

The Link between Child Physical Abuse and Violent Victimization:

A Case of China

by

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ABSTRACT

Child development scholars have demonstrated a host of negative outcomes of child physical abuse, including emotional problems, delinquency, and future victimization. However, it is unclear if child physical abuse during childhood is related to subsequent violent victimization during youth and young adulthood. Building on routine activity theory and prior research, and using data collected from 2,245 individuals in Changzhi, China, this study examines if the experience of child physical abuse is positively related to violent victimization in youth and young adulthood, and if the relationship between child physical abuse and violent victimization is mediated by an individual's routine activities. The results from negative binomial regressions support routine activity theory. The implications of the findings for theory, research and practice are discussed.

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CHAPTER 1

INTRODUCTION

Studies have found that victimization is unequally distributed within the population, and demographic variables, such as age, gender, socioeconomic status, and marital status, may play a role in determining one's risk for future victimization (e.g., Hindelang et al., 1978; Miethe & McDowall, 1993; US Department of Justice, 2001). More recently, scholars in the field of child development have become increasingly interested in childhood experiences and their subsequent effects on victimization in adolescence and adulthood; they have found that those who are abused as children are especially susceptible to future victimization (e.g., Messman-Moore & Long, 2000; Widom et al., 2008). The general approach to explaining this link has been to focus on within-individual changes that occur as one experiences abuse, and explanations have typically focused on lowered self-esteem, learned helplessness, and distorted cognitions (Finkelhor et al., 2011). Although prior studies in the field of child development have helped expand our knowledge about the mechanisms through which child abuse may impact future victimization, important questions remain unanswered and issues unresolved.

Prior studies have largely looked at limited types of violent victimization, such as intimate partner violence and sexual violence. It is unclear, however, whether physical abuse during childhood is related to subsequent violent victimization, beyond these specific types of violent victimization. Because violence is a "salient and powerful life experience that shapes developmental pathways and influences the character and content of later life" (Macmillan, 2001, p. 11), those who experience child physical abuse may

also have a higher risk for other kinds of violent victimization. This possibility, however, has not been adequately tested in empirical research.

Further, prior studies have focused on victim characteristics alone, such as lowered self-esteem, learned helplessness, and distorted cognitions, when explaining the observed relationship between child physical abuse and future victimization (Finkelhor et al., 2011). A full understanding of victimization, however, will never be achieved if the focus is only restricted to victims (Messman-Moore & Long, 2003). In this regard, criminological theories, specifically routine activity theory, may be useful in expanding the focus to the social settings within which victimization occurs (Cohen & Felson, 1979). In particular, routine activity theory assumes that an individual's pattern of routine activities creates an opportunity structure for victimization by increasing the contact between potential offenders and victims, and it is cognizant of the fact that everyday behaviors of individuals are shaped by social institutions and cultural expectations (Champard, 2010). Thus, routine activity theory allows researchers to expand their focus to an individual's routine activities, which may help to explain the relationship between child physical abuse and future violent victimization.

Finally, prior research has only studied the relationship between child physical abuse and subsequent victimization in Western cultures. It is unknown, however, if such a relationship will be observed in non-Western cultures. This is a significant oversight because the relationship between child physical abuse and subsequent victimization may be specific to certain cultures. It is especially important to assess this relationship within the Chinese context for at least two reasons. First, China is the most populous country in the world and the estimate of life-time prevalence of any child abuse is significantly

higher than international and Asian standards (see Ji & Finkelhor, 2014). Second, the Chinese culture places emphasis on strong family ties (Messner et al., 2007) and accepts the use of physical punishment as a way to discipline children (Lau et al., 2006). These characteristics may render the relationship between child physical abuse and subsequent violent victimization, observed in a Western context, insignificant within the Chinese context.

Against this backdrop, and heeding calls to use victimization as an independent variable in order to understand the consequences of such an experience on the lives of victims (e.g. Turanovic & Pratt, 2013, p. 336), the goal of this paper is assess whether exposure to child physical abuse increases an individual's risk for violent victimization in youth and young adulthood and examining to what extent this relationship is mediated by factors intimated by routine activity theory. To this end, I use data collected from 2,245 individuals in Changzhi, a city of over 3 million people in Northern China. Below I present a review of the extant literature on child physical abuse and routine activity theory. After describing the data and methods, I discuss the results and address the implications of the findings to theory, research, and practice.

CHAPTER 2

BACKGROUND SECTION

The National Center on Child Abuse and Neglect (NCCAN, 1988) has defined physical abuse as acts of commission that involve either demonstrable harm or endangerment to a child. Kelly (1983) conceptualized child physical abuse as the presence of a non-accidental injury resulting from acts of commission by an adult. These acts are characterized by overt physical violence or excessive punishment and typically occur in discrete, low-frequency episodes (Kelly, 1983; Wolfe, 1988). Physical abuse is often accompanied by parental anger toward the child as a result of the child's inability to meet certain parental standards or demands (Abrams, 1981; Kelly, 1983; Malinosky-Rummell & Hansen, 1993). The global prevalence of self-reported child physical abuse is estimated to be as high as 22.6 percent (Stoltenborgh et al., 2013), and child physical abuse has been recognized as a global health problem that is not confined to any particular country (Stoltenborgh et al., 2013).

Since Kempe and colleagues (1962) first described the symptoms of "the battered child syndrome," researchers have increasingly paid attention to the consequences associated with child physical abuse. Studies have consistently documented a number of short-term and long-term negative consequences of such experiences on individuals' physical, mental and social wellbeing. For example, experiencing physical abuse as a child may have an effect on a person's world views and expectations for future happiness (Garbarino et al., 1991; Ney et al., 1994). Research has also demonstrated a "cycle of violence," suggesting that a childhood history of physical abuse predisposes a survivor to violence by increasing one's risk for delinquency and adult violent criminal behavior

(Widom 1989; Widom & Maxfield, 2001). More importantly, and relevant to this paper, experiencing physical abuse as a child has been linked to an increased vulnerability for victimization in adolescence and adulthood. In fact, some scholars have estimated that the risk of adult physical, sexual, or psychological victimization is 2 to 4 times higher for individuals who have experienced some form of child physical or sexual abuse as compared with those who have not (Cloitre et al., 1996; Coid et al., 2001; Schaaf & McCanne, 1998).

A number of child development scholars have provided explanations for why child physical abuse increases an individual's risk for future victimization. Wyatt (1984), for example, has argued that the experiences of violence in childhood may result in the development of "patterns of vulnerability," because such experiences may deny individuals the opportunity to develop healthy relationships and may violate expectations they have for relationships with those they trust. Similarly, Perry et al. (2001) have focused on distorted cognitions, arguing that children who live in violent households may develop cognitive schemas that create vulnerability for victimization. In addition, some scholars have contended that victims of early physical abuse may experience emotional difficulty, such as anxiety and depression, may develop a general mistrust of others, and may also begin to accept violence as an expected norm for adult relationships, thereby increasing their risk for future victimization (e.g. Astin et al., 1993; Attar et al., 1994; Browne, 1993; Malinosky-Rummell & Hansen, 1993). Additional explanations have focused on how childhood abuse increases risk for future victimization through such mechanisms as lowered self-esteem, learned helplessness, and suppression of anger (Finkelhor et al., 2011; Maneta et al, 2012).

Overall, the explanations discussed above have largely focused on victims and the impact violent childhood experiences may have on the development of a child. Although extremely helpful, such a focus may fail to take into account interpersonal relationships and cultural factors that might influence future victimization (Messman-Moore & Long, 2003). In addition, these explanations have paid little attention to how experiences of abuse in childhood alter social settings that may lead to an increased risk for victimization. This oversight is significant because a complete understanding of the mechanisms linking childhood abuse and future victimization may require researchers to focus less on individual factors and more on the mechanisms that increase vulnerability and risk within the setting and individual functions in (Messman-Moore & Long, 2003).

Routine Activity Theory and Its Application to Victimization

Criminologists have often relied on routine activity theory when examining why some individuals are more susceptible to victimization. According to this theory, victimization is assumed to be a result of an individual's exposure and proximity to possible offenders, their attractiveness as targets, and the level of guardianship to protect them against victimization (Cohen & Felson, 1979; Cohen et al., 1981; Meithe & Meier, 1990; Skogan & Maxfield, 1981). In the context of violent victimization, lack of guardianship and target attractiveness can result from behaviors that victims engage in that reduce their ability to defend themselves or increase their suitability for victimization (Esbensen & Huizinga, 1991; Lauritsen et al., 1991; Spano et al., 2008; Turanovic & Pratt, 2014). Put simply, this theory argues that some individuals and groups are at an increased risk of victimization due to activities which put them in contact with dangerous

individuals and situations, making them easy targets for victimization (Finkelhor & Asdigian, 1996).

Overall, prior research has suggested that routine activity theory is useful in explaining why some groups, such as young males, those with low self-control, and single people, have higher victimization rates (Finkelhor & Asdigian, 1996). For example, young people are more likely to engage in risky activities, such as drinking and going to parties, thus making them more vulnerable to victimization due to reduced guardianship (Finkelhor & Asdigian, 1996; Jensen & Brownfield, 1986). Further, while this theory focuses on the behaviors of individuals, it also takes into account the setting within which victimization takes place and recognizes that social conditions such as social institutions and cultural expectation affect the nature of our everyday behaviors (Champard, 2010).

Linking Child Physical Abuse, Routine Activities, and Violent Victimization

Literature linking child physical abuse and future violent victimization is scant. One exception is a recent study by Tillyer (2013), which looked at the relationship between childhood maltreatment and general violent victimization. The author found a significant relationship between childhood maltreatment and adolescent violent victimization, with risky lifestyles appearing to mediate this relationship. In the study, however, Tillyer looked at the combined experiences of neglect, sexual abuse, and physical abuse on violent victimization without analyzing the effect of each abuse on future victimization separately. Thus, while this study is important to further our understanding of the cumulative effect of various kinds of abuse on future victimization experiences, more research is needed to understand if specific types of abuse in childhood

impact future victimization (see Schaaf & McCanne, 1998). In this regard, although a large bulk of the research on child abuse has looked at the adverse effects of child sexual abuse on future victimization outcomes of an individual, little is known about the effect of child physical abuse on victimization experiences. This oversight is notable because child physical abuse is more prevalent than sexual abuse (U.S. Department of Health & Human Services, 2016). Therefore, it is imperative to examine the relationship between child physical abuse and subsequent violent victimization.

In spite of the lack of empirical research directly examining the relationship between physical abuse and subsequent violent victimization, routine activity theory along with the literature on child physical abuse may suggest that child physical abuse and subsequent violent victimization could be related. Specifically, the child abuse literature suggests that physical abuse can be a traumatic experience for an individual, and such an experience has been linked to a multitude of negative outcomes, such as low self-esteem, emotional problems, and interpersonal problems (Malinosky-Rummell & Hansen, 1993), all of which could shape one's life course trajectories (MacMillan, 2001). Experiencing child physical abuse then, through its effects on various domains in a person's life, can affect an individual's exposure and proximity to possible offenders, his or her attractiveness as a target, and the levels of guardianship that protects him or her against victimization, thereby influencing his or her risk for violent victimization.

Child physical abuse and exposure to motivated offenders. Research has consistently documented that individuals who are abused as children are more likely to engage in delinquent or aggressive acts (see Briere & Runtz, 1990; Pollock et al., 1990; Smith & Thornberry, 1995; Swanston et al., 2003). Specifically, Pollock and colleagues

(1990) found that among 201 men interviewed, self-reported abuse predicted aggression toward others, including fighting and violent criminal acts. Similarly, Briere and Runtz (1990) reported that childhood physical abuse was linked to aggression toward others among a sample of female college students. In addition, studies seem to suggest that those who are abused as children are more likely to use drugs and alcohol (e.g., Kilpatrick et al., 2000; Norman et al., 2012; Widom et al., 2007). For example, Norman and colleagues' (2012) meta-analysis found that child physical abuse and other forms of non-sexual abuse were associated with drug abuse.¹ Substance abuse has further been associated with an increased risk for violent and delinquent behaviors (Lisak & Beszterczey, 2007).

Research has consistently linked delinquent behavior and substance abuse to both personal and property victimization (e.g., Fisher et al., 1998; Jensen & Brownfield, 1986; Lauritsen et al., 1991; Lauritsen et al., 1992; Mustaine & Tewksbury, 1998). According to routine activity theory, this association is because engaging in deviant or risky behaviors increases the likelihood of individuals coming in contact with motivated offenders (Gottfredson, 1984; Sparks et al., 1977; Wikstrom, 1991). Additionally, extant literature suggests that engaging in deviant or risky behaviors increases one's association with deviant others (see Monahan et al., 2009), further escalating one's contact with motivated offenders and in turn enhancing one's risk for victimization (Schreck et al., 2002).

Child physical abuse and target attractiveness. Child physical abuse might also have an impact on subsequent victimization through its effect on target attractiveness. As discussed above, child physical abuse may increase the risk for delinquent and risky

¹ Widom et al. (2007) found that there may be a gendered effect of child abuse on alcohol-related problems, with child abuse increasing risk for alcohol-related problems only among women.

behaviors. Engaging in risky behaviors in turn is likely to make individuals more attractive as targets for a number of reasons. First, engaging in delinquent behaviors can place an individual at a higher risk for retribution. For example, research has found that when someone commits a crime or is a member of a group responsible for committing a crime, there is an increased risk for retaliation by victims or other groups who are looking for payback (Schreck & Fisher, 2004; Peterson et al., 2004). Second, engaging in risky behaviors may reduce an individual's ability to protect themselves. Alcohol, for example, can impair individuals' cognition and motor skills, thereby reducing their ability to protect themselves, thus making them easy targets (Schreck et al., 2006). Consuming alcohol may also make people more likely to provoke others and more likely to misjudge situations, thus increasing the likelihood of violent encounters (Felson & Boba, 2010).

Child physical abuse and low guardianship. Being exposed to potential offenders or being an attractive target alone may not lead to victimization. According to routine activity theory, crime can only occur in the absence of a capable guardian, as it leaves a suitable target unprotected against a motivated offender when they come together in time and space (Cohen & Felson, 1979). Guardians refer to actors who take up the responsibility of being the protectors of a potential target (Reynald, 2010). In the case of juveniles and young adults, guardians might include parents, peers and teachers. Parents, for example, can protect their children by closely monitoring their children. In other words, parents can act as guardians by regulating the behaviors of their children (Patterson et al., 1992) and being aware of their whereabouts. An important factor determining the quality of monitoring is parent-child communication (Stattin & Kerr, 2000).

Child physical abuse may increase subsequent victimization because it reduces guardianship. This is because child physical abuse is a dysfunctional form of parent-child communication (e.g. Borsella, 2006). The experience of physical abuse may evoke feelings of fear, anxiety, and anger in children, which, if directed towards parents, can interfere with a positive parent-child relationship by causing children to be fearful of and to avoid their parents (Bugental & Goodnow, 1998; Grusec & Goodnow, 1994; Maccoby & Martin, 1983; Saarni et al., 1998). If abuse does lead children to avoid their parents, such avoidance could result in children not communicating with parents and parents being less aware of specific or recurrent dangers facing their children. Further, if children grow to fear and express anger toward their parents, they may choose to spend less time in their protection.

In addition to family, schools can also serve as guardians to protect individuals from victimization. Interviews conducted by social workers indicated that 40% of the adolescents who were exposed to violence in the family engaged in truancy (Pfouts et al., 1981), which is considerably higher than the truancy rate of those who were not exposed to violence (Malinosky-Rummell & Hansen, 1993). This finding could further suggest that children who are physically abused may spend more time away from school and in the absence of capable guardianship.

In sum, individuals who have been physically abused may be at a greater risk for subsequent violent victimization, at least in part because those individuals are more likely to engage in routine activities that allow them to come in close contact with motivated offenders, make them more attractive targets, and reduce guardianship, all of which, per routine activity theory, are conditions conducive to victimization.

The Chinese Context

China, with 1.3 billion people, is the world's most populous country. In 2013, it was estimated that 220 million of its population were children (National Bureau of Statistics of China, 2013). With such a large number of children making up its population, there has been growing interest in child abuse research in China. For example, a meta-analysis on child physical abuse in Mainland China, Hong Kong, and Taiwan found that the life-time prevalence of any child physical abuse in China was 36.6 percent, significantly higher than estimates in other countries, both internationally and within Asia (Ji & Finkelhor, 2014). While the topic of child abuse in China has been gaining attention within the academic community, an examination of the impact of child abuse on the lives of children in China is still far from complete. For example, little is known about the effect of child physical abuse on subsequent victimization in youth and adulthood.

In order to understand why child abuse may differently impact future violent victimization within the Chinese context, a discussion of the Chinese culture is warranted. First, the Chinese culture is characterized by Confucian values (Ross et al., 2005). At the center of these values is the idea of Filial piety which gives parents the power to control and punish children. Physical discipline is seen as beneficial to a child's future because parents believe that physical discipline teaches children how to be obedient to and respect authority (Qiao & Chan, 2005). Thus, physical punishment, which is internationally recognized as a form of child physical abuse, is often considered to be a normal and required parenting practice to discipline a child in Chinese societies (Ip et al., 2015). Given this, some investigators have suggested that such positive

attitudes toward parental control and physical punishment may lead to less-negative outcomes arising from the experience of child physical abuse (Lansford et al., 2005). This in turn could suggest that the experience of child physical abuse may not be related to future victimization outcomes in China.

Second, unlike Western societies, the Chinese culture is characterized by its collectivistic orientation. Scholars have observed that such a culture emphasizes strong ties and stakes in extended family relationships (Messner et al., 2007). In particular, research has found that the Chinese people spend a large amount of their time with family members relative to the time spent alone, both within the immediate household and outside the household (Messner et al., 2007, p.499). Further, Chinese parents are found to show less concern for independence and privacy and are often heavily involved in the lives of their children (Chao, 1994; Chen et al., 2000; Messner et al., 2007). Overall, these strong interpersonal connections may be consequential for victimization because they may increase the likelihood that many of the routine activities for Chinese youth are performed in a collective manner, which in turn reduce the probability that individuals are alone inside and outside of their homes (Messner et al., 2007, p.499). Such an emphasis on social ties and involvement of parents in the lives of their children could then serve as a protective factor and thereby cause any relationship between child physical abuse and violent victimization to weaken or disappear.

In sum, given the unique characteristics of Chinese culture, it is important to investigate if there is a link between child physical abuse and future violent victimization in China. Doing so will provide an opportunity to test if culture plays a role in linking these two traumatic experiences. Further, using routine activity theory to study this link

will allow us to test the usefulness of this theory in explaining violent victimization in other cultural contexts. To date, only two studies have examined victimization in the Chinese context and found support for the risky lifestyle/routine activity theory in explaining property theft (see Messner et al., 2007; Zhang et al., 2007). More research may be needed to assess generalizability of this theory and its usefulness in explaining violent victimization and the potential link between child physical abuse and subsequent violent victimization in the Chinese context.

The Current Study

The current study examines the effect of child physical abuse on future violent victimization. This study contributes to victimization research in several ways. First, it assesses if child physical abuse affects one's risk for violent victimization, other than sexual abuse and intimate partner violence. If a link between child physical abuse and general violent victimization exists, it would suggest that child physical abuse is a starting point of a chain reaction of victimizations, indicating that researchers look more closely at childhood experiences of abuse to understand why some individuals are at an increased risk for victimization. Second, drawing on routine activity theory, this study considers how social settings provide an opportunity for victimization and in turn link experiences of abuse in childhood to subsequent violent victimization. Third, by using unique data collected in China, this study is further able to test if cultural values and attitudes may play a role in the relationship between child physical abuse and violent victimization. Specifically, drawing on prior research and routine activity theory, I develop two hypotheses.

Hypothesis 1: The experience of child physical abuse will be positively related to violent victimization in youth and young adulthood.

Hypothesis 2: The relationship between child physical abuse and violent victimization will be mediated by an individual's routine activities.

CHAPTER 3

DATA AND METHODS

DATA

To assess the link between child physical abuse and violent victimization, I use self-reported survey data collected from a sample of 2,245 students in Changzhi, China in 2009. The city of Changzhi is located in the mid-eastern part of China. It is rich in agricultural land and serves as a transportation hub, resulting in both industrial and agricultural interests. The heavy industry is run by coal mined in the surrounding rural areas. Thus, the city's economy, which is shaped by agricultural and mining activities, has drawn a large number of rural residents to migrate to the city for work, resulting in a diverse mix of residents. This in turn has led to a more diverse set of respondents for the study (Pyrooz & Decker, 2013).

To further maximize variation in student academic performance and life chances, 2,500 surveys were administered to students in six schools, consisting of one college, two high schools, one comprehensive school with both college students and vocational school students, and two vocational schools.² A convenience sample was used in selecting the classes within each school. In order to administer the survey to the sample, the questionnaire was translated from English to Chinese by a Changzhi native, and then was translated back to English by a Chinese native. The survey had a response rate of 90 percent, with 2,245 of the 2,500 questionnaires being returned. The sample for this study, however, is further reduced by 4.2% (N = 94), due to missing information on the

² Such a sampling strategy has also resulted in an older age pool of survey respondents compared to many studies that have used school samples in the United States (Pyrooz & Decker, 2013).

dependent variable. In addition, respondents that did not belong to Han ethnicity are excluded from the analysis (N = 155). This is done because more than 93 percent of the respondents are of Han ethnicity and those who are in other ethnic categories are very few and may be heterogeneous. Thus, the present study conducts an analysis on 2,068 youth and young adults in Changzhi, China.

DEPENDENT VARIABLE

Three survey items are used to measure *violent victimization*. Respondents were asked, “How often in the past 12 months have you 1) been hit by someone trying to hurt you; 2) had someone use a threat, a weapon or force to get money or things from you; and 3) been attacked by someone with a weapon or by someone trying to seriously hurt or kill you.” All items were originally coded as an ordinal variable (0 = never, 1 = once or twice, 2 = 3-5 times, 3 = 6-10 times, and 4 = more than 10 times). Consistent with prior studies (e.g., Turanovic et al., 2015), I operationalize violent victimization as a variety score. In order to do so, I recode each item to a dichotomous variable where it takes a value of “1” if a respondent was exposed to each form of violence during the past 12 months and “0” if otherwise. Then I add up these three dichotomous variables to construct a violent victimization variety score, which ranges from 0 to 3. This variable reflects if an individual was victimized and the number of types of violent victimizations he or she experienced in the past 12 months. Overall, violent victimization is positively skewed in the sample with 10.64 percent (N = 220) reporting at least one type of victimization, 3.53 percent (N = 70) reporting two types of violent victimization, and 2.65 percent (N = 51) of the sample experiencing all three forms of violent victimization.

INDEPENDENT VARIABLE

The key independent variable for the present study is *child physical abuse*. Child physical abuse is defined as being a victim of physical abuse within one's household during childhood and is operationalized as an index. Specifically, respondents were asked if they experienced any of the following during childhood, including: 1) "You got hit so hard by someone in your family that you had to see a doctor or go to the hospital;" 2) "People in your family hit you so hard that it left you with bruises or marks;" 3) "You were punished with a belt, a board, a cord, or some other hard object;" 4) "You got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor;" and 5) "You believe that you were physically abused." Response options for each item range from "0 = never" to "4 = always." I average responses to these five items (Cronbach's alpha = .90) to create the child physical abuse index, with a higher score indicating a higher level of child physical abuse. What was the mean? The range? I see them below in Table 1 but let us know and introduce Table 1 earlier.

MEDIATING VARIABLES

This study uses five measures of *routine activities* that have been found to increase the risk of harm and violence in previous studies (e.g., Schreck et al., 2002; Turanovic et al., 2015). These include violent offending, violent delinquent peers, skipping classes, drinking, and low parental monitoring. All these measures of routine activities are assumed to increase the probability of violent victimization because individuals who are involved in these activities may be more likely to come into contact

with motivated offenders, may have less guardianship, and may become more attractive targets (Lauritsen et al., 1991; Sampson & Lauritsen, 1990; Singer, 1981). Mean, S.

Engaging in delinquent behavior increases the probability of victimization because it increases one's proximity to potential offenders (see Stewart et al., 2004). In this study, *violent offending* is measured by responses to four survey items that capture violent delinquency. Respondents were asked, how often in the past 12 months they have 1) carried a hidden weapon for protection; 2) hit someone with the idea of hurting them; 3) attacked someone with a weapon; and 4) used a weapon or force to get money or things from people. Responses were originally coded as "0 = never," "1 = once or twice," "2 = 3-5 times," "3 = 6-10 times," and "4 = more than 10 times." I recode each item to a dichotomous variable where it takes on a value of "1" if a respondent engaged in each form of offending during the past 12 months and "0" if otherwise. Then, because prior research has suggested that variety scores provide valid estimates of overall involvement in illegal activity over a given recall period (see Thornberry & Krohn, 2000; Mulvey et al., 2010), I create a violent offending variety score by summing these four dichotomous variables (Cronbach's alpha = .74). This score reflects the number of specific offenses, of the four offending items, an individual has committed in the past 12 months, with higher scores indicating involvement in a greater number of violent offending types.

Having peers who engage in violent delinquency could result in an individual being put in situations where the risk of violent victimization is high (Schreck & Fisher, 2004). In this study, I create a *violent delinquent peers* index to measure peer involvement in violent delinquency. Respondents were asked, "How many of your close friends have done the following, 1) used a weapon, like a club, knife, or gun, in a fight; 2)

used a knife or gun or some other thing (like a club) to get something from a person (held-up or robbed someone); 3) hurt someone badly enough so that the person needed bandages or a doctor; 4) hit or struck one of his/her parents; and 5) got in trouble at school for fighting?” Responses range from “0 = none” to “4 = all of them.” I average responses to these five items to create the violent delinquent peers index (Cronbach’s $\alpha = .81$), with higher scores indicating a higher level of violent peer delinquency.

The next variable used to measure routine activities is *skipping classes*, as it is argued that more often a person spends time away from authority figures and engages in unstructured activities, the more often he or she will be away from protectors (Osgood et al., 2005; Schreck et al., 2002). Skipping classes is measured by responses to the question, “During the past 12 months, how often have you skipped classes without an excuse?” Responses are coded as an ordinal variable (0 = never, 1 = once or twice, 2 = three to 5 times, 3 = six to ten times, and 4 = more than 10 times). Similarly, respondents were asked how often in the past twelve months they used alcohol, which I use to measure *drinking* behaviors. Responses range from “0 = never” to “4 = every day.” Drinking is included as a measure of routine activities as it can expose individuals to motivated offenders by increasing the accessibility and availability of victims to offenders (Schreck et al., 2002).

Finally, *low parental monitoring*, which reduces the potential for parents to protect their children from possible harm, is operationalized as an index averaged across responses to four items that measure the extent to which respondents report that their parents monitor their whereabouts and activities (Cronbach’s $\alpha = .79$). These items included: 1) “When you go someplace, you leave a note for your parents or call them to

tell them where you are;” 2) “Your parents know where you are when you are not at home or at school;” 3) “You know how to get in touch with your parents if they are not at home;” and 4) “Your parents know who you are with if you are not at home.” Responses to these items range from “0 = never” to “4 = always.” I reverse code responses to these items such that higher scores indicate lower levels of parental monitoring.

CONTROL VARIABLES

To ensure that the relationship between child physical abuse and violent victimization is not confounded by other factors, I include a number of control variables that may be related to both child physical abuse and violent victimization. Specifically, age (in years), male (1 = male, 0 = female), rural residence (1 = rural residence, 0 = urban residence), and family income are included in the analysis. Family income is a measure of the average income of a respondent’s father and mother. Income ranges from “1 = below RMB 500” (approximately US \$80) to “7 = over RMB 5,000” (approximately US \$780).

Table 1. Descriptive Statistics (N=2068)

	<i>Mean</i>	<i>SD</i>
<i>Dependent Variable</i>		
Violent Victimization	.248	.634
<i>Independent Variable</i>		
Child Physical Abuse	.672	1.687
<i>Routine Activity Variables</i>		
Violent offending	.272	.748
Violent Delinquent Peers	.309	.506
Skipping class	.555	.957
Drinking	.585	.798

Low Parental Monitoring	1.374	.937
<i>Control Variables</i>		
Age	17.435	1.923
Male	.597	.490
Rural residence	.621	.485
Family income	2.574	1.114
Low self-control	1.486	.473

Last, because prior research in the United States has found that low self-control has a direct effect on violent victimization (see Pratt et al., 2014), I include self-control in this study and create a low self-control index by averaging responses to 13 items that are drawn from the Brief Self-Control Scale (Tangney et al., 2004). The low self-control index has a high level of internal consistency (Cronbach's alpha = .72), and is coded so that higher scores indicate lower levels of self-control. Descriptive statistics for all study variables are presented in Table 1.

ANALYTIC STRATEGY

The sample contains 2,068 Han youth and young adults who provided valid responses to all the items measuring violent victimization. Of the 2,068 respondents on whom the final analysis is conducted, approximately 8.03 percent had missing values on one or more study variables. To address the missing data problem, I perform multiple imputation (MI), because MI is “one of the most attractive methods for general-purpose handling of missing data in multivariate analysis” (Allison, 2000, p. 301; see also Acock, 2005; Brown & Kros, 2003). Multiple imputation with chained equations is performed in Stata 13 (Ragunathan et al., 2001). Ten imputations in total are performed. Results from

the ten imputed datasets are generated using the “mi estimate” command in Stata 13.1 (Kenward & Carpenter, 2007; Rubin, 2004; StataCorp 2015).

Since violent victimization has a highly skewed distribution and shows evidence of over-dispersion (mean = .248, variance = .634), I use negative binomial regression models to examine violent victimization (Long, 1997). A negative binomial model can be regarded as an extension of a Poisson regression, and it relaxes the assumption that the variance is equal to the mean by introducing an additional parameter which estimates the extent of over-dispersion in the model. By doing so, it does not lead to standard errors that are biased and does not result in inflated significance levels (Long, 1997).

The main purpose of this study is to determine if child physical abuse increases an individual’s risk of violent victimization in youth and young adulthood and if routine activities mediate this link. Thus, the analysis includes seven negative binomial regression models. In the first model (Model 1), I regress violent victimization on child physical abuse and the control variables. In the next five models (Model 2-Model 6), I regress violent victimization on child physical abuse, the control variables, and each of the five variables that I use to capture routine activities. Such a strategy is selected to determine whether every measure of routine activities included in the study is significantly linked to violent victimization and to establish which variable has the strongest mediating effect on the relationship between child physical abuse and violent victimization. Finally, in order to assess how much all routine activities mediate the link between child physical abuse and violent victimization, I regress violent victimization on child physical abuse, all the variables capturing routine activities, and the control variables in the last model (Model 7).

CHAPTER 4

RESULTS

BIVARIATE RESULTS

Table 2 presents the bivariate correlations between all the study variables. To test if routine activities mediate the relationship between child physical abuse and violent victimization, three empirical conditions must be established (see MacKinnon et al., 2000). First, it is necessary to confirm that child physical abuse is significantly related to violent victimization. Inspection of Table 2 indicates that the correlation between child physical abuse and violent victimization is positive and statistically significant ($r = .242$, $p < .001$). With regard to the second requirement, I find that child physical abuse is positively and significantly related to all of the routine activity measures. Finally, review of Table 2 indicates that all routine activity measures are positively and significantly associated with violent victimization.

MULTIVARIATE RESULTS

Before proceeding to multivariate analysis, I conduct various diagnostic tests to ensure that there is no harmful multicollinearity. The correlation coefficients among independent variables are below the traditional threshold of .70 used to detect collinearity. Further, the mean variance inflation factors (VIF) among variables is 1.24, which is well below the standard cutoff of 4.0. Thus, multicollinearity is not a concern. Table 3 presents the results from the negative binomial regression analyses. Turning to the first research question which examines whether individuals who experience child physical abuse are at a greater risk for violent victimization, I find that those individuals

Table 2. Bivariate Correlations among Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1 Violent Victimization	-											
2 Child Physical Abuse	.242***	-										
3 Violent Offending	.425***	.244***	-									
4 Violent Delinquent Peers	.372***	.301***	.514***	-								
5 Skipping class	.231***	.114***	.314***	.283***	-							
6 Drinking	.233***	.104***	.373***	.318***	.334***	-						
7 Low Parental Monitoring	.174***	.162***	.140***	.200***	.156***	.122***	-					
8 Age	-.013*	-.034***	.0004	.021*	.135***	.178***	.066***	-				
9 Male	.194***	.102***	.177***	.219***	.180***	.371***	.186***	.260***	-			
10 Rural Residence	.013	-.035	-.001	.022	-.032	.001	.176***	.08***	.056*	-		
11 Family Income	.0001	.057*	.04	.045*	.087***	.02	-.138***	-.152***	-.030***	-.385***	-	
12 Low Self-control	.100***	.144***	.125***	.159***	.232***	.137***	.251***	-.034***	.056***	-.062***	.078***	-

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test)

who experience physical abuse in childhood are more likely to be violently victimized in youth and young adulthood ($b = .107$, $SE = .016$, $p < .001$; see Model 1). Exponentiation of the coefficient for child physical abuse reveals that a one-unit increase in child physical abuse results in a 19% increase in risk for violent victimization (Incidence Rate Ratios = 1.191).

In Models 2 through 6, I examine whether the link between child physical abuse and violent victimization can be explained by each of the five routine activity measures that are included in the study. Review of these models indicates that every routine activity measure—that is, violent offending, violent delinquent peers, skipping school, drinking, and low parental monitoring, are significantly related to an increased risk for violent victimization. Specifically, Model 2 shows that those individuals who engage in violent offending are at an increased risk for violent victimization ($b = .548$, $SE = .050$, $p < .001$). Exponentiation of the coefficient suggests that a unit increase in violent offending results in an increased risk for violent victimization by 73% (Incidence Rate Ratios = 1.731). Further, I find that the coefficient of child physical abuse is reduced from .107 in Model 1 to .069 in Model 2 when violent offending is included in the regression. This suggests that 36% $((.107-.069)/.107)$ of the effect of child physical abuse on violent victimization is explained by violent offending.

Similarly, an inspection of Model 3 suggests that individuals who have violent delinquent peers are at a greater risk for violent victimization ($b = .819$, $SE = .085$, $p < .001$). Further, when violent delinquent peers is added to the equation, I find that the coefficient of child physical abuse is reduced from .107 in Model 1 to .059 in Model 3,

Table 3. Negative Binomial Regression Coefficients of the relationship between Child Physical Abuse, Routine Activities and Violent Victimization (N= 2068)

	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>	<i>Model 7</i>
<i>Independent Variable</i>	Coef. (SE)	Coef. (SE)	Coef. (SE)	Coef. (SE)	Coef. (SE)	Coef. (SE)	Coef. (SE)
<i>Child Physical Abuse</i>	.107*** (.016)	.069*** (.015)	.059*** (.015)	.096*** (.015)	.103*** (.015)	.098*** (.015)	.052*** (.014)
<i>Routine Activity Variables</i>							
Violent Offending		.548*** (.050)					.310*** (.060)
Violent Delinquent Peers			.819*** (.085)				.371*** (.096)
Skipping class				.356*** (.051)			.147** (.050)
Drinking					.431*** (.063)		.145* (.066)
Low Parental Monitoring						.347*** (.063)	.272*** (.061)
<i>Controls variables</i>							
Age	-.071* (.032)	-.088** (.030)	-.091** (.299)	-.106** (.031)	-.094** (.030)	-.079* (.031)	-.117*** (.029)
Male	1.292*** (.143)	1.142*** (.140)	1.161*** (.141)	1.217*** (.142)	1.101*** (.153)	1.223*** (.143)	.992*** (.142)
Rural Residence	.083 (.125)	.108 (.123)	.030 (.122)	.069 (.124)	.061 (.124)	-.006 (.126)	-.010 (.120)
Family Income	-.004 (.054)	-.029 (.052)	-.051 (.053)	-.055 (.054)	-.036 (.053)	-.004 (.054)	-.065 (.052)
Low Self-control	.362*** (.121)	.269* (.116)	.265* (.117)	.195 (.123)	.260* (.121)	.207 (.125)	.021 (.121)

NOTE: SE= Standard error; * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$ (two-tailed test)

suggesting that 45% $((.107-.059)/.107)$ of the effect of child physical abuse on violent victimization is explained by violent delinquent peers. Likewise, review of Models 4 to 6 indicates that skipping school ($b = .356$, $SE = .051$, $p < .001$), drinking ($b = .431$, $SE = .063$, $p < .001$) and low parental monitoring ($b = .347$, $SE = .063$, $p < .001$) also increase the risk for violent victimization. Comparing the coefficient of child physical abuse in Model 1 to Models 4 to 6, I find that skipping school, drinking, and low parental monitoring account for 10% $((.107-.096)/.107)$, 9% $((.107-.103)/.107)$, and 8% $((.107-.098)/.107)$ of the effect of child physical abuse on violent victimization, respectively. Overall, it seems that violent delinquent peers had the largest mediating effect in the relationship between child physical abuse and violent victimization.

Model 7 includes all the routine activity variables. A review of Model 7 indicates that being physically abused as a child continues to have a positive and statistically significant effect on violent victimization, net of all variables capturing routine activities and control variables. In addition, all the variables capturing routine activities are statistically significant in the final model. More importantly, I find that including all the routine activity variables into the model results in a decrease in the coefficient of child physical abuse from the .107 in Model 1 to .052 in Model 7. Therefore, the routine activity variables together explain 51% $((.107-.052)/.107)$ of the effect of child physical abuse on violent victimization.

Finally, I find that gender and age have significant effects on violent victimization in all seven models, with males and younger individuals being at a greater risk of violent victimization. Further, low self-control, which is statistically significant in Model 1, has no significant effect on violent victimization when routine activities are accounted for in

the final model. More specifically, low self-control does not have a statistically significant effect on violent victimization when I include skipping class and low parental monitoring (see Models 4 and 6). This finding is contrary to extant literature which suggests that low self-control has a direct effect on violent victimization, even after routine activities are accounted for (e.g., Turanovic and Pratt, 2014). I will address this seemingly anomalous finding in the discussion and conclusion section.

CHAPTER 5

DISCUSSION AND CONCLUSION

Child physical abuse is a traumatic experience for individuals, with its effects being seen well into adulthood. Research has repeatedly demonstrated that individuals who have been abused as children are more likely to engage in aggressive and violent behavior, use mind-altering substances, exhibit emotional problems, and have a greater risk for future victimization (e.g., Desai et al., 2002; Malinosky-Rummell & Hansen, 2003). Despite a body of research addressing this topic, important questions remain. First, most studies of victims of child physical abuse have primarily focused on intimate partner violence and sexual abuse as outcomes (Finkelhor et al., 2011). It is unclear whether physical abuse during childhood is related to subsequent violent victimization, beyond these specific types of violent victimization. If child physical abuse is linked to general violent victimization, this would suggest researchers look more closely at childhood experiences of abuse to achieve a full understanding about why some individuals are at an increased risk for victimization. Second, in explaining why child abuse increases the probability of future victimizations, research has focused on victim characteristics alone. These include such measures as lowered self-esteem and distorted cognitions (Finkelhor et al., 2011). Little is known about how child physical abuse results in increased risk for victimization through its effects on the social setting within which victimization occurs. This is important to know because a complete understanding of victimization, cannot be achieved if the focus is only restricted to victims (Messman-Moore & Long, 2003). Finally, studies examining the effects of child abuse on future victimization have used Western samples. Little is known about how experiences of

abuse in childhood affect subsequent victimization in other cultural contexts. This is a significant oversight because cultural attitudes and values towards punishment and abuse could determine the impact abuse has on future victimization experiences.

The purpose of this study is to contribute to existing literature by addressing the gaps identified above. Drawing on routine activity theory and prior research, I developed two hypotheses. Specifically, I anticipated that the experience of child physical abuse would be positively related to violent victimization in youth and young adulthood (hypothesis 1), and that the relationship between child physical abuse and violent victimization would be mediated by an individual's routine activities (hypothesis 2). Using data collected from 2,245 youth and young adults in Changzhi, China, and negative binomial regression models, I find that individuals who are physically abused in childhood are at a greater risk for violent victimization in youth and young adulthood, and that routine activities, such as violent offending, violent delinquent peers, skipping school, drinking, and low parental monitoring, partially mediate the relationship between child physical abuse and violent victimization. Even after accounting for routine activities, however, I find that the experience of physical abuse in childhood continues to exert a statistically significant and direct effect on violent victimization in youth and young adulthood.

Before moving on to the implications of the results, I want to discuss one seemingly anomalous finding regarding low self-control. Specifically, research using Western samples has found that low self-control is an important risk factor for violent victimization, exerting both direct and indirect effects when routine activities are accounted for (e.g., Franklin 2011; Turanovic & Pratt, 2014). Within the Chinese sample

analyzed here, however, the effect of low self-control on violent victimization is rendered insignificant when skipping classes and low parental monitoring are included in the model. I speculate two possible explanations for this finding. First, parental monitoring and skipping school are possible measures of quality of parent-child relationship and involvement in school. Given the importance placed on social relationships within the Chinese culture, this may indicate that social bonds serve as an important mediator between self-control and violent victimization. In other words, low self-control may lead to weaker social bonds, which in turn may result in greater risk for future victimization. Future research may want to test this possibility. Second, within the Chinese culture great emphasis is placed on strong family ties and interpersonal connections (Messner et al., 2007), with parents and extended family showing less concern for independence (Chao, 1994; Chen et al., 2000; Messner et al., 2007). This could mean that the behaviors of individuals in collectivistic cultures occur within the context of family, school, or community, and the involvement of these institutions in the life of an individual could result in individualistic traits, such as self-control, playing a less salient role in choosing between behavioral alternatives that increase the risk for victimization.

A number of implications for theory, research, and practice can be drawn from the current study. The findings of this study seem to suggest that routine activity theory may provide a useful framework for explaining the link between child physical abuse and violent victimization in the Chinese context. Such a finding has at least two theoretical implications. First, routine activity theory seems to be useful in studying violent victimization in other cultural contexts. To date, only two studies have examined victimization in China (see Messner et al., 2007; Zhang et al., 2007). Both studies have

found support for routine activities in explaining property victimization. Less is known about the usefulness of routine activity theory in explaining violent victimization within the Chinese context. The findings of this study, thus, help demonstrate the applicability of routine activity theory in accounting for violent victimization experiences in the Chinese culture. Second, routine activity theory appears to be useful in explaining why adverse childhood experiences, such as physical abuse, increase the risk for violent victimization. However, because this study is conducted using a Chinese sample, it is less clear if routine activity theory will help explain the link between child physical abuse and violent victimization in Western populations. Despite this, the findings from this study suggest that criminological theories, such as routine activity, are useful when studying why child abuse affects later victimization outcomes of individuals.

Further, as one of the first attempts to examine how the experience of child physical abuse serves as a risk factor for future general violent victimization, this study has several implications for research. First, while criminologists have investigated how the experience of abuse in childhood leads to greater likelihood of offending later in life (see Widom, 1989; Widom & Maxfield, 2001), few have examined if the experience of abuse in childhood leads to increased risk for future general violent victimization. The findings of this study, however, indicate that adverse childhood experiences increase risk for victimization, suggesting that criminologists should start looking more closely at childhood abuse in their study of victimization. Doing so could provide greater insights into why some individuals have greater risk for violent victimization. Second, criminologists have, for a long time, studied victimization as an outcome variable (Turanovic & Pratt, 2013), with few scholars examining whether and how certain kinds

of victimizations serve as risk factors for future victimization. The results from this study show that some victimization experiences—in this case, child physical abuse—may increase the risk for future victimization, suggesting that studying victimization as an independent variable is warranted (Turanovic & Pratt, 2013). In doing so, we can develop a deeper understanding of how certain victimization experiences affect the lives of victims and possibly marks the starting point for a chain reaction of victimization experiences.

Finally, the findings of this study have several implications for practice. First, the finding that child physical abuse is linked to violent victimization challenges the long-held belief among Chinese parents that physical punishment is needed in order to discipline a child and, if done with this intention it will not have negative consequences. The knowledge that child physical abuse is positively related to future violent victimization outcomes in a Chinese sample can help shape programs aimed at changing public perceptions about acceptable parenting practices. For instance, such programs can focus on demonstrating to parents how physical discipline could increase a child's risk for general violent victimization. Second, an understanding that the relationship between child physical abuse and violent victimization is partially mediated by routine activities can be used to increase effectiveness of programs to prevent future victimization. Practitioners, for example, can focus on assisting victims of abuse to modify their routine activities. To do so, practitioners can train victims to identify “safe” individuals within their families, schools, and communities that can serve as guardians, thereby reducing the risk of future victimizations. Third, advocates for victims of abuse can disseminate knowledge to various stakeholders, such as community elders, school teachers, and

family members, about the impact of physical abuse on the lives of individuals and the importance of guardianship in the prevention of future victimization.

Despite these important implications, this study is not without limitations. First, the survey captured child physical abuse by asking respondents, aged between 14 to 24 years, to recall events that took place in their childhood. This could have possibly resulted in recall errors, with unhappy, distressed individuals remembering negative childhood experiences more readily (Finkelhor et al., 2011). Second, the onset of and the duration of child physical abuse could not be established in this study. Some scholars have argued that the timing of abuse is an important factor to consider when examining the effects of childhood abuse on future outcomes. For example, Thornberry et al. (2001) found that maltreatment experienced only in adolescence and maltreatment that persisted through childhood and adolescences were associated with stronger and more negative consequences in adolescence than maltreatment that occurred only during childhood. Third, while work in the area of child abuse indicates that abuse results in a number of intra-individual changes that affect future victimization, this study is unable to account for these intra-individual changes. In spite of these limitations, however, given China's unique social context, the positive attitudes held by Chinese parents towards physical punishment, and the higher prevalence of child physical abuse within the country (see Ji & Finkelhor, 2014), it is important to know if and why child physical abuse is related to negative outcomes such as future violent victimization in the Chinese context. This study represents the first to establish that there is a link between child physical abuse and future violent victimization and to demonstrate that routine activities may mediate the link. Ideally, longitudinal data would be used to address these important research questions.

Unfortunately, such data are not available. Thus, moving forward, future research may want to use longitudinal study designs to assess the link between child physical abuse and general violent victimization and examine whether intra-individual changes and routine activities mediate the relationship. Additionally, considering that not all individuals who are abused as children become violent victims in youth and young adulthood, a fruitful line of research would be to focus on the protective factors that help individuals escape from future violent victimization.

In conclusion, the link between child physical abuse and victimization is riddled with complexities. While routine activity theory does prove useful in explaining a significant amount of this relationship, there might be some factors that have not been accounted for. Therefore, researchers may need to acknowledge the value in borrowing from different fields such as child development, criminology, psychology, law and social work to fully understand this relationship. It is only through such collaboration that we can move forward in our study of such a complex phenomenon. The ultimate hope in doing so is to impact policies and practices that will benefit a large number of children and help them ultimately break the pattern of victimization.

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