# THE EFFECTS OF EARLY CHILDHOOD VICTIMIZATION ON SES: A SOCIOLOGICAL ANALYSIS

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ABSTRACT OF THE DISSERTATION

The effects of early childhood victimization on SES:

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Victimization in the U.S. affects millions of people each year. Past research has focused on the effects of victimization on psychological and physical outcomes. This study adds to past research by assessing the effects of early childhood (i.e., before grade 6) parent physical and sexual victimization on young adult socioeconomic status (i.e., income and educational attainment), a sociological outcome. Data are from Add Health (N=4,206). The life course perspective serves as a theoretical framework for the analyses. In addition, this study examines subjective and objective social integration with parents and friends as a pathway through which early childhood victimization may affect long-term SES outcomes, and considers race and sex differences in the effects of victimization. The study uses a comprehensive set of background SES controls, including parent education and parent income, as well as family structure controls (e.g., parent marital status, single parent home). Results were mixed and suggest that early childhood parent victimization affects SES in complex ways, depending on the type and severity of victimization. In

general, physical victimization was a significant and negative predictor of adult educational attainment, and sexual victimization was a significant and negative predictor of adult personal annual income. Severity of physical victimization was significantly related to educational outcomes, while severity of sexual victimization did not affect income. Social integration mediated some of the relationships between victimization and SES. Race and sex differences in the effects of victimization on SES provide tentative support for the application of cumulative disadvantage theory. Overall, results suggest that future research should consider various aspects of victimization (e.g., type and timing), as well important demographic differences in responses to victimization.

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# Chapter 1

## Introduction

Victimization during childhood and adulthood directly or indirectly affects a substantial number of people in the United States. In 2014, approximately 5.4 million violent victimization events occurred involving U.S. residents age 12 or older. This represents a total of 20.1 violent victimizations per 1,000 people (U.S. Department of Justice 2015). In addition, in 2013, the rate of child victimization in the U.S. was 9.1 per 1,000 children. Of the 679,000 child victims in the U.S., 79.5% were neglected, 18.0% were physically abused, 9.0% were sexually abused, and 8.7% were psychologically maltreated (U.S. Department of Health and Human Services 2013). An estimated 1,520 children died of abuse and neglect that year, which represents 2.04 children per 100,000 (U.S. Department of Health and Human Services 2013). Only about 12% of victims of serious violence receive services from a victim services agency (U.S. Department of Justice 2015). Since it affects many people and communities, research efforts to better understand victimization, as well as improve services, are imperative.

### Defining Victimization

Victimization can be defined in multiple ways and may include, for example, physical violence at the hands of strangers or neglect by parents. My dissertation focuses on victimization by parents. Victimization of children by parents includes parental action or inaction that presents imminent risk of harm or causes death, emotional or physical harm, sexual abuse, or exploitation (U.S. Department of Health and Human Services 2013). This conceptualization of victimization suggests that victimization is not limited to actions that cause harm, but can include harm caused by failure to act. In addition, this

suggests that child victimization is not limited to cases in which action or inaction causes death or bodily harm; action or inaction associated only with risk of harm is also a component of victimization. Furthermore, victimization may involve emotional harm, with or without bodily injury. Overall, researchers have identified four types of childhood victimization by parents: neglect, physical abuse, psychological maltreatment, and sexual abuse (U.S. Department of Health and Human Services 2013).

My dissertation focuses on physical and sexual victimization by parents, in part, because they each represent victimization associated with action, rather than inaction as in the case of neglect. Parent physical victimization is "any non-accidental physical injury to the child and can include striking, kicking, burning, biting or any action that results in a physical impairment to the child" (Child Welfare Information Gateway, 2014). Parent sexual victimization is defined as "activities by a parent or caregiver such as fondling a child's genitals, penetration, incest, rape, sodomy, indecent exposure, and exploitation through prostitution or the production of pornographic materials" (Child Welfare Information Gateway, 2014). Using these definitions as a guideline, I operationalize physical victimization to include being hit or kicked by a parent. In terms of sexual victimization, I operationalize sexual victimization as sexual touching by a parent.

Furthermore, research suggests that parents are responsible for 91.4% of child maltreatment (U.S. Department of Health and Human Services 2013). Since parents make up such a large portion of perpetrators and because victimization by parents may be especially harmful (Finkelhor 1995; Ullman 2007), I focus exclusively on physical and sexual victimization by parents.

**Consequences of Victimization**

Researchers interested in studying the effects of victimization have assessed several physical and mental health outcomes (Norman et al. 2012). For example, researchers have examined the short- and long-term effects of victimization on physical illness (Batten et al. 2004; Bentley and Widom 2009), substance abuse (Anne Lown et al. 2011; Kilpatrick at al. 2000), and mental health (Arnow et al. 2011; Bouffard and Koeppel 2012). Much less is known about effects on short- or long-term sociological outcomes like socioeconomic status (SES). SES is a complex measure of social standing or class position and is made up of various indicators like educational attainment, occupation, and income (McLoyd 1998). It is associated with physical health (Adler et al. 1994; Winkleby et al. 1992), life satisfaction (Spreitzer and Synder 1974), and emotional well-being (Luo and Waite 2005). Therefore, documenting the effects of victimization on socioeconomic status is especially important.

Recent empirical work (e.g., Zielinski 2009, Macmillan and Hagan 2004) has found that childhood victimization negatively affects SES. Researchers have used various measures of SES, including personal income and poverty, and assessed them as distinct measures of SES. Importantly, they have found that victimization does not affect all SES outcomes in the same way. Following this trend in the literature, I focus my analysis on two measures of SES, educational attainment and personal income, and treat them as independent outcomes that may be affected differently by physical and sexual victimization.

In addition to empirical work in victimization research that suggests that SES outcomes should be treated separately, others have argued that education and income are

only moderately correlated and not interchangeable (Braveman et al. 2005). This is especially true for racial and ethnic minorities. For example, at similar levels of education, blacks and Mexican American adults have lower mean incomes than whites (Williams 1999). Researchers suggest that these differences are, in part, due to employment discrimination as well as variations in the quality of education (Braveman et al 2005; Williams 1999).

Furthermore, education and income should be considered separately because they have unique strengths and weaknesses as SES indicators. For example, income measures of SES do not necessarily capture differences in SES due to the prestige or resources of different educational institutions, but offer an objective measure of SES in the sense that they are standardized across respondents. Educational attainment, on the other hand, has the advantages of occurring earlier in the life course, typically occurs prior to income attainment, and can be assessed in people who are not earning income through participation in the labor force (Cirino et al. 2002).

**Long-term Effects**

Along with research that has addressed the effects of victimization on outcomes like physical and mental health, research regarding the effects of victimization on SES suggests that victimization represents a profound threat to long-term outcomes overall. As a result, researchers (e.g., Macmillan 2000) have suggested that the life course perspective may be a useful theoretical framework for understanding these long-term effects. The life course perspective examines life events over time and contends that they unfold in a dynamic way that includes individual, group, and cultural considerations. Rather than simple chronological stages that occur in sequential order, the life course

perspective argues that life events occur in complex ways, depending on context (Giele and Elder 1998).

Overall, the approach is comprised of four main themes: timing, linked lives, human agency, and location in time and place (Bengtson et al. 2005). Previous research has focused on the theme of timing and found support for it by documenting long-term SES consequences of childhood/adolescent victimization (Zielinksi 2009, Macmillan 2001, Macmillan and Hagan 2004). Previous research, however, has not examined early childhood victimization when testing the timing theme, focusing instead on adolescence and beyond. This is especially problematic because early childhood is associated with the development of beliefs about and attitudes toward the self and others, which inform one's ability to navigate the social worlds (Bowlby 2012). In addition, social networks may be especially disrupted by early victimization to the extent that it affects family relationships within and outside of the family at a time when children are forming relationships with others (Briere and Elliot 1993) and beginning the process of acquiring human, social, and cultural capital (Macmillan 2001).

As discussed, the remaining themes within the life course perspective, linked lives and agency, have not been considered in previous research and may be especially important in understanding the effects of victimization on SES. First, linked lives focuses on the interconnections in people's lives with others and the ways that relationships influence the life course. Although the consequences of victimization are often studied with respect to effects on individuals, victimization likely affects relationships with others (Macmillan 2000). Linked lives is closely associated with social integration, which accounts for the existence, quantity, and structure of social relationships, as well as the

content and quality of those relationships. Therefore assessing the quality and quantity of social relationships is important to establishing the application of linked lives within victimization research. Furthermore, social relationships may be important, unexplored pathways through which victimization affects future outcomes.

Last, the human agency theme within the life course perspective highlights individual goals and sense of self, meaning, and satisfaction. Agency may be limited by social position (e.g., race) and life circumstances (e.g., health). Constraint, then, is important to consider alongside agency. This is particularly true regarding SES, in the sense that SES reflects an individual's abilities and efforts, as well as her/his social position. When victimization combines with constraints like race and sex that are already associated with poorer SES, especially dire SES outcomes are likely. Researchers have conceptualized this compounding effect of constraints as cumulative disadvantage (Dannefer 2003).

Previous research has mainly focused on the direct effects of victimization on SES, so it has not fully considered pathways like linked lives or compounding constraints. In order to examine these themes and more comprehensively apply the life course perspective to research on victimization, mediators and moderators related to linked lives and agency/constraint must be tested. Zielinksi (2009) proposed three possible mediational pathways through which victimization might affect SES: psychopathology, educational attainment, and physical health. Macmillan (2001) found that educational attainment at least partially mediated the relationship between victimization and SES. As discussed, however, I conceptualize education as an outcome rather than a mediator. Although the other pathways that Zielinski suggested are

important, I will assess the linked lives theme by examining social integration as a mediator.

Scarce research has assessed between-group race and sex differences in outcomes, including SES outcomes. Importantly, physical and sexual victimization in adulthood does not affect all groups equally in society. For example, adult blacks and Hispanics are overrepresented in terms of violent victimization and adult females are overrepresented in terms of sexual victimization (U.S. Bureau of Justice Statistics 2014). Given the fact that racial and ethnic minorities and females are disproportionately affected by certain types of violent crime, it is important to understand how victimization affects these groups specifically. Also, as discussed, cumulative disadvantage theory suggests that the moderating effects of race and sex are promising areas of inquiry. While the empirical and theoretical work in this area is underdeveloped, recent work supports examining cumulative disadvantage (Widom et al. 2013).

Finally, one major challenge for victimization researchers is that they are often limited by small datasets and/or datasets that contain coarse (e.g., Have you ever been victimized?) rather than specific (e.g., Have you ever been kicked by a stranger?) victimization measures (Zielinksi 2009). This poses a problem for individual studies as well as the field of victimization research overall, in part, because it becomes very difficult to define what type(s) of victimization are assessed. Lack of clarity regarding measures is especially problematic to the extent that different types of victimization are associated with different risk factors and outcomes (Finkelhor 1995). I have selected the National Longitudinal Study of Adolescent to Adult Health (Add Health) dataset for my dissertation, in part, because it has specific measures related to different types (e.g.,

physical vs. sexual), sources (e.g., parent vs. non-parent), and timing (e.g., early childhood vs. adulthood) of victimization.

**Study Aims**

In summary, my dissertation has several important aims:

1. advance previous work that has framed victimization research using the life course perspective by examining specific themes within that framework (i.e., timing, linked lives, and agency; Giele and Elder 1998).
2. use the Add Health dataset to test specific types of victimization (i.e., physical and sexual victimization), a specific source of victimization (i.e., parent), and specific timing of victimization (i.e., early childhood).
3. assess the effects of victimization on a long-term sociological outcome (i.e., SES) in order to add to the relatively scarce work in this area and to complement work that has focused on psychological, health, and other outcomes.
4. examine a sociological pathway (i.e., social integration) through which victimization may affect SES.
5. test race- and sex-based differences in the effects of victimization on SES.

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# Chapter 2

## The Effects of Early Childhood Victimization on SES:

## Timing and Cumulative Disadvantage

### Introduction

Physical and sexual victimization during childhood and adulthood directly or indirectly affects a substantial number of people in the United States. In 2014, approximately 5.4 million violent victimization events occurred involving U.S. residents age 12 or older. This represents a total of 20.1 violent victimizations per 1,000 people. Only about 12% of victims of serious violence received services from a victim services agency (U.S. Department of Justice 2015). In addition, in 2013, the rate of child victimization in the U.S. was 9.1 per 1,000 children. Of the approximately 679,000 child victims in the U.S., 79.5% were neglected, 18.0% physically abused, 9.0% sexually abused, and 8.7% psychologically maltreated. An estimated 1,520 children died of abuse and neglect that year, which represents 2.04 children per 100,000 (U.S. Department of Health and Human Services 2013). Since violent crime and child maltreatment are underreported, the actual number of victimizations is difficult to determine.

Incidents of victimization are problematic at an individual level for many reasons, including the fact that they are associated with both short- and long-term problems that extend beyond the incident itself. The effects of victimization on short- and long-term physical and mental health, including illness (Batten et al. 2004; Bentley and Widom 2009), substance abuse (Anne Lown et al. 2011; Kilpatrick et al. 2000), and mental health (Arnow et al. 2011; Bouffard and Koeppel 2012) are well documented (Norman et al. 2012). Much less is known about whether victimization affects long-term socioeconomic

factors, like educational attainment and income. Documenting the effects of victimization on socioeconomic status (SES) is particularly important because SES is associated with physical health (Winkleby et al. 1992; Adler et al. 1994), life satisfaction (Spreitzer and Synder 1974), and emotional well-being (Luo and Waite 2005). In addition, to the extent that victimization affects socioeconomic factors, social researchers can begin to conceptualize victimization not exclusively as an individual-level health concern, but as a larger social problem that has long-term implications for individuals, families, communities, and society. A more nuanced understanding of the effects of victimization on long-term socioeconomic outcomes also helps policy-makers and practitioners enhance interventions designed to help mitigate the effects of victimization.

## Background

**Victimization and the life course.** The life course perspective is particularly useful for understanding the effects of victimization on long-term outcomes (Zielinksi 2009). This perspective is rooted in early theory and research regarding the life cycle (Hunt 1985). Largely based on psychological theory (Erikson 1963), life cycle models fell out of favor in sociology and elsewhere because life stages were linked to biological processes associated with aging, ignoring the socially constructed nature of the life stages (Hunt 1985; Giele and Elder 1998). The life course perspective is a more dynamic approach that acknowledges the multiple ways that the life course can unfold, including variations in experiences from individual to individual as well as differences based on culture (Hunt 1985). Experiences are not necessarily bound to a rigid sequential ordering and can be examined as a "sum total" over time (Giele and Elder 1998).

The life course is by definition social because the events and roles that occur over time are socially defined. While chronological time organizes and links events, the system of events is complex and includes individual, group, and cultural connections that combine together (Giele and Elder 1998). Overall, the approach is comprised of four main themes: timing, linked lives, human agency, and location in time and place (Bengtson et al. 2005). Timing examines the differential effects of events in one's life based on when those events happen in one's life. Specifically, researchers highlight the effects of early life experiences. Next, linked lives addresses the interconnections of people's lives with others and the ways that relationships influence the life course. Human agency highlights individual goals and sense of self, meaning, and satisfaction. Social structures constrain human agency to produce disparate outcomes. Finally, location in time and place accounts for the historical context in which the life course unfolds (Giele and Elder 1998).

Each theme combines individual (e.g., sense of self) and structural factors (e.g., culture) to account for differences in life experiences and responses to experiences that create complex life courses (Giele and Elder 1998). Through these themes, a life course perspective acknowledges that people do not simply move through life stages dictated by biological age, but that the life course can vary and is bound to micro and macro level factors. I will explore the theme of timing in this chapter and examine linked lives and agency in the next two chapters.

**Timing and cumulative disadvantage.** In part, the timing theme is especially useful when understood alongside trajectories and transitions, two important concepts within the life course perspective. Trajectories, life's main pathways through which life

events unfold (e.g., family and work) can be interrupted by life events, referred to as transitions (Elder 1985). Getting a divorce or becoming unemployed may operate as transitions in family and work trajectories, for example. In this sense, victimization represents a disruptive transition to life trajectories that may alter the life course. Furthermore, the timing (e.g., early childhood) of victimization may be particularly important if it occurs simultaneous to important developmental stages (Cole and Putnam 1992).

So, while some effects of victimization are localized, in the sense that they are short-lived and specific to an incident (e.g., fear of the location where an incident occurred), developmental effects represent disruptions to development that change future outcomes (e.g., decreased self-esteem; Finkelhor 1995). According to Finkelhor, developmental disruptions due to victimization are more likely in certain situations: 1. when victimization interrupts an important developmental transition because of timing or source; 2. when victimization is repetitive and ongoing; 3. when victimization changes the nature of relationships with primary supports (e.g., parents); and 4. when victimization adds to other serious stressors (e.g., discrimination).

Early childhood victimization in particular, then, may be especially disruptive since it is associated with several important developmental transitions. Bowlby (1980), for example, argues that early childhood is particularly important because it is during this time that children develop attachments to primary caregivers. The nature of these early attachments establishes the early foundations upon which future development rests. Successful navigation of various early childhood developmental milestones related to trust, autonomy, initiative, and identity are achieved, in part, through early attachment

and other early childhood processes (Erikson, 1963). If these and other important developmental milestones are disrupted by victimization, long-term consequences may be especially likely.

For these reasons, life course researchers contend that early disruptions may be especially problematic because they represent a "scarring" of life chances (Ferraro and Kelley-Moore 2003). In terms of victimization, as Finkelhor asserts (1995), this scarring effect is especially likely when victimization is paired with other stressors or disruptions and when it occurs multiple times. Multiple disruptions or disadvantage may combine together and result in "cumulative disadvantage" over the life course (Dannefer 2003). If victimization occurs alongside poverty, family conflict, or other traumas, for example, it may be especially disruptive. Also, victimization may represent the beginning of the snowballing of disruptive events that affect long-term outcomes. That is, victimization may lead to other disruptive events (e.g., school absences) and compound negative outcomes.

While the effects of victimization on development outcomes (e.g., self-esteem) are of particular interest to psychologists, important sociological factors are also susceptible to disruptive transitions. In particular, young people are also beginning the process of acquiring human, social, and cultural capital that have profound implications for their future experiences (Macmillan 2001). Specifically, disruptions to the acquisition of capital represent threats to future SES outcomes. In this sense, SES can be conceptualized as a developmental outcome that is vulnerable to disruptions in general, but especially so during crucial moments in life.

**Previous research on childhood victimization and SES.** Overall, few studies assess the effects of victimization on long-term socioeconomic outcomes. The studies that have looked at victimization and SES (e.g., Mullen et al. 1996; Hyman 2000) have suffered from methodological limitations, including small sample size, cross-sectional data, focus on specific populations, and a lack of comprehensive controls (Macmillan 2001; Zielinski 2009). In order to partially address existing gaps, Zielinski (2009) used the National Comorbidity Study, a nationally representative sample, administered between 1990 and 1992, to examine whether three types of childhood maltreatment (i.e., physical abuse, sexual abuse, severe neglect) affected adult socioeconomic outcomes (e.g., employment status, income, and health care coverage). He used a comprehensive set of demographic controls, including childhood socioeconomic measures, which are widely recognized as potential confounding explanations for the association between victimization and adult SES. In addition to the fact that childhood SES is a major predictor of adult SES, childhood SES is strongly and negatively associated with physical abuse (Putnam 2003).

In the cross-sectional analyses, Zielinski found that childhood maltreatment was significantly associated with poorer socioeconomic outcomes, even after controlling for childhood SES measures. For example, adults who experienced maltreatment as children were more likely to fall below the poverty line, receive public assistance, and be unemployed in adulthood as non-victims. Zielinski proposes that childhood maltreatment may be associated with poorer socioeconomic outcomes because of lower educational attainment, greater psychopathology in the form of depression and antisocial tendencies, and poorer physical health.

In addition to the effects of maltreatment in general on SES, Zielinski examined the effects of specific types of victimization on SES. He reported differential effects of physical abuse, sexual abuse, and neglect on SES, even after controlling for background SES. For example, he found that victims of childhood physical and sexual abuse were more likely to fall below the poverty line as adults than non-victims. However, only victims of sexual abuse were significantly more likely to have lower income than non-victims, while only victims of physical abuse were significantly more likely to be unemployed than non-victims. These findings suggest that focusing exclusively on the presence or absence of maltreatment, rather than specific aspects of victimization, may not account for important differences in types of victimization.

In addition to examining specific types of childhood victimization, Zielinksi also examined the relationship between severity of childhood victimization and adult SES. He reported that exposure to multiple types of victimization was associated with poorer SES outcomes than exposure to one type of victimization. Specifically, compared to victims of one type of maltreatment, victims of multiple types of maltreatment were at an increased disadvantage regarding income and poverty.

Although Zielinski's findings must be interpreted with caution because of cross-sectional data and potential biases imposed by retrospective recall, they suggest that childhood victimization is a complex phenomenon that may have long-term consequences for adult outcomes. Zielinski's study also has limitations, however, that may explain some of his findings and provide an opportunity for further analysis. One main limitation is that he used subjective measures of physical victimization. Specifically, he assessed physical victimization based on participants' responses

regarding physical victimization using a four-point scale (i.e., often, sometimes, rarely, never). If respondents did not interpret these answer options similarly, people experiencing similar victimization may have responded with different answers. In addition, in combination with respondents who answered yes to a different survey question asking whether or not they experienced physical abuse as a child, Zielinski only counted respondents who reported experiencing physical victimization "often" as having been physically victimized. This may have misrepresented respondents' physical victimization experiences and subsequent outcomes.

Next, while Zielinksi addressed severity of victimization by assessing the effects of experiencing more than one type of victimization, this conceptualization of severity does not account for the total number of instances of victimization. A more comprehensive analysis of severity should consider the effects of multiple types of victimization and total number of instances as different dimensions of severity.

With respect to the dependent variable, income, Zielinski used a categorical measure that assessed household income. Using household income rather than individual income may not accurately reflect the consequences of victimization for future personal earning potential. Furthermore, while he used a fairly comprehensive set of controls, he did not control for parent income, a particularly important SES control.

In another study, Macmillan (2000) used two datasets, one of which was longitudinal, to assess the effects of victimization on SES outcomes. Specifically, in the first set of analyses, the author examined longitudinal data from the National Youth Survey, 1976-1986, and determined that non-familial physical assault in adolescence was significantly associated with lower income, after controlling for a comprehensive set of

demographics. Experiencing sexual assault was not significantly associated with lower income. In the second set of analyses, a cross-sectional examination of the 1993 Canadian General Social Survey (CGSS-93), Macmillan found that retrospective reports of criminal victimization (i.e., self-report of the most serious crime experienced, whether sexual assault, robbery, or physical assault) was significantly associated with lower annual personal income, after controlling for a comprehensive set of demographics.

Macmillan also tested the age-graded effects of victimization by analyzing victimization occurring at five different age categories: 1) adolescence, 2) 18 and 19, 3) 20-24, 4) 25-29, and 5) 30 and older. He found that the younger a person was at the age of the most serious self-reported victimization incident, the more detrimental the incident was to income. Victimization in adolescence reduced annual income in adulthood by $6,000 and victimization at age 18-19 reduced it by $3,700; victimization at 20 or older did not significantly reduce income. Macmillan (2001) explains these findings in the context of life course theory and argues that victimization is disruptive to the life course trajectory, including socioeconomic attainment. Specifically, he proposes that this age-graded effect of victimization stems from the fact that earlier disruptions in the life course lead to worse outcomes than disruptions that occur later in life because they occur during key stages of development.

There are several limitations regarding Macmillan's findings related to timing. First, although he tested an age-graded effect in the second set of analyses, he did not test for effects of early childhood victimization in either set. The first set assessed victimization in 11-17 year olds, while the second set includes victimization from adolescence to adulthood. Furthermore, in the second set, respondents selected any

instance of victimization that they considered the most severe. Therefore, a respondent may have been categorized as having been victimized in adulthood only, for example, even if s/he had also been victimized earlier.

Macmillan's study also had additional methodological limitations. First, he did not establish independent effects of, for example, physical versus sexual victimization since they were not analyzed separately. Also, each set of the analyses had a problematic measure. In the first set, the SES dependent variable was hourly wage, which may not be a strong representation of overall SES. In the second set of analyses, Macmillan used proxy variables (i.e., immigration status; first language spoken in childhood) to control for childhood SES, which is problematic because childhood SES is a particularly important control variable.

In a follow-up to this study, Macmillan and Hagan (2004) used data from the National Youth Survey to look at other socioeconomic outcomes in addition to income, (i.e., employment, occupational status, and public assistance). Results were largely consistent with Macmillan's (2000) previous study. Specifically, violent victimization, measured as annual reported incidence of physical and/or sexual assault, was associated with a significant and large, negative effect on income and occupational status, with victims experiencing lower wages and lower occupational status than non-victims. Victimization was also associated with a lower likelihood of employment and a greater likelihood of reliance on public assistance.

By looking at average annual incidence, this study adds another measure of severity that Zielinski did not address: the total number of instances of victimization.

However, the major limitation of the study is that the victimization measure cannot account for differences in effects for physical and sexual victimization.

**Theoretical and empirical gaps**. While a review of the literature suggests that victimization affects a number of different SES outcomes, additional work is necessary to expand upon previous studies by developing the theoretical framework, resolving potentially conflicting findings, and addressing the important limitations of these studies. As discussed, research regarding the effects of victimization on SES is relatively scarce overall, so replicating previous studies, as well as filling in gaps in existing literature, will add to knowledge regarding the effects of victimization. More specifically, to the extent that victimization research often focuses on psychological outcomes, additional work using more sociological indicators (e.g., SES) will position the topic more firmly in sociology.

Although these studies have several important limitations, they begin to advance theoretical work in victimization research, which has been absent in previous studies. Specifically, by documenting long-term effects of early victimization on later SES, recent studies provide an important justification for the application of the life course perspective in general, as well as the theme of timing and cumulative disadvantage in particular. Furthermore, evidence suggests that the effects of victimization on SES are more profound when victimization occurs earlier in life, providing additional support for the fact that the theme of timing is important. In addition, researchers have found that the severity of victimization is crucial to understanding the effects of victimization, by documenting the effects of experiencing multiple types or multiple instances of victimization. While researchers have discussed severity findings within the context of

disruptions and life course theory in general, it may be helpful to conceptualize severity as a type of cumulative disadvantage.

**Aims of the Study**

I will add to the theoretical work in victimization research by exploring the timing theme, in part, by examining early childhood victimization (i.e., before 6$^{th}$ grade). As discussed, life course theory asserts that the timing of disruptive life events must be considered. When victimization interrupts important developmental transitions in the life course because of timing, it may have particularly profound effects. Since early childhood is when acquisition of human, social, and cultural capital (Macmillan 2001), as well as trust in others (Erikson 1968), commences, disruptions during this stage of development represent profound threats to future SES and other long-term outcomes. To the extent that SES outcomes (e.g., income, education) are social and dependent on others (Lin et al. 1981; Podolny and Baron 1997), disruptions to relationships through reductions in trust or network size, for example, may pose long-term threats. Macmillan's findings regarding the age-graded effect of victimization, suggest that the earlier the victimization, the more it affects later SES, providing empirical evidence for the importance of focusing on early childhood. In these ways, my study will add to the understanding of the long-term effects of victimization and provide a theoretical framework (i.e., timing within the life course perspective) for understanding the effects.

In addition, in order to better understand the applicability of cumulative disadvantage in victimization research, I will test two measures of severity: experiencing multiple types (i.e., physical and sexual) of victimization and experiencing multiple instances of each type of victimization. Each of these severity measures tests the

contention that multiple disruptive events lead to more disadvantage over time than one event. While previous research has examined severity measures, it lacks a theoretical framework for guiding severity analyses. Also, I will examine severity using better measures. As discussed, some studies have combined physical and sexual victimization into one measure. My study will examine physical and sexual victimization separately and together to better understand their independent and combined effects. In addition to assessing cumulative disadvantage, assessing physical and sexual victimization tests the possibility that they differentially affect SES outcomes.

I will examine parent victimization only, specifically because of its potential to profoundly disrupt trajectories. While Zielinski and Macmillan did not indicate the source of victimization in their analyses, studies have found that closeness of the victim to the perpetrator influences how consequential victimization is on long-term outcomes other than SES (Browne and Finkelhor 1986; Kendall-Tackett et al. 1993), so a closer examination of SES is warranted. Furthermore, Finkelhor (1995) argues that disruptions due to victimization are more likely when victimization changes the nature of relationships with primary supports (e.g., parents). Perhaps victimization by parents is an especially profound disruption because parents are particularly important to one's social network. Parents, for example, may help children acquire social capital throughout their lives in a way that strangers do not. To the extent that victimization by parents disrupts or strains the parent-child relationship, there may be an especially significant decrease in resources necessary for socioeconomic attainment.

Relatedly, based on Zielinski's findings that suggest different outcomes regarding the type of victimization, I will test the relative effects of physical and sexual

victimization. Sexual violence may be especially disruptive to interpersonal trust and promote social isolation (Harter, et al. 1988; Beitchman 1991), both of which can negatively affect long-term outcomes like SES. In addition, to the degree that sexual victimization more profoundly changes the parent-child relationship and other relationships, it may have more detrimental long-term effects.

Finally, I will use a continuous measure of annual personal income as an SES outcome, rather than household income or hourly wage. Annual personal income may more accurately reflect one's earning potential and achievement and be more strongly associated with personal victimization.

In order to more accurately assess the effect of early childhood victimization on young adulthood SES, I conducted a comprehensive literature review of studies examining predictors and correlates of both childhood victimization and adult SES. Research indicates that gender and race differences exist with regard to the prevalence and type of abuse that is experienced (Chiu et al. 2013; Gorey and Leslie 1997). Family structure variables (i.e., blended and single-parent families) and parent SES have also been consistently linked to parent physical and sexual victimization (DePaul and Domenach 2000; Hilton et al. 2015; MacMillan et al. 2013; Murphy and Braner 2000).

Demographic and parent variables have also been linked to educational attainment, including both high school and college completion, and adult earnings. Regarding demographic factors, research has consistently found that racial and ethnic minorities have poorer adult SES outcomes than whites, both in terms of educational attainment and income (Cancio et al. 1996; Kao and Thompson 2003; De Witte et al. 2013). Sex differences exist for SES as well, with females earning less in adulthood than

males despite relatively equal levels of educational attainment (Buchmann and DiPrete 2006). Family structure and resources variables also play a role as the absence of a parent, stepparent families, and parent education and income have all been linked to future educational attainment and earnings (Finn and Owings 1994; Milne et al. 1986; Teachman 1987).

Previous studies on the relationships between childhood victimization and adult SES have controlled for some, but not all, of the demographic and family background variables associated with childhood victimization and SES. Analyses using the present dataset explored the inclusion of many demographic variables and parent variables from the Add Health dataset. Race, ethnicity, and sex were all significantly associated with both childhood victimization and adult SES. Adult demographic variables, such as adulthood marital status, having children, and number of children, were also considered; although they were all significantly associated with SES outcomes, they were not significantly associated with victimization variables. Therefore, these variables were not included as covariates. Regarding early childhood family structure variables, several variables emerged as potential covariates. Analyses showed that having a stepfather (but not a stepmother), not having a mother or father figure, parental marital status, and parent education and household income were all significantly associated with both the predictor and outcome variables.

**Hypotheses**

*Hypothesis 1:* An experience of <u>any</u> parent childhood victimization (i.e., physical or sexual) during early childhood (i.e., before 6$^{th}$ grade) will lead to lower income and

educational attainment in young adulthood, even after controlling for a comprehensive set of demographic controls.

*Hypothesis 2*: With regard to type of childhood parent victimization, *parent physical* and *parent sexual* victimization during early childhood will have independent effects on adult SES, even after controlling for a comprehensive set of demographic controls. However, sexual victimization will have a greater effect on SES than physical victimization, as compared to no parental victimization, because of its potential to cause more dramatic disruptions of life course trajectories.

*Hypothesis 3a*: With regard to severity-both types of childhood parent victimization, people who experience more severe parent victimization (i.e., *both physical and sexual victimization by parents*) will have worse SES outcomes than people who experience less severe parent victimization (i.e., *either parent physical* or *parent sexual*) due to cumulative disadvantage.

*Hypothesis 3b:* With regard to severity- multiple instances of childhood parent victimization, people who experience more severe parent victimization (i.e., more than once instance of parent sexual or frequent parent physical victimization) will have lower SES than those who experience less severe parent victimization (i.e., only one instance of parent sexual or infrequent parent physical victimization), as a result of cumulative disadvantage.

## Methods

### Data and Procedure

I used the Add Health public-use dataset for the analyses in this chapter. Add Health is a longitudinal study, with four waves. Wave I data were collected in 1994-1995

and the three follow-up waves were conducted in 1996, 2001-2002, and 2007-2008. Wave I included an in-school questionnaire and an in-home interview. I only used data from the in-home interview because follow-up waves only included respondents who completed the in-home interview. Students in Wave I were in grades 7-12, while students in Wave II were in grades 8-12. In Waves III and IV, participants were no longer in school and were 18-26 years old and 24-32 years old, respectively. My analytic sample includes data from all four waves, with independent variables and covariates selected from Waves I-III and dependent variables selected from Wave IV.

**Participants**

**Survey sample**. There were 80 schools selected from a total sampling frame of 26,666. Of the 80 schools selected, 52 agreed to participate. The 28 schools that did not agree to participate were replaced with schools with similar profiles regarding school characteristics like size, census region, and racial make-up. For the in-home interviews, a sample of students was randomly selected from school rosters. The total sample for the Wave I in-home interview was N = 20,745. The follow-up in-home samples were N = 14,738 (Wave II), 15,197 (Wave III), and 15,701 (Wave IV). The public-use dataset was limited to 6,504 respondents in Wave I, 4,834 respondents in Wave II, 4,882 respondents in Wave III, and 5,113 respondents in Wave IV.

**Analytic sample.** All respondents with valid answers ($N$ = 6,504) to any of the survey questions were considered for inclusion in this study. There were 1,392 (21%) participants who were not interviewed at Wave IV and 1,623 (25%) participants who

were not interviewed at Wave III.[1] Because these participants had no data on the predictor and outcome variables, which were assessed at Waves III and IV, they were deleted from analyses. The final sample size was 4,206.

The sample consisted of slightly more females (*n* = 2,331, 55.4%) than males (*n* = 1,875; 44.6%). A minority of people in the sample identified as Hispanic *(n* = 419; 10%). The majority of the sample (*n* = 2,459; 58.5%) was white, followed by Black (*n* = 986; 23.4%), other (*n* = 566; 12.3%), Asian (*n* = 141; 3.4%), and American Indian/Native American (*n* = 52; 1.8%). In Wave I, the age range was 11-20 years old, with a mean of 15.9 (*SD* = 1.61). Add Health oversampled highly-educated black participants, which was accounted for by sample weighting.

**Measures**

Relevant items were selected from the larger data set. Specifically, items were selected that assessed: 1. childhood parent physical and sexual victimization (occurring before Grade 6 and retrospectively reported) from Wave III; 2. demographic controls, including participant demographics and childhood parent SES and family background variables, from Waves I-III; 4. adult personal income and educational attainment from Wave IV. Respondents reported all of the items, with the exception of the parent variables. Parent variables were reported on by one of the parents, in most cases, the mother.

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[1] There were 5 categories of respondents who were not interviewed: ineligible (e.g., death before collection); eligible, not interviewed (e.g., could not locate, no one home after multiple attempts); solicited, but unable (e.g., out of country, institutionalized); solicited, but unwilling (i.e., refused by participant, parent, or other person); and other (e.g., accidental prior interview). Add Health researchers conducted extensive analyses to understand bias resulting from non-response and concluded that bias was minimal in Wave III (i.e., usually less that 1%) (Chantala, Kalsbeek, and Andraca 2005) and Wave IV (Brownstein et al. 2010).

**Socio-economic status**. The dependent variables were two measures of socio-economic-status. Both variables were measured using items from Wave IV: adult personal income and educational attainment. *Adult personal income* was a continuous variable, with participants reporting their exact personal income. The personal income variable was highly skewed (skew = 10.047) and included a relatively high percentage of zero earners (6.4%). To correct for these problems, a sum of $100 was added to all cases with zero income and then a logarithmic transformation was taken.

*Adult educational attainment* was a categorical variable with 13 categories ranging from *8$^{th}$ grade or less* to *completed a doctoral degree*. Because of the small percentages for various categories, the original, 13 category variable was collapsed into a four-category variable: *did not graduate high school* (1), *high school diploma* (2), *attended or completed college* (4), and *post-college* (5). Dummies were created for the ordinal variable with *did not graduate high school* serving as the reference category.

**Victimization**. All of the victimization variables were created using items that assessed two types of childhood victimization: parent physical victimization and parent sexual victimization.

***Severity of parent physical victimization- multiple instances.*** Severity of parent physical victimization- multiple instances was assessed using one item from Wave III that evaluated the frequency of parent physical victimization. Participants were asked how many times they had ever been hit or kicked by a parent before grade 6 on a 6-point Likert scale (0 = *never happened*, 1 = *once*, 2 = *twice*, 3 = *3-5 times*, 4 = *6-10 times*, and 5 = *more than 10 times*). Because of the small percentages in categories 1-5, the variable

was recoded as a 3-category variable: *none* (0= never happened), *infrequent* (1= 1-5 times), and *frequent* (2 = 6 times or more).

***Severity of parent sexual victimization- multiple instances***. Severity of parent sexual victimization- multiple instances was assessed using one item from Wave III that examined the frequency of parent sexual victimization. Participants were asked how many times they had ever been touched sexually by a parent before grade 6 on a 6- point Likert scale (0 = *never happened*, 1 = *once*, 2 = *twice*, 3 = *3-5 times*, 4 = *6-10 times*, and 5 = *more than 10 times*). Because of the small percentages of participants who experienced sexual victimization *more than once* (2-5) the variable was recoded as a 3-category variable: *none* (0), *once* (1), and *more than once* (2).

***Any parent victimization.*** To create the any parental victimization variable, two dichotomous victimization variables (i.e., 0 = did not experience victimization, 1= experienced victimization) from the two frequency parental victimization variables (i.e., physical and sexual) discussed above. Respondents were coded as having experienced *any childhood parental victimization* (1) if they reported one or more instances of sexual or physical victimization; respondents were coded as having experienced *no childhood parental victimization* (0) if they reported experiencing no physical and no sexual victimization.

***Type and severity-both types of childhood parent victimization***. In order to compare the relative influence of parent sexual and physical victimization on SES and the effect of experiencing both types of parental victimization, a 4-category variable (0 = none, 1 = physical only, 2 = sexual only, and 3 = both) was created from the two severity of sexual and physical variables discussed above. Participants who reported no physical

or sexual victimization on the severity variables above were coded as *none* (0). Participants who reported physical victimization at least once but no sexual victimization were coded as *physical only* (1). Participants who reported sexual victimization at least once but no physical victimization were coded as *sexual only* (2). Participants who reported at least once instance of physical and sexual victimization were coded as *both* (32).

**Demographics**. A comprehensive set of 10 demographic controls was used in all models. *Race, sex,* and *ethnicity* were assessed in Wave I. Race was originally a 5-category variable (1 = white, 2 = black, 3 = Asian, 4 = native American/ Indian, and 5 = other). Because of the small percentage of Indian participants, race was recoded as a 4-category variable with the categories of other and Native American/Indian collapsed into one category. Dummy variables were created for race, with white serving as the reference category. Both sex and ethnicity were dichotomous.

Seven childhood parent variables were also used as controls. Childhood parent variables were assessed using data from Wave I and II. Childhood SES was assessed using parent education and household income. The *childhood household parent income* variable was based on the one of the participant's parents reporting their exact household income from all sources. Household income was extremely and positively skewed (skew = 8.197). Therefore, a logarithmic transformation of the variable was created after adding $100 to respondents with zero income. Childhood household parent income was a continuous variable. *Mother education* and *father education* were assessed using two items. The original education variables contained 13 categories ranging from *never attended school* (1) to *post- doctorate* (13); these variables were recoded to contain four

categories: *didn't graduate high school* (1); *high school graduate* (2); *some college* or *college graduate* (3); and *post-college* (4). Dummy variables were created with *didn't graduate high school* serving as the reference category. In addition to childhood parent SES, family structure variables were also included. *Childhood parental marital status* was assessed and initially contained 5 categories (i.e., single, married, widowed, divorced, and separated); this variable was recoded to contain three categories: *single* (1); *other* (2), which included divorced, separated, and widowed; and *married* (3), with married serving as the reference category. To assess the *presence of a stepfather*, participants were asked if they had a stepfather (1 = yes, 0 = no). Two items from Wave III were used to assess the *absence of a mother figure* or *absence of a father figure*. Participants in Wave III were asked to report whether or not they 1) had a mother figure and 2) had a father figure during the time period of the last interview at Wave II. Participants with no father figure or mother figure were coded as 1, and participants with parental figures present were coded as 0.

**Analytic Strategy**

**Weighting**. The cross-sectional grand sample weight that addressed sampling issues like oversampling and sampling design (Chantala 2006) was used for all analyses. In addition, a weight for highly educated blacks, who were oversampled for the study, was also included.

**Missing data analyses**. In the analytic sample, there was very little missing data on the study variables. The percentage of missing data was less than 5%, ranging from < 1% ($n$ = 1) for adult personal income to 4.8% for childhood parent physical victimization ($n$ = 202) and adult personal income (n = 201). With regard to participant demographics,

missing data analyses revealed that participants missing data on one or more study variables were more likely to be male, African American, and Hispanic. Bivariate analyses of relationships between participant demographic and background variables and missing data on victimization variables revealed significant associations between parent childhood education and sex and missing data on abuse variables. Specifically, participants who were male and participants whose parents had lower levels of education were significantly more likely to be missing data on parent victimization measures. With respect to attrition and missing data on SES outcomes, analyses revealed that race, parental marital status, mother's education, and presence of a stepfather were significantly associated with missing data on SES and dropping out of the study. To correct for missing data, multiple imputation was conducted using SPSS's missing data analysis and multiple imputation procedures. This procedure creates five imputed datasets. When analyses are conducted, SPSS generates pooled results that represent the average of the respective statistics from the five datasets. All study variables were entered in the multiple imputation procedure, including participant demographics. Multiple imputation was not conducted on the dependent variable, as all of the participants with missing data on income were deleted.

**Descriptive statistics**. Frequencies and percentages were calculated for categorical variables. Means and standard deviations were calculated for continuous variables. Univariate tests of normality (e.g., normality distribution plots, skewness, kurtosis) of the continuous variables adult personal income and parent household income were also conducted. Both of these variables were transformed as discussed above, so that skewness statistics were below 1.0. Boxplots revealed 5 suspicious outliers; these

were determined not to be influential outliers in further multivariate analyses by using Cook's distance scores.

**Bivariate associations.** To explore relationships between both family variables and participant demographics and the two frequency of childhood parent victimization variables (i.e., physical, sexual), chi-square tests were conducted. To assess bivariate associations between the frequency of childhood victimization variables and adult educational attainment, chi-square tests were also conducted. To assess bivariate associations between severity of victimization variables and adult personal income, one-way ANOVAs were conducted.

**Multivariate analyses.** To conduct analyses with adult personal annual income as the outcome, several nested, multiple linear regressions were conducted to assess Hypotheses 1-III. To test for multicollinearity, tolerance and the variance inflation factor (VIF) were examined. Variables with tolerances less than .10 or VIF values greater than 10 were investigated further. Cook's distance scores were used to identify influential outliers. To test for homoscedasticity, a plot of the residuals versus predicted values was generated for each analysis.

To conduct analyses with adult educational attainment as the outcome, several multiple ordinal regressions were conducted to assess Hypotheses 1-3. Specifically, cumulative odds ordinal logistic regression with proportional odds was conducted using the GENLIN ordinal regression procedure in SPSS. Tests for the homogeneity of odds and multicollinearity were conducted.

***Hypothesis 1***. To assess the hypothesis that any victimization is associated with income, one nested, multiple linear regression with two steps was conducted. The

dichotomous *any victimization* variable was entered in the first step, along with the weighting variables (i.e., highly educated black, grand sample weight), followed by the 10 demographic controls in the second step. To assess the hypothesis that any victimization is associated with education, two separate ordinal regressions were conducted. In the first set of analyses, any victimization and weighting variable were entered. In the second set of analyses, all of these variables were entered along with the 10 demographic controls.

***Hypothesis 2 and 3a***. To test the hypotheses that type (sexual vs. physical) and severity-both types of childhood victimization are predictive of SES, one linear regression analysis was conducted for income and two ordinal regression analyses were conducted for education. Analyses were conducted in the same way as for Hypothesis 1, except that the *type/severity-both types* victimization variable was used. *Neither type of victimization* served as the reference category.

***Hypothesis 3b***. To test the hypothesis that severity- multiple instances of childhood parental victimization (physical or sexual) is predictive of SES, two hierarchical, linear regression analysis were conducted for income (one for each severity of victimization variables- physical or sexual) and four ordinal regression analyses (two for each severity of victimization variables- physical or sexual) were conducted for education. Analyses were conducted in the same way as for Hypothesis 1, except that the *severity of parent physical victimization* and *severity of parent sexual victimization* variables were used. *No victimization* served as the reference category.

An alpha of .05 was used to determine significance for all bivariate and multivariate analyses. Changes in the victimization coefficients and adjusted $R^2$ from step 1 to step 2 were analyzed.

## Results

### Descriptive

**Demographic controls**. Descriptive for participant demographics (e.g. sex, race) and childhood parent variables (e.g., parent household income, marital status) are presented in Table 2.1.

[Table 2.1 about here]

**Childhood victimization**. With regard to any victimization, a minority of participants reported experiencing any type of childhood victimization (*n* = 1179, 28%). Regarding *type/severity-both types,* a majority of participants reported experiencing *neither* physical nor sexual victimization (n = 3023, 71.9%), while 988 (23.5%) reported experiencing *physical only*, 38 (1%) reported experiencing *sexual only*, and 157 (3.7%) reported experiencing *both* types of parent victimization.

Regarding *severity of parent sexual victimization-multiple instances*, the majority of participants reported experiencing *no* parent sexual victimization (n = 4011; 95.4%); followed by *once* (n = 105; 2.5%) and *more than once* (n = 90; 2.1%). For *severity of parent physical victimization*, a majority of participants reported *no* physical victimization (n = 3061, 72.8%), followed by infrequent (n = 793, 18.9%) and infrequent (n = 352; 8.4%).

**Adult socioeconomic status.** The mean of *adult personal income* was 35,297 (*SD* = 44,969), and the median income was 30,000. With respect to *adult educational*

*attainment*, a majority of the sample reported having *some college or college graduate* (*n* = 2,677; 63.6%), followed by a *high school diploma* (*n* = 659; 15.7%), *post-college* (*n* = 573; 13.6%), and *did not graduate high school* (*n* = 297; 7.18%).

**Bivariate Associations**

**Childhood victimization and adult socio-economic status**. Any victimization was significantly associated with educational attainment ($\chi^2$ (6) = 18.6, $p < .01$) but not with income, F(2, 4206) = .802, p = .517. With regard to *severity of parent victimization-multiple instances*, results revealed that severity of parent physical victimization with educational attainment ($\chi^2$ (6) = 14.13, $p < .01$) but was not significantly associated with income, F(2, 4206) = .419, p = .448. *Severity of sexual victimization-multiple instances* was significantly associated with education ($\chi^2$ (6) = 32.06 $p < .001$) and income F(2, 4206) = 8.05, p < .01. With regard to *type/severity- both*, results revealed that type was significantly associated with education ($\chi^2$ (9) = 37,7, $p < .001$) and income, F(3, 4206) = 5.71, p < .01.

**Participant demographic controls and childhood victimization**. Chi-square analyses revealed that *severity of parent physical victimization-multiple instances* was significantly associated with sex ($\chi^2$ (2) = 7.62, $p < .05$), ethnicity ($\chi^2$ (2) = 8.49, $p < .01$), and race ($\chi^2$ (6) = 21.9, $p < .000$). *Severity of sexual victimization- multiple instances* was significantly associated with race ($\chi^2$ (6) = 8.23, $p < .05$), ethnicity ($\chi^2$ (3) = 11.30, $p < .01$), and sex ($\chi^2$ (3) = 11.43, $p < .01$). *Type/severity-both types of parent victimization-* was significantly associated with race ($\chi^2$ (6) = 42.2, $p < .001$), sex ($\chi^2$ (3) = 13.0, $p < .01$), and ethnicity ($\chi^2$ (3) = 11.48, $p < .01$).

With regard to early childhood family structure, a number of parent variables were significantly related to *severity of parent sexual victimization- multiple instances*, including having no mother figure ($\chi^2$ (2) = 5.96, $p < .05$), having no father figure ($\chi^2$ (2) = 13.4, $p < .001$), father's education ($\chi^2$ (2) = 20.6, $p < .01$), parent marital status ($\chi^2$ (3) = 11.6, $p < .01$), and parent household income, coded into four quartiles, ($\chi^2$ (1) = 2.4, $p$ = .472).. Having a stepfather was not significantly associated with experiencing severity of sexual victimization ($p$ = .070). Variables significantly associated with *severity of physical victimization* included: having a stepfather ($\chi^2$ (1) = 7.15, $p < .01$), having no mother figure ($\chi^2$ (1) = 5.4, $p < .05$), having no father figure ($\chi^2$ (1) = 7.41, $p < .01$), mother's education ($\chi^2$ (1) = 22.8, $p < .001$), and parent marital status ($\chi^2$ (9) = 11.5, $p <$ .01), and parent household income, coded into four quartiles, ($\chi^2$ (1) = 8.9, $p < .01$). Father's education was not significantly associated with physical victimization ($p$ = .187).

**Multivariate analyses**

**Any childhood victimization**. The purpose of Hypothesis 1 was to explore the influence of any experience of early childhood victimization (i.e., physical or sexual) on two adult SES outcomes: personal income and educational attainment. Ordinal regression analyses revealed that the *any victimization* variable was not significantly associated with educational attainment, after adjusting for the weighting (p = .966). However, in analyses controlling for participant demographics and family background variables, any victimization was significantly associated with education. Participants reporting any victimization were about 4/5$^{th}$ as likely to be in a higher education category as compared to participants reporting no victimization ($exp^B$ = .829; 95% *CI*, .707, .973) times greater

than for those participants reporting no victimization, $\chi^2(1) = 5.405$, $p < .05$. See Table 2.2 for additional results.

With regard to adult personal income, linear regression analyses revealed that *any victimization* did not significantly predict income in the first step ($\beta = -.005$, $p = .753$). Any victimization also did not significantly predict income ($\beta = .002$, $p = .74$) after controlling for the comprehensive set of demographic controls (see Table 2.3 for complete results).

**Type/severity- both types of victimization**. The purpose of Hypothesis 2 was to explore the influence of parent physical victimization relative to parent sexual victimization, when compared to no parent victimization. The purpose of Hypothesis 3a was to explore the influence of both types of parent victimization relative to no victimization.

As reported in Table 2.4, ordinal regression analyses revealed that *parent physical victimization* and *both parent sexual and physical victimization* were significantly associated with educational attainment, as compared to *neither parent victimization*, before and after adjusting for demographic controls; parent sexual victimization was not significantly associated with educational attainment either before or after controlling for covariates. Specifically, after adjusting for demographic controls, participants experiencing *both types* of parent victimization were about half as likely to be in a higher education category ($exp^B = .575$; 95% *CI*, .405 to .817) than participants reporting no victimization, $\chi^2(1) = 11.6$, $p < .01$. Participants reporting *physical* victimization were almost half as likely to be a higher education category **(**$exp^B = .411$; 95% *CI*, .207 to .866) times that for no victimization, $\chi^2(1) = 10.4$, $p < .05$.

Linear regression analyses revealed that *parent physical victimization* was not a significant predictor of personal annual income either before or after controlling for covariates, as compared to neither parent victimization (step 2: $\beta = .020$, $p = .161$). *Parent sexual victimization* was a significant and negative predictor of income in the first step ($\beta = -.029$, $p < .05$) and remained a significant predictor even after controlling for covariates ($\beta = -.037$, $p < .05$). *Both types of parent victimization* was a significant and negative predictor of income both in the first step ($\beta = -.053$, $p < .01$) and in the second step ($\beta = -.042$, $p < .05$). The adjusted $R^2$ in the first step ($R^2 = .012$) indicated that sexual parent victimization and both types of parent victimization accounted together for approximately 1.2% of the variance. The adjusted $R^2$ from model 1 to model 2 changed by .071 ($p < .001$). See Table 2.5 for more results.

**Severity of parent victimization- multiple instances.** The purpose of Hypothesis 3b was to determine whether experiencing multiple instances of sexual or physical parent victimization was predictive of SES outcomes. As a reminder, *severity of parent sexual victimization* variable was coded as 0 = *none*, 1 = *once*, and 2 = *more than once* and *severity of parent physical victimization* variable was coded as 0 = *none*, 1 = *infrequent: 1-5 times,* and 2 = *frequent: 6 or more*.

Ordinal regression analyses revealed that *severity of sexual victimization* was not significantly associated with educational attainment either alone ($p = .667$) or adjusting for controls ($p = .780$; see Table 2.6). With regard to *severity of physical victimization*, participants who experienced *frequent* physical victimization were about half as likely in be in a higher education category ($exp^B = .504$; 95% *CI*, .210 to 1.843) than participants experiencing *no* victimization, $\chi^2(1) = 7.17$, $p < .01$) after adjusting for controls.

Participants who had *infrequent* physical victimization were not significantly different from participants with *no* physical victimization either alone or after adjusting for controls ($p = .811$). See Table 2.7 for complete results.

Linear regression analyses revealed that with regard to *parent sexual victimization*, both *one instance* of sexual victimization and *more than one instance* of victimization were significantly and negatively associated with annual income, as compared to *no* sexual victimization, in the first step of the regression analysis ($\beta = -.039$, $p < .05$; $\beta = -.047$, $p < .01$; respectively). After controlling for covariates, *more than one* and *one* instance of victimization remained a significant and negative predictor of income ($\beta = -.037$, $p < .05$; $\beta = -.033$, $p < .05$). The adjusted $R^2$ in the first step ($R^2 = .011$) indicated that *sexual parent victimization (*both *one* and *more than one)* accounted for approximately 1.1% of the variance. The adjusted $R^2$ from model 1 to model 2 changed by .068 ($p < .001$). In terms of *parent physical victimization*, neither *frequent* nor *infrequent* victimization was significant as compared to *no* victimization, either before or after controlling for covariates. See Tables 2.8 and 2.9 for additional results.

## Discussion

### Timing

Overall, results suggest that early childhood victimization affects socioeconomic status in young adulthood in complex ways. Specifically, early parent physical victimization affects young adult education outcomes and early parent sexual victimization affects young adult personal income. This provides some evidence that early victimization disrupts SES trajectories. In combination with Macmillan's (2000) findings regarding an age-graded effect of victimization, these findings provide strong

evidence for the application of the life course perspective in general and the theme of timing in particular.

Although not explored in my analyses, researchers have discussed several individual-level psychological effects of victimization that may help explain poorer SES outcomes related to physical and sexual victimization. For example, childhood victimization has been linked to greater psychopathology, such as PTSD, depression, and anxiety (Widom 1999; Springer et al. 2007); poorer physical health, such as autoimmune disorders and bronchitis (Repetti, Taylor, and Seeman 2002; Springer et al. 2007); and more health-compromising health behaviors, such as sleep problems and drug abuse (Thompson et al. 2002). To the extent that physical and mental health are associated with poorer school and work attendance and performance (Lerner and Henke 2008; Swanson et al., 2011), they may contribute to poorer SES later in life. Childhood victimization has also been linked to behavioral styles (e.g., poorer self-regulation and aggression) related to disruption in early development that may interfere with the ability to persist at and effectively carry out educational and work-related tasks (Tangney et al. 2004).

Researchers have also discussed interpersonal and social pathways by which victimization disrupts development and may affect SES. Victimization may interfere with both the perceived and objective quality and quantity of social relationships. For example, from a psychological perspective victimization may undermine feelings of trust and closeness (DiLillo 2001; Salmi et al. 2007), leading to perceived social isolation from others. To the extent that trust is undermined as a result of victimization, victimization in early childhood may be particularly problematic since this is when children establish trust in others and begin socially relating to others and establishing friendship and other social

networks (Cole and Putnam 1992; Erikson 1963). Disruptions to the establishment of trust during this stage of development may negatively affect people's perceptions of others such that they do not develop and access social networks necessary for SES attainment. At a more objective level, early childhood victims may, in fact, have smaller, less resource-rich social networks than their peers. Feelings of distrust may cause victims to engage in disengagement strategies (Gibson and Leitenburg 2001) and/or aggression, leading others to, in turn, to reject them. In addition, significant others may distance themselves from victims due to the stigmatizing nature of victimization (Ullman 2007; Herbert and Dunkel-Schetter 1992) and/or because they were the perpetrators, further reducing network size and quality. Since young people are beginning the process of acquiring human, social, and cultural capital (Macmillan 2001), network disruptions during this time may have profound implications for their SES outcomes. In summary, victimization may interrupt both subjective and objective integration that, in turn, may affect SES outcomes (Dika and Singh 2002). Disruption to social networks will be explored in Chapter 3.

**Cumulative Disadvantage**

Results provide some support for cumulative disadvantage since both measures of severity of victimization yielded some negative effects on income and education. Although the independent effects of physical and sexual victimization led to mixed results, when combined together, physical and sexual victimization led to worse outcomes for income as well as education. The cumulative effect of these two types of victimization may especially disrupt developmental pathways, leading to poor outcomes.

Furthermore, the number of instances of physical and sexual victimization affected SES outcomes in important ways. Unlike parent sexual victimization that disrupts income even if it happens only once, physical victimization may affect SES only if it occurs multiple times. Although less frequent physical victimization did not affect education, especially frequent victimization led to worse educational outcomes. These results are consistent with cumulative disadvantage and Finkelhor's (1995) assertion that victimization may be especially disruptive when it is repetitive and ongoing and suggests that cumulative disadvantage applies in the case of physical victimization. Overall, these findings highlight the importance of considering individuals with multiple types of victimization as a separate sub-group and considering multiple definitions of severity.

**Type of Parent Victimization**

With respect to the type of victimization (i.e., parent physical vs. parent sexual), results indicate that parent sexual victimization affects long-term personal income, but not educational attainment. This provides evidence that income and education should be considered as separate SES outcomes. Parent physical victimization, on the other hand, significantly predicted adult educational attainment. Overall, this suggests that parent sexual and physical victimization lead to different SES outcomes. These results are consistent with Zielinski's (2009) findings that different types of victimization lead to different outcomes and more specifically that childhood sexual victimization, but not physical victimization, is predictive of adult income. This provides additional evidence that future research must focus on specific types of victimization, rather than victimization in general.

Given the differential effects of parent sexual and physical victimization, it is likely that they affect the previously discussed pathways to a greater or lesser degree. For example, research suggests that parent sexual victimization has an especially profound effect on interpersonal trust and social isolation (Harter et al. 1988; Beitchman 1991). This may be particularly true when sexual victimization occurs in early childhood. To the extent that individuals who experience parent sexual victimization have especially reduced trust in others, it may be difficult for them to perceive that parent, friend, school, and community resources are available to them and/or they may be less able to take advantage of these resources. In addition to the particularly profound effects of childhood sexual victimization on isolation and trust, research suggests that parent sexual victimization may be more disruptive to family relationships than parent physical victimization (Brown et al. 1999; Beitchman 1991). This disruption in family functioning reduces the effectiveness of the family network to mobilize resources that are imperative to ensuring SES attainment. Also, since sexual victimization may be more stigmatizing than physical victimization (Browne and Finkelhor 1986), significant others may reduce or eliminate contact with victims, reducing the overall size and quality of their networks.

Non-significant results regarding parent physical victimization may also be explained by the fact that mild to moderate parent physical victimization is more culturally acceptable than parent sexual victimization (Benjet and Kazdin 2003). Since physical victimization by one's parent may not be viewed as victimization either by oneself or others, it may not disrupt perceptions of and trust in others or be stigmatizing in a way that makes others distance themselves from victims. In any case, these findings

suggest that type is an important consideration when assessing the effects of childhood physical victimization.

**Limitations**

This study has several important limitations. As a whole the victimization measures may have been biased because of the reliance on retrospective reporting. This was especially true for parent sexual and physical victimization, which was reported in Wave III in young adulthood. In addition, there was no measure of victimization during later points in the life course; controlling for victimization during adolescence and early adulthood is necessary in order to accurately assess the effect of early childhood victimization. Looking specifically at parent victimization, these measures were somewhat vague and may not have included a comprehensive list of all possible types of parent physical and sexual victimization. As a result, it is not possible to account for specific effects of a particular type of parent physical or sexual victimization.

There were several other methodological limitations. First, very few people reported both parent physical and sexual victimization or sexual victimization alone, so there may not have been enough power to make adequate comparisons between one vs. both types of parent victimization and between physical and sexual victimization. Also, the parent control variables, most especially parent educational attainment, may have been biased because only one caregiver responded to the questions.

**Strengths**

There are several important strengths of this study. This study firmly places the topic of victimization in the field of sociology by proposing a sociological, rather than psychological outcome, and by considering sociological pathways through which

victimization may affect long-term SES. First, this study is one of the few to assess the long-term effects of victimization on socioeconomic outcomes. In addition, while researchers have argued that the life course perspective is useful to understanding the effects of victimization on SES, this study specifically examines the theme of timing within the life course perspective. It also tests cumulative disadvantage, another area within the life course perspective that has not been tested in the victimization-SES literature. Analyses testing cumulative disadvantage resulted in interesting findings regarding the severity of victimization, especially that severe physical victimization may be especially important to examine further.

In addition to these theoretical contributions, the methodological strengths of this study are also important to highlight. Specifically, this study assesses the independent and combined effects of parent physical and sexual victimization on SES. This is important because it begins the process of understanding the specific effects of each type of victimization on SES. It also considers the severity of experiencing both types and conceptualizes the combined effect as cumulative disadvantage. Finally, this study included a comprehensive set of controls, which reduces the likelihood that the effects of victimization are due only to background factors.

**Future Research**

While this study proposes that perceptions of and objective measures of size and quality of networks may be important pathways to consider, future research should test these pathways (see Chapter 3). Additionally, future research should look at the effects of early childhood victimization into middle adulthood and beyond. Finally, future research

should explore demographic difference (e.g., race, sex) in the effects of victimization on SES (see Chapter 4).

Table 2.1. Descriptive Statistics, Analytic Sample (N=4,206)

| Variable | N | % | Range | M | SD | Skew |
|---|---|---|---|---|---|---|
| A. *Demographics* | | | | | | |
| **Age** | | | 11-20 | 15.9 | 1.61 | .056 |
| **Sex** | | | | | | |
| Female | 2331 | 55.4 | | | | |
| Male | 1875 | 44.6 | | | | |
| **Race** | | | | | | |
| white | 2459 | 58.5 | | | | |
| Black | 986 | 23.4 | | | | |
| Asian | 141 | 3.4 | | | | |
| Native American | 52 | 1.8 | | | | |
| other | 566 | 12.3 | | | | |
| **Ethnicity** | | | | | | |
| non-Hispanic | 3787 | 90.0 | | | | |
| Hispanic | 419 | 10.0 | | | | |
| **Parent Marital** | | | | | | |
| single | 251 | 6.0 | | | | |
| other | 912 | 21.7 | | | | |
| married | 3043 | 72.3 | | | | |
| **Mother Education** | | | | | | |
| did not graduate h.s. | 578 | 13.7 | | | | |
| high school | 1478 | 35.1 | | | | |
| college | 1766 | 42.0 | | | | |
| post-college | 384 | 9.1 | | | | |
| **Father Education** | | | | | | |
| did not graduate h.s. | 680 | 16.2 | | | | |
| high school | 1534 | 36.5 | | | | |
| college | 1504 | 35.8 | | | | |
| post-college | 488 | 11.6 | | | | |
| **No father figure** | | | | | | |
| yes | 4020 | 95.6 | | | | |
| no | 186 | 4.4 | | | | |
| **No mother figure** | | | | | | |
| yes | 4077 | 96.9 | | | | |
| no | 129 | 3.1 | | | | |
| **Stepfather** | | | | | | |
| yes | 3474 | 82.6 | | | | |
| no | 732 | 17.4 | | | | |
| **Parent Income** | | | 0-999,000 | 48900 | 5600 | 8.19 |

Source: Add Health (1994-2008)

Table 2.1 (cont.). Descriptive Statistics, Analytic Sample (N=4,206)

| Variable | N | % | Range | M | SD | Skew |
|---|---|---|---|---|---|---|
| B. *Predictors* | | | | | | |
| **Severity Physical** | | | | | | |
| none | 3061 | 72.8 | | | | |
| infrequent | 793 | 18.9 | | | | |
| frequent | 352 | 8.40 | | | | |
| **Severity Sexual** | | | | | | |
| none | 4011 | 95.4 | | | | |
| once | 105 | 2.5 | | | | |
| more than once | 90 | 2.1 | | | | |
| **Any Victimization** | | | | | | |
| no | 3207 | 72.0 | | | | |
| yes | 1179 | 28.0 | | | | |
| **Type/Severity-Both** | | | | | | |
| none | 3023 | 71.9 | | | | |
| physical only | 988 | 23.5 | | | | |
| sexual only | 38 | 1.00 | | | | |
| both types | 157 | 3.79 | | | | |
| C. *Outcomes* | | | | | | |
| **Education** | | | | | | |
| did not graduate h.s. | 297 | 7.10 | | | | |
| high school | 659 | 15.7 | | | | |
| college | 2677 | 63.6 | | | | |
| post-college | 573 | 13.6 | | | | |
| **Personal Income** | | | 0-999,995 | 35,297 | 4,989 | 10.05 |

Source: Add Health (1994-2008)

Table 2.2. Ordinal Regression Estimating the Effects of Any Victimization on Educational Attainment

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Any (ref = no) | | |
| *yes* | .973 (.835, 1.13) | .829* (.707, .973) |
| Sex (ref = male) | | |
| *female* | | 1.793** (1.550, 2.074) |
| Race (ref = white) | | |
| *Black* | | .792 (.619, 1.012) |
| *Asian* | | .939 (.662, 1.485) |
| *other* | | .985 (.803, 1.208) |
| Ethnicity (ref = non-Hispanic) | | |
| *Hispanic* | | .535* (.397, .776) |
| Parent Marital (ref = married) | | |
| *single* | | .650** (.474, .891) |
| *other* | | .882 (.731, 1.064) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | | 2.206** (2.142, 2.298) |
| *college* | | 2.416** (2.204, 2.374) |
| *post college* | | 2.738** (2.563, 2.967) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | | 2.221** (2.156, 2.312) |
| *college* | | 2.276** (2.204, 2.374) |
| *post college* | | 2.738** (2.563, 2.967) |
| No father figure (ref = has father) | | |
| *no father* | | .612 (.352, 1.064) |
| No mother figure (ref = has mother) | | |
| *no mother* | | .748 (.384, 1.457) |
| Stepfather (ref = has stepfather) | | |
| *no stepfather* | | .759** (.628, .917) |
| Parent Income | | 2.389* (1.673, 3.410) |

Notes. *p < .05; **p < .01, ***p < .001. Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college. N=4,206
Source: Add Health (1994-2008)

Table 2.3. OLS Regression Predicting Annual Personal Income (Natural Log) by Any Victimization

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | β | β |
| Any Victimization (ref = no) | | |
| *yes* | -.005<br>(.028) | .002<br>(.027) |
| Sex (ref = male) | | |
| *Female* | | -.177**<br>(.024) |
| Race (ref = white) | | |
| *Black* | | -.050**<br>(.037) |
| *Asian* | | .039*<br>(.063) |
| *other* | | -.012<br>(.043) |
| Ethnicity (ref = non-Hispanic) | | |
| *Hispanic* | | -.042**<br>(.050) |
| Parent Marital (ref = married) | | |
| *single* | | -.011<br>(.059) |
| *other* | | -.056**<br>(.032) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | | .090*<br>(.044) |
| *college* | | .136*<br>(.046) |
| *post college* | | .194**<br>(.062) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | | .127**<br>(.041) |
| *college* | | .138**<br>(.044) |
| *post college* | | .190***.<br>(.057) |
| No father figure (ref =has father) | | |
| *no* | | -.031<br>(.112) |
| No mother figure (ref = has mother) | | |
| *no* | | -.037<br>(.140) |
| Stepfather (ref = has stepfather) | | |
| *no* | | -.041*<br>(.033) |
| Parent Income | | .027**<br>(.000) |
| Adjusted R-square | .010 | .083 |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income. N=4,206
Source: Add Health (1994-2008)

Table 2.4. Ordinal Regression Estimating the Effects of Severity (i.e., both types) of Victimization on Educational Attainment

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Type (ref = neither) | | |
| *Physical only* | .411* (.207- .866) | .589* (.281- 1.233) |
| *Sexual only* | 1.170 (.993- 1.38) | .893 (.272- 2.929) |
| *Both types* | .575** (.405- .817) | .633** (.440- .910) |
| Sex (ref = male) | | |
| *female* | | 1.793** (1.550, 2.074) |
| Race (ref = white) | | |
| *Black* | | .792 (.619, 1.012) |
| *Asian* | | .939 (.662, 1.485) |
| *other* | | .985 (.803, 1.208) |
| Ethnicity (ref = non-Hispanic) | | |
| *Hispanic* | | .655* (.430= .367) |
| Parent Marital (ref = married) | | |
| *single* | | .705** (.588- .845) |
| *other* | | .750 (.550, 1.021) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | | 2.118** (2.135, 2.274) |
| *college* | | 2.336** (2.174, 2.649) |
| *post college* | | 2.637** (2.574, 2.878) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | | 2.221** (2.210, 2.445) |
| *college* | | 2.276** (2.105, 2.313) |
| *post college* | | 2.738** (2.743, 2.882) |
| No father figure (ref = has father) | | |
| *no father* | | .442*** (.314, .621) |
| No mother figure (ref = has mother) | | |
| *no mother* | | .716 |
| Stepfather (ref = has stepfather) | | |
| *no stepfather* | | .745** (.616, .899) |
| Parent Income | | 2.389* (1.673, 3.410) |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college. N=4,206
Source: Add Health (1994-2008)

Table 2.5. OLS Regression Predicting Annual Personal Income (Natural Log) by Severity (i.e., both types) of Victimization

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | β | β |
| Type of victimization (ref = neither) | | |
| *physical only* | .019<br>(.070) | .020<br>(.068) |
| *sexual only* | -.029*<br>(.326) | -.037*<br>(.314) |
| *both types* | -.053**<br>(.151) | -.042**<br>(.146) |
| Sex (ref = male) | | |
| *Female* | | -.173**<br>(.057) |
| Race (ref = white) | | |
| *Black* | | -.051**<br>(.085) |
| *Asian* | | .030*<br>(.148) |
| *other* | | -.020<br>(.100) |
| Ethnicity (ref = non-Hispanic) | | |
| *Hispanic* | | -.058**<br>(.117) |
| Parent Marital (ref = married) | | |
| *single* | | -.001<br>(.134) |
| *other* | | -.043**<br>(.074) |
| Parent Income | | .028<br>(.001) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | | .134*<br>(.103) |
| *college* | | .162*<br>(.108) |
| *post college* | | .123**<br>(.146) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | | .085**<br>(.095) |
| *college* | | .141**<br>(.103) |
| *post college* | | .180***.<br>(.135) |
| No father figure (ref =has father) | | |
| *no* | | -.037<br>(.254) |
| No mother figure (ref = has father) | | |
| *no* | | -.034<br>(.317) |
| Stepfather (ref = stepfather) | | |
| *no* | | -.007<br>(.076) |
| Adjusted R-square | .012 | .083 |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income. N=4,206
Source: Add Health (1994-2008)

Table 2.6. Ordinal Regression Estimating the Effects of Severity (i.e., frequency) of Sexual Victimization on Educational Attainment

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Severity Sexual (ref = none) | | |
| *once* | 1.138 (.909- 1.424) | 1.210 (.959- 1.526) |
| *more than once* | .987 (.842- 1.16) | .893 (.272- 2.929) |
| Sex (ref = male) | | |
| *female* | | 1.807** (1.438, 2.270) |
| Race (ref = white) | | |
| *Black* | | .795 (.526, 1.202) |
| *Asian* | | 1.236 (.668, 1.220) |
| *other* | | .942 (.643, 1.425) |
| Ethnicity (ref = non-Hispanic) | | |
| *Hispanic* | | .617 (.479, 1.487) |
| Parent Marital (ref = married) | | |
| *single* | | .999 (.430- 2.320) |
| *other* | | .289** (.122, .685) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | | 2.075** (1.323, 3.252) |
| *college* | | 4.089*** (2.537, 6.589) |
| *post* | | 5.679*** (3.153, 10.228) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | | 1.487 (.942, 2.231) |
| *college* | | 2.781** (1.763, 4.387) |
| *post* | | 4.904** (2.846, 8.453) |
| No father figure (ref = has father) | | |
| *no father* | | .442*** (.314, .621) |
| No mother figure ref = has mother) | | |
| *no mother* | | .008 (.000- .013)* |
| Stepfather ref = has stepfather) | | |
| *no stepfather* | | .705 (.478, 1.039) |
| Parent Income | | 2.657* (1.586, 4.449) |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college. N=4,206
Source: Add Health (1994-2008)

Table 2.7. Ordinal Regression Estimating the Effects of Severity (i.e., frequency) of Physical Victimization on Educational Attainment

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Severity Physical (ref = none) | | |
| *infrequent* | .945 (.823- 1.225) | 1.009 (.917- 1.664) |
| *frequent* | .627** (.442- 1.16) | .504* (.210- 1.843) |
| Sex (ref = male) | | |
| *female* | | 1.801** (1.370, 2.315) |
| Race (ref = white) | | |
| *Black* | | .991 (.021, 1.09) |
| *Asian* | | .683 (.182, 1.220) |
| *other* | | .528 (.495, 1.425) |
| Ethnicity (ref = non-Hispanic) | | |
| *Hispanic* | | .821 (.009, 6.820) |
| Parent Marital (ref = married) | | |
| *single* | | .836 (.580, 1.206) |
| *other* | | 1.223 (.927, 1.614) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | | 1.360 (.964, 1.920) |
| *college* | | 2.614*** (1.794, 3.809) |
| *post* | | 4.099*** (2.363, 7.110) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | | 1.539* (1.097, 2.159) |
| *college* | | 3.228*** (2.198, 4.740) |
| *post* | | 4.392*** (2.604, 7.406) |
| No father figure (ref = has father) | | |
| *no father* | | .742 (.396, 1.391) |
| No mother figure ref = has mother) | | |
| *no mother* | | .888 (.350- 2.255) |
| Stepfather ref = stepfather) | | |
| *no stepfather* | | .680 (.303, 1.518) |
| Parent Income | | 2.510* (.592, 4.178) |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college. N=4,206
Source: Add Health (1994-2008)

Table 2.8. OLS Regression Predicting Annual Personal Income (Natural Log) by Severity (i.e., frequency) of Sexual Victimization

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | β | β |
| Severity of Sexual (ref = none) | | |
| *one* | -.039*<br>(.184) | -.033*<br>(.181) |
| *more than one* | -.047**<br>(.196) | -.037*<br>(.189) |
| Sex (ref = male) | | |
| *Female* | | -.180***<br>(.057) |
| Race (ref = white) | | |
| *Black* | | -.033<br>(.085) |
| *Asian* | | .045*<br>(.148) |
| *other* | | .004<br>(.099) |
| Ethnicity (ref = non-Hispanic) | | |
| *Hispanic* | | -.041*<br>(.118) |
| Parent Income | | .027<br>(.001) |
| Parent Marital (ref = married) | | |
| *single* | | -.012<br>(.134) |
| *other* | | -.055*<br>(.074) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | | .152*<br>(.103) |
| *college* | | .187*<br>(.108) |
| *post college* | | .132**<br>(.146) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | | .041<br>(.095) |
| *college* | | .102***<br>(.101) |
| *post college* | | .060**<br>(.135) |
| No father figure (ref =has father) | | |
| *no* | | -.030<br>(.254) |
| No mother figure (ref = has father) | | |
| *no* | | -.036<br>(.317) |
| Stepfather (ref = has stepfather) | | |
| *no* | | -.034*<br>(.076) |
| Adjusted R-square | .011 | .079 |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income. N=4,206
Source: Add Health (1994-2008)

Table 2.9. OLS Regression Predicting Annual Personal Income (Natural Log) by Severity (i.e., frequency) of Physical Victimization

| **Variable** | Model 1 | Model 2 |
|---|---|---|
| | β | β |
| Severity of Physical (ref = none) | | |
| *infrequent* | -.009<br>(.076) | -.007<br>(.073) |
| *frequent* | .015<br>(.108) | -.016<br>(.104) |
| Sex (ref = male) | | |
| *Female* | | -.180***<br>(.057) |
| Race (ref = white) | | |
| *Black* | | -.035<br>(.086) |
| *Asian* | | .042**<br>(.152) |
| *other* | | .001<br>(.099) |
| Ethnicity (ref = non-Hispanic) | | |
| *Hispanic* | | -.042*<br>(.117) |
| Parent Income | | .026<br>(.001) |
| Parent Marital (ref = married) | | |
| *single* | | -.012<br>(.134) |
| *other* | | -.055*<br>(.074) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | | .152*<br>(.103) |
| *college* | | .187*<br>(.107) |
| *post college* | | .132**<br>(.147) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | | .043<br>(.093) |
| *college* | | .104***<br>(.100) |
| *post college* | | .062**<br>(.133) |
| No father figure (ref =has father) | | |
| *no* | | -.031<br>(.253) |
| No mother figure (ref = has father) | | |
| *no* | | -.038<br>(.316) |
| Stepfather (ref = has stepfather) | | |
| *no* | | -.037*<br>(.076) |
| Adjusted R-square | .001 | .079 |

Note. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income. N=4,206
Source: Add Health (1994-2008)

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# Chapter 3

## Social Integration as a Mediator of the Relationship Between Childhood Victimization and SES

### Introduction

In the preceding chapter as well as within victimization research as a whole, researchers have argued that the life course perspective is a valuable framework for understanding the effects of victimization. In this perspective, the unfolding of the life course is a dynamic and social process, rather than a chronological one with limited variation. In addition, the life course is by definition social because the events and roles that occur over time are socially defined (Giele and Elder 1998). As a result, life course researchers examine the complex combinations of individual, group, and cultural connections and processes.

While the usefulness of the life course perspective within victimization has been explored, little theoretical or empirical work has explicitly assessed the application of specific components of the perspective. One area that offers potential for further study is testing the main themes that organize analyses rooted in the life course perspective. These themes include: timing, linked lives, human agency, and location in time and place (Giele and Elder 1998; Bengtson et al. 2005). Theoretical and empirical analyses of these themes will help researchers understand how, specifically, the life course perspective applies to victimization research. Chapter 2 found evidence for the usefulness of timing in victimization research. This chapter explores the theme of linked lives.

Linked lives focuses on the interconnections of people's lives with others and the ways that relationships influence the life course. Through the linked lives theme, the life

course perspective accounts for the fact that human behavior and experiences exist within a larger social context; social relationships are an essential ingredient in the unfolding of the life course (Thornberry et al. 2003). To the extent that victimization and socioeconomic status are social processes heavily dependent on others, the theme of linked lives may aid in understanding how they are related. In fact, victimization researchers (Macmillan 2001) have suggested that understanding the relationship between victimization and social relationships is an important area of inquiry.

As discussed in chapter 2, while little is known regarding the direct effects of victimization on SES, even less is known about why victimization may affect SES. Although he did not test for mediation, Zielinksi (2009) proposed three possible mediational pathways through which victimization might affect SES: psychopathology, educational attainment, and physical health. Macmillan (2001) found that educational attainment, at least partially, mediated the relationship between victimization and SES. The other pathways that Zielinski suggested, psychopathology and physical health, are important to consider as well. The goal of this study, however, is to examine another sociological mediator associated with the linked lives theme. Specifically, I will examine linked lives by focusing my analyses on social relationships by assessing social integration as a potential mediator of the relationship between victimization and SES. In addition, although Zielinksi suggests that education variables should be tested as mediators, results from Chapters 2 suggest that education may be better understood as an independent outcome (Macmillan 2001) since victimization affects education differently and through different pathways than income.

**Social Integration**

Social integration consists of the existence, quantity, and structure of social relationships, as well as the content and quality of those relationships (Gottlieb, 1985; House 1987; Berkman et al. 2000). It has been associated with suicide (Durkheim, 1897), psychological and physical health (Berkman et al., 2000; Umberson 1987; Myers et al., 1975; for review see Seeman 1996), and work (O'Reilly et al., 1989). Overall, social integration generally leads to positive outcomes, which suggests that a breakdown in social integration with respect to the quality and/or quantity may be detrimental to future outcomes.

Social integration is closely related to social capital and other measures of social relationships (Almedom 2005). Social capital, the actual or potential resources that exist within social relationships (Bourdieu 1972), is relevant because it is the mechanism by which social integration may be translated into enhanced outcomes. That is, social capital, in the form of tangible resources, may be transmitted through social relationships (Coleman, 1988). In addition, Coleman argues that social capital (e.g., social relationships) is the mechanism by which human capital in adulthood (e.g., SES) is realized. Furthermore, social integration can be understood as a type of social capital, such that relationships with others in and of themselves are an important resource. To the extent that the early acquisition of social integration and capital affects later acquisition, then the health of early relationships becomes especially important.

In much the same way that social capital has been conceptualized as having micro and macro level components (Almedom 2005), social integration can be measured at the micro and macro levels. A micro-level analysis, for example, would focus on individual-level variables like sense of control over one's life and trust or family-level variables

such as kinship social support. On the other hand, macro variables may include neighborhood-level factors like residential instability. This study will examine micro-level factors, by assessing the effects of social integration within the family and friendship networks of young people.

Two dimensions of social integration may be especially relevant with respect to the effect of childhood victimization on adult SES: objective and subjective integration. Objective integration refers to the actual networks that exist in people's lives; distinctions can be made with regard to the network structure (e.g., size) and the functions of these networks. Subjective integration refers to the evaluations of the availability or quality of these networks. Health researchers looking at social support, a concept closely related to social integration, have made a distinction between perceived and actual support and have found evidence that perceptions of social support may be more important for various life outcomes (Helgeson 1993; Wethington and Kessler 1986). This distinction highlights the importance of not only objectively having people in life with whom to connect and from whom to get resources, but also of possessing a subjective feeling that people are available, supportive, and helpful. In some instances objective and subjective support are highly correlated (Haber et al. 2007); people have networks available and they perceive people in their networks to be helpful and available. However, there is also evidence to suggest that they can diverge (Reinhardt et al. 2006). A person may have many people in her/his life with whom s/he talks and visits, while at the same time feeling unsupported or alone.

**Theoretical and Empirical Evidence**

**Childhood victimization and social integration**. While social integration has not been assessed as a mediator within the context of victimization research, there is research on the relationships between childhood victimization and social integration and between social integration and adult SES. Research on the pathway from childhood victimization to social integration has found significant and negative relationships. This research reveals that childhood victimization influences both objective and subjective integration. With regard to perceived integration, researchers have reported that victimization undermines trust, generally alters people's perceptions of others, and disrupts cognitive ties to others (Kaysen et al. 2005; Briere et al. 1995). Trust is an important predictor of the successful transfer of social capital (Levin and Cross 2004). As attachment theory suggests, problematic representations of self and others evident in maltreated children may interfere with the recognition or activation of social relationships necessary to pursue goals (Aber and Allen 1987). That is, maltreated children may see themselves as unworthy of connection and care and others as untrustworthy, thus undermining subjective integration.

In addition, childhood victimization, especially physical and sexual victimization by parents, may interfere with objective integration. Victimization by parents may damage the parent-child relationship, leading to lower quantity and quality of parental involvement. More generally, childhood parent victimization has been associated with the erosion of family relationships and with the family's relationships to others (Briere and Elliot 1993). Evidence also suggests that both parent and non-parent victimization is stigmatizing, such that significant others distance themselves from the victim and become

less available (Browne and Finkelhor 1986; Ullman 2002; Jonzon and Lindbad 2004), undermining the degree and richness of objective integration.

Since reliance upon social relationships is associated with SES attainment (Granovetter 1973), it is likely that victims are at a disadvantage with respect to SES if they view others as less available to them and, as a result, are less able to create and use social relationships, since acquisition of social capital is dependent on social networks. The same is true if there is, in fact, an objective breakdown of relationships after victimization occurs.

**Social integration and SES.** Research reveals that social integration affects a number of important outcomes. For example, Resnick et al. (1997) using the Add Health data set, found that stronger feelings of connection with teachers, school, and parents were linked with better health outcomes. Other research (McNeely and Falci 2004) has also reported associations between connectedness to friends and school and physical and mental health and health behaviors.

While these findings suggest that perceptions of integration are important to consider in general, it is also generally accepted that social networks, not the perceptions of the networks, are important to SES outcomes such as employment and income (Granovetter 1973; Campbell et al. 1986). Educational attainment, on the other hand, may be more amenable to effects of both subjective and objective integration. Empirical research regarding subjective integration indicates that the perceived quality of the parent-child relationship and a sense of relatedness to teachers, parents, and peers are associated with academic adjustment and performance (Dubois et al. 1994; Furrer and Skinner 2003). Research regarding objective integration suggests that actual integration

with peers predicts academic success in both childhood and early adulthood (Wentzel 2005). In addition, familial connections and connections between family and school have also been associated with academic performance (Dubois 1994).

This research provides strong evidence for both the relationship between victimization and social integration and social integration and SES outcomes. Moreover, both subjective and objective integration may play an important role in mediating these relationships.

**Hypotheses**

1. *Integration with friends* will mediate the relationship between childhood parent victimization and adult socioeconomic outcomes.
    a. Childhood parent victimization will be associated with lower objective integration with friends (i.e., greater likelihood of having no friends), which in turn, will be associated with lower adult personal annual income and educational attainment.
    b. Childhood parent victimization will be associated with lower subjective integration with friends (i.e., a lower feeling of being cared about by friends), which in turn, will be associated with lower adult personal annual income and educational attainment.
2. *Integration with parents* will mediate the relationship between childhood parent victimization and adult socioeconomic outcomes.
    a. Childhood parent victimization will be associated with lower objective integration with parents (i.e., engaging in fewer activities with parents), which

in turn, will be associated with lower adult personal annual income and educational attainment.

b. Childhood parent victimization will be associated with lower subjective integration with parents (i.e., perceiving lower levels of closeness, care, and love from parents), which in turn, will be associated with lower adult personal annual income and educational attainment.

## Methods

### Data and Procedure

I used the Add Health public-use dataset for the analyses in this chapter. Add Health is a longitudinal study, with four waves. Wave I data were collected in 1994-1995 and the three follow-up waves were conducted in 1996, 2001-2002, and 2007-2008. Wave I included an in-school questionnaire and an in-home interview. I only used data from the in-home interview because follow-up waves only included respondents who completed the in-home interview. Students in Wave I were in grades 7-12, while students in Wave II were in grades 8-12. In Waves III and IV, participants were no longer in school and were 18-26 years old and 24-32 years old, respectively. My analytic sample includes data from all four waves, with independent variables, covariates, and mediators selected from Waves I-III and dependent variables selected from Wave IV.

### Participants

**Survey sample**. There were 80 schools selected from a total sampling frame of 26,666. Of the 80 schools selected, 52 agreed to participate. The 28 schools that did not agree to participate were replaced with schools with similar profiles regarding school characteristics like size, census region, and racial make-up. For the in-home interviews, a

sample of students was drawn from school rosters. The total sample for the Wave I in-home interview was N = 20,745. The follow-up in-home samples were N = 14,738 (Wave II), 15,197 (Wave III), and 15,701 (Wave IV). The public-use dataset was limited to 6,504 respondents in Wave I, 4,834 respondents in Wave II, 4,882 respondents in Wave III, and 5,113 respondents in Wave IV.

**Analytic sample.** All respondents with valid answers ($N$ = 6,504) to any of the survey questions were considered for inclusion in this study, as there were no exclusionary criteria. However, not all participants were selected to be interviewed at each wave; specifically, there were 1,392 (21%) participants who were not interviewed at Wave IV and 1,622 (25%) participants who were not interviewed at Wave III. Since these participants had no data on the predictor and outcome variables, which were assessed at Waves III and IV, they were deleted from analyses. The final sample size was 4,206.

The sample consisted of slightly more females ($n$ = 2,331, 55.4%) than males ($n$ = 1,875; 44.6%). A minority of people in the sample identified as Hispanic ($n$ = 419; 10%). The majority of the sample ($n$ = 2,459; 58.5%) was white, followed by Black ($n$ = 986; 23.4%), other ($n$ = 566; 12.3%), Asian ($n$ = 141; 3.4%), and American Indian/Native American ($n$ = 52; 1.8%). In Wave I, the age range was 11-20 years old, with a mean of 15.9 ($SD$ = 1.61). Add Health oversampled highly-educated black participants, which was accounted for by sample weighting.

**Covariates**. All of the same 10 covariates were included in this chapter as were included in Chapter 2. Participants' sex, ethnicity, and race were included as covariates, as were mother's education, father's education, parent's marital status, parent's household income, no mother figure, no father figure, and presence of a stepfather.

**Measures**

Relevant items were selected from the larger data set. Specifically, items were selected that assessed: 1. childhood parent physical and sexual victimization from Wave III (adult respondents retrospectively reported on childhood victimization before grade 6); 2. demographic controls, including participant demographics and childhood parent variables, from Waves I-III; 3. friend and parent integration measures from Wave II, and 4. adult personal income and educational attainment from Wave IV. Respondents reported on all items, with the exception of the family structure variables. Family structure variables from Wave I were reported on by one of the parents, in most cases, the mother.

**Socio-economic status**. The dependent variables were two measures of socio-economic-status. Both variables were measured using the same two items as were used in Chapter 2; these two items from Wave IV assessed adult personal income and educational attainment. *Adult personal income* was a continuous variable, with participants reporting their exact personal income. The personal income variable was highly skewed (skew = 10.047) and included a relatively high percentage of zero earners (6.4%). To correct for these problems, a sum of $100 was added to all cases with zero income and then a logarithmic transformation was taken. *Adult educational attainment* was a categorical variable with 13 categories ranging from *8$^{th}$ grade or less* to *completed a doctoral degree*. The original, 13 category variable was collapsed into a four- category variable: *didn't graduate high school* (1), *high school diploma* (2), *some or completed college* (3), and *post-college* (4). This variable was dummy-coded for linear regression

analyses. *Didn't graduate high school* served as the reference category for all multivariate analyses.

**Mediator variables**. The four mediator variables (i.e., objective integration with friends, subjective integration with friends, objective integration with parents, and subjective integration with parents) were assessed using several items from Wave II. The assessment of these variables is discussed individually below.

***Objective integration with friends.*** *Objective integration with friends* was assessed using two items from the dataset that asked respondents in Wave II to give the name of their first male friend and the name of their first female friend. For children who were able to report a male or female friend, they received a code of 1; for children who were unable to report a male or female friend, they received a code of 2 (has no female/male friend). From these two items, an objective integration variable was created with four categories: *both a female and male friend* (0), *no male friend* (1), *no female friend* (2), and *no female or male friend* (3). *Both a female and male friend* served as the reference category.

***Subjective integration with friends***. *Subjective integration with friends* was assessed using one item from Wave II. This item asked respondents to indicate how much they felt cared about by their friends. Participants responded on a 5-point Likert scale for each item, with response options ranging from *not at all* (1) to *very much* (5). Because of the small number of participants in the *not at all* (1) and *a little* (2) categories, these two categories were combined into one category. This yielded a four-category variable with the following categories: *none to a little* (1), *somewhat* (2), *quite a bit* (3), and *very much*

(4). Dummy variables were created for linear regression analyses; in all multivariate analyses *very much* served as the reference category.

***Objective integration with parents.*** Two objective integration with parents variables were created: *objective integration with mother* and *objective integration with father*. Each of these variables were drawn from a 10-item scale that asked respondents to report whether or not they had participated in 10 specific activities with each parent. The items asked about the following activities: going shopping, going to a movie, playing a sport, attending a religious service, talking about life, discussing a personal problem, talking about grades, working on a school project together, talking about some other school-related issue, and arguing about behavior. Respondents responded either yes (1) or no (0) to each item. The item regarding arguing about behavior was deleted because it reflected a more divisive, rather than integrative, example of parent-child behavior. A composite score was created for each parent by adding the scores for the remaining 9 items, with composite scores ranging from 0 to 9 and higher scores indicating greater integration. Reliability analyses indicated that the scale had reasonably high internal consistency reliability (Cronbach $\alpha = .584$ for mother and Cronbach $\alpha = .581$ for father).

***Subjective integration with parents***. Two subjective integration with parent variables were created: *subjective integration with mother* and *subjective integration with father*. Each of these variables was created using three items that asked participants to report 1) how much they felt cared about by their mother/father, 2) how close they felt to their mother/father, and 3) how much they agreed that their mother/father loved them. Participants responded on a 5-point Likert scale for each item, with response options ranging from *not close at all* (1) to *extremely close* (5) for the closeness item; from *not at*

*all* (1) or *very much* (5) for the caring item; and from *strongly agree* (1) to *strongly disagree* (5) for the loving item. The last item was reverse coded before combining scores on each item. Scores were averaged to create a composite score, with scores ranging from 1 to 5 and higher scores indicating more integration. Reliability analysis indicated that the scale had reasonably high internal consistency reliability (Cronbach α = .660 and Cronbach α = .771 for father).

**Parent victimization variables**. Several parent victimization variables were created using the same two items used in Chapter 2; these items assessed the frequency of parent physical and parent sexual victimization during Wave III. Victimization items asked adult participants to retrospectively report how many times before grade 6 they were hit or kicked by a parent for physical victimization and how many times before grade 6 they were touched in a sexual way by a parent for sexual victimization. Respondents answered on a six-point Likert scale with the following responses: never happened (0), once (1), twice (2), 3-5 times (3), 6-10 times (4), and more than 10 times (5). From these two variables, other victimization variables were created in the same way as discussed in chapter 2. The variables were as follows: 1. *type and severity- both types of victimization*, coded as neither (0), physical only (1), sexual only (2), and both (3); 2. *severity of physical victimization,* coded as none (0), infrequent (1), and frequent (2), and 3. *severity of sexual victimization*, coded as none (0), once (1), and more than once (2). Two dichotomous (yes = 1, no = 0) *parent physical victimization* and *parent sexual victimization* was also created to explore bivariate associations with mediators.

**Analytic Strategy**

**Weighting.** The cross-sectional grand sample weight that addressed sampling

issues like oversampling and sampling design (Chantala 2006) was used for all analyses. In addition, the Add Health dataset oversampled highly educated blacks. The Add Health weight for highly educated blacks was also included as a control in the analyses.

**Missing data analyses**. As discussed in Chapter 2, the percentage of missing data on covariates, predictors, and outcomes was relatively low. The percentage of missing data for mediator variables from Wave II was relatively large with the largest number of missing respondent data for the variable *subjective integration of friends* ($n$ = 866, 20.6%). Missing data analyses revealed that race was the only covariate that was significantly associated with missing data on the integration variables; specifically, black participants were more likely than white participants to be missing data.

**Analytic Strategy**

**Descriptive statistics**. Univariate tests revealed that both the child and parent income variables were non-normally distributed; natural logarithmic transformations of both of these variables were conducted and the new transformed variables had a skewness of less than 1.0. Boxplots revealed 5 suspicious outliers, which were not influential in additional, multivariate analyses. Descriptive statistics were only calculated for mediator variables. Frequencies and percentages were calculated for categorical variables. Means and standard deviations were calculated for continuous variables. Univariate tests of normality (normality distribution plots, skewness, kurtosis) of the continuous variables were also conducted. Subjective integration with mother was found to be somewhat negatively skewed (skewness < -1.325). As a result, a transformed variable was created by taking the square root of the variable. Descriptive statistics for covariates, predictors, and outcomes are discussed in full in Chapter 2. As in chapter 2,

transformations to parental income and adult personal income were conducted by adding $100 to zero earners and taking the logarithmic transformation of all scores.

**Bivariate associations**. Bivariate associations between categorical friend integration variables (i.e., subjective friend, objective friend) and both parent victimization variables and education were conducted using chi-square tests. Bivariate associations between continuous parent integration variables (e.g., objective mother, subjective father) and both parent victimization variables were conducted using independent-samples t-test.

Bivariate associations between parent integration variables and income were conducted using Pearson Product-Moment correlations. Bivariate associations between parent integration variables, recoded into quartiles, and education were conducted using chi-square tests.

**Mediation analyses.** Only significant associations between early childhood victimization variables and adult SES outcomes reported in Chapter 2 were explored in mediation analyses. Hypotheses 1-4 were tested using the mediation approach suggested by MacKinnon (2008). This approach requires only that the pathway from the independent variable to the mediator and the pathway from the mediator to the dependent variable be significant. This approach, unlike the causal steps approach by Baron and Kenny (1986), does not require that the direct pathway from the independent variable to the dependent variable be significant.

To explore mediational relationships among variables, linear regression analyses were conducted for the continuous outcome income and ordinal regression analyses were conducted for the ordinal outcome education. Specifically, for income, nested, multiple

linear regression analysis was conducted, with covariates, weighting variables, and the predictor entered in the first step, and the mediators in the second step. Tests for multicollinearity and homoscedasticity were conducted. To conduct regression analyses for adult educational attainment, cumulative odds ordinal logistic regression with proportional odds was conducted using the GENLIN ordinal regression procedure in SPSS. Tests for the homogeneity of odds and multicollinearity were conducted. Two sets of analyses were run for each victimization and SES outcome. The first model included the respective victimization variable, the demographic controls, and the weighting variables. The second model included all of these variables, plus the mediators.

## Results

### Descriptive Statistics

**Covariates, victimization, and SES**. A discussion of descriptives for participant demographic controls, parent victimization variables, and SES outcome variables can be found in Chapter 2. For more detailed results, see Table 2.1.

**Integration mediators.** The mean of the objective integration with parents measure was 3.85 (*SD* = 1.90) for objective integration with mother and 2.78 (*SD* = 1.88) for objective integration with father. The mean of the subjective integration of parents measure was 4.52 (*SD* = .566) for subjective integration with mother and 4.29 (*SD* = .725) for subjective integration with father. For frequencies and percentages regarding the friend integration measures, see Table 3.1.

### Bivariate Associations

**Victimization and integration**. Independent-samples t-tests revealed that *physical victimization-yes/no* was significantly associated with all of the parent

integration measures: subjective integration with mother, $t(4206) = -5.48$, $p < .001$, objective integration with mother $t(4206) = -2.823$, $p < .01$, subjective integration with father, and objective integration with father $t(4206) = -3.73$, $p < .001$. *Sexual victimization-yes/no* was significantly associated with objective integration with mother, $t(4206) = -2.009$, $p < .05$, subjective integration with mother, $t(4206) = -2.333$, and objective integration with father, $t(4206) = -7.90$, $p < .001$. Sexual victimization was not significantly associated with objective integration with father ($p = .558$).

Chi-square tests revealed that *physical victimization-yes/no* was significantly associated with objective friend integration and subjective friend integration ($\chi^2$ (1) = 17.88, $p < .001$; $\chi^2$ (1) = 13.70, $p < .01$; respectively). Chi-square tests revealed that *sexual victimization-yes/no* was significantly associated with subjective friend integration ($\chi^2$ (1) = 8.33, $p < .01$), but not with objective friend integration ($p = .279$).

**Integration and socioeconomic status**. With regard to income, subjective friend integration was significantly associated with income, $F(3) = 5.410$, $p < .01$, but objective friend integration was not ($p = .463$). For parents, income was significantly associated with objective integration with mother ($r = .100$, $p < .001$), objective integration with father ($r = .078$, $p < .001$), and subjective integration with mother ($r = .052$, $p < .01$) were all modest. Income was not associated with subjective integration with father ($p = .076$).

With regard to education, both objective friend integration and subjective friend integration were significantly associated with educational attainment, ($\chi^2$ (1) = 36.2, $p < .001$; $\chi^2$ (1) = 51.60, $p < .01$; respectively). To conduct chi-square tests for parent integration, the continuous variables were recoded as categorical with 4 categories based on their quartiles. Results indicated significant associations between education and

objective integration with father ($\chi^2$ (1) = 24.7, $p$ < .001), objective integration with mother ($\chi^2$ (1) = 36.8, $p$ < .001), and subjective integration with mother ($\chi^2$ (1) = 14.5, $p$ < .01). Education was not significantly associated with subjective integration with father ($p$ = .105).

**Multivariate Analyses**

**Type/severity-both types of victimization and education**. As discussed in Chapter 2, ordinal regression analyses revealed that type/severity- multiple types was significantly predictive of educational attainment, even after controlling for demographic covariates but before controlling for mediators (Model 2). Specifically, participants reporting *both types* of parent victimization were a little over half as likely to be in a higher education category ($exp^B$ = .686; 95% *CI*, .477 to .988), compared to those participants experiencing *no victimization*, $\chi^2(1) = 5.88$, $p < .05$. Participants reporting *physical victimization* were a little over half as likely to be in a higher education category ($exp^B$ = .584; 95% *CI*, .286 to 1.192 than participants experiencing *no victimization*, $\chi^2(1) = 3.97$, $p < .05$.

When parent and friend integration mediators were included in the analyses (Model 3), *physical parent victimization* was no longer a significant predictor of education ($p$ = .797). Participants reporting *both types* had a significantly lower odds ratio after including mediators ($exp^B$ = .533; 95% CI, .422 to .906). *Objective integration with mother* was the only parent integration variable to be a significant predictor of educational attainment; a one unit increase in objective integration with mother was associated with an increase of 4.25 in the odds of being in a higher education category (95% *CI*, 2.644 to 6.844), $\chi^2(1) = 13.6$, $p < .001$. Both *subjective friend integration* and

*objective friend integration* were significant predictors of educational attainment. Specifically, participants with lower subjective integration with friends (i.e., who reported friends as caring *none to a little*) were half as likely ($exp^B$ = .578; 95% *CI*, .375 to .892), to be in a higher education category than participants who reported that friends cared *very much,* $\chi^2(1) = 3.91$ $p < .05$. With regard to objective friend integration, participants reporting *no female friend* were almost half as likely ($exp^B$ = .480; 95% CI: .260 and 1.183) to be in a higher educational category than participants with *both a female and male friend*, $\chi^2(1) = 4.087$, $p < .05$. Participants reporting *neither a female nor male friend* ($exp^B$ = .592; 95% CI: .374 and 1.279) were a little over half as likely to be in a higher educational category than participants with both a female and male friend (see Table 3.2 for more detailed results).

**Type/severity-both types of victimization and income**. When adjusting for demographic covariates but not controlling for mediators (Model 2), type/severity-both types was significantly associated with income. Specifically, *both types* and *sexual victimization* were both significantly associated with income ($\beta$ = -.055, $p < .01$; $\beta$ = -032, $p < .05$; respectively). When mediators were included (Model 3), the relationship between *sexual victimization* and income was no longer significant ($\beta$ = -.017, $p < .05$) and the relationship between *both types* and income was reduced ($\beta$ = -.048, $p < .05$).

When integration mediators were entered in the model (Model 3), just one parent integration variable, *objective integration with mother*, was significantly associated with income ($\beta$ = .057, $p < .05$). One of the friend integration variables, *subjective integration with friends*, was significantly associated with income; *none to a little* integration was

significantly associated ($\beta$ = -.037, $p < .05$) with income, as compared to *a lot*. See Table 3.3 for more details.

**Severity-multiple instances and educational attainment**. Examination of the effects of severity of childhood physical victimization on education, adjusting for demographic controls but before controlling for mediators (Model 2), revealed a significant relationship between physical victimization and education. For participants who experienced *frequent physical victimization t*he odds of increasing on an educational category was a little over half ($exp^B$ = .535, 95% *CI*, .350 to .817) that of participants experiencing no *victimization*, $\chi^2(1) = 3.14$, $p < .01$.

When integration mediators were included in the ordinal analyses (Model 3), participants reporting *frequent victimization* was almost half as likely to be in a lower educational category **(**$exp^B$ = .449, 95% *CI*, .358 to .842) than participants experiencing *no victimization*, $\chi^2(1) = 3.38$, $p < .01$. Both *objective integration with mother* and *subjective integration with mother* were significant predictors of educational attainment when entered in the model. Every unit increase on the variable subjective integration with mother was associated with being about 1.8 times as likely to be in a higher educational category ($exp^B$ = 1.85; 95% *CI*, .731 to 1.992), $\chi^2(1) = 2.915$, $p < .05$. Every unit increase on the variable objective integration with mother was associated with being about 4.28 times more likely to be in a higher educational category ($exp^B$ = 4.276, 95% *CI*, 1.005 to 5.51), $\chi^2(1) = 12.6$, $p < .001$.

Only one friend variable, s*ubjective friend integration,* was a significant predictor of educational attainment. Participants experiencing *none to a little* integration were about half as likely to be in a higher education category ($exp^B$ = .547, 95% *CI*, .355 to

.842) than those participants who reported *a lot*, $\chi^2(1) = 3.22$, $p < .01$. The chi-square reflected a better fit of the model from Model 1 to Model 2 (274.0 to 322.1) and was significant ($p < .01$). See Table 3.4 for additional results.

**Severity-multiple instances of sexual victimization and income**. With regard to the relationship between severity of sexual victimization and income, in Model 2 both *one instance* of parent sexual victimization and *more than one instance* of sexual victimization were associated with adult personal income ($\beta = -.038$, $p < .05$; $\beta = -.044$, $p < .01$). When integration variables were entered in the model, only *objective integration with mother* was significantly associated with income ($\beta = .058$, $p < .01$). When friend integration variables were entered in the model (Model 2), only *subjective integration with friend* was significantly associated with income such that *none to a little* ($\beta = -.037$, $p < .01$) were significantly associated with income, as compared to *very much*. See Table 3.5 for additional results

## Discussion

Overall, results suggest that the life course perspective in general and the linked lives theme in particular are important to understanding and explaining the relationship between victimization and SES. In some cases, results indicate that victimization, in part, influences SES through social integration both in terms of one's familial and friendship networks. Results were mixed, however, such that, in certain cases only objective or subjective integration is important and only for certain members of one's social network.

### Parent Integration

**Subjective parent integration**. Findings regarding subjective parent integration provide some support for the idea that subjective integration (i.e., feeling loved by, cared

about, and close to one's mother) mediates the relationship between victimization and SES. Specifically, subjective integration with one's mother partially decreased the relationship between frequent physical victimization and educational attainment, even after controlling for demographics. Subjective integration with father was not a significant mediator in any of the analyses.

The importance of subjective integration with one's mother and not with one's father is a provocative finding. Research on attachment theory may help explain the differential effects regarding mothers and fathers. The primacy of the mother-child relationship, as well as the different functions of the mother-child and the father-child relationship has been emphasized by many attachment theorists (e.g., Bowlby 2008; Paquette 2004). Research indicates that mothers offer a sense of security and are used as a secure base throughout the life course more often than any other attachment figure, including fathers (Markiewicz et al. 2006). In fact, of all possible attachment figures (e.g., mothers, best friends, romantic partners), fathers were used the least. To the degree that mothers play such an important role in the security of children, it may be that victimization disrupts this relationship the most in terms of subjective social integration. Trust in one's mother may especially suffer as a result of victimization and victims may blame mothers for victimization regardless of its source. Because the relationship with one's primary attachment figure informs working models of one's self and others (Bowlby 1980), disruptions in the mother-child bond may interrupt not only one's subjective integration with one's mother, but also one's subjective and objective integration with others. Instead of serving an attachment function, fathers are often used instead as an activating figure in a child's life, with fathers more likely to excite or

encourage risk-taking in children (Paquette 2004); thus, objective integration with fathers may matter more.

**Objective parent integration**. Objective parent integration (i.e., number of activities parents engaged in with children) mediated several of the victimization/SES relationships. More specifically, objective integration with one's mother (and not one's father) was an important mediator of both physical and sexual victimization and SES. From a life-course perspective, this suggests that linked lives is an important theme that victimization researchers might explore in more depth. More specifically, researchers should consider examining different aspects of linkages and more clearly define the specific components of the linkages (e.g., cognitive, emotional, informational).

In addition, these results are consistent with Becker and Tome's human capital theory (1994) that non-human capital (i.e., parent income and assets) as well as human capital (i.e., investment by parents) influence later SES attainment. Mothers engaging in life activities, a type of investment in children, may represent an important form of human capital that serves as a vehicle through which SES may be affected.

The objective integration measure in this study assessed many important activities that may be crucial to educational and income success, including parental discussions about school and personal problems and participation in leisure activities. An in-depth look at these items reveals that they may very well improve SES outcomes by linking children's home and school lives by conveying human capital, and by improving children's interpersonal skills and coping strategies.

More specifically, mother's discussions with children around their schoolwork and other school-related issues may have an effect on education and income by

improving children's relationships with teachers and peers and by improving performance in school. These discussions may also serve to link children's school and home life. Mother's discussions about personal problems and life may affect success in school and work by helping children to develop effective coping strategies to deal with obstacles and to develop important interpersonal skills that promote successful relationships with and feelings of connectedness with others. Mother's engagement with children in everyday activities such as shopping, playing a sport, going to the movies, and attending religious services may affect SES outcomes by expanding children's early social networks with both children and adults that in the short-term and long-term enhance educational and work connections. In addition, parent-child interactions in everyday activities may improve later SES by affording important social learning opportunities through which children can acquire both interpersonal skills and self-efficacy (Bandura 2001). Greater social competence has been linked to educational and occupational success (McLelland, 1973; Webster-Stratton and Reid 2004).

In addition to providing support for the linked lives theme, results suggest that the pathways by which victimization disrupts objective integration with one's mother cannot be entirely explained by family background variables, such as mother's education and income or general family dysfunction. Earlier work on childhood victimization and SES has failed to comprehensively control for family background variables, particularly with regard to family structure. Another variable that would be important to control for and examine in future studies is the sex of the perpetrator. The ways in which the sex of the perpetrator affects both objective and subjective integration with the child victim, both on the part of the victimizing and non-victimizing parent, is important to consider. It is likely

that the mechanism by which victimization affects maternal involvement is dependent on the sex of the victimizing parent. In the case of mother-as-perpetrator, abusing mothers may treat victims more poorly because of conscious or unconscious devaluing of their abused child(ren).

Research suggests that there are negative associations between child parent victimization and both parent involvement and the positivity of attitudes and beliefs toward children (Holden and Edwards 1989; Simons et al. 1994). Although it is highly likely that attitudes about children predict parental victimization, it is possible that the relationship is bi-directional. Inflicting harm on another person, for example, may result in more negative attitudes toward that person. In the same way, parents who harm their children may form negative attitudes toward them; these attitudes may inform the caring that they feel for them and the time and energy they are willing to invest.

When mothers are not the perpetrators of child victimization, they may still suffer negative psychological consequences that go on to influence how they interact with the child victim. Some mothers may feel guilty for not having protected their child while other mothers may side with the offending parent and blame the child for the abuse. This guilt or victim-blaming may serve as a psychological impetus for mothers to distance themselves from the victimized child and spend less time with them, in order to avoid these negative feelings. Another possible explanation is that mothers of a victimizing spouse may themselves be victims of violence and may have little time or energy to devote to the child victim.

There are a number of possible reasons why objective father integration was not found to be a significant mediator of the relationship between victimization and SES. One

explanation is that objective integration with parents measured as simply the number of activities that parents engage in with their child might fail to capture the ways in which father's investment in their children is manifested. Moreover, engagement in everyday activities with children may not be the primary mechanism through which objective integration with fathers affects SES outcomes. Other parental involvement variables (e.g., more direct measures of parent-school involvement) might play a more important role for fathers. Finally, to the degree that fathers are often the perpetrators of childhood victimization, a disengagement by fathers, in the form of less time spent with the father, may serve as a protective factor from further abuse by minimizing the contact that children have to spend with their father and by providing a welcome emotional relief from a parent who may elicit fearful and painful emotions. It is also possible that it is the child who distances her/himself from the perpetrator.

It is also important to consider the effects of victimization on a more global feeling of and actual integration with one's family. Briere and Elliot (1993) argue that childhood victimization disrupts overall family functioning and within-family relationships, as well as familial relationships with non-familial others and institutions. Familial objective integration may represent a more potent predictor of SES in that it is linked to the mobilization of and access to broader social networks that are crucial to SES.

**Friend Integration**

**Subjective friend integration**. Findings for friend integration were opposite of those for parent integration. There was support for the role of subjective friend integration as a mediator of the relationship between victimization variables and SES

outcomes, while support for the role of objective friend integration was limited. This suggests that early childhood victimization may influence the felt sense of being cared about by one's peers, which, in turn, influences SES.

With regard to the first pathway (i.e., from victimization to subjective friend integration), parent victimization likely affects one's subjective integration with friends by way of its influence on the parental bond. As discussed above, impairment of the parental bond is associated with more negative views of others and with difficulties trusting others. As a result of victimization, children may inaccurately judge others as having hostile intentions or as being only concerned with themselves, leading victimized children to, overall, judge others as less caring. Research suggests that victimized children may be fearful and suspicious of others even when peers are acting in a positive way and actively resist positive overtures (Howes and Eldredge 1985; George and Main 1979). To the degree that this avoidance of others leaves peers with little opportunity to get to know the victimized child, peers may develop less caring for and weaker bonds with abused children. Insecure attachments to parents, as a result of victimization, may also negatively affect children's sense of self and may leave children feeling unworthy of care and love. Research (Mullen et al. 1996) indicates that victimized children have decreased levels of self-esteem, especially when they are victims of sexual abuse. Despite their peers' best attempts, victimized children may inaccurately feel as if their peers do not think highly of them.

The felt sense by victimized children that their peers do not care about them may also be grounded in reality, however. This may be especially the case for physically abused children. Research using teacher and mother ratings of children's behavior and

peers' nominations and ratings (Salzinger et al. 1993) found that abused children were more likely to be rated as aggressive and uncooperative and to have lower peer status; in actuality, physically abused children were reported to be more aggressive. Although sexually abused children also rank higher than their peers in aggressiveness, recent research has indicated that they do not appear to have the same problems with peer relationships and may engage in more social withdrawal than physically abused children (Anthonysamy and Zimmer-Gembeck, 2007).

With regard to the second pathway (i.e., subjective friend integration to SES), subjective integration with friends likely affects SES primarily by way of its expansion of social networks, or increased objective integration. Feeling cared about by others may lead one to seek out and form larger friendship networks. However, subjective integration with friends may also have a more direct effect. As discussed above, a greater social connectedness and relatedness to peers is predictive of a decreased likelihood of dropping out of high school and an increased likelihood of graduating from high school (Dubois 1994). Positive feelings toward peers may provide children motivation to attend and perform well at school. In addition, feeling cared about by peers may provide victimized children a psychological safe haven that helps them face adversities not only in the home but also at school and in the workplace. Feeling cared about by others may also be a proxy for connections with more prosocial peers who are more invested in them and less aggressive. Abused children who feel less cared about, on the other hand, may be involved with more antisocial peers who provide them little by way of tangible support and resources, who serve as another source of stress and victimization, and who lead them into deviant behaviors, like drinking.

**Objective friend integration** Results also found that objective integration with friends, specifically with one's female friend, mediated the relationship between severity of physical childhood victimization and adult educational attainment. Studies have found that physically victimized children not only receive more negative peer perceptions and lower peer rankings than their non-victimized peers, but that they have smaller social networks as well (Haskett and Kistner 1991; Salzinger et al. 1993). Research has also found that sexually victimized children are also more likely to be socially isolated (Browne and Finkelhor 1986; Putnam 2003). Although both types of parent victimization may lead to smaller social network size, the mechanism by which they occur may operate differently. Studies have found that physical victimization is linked to more problematic peer relationships, while sexual victimization is linked not to poorer peer relationships, but lower self-esteem (Manly et al. 1994; Bolger et al. 1998). Physical victimization may result in smaller peer networks because of physically victimized children's tendency toward aggressiveness, while sexual victimization may lead to insularity because of victim's belief that they are damaged or unlovable.

With regard to the second pathway by which integration affects SES, results regarding objective friend integration provide some support for the contention that actual networks are important for SES attainment (Granovetter 1973). Research on social relationships and educational attainment has found that the existence of social relationships and social support are linked with success at all levels of schooling (Garnier et al. 1997; Nicpon et al. 2006; Wentzel, 1999).

**Sex Differences in Integration**

It is noteworthy that in both sets of analyses, integration with female significant others (i.e., mothers and female friends) was a significant mediator while integration with male significant others was not. This suggests that, as discussed above for parents, victimization affects relationships with females to a greater degree and/or in different ways than relationships with males. It may also mean that relationships with females have a more positive effect on SES than relationships with males. Although males have more social and economic resources (Carli, 1989; DeNavas-Walt and Proctor 2014) that are beneficial to SES, they are also more likely to engage in deviance and other antisocial behaviors (Bjerregaard and Smith 1993) that may undermine SES acquisition. Therefore, associations with males may reduce one's own SES attainment. On the other hand, female relationships may be beneficial to long-term outcomes to the extent that they are more likely to promote prosocial behaviors that enhance SES (Riegle-Crumb 2006). For example, research on friendship networks and academic success have found that male friendships have a negative net effect on education while female relationships have a positive effect because they have more positive attitudes toward school and skills that promote educational attainment (Younger and Warrington 1996). In addition to the promotion of prosocial behavior, relationships with females, as discussed earlier, may provide emotional support and a felt sense of security (Antonucci and Akiyama 1987). Together these psychological resources may foster abilities and attributes (e.g., relational skills, general perseverance) that promote success in a number of life domains, including SES (Mattanah et al. 2004; Styron and Janoff-Bulman 1997).

**Strengths**

One of the major strengths of this study is that it is one of the first studies to begin to explore the mechanisms by which childhood victimization affects adult SES. By looking at a sociological indicator such as social integration, it seeks to explain these relationships in terms of connections with others rather than individual-level factors. In addition, this study conceptualized social integration as an empirical test of the linked lives theme in the life course perspective. While researchers studying victimization have found evidence for the application of the life course perspective with respect to disrupted trajectories, the examination of a specific theme within the perspective is an important contribution.

Another major contribution of this study is the examination of educational attainment as an outcome rather than a mediator. Although Macmillan (2000) and Zielinski (2009) argued that education variables operate best as mediators, results suggest that education is an important SES outcome in its own right. Discrepant findings regarding income and education for different types and sources of integration point to the fact that these two SES indicators should be examined separately. Processes involved in income attainment may not be the same as those associated with educational attainment; victimization may affect income and education in different ways and through different mechanisms.

Finally, another major contribution of this study was that it considered two types of integration: subjective and objective. Previous research (Dubois 1994) suggests that perceived integration with school and family is one of few variables that affect educational outcomes. Since more objective integration (e.g., social networks) is more widely understood to be associated with long-term SES, the examination of subjective

integration is especially significant. Each of these types of integration has the potential to influence SES in unique ways, both in terms of the strength of the effect and the type of SES outcome on which they operate.

**Limitations**

**Methodological concerns.** One methodological concern of this study was the measurement of the integration variables, particularly the objective integration variables. The parent measure may not have adequately assessed parental involvement and a better objective friendship measure may have been total number of friends, rather than a measure of social isolation (i.e., having no friends). In addition, since most of the study variables were based on self-report, they may not have accurately reflected past or present experiences. For example, psychological variables like neuroticism might explain the relationship between victimization and social integration since individuals high in neuroticism may be more likely to remember past victimization and to rate their current relationships as problematic.

In addition, a more complex assessment of integration is necessary since victimization is associated with opposite and extreme reactions with respect to relations with others. Specifically, victimization may cause victims to socially isolate or become highly dependent on and enmeshed with others. Thus, victimization has the potential to greatly expand objective social networks or severely limit them, making it difficult to assess the exact relationship between victimization and integration. These extreme effects may have differing and potentially opposing effects on SES. This dual effect of victimization on integration may also be evident in subjective assessments of integration with others. Extremely positive and highly idealized perceptions of significant others may

be as likely as extremely negative perceptions of others in victims and may even be evident in the same individual (Lewis and Christopher 1989).

**Analytic concerns.** There are a number of assumptions of mediation that must be met in order to confidently accept the results of mediational analyses. Not all of these assumptions will be addressed here (for a detailed discussion, see MacKinnon 2008), but some of the most relevant ones for this study will be explored. One of the main assumptions of mediation is that the timing of the measurement of the mediator and the dependent variable is correct, so that the assessment of these variables corresponds to time points at which variables are expected to change (MacKinnon 2008). The reason for choosing mediators from Wave II was to position the mediator shortly after (i.e., approximately one to a few years) victimization occurred and still within the period of early to middle childhood. It is during this time that experiences of victimization may change objective and subjective integration factors. The dependent variable was selected from Wave IV since this is when changes in SES would have taken effect. Still, the timing of assessment of the mediator and dependent variable may have been problematic.

Another assumption of mediation is that there is a causal relationship between variables (VanderWeele 2010). There are many different types of third variable relationships including moderation and confounding. It is possible that relationships among social integration, childhood victimization, and adult SES may be the result of other types of relationships, particularly since there is evidence that social-relational variables like social support acts as both a moderator and mediator (Dunkley et al. 2000) However, there is considerable previous theoretical and empirical evidence to suggest a

mediational effect of social integration. Further studies might explore, however, the potential of social integration to moderate the effect of victimization on income.

Finally, and perhaps most importantly, is the assumption that the causal ordering of the variables is correct (MacKinnon 2008). Reverse causality may be a concern especially with respect to the mediator and dependent variables. This is perhaps most likely in the case of parents, where lower parent integration may make one more vulnerable to victimization by parents and strangers alike. Future research should employ more advanced statistical techniques such as structural equation modeling and latent class analysis to assess issues related to the causal ordering of these variables.

**Future Directions**

In addition to the suggestions above, future research might focus on more macro level measures of integration. For example, neighborhood perceptions of collective efficacy and availability of community resources represent subjective and objective macro level indicators, respectively, that may be affected by victimization and influence SES. Finally, in its focus on parents and close friends, this paper only examined the mediating effect of perceived and objective strong ties. To the degree that weak ties are associated with SES attainment (Granovetter 1973), future researchers might consider examining acquaintances, teachers, or co-workers.

Table 3.1. Descriptive Statistics, All Measures Used in Analysis (N=4,206)

| Variable | N | % | Range | M | SD | Skew |
|---|---|---|---|---|---|---|
| **Parent Integration** | | | | | | |
| Objective mother: Number of activities | | | 1-9 | 3.85 | 1.90 | .083 |
| Objective father: Number of activities | | | 1-9 | 2.78 | 1.88 | .444 |
| Subjective mother- Caring from mother | | | 1-5 | 4.52 | .566 | -1.735 |
| Subjective father- Caring from father | | | 1-5 | 4.29 | .725 | -1.439 |
| **Friend Integration** | | | | | | |
| Objective: Friends Care | | | | | | |
| *none to a little* | 110 | 2.6 | | | | |
| *somewhat* | 505 | 12.0 | | | | |
| *quite a bit* | 1483 | 35.3 | | | | |
| *a lot* | 2108 | 50.1 | | | | |
| Subjective: Type of Friend | | | | | | |
| *neither female or male* | 53 | 1.3 | | | | |
| *male only* | 257 | 6.1 | | | | |
| *female only* | 171 | 4.1 | | | | |
| *both types* | 3725 | 88.6 | | | | |

Source: Add Health (1994-2008)

Table 3.2. Ordinal Regression Estimating the Effects of Severity (i.e., both types) of Victimization on Educational Attainment Mediated by Social Integration

| Variable | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| | Odds ratio (CI 95%) | Odds ratio (CI 95%) | Odds ratio (CI 95%) |
| Type (ref = neither) | | | |
| *Physical only* | .443* (.223- .881) | .584* (.286, 1.192) | .952 (.434, .906) |
| *Sexual only* | 1.16 (.987- 1.37) | 1.214 (.775- 1.345) | 1.351 (1.134, 1.610) |
| *Both types* | .577** (.406- .820) | .686** (.477- .988) | .533* (.442, .906) |
| Sex (ref = male) | | | |
| *female* | | 1.803** (1.559, 2.087) | 1.669** (1.421, 1.960) |
| Race (ref = white) | | | |
| *Black* | | .797 (.623, 1.020) | .790 (.611, 1.021) |
| *Asian* | | 1.033 (.693, 1.540) | 1.371 (.926, 2.030) |
| *other* | | 1.024 (.835, 1.256) | .917 (.749, 1.124) |
| Ethnicity (ref = non-Hispanic) | | | |
| *non-Hispanic* | | .678* (.476, 1.103) | .690* (.512, .973) |
| Parent Marital (ref = married) | | | |
| *single* | | .739 (.532- 1.027) | .939 (.677, 1.302) |
| *other* | | 1.137 (.942, 1.372) | 1.184 (.979, 1.433) |
| Mother Education (ref = did not graduate h.s.) | | | |
| *high school* | | 2.049*** (1.619, 2.592) | 1.725 (1.357, 2.193) |
| *college* | | 3.637*** (2.814, 4.702) | 3.472 (2.670, 4.513) |
| *post* | | 4.893*** (3.376, 7.091) | 4.487 (3.082, 6.533) |
| Father Education (ref =did not graduate h.s.) | | | |
| *high school* | | 1.232 (.989, 1.534) | 1.511 (1.204, 1.894) |
| *college* | | 3.308*** (2.562, 4.270) | 2.961 (2.289, 3.381) |
| *post* | | 4.536*** (3.207, 6.415) | 4.101 (2.896, 5.807) |
| Stepfather (ref = no stepfather) | | | |
| *has stepfather* | | .782** (.669, .935) | .575** (.197, 1.691) |
| Parent Income | | 2.389* (1.673, 3.410) | 2.692*** (1.880, 3.854) |
| Subjective Integration-Mother | | | .869 (.746, 1.012) |
| Objective Integration-Mother | | | 4.254*** (2.644, 6.844) |
| Subjective Integration-Father | | | 1.105 (.973, 1.255) |
| Objective Integration-Father | | | 1.151 (.707, 1874) |
| Subjective Integration- Friend (ref = very much) | | | |
| *none to a little* | | | .578* (.375, .892) |
| *somewhat* | | | 1.002 (.796, 1.263) |
| *quite a bit* | | | 1.131 (.964, 1.326) |
| Objective Integration-Friend (ref = male & female friend) | | | |
| *neither male nor female* | | | .592* (.374, 1.279) |
| *no male* | | | 1.015 (.715, 1.441) |
| *no female* | | | .480* (.260, 1.183) |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college. N=4,206

Source: Add Health (1994-2008)

Table 3.3. OLS Regression Predicting Annual Personal Income (Natural Log) by Severity (i.e., both types) of Victimization Mediated by Social Integration

| **Variable** | **Model 1** | **Model 2** | **Model 3** |
|---|---|---|---|
| | β | β | β |
| Type of victimization (ref = neither) | | | |
| *physical only* | .010<br>(.070) | .009<br>(.068) | .013<br>(.068) |
| *sexual only* | -.030*<br>(.326) | -.032*<br>(.314) | -.017<br>(.314) |
| *both types* | -.051**<br>(.151) | -.055**<br>(.146) | -.048*<br>(.146) |
| Sex (ref = male) | | | |
| *Female* | | -.176**<br>(.057) | -.188**<br>(.061) |
| Race (ref = white) | | | |
| *Black* | | -.030<br>(.085) | -.024<br>(.086) |
| *Asian* | | .044**<br>(.148) | .048**<br>(.148) |
| *other* | | -.005<br>(.100) | -.001<br>(.099) |
| Ethnicity (ref = non-Hispanic) | | | |
| *Hispanic* | | -.048**<br>(.110) | -.046**<br>(.117) |
| Parent Income | | .028<br>(.001) | .029<br>(.001) |
| Parent Marital (ref = married) | | | |
| *single* | | -.004<br>(.134) | .012<br>(.134) |
| *other* | | -.039**<br>(.074) | -.034**<br>(.074) |
| Mother Education (ref = did not graduate h.s.) | | | |
| *high school* | | .134*<br>(.103) | .115***<br>(.103) |
| *college* | | .162*<br>(.108) | .153***<br>(.108) |
| *post college* | | .123**<br>(.146) | .123***<br>(.147) |
| Father Education (ref = did not graduate h.s.) | | | |
| *high school* | | .085**<br>(.095) | .063*<br>(.095) |
| *college* | | .141**<br>(.103) | .124**<br>(.103) |
| *post college* | | .071**<br>(.135) | .062**<br>(.136) |
| Stepfather (ref = no stepfather) | | | |
| *yes* | | -.033*<br>(.076) | -.049**<br>(.080) |
| Subjective Integration-Mother | | | -.012<br>(.060) |
| Objective Integration-Mother | | | .057**<br>(.189) |

| | | | |
|---|---|---|---|
| Subjective Integration-Father | | | -.011<br>(.051) |
| Objective Integration-Father | | | .040<br>(.195) |
| Subjective Integration- Friend<br>(ref = very much) | | | |
| *none to a little* | | | -.037*<br>(.175) |
| *somewhat* | | | -.024<br>(.096) |
| *quite a bit* | | | .024<br>(.063) |
| Objective Integration-Friend<br>(ref = male & female friend) | | | |
| *neither male nor female* | | | .011<br>(.265) |
| *no male* | | | .015<br>(.124) |
| *no female* | | | -.009<br>(.143) |
| Adjusted R-square | .006 | .071 | .082 |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income.
N=4,206
Source: Add Health (1994-2008)

Table 3.4. Ordinal Regression Estimating the Effects of Severity (i.e., frequency) of Physical Victimization on Educational Attainment Mediated by Social Integration

| **Variable** | **Model 1** | **Model 2** | **Model 3** |
|---|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Severity Physical (ref = none) | | | |
| *infrequent* | .455** (.304, .681) | .757 (.463- 1.240) | .643 (.452, 1.220) |
| *frequent* | .564** (.363- .877) | .535** (.350- .817) | .449** (.358, .842) |
| Sex (ref = female) | | | |
| *male* | | 1.787*** (1.545, 2.068) | 2.586*** (1.361, 1.850) |
| Race (ref = white) | | | |
| *Black* | | 1.016 (.846, 1.223) | 1.068 (.870, 1.312) |
| *Asian* | | .860 (.688, 1.074) | 1.152 (.772, 1.717) |
| *other* | | .968 (.680, 1.377) | .854 (.666, 1.093) |
| Ethnicity (ref = non-Hispanic) | | | |
| *Hispanic* | | .677 (.529, 1.167) | .637 (.489, 1.016) |
| Parent Marital (ref = married) | | | |
| *single* | | .715* (.515- .994) | .700* (.502, .976) |
| *other* | | 1.119 (.927- 1.349) | 1.104 (.913, 1,314) |
| Mother Education (ref = did not graduate h.s.) | | | |
| *high school* | | 2.010*** (1.590, 2.541) | 1.870*** (1.476. 2.368) |
| *college* | | 3.376*** (2.616, 4.637) | 3.291*** (2.467, 4.100) |
| *post* | | 4.793*** (3.309, 6.942) | 4.107*** (2.825, 5.972) |
| Father Education (ref = did not graduate h.s.) | | | |
| *high school* | | 1.261* (1.014, 1.570) | 1.202*** (.964, 1.498) |
| *college* | | 3.337*** (2/659, 4.387) | 3.102*** (2.999, 4.010) |
| *post* | | 4.592** (3.247, 6.493) | 4.350*** (3.068, 6.167) |
| Stepfather (ref = no stepfather) | | | |
| *has stepfather* | | .701** (.625- .812) | .731** (.611, .913) |
| Parent Income | | 2.435** (1.704, 3.480) | 2.246*** (1.569, 3.215) |
| Objective Mother Integration | | | 4.276*** (2.658, 6.880 |
| Objective Father Integration | | | 1.167 (.716, 1.904) |
| Subjective Mother Integration | | | 1.851* (.731, 1.992) |
| Subjective Father Integration | | | 1.110 (.976, 1.263) |
| Objective Friend Integration (ref = male & female friend) | | | |
| *Neither male nor female* | | | .721 (.305, 1.334) |
| *Male only* | | | .835 (.616, 1.131) |
| *Female only* | | | 1.121 (.790, 1.591) |
| Subjective Friend Integration (ref = very much) | | | |
| *none to a little* | | | .547** (.355, .842) |
| *somewhat* | | | 1.103 (.875, 1.389) |
| *quite a bit* | | | 1.167 (.966, 1.369) |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college.
N=4,206
Source: Add Health (1994-2008)

Table 3.5. OLS Regression Predicting Annual Personal Income (Natural Log) by Severity (i.e., frequency) of Sexual Victimization Mediated by Social Integration

| Variable | **Model 1** | **Model 2** | **Model 3** |
|---|---|---|---|
| | β | β | β |
| Severity of Sexual (ref = none) | | | |
| *once* | -.039*<br>(.187) | -.044**<br>(.188) | -.041**<br>(.189) |
| *more than once* | -.043**<br>(.201) | -.038*<br>(.194) | -.032*<br>(.194) |
| Sex (ref = male) | | | |
| *Female* | | -.176***<br>(.058) | -.193***<br>(.061) |
| Race (ref = white) | | | |
| *Black* | | -.030<br>(.087) | -.024<br>(.087) |
| *Asian* | | .044**<br>(.138) | .049**<br>(.138) |
| *other* | | -.004<br>(.098) | -.001<br>(.099) |
| Ethnicity (ref = non-Hispanic) | | | |
| *Hispanic* | | -.041*<br>(.113) | -.046*<br>(.113) |
| Parent Income | | .033<br>(.001) | .032<br>(.001) |
| Parent Marital (ref = married) | | | |
| *single* | | .008<br>(.135) | .007<br>(.135) |
| *other* | | -.051**<br>(.074) | -.048**<br>(.074) |
| Mother Education<br>(ref = did not graduate h.s.) | | | |
| *high school* | | .067***<br>(.104) | .115***<br>(.104) |
| *college* | | .166***<br>(.108) | .152***<br>(.108) |
| *post college* | | .134***<br>(.147) | .122***<br>(.147) |
| Father Education<br>(ref = did not graduate h.s.) | | | |
| *high school* | | .067**<br>(.098) | .063**<br>(.098) |
| *college* | | .131***<br>(.104) | .125***<br>(.105) |
| *post college* | | .069**<br>(.136) | .063**<br>(.136) |
| Stepfather (ref = no stepfather) | | | |
| *yes* | | -.033*<br>(.076) | -.021*<br>(.076) |
| Objective Mother Integration | | | .058**<br>(.190) |
| Objective Father Integration | | | -.011<br>(.196) |
| Subjective Mother Integration | | | -.013<br>(.062) |

| | | | |
|---|---|---|---|
| Subjective Father Integration | | | .039<br>(.052) |
| Objective Friend Integration (ref = male & female) | | | |
| *neither male nor female* | | | .011<br>(.277) |
| *no female* | | | -.051**<br>(.125) |
| *no male* | | | .010<br>(.147) |
| Subjective Friend Integration (ref = very much | | | |
| *none to a little* | | | -.037**<br>(.174) |
| *somewhat* | | | -.022<br>(.097) |
| *quite a bit* | | | .024<br>(.063) |
| Adjusted R-square | .010 | .079 | .081 |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income.
N=4,206
Source: Add Health (1994-2008)

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# Chapter 4

## Race, Ethnicity, and Sex as Moderators of the Relationship Between Childhood Victimization and SES

### Introduction

As discussed in chapter 2, research suggests that childhood physical and sexual victimization is associated with poorer socioeconomic outcomes in adulthood (Zielinski 2009; Macmillan 2001; Macmillan and Hagan 2004). Research also suggests that adulthood victimization affects SES, along with other outcomes (Norris and Kanniesty 1994; Macmillan and Hagan 2004). Importantly, physical and sexual victimization in adulthood does not affect all groups equally in society. For example, adult blacks and Hispanics are overrepresented in terms of violent victimization and adult females are overrepresented in terms of sexual victimization (U.S. Department of Justice 2014). Given the fact that racial and ethnic minorities and females are disproportionately affected by certain types of violent crime, it is important to understand how victimization affects these groups specifically.

### Cumulative Disadvantage, Double Jeopardy, and Agency

As discussed in Chapter 2, victimization represents a disruption to the life course and this may be especially true when victimization adds to other stressors like discrimination (Finkelhor 1995). In this sense, experiencing victimization alongside discrimination represents cumulative disadvantage, and especially poor outcomes may result when multiple forms of disruption and disadvantage work in combination to scar life chances (Dannefer 2003). Accordingly, minority groups that experience

discrimination and other stressors due to minority group membership may experience particularly poor outcomes as a result of victimization.

In addition, Widom et al. (2013) discusses the double jeopardy hypothesis, closely related to cumulative disadvantage (Hannon 2003; DiPriete and Eirich 2006), but specific to racial and ethnic minorities. Double jeopardy predicts worse outcomes for racial and ethnic minorities as a result of negative life events via a compounding effect. From this perspective, disadvantages resulting from victimization exist above and beyond disadvantages related to minority membership. The double jeopardy hypothesis is in direct contrast to the resilience hypothesis that predicts less serious consequences for racial and ethnic minorities as a result of individual and community-level agency. For example, to the extent that racial and ethnic minorities contend with discrimination and other stress, well-developed buffers to these stressors can mitigate the damage done by victimization (Widom et al. 2013). Similarly, disadvantage-saturation (Hannon 2003) argues that minority groups are already profoundly structurally disadvantaged, such that additional burdens like victimization may be less likely to affect future outcomes compared to majority groups. Finally, the double jeopardy hypothesis is also in conflict with the racial invariance hypothesis that predicts similar consequences of negative life events for all groups. When life events are especially serious, they are likely to affect future outcomes similarly for all people (Widom et al. 2013).

The tension between an emphasis on structural constraints evident in the compounding effects described by cumulative disadvantage and double jeopardy and the agency apparent in resilience theories is evident in life course theory as a whole as well. Specifically, one of the major themes within the life course perspective is agency, the

aspect of the life course associated with well-being, satisfaction, and goal attainment (Giele and Elder 1998). Diverging from a more traditional life cycle approach, with its determinist framework, life course theorists emphasize agency, in part, to highlight the possibility of individual differences in life trajectories. This more dynamic approach asserts that individuals may not simply move through stages based upon chronological age, with little to no input regarding how the stages unfold. Individual identity and goals affect the dynamic unfolding of the life course.

This approach helped give rise to postmodern perspectives (Hunt 1985), in which the theme of agency and choice are ubiquitous. The postmodern approaches (e.g., Giddens 1991) focus on the individual nature of the life course and emphasize the multiple options available to individuals in the postmodern world. Choice and flexibility evident in the postmodern world create life stages that are difficult to discern because lifestyle options are nearly unlimited. These approaches argue that personal identity and pursuit of the self are more important and individual than ever before (Hunt 1985); there are at least as many possible life courses as there are people.

Unlike the postmodern conception, the life course perspective balances the agency theme with a focus on constraint such that it may be best understood as agency within constraint. Agency within constraint critiques the postmodern conception of unlimited choice and recognizes individual or structural barriers. For example, while it would be difficult to argue against the idea that modernity has brought about more choice in individual lives, at least in certain regions or nations, choice may be limited to psychological factors like one's sense of self, identity, and meaning. More social factors that are highly dependent on others, such as socioeconomic status, may be less

susceptible to choice. That is, to the extent that one depends on others to achieve her/his socioeconomic status, for example, choice is less relevant than it is in choosing one's identity. In addition, to the extent that these social factors are rooted in choice, choice may not be evenly distributed among all people. For example, a person from the middle class may have choice regarding which college to go to, what type of car to drive, and what career to pursue. In this case, these choices may reflect a sense of self or identity. A working class counterpart, however, may not have as many options available such that decision-making focuses less on identity construction and more on survival. This tension suggests that the agency theme within the life course perspective must be considered alongside constraint.

In this sense, constraint within the larger theme of agency corresponds to cumulative disadvantage and double jeopardy. In this chapter I test the application of constraint, cumulative disadvantage, and double jeopardy by considering the moderating effect of race and sex on the effects of victimization on SES. In addition to these theoretical considerations, previous research regarding social stratification moderators will guide the analyses.

**Research on Social Stratification Moderators**

There are no studies that have examined the moderating effects of sex and race/ethnicity in the relationship between victimization and SES. A few recent studies, however, have looked at sex and race within-group differences in the relationship between victimization and SES outcomes. Other studies have explored and reported sex and racial/ethnic within-group differences regarding the associations between victimization and other outcomes, including physical and psychological health and

substance abuse. To the degree that the presence of physical and psychological victimization are predictive of poorer SES, these studies may also be important to consider in assessing whether sex and race/ethnicity moderate the relationship between victimization and SES.

**Sex**. Research regarding sex differences in the influence of victimization on psychological health have found that women are more likely to be depressed (Whiffen and Clark 1997) and have more PTSD symptoms (Andrews et al. 2003) as a result of victimization, while male victims of sexual abuse are more likely to attempt suicide (Garnefski and Diekstra 1997) and have alcohol problems than female victims of sexual abuse (Romito and Grassi 2007).

Studies looking at within-group differences for males and females in the relationship between victimization and SES have found mixed results. In a study exploring sex differences regarding the effect of early childhood victimization on SES, Currie and Widom (2010) used a longitudinal, cohort design with a matched comparison group. They examined the effect of court substantiated childhood (i.e., 11 years or younger) maltreatment (i.e., familial physical and sexual assault and neglect) on a number of SES outcomes (i.e., job skill, educational attainment, income, and employment), measured during young and middle adulthood. The three maltreatment measures were combined to create a dichotomous variable measuring the presence or absence of any maltreatment. Results suggest that early childhood victimization affects SES differently for females and males. Specifically, in young adulthood, maltreated females had lower educational attainment relative to non-victim females, whereas maltreated males were less likely to be in a skilled job than their non-victim counterparts.

However, by middle adulthood, only females who experienced maltreatment showed effects of early victimization, suggesting that the long-term effects of victimization may disproportionately affect females. Macmillan and Hagan (2004) reported within-group sex differences in a longitudinal study using the data from the National Youth Survey. They found that female victims of violence in adolescence were more likely to be unemployed in adulthood than non-victims; the same did not hold true for males. Instead, male victims of adolescent violent victimization had lower wages in adulthood than male non-victims.

Other recent studies have reported either non-significant findings regarding sex differences or worse outcomes for males. In a longitudinal study using the National Youth Survey Family Study (NYSFS), Covey et al. (2013) examined three self-reported measures of direct or indirect victimization (i.e., witnessing parental violence, perceptions of neighborhood, and parental physical abuse), occurring from childhood to young adulthood. Results revealed no sex differences for each of the three measures on adult SES outcome measures (e.g., educational attainment, employment, income, and wealth).

Tanaka et al.'s (2011) study using the Ontario Child Health Study assessed the effects of parental childhood physical abuse (CPA) and childhood sexual abuse (CSA) before age 16 on young adult (i.e., 21-35 years) employment status and annual personal income. The authors considered differential outcomes for severe and non-severe CPA, measured by frequency. Like Covey, results regarding non-severe CPA and CSA revealed no sex differences, although the relationship between CSA and unemployment approached significance for females. With respect to severe CPA, there were significant

sex differences regarding the relationship between maltreatment and SES. Specifically, male victims had lower employment rates than female victims. While female victims and non-victims showed no differences in SES outcomes, male victims had lower employment rates than non-male victims.

Discrepancies regarding within-sex differences among these studies may be due to several methodological factors. Specifically, SES outcomes were measured at different times in adulthood and at different developmental stages in childhood (e.g., early childhood vs. adolescence). Some authors assessed severity of victimization and/or analyzed different types of victimization separately, while others did not. Research on both SES and non-SES outcomes suggest that sex may be an important moderator to consider when looking at the long-term effects of victimization on SES. Overall, as indicated by Zielinski (2009), Macmillan (2001), and the findings of Chapter 2, the presence or absence of victimization is not a sufficient measure to explore the negative consequences of victimization; it is also necessary to consider aspects of victimization, such as type, severity, and timing of victimization, when examining both direct and moderation effects.

One potential explanation for sex differences in the effect of victimization on SES, such that childhood victimization disproportionately affects SES outcomes for females as compared to males, is that females and males experience different types of victimization (Briere and Elliot 2003, Elliot et al. 2004; Acierno et al. 1997; Cutler and Nolen-Hoeksema 1991) and may respond differently to victimization (Thompson et al. 2004). For example, females are more likely to experience sexual victimization and males are more likely to experience physical victimization (U.S. Department of Justice

2015). To the extent that sexual victimization is associated with especially poor outcomes (Holbrook et al. 2002; see findings in Chapter 2), sex differences are expected. Furthermore, responses by females and males to these respective types of victimization may differ. Sexual victimization for females may be especially problematic because it reinforces their already devalued status in society and may be experienced as an attack on one's identity as a woman, which may be particularly disruptive to the acquisition and use of social networks associated with SES attainment. On the other hand, physical victimization for males may not be experienced as an attack on one's identity as a man. Moreover, since sexual victimization is more stigmatizing (Browne and Finkelhor 1986), responses by others to physical and sexual victimization may also differ in that they may respond more negatively to sexual victimization by failing to offer support, denying the victimization, and/or blaming the victim, disrupting relationships that may be particularly important for SES outcomes.

Additionally, victimization for women may actually exacerbate their disadvantage in society (Macmillan 2000). Females are economically disadvantaged and may have fewer resources to address the effects of victimization. They also occupy an already stigmatized status and experience discrimination and social exclusion that may compound the effects of victimization (Widom et al. 2013). Finkelhor (1995) argues that disruptions to the life course due to victimization are especially problematic when combined with discrimination. This is compelling evidence for cumulative disadvantage of victimization for women.

In contrast, the findings that there are no sex differences or that males fare worse may be due to several factors. First, females already experience low SES as a result of

their social and economic disadvantage; therefore, victimization may not meaningfully further reduce their already low SES. Next, because of disadvantages with which they have had to contend and the strategies that they have learned to use to cope with adversity, females may be particularly resilient after victimization, employing more adaptive coping strategies such as emotional support (Widom et al. 2013). Although this increased emotional support may serve as a protective factor when considering the relationship between victimization and mental health outcomes, it may not result in greater resiliency with respect to sociological outcomes such as SES. To the extent that females rely on other same-sex networks for emotional support, the increased use of their networks may offer them little help in the way of overcoming disruptions in SES trajectories.

**Race and ethnicity**. There are no studies examining the moderation of victimization and SES by race or ethnicity. In addition, scarce research has examined within-group differences with regard to race and ethnicity in the relationship between childhood victimization and adult SES. Most of the research regarding race and ethnicity differences has focused instead on health effects of victimization. Some of this research has examined moderation effects (i.e., between-group differences).

Studies examining racial and ethnic differences in mental and physical health have looked at multiple types of victimization and have reported poorer outcomes for minorities post-victimization. Most of these studies have looked at psychological health. With regard to race and ethnicity differences in mental health, one longitudinal study by Delisi et al., (2010) found that criminal victimization in older adults (i.e., 50 years and older) was associated with poorer self-efficacy and self-esteem in Blacks, but not in

whites. An examination of the moderating effect of race/ethnicity revealed higher rates of anger as a result of childhood sexual abuse in African American males as compared to Latino males (Moisan, Sanders-Phillips and Moisan 1997). In comparing minority groups, Sanders-Phillips et al., (1995) found higher depression scores in Latino girls than African American girls who had been victimized.

One study looked at a specific type of sexual victimization and found that Latina girls who experience penetration abuse showed poorer psychological health than Latina girls who did not experience penetration abuse; Blacks and whites showed no such differences (Mennen and Meadow 1995). With regard to physical health, childhood maltreatment has been found to be more influential on general physical well-being in blacks than whites (Nikulina and Widom 2013).

As indicated, few studies have investigated racial and ethnic differences in the relationship between victimization and SES. One longitudinal, cohort-design study (Widom et al. 2013) examined the effects of court-substantiated childhood abuse and/or neglect on a number of outcomes, including occupational status. Blacks and whites showed differences in occupational status when comparing victims to non-victims, whereas Hispanics did not show differences. In a longitudinal study of violent victimization in adolescence (Macmillan and Hagan 2004) African American victims had lower wages as compared to non-victims; the same was not true for other racial and ethnic groups.

Studies examining the race and ethnicity differences in the relationship between victimization and SES demonstrate that racial and ethnic minorities experience worse SES outcomes as a result of childhood victimization. In addition to this empirical

evidence suggesting moderation effects, theoretical research suggest that race and ethnicity may be important moderators to consider because racial and ethnic minorities occupy a disadvantaged position in society and, as a result, victimization may have particularly harmful effects on their SES outcomes (i.e. cumulative disadvantage). For example, because racial and ethnic minorities have lower SES, they may have fewer resources to address the effects of victimization. Also, as with females, racial and ethnic minority groups experience discrimination and social exclusion that may exacerbate the effects of victimization (Widom et al. 2013; Finkelhor 1995). Overall, in combination with findings and studies that use non-SES outcomes, results suggest that race and ethnicity are important potential moderating variables.

**Summary**

Considering the theoretical and empirical discussion above, I hypothesize that sex, race, and ethnicity will moderate the relationship between childhood victimization and adult SES, such that minorities have worse SES outcomes post-victimization than whites. While agency within the life course perspective and the resilience hypothesis suggest that people have the ability to buffer the effects of negative life events, I contend that this may hold true only for previously studied psychological outcomes (e.g., depression). Sociological outcomes like SES are more dependent on social factors that are out of one's control. Furthermore, cumulative disadvantage and double jeopardy theories contend that constraint may be more appropriate in the context of oppressed groups who experience discrimination. One's social location may exacerbate the negative effects of victimization on SES outcomes.

I will examine social stratification moderators of the relationship between any childhood victimization, specifically, and SES. Given the fact that violent victimization (i.e., stranger physical victimization) disproportionately affects racial and ethnic minorities, I will test the moderating effect of race and ethnicity on the relationship between childhood non-parent physical victimization and adult SES. Finally, given that females are disproportionately exposed to sexual victimization, I will test the moderating effect of sex on the relationship between childhood parent sexual victimization and adult SES.

I will also look at race (i.e., being black non-Hispanic) compared to ethnicity (Hispanic non-black) in the relationship between any childhood victimization and adult SES. I predict that this black-Hispanic moderator will exacerbate the victimization/SES relationship. Because blacks experience slightly greater disadvantage than Hispanics (Kochhar and Fry 2014), the effects of victimization on SES may be compounded by especially low levels of resources and high levels of discrimination.

**Hypotheses**

1) *Race (i.e., non-Hispanic white vs. non-Hispanic black)* will moderate the relationships between childhood victimization (i.e., presence of physical or sexual) and income and education. As a result of cumulative disadvantage, the negative effects of early childhood victimization (before grade 6) on young adult socioeconomic outcomes will be greater among blacks, compared to whites.

2) *Ethnicity* will moderate the relationship between childhood victimization (i.e., presence of physical or sexual) and income and education, such that being *Hispanic* (vs. *non-Hispanic white*) will strengthen the negative relationships between these variables.

3) Differences among minority groups will also be examined by comparing *non-Hispanic Blacks to Hispanics. Because of Blacks historical position in U.S. culture, being black* will strengthen the negative relationships between victimization (i.e., presence of physical or sexual) and income and education relative to Hispanics.

4) *Sex* (i.e., female, male) will moderate the relationship between childhood victimization (i.e., presence of physical or sexual) and income and education, such that *being female* (vs. *male*) will strengthen the negative relationships between these variables.

## Methods

### Data and Procedure

I used the Add Health public-use dataset for the analyses in this chapter. Add Health is a longitudinal study, with four waves. Wave I data were collected in 1994-1995 and the three follow-up waves were conducted in 1996, 2001-2002, and 2007-2008. Wave I included an in-school questionnaire and an in-home interview. I only used data from the in-home interview because follow-up waves only included respondents who completed the in-home interview. Students in Wave I were in grades 7-12, while students in Wave II were in grades 8-12. In Waves III and IV, participants were no longer in school and were 18-26 years old and 24-32 years old, respectively. My analytic sample

includes data from all four waves, with independent variables and covariates selected from Waves I-III and dependent variables selected from Wave IV.

**Participants**

**Survey sample**. There were 80 schools selected from a total sampling frame of 26,666. Of the 80 schools selected, 52 agreed to participate. The 28 schools that did not agree to participate were replaced with schools with similar profiles regarding school characteristics like size, census region, and racial make-up. For the in-home interviews, a sample of students was drawn from school rosters. The total sample for the Wave I in-home interview was N = 20,745. The follow-up in-home samples were N = 14,738 (Wave II), 15,197 (Wave III), and 15,701 (Wave IV). The public-use dataset was limited to 6,504 respondents in Wave I, 4,834 respondents in Wave II, 4,882 respondents in Wave III, and 5,113 respondents in Wave IV.

**Analytic Sample**

All respondents with valid answers ($N$ = 6,504) to any of the survey questions were considered for inclusion in this study, as there were no exclusionary criteria. Not all participants were selected to be interviewed at each wave; specifically, there were 1,391 (21%) participants who were not interviewed at Wave IV and 1,623 (25.0%) who were not interviewed Wave III. Participants who had no data on the outcome or predictor variables were deleted from analyses. The race variable consisted of five categories: white, Black, Asian, Native American, and race-other. Participants who selected Asian, Native American, or race-other ($n$ = 470, 11%) were excluded from the analyses because a full analysis of race was beyond the scope of the proposed study, and because of the

limitations associated with the small sample size of these racial categories. The final sample size was 3,736.

The sample consisted of slightly more females (*n* = 2,331, 55.4%) than males (*n* = 1,875; 44.6%). For this study race and ethnicity variables were combined to create a Black, white, and Hispanic variable. The majority of participants were white (*n* = 2,371, 63%), followed by black (*n* = 950, 25%), and Hispanic (*n* = 415, 12%). In Wave I, the age range was 11-20 years old, with a mean of 15.9 (*SD* = 1.61).

**Measures**

Relevant items were selected from the larger data set. Specifically, items were selected that assessed: 1. childhood parent physical and sexual victimization from Wave III (adult respondents retrospectively reported on childhood victimization before grade 6); 2. demographic controls, including participant demographics and childhood parent variables, from Waves 1-III; and 3. adult personal income and educational attainment from Wave IV. Respondents reported all of the items, with the exception of the parent variables. Parent variables were reported on by one of the parents, in most cases, the mother.

**Moderator variables**. Race and ethnicity moderators were assessed using six items from Wave I and that asked respondents to report whether they identified as Black, white, Asian, Native American, race-other, or Hispanic. Respondents could select any that applied. Using these six items, a 3-category variable was created: non-Hispanic black (1), Hispanic, (2), and non-Hispanic white (3). Respondents who identified as white, but not as any other racial or ethnic category, were coded as non-Hispanic white. Respondents who identified as black, but not as any other racial or ethnic category, were

coded as black. Respondents who selected Hispanic regardless of whatever other racial categories they selected were coded as Hispanic.

***Race- Black vs. white***. From the 3-category race/ethnicity variable above, a dichotomous race-black vs. white variable was created. Any respondent who was coded as black on the variable above received a code of 0. Any respondent who was coded as white received a code of 1.

***Ethnicity- Hispanic vs. white***. From the race/ethnicity variable above, a dichotomous ethnicity variable was created. Any respondent who was coded as Hispanic on the variable above received a code of 0. Any respondent who was coded as white received a code of 1.

***Race/ethnicity- Black vs. Hispanic***. From the race/ethnicity variable above, a dichotomous *Black vs. Hispanic* variable was created. Any respondent who was coded as Black on the variable above received a code of 0. Any respondent who was coded as Hispanic received a code of 1.

***Sex***. Information regarding biological sex came from the respondent's in-school survey; this information was confirmed during the in-home interview if it was unclear what their biological sex was. Sex was coded as 0 (male) and 1 (female).

**Socio-economic status**. The dependent variables, adult personal income and adult educational attainment, were assessed using the same items as discussed in Chapter 2 and were transformed and recoded in the same way.

**Early childhood victimization**. Early childhood victimization was assessed in terms of two victimization variables: 1. *parent physical victimization- yes/no*, and 2. *parent sexual victimization-yes/no*. Neither the frequency nor type variables were created

because of the insufficient number of participants in cells for moderation analyses. The dichotomous parent victimization variables were creased using the same Wave III frequency of physical and frequency of sexual victimization items that were discussed Chapter 2. As a reminder, these two items asked the respondent to retrospectively report whether they were hit or kicked (physical) or touched sexually (sexual) before grade 6. Responses from the six-category variables ranged from *none* (0) to *6 or more times* (5). The dichotomous parent victimization variables were created by coding all respondents who reported no victimization as *no* (0) and those respondents who reported more than one instance of victimization (i.e., codes 1-5) as *yes* (1).

**Covariates**. Seven of the covariates that were used in Chapter 2 were included in the moderation analyses. These seven covariates were all childhood family structure variables reported in Wave I. The family structure variables were as follows: 1) parental income, 2) mother education, 3) father education, 4) parental marital status, 5) no father figure, 6) no mother figure, and 7) presence of a stepfather. The variables were transformed and recoded in the same way that they were in Chapter 2.

**Analytic Strategy**

**Missing data analyses**. Missing data analyses were the same as for Chapter 2.

**Weighting.** The cross-sectional grand sample weight that addressed sampling issues like oversampling and sampling design (Chantala 2006) was used for all analyses. The cross-sectional grand sample weight that addressed sampling issues was used for all analyses. In addition, a weight for highly educated blacks, who were oversampled for the Add Health study, was also included.

**Descriptive statistics**. Frequencies and percentages were the same as those presented in Chapter 2. Full results are presented in Table 2.1.

**Bivariate associations.** To assess bivariate associations between the four dichotomous moderators and the two dichotomous victimization variable, chi-square goodness of fit tests were conducted. To assess bivariate associations between the dichotomous moderators and SES, a chi-square goodness of fit tests was conducted for the categorical variable education and an independent-samples t-test was calculated for the continuous variable income.

**Multivariate analyses.** Hierarchical, multiple linear regressions were conducted to assess hypotheses involving personal income as a dependent variable. Tests for multicollinearity, homoscedasticity, and outliers were conducted. To test hypotheses involving educational attainment, cumulative odds ordinal logistic regression with proportional odds was conducted using the GENLIN ordinal regression procedure in SPSS. Tests for the homogeneity of odds and multicollinearity were conducted. The proposed test for moderation, involving the computation and evaluation of interaction terms, as discussed by Aiken et al. (1991), was used to test conduct moderation analyses. For linear regression, the predictors and covariates (i.e., demographic controls, weights) were entered in the first step (Model 1), and the interaction term was entered in the second step (Model 2). For the ordinal regression analyses the two models (Model 1 and 2) were tested separately. An alpha level of .05 was used for all analyses.

## Results

### Descriptive

**Demographic controls, predictors, and outcomes**. Descriptive for covariates, independent variables, and outcomes are presented in Chapter 2 and presented in greater detail in Table 2.1.

**Bivariate Associations**

**Moderators and socioeconomic status.** Bivariate analyses revealed that *race- black vs. white* was significantly associated with adult educational attainment, $\chi^2(3) = 8.47$, $p < .05$ and significantly and negatively associated with adult personal income, t(2631) = -3.15 (p < .01). *Ethnicity- Hispanic vs. white* was significantly associated with educational attainment, $\chi^2(3) = 40.9$, $p < .001$, but not with personal annual income, $t(2789) = .913$, $p = 362$. *Race/ethnicity- Black vs. Hispanic* was significantly associated with adult educational attainment, $\chi^2(3) = 21.6$, $p < .001$, but not with adult income, $t(1352) = 1.441$, $p = .150$. Sex was significantly associated with both education, $\chi^2(3) = 74,4$, $p < .001$, and income, $t(4204) = -12.40$, $p < .001$, such that men had higher education and income.

**Moderators and victimization.** *Sex* was significantly associated with parent physical victimization- yes/no ($\chi^2(1) = 7.62$, $p < .01$), but not significantly associated with parent sexual victimization- yes/no ($\chi^2(1) = .003$, $p = .994$). *Ethnicity- Hispanic* vs. white was significantly associated with both sexual victimization ($\chi^2(1) = 4.24$, $p < .05$) and physical victimization ($\chi^2(1) = 15.1$, $p < .001$). *Ethnicity/race- Black vs. Hispanic* was significantly associated with physical victimization ($\chi^2(1) = 13.3$, $p < .001$), but not with sexual victimization ($p = .90$). *Race-black vs. white* was not significantly associated with either of the victimization variables.

**Multivariate Results**

This study tested the interactions among four dichotomous moderators and two dichotomous victimization variables on two SES outcomes for a total of 16 two-way interactions. Only 7 of the 16 interactions were significant at the .05 level. Only the results that were statistically significant will be presented.

**Sex by victimization**. With regard to personal annual income, results revealed that sex was a significant moderator of the relationship between sexual victimization- yes/no and income ($\beta = .053$ $p < .001$). Sex did not moderate the relationship between physical victimization- yes/no and income ($p = .832$). With regard to educational attainment, ordinal regression analyses revealed that sex was not a significant moderator of the relationship between either physical victimization or sexual victimization and education ($p = .447$; $p = 611$). See Tables 4.1-4.4 for more details.

**Race- black vs. white by victimization**. With regard to personal income, results indicated that race moderated the relationships between sexual victimization and income ($\beta = .087$, $p < .01$) and physical victimization and income ($\beta = .062$, $p < .05$). With regard to *educational attainment*, ordinal regression analyses revealed that race was not a significant moderator of the relationship between victimization variables and education. See Tables 4.5-4.8 for more details.

**Ethnicity- Hispanic vs. white by victimization**. With regard to *income*, results revealed that ethnicity was a significant moderator of the relationships between both physical victimization and sexual victimization and income. Specifically, in the second step of the regression analyses, ethnicity was a significant moderator of the relationship between sexual victimization and income ($\beta = .144$, $p < .05$), and between physical victimization and income ($\beta = .189$, $p < .01$), even after controlling for covariates. With

regard to *educational attainment*, results revealed that ethnicity was a significant moderator of the relationship between *sexual victimization* and educational attainment; being non-Hispanic was related with being approximately 9.85 times more likely to be in a higher educational category ($exp^B = 9.84$; 95% CI, 1.790 to 54.13), $\chi^2(1) = 11.70$, $p <$ .01). The interaction between ethnicity and physical victimization was a marginally significant predictor of educational attainment, with non-Hispanics being 2.1 times more likely to be in a higher educational category ($exp^B = 2.104$; 95% CI, .968 to 4.573); $\chi^2(1) = 7.84$, $p < .083$. See Tables 4.9-4.12 for more results.

**Ethnicity/race- black vs. Hispanic by victimization.** With regard to *income*, results revealed that ethnicity/race was not a significant moderator of the relationships between either physical victimization or sexual victimization and income ($p = .447$; $p =$ 915; respectively). With regard to educational attainment, ethnicity/race was a significant moderator of the relationship between sexual victimization and education. Participants who were Hispanic were $2/5^{th}$ as likely to be in a higher education category (95% CI, .022 to .177) as Black participants, $\chi^2(1) = 6.93$, $p < .01$. For complete results see Tables 4.13-4.16.

## Discussion

### Cumulative Disadvantage/Double Jeopardy

**Race and ethnicity**. Overall, results indicate that in many cases victimization is associated with worse outcomes for racial and ethnic minorities relative to whites. Specifically, the effects of physical and sexual victimization on income were stronger for blacks relative to whites. Also, relative to whites, sexual victimization led to worse outcomes for Hispanics on both education and income, as well as worse outcomes on

income for physical victimization. In combination with results from Chapter 2, which found that sexual victimization led to worse income and physical victimization led to worse educational outcomes, findings regarding race differences provide tentative support for double jeopardy and cumulative disadvantage. They also suggest that for some groups and specific types of victimization, researchers must emphasize constraint alongside the agency theme in the life course perspective.

Worse outcomes for blacks compared to whites with regard to physical victimization on income may be due to several factors. For example, blacks are less likely to receive post-victimization services from victim services agencies (U.S. Department of Justice 2007), an important financial and emotional community resource. Research also suggests that, as a result of discrimination, African Americans are more distrustful of formal institutions and representatives of those institutions (Kennedy et al. 2007; Corbie-Smith et al. 2002). Thus, they may be less likely to access places and people (e.g., teachers and schools) who could provide support and resources to help contend with the effects of victimization. In addition, if black victims do take advantage of formal institutions, they may find overburdened organizations because black people and black communities are disproportionately affected by victimization; there may not be enough institutional and community-based resources to effectively ameliorate the effects of victimization.

Results regarding worse outcomes for blacks compared to whites with regard to sexual victimization and income, in combination with results regarding sexual victimization and income in Chapter 2, provide partial support for double jeopardy and cumulative disadvantage. Perhaps experiences with discrimination (Finkelhor 1995)

exacerbate pre-existing disadvantage to produce especially poor outcomes for blacks. Importantly, these findings cannot rule out the possibility that resilience is evident for blacks post-victimization, especially since blacks did not differ from whites on all outcomes. It is possible, for example, that whatever resilience and agency blacks exhibit post-victimization is insufficient for making up the differences in outcomes with respect to whites. That is, agency and constraint may coexist and produce complex outcomes based on individual- and group-level factors.

Hispanics fared particularly poorly compared to both whites and blacks. Like with blacks, in combination with results from Chapter 2, some support for double jeopardy and cumulative disadvantage was evident in results regarding differential effects on income post sexual-violence. Interestingly, Hispanics also had worse income and education outcomes compared to whites post-physical victimization, as well as worse education outcomes compared to blacks post-sexual victimization. Research suggests that features of victimization may partially account for racial and ethnic differences in post-victimization responses. For example, prior research suggests that Latinas experience especially poor outcomes, in part, because they experience earlier victimization, receive less support from their mother after victimization, are more likely to have a sibling who was also victimized, and report higher family conflict post-victimization than other groups (Sanders-Phillips et al. 1995). These differences in the features of victimization, as well as family responses, are important to consider.

While the results that suggest poorer outcomes for Hispanics compared to blacks may also be due to some of these issues, disadvantage-saturation (Hannon 2003) cannot

be ruled out. It may be that blacks are more especially structurally disadvantaged, such that additional burdens like victimization show less of an effect on SES outcomes.

Although outcomes for Hispanics were poor, they did not fare more poorly than other racial groups on all measures. As with results regarding blacks relative to whites, this suggests that resilience cannot be ruled out. Likewise, results suggest that racial/ethnic invariance may apply, that is, victimization may represent a profound disruption to income, regardless of ethnicity.

**Sex.** Results regarding differences in the effect of victimization on SES as moderated by sex were mixed. Results suggest that females had worse income post-sexual victimization than males. This provides some support for cumulative disadvantage. As discussed, females are economically disadvantaged and may have fewer resources to address the effects of victimization. They also occupy an already stigmatized status and experience discrimination and social exclusion that may compound the effects of victimization (Widom et al. 2013). More specifically, girls and women experience school- and job-related discrimination, which reduces long-term SES acquisition. Also, female role expectations suggest that more is demanded of girls within the family (e.g., caregiving) and less time may be spent on income generating activities. This may carry over into adulthood, such that women spend less time on skill building that may yield greater earnings. Even when women acquire skills and education, they are paid less than men. These types of discrimination and multiple demands may combine with victimization to produce especially poor income outcomes.

In addition to their structural disadvantages, compared to male sexuality, female sexuality is stigmatized and regulated in society. For women, then, sexual violence may

have an especially negative effect on their social role as women. Furthermore, to the extent that women are sexually objectified in society in ways that men are not, identity may be especially sensitive to disruptions related to sexuality, including sexual violence. For example, sexual victimization may reinforce feelings of powerlessness and vulnerability more so than it does for men.

Sex did not moderate any of the other relationships. These results were inconsistent with the hypothesis, especially for physical victimization and educational attainment, that sex would moderate victimization-SES relationships. These findings provide preliminary evidence of invariance. As discussed, invariance contends that a particular event is so disruptive that demographic differences are unimportant. Perhaps physical victimization affects all people, regardless of sex, particularly with regard to educational outcomes. Also, cumulative disadvantage may apply less in the case of education, since women have largely closed the education gender gap.

Although resilience was not tested directly, non-significant findings suggest that resilience cannot be ruled out. For example, research suggests that females are more likely to enact social network supports to access emotional support (Burleson 2003). Perhaps these and other post-victimization behaviors act as buffers to decrease differences between females and males that would otherwise exist.

**Summary**

Overall, these results suggest that race, ethnicity, and sex interact with victimization in complex ways. There is some evidence for cumulative disadvantage, but invariance, resilience, and saturation-disadvantage cannot be completely discounted. These findings suggest that one theory does not fit all minority groups' responses to

victimization and that different SES outcomes may be more or less responsive to cumulative disadvantage, racial invariance, saturation-disadvantage, and resilience.

Results suggest that post-victimization outcomes are multifaceted and provide evidence for the application of the themes of agency and constraint within the life-course perspective. As discussed, agency in the (post) modern world highlights the fact that people are not bound to chronological stages and are able to pursue goals and identity on an individual basis, such that the life course unfolds in a dynamic way. The level of agency, however, may be constrained by one's social location. Results from this study provide preliminary evidence for understanding agency and constraint as two ends of a continuum. While it is quite likely that many people in the (post) modern world operate closer to the agency side of the continuum relative to their counterparts a century ago, there still may be considerable variation regarding just how close some people are to agency. Poverty and discrimination structure constraint such that certain groups have less agency than others. When pre-existing constraints like structural disadvantage intersect with disruptive life events like victimization, outcomes can be particularly dire. To the extent that, especially for race, this study illustrates consequences of the intersection of discrimination and victimization, it calls into question a focus on agency as well as resilience. There may be some life disruptions (e.g., sexual victimization) and/or outcomes (e.g., SES) for which resilience and agency are less relevant.

**Strengths and Limitations**

A major strength of this study is that it fills an important gap in the empirical victimization literature by examining the ways that post-victimization outcomes differ by social stratification moderators. It also adds to the literature regarding the effects of

victimization on SES outcomes. In addition, it answers the call from previous researchers for a theoretical framework for understanding victimization. Specifically, it frames the analyses within the life course perspective in general and considers the theme of agency in particular. Furthermore, it considers previously identified theories of disadvantage (e.g., cumulative disadvantage) to understand why demographic differences may lead to different post-victimization outcomes.

This study has several limitations. One shortcoming of this study was the relatively small number of participants who experienced sexual victimization; this problem was exacerbated by the fact that only a subset of the survey sample was interviewed at Wave III. The small sample size made it difficult to adequately explore between-group sex differences. For example, moderation analyses did not assess severity of victimization in terms of multiple experiences or exposure to both types of victimization, in part, due to sample size. Severe victimization may be especially problematic for minorities in the sense that it may compound preexisting disadvantage. Furthermore, I was not able assess intersectionality because of small cell sizes. This limited my ability to assess more complex cumulative disadvantage.

**Future Directions**

This study suggests that victimization researchers must continue to understand the ways in which social location may affect outcomes after victimization. More specifically, it is important for future research to consider more complex demographic differences by combining, for example, sex and race to understand whether multiple experiences of discrimination may intersect with victimization to produce certain outcomes. In addition, future research could look at additional measures of SES in order to assess differences in

the broader influence of childhood victimization on SES. In examining specific types of victimization (e.g., sexual victimization), researchers should also consider the differential effects of specific forms of each type of victimization. For example, molestation may have very different effects than penetration and these effects may be moderated by both race/ethnicity and sex. Finally, it will be important for researchers to examine the theme of timing (see Chapter 2) more fully by investigating social stratification differences in more long-term effects of childhood victimization on middle and late adulthood SES and to compare the effects of childhood and adult victimization of SES for different minority groups. Other social stratification variables such as sexual orientation should also be studied.

Table 4.1. OLS Regression Predicting Annual Personal Income (Natural Log) by Sexual Victimization Moderated by Sex

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | β | β |
| Sexual-Y/N by Sex | | .053* (.137) |
| Parent sexual- Y/N (ref = none) | | |
| *yes* | -.090** (.178) | -.089** (.220) |
| Sex (ref = male) | | |
| *Female* | -.188*** (.061) | -.196*** (.071) |
| Race (ref = white) | | |
| *Black* | .040 (.106) | -.054** (.106) |
| *Hispanic* | -.058 (.088) | .045* (.086) |
| Parent Marital (ref = married) | | |
| *single* | .024 (.143) | -.012 (.144) |
| *other* | -.002 (.078) | -.055* (.079) |
| Mother Education (ref = did not graduate h.s) | | |
| *high school* | .149*** (.111) | .140*** (.112) |
| *college* | .198*** (.115) | .165*** (.117) |
| *post college* | .130** (.153) | .112*** (.159) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | .096* (.103) | .065** (.099) |
| *college* | .163** (.109) | .120** (.107) |
| *post college* | .106* (.140) | .057* (.142) |
| No father figure (ref =has father) | | |
| *yes* | -.019 (.280) | -.030 (.289) |
| No mother figure (ref = has father) | | |
| *yes* | .010 (.350) | -.055* (.353) |
| Stepfather (ref = no stepfather) | | |
| *yes* | -.025 (.081) | -.034* (.080) |
| Parent Income | .036 (.136) | .057** (.136) |
| Adjusted R-square | .010 | .079 |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income. N=3,736
Source: Add Health (1994-2008)

Table 4.2. Ordinal Regression Estimating the Effects of Sexual Victimization on Educational Attainment Moderated by Sex

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Sex by sexual-yes/no | | 1.128 (.833, 1.526) |
| Parent sexual (ref = no) | | |
| *yes* | 1.017 (.596, 1.074) | 1.106 (.847, 1.362) |
| Race (ref = white) | | |
| *black* | 1.165* (1.008, 1.568) | 1.265* (1.009, 1.587) |
| *Hispanic* | .976 (.809, 1.178) | .977 (.810, 1.719) |
| Sex (ref = male) | | |
| *female* | .787** (.445, 1.101) | .791** (.387, .985) |
| Parent Marital (ref = married) | | |
| *single* | .973 (.814, 1.162) | .972 (.813, 1.161) |
| *other* | .714* (.527, .989) | .716* (.528, .971) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | 1.888*** (1.510, 2.362) | 1.792*** (1.431, 2.245) |
| *college* | 3.418*** (2.675, 4.367) | 3.272*** (2.566, 4.173) |
| *post* | 4.769*** (3.336, 6.757) | 4.599*** (3.262, 6.485) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | 1.351*** (1.098, 1.663) | 1.351*** (1.098, 1.662) |
| *college* | 3.411*** (2.681, 4.339) | 3.418*** (2.687, 4.389) |
| *post* | 4.983*** (3.606, 6.886) | 4.977*** (3.601, 6.878) |
| No father figure (ref = has father) | | |
| *no father* | .862 (.492, 1.511) | .866 (.494, 1.518) |
| No mother figure (ref = has mother) | | |
| *no mother* | .488* (.254, .936) | .485* (.282, .931) |
| Stepfather ref = no stepfather) | | |
| *has stepfather* | .738** (.619, .881) | .738** (.566, .809) |
| Parent Income | 2.172** (1.338, 4.739) | 2.641** (1.428, 3.405) |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college.
N=3,736
Source: Add Health (1994-2008)

Table 4.3. OLS Regression Predicting Annual Personal Income (Natural Log) by Physical Victimization Moderated by Sex

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | β | β |
| Sex by physical-y/n | | -.042<br>(.288) |
| Parent physical (ref = none) | | |
| *yes* | -.048**<br>(.144) | -.087<br>(.193) |
| Sex (ref = male) | | |
| *Female* | -.177***<br>(.061) | -.180***<br>(.282) |
| Race (ref = white) | | |
| *Black* | .048**<br>(.116) | -.048**<br>(.106) |
| *Hispanic* | -.065**<br>(.186) | -.062**<br>(.086) |
| Parent Marital (ref = married) | | |
| *single* | .030<br>(.144) | -.029<br>(.144) |
| *other* | -.032<br>(.079) | -.032<br>(.079) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | .126***<br>(.111) | .126***<br>(.111) |
| *college* | .159***<br>(.113) | .159***<br>(.112) |
| *post college* | .120**<br>(.158) | .121**<br>(.156) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | .053*<br>(.099) | .053*<br>(.099) |
| *college* | .108**<br>(.107) | .108**<br>(.107) |
| *post college* | .043<br>(.142) | .043<br>(.142) |
| No father figure (ref =has father) | | |
| *yes* | -.022<br>(.289) | -.023<br>(.289) |
| No mother figure (ref = has father) | | |
| *yes* | -.049<br>(.383) | -.049<br>(.383) |
| Stepfather (ref = no stepfather) | | |
| *yes* | -.025<br>(.079) | -.025<br>(.080) |
| Parent Income | .070***<br>(.141) | .070***<br>(.141) |
| Adjusted R-square | .010 | .079 |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income. N=3,736
Source: Add Health (1994-2008)

Table 4.4. Ordinal Regression Estimating the Effects of Physical Victimization on Educational Attainment Moderated by Sex

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Sex by physical-yes/no | | .905 (.481, 1.704) |
| Parent physical (ref = no) | | |
| *yes* | .575** (.421, .784) | .577* (.375, .892) |
| Race (ref = white) | | |
| *black* | 1.289* (1.028, 1.617) | 1.286* (1.026, 1.613) |
| *Hispanic* | .978 (.823, 1.205) | .868 (.717, 1.050) |
| Sex (ref = male) | | |
| *female* | .575** (.421, .784) | .548** (.413, .899) |
| Parent Marital (ref = married) | | |
| *single* | .713* (.526, .987) | .793* (.665, .949) |
| *other* | .991 (.830, 1.184) | .807 (.599, 1.089) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | 1.905*** (1.523, 2.382) | 1.778*** (1.420, 2.226) |
| *college* | 3.434*** (2.688, 4.386) | 3.262*** (2.558, 4.160) |
| *post* | 4.798*** (3.386, 6.798) | 4.628*** (3.282, 6.526) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | 1.342** (1.091, 1.651) | 1.564*** (1.264, 1.936) |
| *college* | 3.363*** (2.643, 4.278) | 3.496*** (2.752, 4.441) |
| *post* | 4.863*** (3.517, 6.722) | 5.035*** (3.671, 6.909) |
| No father figure (ref = has father) | | . |
| *no father* | .873 (.498, 1.533) | 651 (.382, 1.108) |
| No mother figure (ref = has mother) | | |
| *no mother* | .491* (.255, .944) | .703 (.372, 1.331) |
| Stepfather ref = no stepfather) | | |
| *has stepfather* | .757** (.634, .702) | .835* (.700, .998) |
| Parent Income | 2.779*** (1.972, 3.918) | |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college. N=3,736
Source: Add Health (1994-2008)

Table 4.5. OLS Regression Predicting Annual Personal Income (Natural Log) by Sexual Victimization Moderated by Race (i.e., black/white)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | β | β |
| Sexual-Y/N by Race | | .087** (.665) |
| Parent sexual- Y/N (ref = none) | | |
| *yes* | -.013 (.279) | -.026 (.587) |
| Sex (ref = male) | | |
| *Female* | -.180*** (.089) | -.182*** (.089) |
| Race (ref = white) | | |
| *Black* | .030 (.167) | .029 (.171) |
| Parent Marital (ref = married) | | |
| *single* | .006 (.390) | -.008 (.390) |
| *other* | -.018 (.349) | -.018 (.348) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | .145*** (.197) | .056*** (.197) |
| *college* | .165*** (.203) | .165*** (.203) |
| *post college* | .111** (.245) | .112*** (.245) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | .082** (.177) | .056* (.177) |
| *college* | .141*** (.182) | .141*** (.182) |
| *post college* | .072** (.216) | .071** (.216) |
| No father figure (ref =has father) | | |
| *yes* | -.019 (.301) | -.030 (.301) |
| No mother figure (ref = has father) | | |
| *yes* | -.050 (.373) | -.064* (.373) |
| Stepfather (ref = no stepfather) | | |
| *yes* | -.019 (.152) | -.034* (.084) |
| Parent Income | .049* (.001) | .054** (.001) |
| Adjusted R-square | .010 | .079 |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income.
N=3,736
Source: Add Health (1994-2008)

Table 4.6. OLS Regression Predicting Annual Personal Income (Natural Log) by Physical Victimization Moderated by Race (i.e., black/white)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | β | β |
| Race by physical-y/n | | .062* (.165) |
| Parent physical (ref = none) | | |
| *yes* | -.045** (.073) | -.070** (.142) |
| Sex (ref = male) | | |
| *Female* | -.181*** (.064) | -.182*** (.064) |
| Race (ref = white) | | |
| *Black* | .042** (.088) | .038** (.098) |
| Parent Marital (ref = married) | | |
| *single* | -.006 (.149) | -.008 (.150) |
| *other* | -.031 (.082) | -.034 (.082) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | .151*** (.125) | .163*** (.125) |
| *college* | .175*** (.130) | .195*** (.130) |
| *post college* | .120*** (.167) | .136** (.167) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | .083** (.112) | .055* (.112) |
| *college* | .143*** (.118) | .106*** (.116) |
| *post college* | .073** (.152) | .050 (.152) |
| No father figure (ref =has father) | | |
| *yes* | -.022 (.295) | -.020 (.295) |
| No mother figure (ref = has father) | | |
| *yes* | -.050 (.373) | -.030 (.373) |
| Stepfather (ref = no stepfather) | | |
| *yes* | -.045* (.086) | -.045* (.086) |
| Parent Income | .049* (.196) | .070*** (.196) |
| Adjusted R-square | .010 | .079 |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income.
N=3,736
Source: Add Health (1994-2008)

Table 4.7. Ordinal Regression Estimating the Effects of Sexual Victimization on Educational Attainment Moderated by Race (i.e., black/white)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Race by sexual-yes/no | | .557 (.259, 1.197) |
| Parent sexual (ref = no) | | |
| *yes* | .872 (.741, 1.027) | 1.121 (.783, 1.605) |
| Race (ref = white) | | |
| *black* | .995 (.822, 1.204) | .965 (.780, 1.194) |
| Sex (ref = male) | | |
| *female* | .505** (.436, .585) | .506 (.436, .586) |
| Parent Marital (ref = married) | | |
| *single* | .657* (417, .907) | .659* (.478, .908) |
| *other* | .929 (.768, 1.124) | .950 (.768, 1.215) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | 4.990*** (3.434, 7.251) | 2.061*** (1.597, 2.659) |
| *college* | 3.706*** (2.815, 4.878) | 3.513*** (2.688, 4.574) |
| *post* | 2.060*** (1.567, 2.658) | 5.001*** (3.441, 7.268) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | 1.423** (1.132, 1.790) | 1.413** (1.132, 1.790) |
| *college* | 3.515** (2.699, 4.576) | 3.513** (2.698, 4.574) |
| *post* | 5.036*** (3.561, 7.123) | 5.034*** (3.559, 7.119) |
| No father figure (ref = has father) | | |
| *no father* | 1.106 (.405, 2.024) | 1.104 (.604, 2.020) |
| No mother figure (ref = has mother) | | |
| *no mother* | .352* (.175, .710) | .353* (.175, .712) |
| Stepfather ref = no stepfather) | | |
| *has stepfather* | .742** (.615, .896) | .742** (.614, .895) |
| Parent Income | 2.884*** (2.007, 4.154) | 2.876*** (2.001, 4.134) |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college.
N=3,736
Source: Add Health (1994-2008)

Table 4.8. Ordinal Regression Estimating the Effects of Physical Victimization on Educational Attainment Moderated by Race (i.e., black/white)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Race by physical-yes/no | | .669 (.324, 1.658) |
| Parent physical (ref = no) | | |
| *yes* | .086** (.018, .407) | .577* (.375, .892) |
| Race (ref = white) | | |
| *black* | 1.035 (.257, 1.083) | 1.286* (1.026, 1.613) |
| *Hispanic* | .978 (.823, 1.205) | .868 (.717, 1.050) |
| Sex (ref = male) | | |
| *female* | .573** (.332, .859) | .548** (.413, .899) |
| Parent Marital (ref = married) | | |
| *single* | .943 (.749, 1.140) | .793* (.665, .949) |
| *other* | .651* (.471, .878) | .807 (.599, 1.089) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | 2.100*** (1.627, 2.710) | 1.778*** (1.420, 2.226) |
| *college* | 3.737*** (2.838, 4.920) | 3.262*** (2.558, 4.160) |
| *post* | 5.037*** (3.466, 7.321) | 4.628*** (3.282, 6.526) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | 1.342** (1.091, 1.651) | 1.564*** (1.264, 1.936) |
| *college* | 3.363*** (2.643, 4.278) | 3.496*** (2.752, 4.441) |
| *post* | 4.863*** (3.517, 6.722) | 5.035*** (3.671, 6.909) |
| No father figure (ref = has father) | | . |
| *no father* | 1.120 (.611, 2.053) | 651 (.382, 1.108) |
| No mother figure (ref = has mother) | | |
| *no mother* | .351* (.174, .710) | .703 (.372, 1.331) |
| Stepfather ref = no stepfather) | | |
| *has stepfather* | .763** (.632, .821) | .835* (.700, .998) |
| Parent Income | 2.552*** (1.842, 3.369) | |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college.
N=3,736
Source: Add Health (1994-2008)

Table 4.9. OLS Regression Predicting Annual Personal Income (Natural Log) by Sexual Victimization Moderated by Ethnicity (i.e., Hispanic/white)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | β | β |
| Sexual-Y/N by Ethnicity | | .144* (.640) |
| Parent sexual- Y/N (ref = none) | | |
| *yes* | -.075** (.279) | -.200*** (.553) |
| Sex (ref = male) | | |
| *Female* | -.215*** (.092) | -.218*** (.092) |
| Race (ref = white) | | |
| *Hispanic* | -.021 (.144) | -.036 (.146) |
| Parent Marital (ref = married) | | |
| *single* | .028 (.543) | .028 (.542) |
| *other* | .005 (.388) | .005 (.387) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | .146** (.176) | .145** (.176) |
| *college* | .200** (.185) | .198** (.184) |
| *post college* | .133** (.243) | .122** (.242) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | .047 (.167) | .046 (.167) |
| *college* | .109* (.172) | .108* (.172) |
| *post college* | .051 (.218) | .052 (.218) |
| No father figure (ref =has father) | | |
| *yes* | -.011 (.399) | -.010 (.399) |
| No mother figure (ref = has father) | | |
| *yes* | .009 (.417) | .009 (.417) |
| Stepfather (ref = no stepfather) | | |
| *yes* | .000 (.161) | -.004 (.161) |
| Parent Income | .049* (.203) | .039 (.203) |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income.
N=3,736
Source: Add Health (1994-2008)

Table 4.10. OLS Regression Predicting Annual Personal Income (Natural Log) by Physical Victimization Moderated by Ethnicity (i.e., Hispanic/white)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | β | β |
| Ethnicity by physical-y/n | | .189** (.296) |
| Parent physical (ref = none) | | |
| *yes* | -.014 (.107) | -.186* (.273) |
| Sex (ref = male) | | |
| *Female* | -.181*** (.092) | -.216*** (.092) |
| Race (ref = white) | | |
| *Hispanic* | -.009 (.145) | -.055 (.167) |
| Parent Marital (ref = married) | | |
| *single* | .030 (.544) | -.026 (.543) |
| *other* | .007 (.339) | .006 (.338) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | .141** (.177) | .132* (.177) |
| *college* | .201** (.186) | .192** (.185) |
| *post college* | .117** (.244) | .123** (.243) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | .042 (.168) | .046 (.168) |
| *college* | .100 (.174) | .105 (.173) |
| *post college* | .054 (.219) | .058 (.219) |
| No father figure (ref =has father) | | |
| *yes* | .013 (.399) | -.020 (.399) |
| No mother figure (ref = has father) | | |
| *yes* | .009 (.417) | .009 (.417) |
| Stepfather (ref = no stepfather) | | |
| *yes* | .002 (.161) | -.002 (.161) |
| Parent Income | .039 (.204) | .037 (.203) |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income.
N=3,736
Source: Add Health (1994-2008)

Table 4.11. Ordinal Regression Estimating the Effects of Physical Victimization on Educational Attainment Moderated by Ethnicity (i.e., Hispanic/white)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Ethnicity by Physical-yes/no | | 2.104 (.968, 4.573) |
| Parent Physical (ref = no) | | |
| *yes* | .856 (.718, 1.021) | .456* (.225, .926) |
| Race (ref = white) | | |
| *Hispanic* | .815 (.554, 1.199) | .658 (.422, 1.027) |
| Sex (ref = male) | | |
| *female* | .592*** (.460, .762) | .602 (.468, 780) |
| Parent Marital (ref = married) | | |
| *single* | .745** (.603, .921) | .997 (.349, 2.849) |
| *other* | 1.129 (.675, 1.890) | .414 (.104, 1.646) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | 3.613*** (2.417, 5.402) | 5.527*** (2.894, 10.871) |
| *college* | 3.149*** (2.815, 4.140) | 4.174*** (2.542, 6.855) |
| *post* | 1.584*** (1.237, 2.029) | 2.032** (1.228, 3.204) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | 6.667*** (4.598, 9.668) | 6.253*** (3.453, 11.323) |
| *college* | 3.699*** (2.814, 4.861) | 2.940*** (1.828, 4.729) |
| *post* | 1.515** (1.194, 1.923) | 1.428 (.917, 2.226) |
| No father figure (ref = has father) | | |
| *no father* | .518 (.185, 1.452) | n < 5 |
| No mother figure (ref = has mother) | | |
| *no mother* | .764 (.203, 2.225) | .006 (.000, .242) |
| Stepfather ref = no stepfather) | | |
| *has stepfather* | .770* (.623, .953) | .702 (.454, 1.084) |
| Parent Income | .061 (1.732, 3.740) | 2.520** (1.429, 4.446) |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college.
N=3,736
Source: Add Health (1994-2008)

Table 4.12. Ordinal Regression Estimating the Effects of Sexual Victimization on Educational Attainment Moderated by Ethnicity (i.e., Hispanic/black)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Ethnicity by sexual-yes/no | | 9.844** (1.790, 54.136) |
| Parent sexual (ref = no) | | |
| *yes* | 1.066 (.504, 2.253) | .211* (.049, .907) |
| Race (ref = white) | | |
| *Hispanic* | .830 (.544, 1.221) | .743 (.502, 1.101) |
| Sex (ref = male) | | |
| *female* | .599** (.466, .772) | .593** (.460, .763) |
| Parent Marital (ref = married) | | |
| *single* | .994 (.348, 2.840) | .978 (.342, 2.802) |
| *other* | .384 (.098, 1.513) | .389 (.098, 1.538) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | 1.951** (1.240, 3.071) | 1.990** (1.263, 3.136) |
| *college* | 4.000*** (2.440, 6.557) | 4.119*** (2.509, 6.761) |
| *post* | 5.344*** (2.800, 10.20) | 5.445*** (2.894, 10.428) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | 1.471 (.946, 2.822) | 1.458 (.936, 2.271) |
| *college* | 3.019** (1.879, 4.852) | 2.991*** (1.859, 4.813) |
| *post* | 6.350** (3.510, 11.49) | 6.23*** (3.441, 11.29) |
| No father figure (ref = has father) | | |
| *no father* | -------- | -------- |
| No mother figure (ref = has mother) | | |
| *no mother* | .006** (.000, .247) | .006** (.000, .241) |
| Stepfather ref = no stepfather) | | |
| *has stepfather* | .703 (.456, 1.086) | .724 (.469, 1.119) |
| Parent Income | 2.449** (1.413, 2.896) | |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college. N=3,736
Source: Add Health (1994-2008)

Table 4.13. OLS Regression Predicting Annual Personal Income (Natural Log) by Sexual Victimization Moderated by Race and Ethnicity (i.e., Hispanic/black)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | β | β |
| Sexual-y/n by Race/ethnicity | | .004<br>(.400) |
| Parent sexual- y/n (ref = none) | | |
| *yes* | -.062*<br>(.192) | -.064*<br>(.236) |
| Sex (ref = male) | | |
| *Female* | -.105***<br>(.090) | -.105***<br>(.090) |
| Race/ethnicity (ref = Hispanic) | | |
| *Black* | .110***<br>(.110) | .109***<br>(.111) |
| Parent Marital (ref = married) | | |
| *single* | .003<br>(.145) | .003<br>(.145) |
| *other* | .006<br>(.113) | .006<br>(.113) |
| Mother Education<br>(ref = did not graduate h.s.) | | |
| *high school* | .143***<br>(.140) | .143***<br>(.141) |
| *college* | .217***<br>(.151) | .217***<br>(.151) |
| *post college* | .121**<br>(.219) | .121**<br>(.203) |
| Father Education<br>(ref = did not graduate h.s.) | | |
| *high school* | -.002<br>(.130) | -.002<br>(.130) |
| *college* | .043<br>(.148) | .041<br>(.148) |
| *post college* | .028<br>(.205) | .028<br>(.230) |
| No father figure (ref =has father) | | |
| *yes* | -.004<br>(.252) | -.030<br>(.252) |
| No mother figure (ref = has father) | | |
| *yes* | .042<br>(.393) | -.064*<br>(.393) |
| Stepfather (ref = no stepfather) | | |
| *yes* | -.050<br>(.111) | -.050<br>(.111) |
| Parent Income | .055<br>(.242) | .055<br>(.242) |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income. N=3,736
Source: Add Health (1994-2008)

Table 4.14. OLS Regression Predicting Annual Personal Income (Natural Log) by Physical Victimization Moderated by Race and Ethnicity (i.e., Hispanic/black)

| **Variable** | Model 1 | Model 2 |
|---|---|---|
| | β | β |
| Black vs. Hispanic by Physical-y/n | | .011<br>(.211) |
| Parent physical (ref = none) | | |
| *yes* | -.021<br>(.100) | -.027<br>(.123) |
| Sex (ref = male) | | |
| *Female* | -.123**<br>(.092) | -.123***<br>(.092) |
| Race (ref = Hispanic) | | |
| *Black* | .108**<br>(.115) | .102<br>(.134) |
| Parent Marital (ref = married) | | |
| *single* | -.009<br>(.152) | .010<br>(.152) |
| *other* | -.016<br>(.113) | -.016<br>(.113) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | .118**<br>(.146) | .119**<br>(.146) |
| *college* | .163***<br>(.155) | .163***<br>(.155) |
| *post college* | .103***<br>(.224) | .103*<br>(.224) |
| Father Education (ref = did not graduate h.s.) | | |
| *high school* | .022<br>(.135) | .021<br>(.135) |
| *college* | .054<br>(.151) | .054<br>(.151) |
| *post college* | .058<br>(.210) | .058<br>(.210) |
| No father figure (ref =has father) | | |
| *yes* | -.001<br>(.266) | -.020<br>(.266) |
| No mother figure (ref = has father) | | |
| *yes* | -.055<br>(.392) | -.030<br>(.393) |
| Stepfather (ref = no stepfather) | | |
| *yes* | -.048<br>(.110) | -.048<br>(.110) |
| Parent Income | .060<br>(.256) | .060<br>(.256) |

Notes. *p < .05; **p < .01, ***p < .001; a sum of $100 was added to all cases with zero income.
N=3,736
Source: Add Health (1994-2008)

Table 4.15. Ordinal Regression Estimating the Effects of Sexual Victimization on Educational Attainment Moderated by Ethnicity and Race (i.e., Hispanic/black)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Race/ethnicity by sexual-yes/no | | .019** (.002, .177) |
| Parent sexual (ref = no) | | .661* (.445, 1.319) |
| *yes* | | |
| Race (ref = Hispanic) | | 1.568 (.858, 2.865) |
| *black* | | |
| Sex (ref = male) | | |
| *female* | | .379*** (.239, .600) |
| Parent Marital (ref = married) | | |
| *single* | | .226* (.071, .724) |
| *other* | | 2.212 (.587, 8.331) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | | 10.171*** (3.390, 30.518) |
| *college* | | 3.426** (1.502, 7.160) |
| *post* | | 1.250 (.616, 2.538) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | | 2.069 (.798, 5.683) |
| *college* | | 1.721 (.804, 3.686) |
| *post* | | .918 (.464, 1.817) |
| No father figure (ref = has father) | | |
| *no father* | | .770 (.441, 1.442) |
| No mother figure (ref = has mother) | | |
| *no mother* | | .871 (.343, 2.213) |
| Stepfather ref = no stepfather) | | |
| *has stepfather* | | .606 (.300, 1.323) |
| Parent Income | | 2.066* (.582, 7.333) |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college. N=3,736
Source: Add Health (1994-2008)

Table 4.16. Ordinal Regression Estimating the Effects of Physical Victimization on Educational Attainment Moderated by Race and Ethnicity (i.e., Hispanic/black)

| **Variable** | **Model 1** | **Model 2** |
|---|---|---|
| | **Odds ratio (CI 95%)** | **Odds ratio (CI 95%)** |
| Race by physical-yes/no | | .905 (.543, 1.507) |
| Parent physical (ref = no) | | |
| *yes* | | .821 (.607, 1.109) |
| Race (ref = white) | | |
| *black* | | .897 (.649, 1.240) |
| Sex (ref = male) | | |
| *female* | | .446*** (.355, .560) |
| Parent Marital (ref = married) | | |
| *single* | | 1.192 (.904, 1.570) |
| *other* | | .856 (.594, 1.234) |
| Mother Education (ref = did not graduate h.s.) | | |
| *high school* | | 1.728** (1.223, 2.443) |
| *college* | | 2.772*** (1.900, 4.046) |
| *post* | | 4.066*** (2.341, 7.062) |
| Father Education (ref =did not graduate h.s.) | | |
| *high school* | | .983 (.712, 1.358) |
| *college* | | **2.618 (1.794, 3.822) |
| *post* | | ***3.217 (1.906, 5.429) |
| No father figure (ref = has father) | | |
| *no father* | | .772 (.412, 1.441) |
| No mother figure (ref = has mother) | | |
| *no mother* | | .873 (.344, 2.217) |
| Stepfather ref = no stepfather) | | |
| *has stepfather* | | .730* (.559, .953) |
| Parent Income | | 2.109* (1.124, 3.960) |

Notes. *p < .05; **p < .01, ***p < .001; Educational attainment categories are: (1) did not graduate high school, (2) high school graduate, (3) some college/college, (4) post-college.
N=3,736
Source: Add Health (1994-2008)

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# Chapter 5: Conclusion

## Summary of Results

I analyzed the effects of early childhood parent physical and sexual victimization, as measured by self-report retrospective recall in adulthood, on adult socioeconomic outcomes, using the life course perspective as a theoretical framework. Using data from Add Health, I focused on assessing differences in type and severity, both in terms of experiencing multiple types and instances, of parent victimization. I also examined a sociological mediator, social integration, and assessed the moderating effects of race, ethnicity, and sex.

In the first analytic chapter, I explored the direct effects of early childhood parent physical and sexual victimization on future personal annual income and educational attainment. I also assessed whether the frequency and co-occurrence of physical and sexual parent victimization were important aspects of victimization to consider. All analyses controlled for important family background SES factors (e.g., parent educational attainment). Results suggest that coarse measures of childhood victimization that treat victimization as either present or absent do not capture the nuanced natured of the effects of victimization on SES. Specifically, models testing simply the absence or presence of victimization seemed to mask important relationships between specific types of parent victimization and specific SES outcomes. When early childhood physical and sexual parent victimization were considered separately, in general, experiencing only physical victimization was significantly associated with worse educational attainment, whereas experiencing only sexual victimization was significantly associated with lower personal annual income. Notably, the co-occurrence of parent physical and sexual victimization in

early childhood negatively predicted both personal annual income and educational attainment.

In addition, results revealed that experiencing physical victimization 6 or more times before 6th grade (i.e., frequent physical victimization) significantly and negatively predicted educational attainment relative to not experiencing physical victimization. Relative to not experiencing physical victimization, however, 1-5 instances (i.e., infrequent) of physical victimization did not significantly predict educational attainment. On the other hand, for sexual victimization, experiencing one or more than one instance significantly and negatively predicted income, relative to not experiencing sexual victimization. Importantly, there was little difference in the degree of effect regarding experiencing sexual victimization once or more than once. These results suggest that frequency is particularly important to consider when assessing the effect of physical victimization on education, whereas any experience of sexual victimization is likely to be problematic with regard to personal annual income.

In the second analytic chapter, I considered social integration as a mediator of the significant relationships between early childhood parent sexual and physical victimization and SES from the previous chapter. Overall, two types of integration- objective integration with one's mother (e.g., how many activities one participates in with his/her mother) and subjective integration with friends (i.e., the degree to which one feels cared about by one's friends)- partially mediated all of the significant victimization-SES relationships discussed in Chapter 2. Parent victimization was associated with lower objective integration with mother, which in turn, predicted lower SES. Additional results revealed several significant findings regarding objective integration with friends and

subjective integration with mother. A lack of objective integration with friends (i.e., not having a female friend) mediated the relationship between experiencing physical victimization only and experiencing both physical and sexual victimization on education. Also, subjective integration with one's mother (e.g., feeling loved by one's mother) mediated the relationship between frequent physical victimization and education. Overall, findings suggest that distinctions between perceived and actual integration and different members of one's social network must be considered when examining the pathways by which parent victimization affects SES. It is striking that integration with fathers was not a significant pathway, suggesting that relationships with mothers are particularly affected by victimization and predictive of SES. Sex of the friend may also be important, particularly when it comes to the role of female friends and physical victimization and education.

In the third analytic chapter, I examined the moderating effects of race, ethnicity, and sex on the relationship between the presence or absence of early childhood physical and sexual victimization and SES. Race and ethnicity were significant moderators of the relationship between parent physical victimization and parent sexual victimization and income. Both blacks and Hispanics had lower income than whites post-victimization. Hispanics also had worse educational outcomes relative to whites post-sexual victimization. Sex only moderated the relationship between sexual victimization and income. Overall, results consistently suggest that being a racial or ethnic minority or being female exacerbates the effects of parent victimization on income, but not education. Sexual victimization may be especially stigmatizing for females and Hispanics, providing

further evidence for the importance of examining different types of victimization separately and alongside social stratification measures.

**Conclusions**

**Chapter 2: Timing and Cumulative Disadvantage**. Zielinski (2009) and Macmillan (2000) suggested that the life course perspective is a useful framework for understanding the effects of victimization on SES. Specifically, they argued and found evidence for the fact that victimization in adolescence disrupts SES trajectories. In this sense, they focused on the theme of timing within the life course perspective. The findings and discussion in Chapter 2 build on their efforts to examine the influence of timing by assessing the effects of childhood victimization at an even earlier time-point (i.e., early childhood). This is the first study to examine early childhood victimization and highlight how long some of the effects of victimization on SES may last. Victimization by parents before grade 6 predicted SES in participants' late twenties or early thirties. Results suggest that, because educational and income disparities resulting from victimization were not resolved by young adulthood, victimization represents a profound disruption to SES trajectories. These results cannot be wholly explained by social stratification variables and family background variables, as analyses controlled for the effects of any of these variables that were significantly correlated with both early childhood parent victimization and adult socioeconomic outcomes (e.g., sex and parent household income). Childhood victimization seems to present a problem for future SES independent of parent childhood education and income and family composition and race, sex, and ethnicity.

Analyses examining the effect of multiple types and multiple instances of parent victimization on SES represented a test of cumulative disadvantage (Dannefer 2003), a previously under-examined theoretical perspective. In fact, experiencing both physical and sexual victimization was especially problematic with regard to both of the SES outcomes and lent support to the notion of cumulative disadvantage concerning multiple types of victimization. These results are consistent with previous research reporting worse SES outcomes (e.g., lower educational attainment, under- or no employment, and lower household income) and worse psychiatric outcomes (e.g., higher rates and increased severity diagnosis) in adults who report experiencing both physical and sexual victimization as children (Zielinski 2009; et al. 2007; Edwards et al. 2003). It may be that the co-occurrence of physical and sexual victimization presents such a profound challenge to child victims that it leads to severely compromised functioning and resources at both an individual-level (e.g., greater mental illness and poorer physical health) and social-level (e.g., disrupted or diminished social networks). These consequences in combination may produce even worse SES outcomes than when they are experienced alone.

Results regarding multiple instances of physical victimization and education also provided a test of cumulative disadvantage theory. The finding that more frequent physical victimization predicted lower educational attainment is consistent with studies examining severity of physical victimization and mental health (Clemmons et al. 2007; Fergusson, Boden, and Horwood 2008). This research reports that harsher physical abuse, in the form of both the type and the frequency of physical victimization, is associated with worse psychiatric outcomes and that severity of physical victimization is a more

powerful predictor of worse mental health outcomes than experiencing multiple types of parent victimization. Cumulative disadvantage theory may help to explain these findings. Physical victimization may be especially harmful to a child when it occurs over and over, leaving little time in between victimizations for the child to recover psychological and socially and continually reinforcing the message that others are unsafe and untrustworthy. Experiencing victimization on a frequent basis may destabilize the child to the point that s/he becomes unable to defend her-/himself psychologically and to maintain stable and amiable relationships with caregivers, supportive adults, and peers (Cichetti 1995).

Infrequent physical victimization, on the other hand, may be associated with few disruptions to social networks and relatively minor psychological outcomes that result in negligible or short-term effects on education (e.g., being punished in school). Disruptions of educational trajectories may be minor and temporary because incidents of victimization are temporally separate, occurring far enough apart from one another that they do not have a severe impact. Alternatively, even if incidents of physical victimization occur somewhat close in time, the relatively small number of acts of physical victimization may be insufficient to fracture bonds with primary caregivers and alter mental representations of the self and other. In short, isolated incidents of infrequent physical victimization may not be powerful enough to disrupt pre-existing SES trajectories that are heavily determined by individual abilities and parent childhood SES.

With regard to multiple instances of sexual victimization, cumulative disadvantage may not be applicable when considering the multiple instances of sexual victimization by itself. Sexual victimization that occurred once and that occurred more than once was associated with significant and relatively equal amounts of disruptions in

personal annual income. This suggests that it may be sufficient to examine either the presence or absence of sexual victimization, rather than frequency. Early childhood parent sexual victimization may be an especially profound disruption of life trajectories no matter how many times it occurs.

In addition to providing a test of cumulative disadvantage theory by looking at severity of parent victimization, this study also examined the differential effects of parent physical victimization and parent sexual victimization on SES. Findings that childhood parent sexual victimization, but not physical victimization, was significantly associated with adult income replicated Zielinksi's findings that childhood sexual, but not physical, victimization predicted adult income. Taken together, this study, along with Zielinki's findings, demonstrate that childhood sexual victimization is associated with adult personal income as well as household income. Differences in SES outcomes for physical and sexual provide additional evidence that victimization measures need to account for specific type of victimization.

Differing results for physical and sexual victimization in terms of the SES outcome they predicted may be explained by differences in the rates of externalizing and internalizing behaviors associated with each type of victimization. Although research has consistently demonstrated that both types of parent victimization are associated with externalizing and internalizing behaviors (Briere and Elliot, 1993; Cichetti and Toth, 1995), little research has compared the relative rates of these types of behaviors in adolescents or adults who have been victimized as children (Dykman et al. 1997). Longitudinal research (Bolger, Patterson, and Kupersmidt 1998) looking at child victimization and peer relationships, however, has found that victims of child sexual

abuse do not display as much aggressive behavior toward peers and do not experience as much social conflict as their physically victimized peers.

To the degree that physical victimization may be associated with externalizing behaviors such as deviance and aggression at higher rates than sexual victimization, children may pay a higher price for externalizing behaviors in conventional institutions like educational institutions that heavily penalize deviance (Welch and Payne 2010). As such, educational trajectories may be especially affected by physical victimization. Disruptions to educational trajectories may be difficult to make up for later, especially since deviance tends to peak during college years, derailing post-secondary educational acquisition.

Sexual victimization may be associated with higher rates of internalizing behaviors, like depression, than physical victimization. Internalizing behaviors may not be penalized by educational institutions to the extent that they are hidden and less socially disruptive. Furthermore, relative to work environments, educational settings may be more flexible and allow for individualized progress toward degrees or certifications. Less able or willing to accommodate psychiatric symptoms, the workplace may be problematic for sexual victimization in a way that educational settings are not. Income may, then, suffer more heavily as a result of sexual victimization, since internalizing symptoms such as depression and anxiety can interfere with work attendance. Spotty work attendance may reduce the likelihood of promotion and decrease the length of time at each job.

Finally, the timing of the assessment of income (late twenties/early thirties) may explain non-significant findings regarding physical victimization and income. Non-significant relationships may not be due to a lack of disruption of income trajectories, but

because the disruption is not fully evident in early adulthood. In early adulthood, educational disruptions may not translate into income disparities relative to higher-educated peers. Children or adolescents who are physically victimized and, as a result, derailed early on in their educational trajectory, may seek out or be routed into blue-collar jobs that are comparably lucrative to their more highly educated peers while they are still young adults. Income differences, then, may become evident once education translates more clearly into higher earnings. Timing may be an important theme to consider for both victimization and SES attainment.

In summary, the major contributions of Chapter 2 included: using the life course perspective to address timing with regard to early childhood victimization, assessing cumulative disadvantage by examining multiple types and multiple instances of victimization, and offering an examination and potential explanation for the differential effects of two different types (i.e., physical and sexual) of parental victimization on two different SES outcomes (i.e., education and income).

**Chapter 3: Linked Lives and Social Integration**. Chapter 3 builds on the theoretical framework and findings of Chapter 2 by examining an additional theme in the life course perspective: linked lives. It operationalizes linked lives as social integration with parents and friends. It expands on the results of Chapter 2 by attempting to explain the significant pathways from different types of victimization to different SES outcomes in terms of social integration. Other researchers have proposed physical and mental health and health-compromising behaviors as potential mechanisms (e.g., Zielinski 2009). While these individual-level factors are important mediators to consider, this chapter instead tested a sociological pathway that assesses the linked lives theme in the

life course perspective. Mediation analyses provide tentative support for the linked lives theme, which contends that it is important to understand the interconnections in people's lives with others and the ways that relationships influence the life course (Giele and Elder 1998). To the extent that objective and subjective integration with mother and objective and subjective integration with friends mediated some of the relationships with SES, linked lives may be applicable to victimization-SES research. Evidence suggests that victimization primarily disrupts mother-child relationships, which in turn, may interfere with family functioning and familial connections with members of other social groups (e.g., teachers) important to SES attainment. Interestingly, results also suggest that female friends may be particularly important for educational outcomes post- physical victimization. This suggests that it is important to look at the entirety of one's social network as different types of victimization may not influence one's social relationships in the same way, and different types of relationship may confer different levels and types of benefits for education and income. It also may be important to consider the differing contributions of same-sex and opposite sex dyads regarding both parent-child and peer relationships.

Finally, this chapter makes an important contribution to the research on the differential influence of subjective and objective social relationships as it relates to SES. Researchers looking at the distinction between perceived and actual support with respect to health have argued that these two variables reflect independent constructs with independent effects on physical health, particularly with regard to cardiovascular disease (Hegelson 1993; Uchino 2004). Greater perceived support has been reliably linked to better cardiovascular health (Berkman et al. 1992), while the relationship between

received or actual support and cardiovascular disease has been more complicated, with greater received support being associated, in some studies, with poorer health outcomes (Sabin 1993). Uchino (2009) suggests that this may be due to the timing of these variables in the life-span of the individual; he argues that greater perceived support reflects a more positive intrapersonal profile that develops early in childhood while received support is a more transactional, interpersonal variable dependent upon the individual's health and responses of the individual and a member of her/his network to one another. This transactional nature of received or actual support and its complicated role in health outcomes has been echoed by other researchers (e.g., Smith, 1992).

Interestingly, results from this study suggest that objective or actual integration, and not subjective integration, with mother was a more reliable mediator of the relationship between childhood victimization and SES. Victims of both sexual and physical victimization had lower objective integration with mother, which in turn, predicted personal annual income and education, respectively, although subjective integration with mother was implicated in the relationship between severity of physical victimization and education. If accurate, these results suggest that mothers of victimized children spent less time discussing schoolwork and life problems and engaging in leisure activities, and that these particular mother-child activities in early childhood are crucial to both educational attainment and income. It may be the case that actual integration is more crucial to SES outcomes than it is to health. It will be important for future studies to consider and probe whether greater objective integration occurs as a result of poorer educational performance on the part of the victimized child. More advanced statistical

techniques such as structural equation modeling would help explore the direction of and potential endogeneity of these variables.

In conclusion, past research suggests that victimization is a physically and psychologically damaging event, and that this compromised physical and mental health may explain poorer SES outcomes (Zielinski 2009). Victimization, however, has broader effects associated with short-term and long-term social resources like social networks that affect life chances. The stigma of victimization may have a cutting off effect, such that psychological and tangible benefits of social relationships are unavailable. In this sense, victimization narrows people's life chances and social possibilities by limiting the diversity, size, and quality of social networks, which in turn, interferes with SES accumulation and social status.

**Chapter 4: Cumulative Disadvantage and Agency**. Chapter 4 expanded on the theoretical framework and findings of Chapter 2 by examining the interaction of experiences of early childhood parent sexual or physical victimization with social stratification measures. It operationalized minority status (i.e., being black, Hispanic, or female) and the experience of parent sexual or physical victimization as a constraint on one's agency to realize one's goals regarding socioeconomic status and argued that together they represent cumulative disadvantage. Blacks, Hispanics, and females all fared worse with regard to one type (i.e., females) or both types (i.e., blacks, Hispanics) of childhood parent victimization and income. Income, thus, seems to represent an SES outcome that is particularly vulnerable to multiple disruptions in the life-course trajectory. Non-significant findings regarding gender differences in childhood victimization and education may be explained by the fact that the relative disadvantage

suffered by females as compared to males for education is smaller than it is for income. This relatively small disadvantage with regard to education as a result of one's minority status may also explain why there were non-significant findings for blacks with regard to both types of victimization and education and significant findings for Hispanics with regard to sexual victimization and education. The black-white gap in educational attainment has decreased (U.S. Bureau of the Census 2015), but the gap between Hispanic and non-Hispanic persists. For example, Hispanics are more likely to drop out of high school, not get a GED, and not graduate from college that blacks and whites (Pew Research Hispanic Center 2010). These findings provide support for the theme of cumulative disadvantage with regard to social position and victimization. Importantly, this is the first study to examine the moderation of the relationship between early childhood parent victimization and adult SES by race, sex, and ethnicity.

**Future Research and Interventions**. While this study has added to previous work assessing the effects of victimization on SES, more work is necessary. Although I found support for the importance of examining early childhood victimization and, by extension, timing within the life course perspective, more sophisticated statistical analyses (e.g., time-series analysis) could build from Macmillan's work that suggests an age-grade effect by starting from early childhood victimization, rather than adolescence. These techniques could assess the complex relationships between the timing of victimization and the consequences, as well as non-linear relationships. Also, while I examined two types of victimization independently and together, future research could assess at addition types, as well as levels of severity within type. I assessed severity with regard to frequency and multiple types, but different measures of severity could assess for

difference in the nature of sexual victimization (e.g., sexual touch vs. penetration), for example. It is likely that the nature of sexual and physical victimization may influence different outcomes and/or how long effects last. Re-victimization in adulthood should also be assessed and could be conceptualized as another form of cumulative disadvantage.

As discussed, I tested income and education as separate outcomes and found evidence for different effects for each outcome. Past research has considered other SES outcomes such as receiving public assistance. Future work needs to continue not only to assess these measures separately, but also assess them relative to specific types of victimization. As with income and education, there are likely unique relationships between specific types of victimization and other SES measures. Furthermore, examining all SES outcomes later in life would help researchers determine how long specific effects last, which could help target interventions at age appropriate times during the life course.

To the extent that my findings support the application of linked lives and social integration, future research might assess the influence of non-parent and friend relationships on the relationship between victimization and SES. For example, subjective and objective integration with teachers or extended family may offer a clue regarding just how disruptive parent victimization is to one's subjective evaluations of various others and objective interactions with them. Furthermore, I did not assess the size of one's social network in my objective measures; network size may be another important social integration measure, especially to the extent that it is related to factors associated with SES attainment.

Finally, important race, ethnicity, and sex differences in outcomes, especially with respect to income must be examined further. Due to small cell sizes, I was not able to carry out a full examination of the complex intersections of social stratification that would add dimension to the application of cumulative disadvantage and provide crucial evidence regarding how to ease constraints resulting from minority status. The dynamic relationships that I found, which differed by social location, again suggest the importance of examining specific types of victimization on specific outcomes and, importantly, for difference demographic groups.

This last point highlights the fact that victim-related services tailored to specific circumstances are crucial. To the extent that formal victim services agencies tend to be located within governmental bodies, they may not be flexible and responsive enough to serve the diverse needs of victims, favoring a "one size fits all" models. It is, however, important for victim service agencies to consider the ways in which minority victims may have to contend with disadvantages above and beyond victimization. This requires cultural competency training in victim services agencies and a willingness to allocate more resources to victims who have multiple disadvantages.

More flexible institutions (e.g., universities, counseling centers) could fill in some of the gaps left by victim services. Since most victims do not access victim services, there is a lot of room for improvement in post-victim services as a whole. My results, in combination with previous research regarding the effects of victimization on SES, as well as long-term psychological and health outcomes, indicate that services for victims cannot be short-term crisis oriented services. More comprehensive, long-term support is necessary. With respect to SES, it is important for Universities to consider ways to reduce

stigma for victims of child physical and sexual abuse. These settings could offer important peer mentoring programs modeled after current sexual assault programs, but with a focus on the unique experiences of child victims. Universities are uniquely positioned to help victims of childhood sexual victimization especially, since results indicate that victims of sexual abuse continue in educational pursuits. If they access services within a University setting, perhaps future income would suffer less. Furthermore, since evidence suggests that victims of early childhood physical abuse may have disrupted educational trajectories, making them less likely to access University services, workplace programs like counseling services could offer support for employees.

It is more difficult to recommend services for children, since they are often still living with the person or people who are victimizing them and because of monitoring associated with child abuse in children. Since I did find evidence for negative effects on relationships with mothers especially, parenting classes that address parent victimization, as well as child and parent reactions to victimization could be helpful. If, for example, a non-perpetrator mother understands the importance of continued engagement with her victimized child(ren) even if the child disengages, she could help reduce the effects of victimization on long term outcomes. In addition, to the extent that friends were an important mediator in some of the relationships, mentoring programs or community programs that keep children engaged with the community, peers, and others may be helpful.

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