

Summer 2019

Correlates of Attitudes Toward Violence and Dating Violence Perpetration Among U.S. College Students

Jeongsuk Kim

Follow this and additional works at: <https://scholarcommons.sc.edu/etd>



Part of the [Social Work Commons](#)

Recommended Citation

Kim, J.(2019). *Correlates of Attitudes Toward Violence and Dating Violence Perpetration Among U.S. College Students*. (Doctoral dissertation). Retrieved from <https://scholarcommons.sc.edu/etd/5495>

This Open Access Dissertation is brought to you by Scholar Commons. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of Scholar Commons. For more information, please contact digres@mailbox.sc.edu.

CORRELATES OF ATTITUDES TOWARD VIOLENCE AND DATING VIOLENCE PERPETRATION AMONG U.S. COLLEGE STUDENTS

by

Jeongsuk Kim

Bachelor of Arts
Handong Global University, 2005

Master of Social Work
Ewha Womans University, 2007

Submitted in Partial Fulfillment of the Requirements

For the Degree of Doctor of Philosophy in

Social Work

College of Social Work

University of South Carolina

2019

Accepted by:

Naomi Farber, Major Professor

Sue Levkoff, Committee Member

Kristen Seay, Committee Member

Bongki Woo, Committee Member

Suzanne Swan, Committee Member

Alberto Maydeu-Olivares, Committee Member

Cheryl L. Addy, Vice Provost and Dean of the Graduate School

© Copyright by Jeongsuk Kim, 2019
All Rights Reserved.

ACKNOWLEDGEMENTS

I would like to express my deepest appreciation to my advisor, Dr. Naomi Farber. Dr. Farber, without your insightful guidance and constant encouragement, this dissertation would not have been possible. Thank you for teaching me not only critical thinking but also the values necessary to become a social work scholar and teacher. I really enjoyed our conversations with you and feel privileged to have learned from you.

I would also like to thank all my committee members. Dr. Sue Levkoff, I am very grateful for your critical comments, time, and strong support of my work. Dr. Kristen Seay, thank you for your enthusiasm in offering help, specific feedback, and warm encouragement. Dr. Suzanne Swan, thank you for giving me the opportunity to participate in your violence research group. I learned a lot from you and your students. Dr. Bongki Woo, thank you for your clear advice on writing a dissertation and for sharing your personal research experiences. Dr. Alberto Maydeu-Olivares, I appreciate your advice on my methodology and your allowing me to audit your wonderful class.

I am also indebted to the College of Social Work faculty, especially Dr. Choi Gil, Dr. Ron Pitner, Dr. Maryah Fram, Dr. Bethany Bell, Dr. Jaeseung Kim, and Dr. Sarah Gehlert, for their substantial support and encouragement in my education journey. Many thanks are also due to my peers Weizhou, Mary Ann, Tori, Marissa, Sara, and Trang for making our doctoral program a supportive environment.

I give special appreciation to my family for their endless love and prayers for me. Lastly, thank you, my God. I will always remember what you have done for me in this great journey.

July 23, 2019

ABSTRACT

Objective: Dating violence is a serious and prevalent problem among college students.

Research on dating violence has pinpointed early exposure to violence as a strong predictor of violence perpetration in later life. However, little is known about the particular correlates or mechanisms that facilitate college students' attitudes supporting violence and dating violence perpetration after early exposure to violence. The goals of this three-manuscript dissertation were (1) Chapter 2: to examine the relationship between three forms of violent socialization during childhood and attitudes supporting interpersonal violence; (2) Chapter 3: to examine the moderating effect of pro-violence messages in the relationship between early exposure to violence and later attitudes supporting violence, as well as dating violence perpetration; (3) Chapter 4: to examine the possible mediating effect of attitudes supporting violence and substance use in the relationship between early exposure to violence and dating violence perpetration.

Methods: This study utilized data from 4,533 U.S. college students in the International Dating Violence study (IDVS), based on cross-sectional design. Data from college students in the IDVS were collected through convenience sampling and consisted mostly of undergraduates enrolled in social sciences courses. Statistical analyses include ordinary least squares regression (Chapters 2 & 3), and path analysis (Chapter 4).

Results: (1) Chapter 2: The findings showed that advised violence, witnessed violence, and victimized violence each contributed to college students' acceptance of violence. Verbal endorsement of violence from family and community members had stronger

associations with students' acceptance of interpersonal violence than did childhood experiences of violent victimization and witnessed violence. (2) Chapter 3: The results showed that pro-violence messages moderated the relationship between exposure to violence and attitudes accepting violence among female students, but the messages moderated the effects of exposure to violence on dating violence perpetration among male students. These findings clearly show that pro-violence messages may have different effects on college students' cognition (attitudes toward violence) and their actual behaviors (dating violence perpetration), and that the effects of pro-violence messages vary according to gender. (3) Chapter 4: The findings highlight the significance of attitudes toward violence as a common mediator in the effects of exposure to violence – whether physical or sexual – on physical and psychological violence perpetration. However, substance abuse was a significant mediator only in the relationship between exposure to sexual violence and psychological violence perpetration. **Conclusion:** Collectively, this dissertation indicates that early intervention is critical in preventing the effects of exposure to violence on attitudes supporting violence and actual dating violence perpetration in college students. Thus, the findings highlight necessary training interventions for community members to prevent pro-violence norms. In particular, parents and community elders should take responsibility for providing non-violent advice to solve relationship conflicts for children. Interventions for college students should target multiple risk factors for dating violence perpetration, including gender, pro-violence attitudes, substance abuse, and individuals' histories of exposure to violence. Implications for future research and limitations are discussed.

TABLE OF CONTENTS

Acknowledgements	iii
Abstract	v
List of Tables	viii
List of Figures	ix
Chapter 1: Introduction	1
Chapter 2: Where do they learn violence? The role of multiple forms of violent socialization in childhood	4
Chapter 3: Early exposure to violence and dating violence perpetration: the role of pro-violence messages	27
Chapter 4: Factors mediating the link between early exposure to violence and dating violence perpetration	51
Chapter 5: Conclusion.....	76
References	80

LIST OF TABLES

Table 2.1 Sample characteristics by student gender, International Dating Violence Study (IDVS), % or Mean (SE)	17
Table 2.2 Bivariate associations between focal variables and gender, Mean (SE).....	18
Table 2.3 Hierarchical multiple regression on the acceptance of interpersonal violence (N = 3,930)	19
Table 3.1 Descriptive statistics for the variables and gender differences, International Dating Violence Survey (IDVS), % or Mean (SE).....	40
Table 3.2 OLS regression on attitudes toward violence and dating violence perpetration among male students (N = 1,035)	44
Table 3.3 OLS regression on attitudes toward violence and dating violence perpetration among female students (N = 2,267)	45
Table 4.1 Descriptive statistics for the variables and gender differences, Mean (SE)	65
Table 4.2 Bivariate correlations among the variables (N=3,302).....	67

LIST OF FIGURES

Figure 3.1 Interaction effect of exposure to violence and pro-violence messages in the male group (N=1,035).	41
Figure 3.2 Interaction effect of exposure to violence and pro-violence messages in the female group (N=2,267).	42
Figure 4.1 Hypothesized mediation model linking violence exposure with college students' dating violence perpetration.....	59
Figure 4.2 Reduced mediation model linking early exposure to violence with college students' dating violence perpetration.....	68
Figure 4.3 Multigroup analysis based on gender	70

CHAPTER 1

INTRODUCTION

Dating violence, which includes physical, sexual, psychological, or emotional aggression, is a serious social problem affecting the well-being of college students (CDC, 2018). In college life, romantic relationships become longer and more serious, with couples sometimes deciding to live together (Arnett, 2000). Dating violence entails significant negative effects such as low academic achievement and various adverse health outcomes, including physical injuries and psychological distress (Buelna, Ulloa, & Ulibarri, 2009; Paat & Markham, 2016). Dating violence perpetration has also been found to be a strong predictor of marital violence in later life (White, Merrill, & Koss, 2001). Thus, it is important to examine relevant correlates of aggression to prevent future occurrence of dating violence among people in this age group – as well as those in later life (Paat & Markham, 2016).

Research has revealed that one of the consistent predictors of dating violence perpetration is early exposure to violence (O’Keefe, 1998; Eriksson & Mazerolle, 2015). However, little is known about the particular correlates or mechanisms that facilitate dating violence perpetration among college students. Thus, this dissertation aims to address these gaps, using three empirical studies to examine the relevant correlates or mechanisms that lead from early exposure to violence to dating violence perpetration among college students.

1.1 Study aims

The aims of the proposed research are as follows:

Aim 1. To examine the relationship between three forms of violent socialization during childhood and attitudes supporting interpersonal violence (Chapter 2).

Aim 2. To examine the moderating effect of pro-violence messages in the relationship between early exposure to violence and later attitudes supporting violence, as well as dating violence perpetration (Chapter 3).

Aim 3. To examine the possible mediating effect of attitudes supporting violence and substance use in the relationship between early exposure to violence and dating violence perpetration (Chapter 4).

1.2 Research questions

I will achieve the aims proposed for this dissertation research by answering the following research questions.

Aim 1 research questions (Chapter 2).

Research Question 1: Do multiple forms of early violent socialization (advised violence, witnessed violence, and victimized violence) from family members produce different associations with acceptance of interpersonal violence?

Research Question 2: Do multiple forms of early violent socialization (advised violence, witnessed violence, and victimized violence) from non-family members produce different associations with acceptance of interpersonal violence?

Aim 2 research questions (Chapter 3).

Research Question 1: Are pro-violence messages positively related to attitudes approving violence and/or to dating violence perpetration?

Research Question 2: Do pro-violence messages moderate the association between exposure to violence during childhood and later attitudes approving violence, as well as dating violence perpetration?

Aim 3 research questions (Chapter 4).

Research Question 1: Are there any significant direct and indirect pathways (i.e., mediation) from early exposure to violence to dating violence perpetration through attitudes toward violence and substance use?

Research Question 2: Does a student's gender moderate the direct or indirect pathways from early exposure to violence to attitudes toward violence?

1.3 Overall research design and methodological approach

The overall research design of this dissertation is cross-sectional, and it includes secondary data analysis. The dataset used is 4,533 U.S. college students – a subsample of the International Dating Violence Survey (Status, 1999). The International Dating Violence Survey was conducted to investigate risk factors and protective factors related to dating violence perpetration and victimization among college students in 32 countries (Straus, 2011). Prior to conducting any analysis, several data management tasks, including missing data analysis and measurement testing, were completed. Univariate and bivariate analyses are completed for all three studies to understand data distribution and variable correlations and examine group differences. Advanced statistical approaches include ordinary least squares regression models (Chapter 2 & Chapter 3) and path analysis (Chapter 4). In addition, I used robust standard errors to control the cluster effects of nested data (universities) (Chapter 3 & 4) and confirmed that the data set was balanced, and the results could be generalized through cross validation (Chapter 3).

CHAPTER 2

WHERE DO THEY LEARN VIOLENCE? THE ROLE OF MULTIPLE FORMS OF VIOLENT SOCIALIZATION IN CHILDHOOD¹

¹ Kim, J., Lee, B., and Farber, N. Submitted to *Children and Youth Services Review*, 10/10/2018.

Abstract

Early violent socialization from family and community contexts has consistently been found to be associated with individuals' attitudes toward interpersonal violence in adulthood. The specific sources and processes underlying children's learning of violence, however, are poorly specified and unelaborated. The current study examined how multiple types of violent socialization during childhood differently influenced individuals' acceptance of interpersonal violence among college students (N =3,930). The findings of hierarchical multiple regression analyses indicated that advised violence, witnessed violence, and victimized violence each contributed to college students' acceptance of violence. The verbal advice toward violence from family and community had stronger associations with on students' acceptance of interpersonal violence than experiences related to childhood violence victimization and witnessing violence. Given that existing studies on violent socialization have largely focused on witnessing and childhood victimization, our findings add the new knowledge that family and community members' coaching that includes pro-violence messages plays a significant role in young college students' acceptance of interpersonal violence. Our findings suggested that educational interventions related to communicating skills and attitudes toward violence that create a safe and stable environment for children may be beneficial for parents, teachers, community members, and professionals who work closely with children. The results may be also helpful in informing professional practitioners in colleges when they develop social awareness programs for college students to help change their attitudes toward violence.

1. Introduction

Interpersonal violence, including dating violence and sexual assault are serious and widespread problems on college campuses (Alegría-Flores, Raker, Pleasants, Weaver, & Weinberger, 2017; Kaukinen, 2014). A National Intimate Partner and Sexual Violence Survey (2010) found that 47% of females and 39% of males experience physical violence, sexual violence, and/or stalking by an intimate partner between the ages of 18 and 24 (Black et al., 2011). Although differences in these estimates may be due to variance in the definition of dating violence, research consistently shows that 20% to 50% of college couples report being the victim of at least one act of dating violence (Baker, Stith, & Trauma, 2008; Shorey, Cornelius, & Bell, 2008).

Many researchers are increasingly examining causes of interpersonal violence (Banyard, Cross, & Modecki, 2006). They have determined that one possible factor is a belief system supporting the use of interpersonal violence (Coker et al., 2015; Herrenkohl & Jung, 2016; Herrero, Rodríguez, & Torres, 2017) and such beliefs are significantly associated with experiences of violence in childhood (Bryant & Spencer, 2003; Flood & Pease, 2009). Social learning theories suggest that early experiences of violence infuse cognitive beliefs condoning the use of interpersonal violence and increase the likelihood that individuals will engage in violence (Eriksson & Mazerolle, 2015). This suggests further that early learning of violence may prompt not only victimization and perpetration of violence but also individuals' approval of violence later in life as an adult (Delaney, 2015; Gage, 2016; Lichter & McCloskey, 2004).

Childhood socialization toward violence may take on multiple forms, including verbal reinforcement of violence, observing/witnessing violence, and being the victim of

violent acts from others such as family and neighbors (Delaney, 2015; Mattingly & Straus, 2008; Owens & Straus, 1975). These events may coincide; however, each form of violence may have a different effect on individuals (Bacchini, Affuso, & Aquilar, 2015). Existing studies mainly focus on the effect of a particular form of violent socialization such as physical abuse or witnessing family violence (Jennings et al., 2014; Steel, Watkins, & DiLillo, 2017). The effects of various forms of violent socialization on individual's belief system have rarely been assessed simultaneously. Our study aims to fill this gap by examining multiple forms of violent socialization from family and community members to see if there are different effects among them on college students' acceptance of violence.

1.1. Literature review

Socialization is defined as individuals learning and internalizing social skills, knowledge, behavior patterns and values of a culture to adequately interact with other people and more generally, to function in the larger society. In particular, a child's socialization occurs through various social institutions. Picked up from family, peers, television, and school, learned habits are then often transmitted from one generation to the next (Maccoby, 1984). This section explains the process of violent socialization through social learning theory and the various forms of violent socialization.

Social learning theory & multiple forms of violent socialization

Akers' social learning theory includes four types of processes: differential association, definitions, differential reinforcement, and imitation. Differential association means that individuals interact with certain "associations," including family members, friends, and neighborhood; and, that those individuals can promote favorable or

unfavorable definitions of illegal or law-abiding behaviors (Akers, 1996; Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979). Several factors modulate the strength of the association's influence on an individual's behavior. These include how early (Priority), how long (Duration), how frequent (Frequency) and how close (Intensity) the associated influence is present (Akers, 1996). According to Akers et al. (1979) and Pratt et al. (2010), people learn attitudes, meanings and hence, "definitions" for certain behaviors as good or bad from their environment (Akers et al., 1979; Pratt et al., 2010). If a person possesses a positive or neutral definition for a certain behavior, the person will be more likely to engage in the behavior. Differential reinforcement refers to how the balance between expected and actual reward or punishment influences personal behavior (Akers, 1996; Akers et al., 1979). The more certain behaviors are reinforced by rewards, the more such behaviors are repeated, and the reverse when a behavior is associated with a punishment (Akers, 1996; Akers et al., 1979). Finally, imitation refers to engaging in certain behavior after observing some models of the behavior (Akers & Jennings, 2009; Pratt et al., 2010).

Straus, Mouradian, and DeVoe (1999) specified violent socialization as a result of three processes: advised violence, witnessed violence, and victimized violence (Straus, Mouradian, & DeVoe, 1999). Advised violence refers to have verbal coaching to instigate an aggressive response or retaliation to (cope with) a situation. Witnessed and victimized violence refer to experiences observing violence and experiencing violence as victims. This study adapted the conceptualization of multiple violent socialization defined by Straus et al. (1999).

Advised violence

Children might learn that violent behavior is an appropriate response to solving problems through family and community members' justification for use of violence (Chen, Flores, Shetgiri, & studies, 2016; Herrenkohl & Jung, 2016). Straus et al. (1999) called such violent socialization "advised violence," meaning gaining positive feedback on violent behavior. This type of socialization is learned through modeling and reinforcement (Bandura, 1978). Previous studies supported the association, that is, encouragement by parents or other adult relatives toward aggressive peer interactions may have considerable effects on a child's willingness toward violence and retaliatory attitudes (Chen et al., 2016; Copeland-Linder et al., 2007; Johnson, Finigan, Bradshaw, Haynie, & Cheng, 2011; Orpinas, Murray, & Kelder, 1999; Solomon, Bradshaw, Wright, & Cheng, 2008). For example, youth's perceptions of parental attitudes toward fighting are significantly associated with their own aggressive behavior more: fights at school, greater injuries in fight, and being more likely to carry a weapon than among youth who did not perceive their parent as supporting fighting (Orpinas et al., 1999). Specifically, youths who are more aggressive perceived that their parents are more supportive of fighting and interpret their parent's supportive attitude as approval for their aggressive behaviors (Orpinas et al., 1999).

Such advised violence might be also experienced by children through pro-violence messages or community norms. For example, disadvantaged communities may have informal rules or expectation of violent retribution for disrespect and perceived attacks as self-protection (Anderson, 1999). Such community norms could be conveyed to youth through their interaction with peers and adults in communities. In particular, the

attitudes of violence among peers play a critical role in on children's views of violence, providing models for behavior and shaping individuals' norms and values of violence (Bernburg & Thorlindsson, 2005; Harding, 2009; Herrenkohl & Jung, 2016; Zimmerman & Messner, 2011).

Witnessed violence

As another process of violent socialization, children can be violently socialized through vicarious observations (Bandura, 1978). When children observe rewarding of violent behaviors, they tend to have a positive assessment of violence. (Akers, 1996; Bandura, 1978). For example, if children observe that their father's violence leads to mother's changed behaviors such as submission toward the father, they might think violence is a useful tool to achieve what they want. In this context, witnessing violence leads to aggressive behavior through the mediation of such social learning mechanisms (Schwartz & Proctor, 2000). Several studies have found that children who grow up in families in which they have witnessed interparental violence are more likely to imitate and tolerate these behaviors than are children from nonviolent homes (Allwood & Bell, 2008; Lichter & McCloskey, 2004; O'Keefe, 1998). Outside of the immediate family context, youth who witness violence in their neighborhood might then conclude that violent behavior is a valid way to resolve problems in their community context (Anderson, 1999; Sampson, Raudenbush, & Earls, 1997).

Victimized violence

Being a victim of family and community violence are associated with children's acceptance of violence and aggressive behaviors (Fosco, DeBoard, & Grych, 2007; Temple, Shorey, Tortolero, Wolfe, & Stuart, 2013). In particular, the effect of violent

socialization in the context of physical child abuse perpetuating further violent offenses has been studied for decades – a concept dubbed the “Cycle of Violence” (Fagan, 2005; Milaniak & Widom, 2015; Widom & Maxfield, 2001). Several empirical studies support the Cycle of Violence theory by examining the effect on the victim’s involvement of various types of offense as well as violent offense (Fagan, 2005; Widom & Maxfield, 2001; Wolfe, Wekerle, Scott, Straatman, & Grasley, 2004). A meta-analysis by Wolfe et al. (2003) examined 41 studies which found associations between a child’s exposure to domestic violence including child abuse and his or her internal (depression and anxiety) and external behavioral problems (delinquency and aggression). This study concluded that children who were exposed to domestic violence have a high rate of either type of emotional and behavioral problems. Other studies also showed that childhood maltreatment predicted attitudes for justifying dating violence and aggressive behaviors toward dating partners (Manchikanti Gómez, 2011; Wolfe et al., 2004).

Researchers have suggested that witnessing violence and being a victim of violence, which are considered exposure to violence, have strong associations with children’s aggressive behaviors. However, some researchers have made a distinction between the effects of witnessed violence and victimized violence. They argue that victim experiences might not be associated with children’s positive attitude of violence and aggressive behaviors. For example, Schwartz and Proctor (2000) found that violent victimization was associated with negative emotional dysregulation while witnessed violence was connected to aggressive action (Schwartz & Proctor, 2000). They suggested that direct victimization might include the central mediational processes that would contribute to disruptions in emotional regulation instead of positive assessment of

violence. In this context, we assumed that witnessing violence and being the victim of violence might play different roles in cognitive beliefs about violence.

1.2. The current study

Several gaps in the existing literature indicate the importance of our study. Past research on violent socialization has focused predominantly on a particular type of violent socialization (for example, witnessing family violence), rather than exploring multiple forms of violent socialization from family and community context simultaneously. Examining the effects of a particular form alone does not fully capture violent socialization. Thus, our study makes an important contribution by exploring each role and the different effects of multiple forms of early violent socialization. In addition, few studies have focused on the relationship between early violent socialization and acceptance of violence in young adulthood. Considering the possibility that an attitude of violence might be a significant mechanism in the relationship between violence experience and actual violence perpetration, it is important to identify the effect of violent socialization on acceptance of violence. Thus, our study aims to examine college students' cognitive beliefs about interpersonal violence and the effect of multiple forms of early violent socialization. Based on theoretical frameworks and previous empirical studies, two main research questions were addressed in this study:

Research Question 1: Do multiple forms of early violent socialization (advised violence, witnessed violence, and victimized violence) from family members produce different associations with acceptance of interpersonal violence?

Research Question 2: Do multiple forms of early violent socialization (advised violence, witnessed violence, and victimized violence) from non-family members produce different associations with acceptance of interpersonal violence?

2. Method

2.1 data

The data for this study were obtained from the International Dating Violence Study (IDVS). The IDVS was conducted between 2001 and 2006 in 32 countries in seven world regions, including Africa, Asia, Australia, Europe, Latin America, the Middle East, and North America (Straus, 2010). The IDVS contains a convenience sample of undergraduates enrolled in university courses (mostly criminology, sociology, psychology, or family studies) taught by a designated research consortium member. Across the participating nations, the study yielded a total sample of 17,404 individuals. However, only the 14,252 respondents who reported being in a relationship that lasted at least 1 month are used in the current study. After removing approximately 4% of these cases because of implausibly high numbers of sexual assaults/injuries or inconsistent responses and using imputation for missing data (Medeiros, 2007), the final sample size was 13,659 (Hines & Straus, 2007).

2.2 sample

This study utilized data from 4,533 U.S. college students in the IDVS. U.S. college students in the sample were from 17 universities in the U.S. (including Illinois State University, Indiana State University, Grambling University, University of Southern Mississippi, Jackson State University, University of New Hampshire, John Jay College, University of Cincinnati, Dickinson College, University of Tennessee, University of

Texas at El Paso, Texas Tech University, Rice University, Stephen F. Austin State University, Utah State University, and Howard University). Focusing on young adults, this study restricted the analysis to students 18 to 23 years old. After excluding the cases with age range 34 to 45 and missing values, a total of 3,930 students were included in the analysis.

2.3. Measures

Dependent Variable. Acceptance of violence. Acceptance of violence was measured using ten items from the Violence Approval Scale of the Personal and Relationship Profile (PRP) (Straus, Hamby, Boney-McCoy, & Sugarman, 1999). It was designed to assess the extent to which respondents endorse the use of physical violence in various social contexts. Among ten items, four were about approval of violence within the family such as a husband slapping his wife's face; three were about stereotypical male violence, such as the view that a man should not walk away from a fight; and three were about sexual aggression, such as whether there were circumstances when it would be acceptable for a man to force his wife to have sex (Mattingly & Straus, 2008). The response categories for all scales were from 1 (strongly disagree) to 4 (strongly agree). The range of this scale was 10 to 40 points with higher scores indicating higher levels of acceptance of violent behaviors. The alpha coefficient for this scale was .70 with the overall IDVS student sample (Straus, 2011) and .70 for the current study as well.

Independent variables. Advised violence was conceptualized as respondents' experience of how much they received pro-violence advice during childhood. Advised violence from family was measured based on participants' response to the question, "When I was a kid, my father or mother told me to hit back if someone hit me or insulted

me”. Advised violence from non-family person was measured based on the question, “When I was a kid, people (adults or kids) who were not part of my family told me to hit back if someone hit me or insulted me.” The response categories to these questions ranged from 1 (strongly disagree) to 4 (strongly agree) and high scores indicated higher levels of exposure to violence during childhood.

Witnessed violence was conceptualized as respondents’ experience of how much they witnessed violence during childhood. Witnessed violence from family was measured based on participants’ response to the question, “When I was a kid, I saw my mother or father kick, punch, or beat up their partner”. Witnessed violence from non-family person was measured based on the question, “When I was a kid, I often saw kids who were not in my family get into fights and hit each other.” The response categories to these questions ranged from 1 (strongly disagree) to 4 (strongly agree) and high scores indicated higher levels of exposure to violence during childhood.

Victimized violence was conceptualized as respondents’ experience of how much they experienced violence during childhood. Victimized violence from family was measured based on participants’ response to the question, “When I was less than 12 years old, I was spanked or hit a lot by my mother or father”. Victimized violence from non-family person was measured based on the questions, “When I was a kid, people (adults or kids) who were not part of my family pushed, shoved or slapped me, or threw things at me”. The response categories to these questions ranged from 1 (strongly disagree) to 4 (strongly agree) and high scores indicated higher levels of exposure to violence during childhood.

Covariates. We controlled for age, gender, family's socioeconomic status, and parent's marital status in all analyses. In particular, family's socioeconomic status was a computed z score based on the mean site distribution of socioeconomic status derived from the following variables: father's education, mother's education, and family income (Hines & Straus, 2007).

2.4. Analysis

All analyses were conducted using SAS v9.1.3. Descriptive statistics (univariate and bivariate analyses) were used to describe the distribution of the dependent variables, independent variables, and covariates. Comparisons were conducted using Pearson's Chi-square tests for categorical variables and analysis of variance (ANOVA) tests for continuous variables. Hierarchical multiple regression analysis was conducted to test the association between early violent socialization and acceptance of violence (RQ1 & RQ2).

3. Results

3.1. Sample characteristics

Descriptive statistics of the sample (N=3,930) can be found in Table 2.1. College students included in the study sample were more often girls than boys (68% vs. 32%). The mean age was 20.1 years (SD = 0.03), and most students lived in families of slightly higher-than-average socioeconomic status (SES) (M =0.06, SD = 0.02) with two parents rather than a single parent (66% vs. 34%).

3.2. Acceptance of interpersonal violence and early violent socialization

Table 2.2 shows the acceptance of interpersonal violence and early violent socialization. For the overall population, acceptance of interpersonal violence was 19.3 (SE = .06). Comparing male students and female students, male students were more

Table 2.1: Sample characteristics by student gender, International Dating Violence Study (IDVS), % or Mean (SE)

	Total (N= 3,930)	Male (N= 1,277)	Female (N= 2,653)	Range	Skew
Gender ^a	-	32%	68%		
Age (in years) ^{b,d}	20.1 (0.03)	20.3 (0.04)	20.0 (0.13)	18 - 23	0.56
Family SES ^{b,d}	0.06 (0.02)	0.17 (0.03)	0.01 (0.02)	-3.1 - 2.9	-0.31
Parents' marital status ^{a,c}					
Married	66%	68%	65%	-	
Divorced or separated	25%	25%	26%	-	
Separated by death	4%	4%	4%	-	
Other ^e	5%	4%	5%	-	

Note. ^a. The variables are dummy coded and can be interpreted as proportions, ^b. t-test, ^c. Chi-square test, ^d. $p < 0.05$, ^e. Parents never married to each other and not living together or parents never married to each other and living together.

approving of interpersonal violence ($p < .05$). In the family context, students reported that they experienced advised violence (1.98, SE=.02), victimized violence (1.33, SE=.01), and witnessed violence (1.93, SE=.01) in that order. Male students reported experiencing more advised violence and victimized violence in the family during childhood than female students ($p < .05$). In the non-family context, students reported that they experienced witnessed violence (2.50, SE=.01), advised violence (2.26, SE =.02), and victimized violence (1.50, SE=.01). Similarly, male students experienced more advised violence, witnessed violence, and victimized violence from non-family members including neighbors and peers than female students ($p < .05$).

3.3. Effect of early violent socialization on the acceptance of interpersonal violence

Hierarchical multiple regression tested whether each form of early violent socialization (advised violence, witnessed violence, victimized violence from family and

Table 2.2: Bivariate associations between focal variables and gender, Mean (SE)

	Total (N= 3,930)	Male (N= 1,277)	Female (N= 2,653)	Range	Skew
DV: Acceptance of Interpersonal Violence ^{b,d}	19.3 (0.06)	20.8 (0.12)	18.6 (0.08)	10 - 36	0.13
IV: Violent Socialization Family					
Advised violence ^{b,d}	1.98 (0.02)	2.22 (0.03)	1.87 (0.02)	1 - 4	0.54
Witnessed violence ^b	1.33 (0.01)	1.33 (0.02)	1.33 (0.02)	1 - 4	2.34
Victimized violence ^{b,d}	1.93 (0.01)	2.07 (0.03)	1.88 (0.02)		0.66
Non-family					
Advised violence ^{b,d}	2.26 (0.02)	2.62 (0.03)	2.08 (0.02)	1 - 4	0.12
Witnessed violence ^{b,d}	2.50 (0.01)	2.75 (0.02)	2.38 (0.02)	1 - 4	-0.08
Victimized violence ^{b,d}	1.50 (0.01)	1.81 (0.03)	1.35 (0.01)	1 - 4	1.52

Note. ^a. The variables are dummy coded and can be interpreted as proportions, ^b. t-test, ^c. Chi-square test, ^d. $p < 0.05$.

non-family members during childhood) predicted the acceptance of interpersonal violence (Table 2.3).

Model 1 [$F(6, 3923) = 57.71$; $p < .001$] contained demographic control variables, including gender, age, family SES, and parents' marital status, and explained 8% of the variance in acceptance of violence. As can be seen, all demographic variables significantly predicted the acceptance of interpersonal violence. That is, students who are male, younger age, have lower family SES, and live with single parents are more likely to accept interpersonal violence than those who are not ($p \leq .01$).

Table 2.3: Hierarchical multiple regression on the acceptance of interpersonal violence ($N = 3,930$)

	Model 1 β (SE)	Model 2 β (SE)	Model 3 β (SE)
Gender			
Female	-.263(.137)***	-.179(.125)***	-.143(.129)***
Age (in years)	-.041(.038)**	-.045(.034)**	-.046(.034)**
Family SES	-.056(.066)***	-.009(.059)	.001(.059)
Parents' marital status			
Divorced or separated	.060(.327)***	.034(.293)*	.029(.290)*
Separated by death	.041(.150)**	-.019(.138)	-.022(.136)
Others ^a	.092(.310)***	.024(.282)	.014(.279)
Family			
Advised Violence		.353(.063)***	.280(.070)***
Witnessed Violence		.051(.079)***	.043(.079)**
Victimized Violence		.181(.064)***	.155(.065)***
Non family			
Advised Violence			.114(.074)***
Witnessed Violence			.088(.071)***
Victimized Violence			.008(.075)
R^2	.081	.265	.285
ΔR^2	.081	.184	.019
F (df)	57.715 (6, 3923)	157.390 (9, 3920)	129.842 (12, 3917)
ΔF	57.715***	327.885***	34.935***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Note. ^a. Parents never married and are not living together, or parents never married but are living together.

Model 2 [$F(9, 3920) = 157.39$; $p < .001$], which contained demographic variables and family forms of early violent socialization (advised violence, witnessed violence, and victimized violence), accounted for an 18.4% increase in the variance of the acceptance of interpersonal violence compare to Model 1 ($R^2 = 0.265$, $\Delta R^2 = 0.184$). As shown in Table 2.2, all types of early violence socialization from family were significantly and positively associated with students' acceptance of interpersonal violence ($p \leq .001$).

Model 3 [$F(12, 3917) = 129.84$; $p < .001$], which contained independent variables that were contained in Models 1 and 2 and non-family forms of early violent socialization

(advised violence, witnessed violence, and victimized violence), accounted for a 2% increase in the variance of the acceptance of interpersonal violence compare to Model 2 ($R^2 = 0.285$, $\Delta R^2 = 0.019$). Advised violence and witnessed violence experiences from non-family persons were significantly and positively associated with students' acceptance of interpersonal violence ($p \leq .001$); however, victimized violence experience was not significantly associated with students' acceptance of interpersonal violence. All variables of violent socialization from family still remained significant predictors.

4. Discussion

The current study aimed to examine multiple forms of violent socialization from family and neighbors to see if there were different effects among them on college students' acceptance of violence. Overall, our findings showed that the multiple forms of early violent socialization had a significant impact on college students' beliefs about violence. This finding was consistent with social learning theories which suggested that experiences of violence in childhood influence individuals' approval of violence (Bryant & Spencer, 2003; Flood & Pease, 2009; O'Keefe, 1998; Tontodonato & Crew, 1992). Additionally, compared to violent socialization from non-family members, socialization processes through family members largely influenced college students' cognitive beliefs regarding using violence. This means, not surprisingly, that family context played a robust role in constructing children's beliefs and attitude of violence. Given that if a person has an early, long, frequent, and close association, the association's effect on the person's behavior is stronger (Akers, 1996), it was understandable why family had an influential role on children's socialization than neighbors.

However, the findings showed that multiple forms of violent socialization had different effects on college students' acceptance of violence. Specifically, socialization processes through verbal advice about violence from both family and non-family members were stronger predictors of students' acceptance of interpersonal violence than experiences related to childhood violence victimization and witnessing violence. Our findings add the new knowledge that early advised violence from family and community members was a stronger predictor of young college students' acceptance of interpersonal violence than witnessed violence and victimized violence.

Violent socialization from family and acceptance of violence

The first research question we addressed was whether multiple forms of violent socialization from family members had a specific association with acceptance of interpersonal violence among college students. Our findings showed that all kinds of socialization processes (advised violence, witnessed violence, and victimized violence from family members) were significantly related to the acceptance of interpersonal violence among college students ($p < .001$); however, each association had a different level of strength. For example, advised violence had a crucial impact on acceptance of violence in comparison to the other types of socialization. This result supported the concept that parents' values, attitudes, and behaviors strongly influenced children's aggressive attitudes and behaviors (Duman & Margolin, 2007; Snyder & Patterson, 1995). In some situations, including provocations, parents or family members might encourage their children to respond aggressively. Also, some parents might think it is good for their children, particularly boys, to learn to fight. Such verbal permission and encouragement regarding violence might encourage children to accept or condone

violence against others, which in turn may lead to permission for interpersonal violence in adulthood. Our findings were consistent with prior research confirming the relationship between parental verbal directions toward violence and children's aggressive behaviors (Copeland-Linder et al., 2007; Orpinas et al., 1999; Solomon et al., 2008).

In addition, our findings indicated that students who witnessed violence during childhood and had the childhood experience of being a violence victim were more likely to accept interpersonal violence than those who did not. Witnessing violence early in life influenced not only attitudes toward violence (Lichter & McCloskey, 2004) but also subsequent behavioral outcomes (Roberts, Gilman, Fitzmaurice, Decker, & Koenen, 2010; Schwartz & Proctor, 2000). Our findings were consistent with other studies reporting a strong association between childhood witnessing of intimate partner violence and adulthood's toward attitude and perpetration of partner violence (Gage, 2016; Roberts et al., 2010; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). Numerous studies also have reported that the early experience of being a victim of family violence was a crucial predictor of violence in adulthood (Ehrensaft et al., 2003; Gover et al., 2011) because abusive parents, family members, and community members model aggressive attitudes and perceptions as well as rationalizations that justify violence for children.

Violent socialization from non-family and acceptance of violence

The second research question was whether multiple form of violent socialization from non-family members had a specific association with acceptance of interpersonal violence among college students. Compared to the effect of family members, the effect of socialization from non-family members on acceptance of violence was weaker but we

still see there were significant associations. Similarly, the finding indicated that advised violence from non-family member was a higher predictor of students' acceptance of interpersonal violence than experiences related to direct and indirect violent experience ($p < .001$). This result implied that even though children did not experience direct or indirect violence in the communities, there was enough possibility that community residents' pro-violence attitude largely influenced children's norms of violence (Harding, 2017). The finding also showed that witnessed violence from non-family members was associated with students' acceptance of interpersonal violence ($p < .001$). These findings were consistent with the previous studies confirming the effect of violent environmental context on children's attitude of violence (Anderson, 1999).

In contrast, the childhood experience of being a victim of violence from non-family members was not significantly associated with the acceptance of interpersonal violence. This finding might contradict the findings of previous studies. Studies have reported that the early experience of being a victim of community violence was a crucial predictor of violence in adulthood (Eitle, Turner, & Delinquency, 2002; Gorman-Smith & Tolan, 1998) because community members modeled aggressive attitudes and perceptions as well as rationalizations that justify violence for children. There might be alternative explanations to understanding our results. First, when we examined the correlation between victimized violence and acceptance of violence, there was a positive correlation between two variables ($r = .207, p \leq .001$). However, in the regression analysis, when we included three forms of violent socialization in the model, victimized violence was not significantly associated with the acceptance of violence. This might mean that victimized violence is associated with an acceptance of violence, however, considering the effect of

other forms (i.e. advised violence and witnessed violence) together on acceptance of violence, the effect of victimized violence might be reduced or disappear. Considering children's experiences of victimized violence (1.5, SE=.01) is also less than other types of violent socialization, witnessing violence (2.25, SE=.01) and advised violence (2.26, SE=.02), experiences of victimization might not have a strong effect on their acceptance of violence than form. Lastly, studies argue that violent victimization is more strongly associated with disruptions in emotion regulation such as depression and PTSD than individual's attitude toward violence or aggressive behavior (Schwartz & Proctor, 2000). Schwartz and Proctor (2000) suggested that direct victimization may include the central mediational processes that would contribute to disruptions in emotion regulation unlike witnessed violence which is most likely to lead to learned positive evaluations of violent behavior. Thus, the effect of victimization might be weaker than other forms of violent socialization on acceptance of violence.

5. Implications

Our findings, consistent with social learning theory, indicated that college students' attitude toward violence might be learned and reinforced through environmental contexts. Thus, it is critical to provide early intervention efforts to prevent the effect of childhood socialization to violence on the potential attitudes toward and behaviors of interpersonal violence. This study highlights the need for social workers, teachers, policymakers, and other individuals who work closely with children, their family, and community members to be trained to recognize forms of early socialization to violence.

Direct verbal advice about violence and exposure to violence in a family and neighborhood environment can serve as lessons and models for the children's attitudes

toward and behaviors of violence, which later affect their acceptance of interpersonal violence in adulthood. Therefore, educational intervention programs to create a safe and stable environment for children may help them avoid violence and abuse when they become adults. Parents should take a special responsibility for the discourse on violence. Verbal skills and creating a non-violent environment for children is an effective way to prevent potential violent attitudes and behaviors among college students. In addition, children living in neighborhoods where they have seen or experienced other members of the community intervening or discouraging the use of violence may feel that their community is more likely to intervene, support nonviolent behaviors, or provide sources of support and protection (Garthe, Gorman-Smith, Gregory, & E. Schoeny, 2018). These findings imply that family and non-family members can play an important role in creating and teaching children to value a safe community that does not justify violence.

6. Limitations and suggestions for future studies

Our study has several limitations. First, this study used a cross-sectional exploratory research design and the associations between variables are not causal. It seems valuable to develop this research further with a longitudinal study in order to explain causal relationships among the variables including early violent socialization (advised violence, witnessed violence, and victimized violence) and the acceptance of violence. In addition, the sample was collected through convenience sampling, which may impact generalizability given nonrandomization. Specifically, the sample was selected from students enrolled mostly in criminology, sociology, psychology, and family studies courses; thus, it cannot accurately represent all college students. Also, gathering data from these departments could explain why more female students participated in this

study. For female college students with slightly below average socioeconomic status, their early violence socialization could be different from male college students from different socio- economic backgrounds. Future studies should be tested using a more representative sample with more representative characteristics of the college student population in different contexts. Furthermore, the questions regarding early violent socialization and acceptance of violence were focused on physical violence. However, it is important to consider that violence includes diverse forms including psychological abuse. Thus, our measurements might not fully measure the constructs of violent socialization and acceptance of violence. Also, the measurement of violence socialization needs to measure its prevalence and severity and so future studies should further be considering these limitations of measurement. Lastly, even though family and community have interactive effects on children's socialization, our study did not take into account that complex dynamic, particularly the influence of family on socialization of coping with community violence. Future studies may incorporate the interactive dynamic of family and community context on children's socialization process.

CHAPTER 3

EARLY EXPOSURE TO VIOLENCE AND DATING VIOLENCE PERPETRATION: THE ROLE OF PRO-VIOLENCE MESSAGES²

² Kim, J. To be submitted to *Journal of Interpersonal Violence*.

Abstract

Dating violence is a serious and prevalent problem among college-aged couples. Empirical studies based on social learning theories have found a strong relationship between early exposure to violence and dating violence perpetration in later life. However, substantially less research has examined the factors that reinforce learning of violence. The purpose of the present study was to examine whether pro-violence messages moderate the effect of exposure to violence on attitudes toward violence and dating violence perpetration among U.S. college students (N =3,302). Findings showed that pro-violence messages are associated with attitudes toward violence among both male and female students, but that such messages are associated with increased dating violence perpetration only among female students. In addition, pro-violence messages moderate the relationship between exposure to violence and attitudes accepting violence among only female students; however, the messages also moderated the effect of exposure to violence on dating violence perpetration among male students. Implications for future research and policy are discussed.

1. Introduction

Due to high rates of dating violence among college students and the associated negative outcomes, researchers are increasingly turning their attention to the causes and correlates of dating violence perpetration. Dating violence studies have found that exposure to violence during childhood is strongly associated with beliefs supporting violence and dating violence perpetration (Black et al., 2015; Eriksson & Mazerolle, 2015; Ramsay, Steeves, Feng, & Farag, 2017). Such the reason, researchers have explored which factors reinforce violence acquisition in individuals who witness violence and/or become victims of violence (Thomas, Caldwell, Assari, Jagers, & Flay, 2016).

Some studies have revealed that pro-violence messages from parents and peers, such as support for fighting and tolerant attitudes toward violence, are significantly related to children's attitudes toward violence and aggressive behaviors (Garthe, Gorman-Smith, Gregory, & E. Schoeny, 2018; Walters, 2017). However, only a few studies have examined how pro-violence messages adjust or reinforce the effects of childhood exposure to violence on attitudes supporting violence and dating violence perpetration (Garthe et al., 2018). In addition, considering that the learning process of violence differs according to gender (Debowska, Boduszek, Jones, Willmott, & Sherretts, 2017; Spencer, Morgan, Bridges, Washburn-Busk, & Stith, 2017), research is needed to explore the mechanism of violence acquisition through focusing on gender differences. Thus, the current study investigates the possibility that pro-violence messages moderate the relationship between exposure to violence, and attitudes toward violence and dating violence perpetration among male and female college students.

2. Literature review

Social learning theory and pro-violence messages

Social learning theory suggests that children imitate violent behaviors through direct and indirect exposure to violence, such as witnessing violence and direct victimization (Akers & Jennings, 2009; Bandura, 1978). The theory also emphasizes that learning can be facilitated by acquiring attitudes of certain behaviors – whether or not those behaviors are appropriate (Akers & Jennings, 2009). For example, family and community members’ supportive messages for fighting might play a critical role in facilitating violence learning (Copeland-Linder et al., 2007; Solomon, Bradshaw, Wright, & Cheng, 2008). Social learning theory (Akers, 1996) also postulates that observed or experienced behaviors may be reinforced through reward or punishment. That is, the more often certain behaviors are reinforced by rewards, the more such behaviors are repeated; and in the same way, certain behaviors are eliminated through punishment (Akers, 1996). Violence can be reinforced through parental support for fighting and praise for aggressive peer interactions from family, peers, and community members (Johnson, Finigan, Bradshaw, Haynie, & Cheng, 2011; Orpinas, Murray, & Kelder, 1999; Wright & Fagan, 2013).

The effect of pro-violence messages on violence attitudes and violent behaviors

Even though many researchers have found a strong association between early exposure to violence and aggressive behaviors (Eriksson & Mazerolle, 2015; Foshee, Bauman, & Linder, 1999; Gover, Kaukinen, & Fox, 2008), few studies have examined how pro-violence messages such as support for fighting, predict or adjust an individual’s attitude toward violence and violence perpetration. Existing studies have focused mainly

on the role of parental and peer support for fighting in producing general aggressive patterns among adolescents. These studies reveal that encouragement by parents or other adult relatives for aggressive peer interactions may have considerable effects on children's willingness to engage in violence and adopt retaliatory attitudes (Chen, Flores, Shetgiri, & studies, 2016; Copeland-Linder et al., 2007; Solomon et al., 2008; Wright & Fagan, 2013). For example, youths who believe that their parents support fighting are more likely to get into fights at school, to receive greater injuries during fights, and to carry weapons (Orpinas et al., 1999). Two longitudinal studies also examined the role of caregivers' messages/coaching supporting violence and nonviolence on adolescents' aggression. They found that perceived parental support of fighting is related to higher frequencies of aggressive behavior, and perceived parental support of nonviolent responses to conflict is related to lower levels of aggression (Farrell et al., 2012; Kliewer, Parrish, Taylor, Jackson, Walker, & Shivy et al., 2006).

In addition to parents and family members, children might also receive support for aggressive coping from their peers or from community norms such as tolerance of violence (Thomas et al., 2016; Walters, 2017; Wright & Fagan, 2013). For example, disadvantaged communities may have informal rules or expectations of violent retribution for disrespect, and individuals in these communities may view their violent reaction toward others as self-protection (Anderson, 1999). Such community norms can be conveyed to youths through interactions with peers and adults in their communities. Peers' attitudes toward violence also play a critical role in children's views of violence, providing models for behavior and shaping their norms and values regarding violence

(Bernburg & Thorlindsson, 2005; Harding, 2009; Herrenkohl & Jung, 2016; Zimmerman & Messner, 2011).

Regarding dating violence perpetration, few studies have examined the effect of support for fighting, including pro-violence messages, on dating violence perpetration, and these studies show mixed findings (Garthe et al., 2018). In one longitudinal study, Garthe et al. (2018) found that parental support for fighting did not predict changes in dating violence perpetration across time within a sample of adolescents. In addition, only a few studies have examined the effects of parental and peer support for fighting on individuals who have witnessed violence or who have been victimized (Copeland-Linder et al., 2007; Thomas et al., 2016). In a study of African-American adolescents, Thomas et al. (2016) examined how witnessing physical violence is related to violent behavior and how peer and parent expectations about violent or nonviolent behaviors adjust the linkage. Thomas et al. (2016) found that parents' expectations of nonviolence were not directly related to violent behaviors among these adolescents; rather, parents' protective roles strengthened boys' self-efficacy in avoiding violence. However, expectations of violence from the boys' peers directly predicted violent behaviors.

Gender differences

Although findings are mixed (Holt, Buckley, & Whelan, 2008), most studies suggest that exposure to violence may affect boys and girls differently. In general, boys who have been exposed to violence are more likely to demonstrate externalizing behaviors, including violent behaviors; while girls tend to display more internalizing behaviors, such as emotional distress or depression (Evans, Davies, & DiLillo, 2008; Holt et al., 2008). In terms of attitudes toward violence, studies have found that male students

who experienced violence within the family or from outside are more likely than female students to approve of and adopt violent behaviors (Bacchini, Affuso, & Aquilar, 2015; Mattingly & Straus, 2008).

Such gender differences can be seen in research on parental and peer support for fighting. Copeland-Linder et al. (2007) examined the factors associated with retaliatory attitudes among adolescents who had been assaulted by peers. They found that aggressive peer interactions influenced the retaliatory attitudes of boys, but did not influence the retaliatory attitudes of girls. This could mean that pro-violence messages are more likely to influence boys than girls. Meanwhile Garthe et al. (2018) found that for adolescents of both genders, perceptions of parental support for fighting were positively associated with the perpetration of physical dating violence. However, for females alone, perceptions of parental support for nonviolent responses to conflict were negatively associated with the perpetration of physical dating violence.

The current study

To my knowledge, no studies have examined the moderating effect of supportive messages for fighting in the relationship between exposure to violence and imitated acts of violence. Because existing studies have consistently found that norms supporting violence play a critical role in individuals' attitudes and violent behaviors, it is possible that receiving pro-violence messages may moderate the relationship between exposure to violence during childhood and later dating violence perpetration. In the current study, I examine whether pro-violence messages moderate the relationship between early exposure to violence and later attitudes toward violence and dating violence perpetration.

Based on the theoretical and empirical evidence reviewed above, I will address the following hypotheses:

Hypothesis 1: Pro-violence messages, controlling other covariates, will be positively related to attitudes approving violence as well as dating violence perpetration among male and female college students.

Hypothesis 2: Pro-violence messages, controlling for other covariates, will moderate the association between exposure to violence during childhood and attitudes approving violence as well as dating violence perpetration among male and female college students. That is, exposure to violence during childhood would be more strongly associated with attitudes approving violence and increased dating violence perpetration among those high in receiving pro-violence messages compared to those low in receiving pro-violence messages.

3. Method

3.1 Data and sample

The data for this study comes from the International Dating Violence Study (IDVS). The IDVS was conducted to investigate risk factors and protective factors related to dating violence perpetration and victimization among college students (Straus, 2011). Study participants were selected through convenience sampling from 32 countries. Data were collected from 17,404 student respondents, and most participants were enrolled in university courses (criminology, sociology, psychology, or family studies). All study procedures were approved by the University of New Hampshire Human Subjects Board (Graham, Jensen, Givens, Bowen, & Rizo, 2019).

The sample for this study was composed of 4,533 U.S. college students from 17 universities in the IDVS. As this study focused on emerging adults and dating violence, I restricted the sample to U.S. college students aged 18-23 years old who had engaged in a heterosexual dating relationship lasting more than one month. Thus, I excluded cases of respondents whose ages ranged from 33 to 45 ($n=601$), those with no dating relationships or no relationships of at least 1 month's duration ($n=343$), those having only same-sex dating relationships ($n=93$), and those who were married ($n=121$). After removing cases with missing values regarding family income (missing data $< 2.0\%$), the final analytical sample for our study included 3,302 participants.

3.2 Measures

Except for the CTS 2 scale for dating violence perpetration, all scales come from the Personal and Relationships Profile (PRP) in IDVS (Straus, Hamby, Boney-McCoy, & Sugarman, 1999). Commonly, the response categories of PRP scales range from 1 (strongly disagree) to 4 (strongly agree).

Independent variable. Exposure to violence. This variable was assessed using the witnessed and victimized violence subscales within the Violence Socialization Scale of the PRP (Straus, Hamby, Boney-McCoy, & Sugarman, 1999). A total of six items consist of direct and indirect experiences of violence by family members and non-family members, including physical punishment and witnessing violence. Higher scores indicate higher exposure to violence during childhood. In this study, the internal consistency reliability (Cronbach's alpha) with the U.S. sample was 0.66.

Moderating variable. Pro-violence messages. This variable was measured using the advised violence subscales within the Violence Socialization Scale of the PRP

(Straus, Hamby, Boney-McCoy, & Sugarman, 1999). The two items ask whether respondents' parents or community members gave the respondents pro-violence messages during childhood (i.e., "When I was a kid, my father or mother told me to hit back if someone hit me or insulted me" and "When I was a kid, people [adults or kids] who were not part of my family told me to hit back if someone hit me or insulted me.") Higher scores indicate a higher number of pro-violence messages from parents and other community members. Reliability analysis found an alpha of .69 (Cronbach's alpha).

Dependent variables. Dating Violence Perpetration. The physical assault scale from the revised Conflict Tactics Scales (CTS2) was used to measure this variable. The twelve items range from minor physical aggression (e.g., pushing or grabbing) to severe physical aggression (e.g., punching or kicking). Each item has seven response categories: 1 = once, 2 = twice, 3 = 3-5 times, 4 = 6-10 times, 5 = 11-20 times, 6 = more than 20 times, and 0 = this has never happened in the current relationship. Higher scores indicate higher frequency of physical violence toward dating partners. The internal consistency reliability (Cronbach's alpha) with the U.S. sample was 0.82.

Attitudes toward violence. This variable was measured using the Violence Approval scale of the PRP (Straus et al., 1999). The scale includes 10 items which ask respondents' opinions concerning the acceptability of interpersonal violence in situations such as family violence and sexual violence (e.g., whether it is acceptable for a man to force his wife to have sex, or for parents to slap teens who talk back or repeatedly get into trouble). Higher scores indicate higher levels of acceptance of violence. Internal consistency with the U.S. sample was 0.70.

Control variables. Six control variables were incorporated into the analyses. Three of the control variables were demographic measures: age (in years), family SES, and type of household (two parents vs. single parents). Family SES was created by summing three variables: father's education, mother's education, and family income. The summed values were standardized using the sample mean and sample standard deviation. Thus, the family SES indicates the level of standard deviation – if any – by which each student is above or below the mean for U.S. college students. Since previous research has shown that relationships with parents and interactions with peers are associated with the violent socialization process (Henry, Tolan, & Gorman-Smith, 2001), I controlled factors relevant to parents and peers. Thus, the fourth control variable was positive parenting, which came from the positive parenting scale of the PRP. Six items measured the degree to which parents were loving and supportive, and properly supervised their children. Internal consistency with the U.S. sample was 0.83. The fifth control variable was delinquent peers. This variable came from a subscale, delinquent peers, of the social integration scale in the PRP. Two items assess whether respondent have friends who commit crimes. Internal consistency with the U.S. sample was 0.75. Lastly, previous studies have pointed out that dating violence research should focus on current dating relationship dynamics (O'Keefe, 1997). Thus, I controlled the effect of current relationship dynamics with regard to dating violence perpetration by using the Relationship Conflict variable from the PRP. A total of nine items asked respondents about areas of disagreement with their partners regarding relationships with others, habits, sexual relationships, and time spent together. The response categories for these

questions ranged from 1 (strongly disagree) to 4 (strongly agree), and higher scores indicated higher levels of conflict. Internal consistency with the U.S. sample was 0.79.

3.3 Data analysis

The analysis occurred in two stages. First, chi-square tests and independent sample t-tests were used to determine any significant differences among study variables when comparing females and males. For the second stage of the analysis, the sample was stratified by gender. Multivariate ordinary least square (OLS) regression was then conducted to test the association between early exposure to violence and attitudes toward violence and dating violence perpetration in each gender group. The dependent variable of dating violence perpetration in particular was positively skewed; therefore, the scores on the dating violence scales were logarithmically transformed (natural log) before analyses to normalize distributions. In addition, the moderating effect of pro-violence messages was examined by introducing and testing an interaction term between exposure to violence and pro-violence messages in the OLS model. I also grand-mean centered the continuous predictors to aid interpretation and avoid multicollinearity with the interaction terms (Aiken, West, & Reno, 1991). Finally, since correlated errors were a concern due to the nested nature of the data—the 3,302 college students were clustered in 17 universities—I estimated all of the models using robust standard errors clustered at the university level. This was done using Stata’s `vce(cluster)` command, which generates robust standard errors that are unbiased in the context of clustered data by generalizing the Huber/White/sandwich estimate of variance to account for clustering (Lokshin & Sajaia, 2004). All analyses were conducted using Stata 15.0.

4. Results

4.1. Descriptive statistics

Table 3.1 presents descriptive statistics for the two gender groups, as well as the overall sample. College students included in the study sample were more often girls than boys (68% vs. 32%). The mean age was 20.1 years ($SE = 0.03$), and most students lived with two parents rather than a single parent (66% vs. 34%). Significant bivariate gender differences in the study variables were noted. Female students were more likely than male students to perpetrate dating violence ($p < .01$). However, male students were more likely than female students to approve of interpersonal violence ($p < .001$) and were more likely to have been exposed to violence during childhood ($p < .001$). Male students also received more pro-violence messages than female students ($p < .001$).

4.2. Regression analyses for male students

Table 3.2 provides the results of OLS regression analyses in the male student group. Model 1 and Model 2 show the findings of regression with regard to attitudes toward violence. In Model 1, exposure to violence during childhood was associated with male students' attitudes approving of violence ($b = 0.84$, $p < .001$) controlling for other covariates. In Model 2, pro-violence messages and the interaction term (exposure to violence \times pro-violence messages) were included. Exposure to violence was still associated with attitudes toward violence ($b = 0.25$, $p < .001$), and pro-violence messages were associated with male students' approval of violence ($b = 0.72$, $p < .001$). However, no interaction effect was found.

Model 3 & 4 show the results of regression analysis on dating violence perpetration. In Model 3, early exposure to violence was not associated with dating

Table 3.1 Descriptive statistics for the variables and gender differences, International Dating Violence Survey (IDVS), % or Mean (SE)

		Total (N=3,302)		Male (N=1,035)		Female (N=2,267)		Range	t-value
	Gender (Female)			31.34		68.66			
	Age (years)	20.05	0.03	20.30	0.05	19.93	0.03	18-24.5	5.91***
	Family SES	0.00	0.02	0.13	0.03	-0.06	0.02	-1.8-3.6	5.13***
CVs	Two parents (vs. single parent)	66.29		68.79		65.15			
	Positive parenting	18.42	0.05	17.92	0.10	18.65	0.06	6-24	-6.43***
	Delinquent peers	4.96	0.03	5.50	0.05	4.71	0.03	2-8	13.16***
	Relationship conflict	17.95	0.08	18.73	0.13	17.59	0.09	9-34	6.96***
	Dating violence perpetration (DVP)	76.50	2.70	62.13	4.35	83.06	3.39	0-1200	-3.60**
DVs	Log transformed DVP	1.61	0.04	1.40	0.07	1.70	0.05	0-7.09	-3.31*
	Attitude towards violence	19.34	0.07	21.05	0.13	18.56	0.08	10-36	16.64***
Moderating V	Pro-violence messages	4.25	0.03	4.89	0.05	3.96	0.03	2-8	15.27***
IV	Exposure to violence	10.50	0.05	11.46	0.09	10.06	0.06	6-24	12.52***

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

violence perpetration. In Model 4, early exposure to violence and pro-violence messages were not associated with dating violence perpetration. Even though there was no overall effect of either exposure to violence or pro-violence messages, crossover interaction was noted ($b = 0.03$, $p < .01$). This means that the effect of exposure to violence on dating violence perpetration may decline, depending on the value of pro-violence messages. As shown in Figure 3.1, the effect of early exposure to violence on later dating violence perpetration tends to be stronger on participants who received higher levels of pro-violence messages as children. In addition, the slope appears steeper in the group of students who received higher levels of pro-violence messages than in the group who received lower levels of pro-violence messages.

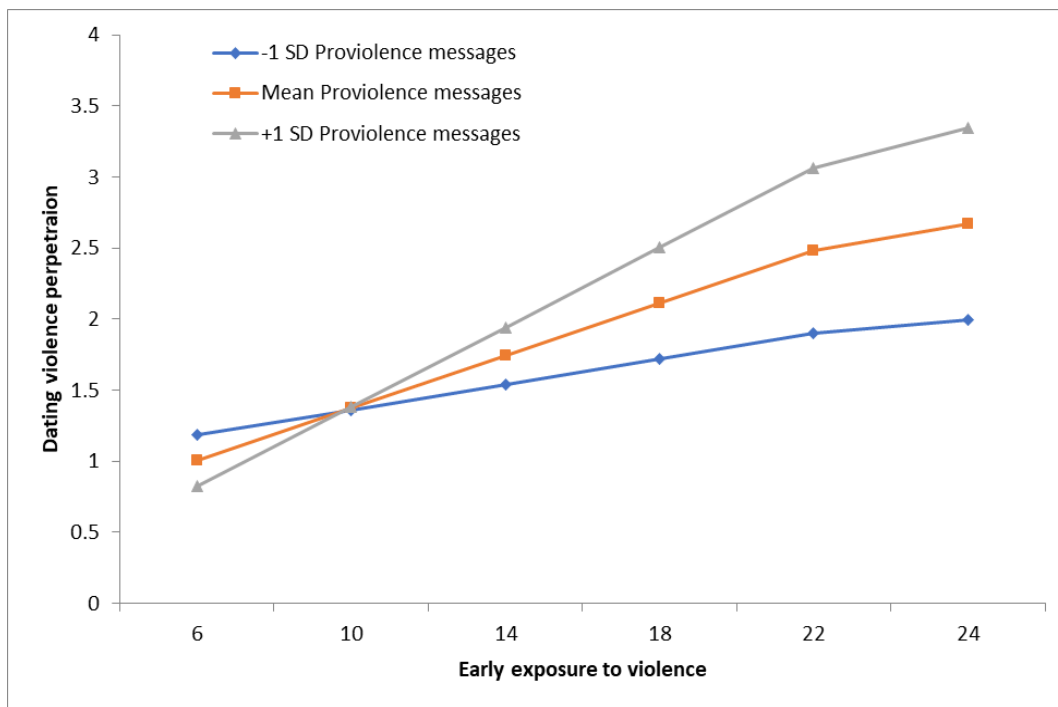


Figure 3.1 Interaction effect of exposure to violence and pro-violence messages in the male group (N=1,035).

This means that children who faced higher frequencies of exposure to violence increasingly strengthened the likelihood that they perpetrated dating violence in later years among students who received pro-violence messages.

Table 3.3 indicates the results of OLS regression analyses in the female student group. In Model 1, exposure to violence during childhood was associated with female students' attitudes approving of violence ($b = 0.42$, $p < .001$) controlling for other covariates. In Model 2, exposure to violence and pro-violence messages were associated with attitudes accepting violence (respectively, $b = 0.22$, $p < .001$; $b = 0.85$, $p < .001$). An interaction effect was found showing that the more often a student was exposed to violence during childhood, the greater is the predicted probability that they will approve of violence if they also received pro-violence messages in childhood (Figure 3.2).

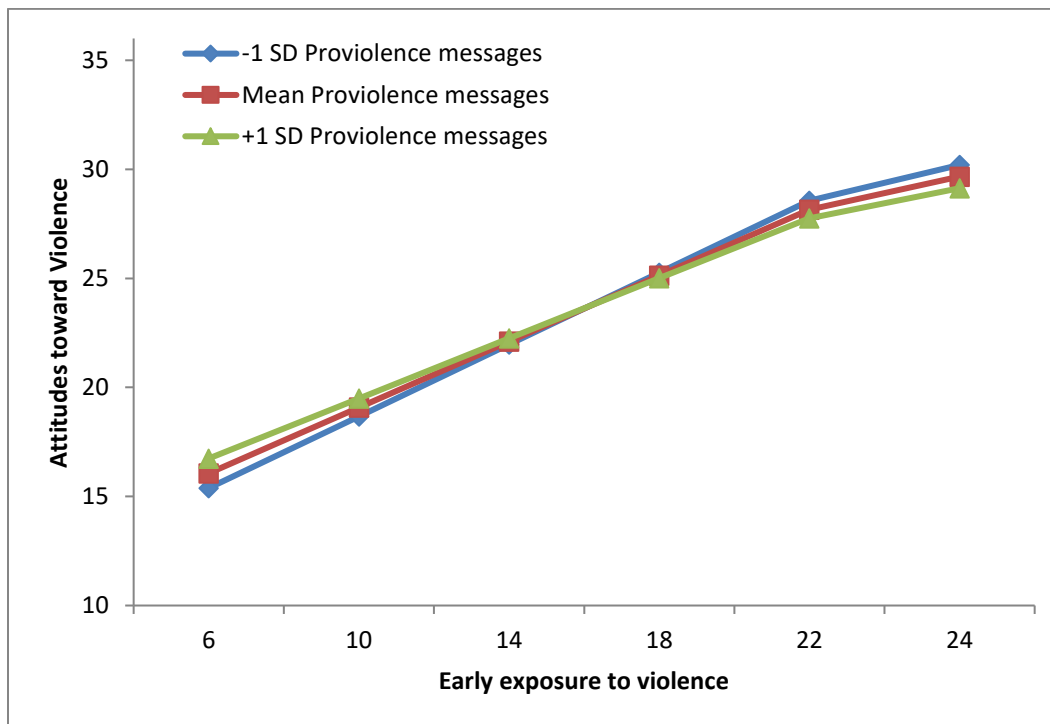


Figure 3.2 Interaction effect of exposure to violence and pro-violence messages in the female group ($N=2,267$).

However, students who experienced early exposure to violence, but who did not receive pro-violence messages, were less likely than the former group to approve of violence ($b = -0.04, p < .01$).

Model 3 shows a pattern found among female students but not among male students: for female students, early exposure to violence is associated with dating violence perpetration ($b=0.09, p < .01$). In Model 4, after adding pro-violence messages, early exposure to violence is still associated with increased dating violence perpetration ($b = 0.06, p < .05$); and pro-violence messages are also associated with dating violence perpetration ($b = 0.14, p < .05$). No interaction effect was found.

4.3. Additional analysis

For the purpose of cross validation, I randomly divided the original data set ($n=3,302$) into two subsets (holdout sample and exploratory sample) and compared the results of analyses, including OLS regression. The randomization process was conducted using the commands “Select case – Random sample of cases” by SPSS 22.0. Through this cross validation procedure, I found that the results of the holdout sample and exploratory sample were similar, meaning our data set was balanced and the results could be generalized.

5. Discussion

The present study has examined the moderating role of pro-violence messages in the relationship between early exposure to violence and later attitudes toward violence and dating violence perpetration. Overall, our findings showed that pro-violence messages are associated with attitudes supporting violence among male and female students, but that such messages are associated with increased dating violence

Table 3.2. OLS regression on attitudes toward violence and dating violence perpetration among male students (N = 1.035)

	Attitudes toward violence						Dating violence perpetration					
	Model 1			Model 2			Model 3			Model 4		
	b	RSE	Beta	b	RSE	Beta	b	RSE	Beta	b	RSE	Beta
Exposure to violence (ETV)	0.84***	0.08	0.84	0.25***	0.04	0.18	0.04	0.03	0.05	0.02	0.03	0.03
Pro-violence messages (PM)				0.72***	0.08	0.28				-0.05	0.05	-0.03
Age (years)	-0.10	0.08	-0.10	-0.15	0.07		-0.10*	0.04	-0.07	-0.10*	0.04	-0.07
Family SES	-0.12	0.11	-0.12	-0.06	0.11	-0.01	-0.15	0.09	-0.06	-0.16	0.08	-0.06
Two-parent household	-0.12	0.30	-0.12	-0.03	0.30	0.00	-0.20	0.14	-0.04	-0.19	0.15	-0.04
Positive parenting	-0.17***	0.03	-0.17	-0.11**	0.04	-0.09	0.01	0.02	0.01	0.00	0.02	0.00
Delinquent peers	0.34**	0.08	0.34	0.27**	0.08	0.10	0.07	0.05	0.05	0.07	0.05	0.04
Relationship conflict							0.14***	0.01	0.24	0.14***	0.01	0.25
ETV x PM				-0.03	0.02	-0.04				0.03**	0.01	0.07
ΔR^2	0.17			0.02			0.08			0.01		

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. *Note.* Relationship conflict is only a control variable in the regression analysis on dating violence perpetration.

Table 3.3 OLS regression on attitudes toward violence and dating violence perpetration among female students (N = 2,267)

	Attitudes toward violence						Dating violence perpetration					
	Model 1			Model 2			Model 3			Model 4		
	b	RSE	Beta	b	RSE	Beta	b	RSE	Beta	b	RSE	Beta
Exposure to violence (ETV)	0.42***	0.03	0.32	0.22***	0.03	0.17	0.09**	0.02	0.11	0.06*	0.02	0.08
Pro-violence messages (PM)				0.85***	0.06	0.36				0.14*	0.05	0.09
Age (years)	-0.07	0.07	-0.03	-0.07	0.06	-0.03	-0.03	0.04	-0.02			
Family SES	-0.40***	0.08	-0.10	-0.14*	0.06	-0.05	-0.15*	0.06	-0.06	-0.12*	0.05	-0.05
Two-parent household	0.13	0.19	0.02				-0.14	0.08	-0.03	-0.12	0.09	-0.02
Positive parenting	-0.11***	0.02	-0.09	-0.10***	0.02	-0.08	0.00	0.01	0.01	0.01	0.01	0.01
Delinquent peers	0.22	0.05	0.09	0.16**	0.04	0.07	0.07*	0.03	0.05	0.06	0.03	0.04
Relationship conflict							0.14***	0.01	0.25	0.14***	0.01	0.25
ETV x PM				-0.04*	0.02	-0.05				0.01	0.01	0.01
ΔR^2	0.18			0.09			0.11			0.01		

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. *Note.* Relationship conflict is only a control variable in the regression analysis on dating violence perpetration.

perpetration only among female students. In addition, pro-violence messages moderate the relationship between exposure to violence and attitudes accepting violence among only female students; however, the messages also moderated the effect of exposure to violence on dating violence perpetration among male students.

These findings are partially consistent with the view that parental and peer support for aggression plays a significant role in cognitive belief and aggressive behaviors (Copeland-Linder et al., 2007; Johnson et al., 2011; Solomon et al., 2008). However, the findings clearly show that pro-violence messages have a different effect on college students' cognition (attitude toward violence) and their actual behaviors (dating violence perpetration). Furthermore, the effect of pro-violence messages varies according to gender. Thus, our findings add new knowledge to the study of violent socialization: messages from parents, peers, and other community members which support violent coping will have different effects on individuals' cognition and actual violent behavior, depending on the individuals' gender.

The first hypothesis I addressed was that receiving pro-violence messages from parents and other community members would be positively related to attitudes supporting violence and increased dating violence perpetration. The findings support Hypothesis 1 and showed that receiving pro-violence messages is positively associated with attitudes supporting violence in both male and female students controlling for demographic/background characteristics. This result supports the concept that parents' values, attitudes, and behaviors strongly influence children's aggressive attitudes and behaviors (Duman & Margolin, 2007; Snyder & Patterson, 1995). For instance, parents or family members might encourage their children to respond aggressively in certain

situations, including provocation. Some parents might also think it is good for their children, particularly boys, to learn how to fight. Such verbal permission and encouragement regarding violence might encourage children to accept or condone violence against others, which in turn may lead to perpetuation of interpersonal violence in adulthood.

Meanwhile receiving pro-violence messages is positively associated with dating violence perpetration in the female student sample, but not in the male sample. This finding seems to contradict some previous studies that suggest parental tolerance of violence and peer support for fighting are more closely related to aggression in male adolescents than in females – see Walters et al. (2017), Garthe et al (2018), and Copeland-Linder et al (2007). One possible explanation for these results is that there might be other more proximate risk factors (e.g., current relationship factors) which lead to dating violence perpetration among boys. O'Keefe (1999) argued that contextual factors (previous background) are not the only factors which should be considered in studies of dating violence, but that current situational factors such as alcohol use, relationship distress, and satisfaction should be considered as well.

Overall, among both male and female college students, receiving pro-violence messages appears more strongly related to college students' pro-violence cognition supporting violence rather than actual aggressive behavior toward against dating partners. Even though receiving verbal support of fighting during childhood significantly predicts acceptance of violence in later life, the finding showed that such verbal reinforcement does not have a strong effect on actual aggressive behavior.

The second hypothesis was that receiving pro-violence messages would moderate the pathway from exposure to violence to attitudes toward violence and dating violence perpetration. To begin, I examined the association between exposure to violence and individual's attitudes toward violence, and I found a moderating effect of pro-violence messages – but only in the female students' model. That is, female students who experienced early exposure to violence were more likely to have attitudes approving violence when they received high levels of pro-violence messages. However, in the male students' model, even though pro-violence messages predicted male students' attitudes toward violence, the association did not differ according to the presence or absence of pro-violence messages.

I next explored the moderating effect of pro-violence messages in the association between exposure to violence and dating violence perpetration. Although the direct impact of exposure to violence and pro-violence messages on dating violence perpetration were not significant, I found a moderating effect in the male students' model. That is, male students who were exposed to violence as children tended to show increased dating violence perpetration when they also received higher levels of pro-violence messages. This means that as children face higher frequencies of exposures to violence, the effects of exposure to violence on dating violence become stronger for those who received a high level of pro-violence messages than those who not. As discussed above, a moderating effect of pro-violence messages was partially found.

The current study extends theories of violence – in particular, social learning theory – in two ways. First, it shows that parents, peers, and community members' norms supporting or tolerating violent coping may be a significant risk factor in learning and

reinforcing beliefs that justify the use of violence and actual violent behaviors. However, existing studies applying social learning theory have focused largely on the effect of exposure to violence on children's aggressive behaviors. We need to consider the mechanisms or conditioning factors that adjust or reinforce the relationship between early exposure to violence and later aggressive behaviors. Second, theories and empirical studies of violence have shown that exposure to violence and verbal reinforcement of violence might be common risk factors in developing beliefs that justify violence and in actual violence perpetration. However, our study points out that exposure to violence predict or moderate cognition alone or behaviors alone. This study also showed that pro-violence messages might be more closely related to college students' cognition than to actual dating violence perpetration. Thus, this finding suggested that we need to explore what risk factors have stronger effects on individual's cognition and actual behaviors in violence learning process.

The findings from the current study have important clinical implications. First, this study provides initial evidence that families and community members can help reduce the likelihood of dating violence perpetration in later life through nonviolent advice and communication with their children. Thus, interventions focused on preventing pro-violence norms by training in healthy parenting/coaching skills to help children avoid violence appear to be worthwhile targets for community programs aimed at parents, peers, and other community members. In addition, practitioners developing dating violence programs should consider college students' personal backgrounds, including their genders and violence histories, and should seek understanding of how student

attitudes toward violence (cognition) and dating violence perpetration (behaviors) are developed and enhanced.

In interpreting the results of the present study, it is important to note its limitations. First, the cross-sectional data precluded causal interpretations, despite the causal assumptions suggested by social learning theory. Future research using longitudinal designs are necessary to rule out alternative interpretations of the current findings. A second limitation of the present study lies in its measurements. In particular, exposure to violence and attitudes toward violence cover different types of general violence patterns rather than specific types of violence exposure or attitudes toward particular type of violence (i.e. male-to-female violence). This measurement might give different results in comparison to previous studies which have focused on particular types of violence. However, despite these limitations, the present study extends our understanding of the role of pro-violence messages in moderating the relationship between exposures to violence and dating violence perpetration. In doing so, these findings provide an empirical basis for further research aimed at alleviating dating violence perpetration among college students through changing norms support violence.

CHAPTER 4

FACTORS MEDIATING THE LINK BETWEEN EARLY EXPOSURE TO VIOLENCE AND DATING VIOLENCE PERPETRATION³

³ Kim, J. To be submitted to *Journal of Interpersonal Violence*

Abstract

Research indicates that children exposed to violence are at a greater risk for engaging in violent behavior as adults. However, the pathway between exposure to violence during childhood and perpetration of dating violence in young adulthood remains unclear.

Utilizing a sample of U.S. college students, the current study examines whether attitudes toward violence and substance use mediate the relationship between childhood exposure to violence and dating violence perpetration. The results of structural equation modeling confirm the mediation models and suggest that the direct and mediating pathways are partially moderated by gender. Implications for future research and policy are discussed.

Keywords: exposure to violence, dating violence perpetration, attitude towards violence, substance use

1. Introduction

Dating violence is a serious and prevalent problem among college-aged couples. A National Intimate Partner and Sexual Violence Survey (2010) found that 47% of females and 39% of males first experience physical violence, sexual violence, and/or stalking by an intimate partner between the ages of 18 and 24 (Black et al., 2011). Research has also shown that 34% of female students report having experienced psychological violence, such as being insulted or humiliated by a dating partner, during the past 12 months (Barrick, Krebs, & Lindquist, 2013).

Although estimates of dating violence vary depending on the definition of dating violence and the measurements used to study it, research consistently shows that between 20% and 50% of college students report being the victim of at least one type of dating violence (Barrick et al., 2013; Kaukinen, Gover, & Hartman, 2012; Shorey, Cornelius, Bell, & behavior, 2008). Dating violence entails a risk of various adverse health outcomes, including physical injuries and psychological trauma (Buelna, Ulloa, & Ulibarri, 2009; Paat & Markham, 2016). Thus, it is important to examine studies that help guide interventions and prevent future occurrences of dating violence within this age group.

A number of studies have delved into the causal factors of intimate partner violence perpetration, and they reveal that early exposure to violence is one of the most consistent predictors of later violence (Eriksson & Mazerolle, 2015; O'Keeffe, 1998). However, little is known about how exposure to violence during childhood leads to the perpetration of dating violence, and still questions remain about the mechanisms that may underlie this relationship. Furthermore, compared to research of adolescents and adults,

the link between exposure to violence and violence perpetration among college students has not been extensively explored, even though dating violence is more prevalent in young adulthood than in other life stages (Buelna et al., 2009).

The current study aims to examine what factors may mediate the relationship between exposure to violence during childhood and dating violence perpetration among college students. Several theoretical frameworks have been proposed to explain these underlying mechanisms. Social learning theory (Akers & Jennings, 2009; Bandura, 1978) emphasizes that indirect and direct exposure to violence leads children to view violence as normative or acceptable in relationships – which, in turn, contributes to the likelihood of violent behavior. According to this perspective, the impact of early exposure to violence and dating violence in young adulthood can be assessed by measuring attitudes toward violence. The general strain theory (Agnew, 1992) and alcohol myopic model (Steele & Josephs, 1990) guide our understanding of the ways in which people who are exposed to violence may manage their stress through substance use – which may, in turn, lead them to engage in delinquent or violent acts.

Exposure to violence and dating violence: attitudes toward violence as a mediator

Social learning theories posit that behaviors are learned through observation and imitation of others (Bandura, 1978). During the process, people also learn attitudes or definitions for certain behaviors as good or bad (Akers & Jennings, 2009). If a person possesses a positive definition of a certain behavior, the person will be more likely to engage in that behavior. As social learning theory suggests, children who are exposed to violence might acquire a belief system justifying the use of interpersonal violence (Eriksson & Mazerolle, 2015; Su, Mrug, & Windle, 2010). Such exposure to violence

increases the risk of perpetrating violence directly through modeling and imitation, or indirectly through attitudes toward violence (Su et al., 2010). Thus, an individual's attitudes, approval, and perception of violence may mediate the relationship between the social learning of violence in childhood and the perpetration of violence later on. Although social learning theories emphasize the mediating role of individual's cognition or beliefs, little is known about the mediating role of attitudes toward violence in the pathway from childhood exposure to violence to dating violence perpetration. Some existing studies support the theory that approval of violence which develops from early exposure to violence is associated with intimate partner violence perpetration (Clarey, Hokoda, & Ulloa, 2010; Foshee, Bauman, & Linder, 1999; O'Keefe, 1998; Reyes et al., 2015). For example, one longitudinal study of adolescents found that the pathway from witnessing and directly experiencing family violence to physical dating aggression perpetration is mediated by the belief that physical dating violence is acceptable (Reyes et al., 2015). However, some studies contradict these findings, demonstrating that attitudes toward violence does not mediate the relationship between exposure to violence and dating violence perpetration (Debowska, Boduszek, Jones, Willmott, & Sherretts, 2017; Eriksson & Mazerolle, 2015).

Meanwhile, other studies have shown that particular types of exposure to violence are more likely to be associated with acceptance of violence and violence perpetration (Debowska et al., 2017; Foshee et al., 1999). For example, Foshee et al (1999) found that only victimization, not witnessing violence, was strongly associated with acceptance of dating violence perpetration. In another study, Debowska et al (2107) found that violent victimization of children by family members created significant positive associations

with male physical domestic violence and social norms regarding physical violence against females. These findings indicate different effects of exposure to violence and the need to explore type-specific etiology and effects regarding exposure to violence (Reyes, Foshee, Niolon, Reidy, & Hall, 2016).

The pathways which lead from early exposure to violence, through attitudes toward violence, and on to actual violence perpetration seem to differ according to gender. Studies have found that males who witness or are victimized by family and non-family violence are more likely than females to approve of violent behaviors (Bacchini, Affuso, & Aquilar, 2015; Debowska et al., 2017; Mattingly & Straus, 2008; Ramsay, Steeves, Feng, & Farag, 2017; Spencer, Morgan, Bridges, Washburn-Busk, & Stith, 2017). In addition, research has suggested that boys who were exposed to violence demonstrate more externalizing behaviors, including violent behaviors, while girls tend to display more internalizing behaviors, such as emotional distress and depression (Black et al., 2015; Evans, Davies, & DiLillo, 2008). These findings suggest a need for further research of gender differences among these pathways.

Exposure to violence and dating violence: substance use as a mediator

Substance use may be an important mediator in the pathway from exposure to violence during childhood to violence perpetration in adulthood. General strain theory suggests that exposure to strain increases the potential for young adults to engage in delinquent behaviors such as violence (Agnew, 1992; Morash & Moon, 2007). Agnew (1992) explained that, in response to the strain of a stressful event, adolescents may try to manage their negative emotions through alcohol and drug abuse – which may, in turn, lead them to engage in delinquent or violent acts. Studies have also reported that

individuals abuse alcohol and other drugs to cope with or block negative emotions or memories of trauma (Crimmins, Cleary, Brownstein, Spunt, & Warley, 2000; Harrison, Fulkerson, & Beebe, 1997).

Meanwhile, intimate partner violence research has identified substance use, particularly alcohol abuse, as a trigger for aggressive behaviors (Reyes, Foshee, Bauer, & Ennett, 2011; Roudsari, Leahy, & Walters, 2009; Temple, Shorey, Tortolero, Wolfe, & Stuart, 2013). Violence perpetration can occur during various phases of alcohol use, including acute intoxication and alcohol-seeking behavior (Shorey, Stuart, & Cornelius, 2011). The alcohol myopic model (Steele & Josephs, 1990) suggests that acute intoxication, most notably with alcohol, reduces an individual's ability to detect social cues and leads to a risk of aggressive behaviors (Shorey et al., 2011). Specifically, alcohol creates a "myopic" perspective which distorts perceptual cues. This distorted cognitive function may then facilitate aggression by focusing an individual's attention on provocation rather than on inhibitory cues in situations of potential conflict (Giancola, 2002; Reyes, Foshee, Bauer, & Ennett, 2014).

This association is supported by other research showing that substance abuse increases intimate partner violence (Follingstad, Bradley, Laughlin, & Burke, 1999; Luthra & Gidycz, 2006; Shorey et al., 2018; Shorey et al., 2011; Temple et al., 2013). For example, in one longitudinal study, Temple, Shorey, Fite, Stuart, and Le (2013) found that alcohol use was significantly associated with subsequent physical violence perpetration against a dating partner. Shorey et al (2018) also found that marijuana use positively associated with all forms of IPV (psychological, physical, and sexual violence) among men arrested for domestic violence.

Empirical evidence regarding the effect of substance abuse on aggression indicates that gender may be a significant moderator in this pathway. Although there are mixed findings (Shorey et al., 2011), many studies have found that male drinking patterns are more likely than female patterns to combine binge drinking with violent behavior (Boles & Miotto, 2003; Hove, Parkhill, Neighbors, McConchie, & Fossos, 2010; Luthra & Gidycz, 2006). Consistent with alcohol research, research on abuse of other drugs – including both marijuana and hard drugs – suggests that the relationship between drug abuse and dating violence is moderated by gender (Brady & Randall, 1999).

Current Study

As discussed above, although dating violence is a significant issue among college students, the factors that mediate the link between exposure to violence and violence perpetration have yet to be thoroughly examined. Furthermore, some previous studies have focused on exposure to physical violence and physical dating violence; but other types of violence are serious issues as well, and we need to explore the underlying mechanisms of these types of violence. Based on these research gaps, the purpose of this study is (1) to examine models in which attitudes toward violence and substance use mediate the relationship from early exposure to violence (physical and sexual violence) to dating violence perpetration (physical violence and psychological violence), and (2) to examine whether these models vary by gender (See Figure 4.1). Based on the theoretical framework, the following research questions are explored:

- 1) Are there any significant direct and indirect pathways (i.e., mediation) from early exposure to violence to dating violence perpetration through attitudes toward violence and substance use?

2) Does a student's gender moderate the direct or indirect pathways from early exposure to violence to attitudes toward violence?

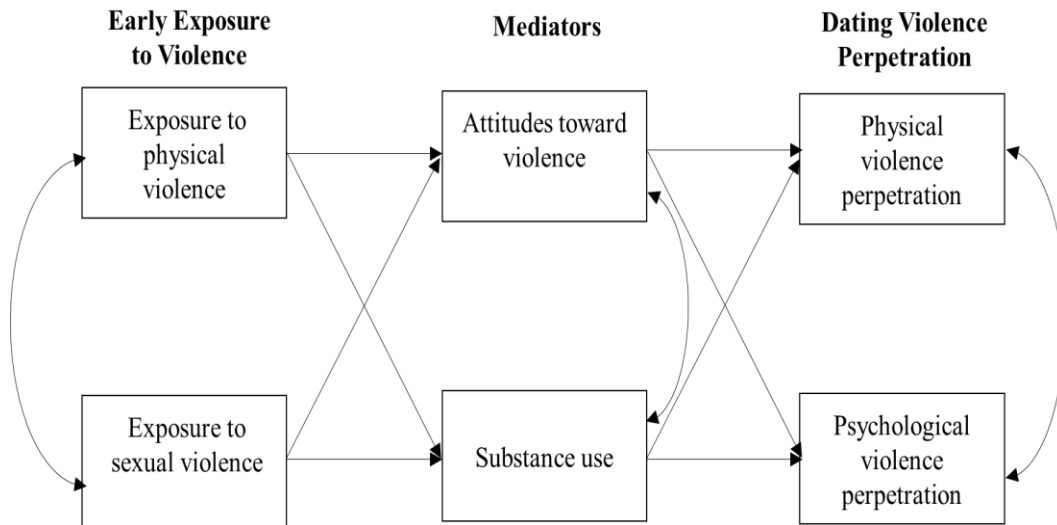


Figure 4.1. Hypothesized mediation model linking violence exposure with college students' dating violence perpetration. Note. Direct links from exposure to violence to dating violence perpetration are not depicted for simplicity.

2. Method

2.1 Data

The data for this study was obtained from the International Dating Violence Study (IDVS). The IDVS was conducted between 2001 and 2006 and focused on college and university students from 32 countries (Straus, 2011). Study participants were selected through convenience sampling, and most participants were enrolled in university courses (criminology, sociology, psychology, or family studies) taught by a designated research consortium member. Data were collected from 17,404 student respondents, 14,525 of whom reported having been in an intimate relationship of at least 1 month.

2.2 Sample

This study utilized data from 4,533 U.S. college students in the IDVS. The sample included students from 17 universities in the U.S. As this study focused on emerging adults and dating violence, it included only U.S. college students aged 18-23 years old who had engaged in a heterosexual dating relationship lasting more than one month. Thus, I excluded cases of respondents whose ages ranged from 33 to 45 ($n=601$), those with no dating relationships or no relationships of at least 1 month's duration ($n=343$), those having only same-sex dating relationships ($n=93$), and those who were married ($n=121$). Cases with missing values regarding family income (missing data < 2.0%) were removed through listwise deletion. The final analytical sample for our study included 3,302 participants with a mean age of 20.01 years ($SE = 0.03$). The students included in the study sample were more often girls than boys (69% vs. 31%). Slightly more male students than female students lived in families having above-average socioeconomic status (SES) (Male=0.13, Female = -0.06).

2.3 Measures

Physical Violence Perpetration. This variable was measured using the physical assault scale of the revised Conflict Tactics Scales (CTS2). Twelve items were assessed by individuals' self-report of physical aggression toward intimate partners, including minor physical aggression (e.g., pushing or grabbing) and severe physical aggression (e.g., punching or kicking). For each item, participants chose their answers from seven frequency categories: 1 = once, 2 = twice, 3 = 3 to 5 times, 4 = 6 to 10 times, 5 = 11 to 20 times, 6 = more than 20 times, and 0 = this has never happened in the current relationship. The CTS2, for which previous studies have established construct validity

and moderate to high reliability, measures violent behaviors (Straus, 2008). In this study, the internal consistency reliability (Cronbach's alpha) with the U.S. sample was 0.82.

Psychological Violence Perpetration. Eight items from the psychological aggression scale of the CTS2 were used to assess self-reported psychological violence perpetration against a dating partner. This scale includes minor aggression (e.g., insulting or swearing) and severe psychological aggression (e.g., threatening to hit or throw something). For each item, participants chose their answers from seven frequency categories: 1 = once, 2 = twice, 3 = 3 to 5 times, 4 = 6 to 10 times, 5 = 11 to 20 times, 6 = more than 20 times, and 0 = this has never happened in the current relationship. The internal consistency reliability with the U.S. sample was 0.76.

Exposure to physical violence. This variable was measured using the witnessed and victimized violence subscales within the Violence Socialization Scale of the Personal and Relationships Profile (PRP) (Straus, Hamby, Boney-McCoy, & Sugarman, 1999). This scale includes six items, which question the kinds of violence exposure respondents have experienced during childhood. These items consist of direct and indirect experiences of violence from family members and non-family members, such as physical punishment and witnessing violence. The response categories to these questions range from 1 (strongly disagree) to 4 (strongly agree) with higher scores indicative of higher exposure to physical violence. In this study, the internal consistency reliability with the U.S. sample was 0.66.

Exposure to sexual violence. This variable was measured using the Sexual Abuse History Scale of the PRP (Straus et al., 1999). The scale includes eight items, concerning individuals' experiences of sexual abuse by family and nonfamily members

during childhood. For example, respondents were asked whether family members or nonfamily members looked at or touched the respondents' private parts. The response categories to these questions ranged from 1 (strongly disagree) to 4 (strongly agree) with higher scores indicative of higher exposure to sexual violence. In this study, the internal consistency reliability with the U.S. sample was 0.79.

Attitude toward violence. Attitude toward violence was measured using the Violence Approval portion of the PRP (Straus et al., 1999). This scale assesses the extent to which respondents endorse the use of physical violence in various social contexts. The scale includes 10 items, which focus on approval of interpersonal violence such as family violence and sexual violence. For example, respondents were asked whether there were circumstances in which it would be acceptable for a man to force his wife to have sex, or for parents to slap a teen who talked back or repeatedly got into trouble. The response categories for all scales ranged from 1 (strongly disagree) to 4 (strongly agree) with higher scores indicative of higher acceptance of violence. Internal consistency with the U.S. sample was 0.70.

Substance use. To obtain a measure of substance use, the Substance Abuse scale of the PRP was used (Straus et al., 1999). Eight items assessed students' excessive use of alcohol or other mind-altering drugs. For example, respondents were asked whether there were times when they couldn't remember what happened the night before because of drinking. The response categories to these questions ranged from 1 (strongly disagree) to 4 (strongly agree), and higher scores indicated higher levels of substance use. Internal consistency with the U.S. sample was 0.81.

Control variables. Demographic controls of gender, age in years, and family SES were included. Family SES was created by summing three variables: father's education, mother's education, and family income. The summed values were standardized by the sample mean and sample standard deviation. Thus, the family SES indicates the number of the standard deviation – if any – by which each student was above or below the mean for U.S college students. Additionally, I controlled the effect of current relationship dynamics with regard to dating violence perpetration by using the Relationship Conflict variable from the PRP. A total of nine items asked respondents about areas of disagreement with their partners about relationships with others, habits, sexual relationships, and time spent together. The response categories to these questions ranged from 1 (strongly disagree) to 4 (strongly agree), and higher scores indicated higher levels of conflict. Internal consistency with the U.S. sample was 0.79.

3. Data Analysis

Data were analyzed with Mplus version 6.6 (Muthen &, 1998-2010) using structural equation modeling (SEM). SEM allows simultaneous assessments of the magnitude and significance of relationships among the exogenous (i.e., predictors) and endogenous (i.e., mediators and outcome) variables included in the model. In this case, the relationship between the predictor (i.e., exposure to violence), mediators (i.e., attitude towards violence and substance use), and dating violence perpetration among college students were assessed.

Because of the endogenous variables, dating violence perpetration was highly skewed, and the data were considered to be severely non-normal. For this reason, all analyses were performed using MLR (maximum likelihood estimation with robust

standard errors) that are robust with regard to non-normality (Asparouhov & Muthén, 2005; Maydeu-Olivares, 2017). Another factor which I took into consideration was that the college students were clustered within schools, a fact which may violate the assumption of independence. I analyzed the data accounting for such clustering with the use of the Mplus complex sampling option (Muthén & Muthén, 2019).

All causal paths in the model were adjusted for the covariates (age, gender, family SES, and relationship conflict). The statistical significance of mediation effects was evaluated using the Model Indirect statement in Mplus. This analysis utilizes Chi-square values (non-significant), the root mean square error of approximation (RMSEA < 0.05), the comparative fit index (CFI > 0.90), the Tucker–Lewis Index (TLI > 0.90), and the standardized root-mean-square residual (SRMR < 0.05), as primary fit indices (Kline, 2010) All path coefficients are presented standardized.

4. Results

4.1. Descriptive statistics

Table 4. 1 shows the mean and t-test results of gender difference in the variables of our study. Female students scored significantly higher than male students on both physical and psychological violence perpetration toward dating partners ($p < .05$). However, male students were more likely than female students to have experienced physical violence during childhood ($p < .05$). Male students also tended to more approving of interpersonal violence and substance use than female students ($p < .05$). These gender difference results also indicate that the proposed structural equation model should be tested separately for males and females, rather than including gender as a covariate within a single model.

Table 4.1. Descriptive statistics for the variables and gender differences, Mean (SE)

		Total (N=3,302)		Male (N=1,035)		Female (N=2,267)		Range	t-value
DV	Physical VP	1.78	0.07	1.45	0.12	1.93	0.09	0-72	-2.99*
	Psychological VP	6.48	0.17	5.54	0.19	6.91	0.14	0-48	-5.47*
IVs	Exposure to PV	10.49	0.07	11.46	0.09	10.06	0.06	6-24	12.51*
	Exposure to SV	10.46	0.06	10.60	0.11	10.40	0.07	8-32	1.52
Mediators	Attitudes toward Violence	19.34	0.07	21.05	0.13	18.56	0.08	10-40	16.65*
	Substance use	13.44	0.08	14.84	0.15	12.81	0.09	8-32	12.44*

Note. VP = violence perpetration; PV = physical violence; SV = sexual violence. * $p < 0.5$ or lower

4.2. Correlations among observed variables in the models

To examine the relationships and influences, we computed the correlations between the variables in the models (see Table 4.2). The results demonstrated that variables related to dating violence perpetration were positively associated with attitudes toward violence and substance use overall ($p < .05$), but physical violence perpetration had no particular association with substance use. Exposure to physical and sexual violence were positively associated with attitudes toward violence and substance use ($p < .05$).

4.3. Testing the Mediation Model

Structural equation modeling was employed to test whether attitudes toward violence and substance use mediated the association between violence exposure and dating violence perpetration. First, we tested a full model in which early exposure to physical and sexual violence was linked both directly and indirectly with dating violence perpetration through both mediators (see Figure 4.1). In this and all following models, early exposure to physical violence and sexual violence were allowed to covary with each other and all control variables could also covary. In addition, covariations among the two mediators were included.

This full model was just-identified ($df = 0$), so model fit indices indicated perfect fit. In this mediation model, of the four direct effects, only the direct path, exposure to physical violence with physical violence perpetration, remained significant. In the model, all other paths were significant except for the path linking exposure to physical violence with substance use and the path linking substance use with physical violence perpetration.

Table 4.2. Bivariate correlations among the variables (N=3,302).

Variables	1	2	3	4	5	6	7	8	9	10
1. Gender (Female)	1.00									
2. Age (Years)	-0.10*	1.00								
3. Family SES	-0.09*	-0.04*	1.00							
4. Conflict	-0.12*	0.04*	-0.02	1						
5. Physical DV	0.05*	-0.02	-0.11*	0.25*	1					
6. Psychological DV	0.09*	-0.01	-0.04*	0.39*	0.58*	1				
7. Exposure to PV	-0.21*	0.04*	-0.20*	0.29*	0.20*	0.17*	1			
8. Exposure to SV	-0.03	0.03	-0.10*	0.21*	0.14*	0.12*	0.38*	1		
9. Attitudes toward	-0.28*	-0.01	-0.12*	0.34*	0.20*	0.21*	0.40*	0.26*	1	
10. Substance use	-0.21*	0.01	0.17*	0.22*	0.03	0.12*	0.14*	0.22*	0.21*	1

Note: Gender was coded 0 for male and 1 for female; Family SES (socio-economic status) was standardized; VP = violence perpetration; PV = physical violence; SV = sexual violence

* $p < 0.5$ or lower

A reduced model was formulated by eliminating all nonsignificant paths in the full model. Model fit indices suggested a good fit of the reduced model, $\chi^2(df=4, n=3,302) = 11.032, p = 0.0262$; comparative fit index = 0.998, root mean square error of approximation = 0.023, standardized root mean square residual = 0.008. Because the reduced model fit the data well and was more parsimonious than the full model, all following analyses were based on the reduced model. The reduced model with all standardized path coefficients is depicted in Figure 4.2.

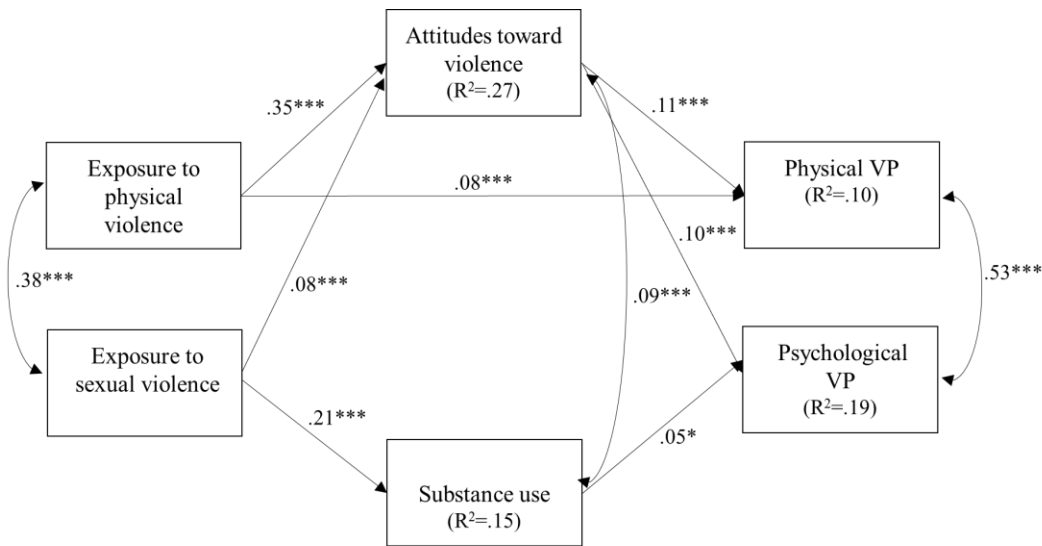


Figure 4.2. Reduced mediation model linking early exposure to violence with college students' dating violence perpetration. Note: All paths were adjusted for students' age, gender, family SES, and dating relationship conflict; VP = violence perpetration. * $p < .05$, ** $p < .01$, *** $p < .001$.

The first research question addressed the direct and indirect pathways by which exposure to violence influenced dating violence. As expected, exposure to both physical violence and sexual violence was significantly associated with increased approval of violence (respectively, $\beta = 0.35, p < .001$; $\beta = 0.08, p < .001$). However, only exposure to sexual violence was associated with substance use ($\beta = 0.21, p < .01$). Attitude toward

violence as a mediator was in turn related to physical and psychological violence perpetration (respectively, $\beta = 0.11$, $p < .001$; $\beta = 0.10$, $p < .001$). Substance use, however, was only associated with psychological violence perpetration ($\beta = 0.05$, $p < .05$), not physical violence perpetration.

Analyses of indirect effects indicated statistically significant mediation between exposure to physical violence and physical violence perpetration ($\beta = 0.03$, $p < .001$) and between exposure to physical violence and psychological violence perpetration ($\beta = 0.03$, $p < .001$) – in both cases via attitude toward violence. The association between exposure to sexual violence and two types of dating violence perpetration was also mediated by attitude toward violence (both, $\beta = 0.01$, $p < .001$). In fact, attitude toward violence was a significant mediator in all mediation pathways, but substance use only mediated in the relationship between exposure to sexual violence and psychological violence perpetration ($\beta = 0.01$, $p < .05$).

4.4 Testing the Moderating Effects of Gender

To examine whether gender moderates the mediation pathways of exposure to violence on dating violence perpetration, the total sample was divided into two subgroups: a male student group ($n = 1,035$) and a female student group ($n = 2,267$). The moderation hypothesis was evaluated with multigroup modeling by testing equivalence of the model across the male and female groups. Specifically, we compared the fit of a constrained model (all paths fixed as equal for both groups) with the fit of an unconstrained model (all paths allowed to vary across the groups). As suggested by a significant chi-square difference, $\Delta\chi^2 = 65.17$, $df = 19$, $p < .001$, the model differs according to student gender.

Standardized path coefficients for both groups are depicted in Figure 4.3. Follow-up tests of invariance for individual path estimates across groups were conducted by freeing one path at a time and comparing each new model with the fully constrained model. One path was found to be unequal across genders, and it is indicated by bold lines in Figure 4.3. Substance use is shown to predict psychological violence perpetration only in the female student group, not in the male student group, $\Delta\chi^2(1) = 17.96, p < .001$.

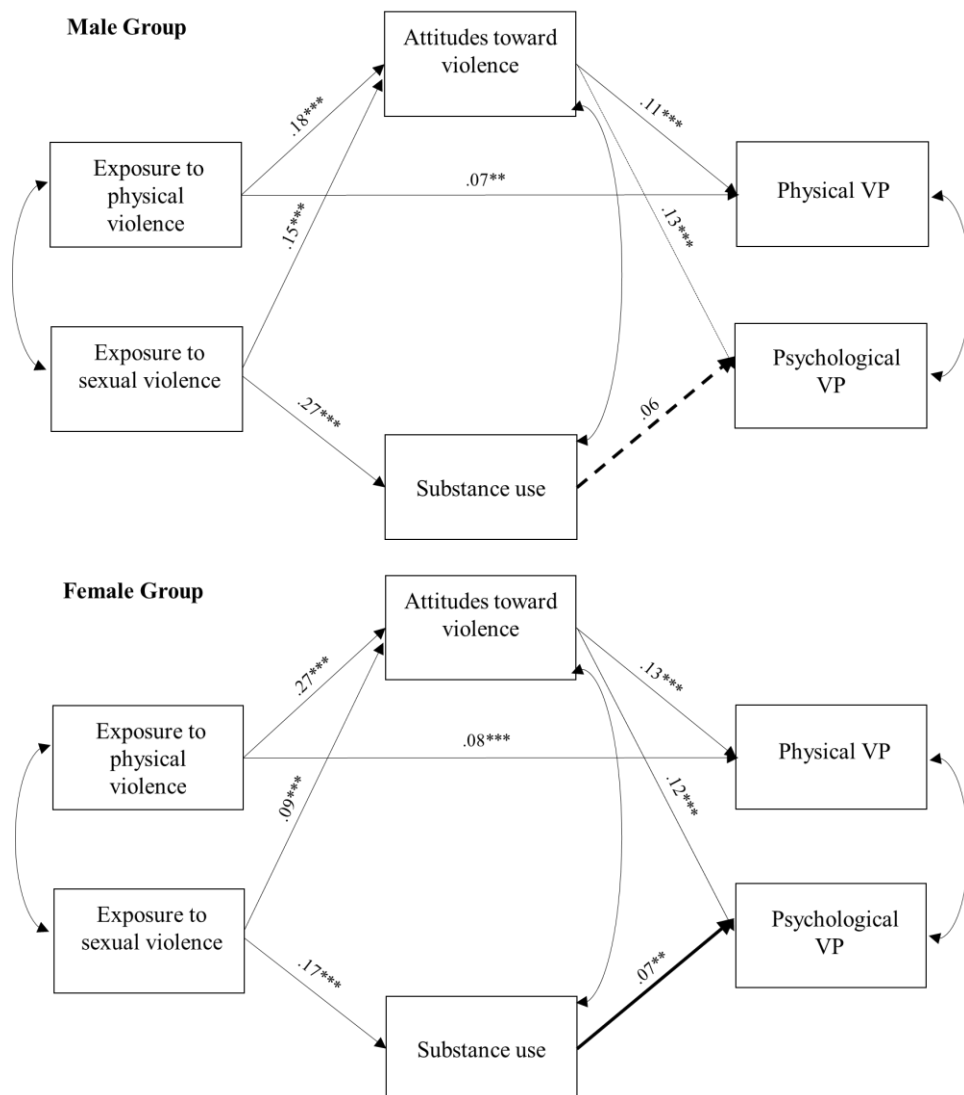


Figure 4.3 Multigroup analysis based on gender. *Note:* Bold lines represent paths which differ significantly across gender; VP = violence perpetration. * $p < .05$, ** $p < .01$, *** $p < .001$.

5. Discussion

Although a wide range of studies has posited an association between exposure to violence during childhood and violent behaviors in later life, little research has investigated the mechanisms that might underlie or explain this relationship.

The current study has examined the association between early exposure to violence and dating violence perpetrated by college students. It tested whether this relationship was mediated by attitudes toward violence and/or by substance abuse, and whether the effects were moderated by the students' gender. Overall, the study findings show that attitude toward violence is a significant mediator in the relationship between childhood exposure to violence and dating violence perpetration. However, substance abuse is a significant mediator only in the relationship between exposure to sexual violence and psychological violence perpetration. Significant differences emerge in the pathway from substance use and psychological dating violence according to students' gender.

Different patterns of mediation emerged for each predictor. First, the finding highlights the significance of attitude toward violence as a common mediator in the effects of exposure to violence – whether physical or sexual – on physical and psychological violence perpetration. This finding reinforces earlier work demonstrating that exposure to violence in childhood is strongly linked to partner violence perpetration when the perpetrators hold attitudes condoning the use of violence (O'Keefe, 1998). These findings are also consistent with social learning theory, which posits that through early exposure to violence, interpersonal violence becomes instilled as an acceptable behavior in an individual's mind; and that, in turn, can lead to perpetration of violence in

adulthood (Eriksson & Mazerolle, 2015). Even though we can clearly see the role of cognitive mechanism in facilitating behavior, we still need to examine the dynamics of specific types of cognitive beliefs in the social learning process that lead to the use of violence.

The study's findings also show that substance abuse mediates the effects of exposure to sexual violence on psychological violence perpetration. However, substance abuse has no mediating effect in other pathways – including the pathway from exposure to physical violence to physical dating violence perpetration. This finding, in particular, contradicts previous studies demonstrating that substance abuse is associated with physical dating violence (Foshee et al., 1999; Reyes et al., 2011; Roudsari et al., 2009). The difference in our study's findings might be related to differences in measurements. Prior studies used substance abuse or binge drinking scales to measure the severity of drug and alcohol abuse (Rapoza & Drake, 2009; Roudsari et al., 2009). However, this study assessed substance abuse through general patterns of alcohol and drug use rather than through specific symptoms of abuse. Thus, the effects of substance use might be assessed differently in our study than in other studies. Meanwhile, there may be other explanations for our finding that substance abuse is related to psychological violence rather than physical violence, but for now the question remains unanswered. Further research is needed to explore the ways in which substance abuse relates to particular types of violence perpetration. Although our findings regarding the pathways that involve substance abuse are mixed, the results are still partly congruent with general strain theory, which suggests that exposure to sexual violence may provoke substance abuse as

a coping mechanism in dealing with trauma – and that coping with trauma may involve committing psychological violence.

Regarding gender differences, I found only one link – from substance abuse to psychological violence perpetration – which varied by gender. In this link, substance abuse was a significant predictor of psychological dating violence by female students, but not by male students. This pattern differs from the findings of some previous studies which suggest that male drinking patterns are more likely to combine binge drinking with aggressive behavior (Boles & Miotto, 2003; Hove et al., 2010; Luthra & Gidycz, 2006). Meanwhile, I found no gender differences in any other paths leading from exposure to violence to dating violence perpetration. In this way, this study varies from previous studies which state that male students who were exposed to violence are more likely to approve of violence than their female counterparts (Bacchini et al., 2015; Mattingly & Straus, 2008). As previously noted, I found no gender difference in the path between exposure to violence and attitudes toward violence. One possible reason for the lack of gender moderation may be that this study measured attitudes toward interpersonal violence, including family violence, male violence, and sexual aggression, while previous studies focused on attitudes toward violence against women or on intimate partner violence (Bacchini et al., 2015; Flood & Pease, 2009). Attitudes toward interpersonal violence might vary along with attitudes toward gender-based violence or intimate partner violence.

6. Limitations

There are several limitations to the current study. First, since the study was cross-sectional, it did not allow for causal prediction of variables. Longitudinal studies are

needed in order to examine the long-term effects of exposure to violence during childhood on violence perpetration in later life. Second, the study sample was conveniently drawn from only 17 universities across the U.S. The study sample consisted of undergraduates enrolled mostly in the social sciences such as criminology, sociology, psychology, and family studies. Random sampling and more diverse samples from other majors will increase the generalizability. In addition, the survey questions regarding exposure to violence and attitudes towards violence focused on physical violence. Future research should consider other forms of violence in order to examine all association between exposure to violence and attitudes toward violence.

7. Implications

This study is an integrated theory-driven examination of multiple mediators in the relationship between exposure to violence and dating violence perpetration. Expanding our knowledge of the factors that lead to dating violence in college settings is critical in order to develop interventions which will contribute to the security and wellbeing of young adults. The preceding results identify attitude toward violence as the primary mediator in the relationship between early exposure to violence and later dating violence perpetration by male and female students. This study also suggests a possible link between substance use and dating violence perpetration. Dating violence prevention programs should target multiple risk factors for aggression, such as positive beliefs about aggressive behavior, substance abuse, gender, and a history of exposure to violence. Target-based intervention through screening of individual risk factors for aggression would provide college students, high-risk groups in particular, with effective educational and skill-building materials (Shorey et al., 2011). In addition, although existing

interventions focus largely on physical dating violence, practitioners should also consider how substance abuse and acceptance of violence influence psychological violence in intimate relationships.

CHAPTER 5

CONCLUSION

Overall, this dissertation aimed to examine relevant correlates in the relationship between early exposure to violence and U.S. college students' attitudes toward violence as well as U.S. college students' dating violence perpetration, using International Dating Violence Study (IDVS) data.

The first study (Chapter 2) examined how several types of violent socialization during childhood differently influenced U.S. college students' acceptance of interpersonal violence. The findings showed that advised violence, i.e., verbal endorsement of violence, had stronger associations with students' acceptance of interpersonal violence than childhood experiences of violent victimization and witnessed violence. Given that existing studies of violent socialization have focused largely on childhood witnessing of violence and violent victimization, our findings add the new knowledge that family and community members' pro-violence messages play a significant role in college students' acceptance of interpersonal violence.

The second study examined the moderating effect of pro-violence messages in the relationship between early exposure to violence and later acceptance of interpersonal violence, as well as dating violence perpetration. The results showed that pro-violence messages moderated the relationship between exposure to violence and attitudes accepting violence among female students, and the messages moderated the effects of exposure to violence on dating violence perpetration among male students. These

findings clearly show that pro-violence messages have a different effect on college students' cognition (attitude toward violence) than on their actual behaviors (dating violence perpetration), and that the effects of pro-violence messages vary according to gender. Thus, our findings add new knowledge to the study of violent socialization: messages from parents, peers, and other community members which support violent coping will have different effects on individuals' cognition than on actual violent behavior.

The third study examined the possible mediating effect of pro-violence attitudes and substance use in the relationship between early exposure to violence and later dating violence perpetration. The findings highlight the significance of attitude toward violence as a common mediator in the effects of exposure to violence – whether physical or sexual – on physical and psychological violence perpetration. However, substance abuse was a significant mediator only in the relationship between exposure to sexual violence and psychological violence perpetration. Furthermore, of all the pathways from exposure to violence to dating violence perpetration, the only gender difference found was in substance use, which predicted psychological violence perpetration in the female student group but not in the male student group. This study expands our knowledge of the factors that lead to dating violence in college settings, and thus is critical in determining the appropriate interventions to prevent dating violence perpetration by young adults.

Limitations

This dissertation has limitations. First, the study was cross-sectional; thus, it did not allow for causal prediction of variables. Longitudinal studies are necessary to examine the long-term effects of exposure to violence during childhood on violence

perpetration in later life. Second, the study sample was conveniently drawn from 17 universities across the U.S., and participants consisted of undergraduates enrolled mostly in the social sciences. Thus, future researchers must be careful in applying this study's findings to college samples which have different characteristics. The final limitation of the present study lies in its measurements. In particular, exposure to violence and attitudes toward violence cover different types of general violence patterns rather than specific types of violence exposure or attitudes toward particular type of violence (e.g., male-to-female violence). This measurement might give different results in comparison to previous studies which focused on particular types of violence. In addition, some measurements, such as exposure to violence (Chapter 3) do not possess strong reliability (Cronbach's $\alpha = 0.66$). Future studies should be conducted using measurement items with enhanced reliability and validity.

Implication for social work research and practice

This dissertation indicates that early intervention is critical in preventing the effects of childhood socialization to violence on attitudes toward violence and actual interpersonal violence in early adulthood. Thus, the findings highlight a need for training school social workers, teachers, policymakers, and other individuals who work closely with children to recognize signs of early socialization to violence. In addition, practitioners who work with communities should seek to change attitudes that support violence. Parents, in particular, should take responsibility for discourse with their children about how to cope with conflict. Enhancement of verbal skills and preservation of non-violent environments for children are good ways to prevent potential violent attitudes and behaviors among college students.

Interventions for college students might include social awareness programs covering content such as pro-violence norms and the dangers of tolerating aggression. In addition, dating violence prevention programs should target multiple risk factors for dating violence perpetration, including pro-violence attitudes, substance abuse, and individuals' histories of exposure to violence. Screening participants for their individual risks of violence perpetration would allow target-based prevention programs. Finally, although existing dating violence interventions focus largely on physical violence, practitioners should also consider how other types of violence might be prevented and reduced.

REFERENCES

- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, 30(1), 47-88.
- Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions*: Sage.
- Akers, R. L. (1996). Is differential association/social learning cultural deviance theory? *Criminology*, 34(2), 229-247.
- Akers, R. L., & Jennings, W. G. (2009). The social learning theory of crime and deviance. In *Handbook on crime and deviance* (pp. 103-120). Springer, New York, NY.
- Akers, R. L., Krohn, M. D., Lanza-Kaduce, L., & Radosevich, M. (1979). Social learning and deviant behavior: A specific test of a general theory. *American Sociological Review*, 636-655.
- Alegría-Flores, K., Raker, K., Pleasants, R. K., Weaver, M. A., & Weinberger, M. (2017). Preventing interpersonal violence on college campuses: the effect of one act training on bystander intervention. *Journal of Interpersonal Violence*, 32(7), 1103-1126.
- Allwood, M. A., & Bell, D. J. (2008). A preliminary examination of emotional and cognitive mediators in the relations between violence exposure and violent

- behaviors in youth. *Journal of Community Psychology*, 36(8), 989-1007.
doi:10.1002/jcop.20277
- Anderson, E. (1999). *Code of the Street* (pp. 107-141). New York: Norton
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American psychologist*, 55(5), 469.
- Asparouhov, T., & Muthén, B. (2005, November). Multivariate statistical modeling with survey data. In *Proceedings of the Federal Committee on Statistical Methodology (FCSM) research conference* (pp. 14-16).
- Bacchini, D., Affuso, G., & Aquilar, S. (2015). Multiple forms and settings of exposure to violence and values: unique and interactive relationships with antisocial behavior in adolescence. *Journal of Interpersonal Violence*, 30(17), 3065-3088.
- Baker, C. R., & Stith, S. M. (2008). Factors predicting dating violence perpetration among male and female college students. *Journal of Aggression, Maltreatment & Trauma*, 17(2), 227-244.
- Bandura, A. (1978). Social learning theory of aggression. *Journal of Communication*, 28(3), 12-29.
- Banyard, V. L., Cross, C., & Modecki, K. L. (2006). Interpersonal Violence in Adolescence: Ecological Correlates of Self-Reported Perpetration. *Journal of Interpersonal Violence*, 21(10), 1314-1332. doi:10.1177/0886260506291657
- Barrick, K., Krebs, C. P., & Lindquist, C. H. (2013). Intimate partner violence victimization among undergraduate women at historically black colleges and universities (HBCUs). *Violence Against Women*, 19(8), 1014-1033.

- Bernburg, J. G., & Thorlindsson, T. (2005). Violent values, conduct norms, and youth aggression: A multilevel study in Iceland. *The Sociological Quarterly*, 46(3), 457-478.
- Black, M. C., Basile, K. C., Breiding, M. J., Smith, S. G., Walters, M. L., Merrick, M. T., & Stevens, M. R. (2011). The national intimate partner and sexual violence survey: 2010 summary report. *Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention*, 19, 39-40.
- Black, B. M., Chido, L. M., Preble, K. M., Weisz, A. N., Yoon, J. S., Delaney-Black, V., . . . Lewandowski, L. (2015). Violence exposure and teen dating violence among African American youth. *Journal of Interpersonal Violence*, 30(12), 2174-2195.
- Boles, S. M., & Miotto, K. (2003). Substance abuse and violence: A review of the literature. *Aggression and Violent Behavior*, 8(2), 155-174.
- Brady, K. T., & Randall, C. L. (1999). Gender differences in substance use disorders. *Psychiatric Clinics of North America*, 22(2), 241-252.
- Bryant, S. A., & Spencer, G. A. (2003). University students' attitudes about attributing blame in domestic violence. *Journal of Family Violence*, 18(6), 369-376.
- Buelna, C., Ulloa, E. C., & Ulibarri, M. D. (2009). Sexual relationship power as a mediator between dating violence and sexually transmitted infections among college women. *Journal of Interpersonal Violence*, 24(8), 1338-1357.
doi:10.1177/0886260508322193
- Centers for Disease Control and Prevention. (2018). *Intimate Partner Violence*. Retrieved from <https://www.cdc.gov/violenceprevention/intimatepartnerviolence/index.html>

- Chen, R. J., Flores, G., & Shetgiri, R. (2016). African-American and Latino parents' attitudes and beliefs regarding adolescent fighting and its prevention. *Journal of child and family studies*, 25(6), 1746-1754.
- Clarey, A., Hokoda, A., & Ulloa, E. C. (2010). Anger control and acceptance of violence as mediators in the relationship between exposure to interparental conflict and dating violence perpetration in Mexican adolescents. *Journal of Family Violence*, 25(7), 619-625.
- Coker, A. L., Fisher, B. S., Bush, H. M., Swan, S. C., Williams, C. M., Clear, E. R., & DeGue, S. (2015). Evaluation of the Green Dot bystander intervention to reduce interpersonal violence among college students across three campuses. *Violence Against Women*, 21(12), 1507-1527. doi:10.1177/1077801214545284
- Copeland-Linder, N., Jones, V. C., Haynie, D. L., Simons-Morton, B. G., Wright, J. L., & Cheng, T. L. (2007). Factors associated with retaliatory attitudes among African American adolescents who have been assaulted. *Journal of Pediatric Psychology*, 32(7), 760-770.
- Crimmins, S. M., Cleary, S. D., Brownstein, H. H., Spunt, B. J., & Warley, R. M. (2000). Trauma, drugs and violence among juvenile offenders. *Journal of Psychoactive Drugs*, 32(1), 43-54.
- David-Ferdon, C., Simon, T. R., Health, U. D. o., & Services, H. (2012). Striving To Reduce Youth Violence Everywhere (STRYVE): CDC's National Initiative to Prevent Youth Violence Foundational Resource. In: Atlanta, GA: Centers for Disease Control and Prevention.

- Debowska, A., Boduszek, D., Jones, A. D., Willmott, D., & Sherretts, N. (2017). Gender-Based Violence-Supportive Cognitions in Adolescent Girls and Boys: The Function of Violence Exposure and Victimization. *Journal of Interpersonal Violence*, doi:10.1177/0886260517741628
- Delaney, A. X. (2015). Violent Socialization and Youth Violence across Different Nations: International Variations in Familial and Contextual Factors. In *Violence and Crime in the Family: Patterns, Causes, and Consequences* (pp. 129-151): Emerald Group Publishing Limited.
- Duman, S., & Margolin, G. (2007). Parents' aggressive influences and children's aggressive problem solutions with peers. *Journal of Clinical Child and Adolescent Psychology*, 36(1), 42-55.
- Ehrensaft, M. K., Cohen, P., Brown, J., Smailes, E., Chen, H., & Johnson, J. G. (2003). Intergenerational transmission of partner violence: a 20-year prospective study. *Journal of Consulting and Clinical Psychology*, 71(4), 741.
- Eitle, D., & Turner, R. J. (2002). Exposure to community violence and young adult crime: The effects of witnessing violence, traumatic victimization, and other stressful life events. *Journal of Research in Crime and Delinquency*, 39(2), 214-237.
- Eriksson, L., & Mazerolle, P. (2015). A cycle of violence? Examining family-of-origin violence, attitudes, and intimate partner violence perpetration. *Journal of Interpersonal Violence*, 30(6), 945-964.

- Evans, S. E., Davies, C., & DiLillo, D. (2008). Exposure to domestic violence: A meta-analysis of child and adolescent outcomes. *Aggression and Violent Behavior*, 13(2), 131-140.
- Fagan, A. (2005). The Relationship Between Adolescent Physical Abuse and Criminal Offending: Support for an Enduring and Generalized Cycle of Violence. *Journal of Family Violence*, 20(5), 279-290. doi:10.1007/s10896-005-6604-7
- Farrell, A. D., Bettencourt, A., Mays, S., Kramer, A., Sullivan, T., & Kliewer, W. (2012). Patterns of Adolescents' Beliefs about Fighting and Their Relation to Behavior and Risk Factors for Aggression. *Journal of Abnormal Child Psychology*, 40(5), 787-802. Retrieved from <https://doi.org/10.1007/s10802-011-9609-0>. doi:10.1007/s10802-011-9609-0
- Flood, M., & Pease, B. (2009). Factors influencing attitudes to violence against women. *Trauma, Violence, & Abuse*, 10(2), 125-142. doi:10.1177/1524838009334131
- Follingstad, D. R., Bradley, R. G., Laughlin, J. E., & Burke, L. (1999). Risk factors and correlates of dating violence: The relevance of examining frequency and severity levels in a college sample. *Violence & Victims*, 14(4), 365. DOI: 10.1891/0886-6708.14.4.365.
- Fosco, G. M., DeBoard, R. L., & Grych, J. H. (2007). Making sense of family violence: Implications of children's appraisals of interparental aggression for their short-and long-term functioning. *European psychologist*, 12(1), 6-16.
- Foshee, V. A., Bauman, K. E., & Linder, G. F. (1999). Family violence and the perpetration of adolescent dating violence: Examining social learning and social control processes. *Journal of Marriage and the Family*, 331-342.

- Gage, A. J. (2016). Exposure to Spousal Violence in the Family, Attitudes and Dating Violence Perpetration Among High School Students in Port-au-Prince. *Journal of Interpersonal Violence, 31*(14), 2445-2474. doi:10.1177/0886260515576971
- Garthe, R. C., Gorman-Smith, D., Gregory, J., & E. Schoeny, M. (2018). Neighborhood concentrated disadvantage and dating violence among urban adolescents: the mediating role of neighborhood social processes. *American Journal of Community Psychology, 61*(3) 310-320. doi:10.1002/ajcp.12239
- Garthe, R. C., Sullivan, T. N., & Gorman-Smith, D. (2019). The family context and adolescent dating violence: a latent class analysis of family relationships and parenting behaviors. *Journal of Youth and adolescence, 1*-15.
- Giancola, P. R. (2002). Alcohol-related aggression during the college years: theories, risk factors and policy implications. *Journal of Studies on Alcohol, supplement*(14), 129-139.
- Gorman-Smith, D., & Tolan, P. (1998). The role of exposure to community violence and developmental problems among inner-city youth. *Development and Psychopathology, 10*(1), 101-116. doi:10.1017/S0954579498001539
- Gover, A. R., Jennings, W. G., Tomsich, E. A., Park, M., & Rennison, C. M. (2011). The influence of childhood maltreatment and self-control on dating violence: A comparison of college students in the United States and South Korea. *Violence and Victims, 26*(3), 296-318
- Gover, A. R., Kaukinen, C., & Fox, K. A. (2008). The relationship between violence in the family of origin and dating violence among college students. *Journal of Interpersonal Violence, 23*(12), 1667-1693.

- Graham, L. M., Jensen, T. M., Givens, A. D., Bowen, G. L., & Rizo, C. F. (2019). Intimate partner violence among same-sex couples in college: a propensity score analysis. *Journal of Interpersonal Violence*, 34(8), 1583-1610.
- Harding, D. J. (2009). Violence, older peers, and the socialization of adolescent boys in disadvantaged neighborhoods. *American Sociological Review*, 74(3), 445-464.
- Harrison, P. A., Fulkerson, J. A., & Beebe, T. J. (1997). Multiple substance use among adolescent physical and sexual abuse victims. *Child Abuse & Neglect*, 21(6), 529-539. doi:[https://doi.org/10.1016/S0145-2134\(97\)00013-6](https://doi.org/10.1016/S0145-2134(97)00013-6).
- Henry, D. B., Tolan, P. H., & Gorman-Smith, D. (2001). Longitudinal family and peer group effects on violence and nonviolent delinquency. *Journal of Clinical Child Psychology*, 30(2), 172-186.
- Herrenkohl, T. I., & Jung, H. (2016). Effects of child abuse, adolescent violence, peer approval and pro-violence attitudes on intimate partner violence in adulthood. *Criminal Behaviour and Mental Health*, 26(4), 304-314. doi:10.1002/cbm.2014
- Herrero, J., Rodríguez, F. J., & Torres, A. (2017). Acceptability of partner violence in 51 societies: The role of sexism and attitudes toward violence in social relationships. *Violence Against Women*, 23(3), 351-367. doi:10.1177/1077801216642870
- Hines, D. A., & Straus, M. A. (2007). Binge drinking and violence against dating partners: the mediating effect of antisocial traits and behaviors in a multinational perspective. *Aggressive Behavior*, 33(5), 441-457.
- Holt, S., Buckley, H., & Whelan, S. (2008). The impact of exposure to domestic violence on children and young people: A review of the literature. *Child abuse & neglect*, 32(8), 797-810.

- Hove, M. C., Parkhill, M. R., Neighbors, C., McConchie, J. M., & Fossos, N. (2010). Alcohol consumption and intimate partner violence perpetration among college students: The role of self-determination. *Journal of Studies on Alcohol and Drugs*, 71(1), 78-85.
- Jennings, W. G., Park, M., Richards, T. N., Tomsich, E., Gover, A., & Powers, R. A. (2014). Exploring the relationship between child physical abuse and adult dating violence using a causal inference approach in an emerging adult population in South Korea. *Child abuse & neglect*, 38(12), 1902-1913.
- Johnson, S. R. L., Finigan, N. M., Bradshaw, C. P., Haynie, D. L., & Cheng, T. L. (2011). Examining the link between neighborhood context and parental messages to their adolescent children about violence. *Journal of Adolescent Health*, 49(1), 58-63.
- Kaukinen, C., Gover, A. R., & Hartman, J. L. (2012). College women's experiences of dating violence in casual and exclusive relationships. *American Journal of Criminal Justice*, 37(2), 146-162.
- Kaukinen, C. (2014). Dating violence among college students: The risk and protective factors. *Trauma, Violence, & Abuse*, 15(4), 283-296.
doi:10.1177/1524838014521321
- Kliewer, W., Parrish, K. A., Taylor, K. W., Jackson, K., Walker, J. M., & Shivy, V. A. (2006). Socialization of coping with community violence: Influences of caregiver coaching, modeling, and family context. *Child Development*, 77(3), 605-623.
- Kline, R. B. (2010). *Principles and Practice of Structural Equation Modeling, Third Edition*: Guilford Publications.

- Lichter, E. L., & McCloskey, L. A. (2004). The effects of childhood exposure to marital violence on adolescent gender-role beliefs and dating violence. *Psychology of Women Quarterly*, 28(4), 344-357.
- Lokshin, M., & Sajaia, Z. (2004). Maximum likelihood estimation of endogenous switching regression models. *The Stata Journal*, 4(3), 282-289.
- Luthra, R., & Gidycz, C. A. (2006). Dating violence among college men and women: Evaluation of a theoretical model. *Journal of Interpersonal Violence*, 21(6), 717-731.
- Manchikanti Gómez, A. (2011). Testing the cycle of violence hypothesis: Child abuse and adolescent dating violence as predictors of intimate partner violence in young adulthood. *Youth & Society*, 43(1), 171-192.
- Mattingly, M., & Straus, M. A. (2008). *Violence socialization and approval of violence: A world perspective on gender differences and American violence*. Paper presented at the The 60th annual American Society of Criminology meeting, St. Louis.
- Maydeu-Olivares, A. (2017). Maximum likelihood estimation of structural equation models for continuous data: Standard errors and goodness of fit. *Structural Equation Modeling*, 24(3), 383-394.
- Medeiros, R. A. (2007). Imputation of missing data in the International dating Violence Study. *Durham, NH: Family Research Laboratory, University of New Hampshire*. Available at: <http://pubpages.unh.edu/~mas2/Imputation%20of%20Missing%20Data>, 203.

- Milaniak, I., & Widom, C. S. (2015). Does child abuse and neglect increase risk for perpetration of violence inside and outside the home?. *Psychology of Violence*, 5(3), 246.
- Morash, M., & Moon, B. (2007). Gender differences in the effects of strain on the delinquency of South Korean youth. *Youth & Society*, 38(3), 300-321.
- Muthén, L., & Muthén, B. (2019). The comprehensive modeling program for applied researchers user guide. *Los Angeles, CA: Muthén & Muthén*.
- O'Keefe, M. (1998). Factors mediating the link between witnessing interparental violence and dating violence. *Journal of Family Violence*, 13(1), 39-57.
doi:10.1023/A:1022860700118
- O'Keefe, M. (1997). Predictors of dating violence among high school students. *Journal of Interpersonal Violence*, 12(4), 546-568.
- Orpinas, P., Murray, N., & Kelder, S. (1999). Parental influences on students' aggressive behaviors and weapon carrying. *Health Education & Behavior*, 26(6), 774-787.
doi:10.1177/109019819902600603
- Owens, D. J., & Straus, M. A. (1975). The social structure of violence in childhood and approval of violence as an adult. *Aggressive behavior*, 1(3), 193-211.
- Paat, Y. F., & Markham, C. (2016). The Roles of Family Factors and Relationship Dynamics on Dating Violence Victimization and Perpetration Among College Men and Women in Emerging Adulthood. *Journal of Interpersonal Violence*, 34(1), 81-114. doi:10.1177/0886260516640544

- Pratt, T. C., Cullen, F. T., Sellers, C. S., Thomas Winfree Jr, L., Madensen, T. D., Daigle, L. E., ... & Gau, J. M. (2010). The empirical status of social learning theory: A meta-analysis. *Justice Quarterly*, 27(6), 765-802.
- Ramsay, D., Steeves, M., Feng, C., & Farag, M. (2017). Protective and risk factors associated with youth attitudes toward violence in Canada. *Journal of Interpersonal Violence*, doi:10.1177/0886260517736275.
- Rapoza, K. A., & Drake, J. E. (2009). Relationships of hazardous alcohol use, alcohol expectancies, and emotional commitment to male sexual coercion and aggression in dating couples. *Journal of Studies on Alcohol and Drugs*, 70(1), 55-63.
- Reyes, H. L. M., Foshee, V. A., Bauer, D. J., & Ennett, S. T. (2011). The role of heavy alcohol use in the developmental process of desistance in dating aggression during adolescence. *Journal of Abnormal Child Psychology*, 39(2), 239-250.
- Reyes, H. L. M., Foshee, V. A., Bauer, D. J., & Ennett, S. T. (2014). Proximal and time-varying effects of cigarette, alcohol, marijuana and other hard drug use on adolescent dating aggression. *Journal of Adolescence*, 37(3), 281-289.
- Reyes, H. L. M., Foshee, V. A., Fortson, B. L., Valle, L. A., Breiding, M. J., & Merrick, M. T. (2015). Longitudinal mediators of relations between family violence and adolescent dating aggression perpetration. *Journal of Marriage and Family*, 77(4), 1016-1030.
- Reyes, H. L. M., Foshee, V. A., Niolon, P. H., Reidy, D. E., & Hall, J. E. (2016). Gender role attitudes and male adolescent dating violence perpetration: Normative beliefs as moderators. *Journal of Youth and Adolescence*, 45(2), 350-360.

- Roberts, A. L., Gilman, S. E., Fitzmaurice, G., Decker, M. R., & Koenen, K. C. (2010). Witness of intimate partner violence in childhood and perpetration of intimate partner violence in adulthood. *Epidemiology (Cambridge, Mass.)*, 21(6), 809.
- Roudsari, B. S., Leahy, M. M., & Walters, S. T. (2009). Correlates of dating violence among male and female heavy-drinking college students. *Journal of Interpersonal Violence*, 24(11), 1892-1905.
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277(5328), 918-924.
- Schwartz, D., & Proctor, L. J. (2000). Community violence exposure and children's social adjustment in the school peer group: the mediating roles of emotion regulation and social cognition. *Journal of Consulting and Clinical Psychology*, 68(4), 670.
- Shorey, R. C., Cornelius, T. L., & Bell, K. M. (2008). A critical review of theoretical frameworks for dating violence: Comparing the dating and marital fields. *Aggression and Violent Behavior*, 13(3), 185-194.
- Shorey, R. C., Haynes, E., Brem, M., Florimbio, A. R., Grigorian, H., & Stuart, G. L. (2018). Marijuana use is associated with intimate partner violence perpetration among men arrested for domestic violence. *Translational Issues in Psychological Science*, 4(1), 108.
- Shorey, R. C., Stuart, G. L., & Cornelius, T. L. (2011). Dating violence and substance use in college students: A review of the literature. *Aggression and Violent Behavior*, 16(6), 541-550.

- Snyder, J. J., & Patterson, G. R. (1995). Individual differences in social aggression: A test of a reinforcement model of socialization in the natural environment. *Behavior Therapy, 26*(2), 371-391.
- Solomon, B. S., Bradshaw, C. P., Wright, J., & Cheng, T. L. (2008). Youth and parental attitudes toward fighting. *Journal of Interpersonal Violence, 23*(4), 544-560.
- Spencer, C. M., Morgan, P., Bridges, J., Washburn-Busk, M., & Stith, S. M. (2017). The relationship between approval of violence and intimate partner violence in college students. *Journal of Interpersonal Violence*, doi:10.1177/0886260517731315.
- Steel, A. L., Watkins, L. E., & DiLillo, D. (2017). Physical abuse in childhood as a predictor of intimate partner violence perpetration among dating couples: the role of negative affect during conflict. *Partner abuse, 8*(2), 204-220.
- Steele, C. M., & Josephs, R. A. (1990). Alcohol myopia: its prized and dangerous effects. *American psychologist, 45*(8), 921.
- Straus, M. A. (2008). Dominance and symmetry in partner violence by male and female university students in 32 nations. *Children and Youth Services Review, 30*(3), 252-275.
- Straus, M. A. (2011). International Dating Violence Study, 2001-2006. *Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor]. Retrieved from [http://www. icpsr. umich. edu/icpsrweb/ICPSR/studies/29583](http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/29583).*
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. (1999). Manual for the personal and relationships profile (PRP). *Durham, NH: University of New*

- Hampshire, Family Research Laboratory. Available in: <http://pubpages.unh.edu/~mas2>.*
- Straus, M. A., Mouradian, V., & DeVoe, E. (1999). Violent socialization, Manual for the personal and relationships profile (PRP). *Durham, NH: University of New Hampshire, Family Research Laboratory. Available in: <http://pubpages.unh.edu/~mas2>, 18-19.*
- Su, W., Mrug, S., & Windle, M. (2010). Social cognitive and emotional mediators link violence exposure and parental nurturance to adolescent aggression. *Journal of Clinical Child & Adolescent Psychology*, 39(6), 814-824.
doi:10.1080/15374416.2010.517163.
- Temple, J. R., Shorey, R. C., Tortolero, S. R., Wolfe, D. A., & Stuart, G. L. (2013). Importance of gender and attitudes about violence in the relationship between exposure to interparental violence and the perpetration of teen dating violence. *Child Abuse & Neglect*, 37(5), 343-352.
- Thomas, A., Caldwell, C. H., Assari, S., Jagers, R. J., & Flay, B. (2016). You do what you see: How witnessing physical violence is linked to violent behavior among male African American adolescents. *The Journal of Men's Studies*, 24(2), 185-207.
- Tontodonato, P., & Crew, B. K. (1992). Dating violence, social learning theory, and gender: A multivariate analysis. *Violence and Victims*, 7(1), 3.
- Walters, G. D. (2017). Viewing the cycle of violence through a gendered pathways lens: perceived parental tolerance of violence, peer Influence, and child aggressive

- behavior. *Journal of Interpersonal Violence*, 0886260517702493. Retrieved from <https://doi.org/10.1177/0886260517702493>. doi:10.1177/0886260517702493
- White, J. W., Merrill, L. L., & Koss, M. P. (2001). Predictors of premilitary courtship violence in a Navy recruit sample. *Journal of Interpersonal Violence*, 16(9), 910-927.
- Widom, C. S., & Maxfield, M. G. (2001). An Update on the "Cycle of Violence." Research in Brief.
- Wolfe, D. A., Crooks, C. V., Lee, V., McIntyre-Smith, A., & Jaffe, P. G. (2003). The effects of children's exposure to domestic violence: A meta-analysis and critique. *Clinical Child and Family Psychology Review*, 6(3), 171-187.
- Wright, E. M., & Fagan, A. A. (2013). The cycle of violence in context: Exploring the moderating roles of neighborhood disadvantage and cultural norms. *Criminology*, 51(2), 217-249.
- Zimmerman, G. M., & Messner, S. F. (2011). Neighborhood context and nonlinear peer effects on adolescent violent crime. *Criminology*, 49(3), 873-903.