				
7. Sex	-0.07	-0.14	-0.05	-0.17	0.08	-0.19	1			
8. Length of Relationship 2	0.04	0.09	0.28	0.32	0.13	0.15	-0.16	1		
9. Length of Relationship 3	0.09	0.06	0.13	0.19	0.26	0.30	-0.14	0.21	1	
10. Age at Relationship 3	0.13	0.13	0.19	0.12	0.03	-0.02	-0.04	0.28	-0.05	1

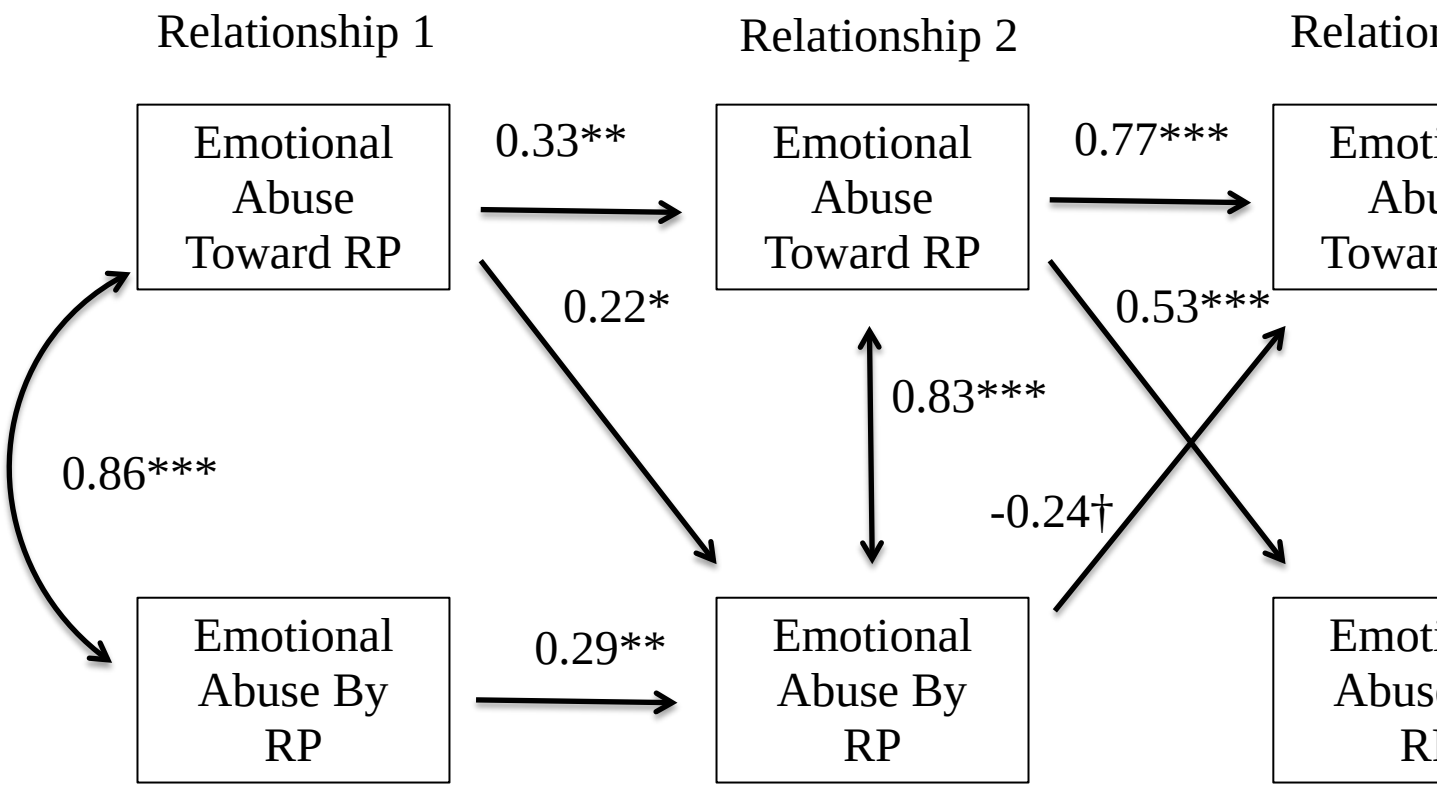

Figure 3.3. Path analysis for emotional abuse controlling for age, sex, and length of relationship. "RP" = Romantic Partner.

DISCUSSION OF FINDINGS

In this chapter we sought answers to three main questions: (1) what factors were associated with increased risk of recurrent abuse; (2) what factors were associated with decreased risk of recurrent abuse; and (3) whether involvement in one abusive relationship was associated with an increased likelihood of being involved in subsequent abusive relationships. Table 3.16 summarizes the pertinent results.

Table 3.16 Summary of Results For Chapter 3

Question 1: Risk Factors Associated with Recurrent Abuse			
Physical Abuse		Emotional Abuse	
Victimization	Perpetration	Victimization	Perpetration
• Sexual History • Social Environment	• Sexual History • Social Environment	• Family Background • Sexual History • Social Environment	• Family Background • Social Environment
Question 2: Protective Factors Associated with Recurrent Abuse			

Physical Abuse		Emotional Abuse	
Victimization	Perpetration	Victimization	Perpetration
• Parental Monitoring • Life Satisfaction	• Parental Monitoring	• Parental Monitoring • Collective Efficacy	• Collective Efficacy
Question 3: Trajectories Across Relationships			
Physical Abuse		Emotional Abuse	
• Prior perpetration predicted subsequent perpetration • Perpetration in 1st relationship predicted victimization in 2nd relationship • Prior victimization predicted subsequent victimization		• Prior perpetration predicted subsequent perpetration • Perpetration in 1st & 2nd relationships predicted victimization in 2nd and 3rd relationships • Victimization in 1st relationship predicted victimization in 2nd relationship	

Multiple abusive relationships. As predicted, many of the risk factors shown to be associated with involvement in one abusive relationship in past literature (e.g., Foshee, Benefield, Ennett, Bauman, & Suchindran, 2004; Wolfe, Scott, Wekerle, & Pittman, 2001; Malik, Sorenson, & Aneshensel, 1997; Howard, Qiu, & Boekeloo, 2003) were also associated with multiple abusive relationships. For example, we found evidence that Family Background, Sexual History and Social Environment were all significantly related to experiencing inter-partner abuse across relationships; however Self-Regulation (e.g. depression and behavioral disaffection in school) was not. Moreover, the Social Environment component (e.g. attitudes that are more accepting of abuse, peer involvement in violence, and negative neighborhood quality) emerged as the most widespread correlate, in that it was associated with all types of recurrent inter-partner across relationships. Importantly, we found that higher levels of parental monitoring and life satisfaction buffered against experiencing recurrent physical abuse, while parental monitoring and a sense of collective efficacy contributed to decreased levels of recurrent emotional abuse. These preliminary analyses suggest that youth with multiple risk factors and/or higher levels of risk may be most likely to experience abuse across multiple relationships, which is in line with

what limited work has been done in this area (Williams et al., 2008).

Trajectories of abuse across relationships. For both physical and emotional abuse, we found a great deal of stability across relationships both in terms of perpetration and victimization. Additionally, we found that *perpetration* in earlier relationships was associated with relative increases in *victimization* in future relationships. These results differ slightly from those studies that suggest that stability with respect to recurrent abuse is a function of relationship dynamics such that abuse is stable mainly in those relationships where the subject remains with the same partner and does not necessarily continue at the same level when subjects begin relationships with new partners (Capaldi, Shortt, and Crosby, 2003; Fritz and Slep, 2009; Shortt et al 2012). For example, the results of Capaldi and colleague's 2003 investigation into whether aggression persists across relationships showed that physical aggression in an earlier relationship was not associated with subsequent physical aggression for those men who had a new partners. However, upon close examination of the study design and methodology employed in these studies we find that their samples are on average older (over 18), less ethnically diverse, and have experienced lower rates of abuse overall, (Capaldi et al 2003; Fritz and Slep, 2009; Shortt et al 2012).

It may be that the stability of abuse across relationships in our at-risk sample is a reflection of age, experience and the social environment. Significantly, rates of abuse have been shown to peak at young ages and then gradually decrease between the ages of 18-21 (Capaldi, Shortt, and Kim, 2005). And samples with high rates of inter-partner abuse often show stronger evidence of stability (O'Leary, 2012). Moreover, our findings suggest that those with negative social environments are likely to persist with their abusive behavior across relationships. As

youth are less mobile as compared with adults, their social environment is likely to remain consistent in a way that contributes to persistent abuse.

Our findings are consistent with models of developmental continuity, which suggest that negative relationship experiences result from a failure to develop good relationship skills and a tendency to adopt unhealthy skills (Pepler, 2012). These maladaptive behaviors learned in childhood may contribute to unhealthy romantic relationship outcomes. Similarly, Gray and Foshee (1997) speculated that learned patterns of aggression carried over into these new relationships. In our sample, we also found high correlations between perpetration and victimization *within* each relationship, indicating a degree of mutual abuse. It may be the case that teens are learning abusive conflict styles in one relationship, and, when they apply them in future relationships, it elicits an aggressive response from their new partner, hence the relationship between past perpetration and future victimization. Importantly, for 75% of our sample, Relationship 1 was their *first ever* romantic relationship. For the majority of our participants, then, their very first experience with an abusive relationship might be enough to set them up for a trajectory of future abuse within romantic relationships over the course of adolescence.

IMPLICATIONS FOR POLICY AND PRACTICE

Unfortunately, many youth who become involved in one abusive relationship go on to experience abuse in future relationships. Therefore, an important part of dating abuse prevention and treatment programs should include identifying those youth who are most at risk for experiencing abuse across multiple partners either because of previous involvement or the presence of other risk factors. In addition to potentially targeting youth who are most at risk for multiple abusive relationships, programs in the area of teen dating abuse need to be aware that

(a) teen dating abuse is frequently more than a one-time experience, and (b) many of the youth in their programs may have already been involved in at least one abusive relationship. Addressing teen dating abuse as a pattern of behaviors that can occur across multiple relationships may be more important than focusing on how to escape or avoid one stereotypical perpetrator. Youth involved in relationships characterized by more mutual abuse may see their relationships as very different from those characterized by imbalances in power and control and therefore may not perceive a problem. Given the strong correlations found between victimization and perpetration in our sample, practitioners should at least consider and address other types of abusive relationships.

Unlike adult intimate partner abuse, which has relatively clear laws and procedures associated with its perpetration, teen dating abuse is a phenomenon that may be falling through the cracks between the adult and juvenile justice systems (Zosky, 2010). While there currently exist strict policies for dealing with adult inter-partner abuse (e.g. mandatory arrest laws), teen dating abuse occurs largely under the legal radar (Zosky, 2010). A balance needs to be struck between holding perpetrators accountable and getting youth the help they need to have healthy relationships *before* they turn 18 and are subject to the harsh legal realities of their abusive relationships. This is especially true if most youth tend to move from one abusive relationship to another. In addition to educating youth about the negative consequences of their behaviors, policy measures should be explored to address dating abuse in a way that (a) sends a signal that it is not socially acceptable, and (b) focuses on rehabilitation.

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

This study was one of the few that has explored the factors associated with experiencing and perpetrating abuse across multiple relationships, and though it has given us a good starting

point to investigate this phenomenon, many questions remain unanswered. For example, why does the experience of abuse in an early relationship so strongly predict future involvement? As previously mentioned, one theory involves learned behaviors (Gray & Foshee, 1997). It may also be that early relationships help to define a romantic self-concept that influences future assortative dating (Rhule-Louie & McMahon, 2007). Thus, youth may come to accept an aggressive conflict style in themselves and seek out similar youth as future partners. Perhaps the most important question is how do we help youth break the cycle of abusive relationships once they are on that trajectory, or even encourage them to seek help for these relationships? While providing an important base from which we can begin to address these questions, our study is limited in the extent to which it examines important contextual aspects of dating abuse such as perceptions of abuse. In order to address why abuse tends to persist across relationships and how we can help youth end this cycle, future research needs to focus on context, definitions, and help seeking related to abuse.

For example, studies suggest that very few adolescents seek help for violent relationships and what help they do seek is mostly limited to advice from peers (Ashley & Foshee, 2005; Black et al., 2008; Henton, Cate, Koval, Lloyd, & Christopher, 1983). Are adolescents simply unwilling to seek help from service providers and other adults, or do important disconnects exist between adolescents involved in abusive relationships and the adults who seek to help them? Teens' own definitions of abusive or problematic relationships may fundamentally differ from the definitions of helping adults, with important implications for teens' help seeking behavior, and previous research suggests that teens may not process and interpret relationship abuse the same way that most helping adults would. Black et al. (2008) found that adolescents were more likely to talk to someone about dating abuse if they attached an angry or jealous meaning to the

abuse, but many youths do not view their own dating abuse in such a negative light. For example, Henton and colleagues (1983) found that 26.5% of victims of teen dating abuse and 31.3% of perpetrators of teen dating abuse interpreted abuse in their relationships as a sign of love while only 4.4% and 3.0%, respectively, interpreted it as a sign of hate. Along these lines, Sears and Byers (2010) found that adolescents' emotional responses to teen dating abuse varied as a function of individual and environmental characteristics and that a large proportion did not report being upset by their experiences. Some preliminary results from Project D.A.T.E. support this conjecture that many teens to not recognize common couple abuse in their relationships as problematic. When asked, "Do you think your partner ever treated you badly?" many participants answered "No" even though they had also reported that their partner had hit them, grabbed them, swore at them, etc. In addition, when asked about "the worst thing that your partner ever did to you," where participants could give any response, common answers included the partner cheating on the teen, flirting with others, not texting them back,—even though the teen also reported physical or emotional abuse from their partner.

More research is needed to understand how youth interpret and react to teen dating abuse, which may help us in both preventing teen dating abuse and in encouraging youth to seek help when they are in an abusive relationship. If we want youth to seek help when they are in abusive or unhealthy relationships, we need to make sure their definitions of "abusive" and "unhealthy" are the same as ours.

Chapter 4: Are Relationship Level Characteristics Associated with Partner Abuse?

STATEMENT OF THE PROBLEM

In recent years, increasing attention has been paid to the importance of relationship-level characteristics in addressing the pervasive issue of teen dating abuse. The recognition of dyadic influences on concurrent abuse has made room for a new wave of research, examining linkages to teen dating abuse using the relationship itself as the unit of analysis (O'Leary & Smith Slep, 2003). Two important themes have emerged from the literature. First, relationships with a greater degree of intimacy, as expressed through longer relationship durations, shared sexual experiences, or perceived seriousness are more likely to include abuse (Giordano, et al., 2010). Second, relationships in which both partners engage in deviant or antisocial behaviors are also associated with increased abuse (Vézina & Hébert, 2007).

This growing body of literature has begun the process of characterizing relationship contexts in which abuse may be most likely to emerge. However, understanding how these various relationship-level risk factors fit together, and which contexts may be the most important for teen dating abuse, is an important next step. With limited resources available to address the issue, intervention efforts must be informed by research that not only asks 'what matters?' but 'what matter *most*?' Further, we know relatively little about whether various subtypes of abuse (physical, emotional, and sexual) may be differentially associated with relationship contexts. Finally, very little research focusing on relationship contexts does so among a sample of youth already on an at-risk trajectory (Giordano et al., 2010). This study addresses these gaps in the literature in two ways: (1) by investigating whether intimacy contexts or deviancy contexts in teen romantic relationships matter more across three subtypes of relationship abuse, and (2) examining this question among a sample of low-income, service receiving youth.

LITERATURE REVIEW

Many researchers have identified significant associations between relationship abuse and characteristics within dating relationships. For instance, adolescents who are engaged in relationships involving sexual activity (Cleveland, Herrera, Stuewig, 2003), substance use (Muehlenhard & Linton, 1987), and high levels of emotional commitment (O'Keefe & Treister, 1998) are at greater risk for abuse perpetration and/or victimization. Roberts, Auinger, and Klein (2006) analyzed data from the National Longitudinal Study of Adolescent Health (ADD Health) to explore relationship-level predictors of verbal and physical victimization in boys' and girls' romantic relationships. Cross-sectional, gender-specific analyses revealed that involvement in sexual intercourse significantly predicted verbal and physical victimization for boys and girls. For males specifically, involvement in a pregnancy with their partner, a "special" relationship, and longer relationships were related to receiving verbal abuse. Longer and "special" relationships were also related to increased verbal abuse among girls. Similarly, Giordano and colleagues (2010) examined data from a large sample of adolescents with a focus on characterizing the context of romantic relationships in which physical abuse most often occurs. They also found that relationships of longer duration, more frequent contact, and shared sexual experience were associated with higher rates of abuse perpetration within teen dating relationships. In addition, the intensity or seriousness of the relationship has been demonstrated as an important contextual factor in the expression of risk for abuse (Cleveland, et al., 2003; Vézina & Hèbert, 2007).

This previous research highlights the first of two dominant themes in the literature on relationship-level factors associated with teen dating abuse. Greater intimacy, as seen through longer, more serious, and sexually involved relationships, is associated with various types of

abuse. This idea runs seemingly counter to the common understanding of relationship closeness as a positive and perhaps protective factor within relationships. Indeed, research does support the notion that expressions of *emotional* intimacy (empathy, positive affect, and mutual understanding) can serve as a buffer against partner violence (Marcus & Swett, 2002). Yet duration, sexual intimacy, and the seriousness of the relationship have been consistently associated with aggression and increased risk for dating abuse (Vézina & Hèbert, 2007; Marcus & Swett, 2002). Theories propose that these associations stem from the emotional dependency of more intimate relationships. Specifically, greater emotional involvement over time leads to increased emotional dependency (DeKeseredy & Schwartz, 1998), feelings of "emotional entrapment" resulting from the public expression of commitment (Makepeace, 1989), and reduced "positivity bias" as closer, longer-term relationships become vulnerable to the expression of more negative emotions (Metts & Bowers, 1994; Marcus & Swett, 2002). Similarly, the association between sexual intercourse and relationship abuse is thought to be a product of enmeshment, where having sex marks an escalation of emotional intensity within the relationship that can serve as a precursor for abuse (Kaestle & Halpern, 2005).

Parallel to, but not yet intersecting with work on intimacy, is another body of literature examining relationship context. It represents a second theme that has emerged concurrently in the research, that deviancy within a romantic relationship is a key contextual factor in predicting dating abuse. Previous work has examined delinquency and substance use, two forms of deviancy, as individual-level factors impacting abuse outcomes for youth entering into relationships (Vézina & Hèbert, 2007). From this perspective, in an examination of risk factors for victimization among adolescent and young adult women, Vèzina and Hèbert (2007) found that 7 out of 10 studies revealed significant relationships between involvement in delinquent or

criminal activities and victimization. Further, Gorman-Smith, Tolan, Sheidow, and Henry (2001) found participation in *violent* criminal activity was associated with perpetration of abuse in romantic relationships. Similar findings apply to substance use. Adolescents who report high levels of substance use, namely tobacco, marijuana, and alcohol, are at increased odds for perpetrating physical and sexual violence against their partners (Banyard, Cross, & Modecki, 2006) as well as for being a victim of physical and sexual violence (Buzy, et al., 2004; Champion, et al., 2004; Foshee, et al., 2004; Howard & Wang, 2003; Johnson-Reid, Scott, McMillen, & Edmond, 2007).

In keeping with more recent conceptualizations of teen dating abuse as often dyadic in nature (O'Leary et al., 2003), these associations between delinquency and substance use with relationship abuse may be understood from the perspective of the overall deviant contexts within a relationship. Specifically, lifestyle and routine activity theory may provide a helpful lens with which to view deviancy as a dyadic context for abuse. This theory posits that certain "risky lifestyles" make youth more prone to risk-taking, deviant behaviors, and violence, depending on where, how, and with whom youth spend their time (Cohen & Felson, 1979; Riley, 1987). These risky lifestyles, characterized primarily by involvement in substance use and delinquency, put youth at-risk for violent victimization (Lauritsen, Sampson, & Laub, 1991), including dating abuse. Importantly, lifestyle and routine activity theory does not view adolescents in a vacuum, but rather emphasizes associations with delinquent others as a key source of risk for victimization (Lauritsen et al., 1991). Given the tendency for antisocial individuals to pair romantically with similarly antisocial partners (Krueger, Moffit, Caspi, Bleske, & Silva, 1998), this theory would predict that dyadic influences of delinquency and substance use, or deviancy within the overall relationship, would be an important context of dating abuse.

In the current study, we seek to extend upon findings in the existing literature. We ask, among our sample of at-risk youth, are intimacy or deviancy contexts more strongly associated with relationship abuse? Additionally, we explore these factors across various subtypes of abuse, to examine whether intimacy or deviancy may relate differently to emotional, physical, and sexual abuse.

METHOD

Participants:

Participants included 223 adolescents (57.8% female) enrolled in the first wave and 193 adolescents (59.6% female) enrolled in the second wave of Project D.A.T.E. Out of the 211 adolescents enrolled in wave 2 of Project D.A.T.E., data for 17 adolescents were not included because they reported no current or recent relationship lasting one month or longer since the time of their wave 1 interview. Of these 17 participants, 9 were male. There were no significant differences in participants' age at interview for the 193 included compared to the 17 removed from analyses, $t(208) = -0.517$, $p = .606$.

Measures:

Relationship Intimacy. Three relationship characteristics assessed how close or intimate participants' current or most recent relationships were at each wave of data collection. Relationship length measured the duration of the relationship in months by asking participants to report the start and end date of the relationship on a calendar. When relationships were not continuous (due to break-ups), the time the participant spent dating the partner at each interval was summed. Physical intimacy was assessed by asking the participant whether or not they had consensual sex with the target partner (0: *no*, 1: *yes*). 'Consensual' was defined for the

participant as "not forced or you agreed to have sex." Last, participants were asked about their perceptions of the seriousness of the relationship (1: *Not at all serious*, 4: *Very serious*).

Deviant Relationship Contexts. Two deviant contexts within participants' relationships were examined. Dyadic Offending was assessed using the Self Report of Delinquency Scale (SRD; Elliott & Huizinga, 1989), which asked participants about their own and their partners' involvement in 12 types of delinquent behaviors during the time of the relationship. The items included minor delinquency (e.g., skip class in school), more serious but non-violent delinquency (e.g., selling drugs), and violent delinquency (e.g., using a weapon, fist fighting). The mean score was taken of the mean of each participant's and partner's delinquency score to create a dyadic measure of the average level of offending within the context of the relationship.

In addition, participants reported on 4 items assessing the frequency of their own and their partners' cigarette, alcohol, marijuana, and hard drug use during the relationship from (0 (*never*) to 3 (*10 or more days per month*). Dyadic Substance Use was similarly derived by averaging the mean score of substance use of both participant and partners, to capture the average level of substance abuse within the relationship.

Dyadic Abuse. Two types of dyadic abuse within the target relationship were assessed at both waves. Dyadic physical abuse was assessed via the Physical Assault subscale of the CTS-2 (Straus et al., 1996). On a 4-point scale ranging from 0 (*never*) to 3 (*10 or more times*), participants rated how often they both perpetrated and were the victim of 12 forms of physical abuse during the relationship (α = .85 at both waves). Example items include "my partner pushed or shoved me/I pushed or shoved my partner", "my partner threw me against a wall/I threw my partner against a wall," and "my partner kicked me/I kicked my partner." Partner and participant physical abuse scores were combined by taking the average of the mean scores for reported

abuse by and towards partner. Average scores were skewed and transformed by adding 1/6 and taking the log, resulting in acceptable skewness (1.42 at W1, 1.58 at W2) and kurtosis (0.72 at W1, 1.71 at W2).

Emotional abuse perpetration and victimization was assessed via adolescents' reports on 16 items measuring a diverse set of acts. Examples include "my partner made me describe where I was every minute of the day/ I made my partner describe where he/she was every minute of the day," "my partner insulted me in front of others/ I insulted my partner in front of others," and "my partner threatened to hurt me/ I threatened to hurt my partner." Participants reported how often each act occurred during their current or most recent relationship at both waves of data collection, on a 4-point scale ranging from 0 (*never*) to 3 (*10 or more times*). The majority (n = 14) of the items comprised the Safe Dates measure of Psychological Aggression (Foshee, 1996). An additional two items were taken from the psychological aggression subscale on the Conflict Tactic Scale 2 (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Together the 32 items (16 items asked regarding both perpetration and victimization) were highly reliable at both waves (W1 α = .93, W2 α = .94). Again, a dyadic score was created by taking the average of the mean scores for reported abuse both by and towards partner. Emotional abuse scores were slightly skewed, and adding 1/6 and taking the log resulted in a nearly normal distribution, skewness = -0.06 (W1) and 0.22 (W2), kurtosis = -0.74 (W1) and -0.80 (W2).

Physical and emotional abuse were examined from a dyadic perspective for two reasons. First, this dyadic focus is in line with previous research that demonstrates high associations between perpetration and victimization in teen dating relationships, and emphasizes the important implications that this concordance has for prevention and intervention initiatives that require an accurate characterization of teen dating abuse (O'Leary & Slep, 2003). Second, these

same high associations were found among our sample; perpetration and victimization were highly correlated within abuse subtypes. Physical abuse scores by and towards partner were correlated at 0.73 at wave 1 and 0.74 at wave 2, and emotional abuse scores by and towards partner were similarly correlated at both waves of data collection , at 0.87 and 0.89 respectively. By examining these abuse outcomes as overall measures of relationship abuse types, we better capture the dyadic nature of teen dating aggression found in this sample and in the literature.

Sexual Victimization and Perpetration. Sexual abuse by romantic partners was assessed via the Sexual Coercion subscale of the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe, et al., 2001). Participants reported whether their romantic partners engaged in four forms of sexual abuse, including my partner "touched me sexually when I didn't want him/her to" and "threatened me in attempt to have sex with me." Sexual abuse scores were analyzed as a binary outcome (0: *no sexual abuse*, 1: *at least one form of sexual abuse*). Participants also reported on their perpetration of these same sexual abuse items and responses were similarly analyzed as dichotomous. Sexual abuse victimization and perpetration were *not* considered from a dyadic viewpoint, but rather kept as distinct outcomes. Unlike physical and emotional abuse, previous research does not demonstrate consistently high associations between sexual abuse victimization and perpetration. Although within our sample, sexual abuse scores by and toward partner were significantly correlated (0.62 at W1 and 0.68 at W2), these associations did not reach the same high levels as the other abuse subtypes and were therefore examined separately.

Controls. Participant gender (0: *female*, 1: *male*) and participant age at the start of the relationship were added as controls in all models.

RESULTS

Romantic Relationship Characteristics:

On average, participants were 15.09 years old (*SD* = 1.76) at the start of their current or most recent relationship at wave 1, and 16.03 years old (*SD* = 1.72) at the start of their current or most recent relationship reported at wave 2. Participants reported an average relationship duration of 9.6 months (*SD* = 11.11) at wave 1 and 10.72 months (*SD* = 12.51) at wave 2. At both waves of data collection, teens reported their relationships as being moderately to very serious (wave 1: *M* = 3.37, *SD* = 0.81; wave 2: *M* = 3.21, *SD* = 0.77), as well as physically intimate, with 56.50% of participants at wave 1 having engaged in sex within the examined relationship and 72.68% of participants at wave 2.

In general, participants' relationships were characterized by at least some deviant behavior. At both waves, most participants (W1: 65.31%; W2: 60.86%) reported engaging in at least one delinquent act while dating their current or most recent partner, and reported similar delinquent involvement of that partner (W1: 62.56% W2: 57.37%). From a dyadic perspective, 76.15% of all relationships at wave 1 (*M* = 1.43, *SD* = 1.35) and 73.26% of all relationships at wave 2 (*M* = 1.26, *SD* = 1.33) included at least some delinquency. Similarly, 57.47% of all examined relationships at W1 (*M* = 0.40, *SD* = 0.53) and 72.00% of examined relationships at W2 (*M* = 0.57, *SD* = 0.59) included at least some substance use. Participants also reported experiencing high levels of concurrent abuse: nearly all relationships at both waves (W1: 91.93%; W2: 91.92%) included emotional abuse and approximately half (W1: 52.91%; W2: 48.19%) involved at least some physical abuse. Sexual abuse was less prevalent, although still frequent, among the sample. Participants reported at least one instance of sexual abuse victimization in 37.20% of relationships at wave 1 and 22.80% of relationships at wave 2. Sexual abuse perpetration was reported in 26.00% of wave 1 and 22.80% of wave 2 relationships. Table

4.0 summarizes the correlations between each relationship-level factor and physical, emotional, and sexual abuse outcomes at each wave, controlling for participant gender and age. Higher numbers indicate stronger associations, with asterisks denoting statistically significant correlations.

Table 4.0: Partial Correlations Between Relationship-Level Factors and Relationship Abuse Outcomes

	Wave 1 (*N* = 223)				Wave 2 (*N* = 194)			
	Dyadic Physical Abuse	Dyadic Emotional Abuse	Sexual Abuse Victimization	Sexual Abuse Perpetration	Dyadic Physical Abuse	Dyadic Emotional Abuse	Sexual Abuse Victimization	Sexual Abuse Perpetration
Predictors								
Relationship Length	.22***	.28***	.07	.10	.26***	.31***	.08	.08
Sexual Intercourse (Y/N)	.41***	.41***	.19**	.35***	.18*	.24***	.14	.15*
Seriousness of Relationship	.23***	.25***	.16*	.20**	.18*	.23***	.07	.10
Dyadic Offending	.57***	.52***	.31***	.35***	.56***	.55***	.32***	.27***
Dyadic Substance Use	.32***	.34***	.13	.26***	.27***	.22**	.04	.10

Note. Controls include participant gender and participant age.
*$p < .05$, **$p \leq .01$, ***$p \leq .001$.

Do Intimacy Factors or Deviant Relationship Contexts Relate More to Abuse Outcomes?

Dyadic Physical Abuse. Table 4.1 summarizes the results of hierarchical multiple regressions examining intimacy factors (relationship length, having had sexual intercourse, and the seriousness of the relationship) and dyadic deviancy (delinquency and substance use) as statistical predictors of dyadic physical abuse within participants' current or most recent relationship at wave 1 and wave 2. As shown in wave 1 Step 1 in Table 4.1, after controlling for reporter characteristics (age and gender), whether the partners had sexual intercourse was significantly associated with physical abuse, such that participants who reported having had sex with their partner were more likely to report higher levels of dyadic physical abuse. Wave 1 Step 2 in Table 4.1 demonstrates that having had sexual intercourse within the relationship as well as dyadic offending were significantly associated to dyadic physical abuse, such that participants who reported having had sex with their partner and relationships with higher levels of offending were more likely to have higher levels of dyadic physical abuse. The duration and seriousness of the relationship were not significantly associated to dyadic physical abuse in step 1 or 2 of the model, nor was dyadic substance use.

The model was replicated for the current or most recent relationship at wave 2. Here, relationship length emerged as a significant factor in both Step 1 and Step 2. As in wave 1, in wave 2 dyadic offending was strongly associated to dyadic physical abuse, with higher levels of offending resulting in higher levels of reported abuse. Contrary to findings using wave 1 data, at wave 2 whether or not participants had sex with their partner was no longer significantly associated to dyadic physical abuse. As in wave 1, in wave 2 the seriousness of the relationship and dyadic substance abuse were also non-significantly associated to dyadic physical abuse.

Table 4.1: Associations Between Relationship Level Factors and Dyadic Physical Abuse

	Dyadic Physical Abuse Wave 1 (*N* = 223)				Dyadic Physical Abuse Wave 2 (*N* = 194)			
	Step 1		Step 2		Step 1		Step 2	
	β	R^2	β	R^2	β	R^2	β	R^2
Step 1								
Relationship Length	0.00		0.00		0.01**		0.00**	
Sexual Intercourse (Y/N)	0.19***		0.13***		0.07		0.03	
Seriousness of Relationship	0.03		0.00		0.02		0.01	
Step 1 R^2		.19***				.08***		
Step 2								
Dyadic Offending			0.09***				0.09***	
Dyadic Substance Use			0.00				0.02	
Step 2 ΔR^2				.18***				.25***
Final model R^2				.37***				.33***

Note. All analyses controlled for reporter characteristics (age and gender). 'No, I did not have sex with this partner' = 0, 'Yes, I did have sex with this partner' = 1. *$p < .05$, **$p \leq .01$, ***$p \leq .001$.

Dyadic Emotional Abuse. Next, the same model was used to examine dyadic emotional abuse as an outcome. Table 4.2 demonstrates that, in both Step 1 and Step 2 at wave 1, relationship length and whether the partners had sex were significantly associated with emotional abuse, such that longer and sexually intimate relationships were more likely to include higher levels of dyadic emotional abuse. Step 2 shows that dyadic offending also emerged as significantly associated to emotionally abusive relationships in wave 1.

Wave 2 analyses showed a partial replication: relationship length and whether the partners had sex were significantly associated with dyadic emotional abuse at Step 1 of the hierarchical multiple regression, but after accounting for the strong and significant association between dyadic offending and dyadic emotional abuse in Step 2, whether the partners had sex was no longer significant. The seriousness of the relationship and dyadic substance use were not significantly associated to dyadic emotional abuse at wave 1 or wave 2.

Table 4.2: Associations Between Relationship Level Factors and Dyadic Emotional Abuse

	Dyadic Emotional Abuse Wave 1 (*N* = 223)				Dyadic Emotional Abuse Wave 2 (*N* = 194)			
	Step 1		Step 2		Step 1		Step 2	
	B	R^2	β	R^2	β	R^2	β	R^2
Step 1								
Relationship Length	0.01**		0.00**		0.01**		0.01**	
Sexual Intercourse (Y/N)	0.22***		0.14***		0.12*		0.07	
Seriousness of Relationship	0.03		0.01		0.03		0.02	
Step 1 R^2		.23***				.13***		
Step 2								
Dyadic Offending			0.09***				0.12***	
Dyadic Substance Use			0.05				-0.01	
Step 2 ΔR^2				.13***				.22***
Final model R^2				.36***				.35***

Note. All analyses controlled for reporter characteristics (age and gender). 'No, I did not have sex with this partner' = 0, 'Yes, I did have sex with this partner' = 1. *$p < .05$, **$p \leq .01$, ***$p \leq .001$.

Sexual Abuse Victimization. Table 4.3 summarizes the results examining these same relationship level factors as statistical predictors of sexual abuse victimization at wave 1 and wave 2, using a logistic regression model. Within wave 1, Step 1 illustrates a significant association between having had sex within the relationship and experiencing sexual victimization, such that the odds of being the victim of sexual abuse were over two times higher for those who had versus had not had sex with the target partner (OR = 2.12). However, after accounting for dyadic offending in wave 1 (see Step 2 in the model), the association with having had sex was no longer significant. Instead, only dyadic offending was significantly associated to sexual victimization at wave 1. In fact, at both waves of data, there was a significant and strong association between dyadic offending and sexual abuse victimization, such that with every one unit increase in the dyadic offending score of the relationship, the odds of the participant experiencing sexual victimization were nearly two times higher (W1: OR = 1.65, W2: OR = 1.87). No other factors emerged as significantly associated to sexual abuse victimization in the final models at wave 1 or wave 2.

Sexual Abuse Perpetration. A similar pattern emerged for sexual abuse perpetration. Within wave 1, Step 1 in Table 4.4 illustrates that having had sex within the relationship was again significantly associated to perpetration of sexual abuse, such that the odds of sexually abusing a partner were over seven times higher for those who had sex in the target relationship (OR = 7.35). After accounting for the strong and significant association of dyadic offending to sexual abuse perpetration within wave 1 (see Step 2), having had sex remained significantly associated to perpetration of sexual abuse. Although decreased, the odds of reporting sexual abuse towards a partner remained over five times higher for participants who also reported having had sex with that partner (OR = 5.23). Additionally, for each one unit increase in the

deviant offending score of the relationship, the odds of the participant having perpetrated sexual abuse were over one and one-half times higher (OR = 1.52) within wave 1.

At wave 2, only dyadic offending was significantly associated to sexual perpetration at both steps in the model. Again, each unit increase in relationship offending was associated with an increase in the odds of sexual abuse perpetration (OR = 1.54). No other relationship level factors were significantly associated with sexual abuse perpetration in wave 2.

Table 4.3: Associations Between Relationship Level Factors and Sexual Abuse Victimization

	Sexual Abuse Victimization Wave 1 (*N* = 223)				Sexual Abuse Victimization Wave 2 (*N* = 194)			
	Step 1		Step 2		Step 1		Step 2	
	OR	R^2	OR	R^2	OR	R^2	OR	R^2
Step 1								
Relationship Length	1.00		0.99		1.01		1.00	
Sexual Intercourse (Y/N)	2.12*		1.66		2.45		2.26	
Seriousness of Relationship	1.42		1.27		1.00		0.93	
Step 1 R^2		.16***				.05		
Step 2								
Dyadic Offending			1.65***				1.87***	
Dyadic Substance Use			0.72				0.52	
Step 2 ΔR^2				.07				.13
Final model R^2				.23***				.18***

Note. All analyses controlled for reporter characteristics (age and gender). 'No, I did not have sex with this partner' = 0, 'Yes, I did have sex with this partner' = 1. OR = Odds Ratio. Nagelkerke R^2 is presented. *$p < .05$, **$p \leq .01$, ***$p \leq .001$.

Table 4.4: Associations Between Relationship Level Factors and Sexual Abuse Perpetration

	Sexual Abuse Perpetration Wave 1 (*N* = 223)				Sexual Abuse Perpetration Wave 2 (*N* = 194)			
	Step 1		Step 2		Step 1		Step 2	
	OR	R^2	OR	R^2	OR	R^2	OR	R^2
Step 1								
Relationship Length	1.00		1.00		1.01		1.00	
Sexual Intercourse (Y/N)	7.35***		5.23***		3.09		2.63	
Seriousness of Relationship	1.60		1.39		1.15		1.07	
Step 1 R^2		.27***				.12*		
Step 2								
Dyadic Offending			1.52**				1.54**	
Dyadic Substance Use			1.21				0.84	
Step 2 ΔR^2				.06				.06
Final model R^2				.33***				.18***

Note. All analyses controlled for reporter characteristics (age and gender). 'No, I did not have sex with this partner' = 0, 'Yes, I did have sex with this partner' = 1. OR = Odds Ratio. Nagelkerke R^2 is presented. *$p < .05$, **$p \leq .01$, ***$p \leq .001$.

DISCUSSION

This study examined intimacy and deviancy relationship contexts among at-risk, low-income adolescents to better understand the relationship characteristics associated with abuse outcomes. In general, participants' relationships were characterized by high levels of intimacy, with the average relationship relatively long-term (around 9 months), moderately to very serious, and sexually involved. Participants' relationships were also highly deviant, with over half involving substance use and approximately three-quarters involving delinquency. In this way, our sample was well suited to examine the question of which contextual variables were more strongly associated to dating abuse, as intimacy and deviancy contexts were both well represented.

Results yielded a strong and consistent finding: deviant contexts were more consistently associated to each subtype of relationship abuse. Specifically, higher levels of dyadic offending were associated with higher levels of physical, emotional, and sexual abuse, with replication in wave 2 analyses. These strong and significant associations were apparent even after accounting for the influence of intimacy contexts, suggesting that deviancy in the relationship is consistently associated with dating abuse across relationships over time, and is uniquely associated with abuse even after accounting for participate gender, age, and relationship intimacy. These findings are in line with the lifestyles and routine activity theory, suggesting that teens' and their partners' risky lifestyles, specifically their involvement in delinquent behavior, put them at greater risk for relationship abuse (Lauritsen et al., 1991). Worth noting, dyadic substance use was initially correlated with dyadic emotional and physical abuse within wave 1 and wave 2 relationships, but was not significantly associated with any abuse outcome after accounting for dyadic offending and intimacy factors. Thus, the lack of significant findings might be the result of the strong

association between dyadic offending and relationship abuse, such that delinquency within the relationship better explained the variance in relationship abuse.

While dyadic offending was a significant correlate of abuse across all analyses, results regarding intimacy contexts were mixed. First, at wave 1 only, having had sexual intercourse with the target partner was significantly associated with experiencing higher rates of physical and emotional dyadic abuse, as well as higher rates of sexual abuse perpetration. The lack of replication between waves for this factor may be a result of our aging sample, captured during a time of developmental importance. Participants were, on average, 15 years old at the start of the examined relationship at wave 1 and 16 years old at the start of the examined relationship at wave 2. It is possible that at wave 1, we captured more relationships in which sexual intercourse in the relationship was also the participant's sexual debut, and that the importance of younger age at first sex in predicting relationship abuse diminishes as adolescents age. Previous research has established such a pattern for the importance of age at first intercourse in predicting sexual risk, where younger ages of first sex were associated with higher odds of contracting an STI in adolescence, but the effect disappeared with age, such that age at first intercourse had no effect on STI rates for young adults (Kaestle, Halpern, Miller, & Ford, 2005).

Similarly, relationship length was inconsistently related to abuse outcomes. The duration of the relationship was significantly associated with emotional abuse at both waves of data, but only related to physical abuse at wave 2. The association to emotional abuse is in line with existing theory regarding relationship length that longer relationships reflect greater emotional investment but also allow for the expression of more negative affect (Marcus & Swett, 2002). The effect of relationship duration on physical abuse in wave 2 only may be the result of longer relationships, on average, among our older versus younger sample, suggesting that more

relationships may have crossed a threshold for duration effects. The expression of negative affect that is more likely to occur as relationships persist, including jealousy and anger, may reflect emotional intensity that teens themselves describe as precursors for physical abuse (Jackson, Cram, & Seymour, 2000).

Overall, the current study addressed the question of which kinds of relationship contexts matter most in regards to teen dating abuse. The level of offending in the relationship was the strongest and most consistent factor associated with all abuse subtypes. Results support a lifestyles and routine activity framework, whereby teens' offending behavior with delinquent partners is a key risk factor for experiencing abuse. Findings are also consistent with previous research suggesting that having sexually intimate and long-term relationships escalate emotional intensity and increase the risk of some kinds of abuse.

IMPLICATIONS FOR POLICY AND PRACTICE

Results suggest two implications for current policy and future practice regarding teen dating abuse interventions. First, many states are eager to begin addressing the issue of adolescent relationship abuse within the school system. For example, in 2007, the Governor of Texas passed legislation requiring each school district in the state to adopt and implement a dating abuse policy that includes teacher training, safety planning, and *awareness education for students* (HB 121, 2007). Such mandated programs reflect attempts to be proactive, but may benefit from a more targeted approach. School-based interventions may be informed by research emphasizing the important dyadic nature of many abusive teen relationships and the significant linkages to deviancy. In this way, schools may opt to target interventions among youth most often in trouble, weaving healthy romantic relationship education into an overall framework of

addressing delinquent lifestyles (e.g. changing how youth spend their time by increasing accessibility to prosocial peers and activities).

Similarly, results of the current study suggest that delinquency is the dominant relationship context associated with abuse, and therefore may be a potentially useful identifier of risky, abusive relationships. Findings lend support to interventions focused on at-risk youth in juvenile detention centers (e.g. *Expect Respect*; Ball, Kerig, & Rosenbluth, 2009). In addition, the juvenile justice system may be a fruitful resource for screening teens in need of (a) treatment for relationship abuse trauma, (b) intervention for a currently abusive relationship, or (c) a preventative intervention for youth at-risk of becoming future victims or perpetrators.

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

This chapter examined two types of negative relationship contexts in order to see which mattered more in relation to dating abuse. However, more research is needed to understand how positive relationship-level factors may mitigate or buffer against risk for abuse, in particular intimacy. Intimacy is a complex relationship characteristic; while the current study's findings were consistent with prior work linking intimacy contexts to abuse, it was unable to capture more complicated expressions of intimacy. Some literature suggests that intimacy, among young adults, may be teased apart further in order to capture the protective quality of emotional closeness. Specifically, that emotional intimacy, including things like empathy, positive affect, and mutual understanding, are related to decreased physical abuse (Marcus & Swett, 2002). Future research exploring these same positive intimacy characteristics among at-risk youth could provide greater depth and complexity to our current understanding.

Last, our results provide strong support for the association between delinquency and dating abuse. However, research suggests that as teens age, even offending youth tend to desist

from antisocial behavior (Farrington, et al., 2009). We may better understand the associations between offending and relationship abuse by examining how the associations change longitudinally, as youth presumably engage in less delinquent behavior.

Chapter 5: Why Do Youth Dating Older Partners Experience Victimization and Poor Sexual Health?

STATEMENT OF THE PROBLEM

In the U.S., older partners who engage in sexual activity with youth who are deemed too immature to consent can be prosecuted and punished for a sexual offense. Although the exact laws vary across states, citizens generally refer to them as statutory rape laws. Although there is debate about whether statutory rape laws actually protect youth (Cocca, 2006; Donovan, 1997; Elo, King, & Furstenberg, 1999; Oberman, 1994), a growing body of evidence supports the need to prevent relationships between adolescents and older romantic partners. Age gaps tend to be associated with many costly negative health outcomes, including early sexual activity, decreased contraceptive use, unplanned pregnancy, and victimization by partners (Abma, Driscoll, & Moore, 1998; Begley, Crosby, DiClemente, Wingood, & Rose, 2003; Buzy et al., 2004; Kaestle, Morisky, & Wiley, 2002; Lindberg, Sonenstein, Ku, & Martinez, 1997; Marín, Coyle, Gómez, Carvajal, & Kirby, 2000; Mezzich, Tarter, Giancola, Lu, Kirisci, & Parks, 1997; Rickert, Wiemann, Vaughan, & White, 2004; Vèzina & Hèbert, 2007; Young & d'Arcy, 2005).

Yet, limitations in research examining romantic relationships involving age gaps have hindered the ability to translate findings into meaningful practices, policies, and laws to protect adolescents from potentially harmful relationships with older partners. This study examined three pressing questions, namely: (1) are age gaps, younger partner age, or a combination of the two most strongly associated to health outcomes, (2) are age gaps differentially related to health outcomes for boys versus girls, and (3) why are age gaps associated with negative health outcomes? Studying these questions within a sample of at-risk youth is particularly important, given that adolescents on at-risk trajectories are the most likely youth to become intimate with

older partners (Hines & Finkelhor, 2007; Young & d'Arcy, 2005). Studying partner age gaps among at-risk youth increases the likelihood that results will generalize to the population of youth and older partners who are most likely to come to the attention of law enforcement and service providers.

LITERATURE REVIEW

Do partner age gaps, younger partner age, or a combination of the two matter most?

Research is needed to confirm that partner age gaps, rather than younger partner age or a combination of the two, account for links to negative health outcomes. In some states, adolescents cannot consent to sex with partners of any age until they have reached a specified "age of consent," for example age 18 in California (Glosser, Gardiner, & Fishman, 2004). Over time, however, there has been a shift away from relying solely on adolescent age in determining whether sexual relationships between different age partners are illegal (Glosser et al., 2004). Today, age gap provisions exist in more than half of U.S. states, which take into consideration whether the younger partner has reached a certain minimum age *and* whether the two partners are within a specified age difference from one another, typically two to four years (Glosser et al., 2004). Age gap provisions imply that adolescents have the capacity to consent to sexual activity with similarly-aged romantic partners. However, as the age gaps widen between youth and their older romantic partners, older partners become responsible for sexual decision-making within the relationship and younger partners are presumed incompetent to consent.

The movement toward age gap provisions is in line with developmental research showing that adolescents begin to develop the cognitive capacity to make informed decisions early in adolescence, but that their ability to carry out informed decisions varies across contexts due to diminished psychosocial maturity (Steinberg, et. al, 2009). Compared to adults, adolescents are

more susceptible to pressure from others (Scott, Reppucci, & Woolard, 1995; Steinberg et al., 2009), and tend to choose romantic partners who will earn them status and acceptance among peers (Collins, 2003; Roscoe, Diana, & Brooks, 1987). Having an older partner might represent maturity, status, and autonomy (Gowen, Feldman, Diaz, & Yisrael, 2004), and older partners might also play the role of emotional or financial caretakers among low-income, at-risk youth (Hines & Finkelhor, 2007). Thus, at-risk adolescents might be particularly motivated to maintain relationships with older, more mature romantic partners. Due to the inequalities and motivations at play, younger partners are likely to be more susceptible to older partners' encouragement of sexual risk-taking and more vulnerable to remaining in the relationship even if it becomes unhealthy or violent. This study examined whether adolescents' age, the age gap between partners, or a combination of the two was most strongly associated with poor reproductive health and victimization outcomes.

Does gender moderate the associations between age gaps and negative health outcomes?

Researchers and service providers have paid little attention to gender differences in associations between partner age gaps and health outcomes. The majority of research to date has focused on the negative health consequences that girls face as a result of dating older partners, and statutory rape policies and practices are predominately aimed at protecting underage girls (Hines & Finkelhor, 2007; PRWORA, 1996). Yet, results from the few studies which have examined age gaps among boys suggest that, compared to those dating similarly-aged partner, boys romantically involved with older partners are at risk for engaging in sexual intercourse at an early age, are less likely to use contraception, and report feeling forced into having sexual intercourse (Manlove, Moore, Liechty, Ikramullah, & Cottingham, 2005; Marin et al., 2000). Initial findings are in line with developmental research showing that both boys and girls exhibit

psychosocially immature behaviors during adolescence (Cauffman & Steinberg, 2000), and thus are both likely to be at risk for engaging in health compromising behaviors, especially if older romantic partners are encouraging such behaviors. However, preliminary findings are in need of replication, and more importantly, follow-up research is needed to investigate other risks boys might face (e.g., victimization) and to test whether the links between partner age gaps and negative health outcomes differ *significantly* for boys versus girls. The current study expanded upon past work by testing gender as a moderator of the associations between partner age gaps and negative reproductive health outcomes, and in addition investigated whether boys and girls who date older partners are differentially at-risk for emotional, physical, and sexual victimization.

Why do partner age gaps relate to negative health outcome?

Little research has investigated the underlying theory that older partners hold more power in relationships than similarly-aged romantic partners, but even less research has examined why dating older, perhaps more influential partners might be associated specifically with negative health outcomes. Indeed, one could argue that intimate relationships with older partners might foster positive health outcomes; for example older, more mature partners might be able to show younger partners how to access and use condoms or might have developed more mature skills for managing relationship conflict without violence. Yet, much evidence documents health *risks*, not benefits, associated with dating older partners (Hines & Finkelhor, 2007). We investigated three theories as a first step toward better understanding why dating older partners might compromise adolescents' health.

First, partner age gaps are most commonly studied within a power and control framework, under the assumption that older partners wield greater decision-making power in

romantic relationships and use this power to manipulate and victimize younger partners (Gowen et al., 2004; Vèzina & Hèbert, 2007; Volpe, Hardie, Cerulli, Sommers, & Morrison-Beedy, 2013). Indeed, in qualitative interviews with girls who have dated older partners, some girls described older boyfriends as wanting "to be able to tell someone what to do and when to do it" (Higginson, 1999, p. 35). Yet, beyond qualitative research, only one study appears to have explored whether older partners actually do hold greater decision-making power within romantic relationships than similarly-aged partners (Volpe et al., 2013). Among sexually active girls, wider partner age gaps were associated with less consistent condom use, but were *not* significantly associated with relationship power, a measure of older partners' control and decision-making dominance within the relationship (Volpe et al., 2013). There is a need to see if this finding can be replicated, particularly given the assumption of decision-making power differences underlying public policies and practices governing statutory relationships (e.g., see PRWORA, 1996). It is possible that adolescents with older partners did not want to admit to the power differences, for example youth answered questions like "most of the time, we do what my partner wants to do." Thus, we investigated whether partner age gaps might be associated with two measures of decision-making power that adolescents might feel more comfortable discussing: older partners' negotiation or compromising behaviors and younger partners' satisfaction with decision-making.

Alternatively, a second explanation for links between age gaps and sexual risk-taking and victimization is that older partners are lower quality partners than similarly aged partners, in that they tend to be engaging in more "risky lifestyles." In other words, there is something about the quality of older partners who seek out younger partners that increases the likelihood of older partners encouraging sexual risk-taking and perpetrating violence within the relationship.

Compared to similarly aged partners, older partners have been shown to have histories of greater externalizing problems, such as school difficulties, delinquency, and substance use which might make them less attractive to partners their own age (Hines & Finkelhor, 2007; Lamb, Elster, & Tavaré, 1986). Lifestyle and routine activity theory posits that some lifestyles are more prone to risk-taking, deviant behaviors, and violence, depending on where, with whom, and how people spend their time (Cohen & Felson, 1979; Riley, 1987). In line with lifestyle and routine activity theory, involvement in "risky lifestyles," namely substance use and delinquency, has been linked to greater risky sexual behavior and perpetration of partner violence (Magdol, Moffitt, Caspi, & Silva, 1998; Tapert, Aarons, Sedlar, & Brown, 2001; Temple, Shorey, Fite, Stuart, & Le, 2013). Thus, older partners' risky lifestyles might render the adolescents they date more vulnerable to risky sexual behaviors and victimization.

Third, older partners' risky lifestyles cannot be examined as explanations for the link between age gaps and negative health outcomes without also considering adolescents' own risky lifestyles. Adolescents with problematic psychosocial histories are more likely to date older romantic partners, and entering into a relationship with an older partner has been associated with increased levels of substance use and delinquency (Hines & Finkelhor, 2007; Lamb et al., 1986; Leitenberg & Saltzman, 2000; Mezzich et al., 1997; Young & d'Arcy, 2005). Thus, adolescents are likely to be engaging in risky lifestyles over the course of the relationship with older partners, whether due to adolescents' pre-existing individual inclination toward risk-taking behaviors or to the encouragement from their older, more deviant romantic partners. As expected based on lifestyle and routine activity theories, adolescents' own risky lifestyles while dating older partners might place them in more vulnerable situations under which sexual risk-taking and victimization occur (Grover, 2004; Vézina et al., 2011).

A Methodological Consideration

The precedent in past literature is to examine age gaps as a categorical variable (e.g., three or more years older; Manlove et al., 2005) or as a continuous variable ranging from negative values to positive values, including participants who dated both younger and older romantic partners (e.g., Young & d'Arcy, 2005). Categorizing age gaps is problematic in that there is a lack of theoretical justification for how to define "older" versus similarly-aged partners. Thus, herein we coded age gaps as a continuous variable. However, most health outcomes examined are either bidirectional by nature (e.g., if one partner engages in unprotected sex so does the other), or tend to be bidirectional due to partner influences and assortative mating processes (e.g., much evidence suggests significant correlations between partners' offending behaviors; Krueger, Moffitt, Caspi, Bleske, & Silva, 1998; Rhule-Louie, & McMahon, 2007). Therefore, the association between the full range of age difference scores (i.e., ranging from negative to positive values) and negative health behaviors is likely to be quadratic rather than linear, in that participants are engaging in more risky behaviors the wider the age gap whether they are the *older* or the *younger* partner in the relationship. Analyzing partner age gaps within a quadratic model is problematic, however, because the theoretical and legal reasoning behind why younger vs. older partners engage in risky health behaviors is vastly different. Older partners are attributed legal responsibility for their behaviors whereas younger partners are assumed to be manipulated or coaxed into engaging in risky health behaviors (Glosser et al., 2004). Thus, the current study focuses solely on relationships involving adolescents and a same age or older romantic partner.

HYPOTHESES

First, we examined whether partner age gaps were associated with sexual risk-taking and victimization above and beyond younger partner age, or whether a combination of the two best predicted negative health outcomes. In line with developmental theory suggesting that contexts are important to adolescents' decision-making competencies, we hypothesized that partner age gaps would be a stronger correlate of negative health outcomes than younger partner age. Second, we hypothesized that partner age gaps would be significantly associated with negative health outcomes for boys and girls. Third, we hypothesized that poor partner compromise in decision-making, partner risky lifestyles, and/or participants' risky lifestyles would explain why dating older romantic partners were associated with sexual risk-taking and victimization.

METHOD

Participants:

Participants included 206 adolescents (59.7% female) enrolled in the first wave of Project D.A.T.E.: Demand Appreciation, Trust, and Equality. Out of the 223 adolescents enrolled in Project D.A.T.E., data for 17 adolescents were not included because they always dated younger partners. Of these 17 participants, 11 were male. There were no significant differences in participants' age at interview for the 206 included compared to the 17 removed from analyses, $t(221) = -1.01$, $p = .312$.

Measures:

Partner age gaps. Age gaps were calculated by standardizing both younger and older partner ages and then subtracting younger partner ages from older partner ages. Standardized

difference scores have been recommended over raw difference scores or residual difference scores because of their mathematical properties, such that the final age gap variable was not too highly correlated to younger partner age and could still be viewed as a distinct variable in statistical models (De Los Reyes & Kazdin, 2004).

Reproductive health outcomes. Three sexual reproductive health outcomes were examined. First, participants were asked if they had consensual sex with the target partner (0: *no*, 1: *yes*). Second, those who had sex were asked how often they used protection against pregnancy or sexual transmitted infections (STIs) on a scale from 0 (*never*) to 4 (*all the time*). Third, adolescents who engaged in sex reported whether they had ever contracted an STI from the target partner and whether they or their partner had ever become pregnant. Responses were combined into one variable and scored as 0 (*no pregnancy or STI*) or 1 (*became pregnant or contracted an STI*).

Victimization by partner. Three types of victimization experiences were assessed. Emotional abuse perpetrated by romantic partners toward adolescents was assessed via adolescents' reports on 16 items measuring a diverse set of acts, for example my partner "made me describe where I was every minute of the day," "insulted me in front of others," and "threatened to hurt me." Participants reported how often each act occurred during the relationship with the target partner on a 4-point scale ranging from 0 (*never*) to 3 (*10 or more times*). The majority (n = 14) of the items comprised the Safe Dates measure of Psychological Aggression (Foshee, 1996). An additional two items were taken from the Psychological Aggression subscale on the Conflict Tactic Scale 2 (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Together the 16 items were highly reliable (α = .90). Emotional abuse scores

were slightly skewed, and adding 1/6 and taking the log resulted in a nearly normal distribution, skewness = 0.19, kurtosis = -0.79.

Physical abuse perpetrated by romantic partners was assessed via the Physical Assault subscale of the CTS-2 (Straus et al., 1996). On a 4-point scale ranging from 0 (*never*) to 3 (*10 or more times*), participants rated how often partners perpetrated 12 forms of physical abuse during the relationship (α = .87). Example items include my partner "pushed or shoved me," "threw me against a wall," and "kicked me." Average scores were skewed and transformed by adding 1/6 and taking the log, resulting in acceptable skewness, 1.42, and kurtosis, 1.04.

Sexual abuse by romantic partners was assessed via the Sexual Coercion subscale of the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe, Scott, Reitzel-Jaffe, Wekerle, Grasley, & Straatman, 2001). Participants reported whether their romantic partners engaged in four forms of sexual abuse, including my partner "touched me sexually when I didn't want him/her to" and "threatened me in attempt to have sex with me." Sexual abuse scores were analyzed as a binary outcome (0: *no sexual abuse*, 1: *at least one form of sexual abuse*).

Participants' delinquency and substance use. Participants were asked about their participation (yes or no) in 12 types of delinquent behaviors from the Self Report of Delinquency Scale (SRD; Elliott & Huizinga, 1989) during the romantic relationship with the target partner. The items included minor delinquency (e.g., skip class in school), more serious but non-violent delinquency (e.g., selling drugs), and violent delinquency (e.g., using a weapon, fist fighting). In addition, participants reported on 4 items assessing the frequency of their cigarette, alcohol, marijuana, and hard drug use during the relationship from (0 (*never*) to 3 (*10 or more days per month*). Self-reported delinquency and substance use scores were standardized and summed for a comprehensive measure of participants' illegal behaviors (α = .82).

Partners' delinquency and substance use. Participants also reported on their romantic partners' involvement in the same 12 delinquent behaviors and 4 types of substances described above. Partners' illegal behaviors were also assessed by standardizing delinquency and substance use scores and calculating sum scores (α = .75).

Negotiation and decision-making. Participants completed the Partner Negotiation subscale of the CTS-2 (Straus et al., 1996). On a 4-point scale ranging from 0 (*never*) to 3 (*10 or more times*), participants reported how often partners engaged in 6 forms of healthy compromise and negotiation when making decisions during the relationship (α = .81). Example items included my partner "showed they cared for me even though we disagreed" and "agreed to try a solution I suggested." In addition, on a scale from 1 (*very dissatisfied*) to 5 (*very satisfied*), participants rated "In general, how satisfied were/are you with the way you and your partner divide(d) decisions?"

Controls. Participant gender (0: *female*, 1: *male*), whether the romantic relationship was the participants' most recent (0: *no*, 1: *yes*), relationship length in months, and participant age at the start of the relationship were added as controls in all models.

RESULTS

Romantic Relationship Characteristics:

On average, participants were 14.46 years old (*SD* = 1.62), and their partners were 16.18 years old (*SD* = 2.61) at the start of the relationship. Partner age discrepancies ranged from 0 to 13 years, with a breakdown as follows: 29.6% were same age, 29.1% were 1 year older, 17.0% were 2 years older, 10.7% were 3 years older, 5.8% were 4 years older, and 7.8% were 5 or more years older. Girls dated significantly older partners than did boys, *M* = 2.17 years older for girls (*SD* = 2.14) vs. *M* = 1.05 years older for boys (*SD* = 1.60), $t(201.98) = 4.90$, $p < .001$; nonetheless, 24.1% of boys dated partners who were 2 or more years older. Only 5 relationships involved same-sex partners. Relationship length varied a great deal, ranging from 1 to 70 months (*M* = 9.59, *SD* =11.65). The majority (61.7%) of relationships were participants' most recent relationship, although only 28.6% were currently dating their partner at the time of the interview.

In general, participants' relationships were characterized by high rates of sexual health risks and victimization experiences. About half (52.7%) of participants reported engaging in sexual intercourse with their partners. Among those, only 58.5% reported using protection "all the time", and 19.6% contracted an STI or became pregnant during the target relationship. Nearly everyone, 88.2%, experienced emotional abuse, 38.9% experienced physical abuse, and 35.0% experienced sexual abuse.

Do Younger Partner Age, Partner Age Gaps, or Both Relate to Health Outcomes?

Tables 5.1 to 5.3 summarize the results examining the control variables, participant age, and partner age gaps as statistical predictors of reproductive health and victimization. Logistic regressions were conducted to examine sexual intercourse, pregnancy/STI, and sexual abuse outcomes. Ordinary Least Square (OLS) regressions were conducted to examine protection

against pregnancy/STIs, emotional abuse, and physical abuse. As shown in Step 1 in Table 5.1, after controlling for gender, whether the relationship was the most recent, and relationship length, participants' (i.e., younger partners') age at the start of the relationship was significantly associated with having sexual intercourse, such that older participants were more likely to engage in sex with their partners. Step 2 in Table 5.1 illustrates a significant and strong association between age gaps and engagement in sexual intercourse, such that with every one unit increase in the standardized age difference between partners, the odds of the couple engaging in sexual intercourse were nearly 5 times higher (OR = 4.96).

Next, Step 1 in Table 5.2 illustrates that participants' age was not associated with the frequency of protection during sex or whether participants became pregnant or contracted an STI, after controlling for gender, whether the relationship was participants' most recent, and relationship length. However, Step 2 in Table 5.2 shows that the wider the age gap between youth and their partner, the less likely they were to use contraception and the more likely they were to become pregnant or contract an STI.

A similar pattern emerged for victimization outcomes. Step 1 in Table 5.3 illustrates that participants' age was not associated with emotional, physical, or sexual abuse after accounting for the controls, whereas Step 2 illustrates that wider age gaps were associated with significantly more frequent emotional and physical abuse and a higher odds of being sexually abused by partners. It is only after accounting for age gaps that younger partner age becomes associated to victimization experiences, such that when age gaps are held constant older adolescents are at the greatest risk for emotional, physical, and sexual victimization.

Next, the full models in Tables 5.1 to 5.3 were replicated to test participant age as a moderator of the association between age gaps and health outcomes. Participant age was not a

significant moderator for any health outcomes (*p*-values ranged from .07 to .97), indicating that the association between age gaps and negative health outcomes was not significantly stronger for the youngest adolescents.

Does Dating Older Partners Matter More for Girls Versus Boys?

The full models in Tables 5.1 to 5.3 were replicated examining gender as a moderator of the association between partner age gaps and each health outcome. Gender was coded as -.5 and .5 and multiplied with age gaps, which was in standardized form. Gender did not emerge as a significant moderator for any health outcomes (*p*-values ranged from .21 to .82).

Why Are Age Gaps Associated with Sexual Risk-Taking and Victimization?

We tested compromise in decision-making within the relationship, partners' risky lifestyles, and participants' risky lifestyles as potential mediators of the association between entering into a relationship with an older partner and negative sexual health outcomes and victimization. For mediation to occur, dating an older partner must be associated with the potential mediators, and in turn the mediators must be associated with the negative health outcomes (Baron & Kenny, 1986; MacKinnon, 2008). Table 5.4 summarizes the partial correlations between the potential mediators and age gaps and all health outcomes, controlling for participant gender, participant age, relationship length, and whether the relationship was the most recent. Table 5.4 illustrates that wider partner age gaps were significantly associated with both riskier partner lifestyles and riskier participant lifestyles but not decreased negotiation or decision-making satisfaction within the relationship. In addition, partners' negotiation and compromise and participants' decision-making satisfaction within the relationship were inconsistently associated with the negative health outcomes, whereas partners' and participants' risky lifestyles were consistently associated with negative health outcomes. Thus, neither

negotiation nor decision-making satisfaction could significantly mediate the associations between age gaps and health outcomes (Baron & Kenny, 1986).

Next, we examined a multiple mediator model testing partners' and participants' risky lifestyles as simultaneous mediators, illustrated in Figure 5.1. The multiple mediator model allowed us to control for the high correlation between participants' and partners' risky lifestyles, $r = .47$, $p < .001$. Analyses were conducted in SPSS using the script provided by Preacher and Hayes (2008). Results are presented in Table 5.5. Indirect effects with 95% confidence intervals that do not cross 0 are significant, indicating that partners' and/or participants' risky lifestyles significantly mediated the associations between age gaps and health outcomes.

Table 5.1: Association Between Partner Age Gaps and Engagement in Sexual Intercourse

	Sexual Intercourse (Yes/No)			
	Step 1		Step 2	
	OR	R^2	OR	R^2
Step 1				
Gender	1.42		2.98**	
Recent Relationship	0.97		1.61	
Relationship Length	1.06***		1.06***	
Participant Age	1.53***		2.34***	
Step 1 R^2		.17***		
Step 2				
Age Gaps			4.96***	
Step 2 ΔR^2				.17***
Final model R^2				.34***

Note. Female = 0, Male = 1. OR = Odds Ratio. Nagelkerke R^2 is presented. **$p < .01$, ***$p < .001$.

Table 5.2: Associations Between Partner Age Gaps and Sexual Health Outcomes

	Use of Protection				Pregnancy or STI (Yes/No)			
	Step 1		Step 2		Step 1		Step 2	
	B	R^2	β	R^2	OR	R^2	OR	R^2
Step 1								
Gender	-0.02		-0.12		0.51		0.80	
Recent Relationship	0.32**		0.29**		0.30*		0.32	
Relationship Length	-0.25*		-0.28**		1.05*		1.07**	
Participant Age	-0.03		-0.15		0.97		1.19	
Step 1 R^2		.14**				.21**		
Step 2								
Age Gaps			-0.28**				2.18**	
Step 2 ΔR^2				.05**				.09**
Final model R^2				.19**				.30**

Note. OR = Odds Ratio. *N* = 107 participants who had sexual intercourse with their partners. Female = 0, Male = 1. For Pregnancy or STI outcome, Nagelkerke R^2 is presented. *$p < .05$, **$p \leq .01$.

Table 5.3: Associations Between Age Gaps and Victimization by Partner

	Emotional Abuse				Physical Abuse				Sexual Abuse (Yes/No)			
	Step 1		Step 2		Step 1		Step 2		Step 1		Step 2	
	B	R^2	*β*	R^2	*β*	R^2	*β*	R^2	OR	R^2	OR	R^2
Step 1												
Gender	0.07		0.15*		0.12		0.19**		1.20		1.47	
Recent Relationship	-0.04		0.03		-0.11		-0.06		0.63		0.72	
Relationship Length	0.32***		0.31***		0.35***		0.35***		1.01		1.01	
Participant Age	0.05		0.18**		0.05		0.16*		1.19		1.31*	
Step 1 R^2		.09**				.12***				.04		
Step 2												
Age Gaps			0.32***				0.26**				1.53*	
Step 2 ΔR^2				.07***				.06**				.02*
Final model R^2				.16***				.17***				.06*

Note. Female = 0, Male = 1. OR = Odds Ratio. Nagelkerke R^2 is presented for Sexual Abuse. *p < .05, **p < .01, ***p < .001.

Table 5.4: Partial Correlations Between Explanatory Variables, Health Outcomes, and Partner Age Gaps

	Age Gaps	Sexual Intercourse	Use of Protection	Pregnancy/ STI	Emotional Abuse	Physical Abuse	Sexual Abuse
Potential Mediators							
Decision-Making Satisfaction	-.13	-.07	.00	-.15	-.24***	-.19**	-.14
Partner Negotiation and Compromise	.02	-.03	-.13	.10	.11	.09	.03
Partner Delinquency and Substance Use	.34***	.34***	-.16	.24*	.51***	.44***	.29***
Participant Delinquency and Substance Use	.28***	.37***	-.25*	.23*	.38***	.40***	.27***

Note. Controls include participant gender, participant age, relationship length, and whether the relationship was the most recent.
*$p < .05$, **$p \leq .01$, ***$p < .001$.

Table 5.5: Partner Externalizing Behavior and Satisfaction with Decision-Making as Mediators, Coefficients Correspond to Figure 1

	a_1	b_1	a_2	b_2	c ′ (c total)	Partners' Risky Lifestyle Indirect B_1 (95% CI)	Participants' Risky Lifestyle Indirect B_2 (95% CI)	Health Outcome R^2
Sexual Health								
Sexual Intercourse[a]	0.40***	0.56*	0.31***	0.86**	1.32*** (1.60***)	**0.22** (0.01, 0.62)	**0.30** (0.06, 0.60)	0.45***
Use of Protection	0.28**	-0.01	0.20*	-0.29	-0.31* (-0.36*)	0.00 (-0.13, 0.10)	-0.06 (-0.26, 0.01)	0.23***
Pregnancy or STI[a]	0.28**	0.32	0.20*	0.59	0.66* (0.78**)	0.07 (-0.14, 0.74)	0.15 (-0.05, 0.63)	0.37**
Victimization								
Emotional Abuse	0.40***	0.15***	0.31***	0.05	0.05 (0.12***)	**0.06** (0.03, 0.10)	**0.02** (0.00, 0.04)	0.35***
Physical Abuse	0.40***	0.09***	0.31***	0.08**	0.03 (0.08**)	**0.03** (0.01, 0.07)	**0.02** (0.01, 0.05)	0.32***
Sexual Abuse[a]	0.40***	0.51*	0.31***	0.43	0.14 (0.42*)	**0.22** (0.00, 0.51)	0.14 (-0.01, 0.36)	0.17**

Note. Covariates (not shown) included participant gender, participant age, relationship length, and whether the relationship was the most recent. Indirect *B*s were calculated using bootstrapping (n = 1,000 resamples); bias corrected and accelerated confidence intervals are reported. Bolded indirect effects indicate the 95% CI does not cross 0, thus $p < .05$. For binary outcomes, Nagelkerke R^2 is presented. Coefficients are unstandardized.

[a]Outcome variable is binary (yes = 1, no = 0).

*$p < .05$, **$p < .01$, ***$p < .001$.

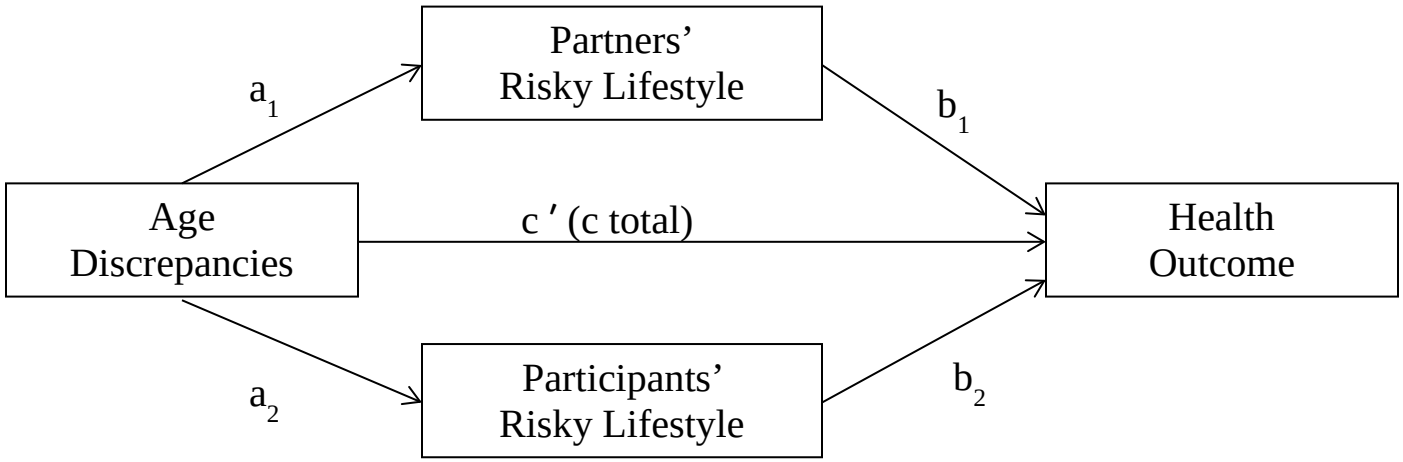

Figure 5.1. Multiple mediator model, coefficients shown in Table 5.5.

Table 5.5 reveals three main findings. First, there were significant indirect effects through partners' risky lifestyles on whether the couple engaged in sexual intercourse and whether the younger partner was emotionally, physically, or sexually abused. Thus, older partners were also more likely to engage in risky lifestyles during the course of the relationship (compared to similarly aged partners), and in turn their involvement in risky lifestyles explained a significant portion of the association between age gaps and four of the six health outcomes examined. Partners' risky lifestyles were not associated with use of protection or whether participants became pregnant or contracted an STI. Second, participants who dated older partners engaged in more risky lifestyles during the course of the relationship, which in turn accounted for a significant amount of the association between age gaps and engagement in sexual intercourse, emotional abuse, and physical abuse. There were no significant indirect effects from age gaps to use of protection, pregnancy or contraction of an STI, and sexual abuse through participants' own risky lifestyles during the relationship.

Lastly, the combined indirect effects of partners' and participants' risky lifestyles fully explained the links from partner age gaps to emotional, physical, and sexual abuse, such that after accounting for risky lifestyles, age gaps no longer related to victimization experiences (see c' values in Table 5.5). Importantly, partners' risky lifestyles were the primary explanation for the links between age gaps and emotional and sexual abuse because links from participants' risky lifestyles to emotional and sexual abuse were non-significant (see b_2 in Table 5.5). Despite the significant indirect effects from age gaps through both partners' and participants' risky lifestyles on whether the couple engaged in sexual intercourse, wider partner age gaps continued to be directly associated with an increased likelihood of engaging in sexual intercourse. Thus,

partners' and participants' risky lifestyles only partially mediated the association between age gaps and engagement in sexual intercourse.

DISCUSSION OF FINDINGS

This chapter examined partner age gaps among low-income, at-risk adolescents to better understand the outcomes associated with dating older partners specifically among adolescents most likely to be in statutory relationships. As expected, most (70.4%) at-risk youth dated a partner who was 1 or more years older, ranging from 1 to 13 years older; about 41% of youth reported dating partners 2 or more years older, and about 14% dated partners 4 or more years older. Moreover, in line with a growing body of existing evidence (Kaestle et al., 2002; Lindberg et al., 1997; Young & d'Arcy, 2005), the wider the age gap between adolescents and their older romantic partners, the more likely adolescents were to have sex with their partner, engage in unprotected sex, and become pregnant or contract an STI. In addition, the wider the age gap between partners, the more likely the younger partner was to experience physical, sexual, and emotional victimization over the course of the relationship. Expanding upon past research, the main purposes of this study were to better understand "for whom" and "why" dating older partners was associated with risky sexual behavior and victimization. Knowing who is most at-risk and why is essential to improving programming, policies, and laws that aim to prevent negative health outcomes. Results yielded three main findings, which might inform how statutory relationships are handled by the legal system and health providers.

First, a consistent pattern emerged documenting that partner age gaps, not the young age of the adolescent partners, were associated with poorer sexual health and greater victimization within at-risk adolescents' romantic relationships, and this was equally true for youth of all ages. In fact, after controlling for partner age gaps, older (rather than younger) adolescent partners

were more likely to engage in sex with their partners and experience victimization. Importantly, this study did not examine *why* age gaps were more strongly associated with health risks than younger partners' ages. However, these findings are in line with developmental theory and research suggesting that adolescents have the cognitive capability to make healthy sexual and romantic decisions in some situations (American Psychological Association, 1989; Steinberg et al., 2009). Yet, adolescents' lack of psychosocial maturity (e.g., vulnerability to peer pressure, immature reasoning in partner selection) increases the likelihood that characteristics of the relationship context, such as wide age gaps and concomitant substance use and delinquency, can compromise their ability to resist partner pressures and make competent decisions (Steinberg et al., 2009).

A second main finding is that, although girls on average dated older partners than did boys, no associations between partner age gaps and sexual health behaviors or victimization experiences differed significantly by gender. Thus, relationships with older romantic partners, compared to similarly-aged partners, appeared to increase risk for poor sexual health and victimization among both girls and boys. Our results support the preliminary findings documenting associations between partner age gaps and negative reproductive health outcomes within samples of adolescent males (Manlove et al., 2005; Marin et al., 2000), and further illustrate that girls are not significantly more affected than boys. Moreover, our results also suggest that boys who date older partners are also at-risk for increased victimization by their romantic partners.

Lastly, in line with lifestyle and routine activity theory, results provided support for the theory that both adolescents' and their older partners' risky lifestyles, specifically their substance use and involvement in delinquent behaviors, help to explain the association between partner age

gaps and poor health outcomes (Cohen & Felson, 1979; Lamb et al., 1986). Wider age gaps between partners were associated with more "risky" relationship contexts overall, such that during the relationship both adolescents and their partners engaged in higher levels of substance use and delinquency the wider the age gap. Importantly, it cannot be determined whether adolescents or their older partners first began engaging in risky lifestyles before the relationship occurred or as a result of the relationship. Regardless, results suggest that there was something qualitatively different about both the younger and older partners in different-age relationships in that they exhibit riskier lifestyles than partners in same-age relationships.

Adolescents' and their partners' risky lifestyles each uniquely explained a significant portion of the association between age gaps and whether the couple engaged in sexual intercourse. Yet, the association between age gaps and engagement in sex remained significant after accounting for both partners' risky lifestyles. In addition, the associations from risky contexts to using protection and becoming pregnant or infected with an STI became non-significant within the mediation model, after accounting for significant associations to partner age gaps. Thus, adolescents' and their partners' risky lifestyles were associated with greater reproductive health risk, and risky lifestyles partly explained why youth dating older partners were more likely to engage in sex. More research is needed, however, to identify additional factors or mechanisms that fully explain why age gaps are related to poor sexual decision-making and negative reproductive health outcomes.

On the other hand, adolescents' and their partners' risky lifestyles fully explained the associations between age gaps and adolescents' emotional, physical, and sexual victimization, with partners' risky lifestyles accounting for most of the associations between age gaps and emotional and sexual victimization. That is, partner age gaps no longer related to victimization

experiences after accounting for risky lifestyles. Age gaps, per se, did not appear to be the underlying reason why younger partners experienced victimization. Instead, findings suggest that the quality of lifestyle that older partners tended to live, namely their involvement in substance use and delinquency, rendered adolescent partners vulnerable to violent victimization.

As documented in preliminary research conducted only among girls (Volpe et al., 2013), results revealed that wider partner age gaps were not significantly associated with less decision-making satisfaction or lower negotiation and compromise within relationships. In contrast to the common theory that inequalities in decision-making lead youth to be taken advantage of by older partners (Gowen et al., 2004; PRWORA, 1996; Vèzina & Hèbert, 2007), decision-making inequality was inconsistently associated with sexual health risk and victimization. Regardless of age gaps, adolescents who experienced emotional and physical abuse were less satisfied with the way decisions were divided in the relationship but were not significantly more likely to engage in sexual intercourse with their partner, experience risky sexual outcomes (inconsistent protection, pregnancy/STIs), or experience sexual abuse.

IMPLICATIONS FOR POLICY AND PRACTICE

Results suggest three implications for current policy and practice in the handling of romantic relationships involving adolescents and older partners. First, given that adolescent age, specifically being a *younger* adolescent, was not associated with greater health risks after accounting for partner age gaps, programming and laws designed to reduce negative sexual health outcomes and partner victimization might be most effective if focused on age gaps between partners. Results call into question many laws across the U.S. that still define sexual activity with youth as illegal based solely on the younger partner's age (e.g., "age of consent"

laws; Glosser et al., 2004). Instead, results support movements toward laws that take into consideration partner age gaps; for example, many states use age gaps to define whether relationships are illegal or to determine the level of punishment for the older partner (i.e., referred to as age gap provisions and Romeo and Juliet clauses; Glosser et al., 2004; Gross, 2007).

Second, research on partner age gaps and campaigns to prevent relationships between adults and adolescents have largely focused on adolescent girls dating older male partners (Hines & Finkelhor, 2007; PRWORA, 1996; Virginia Department of Health, 2003). The predominant focus on preventing relationships with adolescent girls is somewhat warranted in that girls are more commonly involved with older partners than boys, and girls often bear the social and economic responsibilities of early pregnancy. Nonetheless, results herein call attention to the fact that many boys do become involved with older partners, and age gaps are associated with a variety of poor health outcomes that can impact the lives of boys and girls, including less protection against STIs and victimization by romantic partners (Manlove et al., 2005; Marin et al., 2000). Results support past calls for more research, programming, and policies aimed at better preventing health risks associated with partner age gaps among low-income, at-risk adolescent boys (Manlove et al., 2005).

Lastly, results suggest that the age gaps alone are not responsible for the negative health outcomes youth face, but that instead part of why youth have sex with their partners and the victimization they experience by partners can be accounted for by the deviant contexts of the romantic relationships - both participants' and partners' delinquency and substance use. As such, policies and practices aimed at helping youth to form relationships with prosocial, non-deviant partners might be most effective in preventing victimization and negative sexual health

outcomes. Some district attorneys report that their decision to prosecute older partners in statutory rape cases can depend on case-specific factors, such as whether the partners had a caring relationship or whether parents supported the relationship (Miller, Miller, Kenney, & Clark, 1998). This study provides evidence in favor of considering older partners' involvement in substance use and delinquency when determining whether to prosecute, given that older partners' risky lifestyles are linked to whether partners engage in sex and whether the younger partner is at risk for emotional, physical, and sexual victimization.

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

This study highlights the need for research investigating the many legal and social issues related to romantic relationships between adolescents and older partners, particularly research investigating the underlying processes driving the associations between age gaps and costly health outcomes. As a first foray into better understanding why age gaps matter, findings revealed that the links from age gaps to victimization experiences were fully explained by the fact that, in relationships with older versus similarly-aged partners, both partners tended to engage in risky lifestyles including delinquency and substance use. However, risky lifestyles only partially explained why youth dating older partners were more likely than youth dating similarly-aged partners to engage in sexual intercourse. Partner age gaps continued to be the strongest correlate of engagement in sexual activity, use of protection, and whether youth contracted an STI or becoming pregnant. This suggests the need for additional research examining what it is, exactly, about relationships involving older partners that might account for negative health outcomes so that intervention and prevention programs can target the appropriate risks.

In addition, this study replicated past findings suggesting that inequalities in decision-making within the relationship might not explain links between age gaps and negative health outcomes (Volpe et al., 2013). Findings to date have been based on self-report measures which might fail to tap into power and inequality differences within the relationship. However, adolescents might be unaware of the power inequality within the relationship, perhaps because they are not familiar with any other type of context or are in denial. Adolescents might also underreport their partners' dominance in decision-making for self-presentation reasons. Future research is needed to more comprehensively examine decision-making power with a diverse and perhaps less salient set of assessment tools.

Lastly, this study identified age gaps as a more important factor for poor health outcomes than the young age of the adolescent partner, but to better inform statutory rape policies and laws, future research is needed to determine the age gap cutoffs that are most strongly related to negative health outcomes. Today, states vary largely in how they define illegal versus legal sexual relationships, and very little methodologically rigorous research exists to help states approach consensus about the contexts under which youth are competent to consent to sexual activity.

Appendix A

DISSEMINATION OF PROJECT D.A.T.E. DATA

To reach academic and professional audiences, researchers have given sixteen presentations on Project DATE at various conferences around the nation. Priority has been given to presentations at the American Psychology and Law Society (AP-LS) as this conference attracts large numbers of psychology professionals who are concerned with intervention, prevention, and policy related to high risk adolescents. Researchers have also begun preparing reports for publication in various professional journals, one of which is currently under review for *Psychology, Public Policy, and Law* (see below for complete list of papers and presentations).

Over the next several months, we will summarize our research findings using commonly-understood, simple statistics and graphical presentations of the data in order to effectively translate our research findings for service providers and community members. These summary findings will be developed into a professional brochure and distributed broadly. The PI has worked in Virginia for 37 years, and during this time, he has become well integrated into the network of service agencies, which serve high-risk children, especially in the Charlottesville area. In addition, the Project DATE research team has developed relationships with numerous community service providers through partnering in recruitment efforts. Thus, dissemination of results and implications for practice will be widely disseminated to local practitioners and policy makers who are invested in or might benefit from learning more about dating violence in high-risk populations (e.g., probation officers, caseworkers, youth development organizers). Furthermore, the research project received the support of several state agencies during recruitment, including the Department of Social Services and the Department of Juvenile Justice,

who expressed interest in receiving our final brochure. Members of the research team will work with contacts at these agencies to disseminate brochures and will plan to attend relevant state conferences to make presentations if the organizations would like such input.

In addition, we plan to distribute our findings directly to parents and educators who have daily interactions with adolescents at risk for being involved in violent relationships. Copies of the brochure will also be distributed to Urban Vision, a non-profit organization serving low-income children and families located in a public housing development in Charlottesville City. Urban Vision staff members see both parents and adolescents regularly, and have been successful in the past in distributing our brochures and summaries of research findings to residents. Lastly, we recognize the popularity of the internet among adolescents; even low-income adolescents tend to have access to the internet through schools, libraries, and/or youth development programs (e.g., after school programs, YMCA). Thus, we have developed both a MySpace and Facebook webpage for this study. We have used these web pages to communicate with participants throughout the duration of the study, and we will post the summary brochure online for participants to access through these familiar sites.

Paper Under Review:

Oudekerk, B. A., Guarnera, L.A., & Reppucci, N. D. (in review). Why Do Youth Dating Older Partners Experience Victimization and Poor Sexual Health? Informing Statutory Rape Policy and Practice. Submitted to *Psychology, Public Policy, and Law*.

Presentations:

Guarnera, L. A., Oudekerk, B. A., & Reppucci, N. D. (2013, March). *Young Lovers: Links between First Sexual Experience and Teen Dating Violence among At-risk Adolescents.* Presentation at the Robert J. Huskey Graduate Research Exhibition, University of Virginia, Charlottesville, VA.

Guarnera, L. A., Oudekerk, B. A., & Reppucci, N.D. (2013, March). *Sexual Debut Factors as Markers of Repeated Relationship Violence Among At-Risk Adolescents.* Presentation at the American Psychology and Law Society, Portland, Oregon.

Nagel, A. N. (2011, March). *Teen Dating Relationships: The Good, The Bad, and The Violent.* Presentation at Dickinson College Women's Studies Conference, Carlisle, Pennsylvania.

Nagel, A. N., Oudekerk, B. A., & Reppucci, N. D. (2013, March). *Caught in a Bad Romance: Associations between Deviant Relationships Contexts and Motivations for Sex among At-risk Teens.* Presentation at the Robert J. Huskey Graduate Research Exhibition, University of Virginia, Charlottesville, VA.

Nagel, A. N., Oudekerk, B. A., & Reppucci, N. D. (2013, March). *Deviant Romance and Motivations for Sex: Associations between Relationship Quality and Why Teens Have Sex.* Presentation at the American Psychology and Law Society, Portland, Oregon.

Nagel, A.N., Oudekerk, B.A., & Reppucci, N.D. (2012, March). *The Effects of Dating a Gang-Involved Partner on Relationship Abuse among At-risk Adolescents.* Presentation at the American Psychology and Law Society, San Juan, Puerto Rico.

Oudekerk, B. A. & Reppucci, N. D. (2011, December). *Dating Experiences Among High Risk Youth- A First Glimpse at the Development of Project D.A.T.E.* Presentation at the Office

of Adolescent Pregnancy Programs Adolescent Family Life (AFL) Care Grantee Annual Conference, San Antonio, Texas.

Oudekerk, B. A. & Reppucci, N. D. (2011, October). *Statutory Rape among Service Receiving, Low-Income Youth.* Presentation at the Teen Culture Conference: Health and Resilience, Charlottesville, Virginia.

Oudekerk, B. A. & Reppucci, N. D. (2012, June). *Why might partner age gaps relate to teen dating violence?* Dating Violence Among High Risk Populations: Risk, Protection and Intervention symposium, Presentation at the National Institute of Justice Conference, Arlington, Virginia.

Oudekerk, B. A. & Reppucci, N. D. (2012, March*). Statutory Rape among Service Receiving, Low-Income Youth*. Presentation at the American Psychology and Law Society, San Juan, Puerto Rico.

Oudekerk, B. A. & Reppucci, N. D. (2013, March). *Associations between Abuse by Parents, Delinquency and Substance Use in Teen Romantic Relationships, and Dating Violence.* Presentation at the American Psychology and Law Society, Portland, Oregon.

Reitz-Krueger, C.L. & Reppucci, N.D. (2013, March). The relative contributions of witnessing parent and peer violence on teen dating violence perpetration. Paper presented at the William and Mary Graduate Student Conference, Williamsburg, VA.

Reitz-Krueger, C.L. & Reppucci, N.D. (2013, March). Peers or parents: Who matters more for predicting teen dating violence? Paper presented at the Huskey Research Conference, Charlottesville, VA.

Reitz-Krueger, C.L. & Reppucci, N.D. (2013, March). Witnessing parental IPV and perpetrating teen dating violence: The mediating role of peers. Poster presented at the annual convention of the American Psychology-Law Society, Portland, OR.

Reitz-Krueger, C. (2011, March). *Witnessing Intimate Partner Violence & the Perception of Normalcy: Implications for Future Research.* Presentation at Dickinson College Women's Studies Conference, Carlisle, Pennsylvania.

Tsang, S. T., Oudekerk, B. A., & Reppucci, N. D. (2012, March). *When At-risk Adolescents Date Delinquent Partners.* Presentation at the American Psychology and Law Society, San Juan, Puerto Rico.

Walker, T. D., Oudekerk, B. A., & Reppucci, N. D. (2012, March). *Family Influences on High Risk Teens Dating Older Partners.* Presentation at the American Psychology and Law Society, San Juan, Puerto Rico.

Walker, T. D., Oudekerk, B. A., & Reppucci, N. D. (2013, March). *Influence of Interparental Violence on Link between Peer Delinquency and Teen Dating Violence.* Presentation at the American Psychology and Law Society, Portland, Oregon.

Walker, T. W. (2011, March). *Partner Age Differences: How old is too old?* Presentation at Dickinson College Women's Studies Conference, Carlisle, Pennsylvania.

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