THE PAST HURTS:
EXAMINING THE LONG-TERM EFFECTS OF CHILDHOOD ABUSE ON ADULT PSYCHOLOGICAL, PHYSIOLOGICAL, AND INTERPERSONAL WELL-BEING

A Dissertation in
Sociology
by
Andrea L. Ruiz

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The dissertation of Andrea L. Ruiz was reviewed and approved* by the following:

**David Johnson**  
Professor of Sociology, Demography, and Human Development and Family Studies  
Dissertation Advisor  
Chair of Committee

**Gary John Adler**  
Assistant Professor of Sociology

**Sandra Azar**  
Professor of Psychology

**Roger Finke**  
Distinguished Professor of Sociology, Religious Studies, and International Affairs  
Director of the Association of Religion Data Archives (theARDA.com)

**Jennifer VanHook**  
Director, Graduate Program in Sociology

*Signatures are on file in the Graduate School
ABSTRACT

One of the most consistent findings in research on childhood abuse is its noxious effects on outcomes related to health and well-being. Work in this area has explored the topic of resiliency, having identified a number of factors that might buffer against the negative effects of abuse. However, notably lacking in the scholarship are longitudinal studies of adults over their life-span who have faced early abuse, and moreover, what we know about resiliency is largely limited to the protective factors that help young victims of abuse overcome their trauma and thrive. Less is known about what it takes for adult victims to achieve resiliency in the face of their traumatic childhoods.

To address this large limitation in the literature on childhood abuse and resiliency, this dissertation uses data from the National Survey of Midlife Development (MiDUS), [1995] [2005] [2015] to examine the long-term effects of multiple types of childhood abuse on three dimensions of adult well-being: psychological, physiological, and interpersonal. In line with resiliency theory—which provides a useful framework for considering how certain factors can operate to encourage positive development—each chapter sets out to test specific factors that are protective and help to offset the negative effects of childhood abuse on each of the three outcomes. The following manuscript is organized into three sections that assess: (1) psychological well-being and the role of coping, (2) physical health and the role of religiosity, and finally (3) relationships and the roles of social contact and optimism.

The first empirical chapter focuses on psychological well-being over the life-course, and explores the protective effects of three types of coping styles: problem-focused coping, emotion-focused coping, and the less understood food-focused coping. Consistent with cumulative disadvantage, it is expected that victims of abuse will have worse psychological
outcomes when compared to non-victims. However, these individuals may utilize certain coping mechanisms that may protect them from the negative effects of abuse on psychological well-being over their life-span. Results from these analyses point to two important findings. First, emotion-focused coping exacerbates psychological well-being over time for all individuals. However, these negative effects are more pronounced for victims of physical abuse. Individuals who reported physical abuse during childhood experience sharper declines in their overall mental well-being as they engage in more emotion-focused coping. Secondly, results indicate that while food-focused coping is associated with declines in psychological well-being over time for all individuals, this style of coping is protective for victims of physical abuse. Individuals who reported being physically abused experience sharp increases in their psychological well-being as they engage more in coping styles involving food and eating.

The second empirical chapter analyzes trajectories of self-rated physical health, while exploring the roles of private religiosity and public religiosity as protective factors, since religion has been found to have strong, positive associations with outcomes related to health and well-being. I explore this association within the context of childhood abuse, asking how these religious dimensions work for adult victims of abuse and their physical health over the adult life-span. Findings from these analyses point to interesting findings. First, although public religiosity is consistently associated with better health outcomes over time, it failed to have protective effects against childhood abuse on outcomes of physical health. However, while more engagement in private religious behaviors is associated with declines in physical health, this was not true for everyone. Individuals who reported physical abuse showed improved physical health over time as their levels of private religious engagement increased.
Finally, the third empirical chapter focuses on interpersonal relationships over the life-span, while assessing two psychosocial dimensions as protective factors. In this chapter, I use an interpersonal perspective and consider social optimism and frequency of social contact with others as potential buffers against the harmful effects of abuse on later interpersonal relationships. Findings from these analyses indicate two important findings. First, increases in social contact with friends, neighbors, and family members is associated with more positive interpersonal relationships over time, and this is true for all individuals. Victims and non-victims, alike, fare better interpersonal relationships over time as their social contact increases. However, this positive effect is significantly weaker and less pronounced for more severe experiences of childhood abuse. Specifically, victims of cumulative abuse (both emotional and physical) benefit less (and least) from social contact in comparison to others. When compared to all other groups (emotional only, physical only, no abuse), victims of cumulative abuse have the worst adult relationships over the life-course even when they engage at similar or comparable levels of social contact.
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CHAPTER 1

INTRODUCTION

In present time, childhood abuse is a well-known global problem—and one that resonates strongly here in the United States. According to federal reports from the 2015 fiscal year, roughly 683,000 children fell victim to abuse and neglect nationwide—a rate of 9.2 victims per 1,000 children in the population. From these, a nationally estimated 1,670 children died as a result of abuse or neglect, representing a 5.7 percent increase from previous years. This translates to a rate of 2.25 children per 100,000, and an average of five children dying every day from abuse or neglect (Children’s Bureau 2017). However tragic and sensational, these reports, provide no information about the precursors to abuse and neglect and overall, offer little insight into its pervasiveness.

A Brief Overview of Terms

Childhood abuse, as defined by The Child Abuse Prevention and Treatment Act, entails an act (or a failure to act) on the part of a parent or caregiver which presents an imminent risk of serious harm, or results in the death, serious physical or emotional harm, sexual abuse or exploitation (CAPTA 2010). There are four distinct types of childhood maltreatment recognized by nearly all states, as specified in Table 1.1, including: physical abuse, sexual abuse, emotional abuse, and child neglect (Butchart, World Health Organization, and International Society for the Prevention of Child Abuse and Neglect 2006). Physical abuse is defined as any non-accidental physical injury to the child and can include striking, kicking,
burning, biting, or any action that results in a physical impairment. Sexual abuse includes incest, sexual assault by a relative or stranger, fondling of genitals, exposure to indecent acts, sexual rituals, or involvement in child pornography. Psychological abuse (emotional) is the most recently recognized form of child abuse which involves acts of belittlement, symbolic acts designed to terrorize a child, and lack of nurturance or emotional availability by caregivers which result in injury to psychological capacity or emotional stability as evidenced by observable or substantial changes in behavior, emotional responses, or cognitions (anxiety, depression, withdrawal, aggressive behavior).

And finally, child neglect covers a range of behaviors (educational, supervisory, medical, physical, emotional, and abandonment) that involve the caretaker’s failure to provide needed food, clothing, shelter, medical care, or supervision to the degree that the child’s health, safety, and well-being are threatened with harm. These four categories have become the focus of separate studies of incidence and prevalence, etiology, prevention, consequences, and treatment, with uneven development of research within each area and poor integration of knowledge across areas (Azar et al. 2016; Goodvin et al. 2007). Each category has developed its own typology and framework of reference terms, revealing similarities and important differences.

The Complexities of Child Maltreatment

Childhood maltreatment is the result of a complex interplay of various factors, such as personal, cultural, or social factors. The contributing elements that increase the likelihood of abuse are called risk factors. Since no single risk factor has been identified (see Table 1.2) that provides a necessary or sufficient cause of child maltreatment, models of child maltreatment have evolved from isolated cause-and-effect models to approaches that consider the
combination factors that may contribute to child maltreatment. The emerging social interactional models emphasize the importance of viewing child maltreatment in the context of the family, community, and society rather than emphasizing only individual parental psychopathology or individual stressors (Cicchetti and Carlson 1989; Garbarino 1977). The phenomenon of child abuse and neglect has thus been moved away from an individual disorder, toward a disturbance of childrearing, often part of other family problems, like poverty (Burgess and Holmstrom 1979; Pelton 1989; Wolfe and Jaffe 1991).

Some recent studies have developed operational definitions that attempt to define maltreatment more precisely. When it comes to the multidimensionality of childhood abuse, relatively little is known about similarity and differences in terms of causes, consequences, prevention, and treatment of selected types of child abuse and neglect. Many scholars have developed general typologies and frameworks which reveal certain similarities and differences in consequences of various types of abuse, but much of the work is weakened by variations in definitions. In addition categories of child maltreatment, the duration, source, intensity, timing, and situational context of child victimization are also recognized as important factors.

**Health-Related Consequences of Childhood Maltreatment**

*Short-Term Consequences.* Abuse and neglect may result in serious health problems that can adversely affect child development. Evidence on the near-term effects of physical abuse consistently suggests significant, negative impacts on mood and behavioral outcomes, and this is true across different countries and populations (Fakunmoju and Bammekes 2015; Fergusson, Boden, and Horwood 2008; Kim and Cicchetti 2006; Maas, Herrenkohl, and Sousa 2008; Yen et al. 2008). Interestingly, these effects are similar and consistent even for experiences that many would not consider or refer to as abuse, including frequent or severe corporal punishment
(Fergusson et al. 2008; Font and Berger 2015). Cognitive and language deficits in abused children have also been noted clinically (Augoustinos 1987; Azar et al. 2017; Azar, Barnes, and Twentyman 1988; Fantuzzo and Polite 1990; Kolko 1992). Moreover, some studies have linked abuse to lowered intellectual and cognitive functioning, and late verbal development (De Bellis et al. 2009; Gould et al. 2012; Twamley et al. 2009).

Physically abused children are found to have more serious physical injuries, skin markings, and scars than their non-abused peers (Kolko 1992). Moreover, early studies of physically abused children have also indicated numerous signs of neuromotor handicaps, including central nervous system damage, physical defects, growth problems, mental retardation, and speech problems (Green, Gaines, and Sandgrund 1974; Lewis and Shanok 1977). Physical aggression and antisocial behaviors are among the most consistently documented outcomes among children of physical abuse, with longitudinal work indicating that these problems carry over the life-span (Egeland and Sroufe 1981; Rogeness et al. 1986). Children who experienced severe forms of physical violence have higher rates of conduct problems and rule violating behaviors than those who did not experience severe violence (Straus and Gelles 1988).

Poor school performance, like low grades and repeating grade levels, is also consistently noted among physically abused and neglected children (Eckenrode, Laird, and Doris 1993; Salzinger et al. 1991; Wolfe and Mosk 1983), although children of neglect seem to be the most adversely affected. Victims of sexual abuse are often found to be more symptomatic than their non-abused counterparts in levels of fear, frequency of nightmares, general post-traumatic stress disorders, withdrawn behavior, cruelty, delinquency, sexually inappropriate behavior, and self-injurious behavior. Among children who were sexually
abused by a family member, evidence points to high levels of dissociation, which is a process that produces a disturbance in normal functions of memory and identity (Hillberg, Hamilton-Giachritsis, and Dixon 2011; Trickett and Putnam 1993).

**Long-Term Consequences.** Adult survivors of childhood maltreatment often suffer from health problems long after the abuse has occurred. In fact, childhood maltreatment is often regarded as a life-course social determinant of health, with much of the scholarly literature indicating its lasting effects on health and well-being over the life-span (Greenfield 2010). Research indicates that adult victims of maltreatment are more likely to describe their health as being “fair” or “poor” (versus “good” or “excellent”) when compared to non-maltreated individuals. Victims also report being sick more often, visiting doctors more frequently, having twice as many health-related surgeries, and developing multiple chronic pain syndromes than non-victims (Felitti 1991; Kendall-Tackett 2000; Kendall-Tackett, Marshall, and Ness 2003).

The Adverse Childhood Experiences (ACE) survey (Felitti et al. 1998) is commonly used in research which focuses on the long-term health consequences of childhood maltreatment, and includes measures for physical abuse, sexual abuse, emotional abuse, and childhood neglect. Taken together, the evidence largely suggests that experiencing more forms of childhood adversity is associated with elevated risks for developing serious health conditions in adulthood, like heart disease, cancer, stroke, chronic bronchitis, diabetes, and hepatitis. More adverse experiences also increased the likelihood of engaging in negative health behaviors in adulthood, such as physical inactivity, smoking, and alcohol and substance abuse (Dube et al. 2002; Felitti et al. 1998).

Overall, evidence associating maltreatment to long-term physical health is limited and moreover, to the extent that maltreatment does negatively influence health outcomes, the
underlying mechanisms are not well-established (Norman et al. 2012). Moreover, to the extent that maltreatment negatively affects long-term health outcomes, the mechanisms are not well established in the scholarly literature. Moreover, since many forms of childhood maltreatment often occur in concert with each other, one major issue in maltreatment research is the assessment of independent effects across various forms of trauma, in addition to the discernment of these effects from other outside factors. Some research has turned to twin studies and other related research designs to assess maltreatment in isolation of genetic or environmental risk factors, with much evidence indicating distinctions in the effects of particular forms of maltreatment on a number of health outcomes later in life (Bornovalova et al. 2013; Duncan et al. 2008; Scherrer et al. 2007; Young-Wolff, Kendler, and Prescott 2012).

Regarding sexual abuse, evidence links it to increased risks for malnutrition and eating pathologies (Widom et al. 2012), in addition to a range of psychological issues, including adult depression, conduct disorders, revictimization, bulimia nervosa, suicidal ideation and attempts, post-traumatic stress, dissociation, sleep problems, hypersexualized behaviors, and other behavioral problems (Dinwiddie et al. 2000; Kendler et al. 2000; Nelson et al. 2002; Noll et al. 2006; Trickett, Noll, and Putnam 2011). When it comes to physical abuse, evidence points to evidence linking it to adult obesity and malnutrition (Hussey, Chang, and Kotch 2006; Springer et al. 2007; Widom et al. 2012), and an array of long-term psychological issues, such as anxiety, depression, suicidal ideation and behaviors, eating pathology, eating disorders, and increased drug use and abuse (Lindert et al. 2014; Norman et al. 2012). While studies have often given little attention to examining the long-term health effects of emotional trauma, evidence has indicated strong associations between emotional abuse and various psychiatric symptoms and behavioral problems. These associations are often equal to or greater than the
effects of physical abuse on adult health outcomes later in life (Font and Berger 2015; Spertus et al. 2003; Teicher et al. 2006).

**A Resiliency-Focused Approach to Childhood Maltreatment**

Despite the strong empirical evidence regarding childhood maltreatment and health outcomes over the life-course, a number of studies have highlighted significant complexities that challenge our understanding of childhood abuse and its consequences in adulthood. While it is true that most children who are abused will experience complications over their lifetimes, it is also true that many will not elicit serious health disturbances that threaten their well-being over their life-span (Cicchetti and Rogosch 2009; Lee, Cheung, and Kwong 2012; Masten, Best, and Garmezy 1990; Rutter 1985). In fact, longitudinal studies have found evidence suggesting that among individuals who experienced childhood abuse, roughly 10%–20% demonstrate signs of positive development and adaptation (Cicchetti and Rogosch 1997; Herrenkohl, Herrenkohl, and Egolf 1994). The take-away point is: not all victims of abuse become dysfunctional adults. So the question is, what makes the difference for these individuals who rise above their trauma?

The ability to adapt successfully in the face of adversity is referred to as resilience (Masten et al. 1990). Resilience theory has developed well over the last several decades, centering on individual recuperation and convalescence back to normalcy after experiencing stress (Catalano et al. 2004; Richardson 2002). Specifically, its primary focus is on identifying features that offset negative influences and promote positive outcomes (Masten 2007). A large body of work has consistently found that the difference between individuals who adapt well despite risk, and those who do not, is the presence of protective factors.
Protective factors are, in essence, resources utilized by individuals that can be either external or internal (e.g. parental support or community organizations / intelligence or self-efficacy). However, resiliency theory largely focuses on external resources, since such an approach places it in a more ecological context, viewing resilience as something that can be achieved, rather than as a static, individual trait (Sandler et al. 2003). The protective factor model of resilience (Fergus and Zimmerman 2005) is commonly used to assess how resources moderate the effects of stress and protect against negative trajectories (see Figure 1.1), and is normally tested in multiple regression through interaction terms. The bulk of work on resiliency points to an array of factors found to protect child and adolescent victims against the effects of their experiences (see Table 1.2). However, resiliency varies across the life-span, yet most insight in this area has focused on child and adolescent victims of abuse, with the salience of these factors for victims in their adult years are substantially less explored and understood.

A life-course model of resiliency recognizes the potential for resilience to emerge across the life-course through ongoing and continuous processes of adaptation that occur across time (Boerner and Jopp 2007). Figure 1.2 illustrates this conceptual life-course model of resiliency, whereby the first stage in the process of resilience across the life-course must begin with the onset of adversity (the red box). In this case, the onset of adversity refers to the onset of childhood abuse (Windle 2011). The model is consistent with stress theory, considering everything after the initial onset of adversity as reactionary (Allen 2001). Appraisals of stress and hardship resulting from trauma often lead to disruptive and maladaptive behaviors and interrupted self-concept (Bury 1982). Scholars maintain that when familiar patterns are disrupted, people feel fragmented and disjointed (Kralik, Visentin, and van Loon 2006). This idea is captured by the top, right portion of the model which illustrates the separation and
disconnecting of the three spheres. As risk exposure and stress increases, victims become less capable of self-reliance on individual resources, leading them to turn to external resources and support. The activation of external resources thus initiates the various protective processes that ultimately steer victims towards positive adaptation and positive outcomes. The yellow line at the bottom of the model symbolizes resilience through the life-course, representing and illustrating the ongoing nature of these processes and interactions occurring over time.

**Well-Being as an Outcome of Resilience**

The three upshots of resilience are wellness, recovery, and growth/development. These three are the goals which, once attained, can improve well-being and enhance quality of life for victims of abuse. The life-course model of resilience discussed above is cyclical, beginning and ending with a unified concept of well-being (again, see Figure 1.2). Well-being is represented by three overlapping circles, denoting (1) individual, (2) social, and (3) environmental domains. Collectively, the circles represent wellness, since to participate and engage in these domains, one must be “well” (Bryant, Moulds, and Guthrie 2001; McMahon and Fleury 2012).

The conceptualization of wellness incorporates multiple dimensions of health (Cohen-Mansfield et al. 2011), each of which is assessed as an outcome in the following dissertation chapters: (1) psychological health, (2) physical health, and (3) interpersonal health. The premise of psychological well-being is measured by self-acceptance, personal growth, purpose in life, positive relations with others, environmental mastery and autonomy (Ong and Bergeman 2004). Psychological well-being can also refer to a lack of negative psychiatric outcomes (Pietrzak and Cook 2013). Improved physical health and functional status also indicate well-being because they directly impact the degree of disability (Ong and Bergeman 2004), and thus, one’s feelings of control and autonomy which have been associated with
quality of life (Higgs et al. 2003). Finally, positive social relationships reflect the ability to sustain meaningful engagements (Reich, Zautra, and Hall 2010). Resilience produces social functioning abilities that encourage positive development of social networks, and the adoption of positive social roles and engagement (Norris et al. 2008).

**Protective Factors in Adulthood: An Overview of Empirical Evidence**

Prior research has well established that while childhood abuse is strongly associated with adverse outcomes later in life, this is not true for all victims (Dufour, Nadeau, and Bertrand 2000; McGloin and Widom 2001). Despite this fact, surprisingly few studies have sought to explain how and why victims of childhood abuse are impacted differently by their experiences. Prior work tending to these questions provides evidence indicating the presence of several features which act as protective factors for adults with histories of childhood violence. On average, better health functioning and well-being was reported among individuals who reported access to certain resources. Strong social relationships and instrumental and emotional support were found to buffer against the negative impact of stress, resulting in improved functional status and slower cognitive aging (Cohen, Gottlieb, and Underwood 2000; Schwarzer and Leppin 1991; Seeman 1996; Seeman et al. 2001). Other protective resources include: sense of community (Davidson and Cotter 1991; Hobfoll 2002; Keyes 1998; Prezza et al. 2001), external support groups (Jonzon and Lindblad 2006), close intimate partnerships (DuMont, Widom, and Czaja 2007); positive self-appraisal (Jonzon and Lindblad 2006); personal mastery, self-esteem and social skills (Banyard and Williams 2007; Garmezy 1991), and spirituality and religious coping (Dervic et al. 2006; Gall 2006). Finally, research indicates that certain personality traits generally associated with depression, pessimism, self-criticism, interpersonal dependence, and anxiety become much less common with age, making older
adults less psychologically and emotionally vulnerable than their younger counterparts (Jones and Meredith 1996).

**Dissertation Overview and Outline**

The large body of research examining childhood maltreatment offers strong and compelling evidence demonstrating its long-term, deleterious effects on adult health later in life. This work has contributed to our understanding of developmental processes and implications that succeed early life trauma. Despite its many contributions, this body of work is characterized by several limitations and gaps. Research focused on resiliency for victims of childhood abuse in their adult years lags behind the prolific body of research on children and adolescents (Wild, Wiles, and Allen 2013). Work on adult resilience tends to focus exclusively on childhood sexual abuse (Gall et al. 2007; McClure et al. 2008; Wright, Crawford, and Sebastian 2007; Wright, Fopma-Loy, and Fischer 2005) with little attention towards other forms of maltreatment.

What remains unclear from this work is: (a) the distinct effects of different forms of abuse on health outcomes in adulthood, (b) protective factors in adulthood that offset the harmful effects of childhood abuse on health outcomes later in life. This dissertation aims to address these limitations, departing from much of this work in several ways. First, I focus on the long-term effects of two distinct forms of childhood abuse (physical and emotional) on three distinct dimensions of adult wellbeing across the life-course: (1) psychological, (2) physical, and (3) interpersonal. I also apply a resilience-focused approach, utilizing protective-factor models to independently assess moderating effects of several factors (coping style, religious behaviors, and social contact and optimism), in the relationship between childhood abuse and adult well-being over the life-span.
Table 1.1. Definitions of Childhood Maltreatment Types

<table>
<thead>
<tr>
<th>Maltreatment Type</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Abuse</td>
<td>Physical abuse of a child is defined as the intentional use of physical force against a child that results in—or has a high likelihood of resulting in—harm for the child's health, survival, development, or dignity. This includes hitting, beating, kicking, shaking, biting, strangling, scalding, burning, poisoning, and suffocating. Much physical violence against children in the home is inflicted with the object of punishing.</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>Sexual abuse is defined as the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared, or else that violates the laws or social taboos of society. Children can be sexually abused by both adults and other children who are—by virtue of their age or stage of development—in a position of responsibility, trust, or power over the victim.</td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>Emotional and psychological abuse involves both isolated incidents, as well as a pattern of failure over time on the part of a parent or caregiver to provide a developmentally appropriate and supportive environment. Acts in this category may have a high probability of damaging the child's physical or mental health, or his/her physical, mental, spiritual, moral, or social development. Abuse of this type includes the following: the restriction of movement; patterns of belittling, blaming, threatening, frightening, discriminating against, or ridiculing; and other non-physical forms of rejection or hostile treatment.</td>
</tr>
<tr>
<td>Neglect</td>
<td>Neglect includes both isolated incidents, as well as a pattern of failure over time on the part of a parent or other family member to provide for the development and well-being of the child—where the parent is in a position to do so—in one or more of the following areas: health, education, emotional development, nutrition, shelter, and safe living conditions. The parents of neglected children are not necessarily poor.</td>
</tr>
</tbody>
</table>

Source: (Butchart et al. 2006)
<table>
<thead>
<tr>
<th><strong>RISK FACTORS</strong></th>
<th><strong>PROTECTIVE FACTORS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prematurity or low birth weight</td>
<td>Sense of humor</td>
</tr>
<tr>
<td>Prenatal exposure to drugs/alcohol</td>
<td>Self-reliant</td>
</tr>
<tr>
<td>Chronic medical conditions</td>
<td>Strong self-image</td>
</tr>
<tr>
<td>Difficult temperament</td>
<td>Internal locus of control</td>
</tr>
<tr>
<td>Behavioral Problems</td>
<td>Sense of purpose</td>
</tr>
<tr>
<td>Learning Disabilities</td>
<td>Social competence</td>
</tr>
<tr>
<td>Peers who use alcohol/drugs</td>
<td>Autonomy and self-efficacy</td>
</tr>
<tr>
<td>Involvement in anti-social behaviors</td>
<td>Sense of purpose and future</td>
</tr>
</tbody>
</table>

**Individual**

<table>
<thead>
<tr>
<th><strong>RISK FACTORS</strong></th>
<th><strong>PROTECTIVE FACTORS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical and inconsistent parenting</td>
<td>Non-authoritarian/child-centered parenting</td>
</tr>
<tr>
<td>Abusive or conflict ridden family</td>
<td>Positive attitudes towards child’s education</td>
</tr>
<tr>
<td>Single-parent family</td>
<td>Close bonds with at least one parent</td>
</tr>
<tr>
<td>Parents with mental illness</td>
<td>High but achievable expectations for child</td>
</tr>
<tr>
<td>Presence of alcohol or drug abuse</td>
<td>Parental encouragement of child’s decision making</td>
</tr>
<tr>
<td>Low parental monitoring of child</td>
<td></td>
</tr>
</tbody>
</table>

**Family**

<table>
<thead>
<tr>
<th><strong>RISK FACTORS</strong></th>
<th><strong>PROTECTIVE FACTORS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overcrowding</td>
<td>Caring and supportive teachers</td>
</tr>
<tr>
<td>High student/teacher ratio</td>
<td>High but realistic expectations and support</td>
</tr>
<tr>
<td>Insufficient or inappropriate curriculum</td>
<td>Compassion and respect</td>
</tr>
<tr>
<td>Weak or inconsistent adult leadership</td>
<td>Opportunity for involvement and participation</td>
</tr>
<tr>
<td>High demands and expectations without support</td>
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</tr>
</tbody>
</table>

**School**

<table>
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<tr>
<th><strong>RISK FACTORS</strong></th>
<th><strong>PROTECTIVE FACTORS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty</td>
<td>Caring and support</td>
</tr>
<tr>
<td>Neighborhood disorganization</td>
<td>High expectations</td>
</tr>
<tr>
<td>High mobility rates</td>
<td>Opportunities for meaningful participation</td>
</tr>
<tr>
<td>Few adults to monitor children</td>
<td></td>
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<tr>
<td>High levels of drug and gang activity</td>
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**Community**

Adapted from (Christie et al. 2008)
Figure 1.1. Protective Factor Model of Resiliency
Figure 1.2. Life-Course Model of Resiliency

ONSET OF ADVERSITY

Wellness, Recovery Growth/Development

Stress Perception

Disruption

Resilience Processes

Emotional Regulation

Reintegration

Coping Processes

Wellness, Recovery Growth/Development

Energy, Motivation, and Access

Resilience Resources

Environment

Social

Individual

Activation of External Resources
CHAPTER 2

CHILDHOOD ABUSE AND ADULT PSYCHOLOGICAL WELL-BEING:

STRESS COPING AS A MODERATOR

ABSTRACT

The present study uses multiple waves of panel data from the National Survey of Midlife Development in the United States (MiDUS) to examine the long-term effects of childhood abuse on adult psychological well-being, and assess adult coping strategies as protective factors that ameliorate the noxious effects of trauma. The objectives for this study are twofold: (1) draw from cumulative disadvantage theory to investigate the long-term effects of emotional and physical childhood abuse on adult psychological well-being over the life-span, and (2) apply a resilience-focused framework to assess various dimensions of adult coping as intervening factors that protect against the noxious effects of childhood abuse.

Results from fixed-effects models indicate no moderating effects of problem-focused coping. However, emotion-focused coping is found to exacerbate the effects of abuse, specifically for victims of trauma. Finally, food-focused coping serves as a protective factor, specifically for physical abuse victims again. Overall, these results indicate that adult coping is a major component in the long-term psychological functioning of abuse victims. Moreover, the findings suggest that more attention should be given to coping as a protective mechanism that protects against the noxious effects of childhood abuse. Finally, results highlight the importance of assessing various dimensions of coping in the context of childhood abuse, as they reflect the means by which victims of childhood abuse negotiate their past and present worlds to overcome their traumatic experiences.
INTRODUCTION

The life-course perspective provides a general way to conceptualize how childhood abuse influences later outcomes by pointing to various factors that differentiate people over time (Elder 1998, 1994; Kuh, Ben Shlomo, and Ezra 2004). A primary insight of this perspective is cumulative disadvantage which, like the life-course perspective, focuses on differentiation in individual trajectories. However, it posits that differences across individuals occur as a result of early inequalities (Dannefer 1987). Early advantages launch people on promising trajectories. For less unfortunate individuals, early life disadvantage sets off a cascade of risks and detriments that accumulate and worsen over the life-span, which leads to further disadvantage. In other words, early disadvantage, can scar a person’s life-chances (Dannefer 1987, 1988; Dannefer and Sell 1988; Preston, Hill, and Drevenstedt 1998; Ross and Wu 1996; Settersten 1999).

In the context of childhood abuse, victims may be on a set trajectory of disadvantages that over time, lead to the cumulative degeneration of their psychological health (Felitti 2002; Ferraro and Kelley-Moore 2003; Wickrama et al. 2003). Indeed, a bulk of the literature supports this notion, with evidence suggesting that childhood abuse jeopardizes well-being over the adult life-span (Kaplan, Pelcovitz, and Labruna 1999), with findings indicating that all forms of maltreatment are associated with a number of short-term and long-term mental health issues. These include, but are not limited to, post-traumatic stress disorder (PTSD), depression, anxiety (Kaplow and Widom 2007; Min et al. 2013; Springer et al. 2003) and suicidal ideation (Johnstone et al. 2009; Lang et al. 2010; MacMillan et al. 2001).

However, it would be a mistake to conclude that all victims of childhood abuse will experience poor psychological outcomes. Such a simplistic interpretation to cumulative
disadvantage does not explain why some victims thrive in the face of adversity. The question then becomes: “what factors might enable some victims of childhood abuse to thrive in adulthood, while others do not?”

The present study develops a sociological conceptualization of resilience that addresses mechanisms for protecting against the noxious effects of childhood abuse on adult well-being. Drawing from cumulative disadvantage theory, I assess the long-term effects of childhood abuse on psychological well-being over the life-span. To address the limitations of cumulative disadvantage theory, I apply a resilience-focused approach that considers possible countervailing mechanisms that can offset the negative effects of abuse. Resilience-frame models are used to test three dimensions of adult coping—problem-focused, emotion-focused, and food-focused—as possible protective factors that change and ameliorate the noxious effects of childhood abuse on adult well-being.

THEORETICAL AND EMPIRICAL BACKGROUND

Childhood Abuse and Psychological Well-Being: Review of Empirical Evidence

Childhood abuse is one of the most potent determinants of mental health across the life-span. Numerous studies offer strong evidence linking childhood abuse to an array of adult psychological ailments, such as depression, anxiety, PTSD, dissociative symptoms, risky sexual behaviors, suicidal ideation, bulimia nervosa, drug use, and sleep difficulties (Dinwiddie et al. 2000; Font and Berger 2015; Kendler et al. 2000; Lindert et al. 2014; Nelson et al. 2002; Noll et al. 2006; Norman et al. 2012; Teicher et al. 2006; Trickett et al. 2011). Research suggests that these mental health implications are long-lasting—indicating that the onset of adulthood for abuse victims is characterized by greater and more severe mental health ailments, when
compared to persons without histories of trauma (Gilman et al. 2015; McLaughlin et al. 2012, 2010; Shonkoff et al. 2012). For victims of childhood sexual abuse, onset of adulthood is associated with added psychosocial disorders, anxiety and depression, and antisocial behaviors (Farley and Patsalides 2001; Higgins and McCabe 2000; Mulder et al. 1998).

Depression and PTSD are the most common outcomes associated with childhood abuse, with PTSD co-occurring often with depression (Perkonigg et al. 2000; Scott, Wolfe, and Wekerle 2003). In adulthood, victims of childhood abuse have increased risks for developing severe depression that involves extreme symptoms ranging from regular nightmares, chronic fatigue, frequent crying spells, and extreme despondency (Felitti 1991). Victims of physical and emotional abuse are found to experience issues related to low self-esteem, anger management, and heightened levels of aggression (Briere and Runtz 1990). Altogether, these symptoms are magnified for individuals who experienced multiple forms of abuse, with victims reporting more severe chronic depression, regular feelings of hopelessness, and recurrent thoughts of suicide (Arata et al. 2007).

**Childhood Abuse and Adult Coping: A Resilience-Focused Approach**

Victims of abuse experience significant adjustment problems in adulthood, which are far greater and more severe among victims of cumulative abuse. It has been shown that exposure to cumulative abuse in childhood is associated with more serious difficulties in psychological adaptation than single-type exposures (Higgins and McCabe 2000; Sesar, Šimić, and Barišić 2010; Spertus et al. 2003). These difficulties may prompt victims to use different coping strategies to deal with heightened levels of stress (Dannefer 2003; Ferraro and Kelley-Moore 2003; Walsh, Fortier, and DiLillo 2010).
A resilience-based approach emphasizes strengths, resources, and capacities that offset the harmful effects of vulnerability and risk. With this in mind, effective coping strategies in response to trauma may be one of the ways in which victims of abuse can potentially avoid the cascade of life-time disadvantages. Individuals who adaptively manage and cope with trauma-induced emotions and stress often experience less long-term strain than those who struggle to process these emotions. For instance, some victims will develop integrative and adaptive coping strategies that mirror and correspond to their past traumatic experiences (Finkelhor and Browne 1985). Such constructive, adaptive responses to stress reflect the defining features of resilience (Luthar, Cicchetti, and Becker 2000).

**Childhood Abuse and Adult Coping Strategies: Review of Empirical Evidence**

Coping strategies are the cognitive or behavioral responses used to help manage overwhelming tension and strain. Cognitive strategies are internal, and involve the changing of perceptions and feelings regarding the source of that stress (Folkman and Lazarus 1980; Lazarus and Folkman 1984). Behavioral coping responses occur externally, and involve taking actions aimed at reducing the effects of stress. In this vein, coping methods often are categorized as effective (directly addressing a problem) or ineffective (avoidance), although the effectiveness of certain methods also may be dependent on the nature of the stressor (Coyne and Racioppo 2000).

Research and theoretical writings addressing associations between childhood abuse, coping, and long-term functioning have increased dramatically in recent years. However, there has been relatively little research in the area of coping in relation to various types of maltreatment, and most of the work on coping and maltreatment focuses on sexual abuse. This work indicates that victims of sexual abuse use a variety of strategies that include avoidance
and the pursuit of control in other areas of life (Morrow and Smith 1995). Other evidence indicates the use of psychological defense mechanisms that allow for the reinterpretation of their experiences (Ward 1988). Some work assessing multi-type abuse (experiencing more than one type) have indicated that the increased number of co-occurring abuse types is associated with increased risk for disengagement and withdrawal (Arata et al. 2005; Clemmons et al. 2007).

Scholars have suggested that childhood abuse may result in maladaptive styles of coping, like the avoidance of feelings, because they may be functional at the time of the trauma. However, these strategies may create problems later in life for adjustment and management of stress (Widom et al. 2012). In fact, there is strong evidence indicating that while certain coping responses can mediate the impact of abuse, others can increase the likelihood of future adjustment problems (Spaccarelli 1994). Maladaptive coping responses often contribute to negative outcomes later in life, such as more severe PTSD (Valentiner et al. 1996), greater levels of psychological distress (Coffey et al. 1996), and increased withdrawal and use of alcohol (Filipas and Ullman 2006).

Two common responses to stress include problem-focused coping and emotion-focused coping. Problem-focused coping (PFC) addresses the stressor itself. Steps are taken to remove or avoid it, or if it cannot be avoided, to diminish its impact (the objective is to manage or modify the problem causing ill-being). Emotion-focused coping (EFC) tries to minimize the distress brought on by stressors (using methods that regulate emotional response). PFC responses are adopted when problems are perceived to be tolerable and adaptable—diminishing the threat as well as its associated stress. On the other hand, EFC responses are adopted when problems are perceived to be unalterable and permanent—evading negative
emotions by pushing the threat away. However, PFC and EFC are interrelated, and often facilitate one another. While different in its approach, EFC also diminishes stress, but does so with the intention of enhancing subsequent PFC responses. Thus, it is more useful to think of the two as complementary rather than distinct, independent categories (Folkman and Lazarus 1980; Lazarus and Folkman 1984).

However, one perhaps underappreciated measure of coping is emotional eating, or the use of food as a coping mechanism in response to stress. Research on coping in response to childhood abuse has discounted and disregarded food-focused coping (FFC), or stress eating. There are several reasons why FFC is an important strategy to consider in this context. It has long been recognized stressful circumstances may lead to overeating (Ball and Lee 2002; Greenfield and Marks 2009). Managing stress with food is may be tied to mental health outcomes (Ball and Lee 2002; Brewerton 2011), but not always. Emotional eating can occur in individuals with no psychopathology diagnosis (Ulrich-Lai et al. 2010) or psychiatric conditions (Torres and Nowson 2007). Emotional eating has been shown to have strong rewarding properties, and can quickly suppress feelings of stress and tension (Ulrich-Lai et al. 2010). Determining whether and how childhood abuse might serve as a predisposing factor toward emotional eating could help in identifying vulnerabilities to negative health consequences but also clarify the use of food to help with mental health and well-being.

Despite its contributions, the body of research on adult coping is characterized by several limitations. First, much of this work is limited to the two coping strategies outlined by Lazarus and Folkman (1984), with little attention to other strategies, such as FFC. Even with a narrow focus on coping strategies, research has yet to determine which is most effective or ineffective and has a limited understanding of the ways these strategies influence the
relationship between different types of abuse and adult well-being. Another limitation in the research relates to the measurement of adult coping strategies, with most studies using measures to gauge only current coping strategies—an approach which ignores the dynamic nature of coping processes and strategies across the life-course (Bonanno 2004). This means that results can be starkly inconsistent depending on the instrument used to construct it.

Study Aims and Research Hypotheses

Despite the great contributions outlined by past research that focuses on childhood abuse and coping, there are several limitations worth noting. The present research aims to address some of the limitations of previous empirical work. First, much of the work exploring resiliency and protective factors is limited to child and adolescent victims. Little attention has been paid to identifying salient factors that protect victims in adulthood. While early intervention and support for child victims is obligatory, the fact remains that childhood abuse affects victims across the life-span, necessitating intervention and support efforts that are geared towards victims in their adult years. To address these gaps, I apply a resiliency framework to assess three distinct coping strategies as possible protective factors against childhood abuse.

Secondly, studies that have examined abused children as adults concentrate mostly on effects that become manifest in young adulthood (Chartier, Walker, and Naimark 2010; Fergusson et al. 2008; Wright, Crawford, and Del Castillo 2009). However, many ailments have a long latency period—meaning that a life-course assessment of childhood abuse requires the study of adult populations. Studies using a life-course approach have generally indicated that the effects of childhood abuse carry into adulthood and well over the life-span (Greenfield and Marks 2009; Morton, Schafer, and Ferraro 2012; Springer et al. 2007). Third, much of the work is characterized by sampling limitations. Many studies use small community samples that are
non-representative and produce results that cannot be generalized (Rikhye et al. 2008; Sagy and Dotan 2001; Wright et al. 2009). The analyses of child protective services (CPS) reports also result in non-representative samples (Sunday et al. 2008), since they often over-represent the most severe cases of abuse (Sedlak et al. 2010). Finally, studies often ignore the complexity of childhood abuse by focusing on a single dimension, like physical abuse only (Springer et al. 2007; Sunday et al. 2008), sexual abuse only (Chandy, Blum, and Resnick 1996), or emotional abuse only (Wright et al. 2009). To address this limitation, I employ measures that capture distinct domains of experiences that include no abuse, single-type abuse (emotional only and physical only), as well as cumulative abuse (both emotional and physical abuse). This comparison can yield results that better extricate the complexity of childhood abuse and its underlying relationships. In consideration of the aforementioned work, and guided by insights from cumulative disadvantage and resiliency, I propose the following hypotheses:

**H1:** Increases in PFC will be associated with increases in psychological well-being over time.
**H2:** Increases in EFC will be associated with decreases in psychological well-being over time.
**H3:** Increases in FFC will be associated with decreases in psychological well-being over time.
**H4:** For victims of abuse, PFC will have stronger positive effects on psychological well-being.
**H5:** For victims of abuse, EFC will have stronger negative effects on psychological well-being.
**H6:** For victims of abuse, FFC will have stronger negative effects on psychological well-being.

**METHODS**

**Data and Sample**

Data come from the National Survey of Midlife in the United States (MiDUS; Brim et al. 1999), a national probability sample of English-speaking, non-institutionalized adults in the U.S., between the ages of 25 and 74, who were drawn from a random-digit-dial sample of working

The current study retains cases using two conditions. First, respondents must have participated in all data collection periods (W1, W2, and W3). Second, respondents must have answered key childhood abuse questions asked at W1. Only those cases who reported abuse by a parent are included in the sample. This yielded an effective sample size of 2,485. Analyses were conducted using weighted and unweighted, resulting in similar outcomes. For more reliable standard errors, I report estimates from unweighted data (Winship and Radbill 1994).

**Study Variables**

*Psychological Well-Being.* My dependent variable is a measure gauging psychological well-being, comprised of Ryff’s six dimensions (Ryff and Keyes 1995), including: personal growth, purpose in life, self-acceptance, positive relationships with others, environmental mastery, and autonomy. For each six dimensions (see Table 2.1), respondents were asked seven questions about how much they agree or disagree with statements related to that dimension, where (1 = strongly agree) and (7 = strongly disagree). Scale scores are recoded so that higher total scores reflect greater psychological well-being. Negative items were reverse coded so that higher scores reflected more positive appraisals.

*Childhood Abuse.* Physical and emotional abuse variables draw from the Conflict Tactics Scale (CTS)(Straus 1979), which ask about the frequency of emotional abuse, physical abuse, and
severe physical abuse. Respondents were given a series of questionnaire items tapping into abusive experiences, and were able to respond to these items separately for mother and father (see Table 2.1). The initial prompt asked respondents, “During your childhood, how often did your [mother/father] do any of these things to you? Response categories for abuse items included: (0 = never), (1 = rarely), (2 = sometimes), and (3 = often).

I conducted analyses for final models using two different operationalizations for childhood abuse. The first was a continuous measure gauging frequency of abuse, where (0 = never), (1 = rarely), (2 = sometimes), and (3 = often). The second used type-specific, dichotomous measures to indicate emotional abuse only, physical abuse only, emotional and physical, and no abuse, and were coded so that (0 = never) and (1 = rarely, sometimes, often). Both versions produced similar findings, thus only one version was selected for the final analyses. Models are presented using the type-specific dichotomous childhood abuse measures, a decision made for several reasons. First, assessing childhood abuse experiences as either present or absent is one of the most common techniques used by abuse scholars who assess multiple forms of childhood abuse and maltreatment (e.g., Berenson and Andersen 2006; Pepin and Banyard 2006). Second, the severe physical abuse measure includes items that are largely skewed towards ‘never’ (~80%), indicating that the majority of respondents do not report experiences of this type of childhood physical abuse. Third, ancillary analyses from this study indicated that there are meaningful differences between individuals who ‘rarely’ experienced childhood abuse and individuals who ‘never’ experienced childhood abuse. Finally, and most importantly, the presence/absence dichotomy gauging childhood abuse experiences represents the perspective that even one experience of being abuse as child is a form of trauma that can have lasting effects.
**Stress Coping Strategies.** I include three scales that gauge distinct stress coping responses (see Table 2.1). Each scale is comprised by items that indicate respondents’ level of agreement or disagreement with a statement related to that item, where (1 = strongly agree) and (7 = strongly disagree). The first scale assesses PFC, a response that targets causes of stress in a practical way, directly reducing the stress (Lazarus and Folkman 1984). This scale is constructed by calculating the sum of twelve items. The second scale measures EFC, a response that involves strategies to reduce negative emotions associated with stress, often ineffective and short-termed (Lazarus and Folkman 1984). This scale calculates the sum of twelve items. The final scale measures FFC, using two items gauging use of food to alleviate stress. All response categories for items were coded so that higher scores represent higher levels.

**Covariates.** I include a series of time-variant covariates. Financial strain is a two-item mean index ($\alpha = .75$), ranging from 0–2, where a higher number indicates more hardship. Respondents were asked about (a) having enough money to make ends meet, where (0 = more than enough money), (1 = just enough money), (2 = not enough money), and (b) difficulty paying bills, where (0 = not at all difficult), (1 = not very difficult), and (2 = very difficult). Marital status is coded, where (1 = separated, divorced, or widowed), (2 = never married), and (3 = married), as the omitted group. Finally, age and level of education are both included as continuous measures that assess actual years of age and actual years of formal education.

**Analytical Strategy**

Analyses were produced using Stata SE, Version 15. Missing data for variables that were missing at random (MAR) were handled via multiple imputation (MI), using sequential chained regression models specifically tailored to the level of measurement of each variable (Hedeker
Using information from all analytical variables, 50 imputations were generated. Sensitivity analyses concluded that the imputed and non-imputed data produced substantively consistent results (Johnson and Young 2011; Young and Johnson 2013, 2015).

The present study estimates a series of panel models to examine the long-term effects of childhood abuse on adult psychological well-being over the life-span, while also assessing moderating effects of various adult coping styles. Panel models can assess the effects of individual terms as either fixed or random. Fixed-effects (FE) assumes that time-invariant characteristics are unique across individuals and should not be correlated with other individual characteristics. Unlike FE, random-effects (RE) assumes that the variation across entities is random and uncorrelated with independent variables used in the model. Deciding between FE and RE can be done by performing a Hausman test, which assesses correlations between individual effects and other model regressors. The Hausman test for the present study indicated that FE models were most appropriate (see Appendix Table 2.1).

When using FE, it is assumed that something within the individual can impact the outcome and must be controlled for. Omitting time-invariant variables and not assessing these factors as causes of the dependent variable, FE is able to control for time-invariant differences between individuals. In this regard, FE is advantageous because it eliminates the effects of confounding variables without having to measure them. In other words, FE alleviates omitted-variable bias in a less-than-fully-specified model, even without an idea of what a fully specified model would look like (Johnson 2005).

Because FE models analyze the impact of variables that vary or change over time, any changes in the outcome variable cannot be attributed to time-constant, individual characteristics (like race, sex, or religion), but instead, to time-varying factors. FE coefficients
measure the change in the outcome variable associated with one unit increases in the predictor variable. However, because FE only measures change (and differences in rate of change for interactions with non-time varying independent measures), they are unable to assess the direct effects of time-constant measures, like childhood abuse. To estimate the direct effects of abuse on adult outcomes later in life, and the effects of time-constant measures like race and sex, I estimate RE models as well. These models are further able to demonstrate results when the effects are measured cross-sectionally.

The results section below will proceed as follows. First, I briefly discuss several noteworthy from descriptive statistics shown in Table 2.2, then proceed to a quick overview of correlation coefficients outlined in Figure 2.1. Table 2.3 displays results from FE models. Since childhood abuse is time-invariant, it cannot be estimated directly. Thus, Model 1 includes only stress coping, while Model 2, the full model, adds covariates. Childhood abuse is allowed in FE models as an interaction term with a time-varying measure. Accordingly, I include three sets of multiplicative terms interacting abuse with stress coping measures. Model 3 interacts abuse with PFC. Model 4 interacts abuse with EFC. Model 5 interacts abuse with FFC. Finally, Appendix Table 2.2 displays results from RE models which estimate the direct effects of abuse on psychological well-being, and also examine these effects using cross-sectional measures.

RESULTS

Descriptive Statistics

Table 2.2 displays descriptive statistics for analytical variables. Results indicate that roughly 27% of respondents reported no abuse, while over half (50.14%) experienced both physical and emotional abuse. Only about 10% reported physical abuse only, and 14% reported
emotional abuse only. The overall mean for psychological well-being is moderately high, averaging about 13 out of 17, remaining mostly stable over time. When it comes to PFC, levels are moderately high, with an average of about 23 out of 34. Across waves, PFC increases, which indicates that age is associated with healthier coping. Mean levels of EFC are relatively low and decrease with age, also indicating that coping improves as people get older. Average levels of FFC are relatively low and decrease over time. For covariates, longitudinal levels of financial hardship are moderate and stable. At W1, 74% were married, 17% separated, divorced, or widowed, and 10% never married. By W3, 67% were married, 7% never married, and 26% became separated, divorced, or widowed. Average age longitudinally was about 56 years.

Figure 2.1 which displays zero-order correlations between childhood abuse, psychological well-being, and stress coping using the stacked, longitudinal sample. Results indicate that in relation to psychological well-being, PFC is moderately, positively associated. On the other hand, EFC and FFC are negatively associated with psychological well-being. Cumulative abuse (both emotional and physical) is negatively associated with well-being, while emotional, physical, and no abuse are positively associated. When it comes to abuse and coping, emotional and no abuse are positively associated with PFC, while physical and cumulative abuse are negatively associated with PFC. Only cumulative abuse shares a positive association with EFC, while physical, emotional, and no abuse have negative associations. Once more, cumulative and emotional abuse share positive associations with FFC. Physical abuse and no abuse share negative associations with FFC.

**Multivariate Models**

Table 2.3 displays results from FE models predicting psychological well-being over time. Model 1 includes stress coping only, indicating that higher PFC is associated with increased
psychological well-being over time (b = 0.11, \( p \leq .001 \)). For EFC and FFC, increases are
associated with declines in psychological well-being over time (b = -0.09, \( p \leq .001 \); b = -0.08, \( p \leq .01 \)). Model 2, the full model, indicates that the effects of PFC remain significant upon adding
covariates, offering support for H1 (b = 0.08, \( p \leq .001 \)). EFC also remains significant, and offers
support for H2 (b = -0.07, \( p \leq .01 \)). FFC loses its effects upon adding controls, failing to support
H3. Some noteworthy effects of controls include the following points. First, increases in
financial strain are associated with declines in psychological well-being over time (b = -0.35, \( p \leq .001 \)). Also, when compared to being married, being separated, divorced, or widowed is
associated with declines in psychological well-being over time (b = -0.24, \( p \leq .05 \)). Finally,
increases in age are associated with improved well-being over time (b = 0.12, \( p \leq .001 \)).

Model 3 is the first interaction model, which includes a multiplicative term between
childhood abuse and PFC. Results indicate no significant interaction effects, offering no
support for H4. However, PFC remains statistically significant in the main model, and
covariates remain unchanged as well. Model 4 includes the second set of product terms
between childhood abuse and EFC. Results indicate a statistically significant interaction
between physical abuse and EFC, offering support for H5. The negative coefficient suggests
that increases in EFC are associated with declines in the psychological well-being of physical
abuse victims over time, when compared to non-victims (b = -0.06, \( p \leq .01 \)). Figure 2.2 plots the
interaction between physical abuse and EFC to illustrate the effect graphically, where EFC has
a stronger negative effect on well-being for victims of physical abuse than non-victims.

Model 5 adds the final set of product terms between abuse and FFC. Results indicate a
statistically significant interaction between physical abuse and FFC, offering support for H6.
The positive coefficient indicates for victims of physical abuse, increases in FFC are associated
with increases in psychological well-being (b = 0.17, p ≤ .05). All covariates remain unchanged in associations and statistical significance. Figure 2.3 plots the interaction between physical abuse and FFC to express its effects graphically. As it indicates, increases in FFC have stronger positive effects on psychological well-being for victims of physical abuse than for non-victims.

**DISCUSSION AND CONCLUSION**

Drawing from a cumulative disadvantage perspective, the present study examines trajectories of psychological well-being over the adult life-span by asking two major questions: (1) what are the distinct, long-term effects of different types of childhood abuse on later psychological well-being? and (2) do adult coping strategies moderate the relationship between abuse and psychological well-being, and if so, which strategies protect against the effects of trauma?

First, much of the work on the effects of childhood abuse on psychological well-being typically utilize data from cross-sectional or clinical samples which do not allow for causal mechanisms to be assessed, nor do they permit associations between early life experiences and outcomes later in life and over time to be examined. These limitations have implications for policy and intervention. In the context of childhood abuse, such data limitations impede assessment of factors and mechanisms that occur between onset of trauma and outcomes later in life, making it difficult to investigate protective factors that promote resiliency for victims. In response to these limitations, the present study utilized panel data that spans a total of twenty years (1995 – 2015), with data collected from the same individuals at three different time periods, a design which allows the examination of trajectories of well-being over time that are influenced by a combination of early experiences of childhood abuse and type of coping style adopted by individuals in adulthood.
Next, research using longitudinal data to assess the long-term effects of childhood abuse on adult outcomes are often framed around life-course perspectives, particularly cumulative disadvantage theory, which maintains that victims of childhood abuse experience negative outcomes and accumulated disadvantage over their life time. However, one major limitation of cumulative disadvantage is its oversimplified perspective positing that negative events and circumstances faced by victims of abuse over their lifetimes are inevitable consequences (Dannefer 2003, 1987, 1988). Evidence from longitudinal studies on resiliency indicate that this is not entirely true however, with an amassed body of work having identified a number of factors consistently shown to protect young victims of abuse from negative outcomes (Dixon and Perkins 2017; Jonzon and Lindblad 2006; Masten 2007; Masten et al. 1990; McClure et al. 2008; McEwen 2004; Rutter 1985). These findings contribute greatly towards intervention strategies centered on child and adolescent victims of abuse. However, protective factors for victims in adulthood are substantially less explored and understood (Windle 2011).

One commonly assessed factor in research exploring childhood abuse and later outcomes is coping strategies. Two common types explored by scholars are problem-focused and emotion-focused coping (Carver and Connor-Smith 2010; Cicchetti and Rogosch 2009; Coffey et al. 1996; Compas et al. 2001; Folkman and Lazarus 1980; Lazarus and Folkman 1984; Suls and Fletcher 1985; Walsh et al. 2010; Wright et al. 2007). However, only few studies have examined other types of styles, like coping through food and eating as forms of self-medication (Ball and Lee 2002; Brewerton 2011; Greenfield and Marks 2009; Hilbert et al. 2011; Powell-Tuck 1977; Torres and Nowson 2007).

To address the limitations of cumulative disadvantage theory, and in keeping with work on resiliency, the present study applies a resilience-focused approach to examine trajectories
of adult psychological well-being influenced by childhood abuse experiences. In an effort
to address the limitations and help expand research on adult coping, the present study assesses
an important, yet often overlooked dimension of adult coping: food-focused coping, in addition
to the commonly explored problem-focused and emotion-focused coping styles. These three
coping measures are assessed as countervailing factors that can offset the negative effects of
abuse and then promote positive outcomes. I hypothesized that (1) problem-focused coping
would be associated with increased psychological well-being over time, (2) emotion-focused
and food-focused coping would both be associated with declined in psychological well-being,
(3) for victims of abuse, problem-focused coping will have stronger positive effects on
psychological well-being over time, and (4) emotion-focused and food-focused coping would
have stronger negative effects on psychological well-being among victims of abuse.

Regarding direct effects of coping on changes in psychological well-being, results from
fixed-effects models revealed that problem-focused coping was associated with improvements
in psychological well-being over time, which offers support for H1. This finding is consistent
with work suggesting that by actively dealing with problems and sources of stress (Billings and
Moos 1981), problem-focused strategies are most effective and beneficial (Arslan 2017;
Beldad, de Jong, and Steehouder 2011). When it comes to emotion-focused coping, evidence
indicates it is associated with declines in psychological well-being over time. This finding
offered support for my second hypothesis, H2, and is consistent with other work noting its
association with negative mental health outcomes (Arslan 2017). Work has suggested that
while in immediate response to stress, emotion-focused coping can be beneficial, as a long-
term strategy, it is less effective and increasingly harmful (Arslan 2017; Sesar et al. 2010; Suls
and Fletcher 1985). Food-focused coping was also associated with declines in well-being,
which supported H3. This finding confirms work indicating strong links between food coping strategies and psychiatric conditions like depression and anxiety (Ball and Lee 2002; Jordan, Khubchandani, and Wiblishauser 2016).

While problem-focused coping was found to be positively associated with psychological well-being, results from interaction models indicate its lack of protective effects in the context of childhood abuse, which failed to support my fourth hypothesis, H4. In other words, while problem-focused coping is associated with improvements in psychological well-being over time, it does not have beneficial effects for adult victims of abuse using this coping approach.

When it comes to emotion-focused coping, which is associated with declines in psychological well-being, results from interaction models revealed its negative effects persist in the context of childhood abuse, so that both non-victims and victims alike are negatively impacted. However, its effects are magnified for victims of physical abuse in particular, having harsher impacts on their well-being over time. This confirms previous work that indicates associations between emotion-focused coping and poor mental health (Nater et al. 2006), maladaptive behaviors, and internalizing symptoms (Arslan 2017; Guerra et al. 2016). Taken together, this finding supports my fifth hypothesis, H5.

Lastly, despite having shown to be negatively associated with well-being, results from interaction models find evidence suggesting protective effects of food-focused coping in the context of childhood physical abuse. When non-victims use food to cope with stress, their psychological well-being worsens over time. However, when victims of physical abuse use food to cope with stress, their psychological well-being drastically improves. This finding does not support H6, but can be explained by work indicating strong associations between stress and binge eating behaviors (Ball and Lee 2002; Greenfield and Marks 2009). Increased eating when
stressed suggests that the use of food is a form of self-medication (Brewerton 2011) which triggers dopamine in the brain, blunting feelings of distress (Ulrich-Lai et al. 2010).

This study is characterized by several limitations. First, childhood reports were obtained retrospectively, by asking adults to think back and recall events of maltreatment during their childhood, making these measures subject to recall bias. Additionally, since childhood abuse items were asked only in the first wave, their reports cannot be checked for consistency. Thus, it becomes unclear whether these measures are capturing events and experiences that really happened, or is they are reconstructed memories formed over time. Second, childhood abuse is assessed using type-specific measures that differentiate between the presence and the absence of a specific abuse experience. This method highlights an individuals’ relative experience of abuse during childhood and its influence on future outcomes that are relative to the effects of other types of experiences. So while I am able to assess whether or not someone was abused, and in what particular way, the frequency of the abuse and its severity both go unaccounted for. However, results from ancillary analyses used a continuous specification of childhood abuse to gauge how frequency of abuse corresponds to changes in well-being over time, producing similar results as the ones presented here. Next, more racial/ethnic representation is needed in the MiDUS, with, for example, Latino respondents comprising roughly 1.3 %. More representation from minority groups would be beneficial when investigating the long-term impact of childhood abuse. Finally, despite the inclusion of statistical controls, many factors are unaccounted for, such as genetic features and other types of adverse experiences that, if taken into account, may result in more complex associations and stories.
Despite these limitations, findings from the present study provide empirical evidence that indicates that adult victims of childhood abuse are negatively impacted by their trauma even years after the abuse happened, highlighting the importance of policies and practices aimed at recovery for victims in adulthood. More crucially, I think, this study offers proof that recovery can happen at any age. Historically, much of the formal discourse has focused on recovery for victims in early life, not victims in adulthood, who may have never received trauma treatment. Results from this study suggest that childhood abuse lasts a life time. Major efforts should be made not simply to prevent abuse from happening or intervening when it does, but also to ensure that for those who did suffer abuse have access to opportunities, regardless of how long ago the trauma happened, that aid in overcoming their past and achieving optimal well-being. More attention should be given to recovery needs and protective factors that can make resiliency possible at every life-stage.
<table>
<thead>
<tr>
<th>Description of Scale and Index Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Emotional Abuse ($\alpha = .61$)</td>
</tr>
<tr>
<td>a) “Insulted you, swore at you.”</td>
</tr>
<tr>
<td>b) “Sulked or refused to talk to you.”</td>
</tr>
<tr>
<td>c) “Stomped out of the room.”</td>
</tr>
<tr>
<td>d) “Said something to spite you.”</td>
</tr>
<tr>
<td>e) “Threatened to hit you.”</td>
</tr>
<tr>
<td>f) “Smashed or kicked something in anger.”</td>
</tr>
<tr>
<td>(2) Physical/Severe Physical Abuse ($\alpha = .74$)</td>
</tr>
<tr>
<td>a) “Pushed, grabbed, and shoved you.”</td>
</tr>
<tr>
<td>b) “Slapped you.”</td>
</tr>
<tr>
<td>c) “Threw something at you.”</td>
</tr>
<tr>
<td>d) “Kicked, bit, or hit you with a fist.”</td>
</tr>
<tr>
<td>e) “Hit or tried to hit you with something.”</td>
</tr>
<tr>
<td>f) “Beat you, choked, burned or scalded you.”</td>
</tr>
<tr>
<td>(3) Problem-Focused Coping (PFC) ($\alpha = .90$)</td>
</tr>
<tr>
<td>a) “I try to grow as a person as a result of the experience.”</td>
</tr>
<tr>
<td>b) “I try to see it in a different light, to make it seem more positive.”</td>
</tr>
<tr>
<td>c) “I look for something good in what is happening.”</td>
</tr>
<tr>
<td>d) “I learn something from the experience.”</td>
</tr>
<tr>
<td>e) “I concentrate my efforts on doing something about it.”</td>
</tr>
<tr>
<td>f) “I take additional action to try to get rid of the problem.”</td>
</tr>
<tr>
<td>g) “I take direct action to get around the problem.”</td>
</tr>
<tr>
<td>h) “I do what has to be done, one step at a time.”</td>
</tr>
<tr>
<td>i) “I make a plan of action.”</td>
</tr>
<tr>
<td>j) “I try to come up with a strategy about what to do.”</td>
</tr>
<tr>
<td>k) “I think about how I might best handle the problem.”</td>
</tr>
<tr>
<td>l) “I think hard about what steps to take.”</td>
</tr>
<tr>
<td>(4) Emotion-Focused Coping (EFC) ($\alpha = .83$)</td>
</tr>
<tr>
<td>a) “I get upset and let my emotions out.”</td>
</tr>
<tr>
<td>b) “I get upset, and am really aware of it.”</td>
</tr>
<tr>
<td>c) “I let my feelings out.”</td>
</tr>
<tr>
<td>d) “I feel a lot of emotional distress and find myself expressing those feelings a lot.”</td>
</tr>
<tr>
<td>e) “I say to myself “this isn’t real”.”</td>
</tr>
<tr>
<td>f) “I refuse to believe that it has happened.”</td>
</tr>
<tr>
<td>g) “I pretend that it hasn’t really happened.”</td>
</tr>
<tr>
<td>h) “I act as though it hasn’t even happened.”</td>
</tr>
<tr>
<td>i) “I admit to myself that I can’t deal with it, and quit trying.”</td>
</tr>
<tr>
<td>j) “I give up trying to reach my goal.”</td>
</tr>
<tr>
<td>k) “I give up the attempt to get what I want.”</td>
</tr>
<tr>
<td>l) “I reduce the amount of effort I’m putting into solving the problem.”</td>
</tr>
<tr>
<td>(5) Food-Focused Coping (FFC) ($\alpha = .89$)</td>
</tr>
<tr>
<td>a) “I eat more than I usually do.”</td>
</tr>
<tr>
<td>b) “I eat more of my favorite foods to make myself feel better.”</td>
</tr>
<tr>
<td>(6) Autonomy ($\alpha = .76$)</td>
</tr>
<tr>
<td>a) “I’m not afraid to voice opinions, even when in opposition to opinions of most people.” (R)</td>
</tr>
<tr>
<td>b) “My decisions are not usually influenced by what everyone else is doing.” (R)</td>
</tr>
<tr>
<td>c) “I tend to be influenced by people with strong opinions.”</td>
</tr>
<tr>
<td>d) “I have confidence in my opinions, even if they are contrary to the general consensus.” (R)</td>
</tr>
<tr>
<td>e) “It’s difficult for me to voice my own opinions on controversial matters.”</td>
</tr>
<tr>
<td>f) “I tend to worry about what other people think of me.”</td>
</tr>
<tr>
<td>g) “I judge myself by what I think is important, not by values others think is important.” (R)</td>
</tr>
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<td>7</td>
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</tr>
<tr>
<td>a)</td>
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<tr>
<td>b)</td>
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<tr>
<td>c)</td>
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<tr>
<td>d)</td>
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<tr>
<td>e)</td>
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<tr>
<td>f)</td>
</tr>
<tr>
<td>g)</td>
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<table>
<thead>
<tr>
<th>8</th>
<th>Personal Growth (α = .85)</th>
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<tbody>
<tr>
<td>a)</td>
<td>“I am not interested in activities that will expand my horizons.”</td>
</tr>
<tr>
<td>b)</td>
<td>“It’s important having experiences that challenge how think about yourself and world.” (R)</td>
</tr>
<tr>
<td>c)</td>
<td>“When I think about it, I haven’t really improved much as a person over the years.”</td>
</tr>
<tr>
<td>d)</td>
<td>“I have the sense that I have developed a lot as a person over time.” (R)</td>
</tr>
<tr>
<td>e)</td>
<td>“For me, life has been a continuous process of learning, changing, and growth.” (R)</td>
</tr>
<tr>
<td>f)</td>
<td>“I gave up trying to make big improvements or changes in my life a long time ago.”</td>
</tr>
<tr>
<td>g)</td>
<td>“I don’t enjoy being in new situations that require changing familiar ways of doing things.”</td>
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</table>

<table>
<thead>
<tr>
<th>9</th>
<th>Positive Relationships with Others (α = .78)</th>
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<tbody>
<tr>
<td>a)</td>
<td>“Most people see me as loving and affectionate.” (R)</td>
</tr>
<tr>
<td>b)</td>
<td>“Maintaining close relationships has been difficult and frustrating for me.”</td>
</tr>
<tr>
<td>c)</td>
<td>“I often feel lonely because I have few close friends with whom to share my concerns.”</td>
</tr>
<tr>
<td>d)</td>
<td>“I enjoy personal and mutual conversations with family members and friends.” (R)</td>
</tr>
<tr>
<td>e)</td>
<td>“People would describe me as a giving person, willing to share my time with others.” (R)</td>
</tr>
<tr>
<td>f)</td>
<td>“I have not experienced many warm and trusting relationships with others.”</td>
</tr>
<tr>
<td>g)</td>
<td>“I know that I can trust my friends, and they know they can trust me.” (R)</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>10</th>
<th>Purpose in Life (α = .63)</th>
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<tbody>
<tr>
<td>a)</td>
<td>“I live life one day at a time and don’t really think about the future.”</td>
</tr>
<tr>
<td>b)</td>
<td>“I have a sense of direction and purpose in life.” (R)</td>
</tr>
<tr>
<td>c)</td>
<td>“I don’t have a good sense of what it is I’m trying to accomplish in life.”</td>
</tr>
<tr>
<td>d)</td>
<td>“My daily activities often seem trivial and unimportant to me.”</td>
</tr>
<tr>
<td>e)</td>
<td>“I enjoy making plans for the future and working to make them a reality.” (R)</td>
</tr>
<tr>
<td>f)</td>
<td>“Some people wander aimlessly through life, but I am not one of them.” (R)</td>
</tr>
<tr>
<td>g)</td>
<td>“I sometimes feel as if I’ve done all there is to do in life.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11</th>
<th>Self-Acceptance (α = .73)</th>
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<tbody>
<tr>
<td>a)</td>
<td>“When I look at the story of my life, I am pleased with how things have turned out.” (R)</td>
</tr>
<tr>
<td>b)</td>
<td>“In general, I feel confident and positive about myself.” (R)</td>
</tr>
<tr>
<td>c)</td>
<td>“I feel like many of the people I know have gotten more out of life than I have.”</td>
</tr>
<tr>
<td>d)</td>
<td>“I like most parts of my personality.” (R)</td>
</tr>
<tr>
<td>e)</td>
<td>“In many ways I feel disappointed about my achievements in life.”</td>
</tr>
<tr>
<td>f)</td>
<td>“My attitude about myself probably not as positive as most people feel about themselves.”</td>
</tr>
<tr>
<td>g)</td>
<td>“When compared to friends and acquaintances, I makes me feel good about who I am.” (R)</td>
</tr>
</tbody>
</table>
Table 2.2. Imputed Descriptives of Analytical Variables – MiDUS I, II, III (n = 2,485)

<table>
<thead>
<tr>
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<tr>
<td>Age (in years)</td>
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</tr>
<tr>
<td>Separate/Divorce/Widow (reference)</td>
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<td>Financial Strain</td>
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<td>2.28</td>
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<td>5.98</td>
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<td>10.07</td>
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<td>2.51</td>
<td>2.53</td>
<td>2.51</td>
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<td>Financial Strain</td>
<td>16.50</td>
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<td>17.32</td>
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<tr>
<td>Financial Strain</td>
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<td>5.63</td>
<td>7.80</td>
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<td>Age (in years)</td>
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**Figure 2.1. Zero-Ordered Correlations between Abuse, Psychological Well-Being, and Coping (n = 2,485)**

<table>
<thead>
<tr>
<th></th>
<th>Psych Well-Being</th>
<th>PF Coping</th>
<th>EF Coping</th>
<th>FF Coping</th>
<th>Physical Abuse</th>
<th>Emotional Abuse</th>
<th>Both Abuse</th>
<th>No Abuse</th>
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<tr>
<td>Psych Well-Being</td>
<td>1.00</td>
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<tr>
<td>PF Coping</td>
<td>0.51***</td>
<td>1.00</td>
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<tr>
<td>EF Coping</td>
<td>-0.42***</td>
<td>-0.23***</td>
<td>1.00</td>
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<td></td>
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</tr>
<tr>
<td>FF Coping</td>
<td>-0.21***</td>
<td>-0.09***</td>
<td>0.36***</td>
<td>1.00</td>
<td></td>
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<tr>
<td>Physical Abuse</td>
<td>0.05***</td>
<td>-0.02***</td>
<td>-0.02***</td>
<td>-0.03***</td>
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<tr>
<td>Emotional Abuse</td>
<td>0.02***</td>
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<td>-0.03***</td>
<td>0.01</td>
<td>-0.13***</td>
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<tr>
<td>Both Abuse</td>
<td>-0.11***</td>
<td>-0.06***</td>
<td>0.06***</td>
<td>0.05***</td>
<td>-0.32***</td>
<td>-0.40***</td>
<td>1.00</td>
<td></td>
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<tr>
<td>No Abuse</td>
<td>0.08***</td>
<td>0.05***</td>
<td>-0.04***</td>
<td>-0.04***</td>
<td>-0.19***</td>
<td>-0.24***</td>
<td>-0.61***</td>
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*p ≤ .001 ***; p ≤ .01 **; p ≤ .05 *; p ≤ .10 †
Table 2.3. Fixed-Effects Models Estimating Adult Psychological Well-Being (n = 2,485)

<table>
<thead>
<tr>
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<th>1</th>
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<tbody>
<tr>
<td>Emotional Abuse (vs. No Abuse)</td>
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<td>Physical Abuse (vs. No Abuse)</td>
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<td>Both Abuse (vs. No Abuse)</td>
<td>—</td>
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<tr>
<td>Problem-Focused Coping</td>
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<td>-0.07***</td>
<td>-0.06***</td>
<td>-0.07**</td>
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<tr>
<td>Food-Focused Coping</td>
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<td>-0.03</td>
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<td>-0.05</td>
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<td>-0.35***</td>
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<td>-0.36***</td>
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<tr>
<td>Separated/Divorced/Widow</td>
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<td>-0.24*</td>
<td>-0.24*</td>
<td>-0.24*</td>
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<tr>
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p ≤ .001 ***; p ≤ .01 **; p ≤ .05 *; p ≤ .10 †
Figure 2.2. Interaction between Physical Abuse and EFC

![Graph showing the interaction between Physical Abuse and EFC](image-url)
Figure 2.3. Interaction between Physical Abuse and FFC

![Graph showing the interaction between Physical Abuse and FFC](image)
### Appendix Table 2.1. Hausman Specification Test

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>(b) FE</td>
<td>(B) RE</td>
<td>(b - B)</td>
<td>$\sqrt{\text{diag}(V_{b-V_B})}$ S.E.</td>
</tr>
<tr>
<td>PFC</td>
<td>0.09</td>
<td>0.17</td>
<td>-0.08</td>
<td>0.01</td>
</tr>
<tr>
<td>EMC</td>
<td>-0.07</td>
<td>-0.13</td>
<td>0.06</td>
<td>0.01</td>
</tr>
<tr>
<td>FFC</td>
<td>-0.11</td>
<td>-0.08</td>
<td>-0.03</td>
<td>0.04</td>
</tr>
<tr>
<td>Emotional X PFC</td>
<td>0.06</td>
<td>-0.02</td>
<td>0.07</td>
<td>0.03</td>
</tr>
<tr>
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<td>0.00</td>
<td>0.01</td>
<td>0.03</td>
</tr>
<tr>
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<td>0.02</td>
<td>-0.01</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
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<td>0.01</td>
<td>-0.00</td>
<td>0.02</td>
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<td>-0.05</td>
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<td>-0.03</td>
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<td>0.07</td>
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<td>0.20</td>
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<td>-0.01</td>
<td>-0.05</td>
<td>0.04</td>
<td>0.06</td>
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</table>

$\text{chi}^2 (12) = (b - B)' [(V_{b-V_B})^{-1}] (b - B)$

$\text{chi}^2 (12) = 121.92$

$\text{Prob} > \text{chi}^2 = 0.0000$
### Appendix Table 2.2. Random-Effects Models Estimating Psychological Well-Being (n = 2,485)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
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</thead>
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<tr>
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<td>-0.21</td>
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<td>-0.45*</td>
<td>-0.31*</td>
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<tr>
<td>Physical Abuse (vs. No Abuse)</td>
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<td>1.05*</td>
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</tr>
<tr>
<td>Both Abuse (vs. No Abuse)</td>
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<td>-0.23**</td>
<td>0.14</td>
<td>-0.33*</td>
<td>-0.20*</td>
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<tr>
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<td>0.17***</td>
<td>0.15***</td>
<td>0.16***</td>
<td>0.15***</td>
<td>0.15***</td>
</tr>
<tr>
<td>Emotion-Focused Coping</td>
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<td>-0.10***</td>
<td>-0.10***</td>
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<td>-0.10***</td>
</tr>
<tr>
<td>Food-Focused Coping</td>
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<td>-0.06***</td>
<td>-0.06***</td>
<td>-0.06***</td>
<td>-0.06*</td>
</tr>
<tr>
<td>Financial Strain</td>
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<td>-0.56***</td>
<td>-0.56***</td>
<td>-0.56***</td>
<td>-0.56***</td>
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<tr>
<td>Years of Education</td>
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<td>—</td>
<td>0.04***</td>
<td>0.04***</td>
<td>0.05***</td>
<td>0.04***</td>
</tr>
<tr>
<td>Separated/Divorced/Widow</td>
<td>—</td>
<td>—</td>
<td>-0.30***</td>
<td>-0.30***</td>
<td>-0.30***</td>
<td>-0.29***</td>
</tr>
<tr>
<td>Never Married</td>
<td>—</td>
<td>—</td>
<td>-0.58***</td>
<td>-0.57***</td>
<td>-0.57***</td>
<td>-0.56***</td>
</tr>
<tr>
<td>Age (in years)</td>
<td>—</td>
<td>—</td>
<td>0.11***</td>
<td>0.11***</td>
<td>0.11***</td>
<td>0.11***</td>
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<tr>
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<td>-0.02</td>
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<tr>
<td>Emotional Abuse X EFC</td>
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<td>F</td>
<td>13.94***</td>
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<tr>
<td>sigma_u</td>
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<tr>
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<tr>
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<td>0.40</td>
<td>0.49</td>
<td>0.49</td>
<td>0.49</td>
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</tr>
</tbody>
</table>

* p ≤ .01 ** p ≤ .001; † p ≤ .05 ; * p ≤ .10
CHAPTER 3

CHILDHOOD ABUSE AND ADULT PHYSIOLOGICAL WELL-BEING:

RELIGIOSITY AS A MODERATOR

ABSTRACT

Life-course research has linked childhood abuse to an array of health issues later in life, however, there is limited work that investigates possible protective mechanisms for adult victims that can help to mitigate the harmful effects of such early life experiences on later well-being. This study investigates two specific domains of childhood maltreatment (emotional abuse and physical abuse) and their effects on physical health over the life-span. Moreover, work on the religion-health connection has suggested a strong link between religion and health outcomes. Using a resiliency framework, I assess religious behaviors (public religiosity and private religiosity) as possible protective factors against the harmful effects of childhood abuse. Data come from three waves of a national survey of U.S. men and women aged 25–74 years (n = 2,485). Findings reveal that when compared to non-victims, individuals who experienced both types of abuse show declines in their self-rated physical health over the life-course, net of covariates. Additionally, private religiosity has protective effects for victims of physical abuse. Because religious engagement and practices function in the same way that many commonly recognized protective factors do (i.e. providing access to social support systems and providing a sense of purpose), these results reveal the importance of recognizing additional factors that can be translated into policy programs aimed at intervention and resiliency for victims of childhood abuse in their adult years.
INTRODUCTION

The empirical evidence linking childhood abuse to adult health has burgeoned in recent years, with findings suggesting that childhood abuse has long-term effects on health in adulthood. Research indicates that victims of childhood psychological or physical abuse had worse health than non-victims, and also experienced significantly added declines in their health over a span of ten years in adulthood (Greenfield and Marks 2009). These findings are consistent with research documenting consistent links between childhood abuse and a plethora of health-related complications later in life, including chronic pain (Greenfield 2010), chronic fatigue, (Felitti et al. 1998), and irritable bowel syndrome (Rayworth, Wise, and Harlow 2004), and premature mortality (Felitti et al. 1998; White and Widom 2003).

Though research in this area has theoretical and empirical implications for both research and policy, the investigation of childhood abuse and adult health is nonetheless limited in several ways. First, many studies exploring the link between childhood trauma and later health involve clinical samples which are not nationally representative of the United States population (Bennett and Kemper 1994; Downs and Harrison 1998; Green et al. 2010). Second, much of the work exploring the effects of childhood abuse utilizes cross-sectional data, which limits the assessment of health outcomes to one point in time (Haas 2008). To examine the long-term effects of childhood experiences, it is important to capture outcomes over a long-enough time span, since many effects stemming from childhood abuse are not immediate.

Finally, research on resiliency explores protective factors that can ameliorate the reaction to trauma so that victims can adapt more successfully (Masten 2004). However, most of this work investigates and identifies protective factors for child and adolescent victims (Cicchetti and Rogosch 1997; Compas et al. 2001; Fergus and Zimmerman 2005; Garmezy 1991; Herrenkohl 1993; Green et al. 2010).
et al. 1994; Masten 2007; Masten et al. 1990; Sandler et al. 2003). Only few studies have assessed protective factors for adult victims of abuse (McClure et al. 2008; Ong and Bergeman 2004; Reich et al. 2010; Walsh et al. 2010; Wild et al. 2013).

Recognizing these limitations, the present study poses the major question: “what are the long-term effects of childhood abuse on adult health over time?” I apply a life-course framework to address this question, using panel data from a nationally representative survey of American adults to estimate long-term effects of childhood abuse experiences on adult health later in life. A second question this study poses is “what is the role of religion in the relationship between childhood abuse and adult health? Using a resiliency-protective factor model (Fergus and Zimmerman 2005), I assess two dimensions of religiosity as factors that can offset the effects of abuse.

THEORETICAL AND EMPIRICAL BACKGROUND

The Life-Course Perspective and Cumulative Disadvantage

A life-course perspective is a useful framework to examine processes through which early childhood experiences influence health outcomes later in life. A primary insight of the perspective is that past experiences can cumulatively and interactively influence later outcomes, while also emphasizing that outcomes like health are characterized by patterns of continuity and change (Elder 1998, 1994). The effects of childhood abuse by a parent of family member can be especially damaging and dangerous compared to other types of trauma. Since abuse often occurs within the context of the family, children are left without a safe place in which to protect themselves from an attack (Azar et al. 1988; Greenfield and Marks 2009; Moylan et al. 2010; Repetti, Taylor, and Seeman 2002; Rogers and Holmbeck 1997; Straus
Moreover, experiences of abuse typically occur in close succession which makes their effects more likely to accumulate and worsen over time (Felitti 2002; Felitti et al. 1998). A hallmark of the life-course perspective is a component known as cumulative disadvantage. Cumulative disadvantage maintains that early life adversity sets individuals on diverse pathways that differentially exposes them to disadvantage or progressively deteriorating circumstances (Dannefer 2003, 1987; O’Rand 1996). When applied to research on childhood abuse and health, cumulative disadvantage posits that victims of childhood abuse are more likely to experience more substantial functional declines over time when compared to non-victims. Evidence of cumulative disadvantage is found in research which finds strong linkages between childhood abuse and various health conditions over the life-course, including obesity, heart disease, cancer, lung disease, liver disease, and stroke (Elo and Preston 1992; Kuh et al. 2002; Smith 2009; Straus, Gelles, and Smith 1990).

**Childhood Abuse and Health: An Overview of Empirical Evidence**

A major focus in the childhood abuse literature relates to health outcomes among children and adolescents (Mason, Zimmerman, and Evans 1998). However, an array of long-term effects have also been documented, with findings indicating that childhood abuse is associated with increased reports of physical illness and poorer health (Felitti 2002; Goodwin and Stein 2004; Kendall-Tackett 2000; Shaw and Krause 2002; Springer et al. 2003; Thompson et al. 2002; Walker et al. 1999), and more substantial declines in health across the adult life-span, when compared to non-victims (Greenfield 2010). Other work has focused on childhood violence and specific health conditions later in life, such as gastroenterological symptoms (Leserman et al. 2008), or chronic pain (Kendall-Tackett et al. 2003; Lampe et al. 2003). Results indicate
that histories of childhood violence, either physical or emotional, are associated with increased risks for physical conditions and increased symptom severity.

Focusing specifically on physical health, one study notes different pathways through which abuse can lead to poor adult health: behavioral and emotional (Kendall-Tackett 2002). Supporting research indicates that victims of abuse have increased risks for adopting high-risk health-related behaviors (Dietz 2004; Walker et al. 1999), some of which include smoking (Felitti 2002; Kendall-Tackett 2002), heavy drinking (Caetano, Field, and Nelson 2003; Thompson et al. 2002), substance abuse (Kendler et al. 2000), and adult obesity and binge-eating (Felitti 2002; Greenfield and Marks 2009; Kendall-Tackett 2002). Other studies have also shown associations between childhood abuse and psychological distress, depression, and other psychiatric disorders (Gilbert et al. 2009; Greenfield 2010; Pine and Cohen 2002). These mental health outcomes have been shown to cause negative physical health conditions (Taylor 2010). Together, these pathways may explain the relationship between early abuse and adult health, especially in light of the fact that behavioral and emotional causes underlie the leading cases of morbidity and mortality (Felitti et al. 1998).

Although physical and emotional abuse may have distinct effects on individual health across the life-course, a bulk of the evidence suggests that these experiences may co-occur, with many individuals rarely experiencing only one form of abuse (Dong et al. 2003; Felitti et al. 1998; Saunders 2003). When compared to individual exposures of childhood abuse, cumulative maltreatment is associated with more physical health ailments, physical and mental health issues, formal diagnoses of conditions, and risky health-related behaviors (Dube et al. 2002; Kendall-Tackett 2002). Other studies assessing childhood abuse and adult health have found mixed findings, with results indicating that physical abuse is associated with
poorer health only (Sachs-Ericsson et al. 2005; Shaw and Krause 2002; Thompson, Kingree, and Desai 2004). Other studies linking abuse to physical health indicated that psychological abuse from a mother, or from both parents, was associated with poorer physical health among women, while the same type of abuse from fathers had no effect (Irving and Ferraro 2006).

**Positive Adjustment in Adulthood: A Resiliency Framework**

Though cumulative disadvantage posits that negative events can create trajectories of poor outcomes (Dannefer 2003, 1987; O’Rand 1996), the effects of adversity are not fixed (Ferraro and Shippee 2009). Indeed, while many experience a lifetime of consequences resulting from trauma, others are able to maintain healthy and stable levels of functioning over their life time (Bonanno 2004; Masten 2001). Resiliency theory is one framework that offers clarification to these discordant trends, with its central focus aimed at understanding why some victims grow into healthy adults while others do not (Garmezy 1991; Masten 2007; Rutter 1985). Although concerned with risk exposure, resiliency theory is centered on healthy development in spite of risks, with a focus on positive factors that work against risks. These factors may be either assets or resources; the former referring to positive factors that reside within the individual, and the ladder being those that are external. The term resources emphasizes the social environmental influences as the focus in preventing negative outcomes. Resources include support, adult mentoring, or community organizations that promote positive development.

**Religiosity as a Psychosocial Resource to Foster Resiliency**

Coping with stress has been shown to be a powerful factor in preventing disease and speeding up health recovery, and researchers are increasingly looking to religion as one effective resource for dealing with stressful events and conditions. According to scholars; during these
stressful life events, religious beliefs and practices are powerful coping mechanisms (Ellison and Levin 1998). According to a recent survey, about 77% of American adults report that religion is, to an extent, an important part of their life (Pew Research Center 2016). Thus, it makes sense to consider religion as a possible protective resource for victims in adulthoods.

Interest in what is known as the religion-health connection has grown significantly in recent years. Only just a decade ago, the idea that religion may be linked to health outcomes was perceived by many to be outlandish, and greeted by much skepticism in academia. However in recent years, the topic is ever growing. The interest in religion and health is being driven by research programs in several fields, including sociology, psychology, health behavior and health (Ellison and Levin 1998). According to scholars; during these stressful life events, religious beliefs and practices are powerful coping mechanisms (Ellison and Levin 1998; Pargament et al. 1998). A substantial body of work has explored two primary dimensions of religion, which I refer to here as (1) public religiosity and (2) private religiosity. Both religious aspects have been linked to a wide range of health outcomes. In this vein, the strongest evidence suggests that public forms of religiosity, like religious attendance, are positively associated with psychological well-being (Ellison 1991; Hummer et al. 1999; Krause et al. 2001; McCullough et al. 2000; Pargament et al. 1998). Private forms of religiosity, like private prayer and closeness to God, have also been linked to positive health outcomes (Breslin and Lewis 2008; Ellison 1991; Gall et al. 2007; Pargament et al. 1998).

There are various mechanisms by which these religious dimensions can produce salutary effects on well-being. One mechanism discussed in the literature is the function of public religiosity as a social resource (e.g., social ties, formal and informal support). Evidence suggests that social resources enhance mental and physical health outcomes among
individuals, and especially when these resources are to be found within the church (Cohen et al. 2000; Hayward and Krause 2013c, 2013b, 2013a; Krause et al. 2001; Krause and Hayward 2015). According to scholars; support exchanges with like-minded individuals bring people together with a common interest and a set of beliefs, thus conferring beneficial resources and positive social experiences (Ellison 1991; Ellison and Levin 1998; Krause 2009; Krause and Hayward 2015). Secondly, religious coping has shown to be important during crises and bereavement (Ellison 1991; Ellison and Levin 1998; Ellison and Taylor 1996; Gall 2006; Gall et al. 2007; Krause et al. 2001; Pargament et al. 1998). Religious communities also offer a space where individuals can seek comfort and receive support from other congregants through increased access to resources via programs, or church groups.

Findings involving the frequency of prayer—have been especially interesting (Bartkowski, Acevedo, and Van Loggerenberg 2017; Bradshaw, Ellison, and Flannelly 2008; Breslin and Lewis 2008; Ellison et al. 2014; Ellison and Taylor 1996; Hayward and Krause 2013b). There are sound reasons to suspect that more frequent prayer will lead to more favorable health outcomes. However, the empirical findings on this point are decidedly mixed. Some studies reveal salubrious effects of prayer on health, while other studies find null, and negative effects. Mechanisms behind private religiosity’s link to salutary health outcomes include internal factors, rather than external. According to Collins (2010), private religiosity, like prayer, can also have salutary effects on health through interior dialogues and interpretative processes that help victims reframe and reappraise stressors. These practices may alter primary appraisals, where stress and struggles are perceived as opportunities for spiritual growth, or as part of a broader divine plan. In addition, perceived collaborations with God may help bolster feelings of control and enhance confidence in one’s ability to manage
difficult life circumstances. Additionally, private religiosity may also strengthen relationships with a deity by offering someone to talk to about suffering, and also helping remind individuals they are not alone and that someone cares.

A substantial literature indicates the salience of religion and religious participation in the lives of the elderly, especially for African Americans, Hispanics, Native Americans, and Asian Americans (Ellison 1995; Mattis and Jagers 2001; McAuley, Pecchioni, and Grant 2000; Nelson 1989). In addition, both cross-sectional and longitudinal studies indicate that there are aging-related changes in the pattern of predominant religious behaviors, with participation in organized religious activities remaining high until late old age, then dropping off due to increased physical disability. However, religious attitudes and private behaviors (i.e., prayer, reading religious materials, watching or listening to religious programs) actually increase with age (Ellison and Taylor 1996; Hayward and Krause 2013b; Koenig et al. 1999).

There is also growing evidence of a positive relationship between religious practices, spirituality, and health. In their recent review of the evidence of the role of spirituality, health, and aging, (Ellison 1991; Gall 2006; Gall et al. 2007; Hummer et al. 1999; Krause 2009; Mattis and Jagers 2001; McCullough et al. 2000). This work generally concludes that greater religious participation and higher self-rated spirituality have been associated with lower mortality rates and better self-rated health (Hummer et al. 1999; Krause et al. 2017; McCullough et al. 2000), crossectionally and over time; and lower risk for hypertension and lower cancer rates, especially in those religions that have strong dietary and other lifestyle restrictions (Ellison 1995, 1991; Hummer et al. 1999; Krause 2009; Krause et al. 2017; McCullough et al. 2000; Musick, Blazer, and Hays 2000). The evidence for participation and functional status are less
clear because of possible reverse causation, but longitudinal studies do suggest that service attendance influences functional health.

The beneficial effects of religion on health are believed to occur through several mechanisms, including supporting a healthier lifestyle (i.e., proscriptions against smoking, drinking, illicit drug use, more physical activity, and diet) (Idler and Kasl 1992; Strawbridge et al. 1997) by fostering greater social integration, more social contacts, and the provision of more instrumental and emotional support (Ellison 1995) greater marital satisfaction and stability, and greater comfort, meaning, and effective coping with major life challenges and transitions (Ellison 1991; Krause et al. 2017; Pargament et al. 1998). Several authors also note, however, that greater religiosity and religious coping can also have negative health and mental health effects, especially because of ideological rigidity, spiritual discontent, demonic reappraisal, and negative reappraisal of God (Bartkowski et al. 2017; Bradshaw et al. 2008; Ellison 1995; Ellison et al. 2014; Idler and Kasl 1992; Krause 2009; Pargament et al. 1998; Strawbridge et al. 1998). Additional evidence in support of the complex relationships between religiosity and health (Strawbridge et al. 1997, 1998). They contrasted nonorganizational religiosity (i.e., prayer, importance of religious and spiritual beliefs) versus organizational religiosity (i.e., attendance at services and other religious activities) as moderators on stress and depression. Their results indicated that although religiosity is protective for mortality and morbidity, it buffers some stressors but appears to exacerbate others. They found that nonorganizational religiosity was unrelated to depression, while organizational religiosity had a weak negative association with depression. However, while both forms of religiosity buffered the effect of nonfamily stressors (i.e., financial, health), nonorganizational religiosity exacerbated the effects of child problems, and organizational religiosity exacerbated the effects
of marital problems, child and/or spousal abuse, and caregiving. Thus, religiosity may benefit those facing non-familial stressors, but may make coping with family crises worse.

**Study Aims and Research Hypotheses**

The current study aims to address several limitations in the previously mentioned literature on the long-term effects of childhood abuse on later health. First, much of the work exploring resiliency and protective factors in the context of childhood abuse is limited to child and adolescents victims, paying less attention to victims in their adult years. However, while early intervention and support is important, there is still an important role for providing intervention and support to childhood abuse victims in their adult years. It is important to promote resilience at all levels and life-stages. Interestingly, almost no research has considered the ways in which religion can operate as a protective factor for victims in their adult years. To address these two gaps in the literature, the present study applies a resiliency framework and protective factor model to assess “religiosity” as a protective factor in the relationship between childhood abuse and adult health.

Next, while some studies have considered both the independent and cumulative effects of physical and sexual abuse (Arata et al. 2005, 2007; Briere and Runtz 1990; Clemmons et al. 2007; Sesar et al. 2010), few scholars have considered how psychological abuse is a distinct or co-occurring form of abuse, especially when assessing health outcomes. Also, most population-based studies regarding the long-term effects of abuse typically dichotomize groups, with frequent abuse compared to less frequent abuse or no abuse at all (Chartier et al. 2010). Such an approach does not allow assessments of victims who may have experienced abuse at lower levels of frequency than others. To address these limitations, I estimate the distinct effects of emotional and physical childhood abuse by a parent only. I then create type-specific binary
indicators to assess emotional abuse only, physical abuse only, cumulative abuse (both emotional and physical), and no abuse, treated as the reference group.

Another limitation in this work is that adult health is often assessed using one point in time, which does not allow the examination of health trajectories across adulthood. If childhood abuse is a risk factor for health over the life-span, health measured at only one point in time cannot explore that possibility. The current study addresses this limitation by using three waves of panel data spanning a total of 20 years, allowing the assessment of changes in health over time as well as trajectories across the life-span. Next, much work has focused on a single health outcome at a time, a method criticized by scholars who say there is great value in studying health as a multidimensional construct. Guided by insights from the life-course perspective, resiliency framework, and from previous empirical work, I propose the following set of research hypotheses:

**H1:** Victims of cumulative abuse will have the poorest health compared to other groups.

**H2:** Increases in public religiosity will be associated with better health over time.

**H3:** Increases in private religiosity will be associated with better health over time.

**H4:** Public religiosity will buffer against the harmful effects of childhood abuse.

**H5:** Private religiosity will buffer against the harmful effects of childhood abuse.

**METHODS**

**Dataset and Sample**

The present study used data from three waves of the National Survey of Midlife in the U.S. (MiDUS), a national probability sample of roughly 7,000 adults between the ages of 25–74. Wave 1 [W1] took place in 1995 using a telephone survey and questionnaire. Respondents were followed up every ten years, with Wave 2 [W2] taking place in 2004–2005 and Wave 3
[W3] taking place in 2013–2014. Response rates for both follow-up waves averaged about 61%. For the present study, cases were retained based on two provisions: (1) participation in all data collection periods (W1, W2, W3), and (2) responses to W1 childhood abuse questions. Only cases of parental abuse were included, yielding an effective sample size of 2,485.

Weighted and unweighted data resulted in similar outcomes. Reported estimates are from unweighted data for more reliable standard errors (Winship and Radbill 1994).

Study Variables

Subjective Physical Health. My dependent variable is an ordinal measure gauging subjective physical health, ranging from 0–3. There are several reasons to justify the decision to use this variable. First, self-reported health measures offer a more holistic assessment of well-being than other health markers and are also found to strongly predict health outcomes like mortality, obesity, and number of chronic illnesses (Idler et al. 2004; Idler, Russell, and Davis 2000; Idler and Benyamini 1997; Idler and Kasl 1991). Subjective health markers are, on the one hand, influenced by morbidity and preclinical problems, but are not dependent on particular health behaviors. In other words, even if someone is not formally diagnosed with an illness, or does not illicit symptoms of an ailment, personal perceptions of one’s own health grants insight into their general state of well-being. For this measure, respondents were asked, “Would you say your physical health is excellent, very good, good, fair, or poor?” Original responses were reverse coded so that a higher number indicates better health, so that (0 = poor), (1 = fair), (2 = good), and (3 = very good).

Childhood Abuse. Abuse measures draw from the Conflict Tactics Scale (CTS) (Straus 1979), which is the most widely used instrument for research on family violence. Questions in this
scale are retrospective inquiries about a respondent’s frequency of experiences related to emotional abuse, physical abuse, and severe physical abuse by a parent. Respondents were given a series of items tapping into these experiences, all of which were asked twice—once about their mother and once about their father (see Table 3.1). The initial prompt asked respondents, “During your childhood, how often did your [mother/father] do any of these things to you? Response categories for each abuse questionnaire item included: (0 = never), (1 = rarely), (2 = sometimes), and (3 = often). Previous research has shown that CTS measures have high validity but low internal consistency reliability due to rare occurrences of the experiences, underreporting of abusive events, and weak associations among indicators (Dowd and Goldman 2006; Straus et al. 1998).

I considered different operationalizations for the childhood abuse variable. Final models were conducted using childhood abuse as a continuous measure gauging frequency of abuse: (0 = never), (1 = rarely), (2 = sometimes), and (3 = often), and also as type-specific, dichotomous measures, indicating (0 = never) and (1 = rarely, sometimes, often) for four distinct categories: (1) emotional abuse only, (2) physical abuse only, (3) emotional and physical abuse (cumulative abuse), and (4) no abuse, serving as the omitted category. Both operationalizations resulted in similar results. I decided to present final models using the dichotomized measures for several reasons. First, much of the abuse literature differentiates between experiences of abuse, and no experiences (e.g., Berenson and Andersen 2006; Pepin and Banyard 2006). Also, the items that comprise the severe physical abuse variable is skewed toward never (~80%), and finally, there are meaningful differences found between individuals who report rare experiences of childhood abuse, and no experiences. Thus, the dichotomy best represents the theoretical perspective that even one experience of abuse is traumatic.
Religiosity. Public religiosity is included as a two-item index (see Table 3-1). The first item in this index measures frequency of church attendance and the second index item measures frequency of church activity participation. Response categories for both items are scored on a five-point Likert scale, where a higher number indicates a higher frequency of that behavior: (0 = never), (1 = less than once a month), (2 = 1–3 times a month), (3 = once a week), (4 = more than once a week). Next, private religiosity is included as a three-item mean index, ranging from 0–15, where a higher number indicates a greater frequency prayer, meditation, and of reading the Bible. Response are coded on a five-point Likert scale, where (0 = never), (1 = less than once a month), (2 = 1–3 times a month), (3 = once a week), (4 = more than once a week).

Covariates. The present study adjusts for several demographic covariates which may be associated with childhood abuse experiences and adult health. Since I assess religion as a moderator in analytical models, denomination is included as a control, where (1 = mainline Protestants), (2 = conservative Protestants), (3 = Catholics), (4 = religious others), and (5 = no religion), as the omitted category. Marital status is coded so that (1 = separated, divorced, or widowed), (2 = never married), and (3 = married), as the omitted group. Race include: (1 = African American), (2 = Hispanic/Latino), (3 = other), and (4 = non-Hispanic Whites), as the omitted category. A dummy compares males to females, where (1 = male) and (0 = female), as the omitted group. Age and education are continuous measures, gauging actual years. Financial strain in included as a two-item mean index (α = .75), ranging from 0–2, where a higher number indicates more hardship. Respondents were asked about (a) having enough money to make ends meet, where (0 = more than enough money), (1 = just enough money), (2 = not enough money), and (b) difficulty paying bills, where (0 = not at all difficult), (1 = not very difficult), and (2 = very difficult). Preliminary analyses considered proxy variables for
childhood socioeconomic status as controls, but were removed from the final analyses since none were statistically significant.

**Analytical Strategy**

All analyses and models presented were produced using Stata SE, Version 15. Prior to analyses, I addressed missing data for variables that were missing at random (MAR) using multiple imputation (MI). MI models were produced using sequential chained regression with models tailored to each variable’s level of measurement (Hedeker and Gibbons 2006). A total of 50 imputations were generated using information from all analytical variables. I conducted sensitivity analyses comparing results with and without imputation, which indicated results were substantively consistent (Johnson and Young 2011; Young and Johnson 2013, 2015).

Panel models can assess the effects of individual terms as either fixed or random. Fixed-effects (FE) assumes that time-invariant characteristics are unique to each person and should not be correlated with other individual characteristics, while random-effects (RE) assumes that the variation across entities is random and uncorrelated with the independent variables used in the model. This assumption makes RE advantageous over FE since these models allow the inclusion of time-constant measures, like race, sex, and childhood abuse, into models as explanatory variables (Johnson 2005). To decide between FE and RE, I conduct a Hausman specification test which assesses whether or not the unique errors are correlated with the regressors. Results concluded that error terms were correlated and that FE was unsuitable (see Appendix Table 3.1).

The current study estimated a series of RE models to assess how childhood abuse exerts additional influence on outcomes of adult physical health over the life-span, net of baseline levels. In addition, these models aim to examine the moderating effects of religiosity
in the relationship between childhood abuse and adult health. RE coefficients estimated by these models indicate the average effects of predictor variables on adult physical health, per each one unit change over time. Several multiplicative terms are added to models that interact childhood abuse with religiosity. These interactions assess the combined effects of abuse and religiosity in changes in adult health outcomes over time.

The following sections are organized as following. First, after presenting descriptive statistics from Table 3.1, I present results from analytical models displayed in Table 3.2. Model 1 includes childhood abuse only, while Model 2 adds religiosity. Model 3, the full model, includes all variables. Model 4 interacts abuse with public religiosity, while Model 5 interacts abuse with private religiosity.

RESULTS

Descriptive Statistics

I begin first by briefly noting descriptive statistics reflected in Table 3.2. Results indicate that roughly 27% of respondents reported no abusive experiences in their childhoods. However, about half (50.14%) said they experienced both emotional and physical abuse. About 10% reported physical abuse only, while about 14% reported emotional abuse only. Next, overall means of self-reported health indicate high levels, with respondents averaging a 2.63 out of a 3.00. These levels show moderate declines over time, averaging a 2.71 at W1 and a 2.47 at W3.

Levels of overall public religiosity are relatively low, with respondents reporting attending or participating in church-related events between less than once a month and 1–3 times a month. Levels of public religiosity decline between W2 and W3, although this decrease is not very significant. When it comes to private religiosity, overall levels are moderate,
averaging 6.74 out of 15. These levels slightly increase in-between the second and third waves. Approximately 44% were mainline Protestant, and 10% as conservative Protestant. Roughly 27% were Catholic, and 10% were another denomination. Another 10% said they had no religious affiliation.

Levels of financial hardship longitudinally are moderate, averaging at about 0.81 from a scale ranging from zero to two. Average education across waves is approximately two to three years of college without a college degree. At W1, roughly 74% of respondents were married, 17% were separated, divorced, or widowed, and about 10% were never married. By W3, married respondents decreased to 67%, and never married declined to about 7%. However, separated, divorced, or widowed jumped to 26%. Next, the average age of respondents longitudinally was about 56 years of age. A majority of respondents were female (55.98%). Finally, the majority of respondents were white (87%), while 3.4% were African American, 1.3% were Hispanic, and 8.8% identified as other.

Figure 3.1 displays zero-order correlations between childhood abuse categories, self-rated health, and religiosity measures using the stacked, longitudinal sample. Public religiosity is positively associated with health, while private religiosity is negatively associated. Next, in relation to health, cumulative abuse is negatively associated, while emotional abuse and no abuse are positively associated. Regarding associations between childhood abuse and religion, findings suggest that physical and no abuse are positively associated with public religiosity, while cumulative abuse is negatively associated. Regarding private religiosity, physical, emotional, and none are positively related, and cumulative is negatively related.

**Multivariate Models**

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Table 3.3 displays results from RE models predicting the effects of childhood abuse on adult physical health over time, net of covariates. Model 1 includes childhood abuse only. Results here indicate that when compared to non-victims, individuals who experience both emotional and physical abuse experience declines in their self-reported physical health over the life-span (b = -0.10, p ≤ .01). The emotional abuse group is only marginally significant, indicating slightly better health when compared to non-victims. This result, while non-intuitive, is consistent with previous work that has suggested emotional abuse victims suffer psychological ailments as opposed to physiological ones. Model 2 adds religiosity to childhood abuse measures. The effects of childhood abuse remain significant, where when compared to non-victims, victims of both types of abuse experience declines in their subjective health over time (b = -0.13, p ≤ .001), offering support for H1. Furthermore, increases in public religiosity over time are associated with better self-reported health over the life-span (b = 0.08, p ≤ .001), net of childhood trauma, offering support for H2. However, increases in private religiosity over time are associated with declines in health (b = -0.03, p ≤ .001), countering H3.

Model 3, the full model, adds all remaining covariates. The effects of childhood abuse and religious predictors are robust and remain largely unchanged from Model 2. Experiencing both types of childhood abuse is associated with health declines over time (b = -0.13, p ≤ .001), increases in public religiosity are associated with increases in physical health (b = 0.06, p ≤ .001), while increases in private religiosity over time are associated with health declines (b = -0.02, p ≤ .001), net of all controls. Some noteworthy effects of controls from this model are as follows. First, increased financial strain over time is associated with decreases in physical health, financial strain are associated with decreases in physical health over time, net of childhood abuse, religion, and covariates (b = -0.25, p ≤ .001). More education is associated with better
self-rated health over time (b = 0.07, p ≤ .001). There are curvilinear effects of age, where increases are associated first with health declines (b = -0.03, p ≤ .001), then with health stability (b = 0.01, p ≤ .001), and then again with declines (b = -6.14, p ≤ .001). The final point to make regards race and ethnicity, where when compared to whites, the group identifying others is associated with health declines over time (b = -0.17, p ≤ .001), net of all else.

The final two models add interaction terms. Model 4 interacts childhood abuse and public religiosity, while Model 5 interacts childhood abuse and private religiosity. For Model 4, results indicate no significant interaction effects between childhood abuse and religiosity. This finding offers no support for H4. However, the main effects of both types of abuse remain statistically significant. The coefficient refers to the effect of childhood abuse at mean levels of religiosity. Victims of cumulative abuse with average levels of public religiosity experience declines in physical health over time (b = -0.12, p ≤ .001), as compared to non-victims with the same levels of religiosity. All other predictors remain unchanged from the full model.

Next, results from Model 5 indicate a statistically significant interaction between physical abuse and private religiosity. The coefficient here is positive and significant, suggesting that the effects of private religiosity are protective for victims of physical abuse (b = 0.02, p ≤ .05), offering partial support for H5. Figure 3.2 plots the interaction effects of abuse with private religiosity. For groups who experienced emotional abuse only, cumulative abuse, or no abuse, results indicate that increases private religiosity over time are associated with health declines. However, the same is not true for victims of physical abuse, whose health improves slightly as private religiosity increase. Results from Model 5 also indicate that the main effects of physical abuse and cumulative abuse are statistically significant. These coefficients refer to the effect of abuse at mean levels of private religiosity. Thus, physical and
cumulative abuse, with average levels of private religiosity, are associated with declines in health over time \((b = -0.24, p \leq .05; b = -0.14, p \leq .05)\), compared to non-victims with equal levels of religiosity. All covariates remain unchanged in their associations and statistical significance. I limit results to these brief remarks, and now move to a discussion of findings and concluding comments.

**DISCUSSION AND CONCLUSION**

Guided by a life-course perspective, this research used a resilience-focused approach to investigate how different dimensions of childhood abuse influence changes in physical health later in life by asking two main research questions: (1) what are the distinct, long-term effects of different types of abuse on physical health outcomes over the adult life-course?, and (2) is religiosity a protective factor against the harmful effects of abuse? Many studies assessing health and well-being use cross-sectional data or clinical samples which cannot assess causal mechanisms and processes linking early childhood experiences and events to later well-being. These data limitations translate to policy limitations since they limit insight into possible protective mechanisms occurring in between the time of initial trauma and outcomes occurring later in life, which can be derived using longitudinal or panel data. The current study is among the first to employ panel data to examine the role of specific dimensions of childhood abuse in trajectories of adult physical health over a span of twenty years. In other words, I examine if emotional abuse impacts health differently than physical abuse, and consider cumulative effects when they co-occur together.

Moreover, work in the area of religion has shown strong links between religiosity and well-being, but less is understood about their effects in the context of childhood abuse. Based
on the literature exploring these links, I apply a resiliency framework to assess religiosity as a protective factor that can protect against the harmful effects of abuse. While scholars have identified several factors that can protect child and adolescent victims of abuse against its negative effects, less is known about the salience of these factors for victims in their adult years. Applying the resiliency framework here places resiliency in a more ecological context, allowing its conceptualization to be something that can be accessed externally, as opposed to being a fixed individual trait. I hypothesized that (1) cumulative abuse would be associated with the poorest health over time, (2) that both public and private religiosity would be associated with better health over time, and finally (3) that both forms of religiosity would protect against the harmful effects of childhood abuse (regardless of type), serving protective resources that help victims cope with trauma.

Regarding direct effects influencing changes in health over time, findings from random-effects models revealed that only reports of combined abuse (both physical and emotional) were consistently associated with poorer physical health over time, results that offered support for H1. This finding supports the idea that abuse from a parent can have long-term health risks when that abuse is a co-occurrence of physical and emotional forms of trauma. This pattern of findings demonstrates the importance of continued focus on the long-term consequences of cumulative experiences of abuse, which some previous work has conceptualized in their investigations (Greenfield and Marks 2009; Irving and Ferraro 2006).

For religion measures, evidence from random-effects models suggests that public religiosity was associated with better health over time, offering support for H2. This finding is consistent with other work which has noted the protective role of public religiosity on an array of outcomes including cardiovascular disease (Powell, Shahabi, and Thoresen 2003) and
immune function (Sephton et al. 2001). Scholars suggest that health behaviors, social support, and among enhanced optimism can be the major factors explaining the positive association between religion and health (Idler and Kasl 1991). In addition, public forms of religious behaviors can put individuals in touch with like-minded people, which can produce many of the benefits of a strong social network. Together, this may also explain the lack of support for H3, with results indicating that private religiosity was not directly associated with improvements in health over time, since this type of religious behavior lacks the communal benefits inherent in public religiosity. The negative association between private religiosity and health is consistent with work suggesting that religious experiences are not always positive.

But while public religiosity was found to be positively associated with health over time, results from interaction models find that it lacked salutary effects, offering no support for H4. One way to explain public religiosity’s lack of protective effects is by turning to work with evidence that negative coping responses (Krause, Ellison, and Wulff 1998) and religious doubt (Krause et al. 1999; Krause and Wulff 2004) can negatively impact health. In this vein, victims of abuse may be confronted by cognitive dissonance between their own negative family experiences, on one hand, and the idealized religious “Christian” understandings of proper family behavior. In this case, since the abuse occurred at the hands of parents, turning to religion could be painful for victims, leading them to dredge up old memories and reliving their abusive experiences. Turning to religion may also involve a degree of cognitive dissonance in another way. They may seek a closer relationship with the divine, ultimately finding that unsatisfying, and wondering why God would allow this to happen to them. They may even question the loyalty of their religious community who did not help them in their time of need (Bradshaw et al. 2008; Ellison et al. 2014; Pargament 1997; Pargament et al. 1998).
Additionally, while private religiosity was found to be negatively associated with health outcomes over the life-course, interaction models found that it, indeed, has protective effects for victims of physical abuse, offering support for H5. As to why this protective effect was present only for victims of physical abuse, it could be that individuals who exhibit increased private religiosity may do so because they are searching for answers or for comfort. This effect may be driven partly by the legacy of the abuse they have suffered, leading their experiences to second-order stress later in life, resulting in individuals to draw on private religiosity in coping efforts. Most importantly, private religiosity’s protective effects is consistent with literature on religious coping and the stress response model, which argues that religion can be especially beneficial in times of extreme duress (Ellison and Taylor 1996; Krause et al. 2001; Pargament 1997; Pargament et al. 1998). Finally, this result is consistent with the resiliency framework (Luthar et al. 2000; Mcgloin and Widom 2001; Ong and Bergeman 2004; Reich et al. 2010; Richardson 2002; Windle 2011), indicating that private religiosity acts as a resource that has protective effects against stress from physically abusive experiences, and is beneficial for victims dealing with this form of trauma. These are some ways to try and explain the counterintuitive, yet interesting, results.

The study has several limitations, with several of its features limiting the full extent to which conclusions can be drawn. First, reports of childhood abuse experiences are retrospective and thus, are subject to inaccurate recollection. Reports of abuse were obtained in adulthood—asking adults to recall instances of childhood abuse and/or maltreatment that occurred during their early years. An added disadvantage is that childhood abuse questions were asked only in the first wave, making it impossible to check consistency of childhood abuse reports across questionnaires. This adds to the complications present in the
operationalization and measurement of childhood abuse, since it is not clear whether these measures capture reality, or are simply reconstructed memories that are formed over time. Even well-validated retrospective measures can be imperfect since recalling actual events makes them less concrete and more value-laden.

Second, I used a type-specific categorization of childhood abuse which differentiates between the presence and absence of various forms of abuse. This method highlights one’s relative experiences of abuse during childhood and their subsequent effects on adult health over the life-span—relative to the effects of other types of experiences. Ancillary analyses were conducted using a continuous specification of childhood abuse which combined all forms of maltreatment into one all-encompassing measure. Gauging the frequency of abusive experiences during childhood, this approach aimed at capturing processes by which increased frequency translates to increased severity, of which corresponds to health declines later in life. Limitations of both methods of measurement include lack of distinction between maternal, paternal, or non-parental abuse—all of which are important issues to consider and examine.

Third, it is important to note that results indicating protective effects by private religiosity for may be picking up elements of selectivity, especially if pre-existing distress or other personality elements (e.g., introspection) are not adequately controlled in the model. Thus, results may not really address the question "what are the effects of increased religiosity," and instead, say more about the characteristics of people who sharply increase their religiosity. Next, there are very few Latino respondents (~1.3 %) in the MiDUS. More representation from minority groups would be beneficial when investigating the long-term impact of childhood abuse. Finally, despite the inclusion of statistical controls, there are other
factors not accounted for here, such as genetic factors and other forms of adversity. If taken into account, results might yield a more complex story.

Despite these limitations, findings from the present study provide additional empirical support for the importance of policies and practices aimed at recovery for victims of abuse, especially for victims in their adult years. Historically, much of the formal discourse addressing recovery has focused on victims in their early life, not victims in adulthood who never received treatment for their early life trauma. It is crucial that future work on trauma intervention and therapy not ignore abuse victims simply because they are not children or adolescents anymore. Results from this study suggest that childhood abuse lasts a life time, and that major efforts should be made not simply with the goal of preventing and intervening with children experiencing abuse, but also to ensure that older victims are given opportunities to overcome their past, despite how distant it is, and achieve optimal well-being in present and later life. More attention should be given to recovery needs and protective factors that can make resiliency possible at every life-stage.
Table 3.1. Description of Scale and Index Items

(1) **Emotional Abuse (α = .61)**
   - a) “Insulted you, swore at you.”
   - b) “Sulked or refused to talk to you.”
   - c) “Stomped out of the room.”
   - d) “Said something to spite you.”
   - e) “Threatened to hit you.”
   - f) “Smashed or kicked something in anger.”

(2) **Physical/Severe Physical Abuse (α = .74)**
   - a) “Pushed, grabbed, and shoved you.”
   - b) “Slapped you.”
   - c) “Threw something at you.”
   - d) “Kicked, bit, or hit you with a fist.”
   - e) “Hit or tried to hit you with something.”
   - f) “Beat you, choked, burned or scalded you.”

(3) **Public Religiosity (α = .81)**
   - a) “How often do you attend religious services?”
   - b) “How often do you attend or participate in church activities?”

(4) **Private Religiosity (α = .84)**
   - a) “How often do you pray in private?”
   - b) “How often do you meditate or chant?”
   - c) “How often do you read the Bible or other religious literature?”
Table 3.2. Imputed Descriptives of Analytical Variables – MiDUS I, II, III (n = 2,485)

<table>
<thead>
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<td>x̅  σ  range</td>
<td>%  x̅  σ  range</td>
<td>%  x̅  σ  range</td>
<td>%  x̅  σ  range</td>
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<td>Physical Abuse</td>
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<td>Subjective Physical Health</td>
<td>2.63 0.95 0–3</td>
<td>2.71 0.89 0–3</td>
<td>2.70 0.93 0–3</td>
<td>2.47 1.02 0–3</td>
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<td>3.27 2.57 0–8</td>
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<td>Private Religiosity</td>
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<td>6.69 4.31 0–15</td>
<td>6.80 4.46 0–15</td>
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<td>Years of Education</td>
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<td>Age (in years)</td>
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<td>46.70 11.27 20–74</td>
<td>55.60 11.22 30–84</td>
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<tr>
<td>White (reference)</td>
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<td>86.56</td>
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References

**Figure 3.1.** Zero-Ordered Correlations between Abuse, Subjective Physical Health, and Religiosity (n = 2,485)

<table>
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<td>0.67***</td>
<td>1.00</td>
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<td>0.01***</td>
<td>1.00</td>
<td></td>
<td></td>
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<td>0.01†</td>
<td>0.01*</td>
<td>-0.13***</td>
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<tr>
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<td>-0.06***</td>
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*p ≤ .001 ***; p ≤ .01 **; p ≤ .05 *; p ≤ .10 †
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<td>—</td>
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<tr>
<td>Physical Abuse × Private Religiosity</td>
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*p ≤ .001 ***; p ≤ .01 **; p ≤ .05 *; p ≤ .10 †
Figure 3.2. Interactions between Childhood Abuse and Private Religiosity

![Graph showing interactions between Childhood Abuse and Private Religiosity]
**Appendix Table 3.1. Hausman Specification Test**

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>(b) FE</th>
<th>(B) RE</th>
<th>( (b - B) )</th>
<th>( \sqrt{(\text{diag}(V_b-V_B))} ) S.E.</th>
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</thead>
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<tr>
<td>Both X Private</td>
<td>-0.01</td>
<td>-0.00</td>
<td>-0.01</td>
<td>0.02</td>
</tr>
</tbody>
</table>

\[
\text{chi}^2 (8) = (b - B) \cdot [(V_b - V_B)^{(-1)}] (b - B)
\]

\[
\text{chi}^2 (8) = 12.89
\]

\[
\text{Prob} > \text{chi}^2 = 0.1156
\]
CHAPTER 4

CHILDHOOD ABUSE AND ADULT INTERPERSONAL WELL-BEING:
SOCIAL CONTACT AND SOCIAL OPTIMISM AS MODERATORS

ABSTRACT

Using multi-wave data from the National Survey of Midlife Development in the United States (MiDUS), the present study investigates the long-term effects of childhood abuse on adult interpersonal relationships, while considering the role of social contract and social optimism as possible moderators in this association. The objectives here are twofold: (1) to investigate the long-term effects of emotional and physical childhood abuse on adult interpersonal relationships over the life-course, and (2) apply an interpersonal perspective on resiliency theory to consider the protective mechanisms of two distinct yet interrelated social dimensions: social contact and social optimism. Results from fixed-effects models indicate that the protective effects of social contact with other people is weakest for victims of cumulative trauma (individuals who experienced both emotional and physical abuse). Additionally, social optimism had more pronounced positive effects specifically for victims of emotional abuse. Overall, these results indicate that a victim’s frequency of social contact with other people and overall optimism regarding society and their place in it are important components in their long-term interpersonal relationships in adulthood. Finally, results here also highlight the importance of assessing multiple dimensions of childhood abuse, as their effects on interpersonal outcomes appear nuanced and differentially affected by social moderators.
INTRODUCTION

Childhood abuse and neglect can have strong influences on the ways in which adults manage and construct relationships over their life-span (Riggs 2010). These experiences can shape the way victims define the world around them and themselves, which can ultimately impact interpersonal relationships over their lifetimes. A deeper understanding of the extent to which childhood abuse can negatively impact relationships later in life is even more important since interpersonal connections and relations with others can provide adult victims a context in which to recover from their traumatic pasts (Whiffen, Judd, and Aube 1999).

It has been only in recent years that scholars have started systematically and empirically exploring relationships between childhood abuse and adult interpersonal relationships later in life (Reyome 2010). A number of these empirical studies have shown that abusive childhood experiences are related to difficulties establishing supportive interpersonal relationships in adulthood. When compared to their peers, abused individuals are more withdrawn and emotionally disengaged from infancy to adulthood, and also exhibit less social interactions and prosocial behaviors (Mueller and Silverman 1989; Solomon and George 1999) and report more social discomfort (Briere and Runtz 1990).

Victims of abuse are also more likely than non-victims to report higher levels of partner violence (Banyard, Arnold, and Smith 2000; DiLilio et al. 2001), and separation and divorce (Colman and Widom 2004). Even fewer studies have assessed the long-term effects of various/multiple experiences of abuse. Multiple traumas by a parent have been associated with a range of problems including the capacity to form positive relationships (van der Kolk 2005), decreased social support in adulthood (Vranceanu, Hobfoll, and Johnson 2007), and negative interactions in close relationships (Beards et al. 2013).
Despite the accumulation of evidence regarding the impact of childhood abuse on adult interpersonal functioning, much of this work is characterized by limitations. First, research offers limited insight into specific relationships between dimensions of abuse and adult outcomes, with most studies investigating a single dimension of abuse, or employing a measure that combines all dimensions into one. Second, studies that assess relationship outcomes have largely focused on romantic relationships (Colman and Widom 2004; DiLilio et al. 2001), with less attention given to non-intimate relations in adulthood. Finally, most attempts at understanding the links between childhood abuse and adult relationships are hampered by the nature of available data which offers inadequate insight into various mechanisms that can protect against the negative effects of childhood abuse, especially for adult victims, who are often overlooked in research on resiliency. More research is needed to address the various limitations existing in previous work, and to further identify salient factors that can ameliorate the negative effects of abuse for victims in their adult years. Guided by insights from an interpersonal perspective, the present study uses a resilience-focused approach to examine the link between childhood abuse and adult interpersonal relationships, while also exploring two types of social resources (social contact and social optimism) as potential protective factors in this association.

THEORETICAL AND EMPIRICAL BACKGROUND

Childhood Abuse and Adult Interpersonal Relationships: Review of Empirical Evidence

Notwithstanding the many limitations in the body of work assessing childhood abuse and adult well-being, the bulk of the literature suggests that abused children have more psychologically and socially disturbed than their non-abused counterparts. A better understanding of the
various factors underlying these associations can have strong implications for methods of interventions. The bulk of the work suggests that parental abuse is associated with significantly higher rates of psychiatric disorders in adulthood (Berenson and Andersen 2006; Drapeau et al. 2003; Kaufman et al. 2000). Research over the last couple decades shows that childhood abuse and neglect are associated with *intrapersonal* difficulties that are associated with depression, anxiety, substance abuse, diminished identity, pathological self-representations, and other psychological disorders (Briere 1992; Reviere and Bakeman 2001; Rosen and Martin 1998). Researchers have also examined the *interpersonal* effects of childhood abuse, indicating evidence linking trauma to lower quality relationships, intimacy dysfunction, and difficulties with social adjustment (Davis, Petretic-Jackson, and Ting 2001; Heim and Nemeroff 2001; Vranceanu et al. 2007; Wright 2007).

Despite this burgeoning body of work, few studies have assessed the long-term effects of various and/or multiple forms of childhood abuse experiences. Much of the early literature ignored the independent effects of abuse since many were found to co-occur and overlap (McCloskey and Stuewig 2001; Scher et al. 2004). However, recent evidence indicates differential effects across abuse dimensions (Briere and Runtz 1990; Gross and Keller 1992). Of the various types of childhood abuse, greater attention has been given to sexual abuse, with evidence linking it to fear of intimacy, relationship anxiety, and decreased interpersonal functioning (Davis and Petretic-Jackson 2000; Parker and Parker 1986). Victims of sexual abuse often report greater difficulty establishing stable relationships (DiLilio and Long 1999), and developing trust with their partners (Banyard et al. 2000).

Emerging research has only started to demonstrate similar patterns of association between other types of maltreatment in relation to adult relationships. Physically abused
children often experience anger management issues (Drapeau and Perry 2004), fear of intimacy (Repic 2007), and adult interpersonal violence and aggression (Berzenski and Yates 2011; Reyome 2010; Zurbriggen, Ramsey, and Jaworski 2011). Emotional maltreatment has been linked to self-esteem dysfunction, relationship difficulties (Briere and Runtz 1989; Carbone 2010; Drapeau and Perry 2004; Morimoto and Sharma 2004), and marital dissatisfaction (Perry, Dilillo, and Peugh 2007). Victims of multiple forms of maltreatment are found to experience heightened levels of depression (Clemmons et al. 2007; Morimoto and Sharma 2004; Stuewig and McCloskey 2005), difficulty maintaining relationships, and less dense social support networks (Beards et al. 2013; van der Kolk 2005; Vranceanu et al. 2007).

**Social Contact and Social Optimism: An Interpersonal Perspective on Resiliency**

As evidence for the link between childhood abuse and adult relationships continues to grow, so too does the need to better understand the nature of this association. Overall, the evidence linking childhood abuse and adult relationships suggests that victims of abuse fare far worse in their interpersonal outcomes later in life when compared to their non-victim counterparts. Additionally, this body of work seems to indicate that the worst adult interpersonal outcomes are among individuals who experienced more severe forms of abuse (duration and overlap of type). However, these findings overall are mixed and discordant, with studies pointing to null associations between childhood abuse and adult relationship outcomes. While it is clear that early childhood abuse increases risks for poor relationships in adulthood, this is not the case for everyone. Some victims are able to develop and maintain healthy and happy relationships over their lifetimes in spite of their past trauma.

Overall, social health, or interpersonal health, is largely defined in terms of adjustment to one’s environment. Social well-being can be characterized as positive social behavior, which
can include social contact with others (Segovia, Bartlett, and Edwards 1989) and even social participation. While there are differences in the terminology used to reference health social interactions and relationships, most research adopts the term social adjustment or social support in describing various elements of well-being. There is no consensus us what measures are best at capturing social well-being, which is one major limitation in this work.

A resilience-based approach emphasizes strengths, resources and capacities that can offset the harmful effects of vulnerability and risk. Certain factors in adulthood may mitigate the deleterious influences of early trauma (Powers et al. 2009; Runtz and Schallow 1997) and produce positive outcomes for adult victims. Currently, most studies of risk or resilience conceptualize factors into classes, distinguishing between individual and characterological factors from those relating to social context and environment. However, the interpersonal perspective recognizes the interconnectedness of personality traits and important elements of social circumstances, and thus propositions that these factors be considered in combination (Horowitz and Strack 2010; Kiesler 1996). Two factors that may mitigate the effects of childhood abuse on interpersonal relationships in adulthood are two types of social resources: (1) social optimism, a personality and characterological trait, and (2) frequency of social contact with others, a social circumstantial factor.

To date, many studies have linked optimism with positive outcomes including emotional adjustment and physical health (Carver and Scheier 2001), psychosocial well-being (Carver et al. 2005), better psychological adjustment during a life transition (Brissette, Scheier, and Carver 2002), and lower posttraumatic symptom levels after trauma (Ahmad 2006). Optimism is seen as a personality trait. Research finds that optimists tend to be persistent in engagement and goal-striving, and cope through active problem-solving solutions and forward
planning. This is distinct from pessimists who are more likely to disengage from others, refuse making efforts, and cope emotionally through denial or hopeful thinking (Carver et al. 2005; Nes and Segerstrom 2006). Optimists also tend to use problem-solving skills when facing stress, along with adaptive forms of emotion-based coping (Aspinwall and Richter 1999). Optimism could influence well-being through these types of coping and response strategies when facing stress and duress (Nes and Segerstrom 2006).

However, optimism alone is not sufficient to foster resilience. Since, however, optimism is also associated with seeking social support in times of need (Brissette et al. 2002; Nes and Segerstrom 2006), it can influence positive interpersonal outcomes through such interpersonal strategies (Carver et al. 2005). Aspects of inner expectations and representations of the social world can guide one’s overt behavior and social contact with others. Thus, or reaching out to others may be another factor that can mediate the negative effects of trauma on adult relationships. Moreover, optimists tend to have social interactions that are more positive in nature, leading to added social support (Räikkönen et al. 1999; Vollmann et al. 2011), and less loneliness (Rius-Ottenheim et al. 2012; Srivastava et al. 2006).

But social contact can also influence social optimism. Some research has suggested that having social connections can influence individual self-perception and one’s place in the social world in positive ways, and even protect against feelings of hopelessness and negative psychological outcomes that result from traumatic events (Panzarella, Alloy, and Whitehouse 2006). Social contact have also been linked to decreased risk for PTSD among adult victims of child sexual abuse (Hyman, Gold, and Cott 2003). Perceptions of social support and ties have been found to protect against cardiovascular reactivity (Smith et al. 2004), and heightened blood pressure (Steptoe, Dockray, and Wardle 2009). In addition, strong social bonds have
been found to reduce health risk factors such as hypertension, smoking and obesity (Holt-Lunstad, Smith, and Layton 2010; House, Umberson, and Landis 1988). In a similar way, perceived social isolation has been linked to negative immune functions, and significantly higher rates of disease and mortality (Hawkley et al. 2010). Thus, lacking social support or inclusiveness, or feeling socially isolated may facilitate the development of issues that stem from early childhood trauma. Taken together, optimistic views can enhance social interactions, and feelings of having social connections and social support can engender strength to face fear and trauma. With enough positive social contact and support, experiences of hopelessness can be minimized and adaptive and acting coping responses can be fostered. Taken together, these can increase the likelihood of resilient outcomes among victims of abuse.

**Study Aims and Hypotheses**

While this body of work has contributed greatly to the research on childhood maltreatment, it is characterized by several limitations. First, although social optimism and social contact have been studied extensively, little is known how the two variables can protect against the negative effects of childhood abuse. Combining personality and social dimensions together may extend our understanding of psychosocial influences on interpersonal relationships and social health later in life, and perhaps offer insight into refined approaches to intervention methods for adult victims of trauma. From an interpersonal perspective, both of these factors are closely related. The general assumption of this perspective follows the definition of personality, defined as an enduring pattern of interpersonal and social situations of which comprise our human lives (Sullivan 1953). Hence, this perspective views optimism, an individual trait, as relating to patterns of social behaviors, such that optimists can be influenced by their social circumstances. The present studies applies the interpersonal
perspective to a resilience approach, which will consider both factors together as protective factors in the association between childhood abuse and adult interpersonal relationships.

Secondly, despite evidence indicating the distinctness of its constructs, research continues to evaluate maltreatment as one single construct that. This results in only partial insight into the associations between different forms of maltreatment and relational outcomes in adulthood. Second, studies that assess adult relationship outcomes focus largely on romantic and intimate relationships, using measures that gauge intimate partnership or marital satisfaction (Colman and Widom 2004; DiLillo, Lewis, and Loreto-Colgan 2007). Less is known about the impact of childhood abuse on platonic, non-intimate relationships.

Studies that have assessed non-romantic relationships use outcome variables that do not directly gauge interpersonal relationships, like social well-being. This measure does not measure interpersonal relationships since its intended purpose if to measure intrapersonal processes, not interpersonal (Keyes 1998). Other research related to adult relationships either employs measures of interpersonal conflict as criteria for psychological disorders, or measures of psychological disorders as criteria for interpersonal difficulties (Erickson, Sroufe, and Egeland 1985; Masten 1994). Neither approach investigates non-romantic, interpersonal relationships in adulthood as an outcome variable influenced by early trauma.

Finally, resilience-focused research that focuses on adult victims of childhood abuse is severely limited, with so little known about factors that can promote well-being in the face of traumatic pasts, especially within the social and interpersonal domains. While most work in resiliency distinguishes between social and personality factors (Smith et al. 2004), research a assessing interpersonal outcomes would benefit from integrating both sets of factors together,
since they often are interrelated and may even contribute to one another (Carver and Connor-Smith 2010; Chang 2001; Horowitz and Strack 2010; Pincus and Ansell 2003).

In consideration of the aforementioned work, I propose the following hypotheses:

- **H1**: Increases in social contact will be associated with better adult relationships over time.
- **H2**: Increases in social optimism will be associated with better adult relationships over time.
- **H3**: For abuse victims, social contact will have stronger positive effects on relationships.
- **H4**: For abuse victims, social optimism will have stronger positive effects on relationships.

**METHODS**

**Data and Sample**

The present study uses data from the National Survey of Midlife in the United States (MiDUS; Brim et al. 1999), a national probability sample of English-speaking adults in the U.S., between the ages of 25 and 74. These individuals were drawn from sample of telephone banks, with the initial data collection for Wave 1 [W1] taking place in 1995‒1996. Approximately ten years later (2005‒2006), Wave 2 [W2] took place, successfully contacting 61% of the original sample for participation in follow-up interviews. Another ten years later, Wave 3 [W3] data collection took place (2013‒2014), with a response rate of about 62%. The present study retains cases based on two stipulations: (1) respondents must have participated in all three, and (2) respondents must have also responded to the W1 childhood abuse questions, indicating that they were abused by a parent or parents. Accounting for these provisions yielded an effective sample size of 2,485 respondents. Analyses were conducted using both weighted and unweighted data, with results indicating similar outcomes. For more reliable standard errors, I report estimates from unweighted data (Winship and Radbill 1994).

**Study Variables**
Positive Interpersonal Relationships. My dependent variable is a three-item index ($\alpha = 0.58$) gauging positive relationships. Respondents were prompted with three statements (see Table 4.1) regarding close relationships with others, where (1 = strongly agree) and (7 = strongly disagree). Items were coded to indicate better relationships, and were them summed together.

Childhood Abuse. Physical and emotional abuse variables draw from the Conflict Tactics Scale (CTS) (Straus 1979), which ask about the frequency of emotional abuse, physical abuse, and severe physical abuse. Respondents were given a series of questionnaire items regarding multiple types of abuse experienced in their childhoods, and responded separately to these items about abuse from their mother, and then abuse by their father (see Table 4.1). The prompt asked, “During your childhood, how often did your [mother/father] do any of these things to you? Response categories for each of the abuse items included: (0 = never), (1 = rarely), (2 = sometimes), and (3 = often).

Final models were conducted using childhood abuse as a continuous measure gauging frequency of abuse: (0 = never), (1 = rarely), (2 = sometimes), and (3 = often), and also as type-specific, dichotomous measures, indicating (0 = never) and (1 = rarely, sometimes, often) for four distinct categories: (1) emotional abuse only, (2) physical abuse only, (3) emotional and physical abuse (cumulative abuse), and (4) no abuse, serving as the omitted category. Both operationalizations resulted in similar results. I decided to present final models using the dichotomized measures for several reasons. First, much of the abuse literature differentiates between experiences of abuse, and no experiences (e.g., Berenson and Andersen 2006; Pepin and Banyard 2006). Also, the items that comprise the severe physical abuse variable is skewed toward never (~80%), and finally, there are meaningful differences found between individuals
who report rare experiences of childhood abuse, and no experiences. Thus, the dichotomy best represents the theoretical perspective that even one experience of abuse is traumatic.

**Social Contact.** The first social resource measure is a three-item index (α = 0.45) gauging frequency of contact with other people. Respondents were prompted with three questions asking about their frequency of contact with neighbors, family, and friends (see Table 4.1). Possible response categories were reverse coded so that a higher number indicates increased frequency, where (0 = never or hardly ever), (1 = less than once a month), (2 = 1-3 times a month), (3 = about once a week), (4 = several times a week), and (5 = almost every day).

**Social Optimism.** Commonly used as a measure for “social well-being,” I use the five-dimension scale constructed by Keyes (1998) to assess “social optimism” as the second social resource. This scale takes the sum of five sub-scales that gauge (1) social coherence (α = 0.65), (2) social integration (α = 0.73), (3) social acceptance (α = 0.42), (4) social contribution (α = 0.67), and (5) social actualization (α = 0.67). Each dimension includes its own subset of questions that were prompted to respondents (see Table 4.1), with response categories that were summed together after being coded so that a higher number indicates higher levels.

**Covariates.** I include a series of time-variant covariates. The first is an index gauging physical impairment (α = .89), which takes the average of ten items used in two measures that assess basic and intermediate activities of daily living (ADL and IADL). Respondents were asked how much their health limited their ADL (bathing or dressing yourself, climbing one flight of stairs, and walking one block) and IADL (lifting or carrying groceries; climbing stairs; bending, kneeling, or stooping; walking more than a mile; walking several blocks; vigorous activities; and moderate activities). Possible scores for ranged from (1 = not at all) to (4 = a lot), which
were averaged together into one index, where a higher number indicates greater impairment. Financial strain is a two-item mean index (α = .75), ranging from 0–2, where a higher number indicates more hardship. Respondents were asked about having enough money, where (0 = more than enough money), (1 = just enough money), (2 = not enough money). Another question asks about difficulty paying bills, where (0 = not at all difficult), (1 = not very difficult), and (2 = very difficult). Employment status is a dummy, indicating (1 = employed) and (0 = unemployed), serving as the omitted category. Marital status is a categorical measure indicating: (1 = separated, divorced, or widowed), (2 = never married), and (3 = married), as the omitted group. Finally, age and education gauge actual years for each measure.

**Analytical Strategy**

The present study conducted all analyses using Stata SE, Version 15. Missing data were handled via multiple imputation (MI) for variables that are missing at random (MAR). Models using sequential chained regression were specifically tailored to the level of measurement of each variable (Hedeker and Gibbons 2006). A total of 50 imputations were generated using information from all analytical variables. A final sensitivity analyses was conducted, and it concluded that the imputed and non-imputed data produced substantively consistent results (Johnson and Young 2011; Young and Johnson 2013, 2015).

Panel models are used to examine the long-term impact of childhood on interpersonal relationships later in life, while considering the effects of social contact and social optimism as possible moderators in this association. Panel models can assess the effects of individual terms as either random or fixed. Deciding between fixed effects (FE) or random effects (RE) can be done using the Hausman test, which is designed to examine correlations between regressors in the model and can specify which approach is most appropriate to use. Results from the
Hausman test (see Appendix Table 4.1) indicated that FE models were appropriate. When using FE, it is assumed that something within the individual can impact the outcome, and thus must be controlled for. FE models control for all time-invariant differences between individuals, and so these models cannot be used to assess time-invariant causes of the dependent variable. Any change in the outcome variable cannot be attributed to time-constant individual characteristics, like race, sex, or religion.

FE is advantageous because it alleviates omitted-variable bias in a less-than-fully-specified model, even without an idea of what a fully specified model would look like (Johnson 2005). FE coefficients estimated here measure change in interpersonal relationships in adulthood that is associated with one unit increases in predictor variable. However, because FE only measures change in variables, and differences in rates of change for interactions with non-time varying measures, I also estimate RE models to assess results of effects measured cross-sectionally, and to estimate direct effects of abuse and other time-constant measures.

The results section below will proceed as follows. I first briefly discuss noteworthy findings from descriptive statistics shown in Table 4.2, then proceed to a quick overview of correlation coefficients outlined in Figure 4.1. Table 4.3 displays results from FE models. Since childhood abuse is time-invariant, it cannot be estimated directly in the models. Thus, Model 1 includes social contact and social optimism, while Model 2, the full model, adds all time-varying covariates. Since time-invariant measures are allowed in interaction terms, I include two sets that interact childhood abuse with both social measures. Model 3 interacts childhood abuse with social contact, while Model 4 interacts childhood abuse with social optimism. Finally, Appendix Table 4.2 displays results from RE models to test direct effects of childhood abuse on adult relationships, and examine effects using cross-sectional measures.
RESULTS

Descriptive Statistics

I begin first by briefly noting descriptive statistics reflected in Table 4.2. Results indicate that an approximate 27% of respondents reported having no abusive experiences in their childhood, while about half (50.14%) reported experiencing a combination of both emotional and physical abuse. About 10% reported physical abuse only, while about 14% reported emotional abuse only. Next, overall means of positive interpersonal relationships indicate moderate levels, with respondents averaging 13.78 out of nineteen. These levels seem to fluctuate over time, with an average of 13.46 at W1, a drop to 13.04 at W2, then an increase to 14.83 at W3. This indicates dips in relationship quality in early adulthood, with improvements occurring with age and over the life-course.

Levels of overall social contact are moderate, with respondents reporting contact with other people roughly once a week or several times a week (a mean of 3.81 out of five). Levels of social contact remain largely stable over time, across all three waves. When it comes to social optimism among respondents, levels appear moderate, with an average score of 13.20. Social optimism does seem to fluctuate over time, first by increasing between W1 and W2 (13.13 to 13.48), then by decreasing between W2 and W3 (13.48 to 12.99).

Physical impairment levels are moderate overall, averaging a 0.46 out of three. However, as expected, these levels increase across waves, as respondents continue to age. For financial hardship, respondents average a 0.81 from a scale ranging from zero to two, indicating moderate levels of strain. Average education across waves is approximately two to three years of college without a college degree. At W1, roughly 74% of respondents were married, 17% were separated, divorced, or widowed, and about 10% were never married. By
W3, married respondents decreased to 67%, and never married declined to about 7%. However, separated, divorced, or widowed jumped to 26%. Next, the average age of respondents longitudinally was about 56 years of age.

Figure 4.1 displays zero-order correlations between key analytical variables. Results indicate that both social measures are positively associated with better interpersonal relationships, using the stacked, longitudinal sample. Both social measures are also positively associated with one another. Next, physical abuse and no abuse share positive associations with interpersonal relationships, while emotional abuse and cumulative abuse share negative associations. Similar links are found between childhood abuse and social measures, where physical and no abuse are positively associated with social contact and social optimism, while emotional abuse and cumulative abuse are negatively associated with these measures.

**Multivariate Models**

Table 4.3 displays results from FE models predicting the effects of childhood abuse and social measures on adult interpersonal relationships over time, net of covariates. Model 1 includes social measures only. Results here indicate that increases in social contact and in social optimism are associated with better interpersonal relationships over time (b = 0.31, p ≤ .001; b = 0.17, p ≤ .001). These effects are robust and remain significant (b = 0.29, p ≤ .001; b = 0.18, p ≤ .001) even after the inclusion of time-varying covariates in the full model (Model 2), offering support for H1 and H2. Some noteworthy effects of controls from this model are as follows. First, when compared to married respondents, separated, divorced, or widowed have poorer relationships (b = -0.61, p ≤ .001). Finally, increases in age are associated with better relationships, meaning that relationships enhance as individuals get older (b = 0.08, p ≤ .001).
The final two models add interaction terms. Model 3 interacts childhood abuse and social contact, while Model 4 interacts childhood abuse and social optimism. Results from Model 3 indicate a significant interaction effect between cumulative abuse and social contact. The coefficient here is negative and significant, suggesting that when compared to all other groups, the effects of contact are weakest for victims of cumulative abuse ($b = 0.27, p \leq .05$). Figure 4.2 plots this interaction, demonstrating that for all groups, increases in social contact are associated with better interpersonal relationships. However, relative to groups who reported emotional abuse only, physical abuse only, or no abuse, the effects of social contact are much weaker for victims of combined abuse. Taken together, these results offer partial support for H3. All predictors in Model 3 remain unchanged from the full model.

Next, results from Model 4 indicate a statistically significant interaction between emotional abuse and social optimism. The coefficient here is positive and significant, suggesting that when compared to all other groups, the effects of social optimism are strongest for victims of emotional abuse ($b = 0.16, p \leq .05$), offering partial support for H4. Figure 4.2 plots this interaction between childhood abuse and social optimism, indicating that for all groups, increases in social optimism are associated with better relationships over time, but that its effects are more pronounced among victims of emotional abuse. All covariates remain unchanged in their associations and statistical significance. I limit results to these noteworthy points, and now move to a discussion of findings and concluding comments.

**DISCUSSION AND CONCLUSION**

Guided by an interpersonal perspective, this study used a resilience-focused approach to investigate how two psychosocial factors impact the relationship between multiple dimensions
of abuse and interpersonal relationships in adulthood. This work was guided by the following research questions: (1) do social contact and social optimism influence interpersonal relationships in adulthood, (2) do social contact and social optimism protect against the negative effects of childhood abuse on adult interpersonal relationships, and (3) are there distinct moderating effects of both psychosocial factors across different dimensions and categories of childhood abuse?

Many studies assessing adult outcomes related to interpersonal relationships are characterized by several limitations. First, they utilize data from cross-sectional or clinical samples and are unable to examine causal mechanisms or processes that link early childhood experiences and psychosocial events in adulthood to later interpersonal relationships. These types of limitations ultimately translate into policy limitations since they limit what we know about possible protective mechanisms that can protect adult victims of abuse from negative outcomes later in life. Such insights can be derived using longitudinal or panel data. The current study is among the first to employ panel data to examine the role of different types of childhood abuse on trajectories of adult interpersonal relationships over a span of twenty years. In other words, I examine if emotional abuse impacts adult interpersonal relationships differently than physical abuse, or from a combination of both types of abuse. In addition, this research examines the role of two psychosocial measures as possible protective factors in the relationship between childhood abuse and adult interpersonal relationships.

Moreover, work that has assessed optimism and of social contact has indicated their positive links to better emotional, physical, and interpersonal outcomes among victims of trauma, but rarely, if ever, have they been considered as complimentary factors, examined together in a resilience-focused approach to childhood abuse and adult relationships.
Based on the literature that has explored these links, I apply a resiliency framework guided by an interpersonal perspective to assess social optimism and social contact as possible protective factors that buffer against the negative effects of childhood abuse on adult interpersonal relationships later in life. Resilience-focused research that focuses on childhood abuse victims in their adult years is limited, with so little understood about the salience of protective factors in adult years of the life-stage. Moreover, most work makes strict distinctions between protective mechanisms that relate to personality and those that relate to interpersonal circumstances, and so, we know little about what it means to assess these factors not as separate entities, but as complimentary ones.

By using a resiliency-focused approach guided by the interpersonal perspective, I consider both personality and social resilience factors in my resilience-protective models, since they are interrelated elements and may contribute to one another (Carver et al. 2005; Norem and Chang 2002). I hypothesized that social contact and social optimism will be associated with better interpersonal relationships over time, and that they will both have protective effects which will ameliorate the negative effects of childhood abuse on interpersonal relationships later in life.

Regarding direct effects impacting changes in interpersonal relationships, results from fixed-effects models revealed that social contact and social optimism were both associated with better more positive interpersonal relationships, lending support to H1 and H2. This pattern of findings demonstrates the importance of considering various psychosocial factors when assessing adult interpersonal relationships among victims of trauma. Next, results from interaction models both offer support for H3 and H4. The first interaction result suggests that social contact does protect against the negative effects of abuse, whereby abuse victims
become comparable in their interpersonal relationships to non-victims. However, this is less the case for victims of cumulative abuse, whereby social contact seemed to have the weakest protective effects. Such a finding is consistent with work on the long-term consequences of cumulative experiences of abuse, which some previous work has conceptualized in their investigations (Greenfield and Marks 2009; Irving and Ferraro 2006).

Results from the final interaction model indicated that social optimism protected against the negative effects of abuse, making victims comparable to non-victims in interpersonal relationships. However, this effect was especially pronounced for victims of emotional abuse. In other words, the positive impact of social optimism was strongest for adult victims who reported experiences of emotional abuse. This finding is consistent with work that indicates emotional maltreatment as most strongly linked to increased difficulties with maintaining healthy relationships and social support networks (Beards et al. 2013; Briere and Runtz 1989; Carbone 2010; Drapeau and Perry 2004; van der Kolk 2005; Morimoto and Sharma 2004; Vranceanu et al. 2007). We might expect then that social optimism may be more beneficial for this group of victims, especially if they are searching for interpersonal happiness through emotional-focused coping, a more reflective and interpretive form of stress coping. On the whole, results here are consistent with the resiliency framework, and provide evidence for social contact and optimism and types of social resources that offer protection against the noxious influence of early trauma on later relationship outcomes. These are only some ways to try and explain the counterintuitive, but very interesting, results.

The study is characterized by several features which limit the full extent to which conclusions can be drawn. First, reports of childhood abuse experiences are retrospective and subject to inaccurate recollections. Childhood reports were obtained by asking adults to think
back in time and remember particular events involving maltreatment. Since childhood abuse items were asked only in the first wave, it is also impossible to check consistency in abuse reports. This leads to complications in the operationalization and measurement of childhood abuse measures since it is not clear whether these types of measures capture reality or are reconstructed memories formed over time. Even well-validated retrospective measures can be imperfect since recalling concrete events makes them less concrete and more value-laden.

Second, I used a type-specific categorization of childhood abuse, which gauges the presence and absence various categories of childhood abuse. This method captures the effects of relative abuse experiences on future health outcomes, in relation to the effects of other experiences. Ancillary analyses were conducted using a continuous specification of abuse, which gauged frequency (i.e. severity), an approach which captures processes by which increased frequency of abuse corresponds to declining health. Despite their distinct strengths, both operationalizations of childhood abuse are characterized by limitations, including failure to distinguish between maternal, paternal, and non-parental forms of abuse. Another limitation relates to racial/ethnic representation in the MiDUS—with less than 1% of respondents are Latino/Hispanic. Sufficient representation of minority groups in longitudinal data would be beneficial when investigating the long-term impact of childhood abuse on health-related outcomes. Finally, despite the inclusion of statistical controls, there are factors unaccounted for, such as genetic predispositions and other adversities, which if included, may have yielded a more complex and nuanced story than the one told here.

Despite these limitations, results from this study have provided strong empirical support indicating the importance of interventions designed for adult victims of childhood abuse. Most of the formal discourse addressing recovery has focused on young victims, with
less attention given to victims in adulthood. Findings here suggest that childhood abuse lasts a life time, and it is crucial that we give more attention to the recovery needs of adult victims that can better make resiliency possible at every life-stage.
Table 4.1. Description of Scale and Index Items

<table>
<thead>
<tr>
<th>Scale and Index Items</th>
<th>Items</th>
</tr>
</thead>
</table>
| **(1) Emotional Abuse (α = .61)** | a) “Insulted you, swore at you.”  
  b) “Sulked or refused to talk to you.”  
  c) “Stomped out of the room.”  
  d) “Said something to spite you.”  
  e) “Threatened to hit you.”  
  f) “Smashed or kicked something in anger.” |
| **(2) Physical/Severe Physical Abuse (α = .74)** | a) “Pushed, grabbed, and shoved you.”  
  b) “Slapped you.”  
  c) “Thrown something at you.”  
  d) “Kicked, bit, or hit you with a fist.”  
  e) “Hit or tried to hit you with something.”  
  f) “Beat you, choked, burned or scalded you.” |
| **(3) Positive Interpersonal Relationships (α = .58)** | a) “Maintaining close relationships has been difficult and frustrating for me.”  
  b) “People would describe me as a giving person, willing to share my time with others.”(R)  
  c) “I have not experienced many warm and trusting relationships with others.” |
| **(4) Social Contact (α = .45)** | a) “How often do you have any contact, something as simple as saying "hello", with any of your neighbors?”  
  b) “How often are you in contact with any members of your family, that is, any of your brothers, sisters, parents, or children who do not live with you, including visits, phone calls, letters, or e-mail?”  
  c) “How often are you in contact with any of your friends, including visits, phone calls, letters, or e-mail?” |
| **(5) Meaningfulness of Society (Social Coherence) (α = .65)** | a) “The world is too complex for me.”  
  b) “I cannot make sense of what’s going on in the world.” |
| **(6) Social Integration (α = .73)** | a) “I don’t feel I belong to anything I’d call a community.”  
  b) “I feel close to other people in my community.”  
  c) “My community is a source of comfort.” |
| **(7) Acceptance of Others (Social Acceptance) (α = .42)** | a) “People who do a favor expect nothing in return.”  
  b) “People do not care about other people’s problems.”  
  c) “I believe that people are kind.” |
| **(8) Social Contribution (α = .67)** | a) “I have something valuable to give to the world.”  
  b) “My daily activities do not create anything worthwhile for my community.”  
  c) “I have nothing important to contribute to society.” |
| **(9) Social Actualization (α = .64)** | a) “The world is becoming a better place for everyone.”  
  b) “Society has stopped making progress.”  
  c) “Society isn’t improving for people like me.” |
### Figure 4.1. Zero-Ordered Correlations between Abuse, Relationships, Social Contact, and Social Optimism (n = 2,485)

<table>
<thead>
<tr>
<th></th>
<th>Interpersonal Relationships</th>
<th>Social Contact</th>
<th>Social Optimism</th>
<th>Physical Abuse</th>
<th>Emotional Abuse</th>
<th>Both Abuse</th>
<th>No Abuse</th>
</tr>
</thead>
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<td>Interpersonal</td>
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<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Relationships</td>
<td></td>
<td>0.29***</td>
<td>0.41***</td>
<td>0.06***</td>
<td>-0.01***</td>
<td>-0.13***</td>
<td></td>
</tr>
<tr>
<td>Social Contact</td>
<td></td>
<td>0.02</td>
<td>0.26***</td>
<td>0.03***</td>
<td>-0.01***</td>
<td>-0.06***</td>
<td>0.10***</td>
</tr>
<tr>
<td>Social Optimism</td>
<td></td>
<td>0.00</td>
<td>1.00</td>
<td>0.00</td>
<td>-0.02***</td>
<td>-0.11***</td>
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</tr>
<tr>
<td>Physical Abuse</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
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<td>-0.32***</td>
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<tr>
<td>Emotional Abuse</td>
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<td></td>
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</tr>
<tr>
<td>Both Abuse</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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*p ≤ .001 ***; p ≤ .01**; p ≤ .05 *; p ≤ .10 †
Table 4.2. Imputed Descriptives of Analytical Variables – MiDUS I, II, III (n = 2,485)

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<th></th>
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<th></th>
<th></th>
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</thead>
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<tr>
<td></td>
<td>x̄  σ  range</td>
<td>%  x̄  σ  range</td>
<td>%  x̄  σ  range</td>
<td>%  x̄  σ  range</td>
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<tr>
<td>Physical Abuse</td>
<td>—        —        —</td>
<td>9.42 —  —</td>
<td>— 3.83 — 0.84 — 0-5</td>
<td>— 3.81 — 0.87 — 0-5</td>
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<tr>
<td>No Abuse (reference)</td>
<td>—        —        —</td>
<td>26.72 —  —</td>
<td>— 6.60 — 0.78 — 0-3</td>
<td>— 0.78 — 0.55 — 0-2</td>
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<td>0.26 — 0.45 — 0-3</td>
<td>0.45 — 0.61 — 0-3</td>
<td>0.68 — 0.78 — 0-3</td>
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<td>Financial Strain</td>
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<td>Employed (vs unemployed)</td>
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<td>68.05 —  —</td>
<td>55.29 —  —</td>
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<td>7.44 —  —</td>
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<tr>
<td>Married (reference)</td>
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<td>73.48 —  —</td>
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<tr>
<td>Age (in years)</td>
<td>55.67 — 13.43 — 20-93</td>
<td>46.70 — 11.27 — 20-74</td>
<td>55.60 — 11.22 — 30-84</td>
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Table 4.3. Fixed-Effects Models Estimating Positive Adult Relationships (n = 2,485)

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<td>Years of Education</td>
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<tr>
<td>Separated/Divorced/Widow</td>
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<td>-0.61***</td>
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<td>Age (in years)</td>
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<td>0.08***</td>
<td>0.08***</td>
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<tr>
<td>Emotional Abuse X Social Contact</td>
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<td>—</td>
<td>-0.16</td>
<td>—</td>
</tr>
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<tr>
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<td>-0.27*</td>
<td>—</td>
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<td>—</td>
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<tr>
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<td>—</td>
<td>—</td>
<td>-0.02</td>
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<td>Both Abuse X Social Optimism</td>
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<td>—</td>
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<td>6.32***</td>
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<td>F</td>
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p ≤ .001 ***; p ≤ .01 **; p ≤ .05 *; p ≤ .10 †
Figure 4.2. Interaction between Cumulative Abuse and Social Contact
**Figure 4.3.** Interaction between Emotional Abuse and Social Optimism
## Appendix Table 4.1. Hausman Specification Test

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th></th>
<th>(b – B)</th>
<th>√ (diag(V_b - V_B))</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(b) FE</td>
<td>(B) RE</td>
<td></td>
<td>S.E.</td>
</tr>
<tr>
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<td>0.89</td>
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</tr>
<tr>
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<td>-0.31</td>
<td>0.04</td>
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<td>Emotional x Contact</td>
<td>-0.12</td>
<td>-0.33</td>
<td>0.21</td>
<td>0.15</td>
</tr>
<tr>
<td>Physical x Contact</td>
<td>-0.02</td>
<td>0.01</td>
<td>-0.03</td>
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<td>-0.29</td>
<td>-0.33</td>
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<td>0.07</td>
<td>0.14</td>
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</tr>
<tr>
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<td>0.00</td>
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<tr>
<td>Both x Optimism</td>
<td>0.12</td>
<td>0.04</td>
<td>0.08</td>
<td>0.05</td>
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\[ \text{chi}^2 (8) = (b - B)' [(V_b - V_B) ^ (-1)] (b - B) \]

\[ \text{chi}^2 (8) = 363.20 \]

**Prob > chi^2 = 0.0000**
Appendix Table 4.2. Random-Effects Models Estimating Positive Relationships ($n = 2,485$)

<table>
<thead>
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<tr>
<td>Emotional Abuse (vs. No Abuse)</td>
<td>-0.52*</td>
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<td>-0.09</td>
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<td>-0.23</td>
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<tr>
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<td>—</td>
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<td>-0.63***</td>
<td>-0.01</td>
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<td>Social Contact</td>
<td>—</td>
<td>0.69***</td>
<td>0.68***</td>
<td>0.64***</td>
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<td>Social Optimism</td>
<td>—</td>
<td>0.43***</td>
<td>0.42***</td>
<td>0.40***</td>
<td>0.40***</td>
<td>0.33***</td>
</tr>
<tr>
<td>Physical Impairment</td>
<td>—</td>
<td>0.13†</td>
<td>-0.13†</td>
<td>-0.14*</td>
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<tr>
<td>Financial Strain</td>
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<td>0.01</td>
<td>-0.01</td>
<td>-0.01</td>
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<tr>
<td>Years of Education</td>
<td>—</td>
<td>0.01</td>
<td>-0.01</td>
<td>-0.01</td>
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<tr>
<td>Employed (vs. unemployed)</td>
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<td>-0.01</td>
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<tr>
<td>Separated/Divorced/Widow</td>
<td>—</td>
<td>-0.79***</td>
<td>-0.78***</td>
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<tr>
<td>Never Married</td>
<td>—</td>
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<td>-0.12***</td>
<td>-1.13***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (in years)</td>
<td>—</td>
<td>0.06***</td>
<td>0.06***</td>
<td>0.06***</td>
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<tr>
<td>Emotional Abuse X Social Contact</td>
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<td>Physical Abuse X Social Contact</td>
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</tr>
<tr>
<td>Constant</td>
<td>14.41***</td>
<td>5.54***</td>
<td>6.11***</td>
<td>3.73***</td>
<td>3.44***</td>
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$p \leq .001***; p \leq .01**; p \leq .05*; p \leq .10†$
CHAPTER 5

SUMMARY AND CONCLUSIONS

The overarching objective of this dissertation was to advance scholarship on the long-term, health implications of childhood abuse by investigating multiple types of parental abuse and their impact on three different forms of adult well-being: psychological, physical, and social. Drawing from multiple perspectives, namely life-course and resiliency, I aimed to examine factors that can be utilized in adulthood to combat early experiences of abuse and promote well-being later in life. I first examined the long-term effects of childhood abuse on adult psychological well-being, and the role of various adult coping styles as possible moderators in this association. I then examined the long-term effects of abuse on adult physical health outcomes, and considered two religious dimensions as potential moderators. Finally, I examined the effects of childhood abuse on adult interpersonal relationships, and assessed two social dimensions as potential moderators in this association. These relationships were tested using the National Survey of Midlife in the U.S. (MiDUS), a nationally representative panel study of American adults spanning a total of 20 years (1995-2015).

Several major findings emerged from my analyses. First, regarding coping strategies, moderating effects were found for emotion-focused and food-focused coping styles, not for problem-focused coping. Findings indicated that emotion-focused coping exacerbated the negative effects of childhood physical abuse on adult psychological well-being. While this coping strategy is associated with declines in well-being for all individuals, even non-victims, its negative effects on well-being were especially pronounced for victims of physical abuse. However, food-focused coping was found to protect against childhood physical abuse. While for all other individuals, food-focused coping was associated with poorer psychological well-
being over time, it substantially improved the well-being of physical abuse victims. Second, regarding religiosity in the relationship between childhood abuse and adult physical health, only private religiosity was found to moderate this relationship, while public religiosity did not. While public religiosity was associated with more positive physical health outcomes over time, it did not buffer against the effects of childhood abuse on later health. However, while private religiosity was negatively associated with health over time, this was not the case for everyone. For victims of physical abuse, in particular, private religiosity was associated with improved physical health outcomes over time. Lastly, regarding social contact and social optimism, my findings indicated that both factors were protective but in different ways, and for different groups. Increased social contact with family and friends was associated with better interpersonal relationships over the life-course, but its positive effects were weakest for victims who experienced cumulative abuse (both physical and emotional). Finally, social optimism was associated with better relationships in adulthood, but these positive effects were especially pronounced for victims of emotional abuse, who experienced further improvements in their relationships over time.

**Theoretical Implications**

By examining the long-term effects of childhood abuse on adult dimensions of health and well-being, this research resonates with the life-course perspective, which recognizes the linkages between early life experiences and later outcomes in adulthood. Its focus on continuity and change in individual trajectories accounts for various influencing factors, like history, social context, timing, and age. A primary insight of the life-course perspective is cumulative disadvantage, which highlights early adversity and its negative impact on future outcomes through chains of disadvantage that accumulate over time and further one’s disadvantage.
This dissertation work also considers moderating and protective factors in the relationship between childhood abuse and adult well-being. This approach resonates with resiliency theory, a framework focused on factors that offset the effects of stress exposure and promote positive outcomes in spite of these stressors. Taken together, these frameworks comprise a life-course model of resiliency, which recognizes the potential for resiliency to emerge across the life-span through ongoing processes of adaptation. Consistent with cumulative disadvantage, the life-course model of resiliency posits that early hardship results in increased stress and forces individuals to turn to external support systems and resources which initiate the protective processes that steer individuals towards positive adaptation.

In line with cumulative disadvantage, results from this dissertation offer evidence indicating that victims of cumulative abuse (the co-occurrence of emotional and physical experience) experience the worst outcomes over time when compared to all other groups, especially to non-victims. In Chapter 2, victims of cumulative abuse have worse psychological well-being over the life-span than any other group. Results from Chapter 3 indicate that when compared to other groups, victims of cumulative abuse have worse physical health outcomes over the life-course. Finally, in Chapter 4, not only do victims of cumulative abuse have worse interpersonal relationships than anyone else, they also benefit least from social resources.

Taken together, these findings suggest that the experience of multiple types of abuse is a more severe experience of trauma than experiencing no abuse or a single type of abuse. This notion is consistent with previous work indicating that experiencing multiple types of abuse is linked to increased severity of abuse (Clemmons et al. 2007) and is tied to greater symptoms of physical and mental distress (Arata et al. 2007). Thus, the added exposure to stress in
experiences of cumulative abuse might inhibit the protective mechanisms of resources and support, and lead to added stress, disadvantage, and ultimately poorer outcomes over time.

Lending support to resiliency theory, results from this dissertation indicate that certain factors promote positive outcomes and offset the negative effects of abuse. Food-focused coping in Chapter 2 was found to be protective against the effects of physical abuse on adult psychological well-being. Results from Chapter 3 revealed that private religiosity also protected against the effects of physical abuse, but for outcomes of adult physical health over time. Finally, Chapter 3 highlights results indicating that social optimism protects against the noxious effects of emotional abuse on adult interpersonal relationships later in life. Overall, the findings from this dissertation suggest that early childhood abuse negatively impacts well-being later in life, but more importantly, that the pathway to resiliency has no set beginning or end. Instead, resiliency is a process that can take place over the life-span, across all developmental stages, and initiated through resources available in adulthood.

Future Research

Over the last several decades, much progress has been made in research on childhood abuse. We have revised and expanded our theoretical perspectives, and have included a broader scope of health and behavioral outcomes tied to childhood abuse experiences. Recent work has turned to using longitudinal data with larger samples than ever before. But despite this progress, there are still limitations to this work, and even more unanswered questions.

First, much of the work on childhood abuse has been highly specialized, with many focusing exclusively on certain dimensions of abuse, or concentrating on specific contexts or environments. Others have ignored the multiple dimensions of maltreatment altogether. Moreover, when assessing the effects of abuse on health, many studies use samples that
include victims only (Banyard and Williams 2007; Jonzon and Lindblad 2006). However, failure to include non-victims as a reference group makes it impossible to understand whether factors promote positive outcomes in the face of adversity, or for everyone regardless of experience. Other work has used cross-sectional designs to assess resilience at one point in time, making results highly sensitive to the sampling time frame (Bennett et al. 2010). An optimal study design for researchers to consider in the future is one that draws from a large population sample of children and prospectively track them into their adult years. This would enable links to be drawn between maltreatment, health, and possible moderators that work for victims at every life-stage. A longitudinal design can offer greater information on changes over time, and the factors that influence outcomes across the life-course.

Programs aimed at the issue of childhood abuse continue to grow, expand, and improve. However, most are designed around intervention and prevention, leaving out many victims whose abuse was not prevented and whom remain impacted by that trauma. Despite what research tells us about the life-long effects of childhood abuse, there still is no foundation guiding our efforts to help victims of abuse in their adult years. Future work must continue using longitudinal research to assess various issues of importance. First, it would be useful to examine the compounding impacts of multiple morbidity over time, since this can possibly reduce or impede resilient outcomes. Also, researchers should consider following health trajectories that gauge changes in ailments associated with changes in resilience. This can offer valuable insight into the processes of resilience over time and the way it manifests at varying degrees of wellness and morbidity. Work should also aim at identifying periods of greater vulnerability over the life-course that would indicate increased need for resiliency support. This would help guide efforts at enhancing resilience for adult victims. In all, more substantial
efforts are needed to reach beyond what we know and address the many limitations in current research. New insights can help improve the quality of life for those who experienced trauma long ago. Long-term collaborative efforts can also improve the ways we understand and respond to childhood abuse, and to enhance the quality of policy decisions and social services that affect the welfare of childhood abuse victims, both past and present.
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ANDREA L. RUIZ
ALR349@PSU.EDU ※ 210-330-8787 ※ ANDREALIZARUIZ.COM

EDUCATION
2013 – 2018  PhD in Sociology – The Pennsylvania State University
2011 – 2013  M.S. in Sociology – University of Texas – San Antonio

PUBLICATIONS

PROFESSIONAL EXPERIENCE
2017 – 2018..........................Research Assistant – Sarah Font, PhD
The Pennsylvania State University – Department of Sociology
2015 – 2017..........................Research/Teaching Assistant – Gary Adler, PhD
The Pennsylvania State University – Department of Sociology
2014 – 2015..........................Research Assistant – David Johnson, PhD
The Pennsylvania State University – Department of Sociology
2013 – 2014..........................ARDA (Association of Religion Data Archives) – Roger Finke, PhD
The Pennsylvania State University – Department of Sociology
2013 – 2014..........................Research Assistant – Christopher G. Ellison, PhD
University of Texas – San Antonio – Department of Sociology
2011 – 2012..........................Research Assistant – Gabriel A. Acevedo, PhD
University of Texas – San Antonio – Department of Sociology