Childhood Maltreatment and Later-Life Intergenerational Solidarity

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CHILDHOOD MALTREATMENT AND LATER-LIFE INTERGENERATIONAL SOLIDARITY

A dissertation
by

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Submitted in partial fulfillment
of the requirements for a degree of
Doctor of Philosophy

AUGUST 2016

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Abstract

Every year, more than three million allegations of childhood maltreatment are received by child protective services, many of which involve cases of abuse or neglect inflicted by the victims' parents. A number of studies found that negative consequences of childhood maltreatment can last for a lifetime. Despite the long-term impact of childhood maltreatment, later-life relationships between adult victims of childhood maltreatment and their abusive parent have rarely been examined.

This dissertation aims to address the gap in the literature by examining how adult victims of childhood maltreatment relate to their abusive parent when the parent becomes old and requires long-term care assistance. This three-paper dissertation utilized existing data sources: Wisconsin Longitudinal Study and National Survey of Midlife Development in the United States. The first paper examined the mediating effect of intergenerational solidarity with the aging mother in the association between maternal childhood maltreatment and adult psychological functioning. The second paper used longitudinal data analysis to compare long-term changes in affectual solidarity with aging mothers between adults with a history of childhood abuse and those without. This paper also examined moderating effects of the correlates of childhood abuse (i.e., poor social

competency and lack of emotional regulation) in the association between childhood abuse and affectual solidarity with the aging mother. The third paper focused on the caregiving situation in which adult victims of childhood abuse provided care to their abusive parent. This paper investigated whether and how providing care to the abusive parent was associated with psychological distress among abused adult children, and whether self-esteem mediated the association.

By revealing the dynamics of later-life relationships between adult victims of childhood maltreatment and their abusive parent, this three-paper dissertation not only contributes to creating new knowledge to the aging literature, but also provides future direction for social work practice and policy.

DEDICATION

This dissertation is dedicated to my parents, Myung Tak Kong and Keonghwa Choi, who have devoted their entire lives to serve and care for the marginalized.

ACKNOWLEDGEMENTS

First, I would like to thank my dissertation committee. Dr. James Lubben, who is my advisor and dissertation committee co-chair, has offered me tremendous support throughout the doctoral program. Thanks to him, I had numerous opportunities to get involved in several groundbreaking projects, such as Grand Challenges and BC Talks Aging that broadened my perspective as a gerontologist.

I am also grateful of Dr. Sara Moorman who is the other dissertation committee co-chair. Her insight guided me deeply into my current research topic – adult victims of childhood abuse and their relationships with the abusive parent, which was the key achievement in my doctoral education. It was such a nourishing experience working with her. Her genuine mentorship has guided me immensely to make important decisions for this dissertation. Particularly, I learned greatly on how to make a research paper strong.

I would like to express my gratitude to Dr. Scott Easton who is my dissertation committee member. I am very appreciative of his warmth and encouragement throughout the past years. I feel fortunate to have been involved in many projects with him, which has provided me with years of immense research training, and opportunity to collaborate with scholars outside of Boston College. Thanks to him, I got connected to the Wisconsin Longitudinal Study with which I have developed my first publishable paper and this dissertation.

I would like to thank my cohort members – Haenim Lee, Leia Saltzman, and Melissa Harry. We have gone through so many important moments together throughout the past five years and I feel grateful of the companionship that we have developed and continued.

Lastly, I would like to thank my whole family in Korea and United States who held me to stand firm during the struggling times. I give my special thanks to my one and only 반쪽 (“banjeok”; translation, ‘the other half’), Seung Heon Rhee who pursues a *differential* world and my son, Nolan Yunho Rhee who is my everything.

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Chapter I: Dissertation Introduction

Introduction

The parent-child relationship is one of the most significant relationships based on strong affective bonds and reciprocal exchanges of social support throughout a lifetime. Vern Bengtson and his colleagues put forth a theory of intergenerational solidarity, focusing on cohesion and integration in family relations (Bengston, 1996; Robert, Richards, & Bengtson, 1991). Inquiries in the intergenerational solidarity theory have revolved around changes in solidarity patterns over time, factors to determine exchanges of support, or effects of intergenerational solidarity on individual well-being (Fingerman, Sechrist, & Birditt, 2013).

Much of the intergenerational solidarity research focuses on harmonious and positive aspects of family relations, but some are based on intergenerational ambivalence or conflict hypotheses that deal with negative aspects in intergenerational ties (Luescher & Pillemer, 1998). These studies showed that conflicts and ambivalent feelings may weaken other aspects of intergenerational solidarity, such as emotional connections or frequency of contacts, which could ultimately diminish individual well-being (Hogerbrugge & Komter, 2012). However, it should be noted that these conflicts and contradictory emotions are the ones that commonly occur in the parent-adult child relationships. What has been rarely examined is the parent-adult child relationships that involve serious conflicts originating from traumatic abuse history. In particular, later-life relationships between adult victims of childhood maltreatment and their abusive/neglectful parent have never been investigated in light of the intergenerational solidarity framework.

The federal Child Abuse Prevention and Treatment Act (CAPTA) defines child abuse and neglect as: "Any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act, which presents an imminent risk of serious harm" (CAPTA Reauthorization Act of 2010). In 2012, approximately nine out of every 1,000 U.S. children, estimated to be 686,000 children, experienced abuse or neglect from their primary caregivers who were, in most cases, the victims' parents (National Child Abuse and Neglect Data System, 2013). Despite the devastating experience of being maltreated, empirical and clinical evidence exists that some abused or neglected adult children maintain a relationship with their abusive/neglectful parent (Kong & Moorman, 2015; Span, 2014). A series of questions then arises: How does the dysfunctional relationship with the parent change over time? Does the experience of childhood maltreatment affect intergenerational solidarity with the abusive parent in old age? In what ways does providing care to the abusive/neglectful parent affect psychological well-being of adult children?

Despite the scarce research, this topic is a pressing issue. Due to an increasing older population and the lack of expansion of formal services, family support is becoming more important when it comes to the care of older parents (Feinberg, Reinhard, Houser, & Choula, 2011). Additionally, prolonged longevity has extended the time to share lives across generations (Gaalen & Dykstra, 2006). Under such circumstances, adults with a history of childhood maltreatment may take the role of supporting their aging parents, which can be particularly challenging because of the past history of abuse. Therefore, it is a salient social work agenda to understand the vulnerabilities of adults with a history of

childhood maltreatment in the relationship with their abusive parent and to properly respond to their specific concerns and challenges.

This three-paper dissertation aims to address key research questions relevant to adult victims of childhood maltreatment and their abusive parent. It examines how adult victims of childhood maltreatment relate to their abusive/neglectful parent when the parent becomes old and needs support and care from the adult child. Incorporating Bengston's intergenerational solidarity theory (Bengtson, 1996) and stress process model (Pearlin, 1989), data analyses focus on investigating the effects of childhood maltreatment on later-life intergenerational solidarity with the abusive parent and its impact on psychological well-being of the adult victims. Also, this dissertation examines the effects of providing care to the abusive parent on psychological distress of adult victims of childhood maltreatment.

Theoretical Framework and Literature Review

Research has established that childhood maltreatment has a long-term negative impact on the victims' lives (Briere & Jordan, 2009). Adults with a history of childhood maltreatment are likely to suffer from post-traumatic stress, cognitive disturbance, chronic interpersonal difficulties, and lack of emotional regulation (Briere & Jordan, 2009). According to a recent systematic review of 124 studies examining the long-term effects of childhood maltreatment, the childhood experience of physical, emotional abuse and/or neglect was associated with mental disorders, drug use, suicide attempts, and high-risk sexual behaviors in adulthood (Norman et al., 2012). Also, adult victims of childhood maltreatment are less likely to have satisfying and functional social relationships because of distrust of others, low self-esteem, and difficulty in forming

secure attachments to others (Cook et al., 2005). Repetti, Taylor, and Seeman (2002) suggests that childhood maltreatment impairs stress-responsive biological regulatory systems that govern emotional processes and social competences, which can be the root causes of physical, mental, and interpersonal problems in adulthood.

This dissertation posits that childhood maltreatment affects later-life relationships with the abusive parent in a similar way to how it interferes with other aspects of the adult victims' lives. The first two papers employ intergenerational solidarity theory (Bengtson, 1996) to examine later-life solidarity patterns between adults with a history of childhood maltreatment and their abusive parent. The third paper focuses on the caregiving experience of adults with a history of childhood maltreatment, where the stress process model (Pearlin, 1989) is used to formulate hypotheses.

Intergenerational Solidarity Theory

The late 1980s and the 1990s were thriving periods for the studies of intergenerational relations. The most salient contribution to the field was made by Vern Bengtson and his colleagues who formulated a theory of solidarity across generations (Bengtson, 1996; Hammarstrom, 2005). Intergenerational solidarity refers to cohesion or integration in intergenerational family relations (Bengtson, 1996; Hammarstrom, 2005). Its empirical concept is multi-dimensional encompassing six different aspects of intergenerational relationships.

Bengtson and colleagues originally conceptualized intergenerational solidarity as having three different dimensions: 1) affectual solidarity indicating emotional closeness or cohesiveness; 2) associational solidarity indicating types and frequencies of interactions; and, 3) consensual solidarity indicating agreement/similarity in values or

attitudes. Through continued research efforts, this concept of solidarity was evolved to add three more components: 1) functional solidarity indicating exchanges of social support; 2) normative solidarity indicating expectation regarding filial obligations; and, 3) structural solidarity indicating geographical proximity between parents and their offspring.

Along with the progress of refining the concept of intergenerational solidarity, advancement has been made in the field by several studies that examined the interconnectedness among multiple dimensions of the solidarity construct. Furthermore, many research efforts were made to explain whether and how intergenerational solidarity changes over time, what specific factors explain the quality and magnitude of solidarity, and how intergenerational solidarity impacts individual well-being (Bengtson, Giarrusso, Mabry, & Silverstein, 2002; Roberts, Richards, & Bengtson, 1991; Silverstein, Conroy, & Gans, 2012).

Intergenerational solidarity over a life course. This dissertation focuses on the life course component in the intergenerational solidarity theory and hypothesizes that there is a significant link between a history of childhood maltreatment and later-life intergenerational solidarity with the abusive parent. One of the key questions in the solidarity theory is related to how emotional bonds between parents and their children change over the life course, and thus a great deal of studies investigated long-term trajectories of intergenerational solidarity constructs. For example, Bengtson (1996) found remarkably stable patterns of affectual solidarity (emotional closeness) and consensual solidarity (similarities in orientations and outlooks) over time. In other words, there was no significant change in the average levels of the two constructs for about two

decades. Also, Rossi and Rossi (1990) examined life course trends of some intergenerational solidarity constructs. The authors compared the mean scores of normative solidarity between different age groups (e.g., 19-30, 41-50, and over 70 years old). Interestingly, perceived obligations to parents declined with age, so younger groups showed stronger obligations toward their parents. In examining the life course trajectory of affectual solidarity, parent-child emotional bonds significantly dropped in the child's adolescence, but rebounded in the child's 20s. The mean scores of the affectual solidarity steadily declined as the adult child approached middle to late adulthood.

Another set of studies focused on examining the link between past and current levels of intergenerational solidarity. Clarke, Preston, Raksin, and Bengtson (1999) mentioned that parents' unequal treatment and favoritism toward siblings could possibly have a negative impact on contemporary relationships with aging parents possibly because of some residual resentment from the past. Whitbeck and colleagues (1991) also found that parental rejection or hostility in childhood undermined contemporary emotional connections with aging parents.

Along this line, some studies examined how the past relationship quality affects the contemporary exchanges of social support between aging parents and their adult children. Previous intergenerational solidarity research often describes two main aspects of support exchanges: 1) *emotional support* based on strong affective ties, such as encouragement, guidance and companionship; and, 2) exchange of mutual *instrumental support*, such as financial support or practical aid including household help, transportation, and caregiving (Klaus, 2009; Schwarz, 2009). Whitbeck and his colleagues (1991) showed that parental rejection and harsh discipline in childhood

diminished the quality of parent-adult child relationships in later life, which in turn reduced the frequency of providing assistance to their aging parents. In addition, other studies found that adult children who experienced strong emotional bonds with their parents during childhood tend to exchange more frequent emotional support with their aging parents (Parrott & Bengtson, 1999; Schwarz, Trommsdorff, Albert, & Mayer, 2005).

Intergenerational solidarity and adult child's well-being. Previous studies showed that high levels of intergenerational solidarity have a positive impact on individual well-being (Merz, Consedine, Schulze, & Schuengel, 2009; Merz, Schuengel, & Schulze, 2009). Particularly, when providing care to aging parents, strong emotional ties can diminish caregiving burdens and psychological symptomatology (Crispi, Schiaffino, & Berman, 1997). Cicirelli (1993) also found that for adult children, strong filial attachment was associated with increased amount of assistance provided to aging parents, but decreased subjective caregiving burden. In a study examining caregivers of dementia patients, relationship closeness with parents was associated with better mental health and lower caregiver depression (Fauth et al., 2012).

Stress Process Model (SPM)

Stress Process Model (SPM) focuses on social aspects of stress and the process of how social stress impacts individual health and well-being (Pearlin, 2010; Pearlin, 1989; Pearlin, Menaghan, Lieberman, & Mullan, 1981). The key concepts in SPM include *stressors*, *mediators*, and *outcomes of stress* (Pearlin et al., 1990; Pearlin, 1989; Pearlin et al., 1981; Thoits, 1995). *Stressors* include negative life events (e.g. getting fired, divorce), chronic strains (e.g. disabling conditions, poverty), and daily hassles (e.g. traffic

jams, cooking). *Mediators* are coping strategies (e.g., emotion-focused coping), personal resources (e.g. self-concept), and social support that can buffer/attenuate the effect of stressors on stress outcomes. In short, SPM explains the effect of stressors on physiological or psychological stress outcomes mediated through or moderated by specific coping strategies or personal resources.

In the caregiving context, the examples of stressors include the objective and subjective indicators of caregiving demands or burdens. Objective indicators refer to care recipients' cognitive status, problematic behaviors (e.g. agitation, aggression), activities of daily living (ADL), or instrumental ADL dependencies. Subjective indicators include caregivers' feelings of overload, emotional closeness with care recipients, and subjective appraisal of caregiving demands (Mausbach et al., 2012; Pearlin et al., 1990; Whitlatch, Schur, Noelker, Ejaz, & Looman, 2001). Stress outcomes indicate the inhibition of individual well-being, physical and mental health, or social functioning (Pearlin et al., 1990; Pearlin, 1989). The examples of stress outcomes include disruptions in usual activities, incidences of injuries, disorders in the digestive and cardiovascular systems, and mental health problems such as depression and anxiety (Pearlin et al., 1990; Pearlin, 1989).

In terms of the stress process of providing care to the abusive parent, only tenuous evidence exists. Kong and Moorman (2015) is the first empirical study that examined the caregiving experience among adults with a history of childhood maltreatment. The authors found that when providing care to their abusive/neglectful parent, filial caregivers with a history of childhood maltreatment exhibited more frequent depressive symptoms compared to non-maltreated caregivers. This study also found a significant moderating

effect of emotion-focused coping in the association between providing care to the abusive parent and depressed symptoms. The use of emotion-focused coping (i.e., denial and disengagement) was harmful to both maltreated and non-maltreated caregivers, but the negative effect was stronger for the maltreated caregivers.

Overview of the Three Papers: Aims, Hypotheses, and Data Sets

Paper 1

Paper 1 aims to examine the association between a history of childhood maltreatment, intergenerational solidarity with the aging mother, and adult psychological functioning. It is hypothesized that the childhood experience of being abused or neglected affects later-life intergenerational solidarity with the abusive parent, which can ultimately lead to negative psychological consequences among adults with a history of childhood maltreatment. Specifically, this paper seeks to test the following hypotheses:

Hypothesis 1. Recollection of maternal childhood maltreatment will be associated with psychological well-being and depressive symptoms of adult children.

Hypothesis 2. Intergenerational solidarity with the aging mother will mediate the association between maternal childhood maltreatment and psychological well-being/depressive symptoms of adult children.

Data set. The Wisconsin Longitudinal Study (WLS) is a longitudinal study of Wisconsin high school graduates in 1957 that have been followed for more than 50 years. The WLS started surveying all high school seniors in the public, private, and parochial schools of Wisconsin in 1957 mainly to assess educational plans of the seniors. In 1964 and 1975, a randomly selected one-third sample of the graduates, consisting of 10,317 cases, and their parents were surveyed via mail and telephone interviews to obtain a full

record of social background, youth aspirations, labor market experiences, and social participation (Hauser, 2009). Survey data were further collected from the graduates in 1993-1994 (Wave 1), 2004-2005 (Wave 2), and 2010-2011 (Wave 3), which provide extensive information of respondents' lives from their late adolescence through the early/mid-70s.

The retention rates have been high among the surviving graduates. In Wave 1, 87% of surviving graduates (n = 8,493) responded to the telephone survey and 81% of the telephone sample (n = 6,876) completed the mail survey. In Wave 2, almost 85% of living graduates participated in the telephone survey (n = 7,245) and 88% of these participants (n = 6,845) completed the mail-in follow-up questionnaire. In Wave 3, 73% of living graduates completed the telephone survey (n = 5,928) and 91% of the telephone sample returned the mail survey (n = 5,391). The majority of the WLS sample consists of non-Hispanic White who completed at least a high school education. Therefore, the findings of the study may not be representative of ethnic and racial minorities including African American, Hispanic, or Asian population and those with less than a high school education.

Paper 2

The aim of *Paper 2* is to investigate how the childhood experience of being abused is manifested in the relationship with the abusive parent who becomes old and in need of long-term care assistance. The longitudinal data analysis consists of two distinct parts. The first step is to compare long-term changes in the level of intergenerational solidarity with aging mothers between adults with a history of childhood abuse and those without. The next step is to investigate the moderating effects of emotional dysregulation

and poor social competence in the association between a history of childhood abuse and intergenerational solidarity with the aging mother. The potential moderators are the key correlates of childhood abuse. Data analysis focuses on examining whether and how the correlates of childhood abuse may intervene in the relationship with the aging mother. The specific research questions are as follows:

Research Question 1. What are the age trajectories of affectual solidarity with mothers for adults with a history of childhood abuse and those without?

Research Question 2. Do emotional dysregulation and poor social competence moderate the association between a history of childhood abuse and affectual solidarity with the aging mother?

Data set. Paper 2 utilizes multiple waves of the WLS, including Wave 1, Wave 2, and Wave 3.

Paper 3

Paper 3 focuses on adult victims of childhood abuse who provide care to their abusive parent. This paper aims to examine: 1) the effect of providing care to the abusive parent on psychological distress; and, 2) whether self-esteem mediates the association between caregiving for the abusive parent and psychological distress. In order to differentiate between the effect of caring for the abusive parent and the effect of having experienced parental abuse but caring for a parent who was not abusive, the final child abuse variable has three mutually exclusive categories: (a) no history of child abuse; (b) verbally and/or physically abused by a parent and caring for that abusive parent; and, (c) verbally and/or physically abused by a parent but caring for a non-abusive parent. In the

case that the caregiver reported providing care to both the abusive parent and non-abusive parent, the case will be coded as (b) caring for the abusive parent.

Hypothesis 1. Caring for the abusive parent will be associated with greater depressed affect.

Hypothesis 2. Self-esteem will mediate the association between caring for the abusive parent and greater depressed affect.

Data set. The National Survey of Midlife Development in the United States (MIDUS) is a nationally representative longitudinal study of 7,108 individuals in the U.S. MIDUS I was first conducted in 1995-1996 investigating family relationships, health status, lifestyles, work attitudes, and well-being of the national sample aged 25 to 74. Among 7,108 individuals who responded to the telephone interview, about 89% (n = 6,325) completed the self-administered questionnaire. A follow-up survey, MIDUS II, conducted in 2004-2006, examined the age-related changes in social, psychological, behavioral, and health statuses among respondents. In the MIDUS II, 75% of the surviving original respondents (n = 4,963) participated in a telephone interview and 81% of these respondents (n = 4,041) responded to a self-administered questionnaire (Ryff et al., 2012).

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Chapter II: Paper I. History of Maternal Childhood Maltreatment and Later-life Solidarity with the Abusive Mother

Abstract

Studies based on the life course perspective have identified several mechanisms by which childhood maltreatment has a long-term negative impact on the adult victim's psychological functioning. However, little is known about whether and how later-life solidarity with the abusive parent plays a role as a potential mechanism. Thus, this study aims to address this gap in the literature by examining the mediating effect of later-life intergenerational solidarity with the abusive parent in the association between maternal childhood maltreatment and psychological well-being/depressive symptoms.

Using the 2004-2005 data from the Wisconsin Longitudinal Study, this study employed a structural equation modeling approach to analyze a total of 1,371 adults aged 65 years old. Results showed that maternal childhood maltreatment was associated with lower associational, affectual, and consensual solidarities with the aging mother. In addition, a mediation analysis showed that affectual solidarity with the aging mother significantly mediated the association between a history of maternal childhood maltreatment and psychological well-being of adult children.

The findings of this study suggest that practitioners may support adults with a history of childhood maltreatment by untangling unresolved issues with their abusive parent. Policy support should be in place to address the concerns of adults with a history of childhood maltreatment through systematic and societal efforts.

Introduction

Mother-child relationship quality carries a special importance to child development leading to a long-term impact on several aspects of the child's life (Vaughn, Bost, & Ijzendoorn, 2008). Empirical evidence exists that strong interdependence and emotional connections with the mother play a critical role in the development of child's social or psychological well-being (Onayli & Erdur-Baker, 2013). Unfortunately, many children experience abusive and neglectful treatment from their mothers. In 2012, the rate of childhood maltreatment was 9.2 victims per 1,000 children (National Child Abuse and Neglect Data System, 2013). The negative consequences of mothers not being a safe haven for a child are so immense that the victim may experience problems related to physical, psychological, and/or social functioning across their life course (Briere & Jordan, 2009; Repetti, Taylor, & Seeman, 2002). Particularly, studies have consistently shown that parental childhood maltreatment can result in mental health problems in adulthood, such as depression, anxiety, post-traumatic stress disorder, or other psychiatric disorders (Green et al., 2010; Sugaya et al., 2012).

Several arguments have been made about the mechanisms by which the effects of childhood maltreatment are sustained over time, such as emotional dysregulation, poor social competence, and interrupted interpersonal relationships (Briere & Jordan, 2009; Repetti et al., 2002). Yet, researchers have not considered the continuing quality of mother-adult child relationships as a possible mechanism, although the mother-child relationship is one of the most significant social ties that continues throughout the life course (Bengtson & Roberts, 1991). Savla and colleagues (2013) found that parental childhood abuse diminished emotional closeness with family (excluding the spouse or

partner) when the victims reached mid- or late-adulthood, but this study did not explicitly focus on mother-adult child dyads.

Therefore, this study aims to examine the mediating effect of later-life relationships with the aging mother in the association between maternal childhood maltreatment and adult psychological functioning by analyzing a sample of 1,371 adults who participated in the 2004-2005 data set of the Wisconsin Longitudinal Study. Intergenerational solidarity theory served as a theoretical framework to address mediating relationships among the key constructs. By uncovering the sustained effects of dysfunctional parent-child relationships, this study not only supports the importance of addressing a traumatic relationship with the abusive parent, but also highlights the importance of providing social work interventions for later-life families facing this particular problem.

Literature Review

Intergenerational Solidarity Theory

In the late 1980s and early 1990s, there was an expansion of research regarding parent-adult child relationships (Mancini & Blieszner, 1989; Bengtson, Rosenthal, & Burton, 1990; Bengtson & Roberts, 1991). In the midst of these empirical efforts, Bengtson and colleagues put forth a theory of intergenerational solidarity to explain the patterns of integration between parents and adult children in later life (Bengtson & Roberts, 1991; Roberts, Richards, & Bengtson, 1991). *Intergenerational solidarity* can be defined as a "social cohesion between generations" (Bengtson & Oyama, 2007, p. 2). The concept is a "higher order concept that encompasses the multiple, complex, and sometimes contradictory ways that parents and children are socially connected to each

other" (Lawton, Silverstein, & Bengtson, 1994, p. 59). It consists of six distinct elements including associational, structural, affectual, consensual, functional, and normative solidarities (Bengtson, 1996; Bengtson & Roberts, 1991; Roberts, Richards, & Bengtson, 1991). *Associational solidarity* refers to the frequency of contact or interaction between generations. *Structural solidarity* refers to the social systems that enable or hinder family interaction, as reflected in geographic proximity, morbidity, and mortality among family members. *Affectual solidarity* refers to sentiments or subjective evaluations about the relationship with other family members. *Consensual solidarity* refers to the degree of agreement on values, attitudes, and beliefs among family members. *Functional solidarity* refers to the extent of exchanging social support among family members. *Normative solidarity* refers to expectations about familial roles or strength of commitment to filial obligations.

Solidarity theory has often been used to examine normal intergenerational relationships (Bengtson, 1996). However, I speculate that the tenets of the theory can also be used to understand later-life relationships between adult victims of childhood maltreatment and their abusive parent. The multiple dimensions of solidarity with the abusive parent may mediate the association between childhood maltreatment and psychological functioning in adulthood.

Long-term Sequelae of Childhood Maltreatment

Herrenkohl and colleagues (2012) found that a history of childhood maltreatment can undermine psychological well-being in adulthood. In addition, adults with a history of childhood maltreatment are more likely to report the issues of major depression, anxiety disorder, and substance abuse (Cohen, Brown, & Smailes, 2001; Green et al.,

2010). Other studies also showed that childhood maltreatment is linked with psychiatric disorders (e.g., post-traumatic stress disorder) and/or suicidal behavior in adulthood (Schneider, Baumrind, & Kimerling, 2007; Sugaya et al., 2012; Thompson, Kaslow, Lane, & Kingree, 2000).

One of the key mechanisms of the long-term negative effects of childhood maltreatment is related to the fact that adult victims of childhood maltreatment tend to have difficulties in forming and sustaining social relationships (Muller, Thornback, & Bedi, 2012; Sperry & Widom, 2013). Childhood maltreatment may inhibit development of emotional regulation and social competence, resulting in negative schemas about self and others and lack of complex social skills (Hart et al., 1998; Brody & Flor, 1998; Repetti et al., 2002). These resultant effects are known to interfere with building and maintaining positive social interactions and interpersonal relationships, which could eventually harm psychological functioning of adult victims of childhood maltreatment (Muller, Thornback, & Bedi, 2012; Sperry & Widom, 2013).

However, among interpersonal relationships, little empirical evidence exists in terms of whether and how later-life relationships with the abusive parent affect psychological functioning of adult victims of childhood maltreatment. Anecdotally, many such adults remain bound in the relationship with their abusive parent (Span, 2014). They may carry out filial roles through frequent contacts and exchanges of social support with the aging abusive parents, which could be particularly stressful because of the past experience of abuse or neglect (Kong & Moorman, in press).

Childhood Maltreatment and Later-life Intergenerational Solidarity

Some studies of later-life intergenerational solidarity may provide suggestive evidence as they examined how the earlier experience of negative, though not abusive, relationships with parents affects the level of solidarity with aging parents. Clarke and colleagues (1999) explored the principal themes of intergenerational conflict and concluded that childhood experience of parents' favoritism among siblings can bring about tensions and conflicts in the relationship with aging parents possibly because of residual resentment. This result suggests that the negativity experienced in parent-child relationships can last over time, undermining contemporary solidarity with aging parents.

Along these lines, another study examining adult children in midlife (29-68 years old) found that the retrospective reports of parental rejection or hostility during childhood weakened contemporary affectual solidarity with aging parents, which in turn reduced the provision of instrumental support to parents and increased relational conflict (Whitbeck, Simons, & Conger, 1991; Whitbeck, Hoyt, & Huck, 1994). In a study examining the exchanges of support between parents and their adult children over 27 years, parents who spent less time in activities with their child in childhood (e.g., having conversations, having dinner together) received less support from the adult child (Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002). These findings of negative relationships may imply that maternal childhood maltreatment can diminish the level of solidarity with the aging abusive mother.

Later-life Intergenerational Solidarity and Psychological Functioning of Adult Children

Research has clearly established that intergenerational solidarity has a significant impact on individual well-being throughout the life course (Bengtson, Giarrusso, Mabry, & Silverstein, 2002; Roberts et al., 1991; Silverstein, Conroy, & Gans, 2012). As high-quality social relationships predict better mental health, strong intergenerational solidarity is known to enhance individual well-being (Teo, Choi, & Valenstein, 2013). Several studies showed that greater affectual solidarity was linked with better individual well-being for both parents and adult children (Fingerman, Sechrist, & Birditt, 2012; Merz, Schuengel, & Schulze, 2009; Merz, Consedine, Schulze, & Schuengel, 2009). Another study conducted by Umberson (1992) showed that having frequent contact and receiving social support from the mother reduced depressive symptoms among adult children, but relationship strain with the mother or father increased depressive symptoms. Similarly, conflicts between parents and adult children were associated with reduced life satisfaction among adult children (Llacer, Zunzunegui, Gutierrez-Cuadra, Beland, & Zarit, 2002).

The review of literature and theoretical considerations suggest that childhood maltreatment may lead to lower levels of solidarity with the abusive parent, which could undermine psychological functioning of maltreated adult children. Thus, this present study evaluated the following hypotheses:

Hypothesis 1. Recollection of maternal childhood maltreatment will be associated with psychological well-being and depressive symptoms of adult children.

Hypothesis 2. Intergenerational solidarity with the aging mother will mediate the association between maternal childhood maltreatment and psychological well-being/depressive symptoms of adult children.

Methods

Sample

The Wisconsin Longitudinal Study (WLS) is a longitudinal study of 10,317 Wisconsin adolescents who graduated from high school in 1957. Survey data were collected from the graduates in 1957, 1975, 1993-1994, 2004-2005, and 2010-2011, which provides extensive information about the graduates from their late adolescence through their early 70s.

The present study used the 2004-2005 data set when most graduates turned 65 years old as this study focuses on examining later-life intergenerational relationships. In addition, the 2004-2005 data set allowed securing sufficient sample size because most graduates had living mothers at that time. The final study sample included 1,371 graduates who reported having living mothers; only graduates with living parents responded to a series of items related to intergenerational solidarity. More than half of the sample was female (54.8%, n = 751), and about 80% were married or had a partner (80.15%, n = 1,098). On average, the respondents had completed 13.7 years of formal education (*SD* = 2.3), and 85.7% had very good or excellent health status.

Measures

Psychological well-being. Psychological well-being was measured by the Ryff Scale of Psychological Well-being (Ryff & Keyes, 1995). A total of 31 items were used to measure its six different dimensions; each item uses a six-point Likert scale (1 =

strongly disagree; 6 = strongly agree). A measurement model was constructed based on a six-factor structure that involves autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. First, autonomy indicates "a sense of self-determination" (Ryff & Keyes, 1995, p. 720), and was measured by five items including an item, such as: "I have confidence in my opinions even if they are contrary to the general consensus." Environmental mastery indicates "the capacity to manage effectively one's life and surrounding world" (Ryff & Keyes, 1995, p. 720), and was measured by five items (e.g., "In general, I feel I am in charge of the situation in which I live."). Personal growth indicates "a sense of continued growth and development as a person" (Ryff & Keyes, 1995, p. 720), and was measured by five items (e.g., "I have the sense that I have developed a lot as a person over time."). Positive relations with others indicate "the possession of quality relations with others" (Ryff & Keyes, 1995, p. 720), and was measured by five items (e.g., "people would describe me as a giving person, willing to share my time with other."). Purpose in life indicates "the belief that one's life is purposeful and meaningful" (Ryff & Keyes, 1995, p. 720), and was measured by six items (e.g., "I am an active person in carrying out the plans I set for myself."). Lastly, self-acceptance indicates "positive evaluations of oneself and one's past life" (Ryff & Keyes, 1995, p. 720), and was measured by five items (e.g., "In general, I feel confident and positive about myself."). The corresponding items of the six factors were averaged and the mean scores of each factor were used in the measurement model.

Depressive symptoms. Depressive symptoms were measured by the 20-item Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). Each item

used an eight-point scale (0 ~ 7) to mark the number of days in the past week a respondent had experienced a specific symptom. Suggested by previous studies (Kim, DeCoster, Huang, & Chiriboga, 2011; Radloff, 1977), a measurement model was constructed based on a four-factor structure: negative affect, positive affect, somatic symptoms, and interpersonal relations. First, negative affect was measured by eight items including, for example: "On how many days in the past week did you feel you could not shake off the blues even with help from your family and friends?" Positive affect was measured by four items (e.g., "On how many days in the past week did you feel happy?"). Somatic symptoms were measured by six items asking a cluster of physical symptoms (e.g., "On how many days in the past week did you have trouble keeping your mind on what you were doing?"). Interpersonal relationship was measured by two items asking negative emotions experienced in interpersonal relationships (e.g., "On how many days in the past week did you feel that people were unfriendly?"). The corresponding items of the four factors were averaged and the mean scores of each factor were used in the measurement model.

Maternal childhood maltreatment. Maternal childhood maltreatment consisted of three dimensions: neglect, mother's verbal abuse, and mother's physical abuse. The items were drawn from the Childhood Trauma Questionnaire (Bernstein et al., 1994) and the Conflict Tactics Scale (Straus, Gelles, & Steinmetz, 1980). Childhood neglect was measured by an item: "Up until you were 18, how often did you know that there was someone to take care of you and protect you?" The childhood neglect item had five response choices (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = very often), which was reverse-coded in the measurement model. To deal with skewness of the variable, the

three categories of "sometimes," "often," and "very often" were combined. Childhood verbal abuse was measured by an item: "Up until you were 18, to what extent did your mother insult or swear at you?" Childhood physical abuse was measured by an item: "Up until you were 18, to what extent did your mother treat you in a way that you would now consider physical abuse?" These items had four response choices (1 = not at all, 2 = a little, 3 = some, 4 = a lot). To deal with skewness of the two items, three categories of "a little," "some," and "a lot" were combined.

Intergenerational solidarity. Each of five intergenerational solidarity constructs was assessed by single-item indicators of associational solidarity, structural solidarity, affectual solidarity, consensual solidarity, and functional solidarity. Normative solidarity, the sixth intergenerational solidarity construct, was not available in the WLS.

Associational solidarity was measured by an item: "How frequently do you have contact with your mother?" It was a scale variable ranging from 0 to 950 times per year. The item was recoded to have four response choices to deal with skewness: 1) less than once a week, 2) once a week, 3) more than once a week, and 4) every day or more.

Structural solidarity was measured by an item: "How many miles do you live from your mother's place of residence?" This item was a scale variable ranging from 0 to 9,000 miles. As guided by previous studies (e.g., Campton & Pollak, 2009), this item was recoded to have four response choices to deal with skewness. After the recoding, the variable was reverse coded so that greater values indicate higher proximity: 1) 780 miles or more, 2) 30 miles – 780 miles (12 hour drive), 3) less than 30 miles (1 hour drive), and 4) living with the parent.

Affectual solidarity was measured by an item: “How close are you to your mother?” Respondents rated the item using a four-point Likert scale (1 = not at all close, 2 = not very close, 3 = somewhat close, 4 = very close). Consensual solidarity was measured by an item, “How similar of an outlook on life do you and your mother have?” Respondents rate the item using a four-point Likert scale (1 = not at all similar, 2 = not very similar, 3 = somewhat similar, 4 = very similar). The affectual and consensual solidarity items were only asked of a randomly selected 50% of those with living parents.

Functional solidarity was assessed by four different dimensions: instrumental support giving, instrumental support receiving, emotional support giving, and emotional support receiving. First, instrumental support giving was measured by aggregating the two items: “During the past month, did you give help to your parents with (a) transportation, errands or shopping?; (b) housework, yard work, repairs or other work around the house?” Second, instrumental support receiving was measured by aggregating the two items: “During the past month, did you receive help from your parents with (a) transportation, errands or shopping?; (b) housework, yard work, repairs or other work around the house?” Third, emotional support giving was measured by an item: “During the past month, did you give advice, encouragement, moral or emotional support to your parents?” Lastly, emotional support receiving was measured by an item: “During the past month, did you receive advice, encouragement, moral or emotional support from your parents?” Each item was coded as a binary variable (1 = yes; 0 = no), and the items were summed such that functional solidarity ranged from 0 to 6.

Sociodemographic characteristics. I controlled for sociodemographic characteristics, including gender, educational attainment, and marital status. Gender and

marital status were entered as dummy-coded variables with males and non-married serving as the reference categories. Years of educational attainment were entered as a continuous variable.

Analytic Strategy

A structural equation modeling approach was used to test the hypothesized model that maternal childhood maltreatment is negatively associated with five dimensions of intergenerational solidarity with the aging mother, which will be associated with lower psychological well-being and greater depressive symptoms among adult children (Figure 1). Analyses were performed in LISREL 8.8. The model was estimated using an asymptotic covariance matrix of polychoric correlations because of the presence of categorical variables. The model fit was evaluated based on the following criteria of the goodness-of-fit indices: (a) comparative fit index (CFI) $\geq .95$, (b) root mean square error of approximation (RMSEA) $< .08$, and (c) standardized root mean square residual (SRMR) $\leq .08$ (Hu & Bentler, 1999; Vanderberg & Lane 2000). Except the two items with data missing completely at random (i.e., affectual and consensual solidarities), complete data were provided by 85.3% (n = 1,169). Listwise deletion was used to handle missing data. The initial model was respecified to include several error covariances based on modification indices greater than 40. Ultimately, the respecification was determined by conceptual considerations as well as these empirical statistics.

A robustness check was performed by excluding 138 cases who reported having living fathers to rule out potential effects of having a living father in the relationship with the abusive mother. The results were substantively similar. The summary of the findings is presented in Appendix Table 3 and Figure 3.

Results

Table 1 presents descriptive statistics of the study samples. Approximately 13% of the respondents (n = 176) reported "never," "rarely," and "sometimes," for the neglect item, which corresponds to being neglected during childhood. In addition, 17.3% (n = 226) reported "a little," "some," and "a lot" for mother's verbal abuse, and 9% (n = 118) for mother's physical abuse. On average, the respondents contacted their mother "once a week" (*associational solidarity*; M: 2.31, *SD*: 1.03), and they lived "30-780 miles" away from mother's residence (*structural solidarity*; M: 2.34, *SD*: 0.81). The respondents reported being "somewhat" emotionally close to their mother (*affectual solidarity*; M: 3.51, *SD*: 0.68) and having "somewhat" similar values or attitudes (*consensual solidarity*; M: 3.03, *SD*: 0.74). Lastly, the respondents provided or received slightly more than one type of social support, out of six possibilities, with their mother (*functional solidarity*; M: 1.23, *SD*: 1.24).

Structural Equation Model

Table 2 summarizes unstandardized and standardized coefficients and goodness-of-fit statistics predicting respondents' psychological well-being and depressive symptoms respectively. Figure 2 shows standardized path coefficients and their significance levels.

In accordance with what was hypothesized, maternal childhood maltreatment undermined later-life solidarity with the aging mother. Specifically, associational, affectual, and consensual solidarities were significantly affected. One standard deviation (*SD*) increase in maternal childhood maltreatment corresponded to a 0.13 *SD* decrease in associational solidarity ($p < .05$), 0.50 *SD* decrease in affectual solidarity ($p < .001$), and

0.60 *SD* decrease in consensual solidarity with the aging mother ($p < .001$). In turn, affectual solidarity was positively associated with psychological well-being of adult children. When affectual solidarity increased by 1 *SD*, adult children's psychological well-being increased by 0.18 *SD* ($p < .001$). A mediation analysis showed that affectual solidarity with the aging mother significantly mediated the association between maternal childhood maltreatment and psychological well-being of adult children ($b = -.08$, $p < .05$) although the direct path between childhood maltreatment and psychological well-being was not statistically significant. This result indicates that maternal childhood abuse may impair the affective bonding with the aging mother, which may lead to diminished psychological well-being of adults with a history of childhood abuse.

Furthermore, the direct path between maternal childhood maltreatment and depressive symptoms was statistically significant ($\beta = .34$, $p < .01$). However, none of the paths between solidarity dimensions and depressive symptoms were statistically significant.

Discussion

The primary purpose of this study was to examine the mediating role of later-life solidarity with the aging mother in the association between maternal childhood maltreatment and psychological functioning of adult children (i.e., psychological well-being, depressive symptoms). I found a significant mediation such that the experience of maternal childhood maltreatment was associated with lower level of affectual solidarity with the aging mother, which could then lead to lower psychological well-being of adult children. However, later-life solidarity with the aging mother was not significantly associated with depressive symptoms.

Childhood Maltreatment and Later-life Intergenerational Solidarity

As expected, maternal childhood maltreatment was negatively associated with associational, affectual, and consensual solidarities with the aging mother. In other words, more frequent experience of childhood abuse and neglect significantly reduced the frequency of contact, emotional cohesiveness, and agreement in values/attitudes with the aging mother. The past history of abuse from the mother seems to persist over time, which may impede later-life solidarity with the abusive mother. This result is consistent with the previous finding that the experience of parental childhood abuse diminished emotional closeness with family members when the victims reached mid- or late-adulthood (Savla et al., 2013). In addition, studies based on the life-course perspective showed that adults with a history of childhood maltreatment may have difficulty forming functional interpersonal relations (Briere & Jordan, 2009; Paradis & Boucher, 2010). The current study advances this existing knowledge that the impact of maternal childhood maltreatment may persist over time diminishing later-life relationships with the abusive parent.

It is also noteworthy that maternal childhood maltreatment was not significantly associated with structural and functional solidarities with the aging mother. In terms of structural solidarity, studies have identified that factors such as adult children's education or marital status, and parents' health status are influential on geographical proximity between aging parents and adult children (Campton & Pollak, 2009). The findings of this study suggest that the childhood experience of being maltreated may not affect residential geographical proximity with the abusive parent. In regard to functional solidarity, one plausible interpretation is that the childhood experience of maternal maltreatment may

impede affectual solidarity with the abusive mother, but maltreated adult children may still be engaged in interacting with their mother at a certain level. This is consistent with the findings of Kong and Moorman (in press) that although maternal childhood abuse was associated with providing less frequent emotional support to the abusive mother, the authors did not find a significant association between maternal childhood abuse and provision of instrumental support. Along similar lines, Whitbeck and colleagues (1994; 1991) showed that the experience of parental rejection, hostility, or harsh discipline during childhood undermined contemporary emotional cohesiveness with aging parents, but the negative parenting behaviors did not directly affect the amount of instrumental or emotional support provided to aging parents by adult children. Silverstein and colleagues (2002) also concluded that as parents became older, adult children provided greater levels of social support regardless of the amount of support (e.g., emotional support, financial or time commitment) they received during childhood. Further research should address why the effect of childhood maltreatment on functional solidarity is not as strong as the one on associational or affectual solidarity. There may be interplay of normative solidarity – not measured here – that allows adults with a history of childhood maltreatment to carry out filial roles even if they are emotionally distant from the abusive parent.

Later-life Intergenerational Solidarity and Psychological Consequences

Previous solidarity studies showed that intergenerational solidarity promotes individual well-being (Bengtson, Giarrusso, Mabry, & Silverstein, 2002; Roberts et al., 1991; Silverstein et al., 2012). Consistent with these previous studies, the present study found that higher affectual solidarity was associated with better psychological functioning. Furthermore, this study found empirical evidence of a significant mediation

effect that having experienced maternal childhood maltreatment was associated with lower emotional cohesiveness with the abusive mother, which in turn was associated with lower psychological well-being of the maltreated adult children.

Research on long-term effects of childhood maltreatment has identified several mechanisms, such as substance abuse or impaired social functioning, that lead the adult victims to experience physical and mental health problems in later life (Repetti et al., 2002). In line with this research, the findings of this study suggest that difficult relationships with the abusive parent may linger over time, undermining psychological functioning of adults with a history of childhood maltreatment. Previous studies suggest that having a good relationship with parents is still important for individuals in late adulthood (Fingerman, Pillemer, Silverstein, & Suitor, 2011). This may be no exception for adults with a history of childhood maltreatment. Even if adult victims are now long independent of parental protection, the relationship with the abusive parent still matters to them – it could be the persistence of the unresolved issue or the continuity of abuse from the parent. Future research may explore whether and how later-life relationships with the abusive parent can spill over into other negativities in the lives of adult children. This line of research will provide implications that revisiting the parent-adult child relationship can be one way to address specific concerns of adults with a history of childhood maltreatment.

On the other hand, the study results also indicate that even for adults with a history of childhood maltreatment, higher affectual solidarity with the abusive mother would mean better mental health outcomes, although the cross-sectional analysis cannot preclude the possibility that better mental health allows some maltreated adult children to

be closer to their abusive mother. This is an important finding because it provides rationale for improving later-life relationships with the aging abusive parent. It would be hasty to conclude that all maltreated adult children should restore relationships with their abusive parent. However, revisiting the relationship with the abusive parent could be beneficial for some maltreated adult children – more or so for those who were less severely abused.

Furthermore, the findings of the study asserts that intergenerational solidarity theory can serve as a theoretical tool to examine adults with a history of childhood maltreatment in the relationship with their abusive parent. Further research may investigate more systematic family relations of adults with a history of childhood maltreatment, which will enable clinicians to provide intervention strategies based on a broader family context to address psychological vulnerabilities of this specific population.

Limitations and Future Research

There are some potential limitations of this study. First, maternal childhood maltreatment was measured by self-reported retrospective questions which may involve recall errors (Raphael, 1987). However, the recollection of childhood abuse and neglect still becomes a good measure because it represents adult children's perceived assessment of the past parent-child relationship quality. Future research should incorporate prospective research design to better assess the consequences of childhood maltreatment. Also, it is worth noting that the neglect item was not specific to mothers but indicative of both parents.

Secondly, normative solidarity was not involved in the data analyses because of its unavailability in the WLS. Previous studies showed that normative solidarity serves as an antecedent to other solidarity constructs (Parrott & Bengtson, 1999; Schwarz, Trommsdorff, Albert, & Mayer, 2005). In other words, having strong filial norms may lead to greater affection as well as more frequent contact or support exchange with parents. Particularly for adult children with a history of childhood maltreatment, they may continue to have contact with their abusive parent because of the normative obligations. On the other hand, it could be possible that their norms to support the abusive parent could be weakened due to the earlier abusive and neglectful treatment, which may contribute to reducing other solidarity dimensions (e.g., contact, emotional closeness). As previous studies suggest, low levels of normative solidarity can undermine other aspects of intergenerational solidarity with the abusive parent.

In addition, this study did not examine the sample of fathers because of the small number of living fathers. Future research may incorporate the long-term effect of childhood maltreatment on the relationship with the abusive father as it has been reported that fathers were more likely to be perpetrators of childhood maltreatment than mothers and paternal abuse tends to be more severe involving multiple forms of violence (National Child Abuse and Neglect Data System, 2013).

More sophisticated data analysis involving longitudinal data will enhance the understanding of the causal ordering among the key constructs. Due to the nature of cross-sectional data, this study cannot exclude the possibility that adult psychological functioning affects intergenerational solidarity with the aging mother.

Lastly, it should be noted that the majority of the WLS sample consists of non-Hispanic White who completed at least a high school education. Therefore, the study findings may not be representative of ethnic and racial minorities including African American, Hispanic, or Asian population and those with less than a high school education.

Despite these limitations, this study makes significant contributions. First, intergenerational solidarity research has been focused on general parent-adult children relationships (Bengtson, 1996; Bengtson & Roberts, 1991), but the present study adds new knowledge to the intergenerational solidarity literature by linking a history of childhood maltreatment to later-life intergenerational relationships in terms of five distinct dimensions: associational, structural, affectual, consensual, and functional solidarities. Additionally, this study contributes to the life course studies of childhood maltreatment. Childhood maltreatment studies showed that for adult victims of childhood maltreatment, difficulties in social relationships may lead to negative psychological consequences in adulthood (Paradis & Boucher, 2010). The current research adds new knowledge to the literature by showing that later-life solidarity with the abusive parent is another mechanism that prolongs the effects of childhood maltreatment on mental health outcomes in late adulthood.

This study also provides important implications for practice. When intervening with adults with a history of childhood maltreatment, it will be important to assess contemporary relationship quality with their abusive parent and create intervention plans to relieve the stress interacting with the parent. For example, practitioners can help adult victims of childhood maltreatment to address unresolved issues with their abusive parent.

As studies suggest, it will be also helpful to provide specific communication skills to better deal with the abusive parent (Baxter, 2014).

In terms of policy, policy makers should be aware of the potential vulnerabilities and difficulties of this group of adult children – who used to be abused and neglected by their parents and may continue to struggle in the relationship with them. Their concerns should be addressed not solely by their own individual efforts, but by systematic and collective support from society.

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Appendix

Table 1

Descriptive Statistics, WLS Participants with Living Mothers, 2004-2005 (N = 1,371)

Variables	N	(%)
Maternal childhood maltreatment		
Neglect[a]		
Very often	866	64.20
Often	307	22.76
Sometimes, rarely, and never	176	13.05
Verbal abuse		
Not at all	1,084	82.75
A little, some, a lot	226	17.25
Physical abuse		
Not at all	1,193	91.00
A little, some, a lot	118	9.00

Variables	Mean (*SD*)	Range	
		potential	actual
Intergenerational solidarity with mother			
Associational (contact)	2.31 (1.03)	1/4	1/4
Structural (proximity)	2.34 (.81)	1/4	1/4
Affectual (emotional closeness)	3.51 (.68)	1/4	1/4
Consensual (similarity)	3.03 (.74)	1/4	1/4
Functional (support exchanges)	1.23 (1.24)	0/6	0/6
Psychological well-being			
Autonomy	4.54 (.75)	1/6	1.4/6
Environmental mastery	4.92 (.74)		1/6
Personal growth	5.01 (.72)		1.5/6
Positive relations	4.74 (.98)		1.4/6
Purpose in life	4.79 (.76)		1.83/6
Self-acceptance	4.92 (.75)		1.2/6
Depressive symptoms			
Negative affect	.40 (.68)	0/7	0/5.63
Positive affect	1.26 (1.46)		0/7
Somatic symptom	.84 (.90)		0/6.17
Interpersonal relation	.38 (.77)		0/6

Note. Descriptive statistics are reported after correction for skewness and direction. Higher mean scores indicate greater values of the listed variables. [a]The neglect item asked "how often did you know that there was someone to take care of you and protect you?", which was reverse-coded in the analysis.

Table 2

Unstandardized and Standardized Estimates and Goodness-of-Fit Indices (N = 1,371)

	Unstandardized (S.E.)	Standardized
Factor loadings (λx)		
ξ_1: Maternal childhood maltreatment		
x_1: Neglect[a]	1	.51
x_2: Verbal abuse	1.30 (.15)***	.66
x_3: Physical abuse	1.30 (.17)***	.66
Factor loadings (λy)		
η_6: Psychological well-being		
y_1: Autonomy[a]	1	.50
y_2: Environmental mastery	1.79 (.06)***	.89
y_3: Personal growth	1.58 (.06)***	.79
y_4: Positive relations	1.35 (.06)***	.67
y_5: Purpose in life	1.54 (.06)***	.76
y_6: Self-acceptance	1.65 (.05)***	.82
η_7: Depressive symptoms		
y_7: Negative affect[a]	1	.82
y_8: Positive affect	.76 (.05)***	.63
y_9: Somatic symptom	.88 (.04)***	.72
y_{10}: Interpersonal relation	.59 (.15)***	.48
Parameter estimates		
$\gamma_{(1, 1)}$: Childhood maltreatment → Associational	-.26 (.10)**	-.13
$\gamma_{(2, 1)}$: Childhood maltreatment → Structural	-.10 (.09)	-.05
$\gamma_{(3, 1)}$: Childhood maltreatment → Affectual	-.99 (.14)***	-.50
$\gamma_{(4, 1)}$: Childhood maltreatment → Consensual	-1.18 (.15)***	-.60
$\gamma_{(5, 1)}$: Childhood maltreatment → Functional	-.08 (.09)	-.04

$\gamma_{(6,1)}$: Childhood maltreatment → Psychological well-being	.07 (.05)	.21
$\gamma_{(7,1)}$: Childhood maltreatment → Depressive symptoms	.34 (.12)**	.07
$\beta_{(6,1)}$: Associational → Psychological well-being	-.02 (.02)	-.04
$\beta_{(6,2)}$: Structural → Psychological well-being	-.01 (.02)	-.01
$\beta_{(6,3)}$: Affectual → Psychological well-being	.09 (.02)***	.18
$\beta_{(6,4)}$: Consensual → Psychological well-being	.00 (.02)	-.00
$\beta_{(6,5)}$: Functional → Psychological well-being	.00 (.02)	.00
$\beta_{(7,1)}$: Associational → Depressive symptoms	-.00 (.03)	-.01
$\beta_{(7,2)}$: Structural → Depressive symptoms	.02 (.03)	.03
$\beta_{(7,3)}$: Affectual → Depressive symptoms	-.04 (.04)	-.05
$\beta_{(7,4)}$: Consensual → Depressive symptoms	.06 (.04)	.07
$\beta_{(7,5)}$: Functional → Depressive symptoms	-.01 (.03)	-.01

Indirect effects	**Estimate (S.E.)**
Childhood maltreatment → Affetual → Psychological well-being	-.08 (.03)*

Goodness of fit indices	
Satorra-Bentler Scaled $\chi 2$ (df)	970.958 (157)***
RMSEA (90% CI)	.062 (.053 - .067)
CFI	.957
SRMR	.076

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

Table 3

Without Living Fathers: Unstandardized and Standardized Estimates and Goodness-of-fit Indices (N = 1,233)

	Unstandardized (S.E.)	Standardized
Factor loadings (λx)		
ξ_1: Maternal childhood maltreatment		
x_1: Neglect[a]	1	.45
x_2: Verbal abuse	1.35 (.17)***	.60
x_3: Physical abuse	1.27 (.18)***	.57
Factor loadings (λy)		
η_6: Psychological well-being		
y_1: Autonomy[a]	1	.52
y_2: Environmental mastery	1.71 (.06)***	.89
y_3: Personal growth	1.52 (.05)***	.79
y_4: Positive relations	1.29 (.05)***	.67
y_5: Purpose in life	1.50 (.06)***	.78
y_6: Self-acceptance	1.59 (.05)***	.82
η_7: Depressive symptoms		
y_7: Negative affect[a]	1	.86
y_8: Positive affect	.72 (.04)***	.61
y_9: Somatic symptom	.82 (.03)***	.70
y_{10}: Interpersonal relation	.00 (.10)	.00
Parameter estimates		
$\gamma_{(1, 1)}$: Childhood maltreatment → Associational	-.45 (.11)***	-.20
$\gamma_{(2, 1)}$: Childhood maltreatment → Structural	-.28 (.10)**	-.12
$\gamma_{(3, 1)}$: Childhood maltreatment → Affectual	-1.32 (.21)***	-.59
$\gamma_{(4, 1)}$: Childhood maltreatment → Consensual	-1.55 (.23)***	-.69
$\gamma_{(5, 1)}$: Childhood maltreatment → Functional	-.23 (.10)*	-.10
$\gamma_{(6, 1)}$: Childhood maltreatment → Psychological well-being	.18 (.10)	.16

$\gamma_{(7,1)}$: Childhood maltreatment → Depressive symptoms	.32 (.18)	.17
$\beta_{(6,1)}$: Associational → Psychological well-being	.01 (.02)	.01
$\beta_{(6,2)}$: Structural → Psychological well-being	-.01 (.02)	-.01
$\beta_{(6,3)}$: Affectual → Psychological well-being	.10 (.03)***	.19
$\beta_{(6,4)}$: Consensual → Psychological well-being	.03 (.03)	.06
$\beta_{(6,5)}$: Functional → Psychological well-being	.00 (.02)	.00
$\beta_{(7,1)}$: Associational → Depressive symptoms	-.02 (.03)	-.02
$\beta_{(7,2)}$: Structural → Depressive symptoms	.06 (.03)	.06
$\beta_{(7,3)}$: Affectual → Depressive symptoms	.03(.05)	.04
$\beta_{(7,4)}$: Consensual → Depressive symptoms	-.01 (.05)	-.01
$\beta_{(7,5)}$: Functional → Depressive symptoms	-.04 (.03)	-.04
Indirect effects	**Estimate (S.E.)**	
Childhood maltreatment → Affetual → Psychological well-being	-.18 (.08)*	
Goodness of fit indices		
Satorra-Bentler Scaled $\chi 2$ (df)	1032.79 (157)***	
RMSEA (90% CI)	.067 (.063 - .071)	
CFI	.945	
SRMR	.080	

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

[a]Reference group (path loading was set as 1 for model identification)

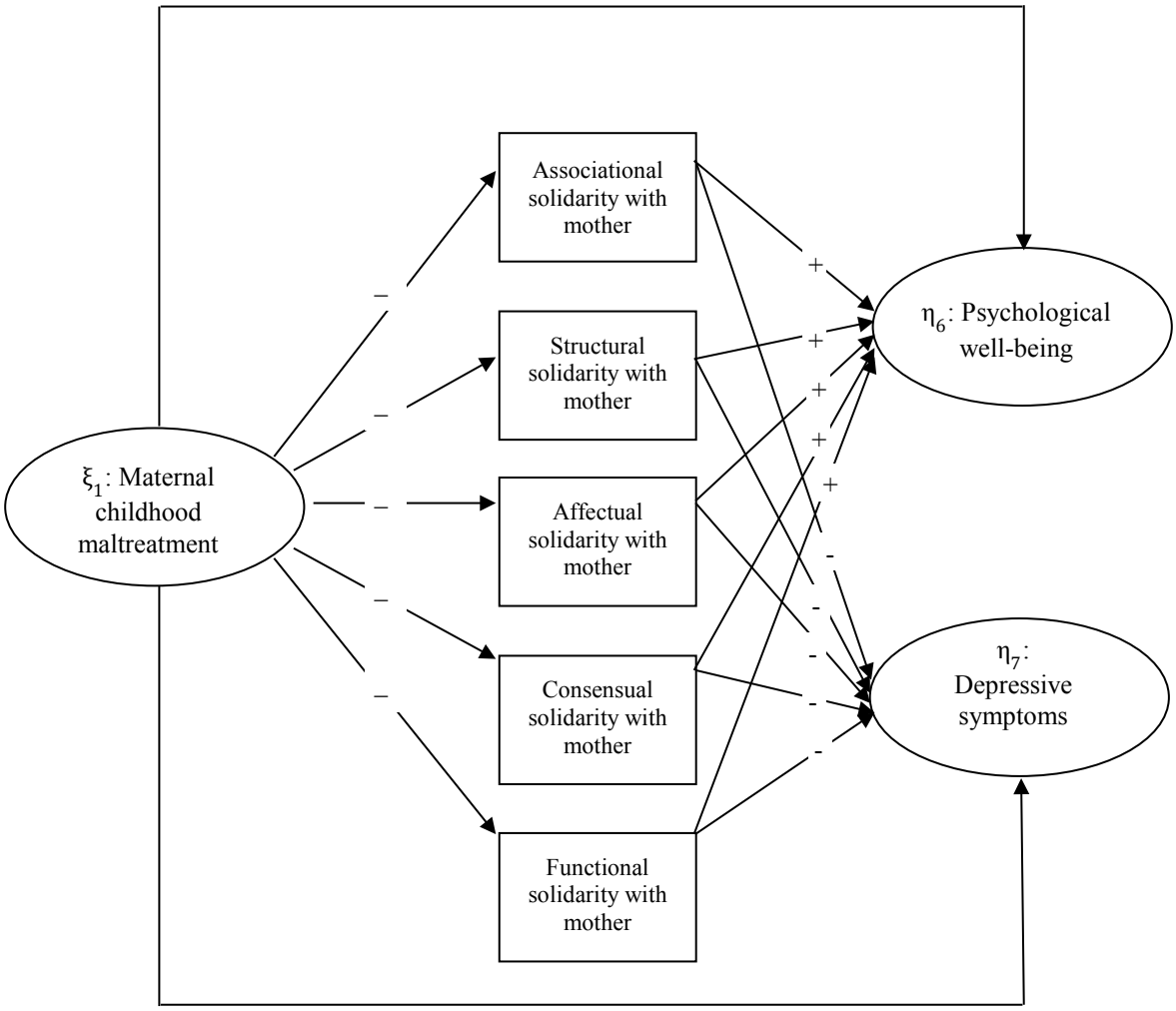

Figure 1. Hypothesized Model.

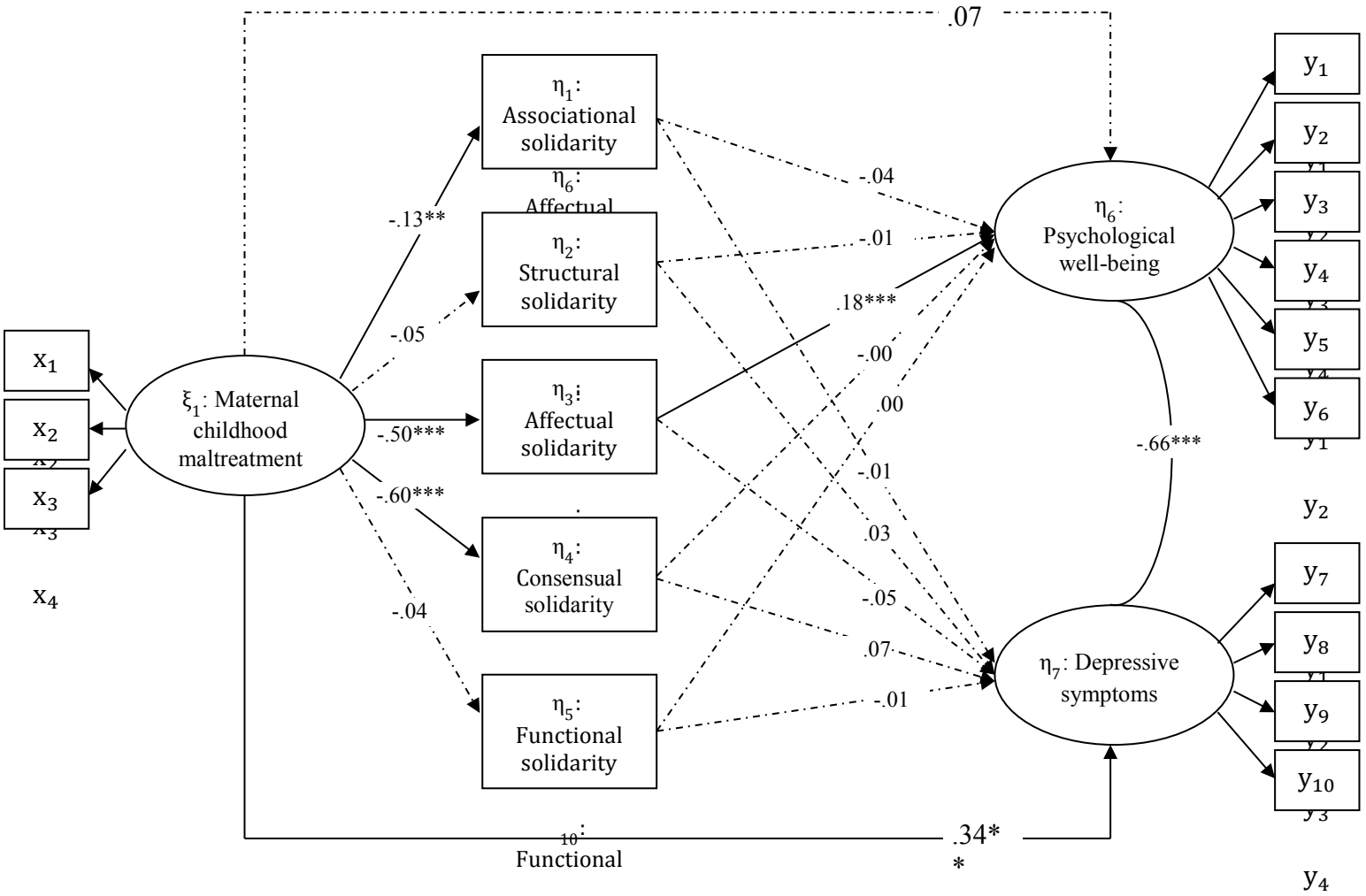

Figure 2. Final Model. N = 1,371. Significance was denoted as follows: * p < 0.05. ** p < 0.01. *** p < 0.001. Standardized path coefficients are shown. Latent error covariances were added between $\eta_1$and η_2, $\eta_1$and η_3, $\eta_1$and η_5, $\eta_2$and η_5, $\eta_3$and η_4, $\eta_3$and η_5. Indicator error covariances were added between x_2 and x_3, y_2 and y_3, y_2 and y_5, y_3 and y_5, y_4 and y_5, y_4 and y_6, y_8 and y_{10}.

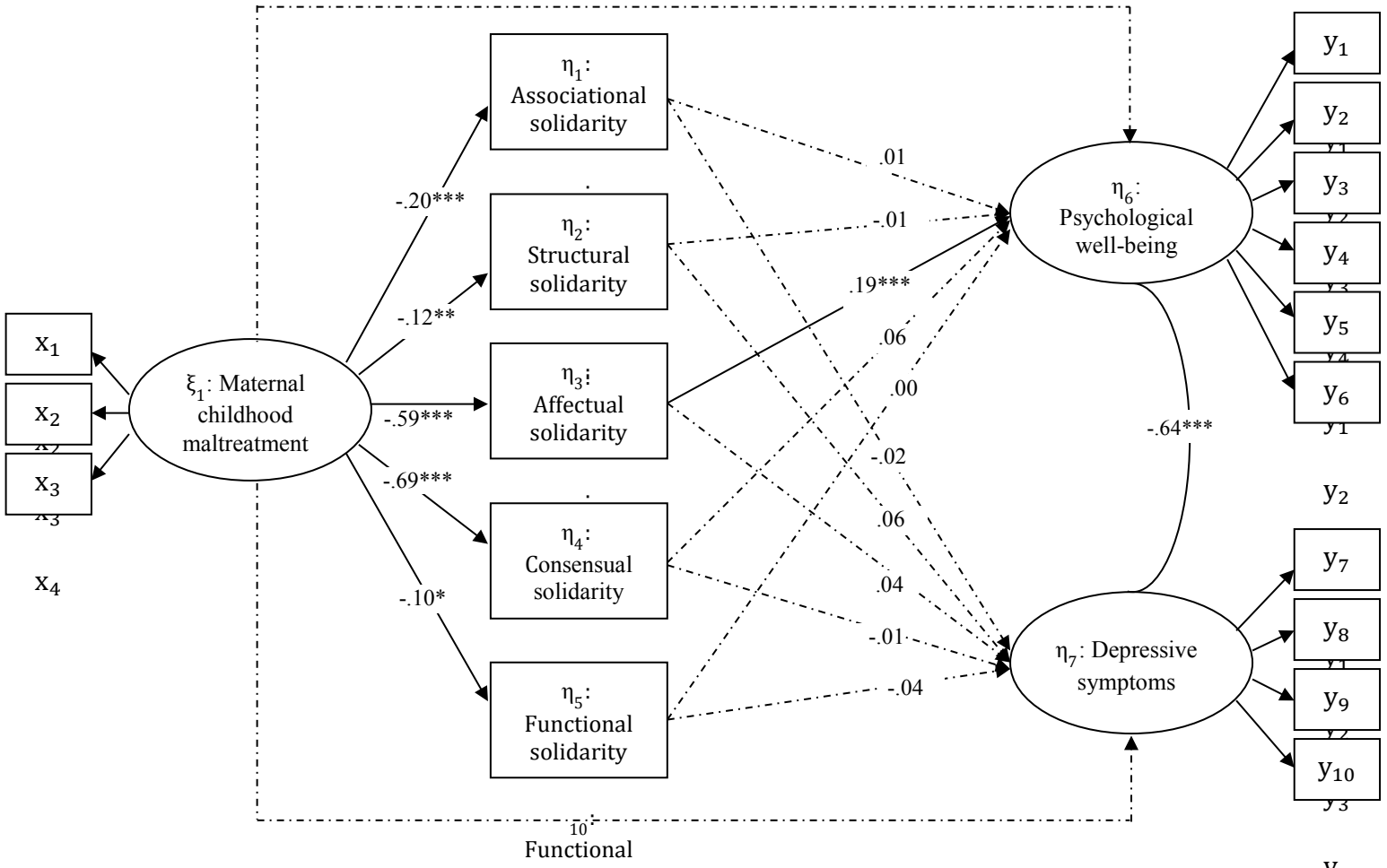

Figure 3. Without Living Fathers: Final Model. N = 1,233. Significance was denoted as follows: * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. Standardized path coefficients are shown. Latent error covariances were added between $\eta_1$and η_2, $\eta_1$and η_3, $\eta_1$and η_5, $\eta_2$and η_5, $\eta_3$and η_4, $\eta_3$and η_5. Indicator error covariances were added between x_1 and x_2, x_2 and x_3, y_2 and y_3, y_2 and y_5, y_3 and y_5, y_4 and y_5, y_4 and y_6, y_8 and y_9.

Chapter III: Paper II. Longitudinal Analysis of Affectual Solidarity with the Abusive Mother

Abstract

This study aims to examine the effect of childhood abuse on later-life affectual solidarity (i.e., emotional closeness) with the aging mother. Based on intergenerational solidarity theory, data analyses focused on: a) charting the trajectories of affectual solidarity with aging mothers for adults with a history of childhood abuse and those without; and, b) examining the moderating effects of hostility and positive relations with others in the association between a history of childhood abuse and affectual solidarity with the aging mother.

This study used multiple waves of the Wisconsin Longitudinal Study including 1993-1994, 2004-2005, and 2010-2011 data sets. The final study sample was composed of 1,968 graduates whose mothers were alive at the baseline data collection. To take advantage of the three-wave longitudinal data, growth curve modeling techniques were employed.

Key findings indicated that for adults who were abused by both parents, affectual solidarity with the abusive mother increased over time. This result was contrast to non-abused adult children whose affectual solidarity with mothers did not change over time. I also found a statistically significant moderating effect of positive relations with others in the association between a history of childhood abuse and affectual solidarity with the aging mother. Overall, higher positive relations with others was associated with greater emotional closeness with the aging mother, and this positive association was stronger for adults with a history of childhood abuse compared to those without. The study findings

suggest that adults with a history of abuse may become emotionally closer to their abusive mother as they approach to the later stage of life. Future research may explore resilience among adults with a history of childhood abuse and examine how and why they may be reconciled with their abusive parent.

Introduction

In recent decades, issues related to parent-adult child relationships are becoming more important as increased longevity has allowed longer co-survivorships across the generations. A majority of 40-year-old adults had both parents alive, and almost half of 60-year-old adults had a parent still alive in 2000 (Settersten, 2007). This change has extended the time available for support exchanges and emotional connections between aging parents and their adult children (Silverstein & Giarrusso, 2010; Suitor, Sechrist, Gilligan, & Pillemer, 2011). Despite increases in long-term care options and policy interventions, families, especially adult children, often take a primary responsibility for supporting their aging parents (Bookman & Kimbrel, 2011).

However, the intergenerational solidarity research has overlooked abuse and neglect in parent-adult child dyads. Particularly, it has been rarely studied how adults with a history of parental childhood abuse relate to their formerly, and maybe currently, abusive parent. It must be an ironic situation for adults with a history of parental childhood abuse to watch their abusive parent becoming physically weaker and in need of support from them. In understanding the dyads, priority should be placed on examining emotional bonds between the two because it is the foundational aspect of the intergenerational relationships according to previous studies (Robert et al., 1991). In other words, emotional bonds can be the key aspect that can facilitate more frequent contacts and support exchanges between parents and adult children.

Thus, the present study aims to examine the effects of childhood abuse on later-life affectual solidarity (i.e., emotional closeness) with the abusive mother based on Bengtson's intergenerational solidarity theory. Mothers are usually primary caregivers,

and establishing a secure bond with the mother is an important developmental task to child development, leading to long-term impact on social or psychological well-being (Vaughn, Bost, & Ijzendoorn, 2008). Using longitudinal data from the Wisconsin Longitudinal Study (WLS), the present study focuses on: a) charting the trajectories of affectual solidarity with aging mothers for adults with a history of parental childhood abuse and those without; and, b) examining the moderating effects of correlates of childhood abuse (i.e., hostility, positive relations with others) in the association between a history of childhood abuse and affectual solidarity with the aging mother. This study will contribute to adding new knowledge in terms of intergenerational relationships between adult victims of childhood abuse and their abusive parent, which will help identify social work practice implications for adults with a history of childhood abuse.

Literature Review

Intergenerational Solidarity Theory

In the late 1980s and early 1990s, there was a great advancement in terms of empirical investigation about parent and adult-child relationships (Mancini & Blieszner, 1989; Bengtson, Rosenthal, & Burton, 1990; Bengtson & Roberts, 1991). Amongst these efforts, Bengtson and colleagues postulated a theory of intergenerational solidarity to explain the patterns of integration/cohesion between parents and their adult children (Bengtson & Roberts, 1991; Roberts, Richards, & Bengtson, 1991). *Intergenerational solidarity* can be defined as "social cohesion between generations" (Bengtson & Oyama, 2007, p. 2), and it is conceptualized as a "higher order concept that encompasses the multiple, complex, and sometimes contradictory ways that parents and children are socially connected to each other" (Lawton, Silverstein, & Bengtson, 1994, p. 59). As its

definition suggests, intergenerational solidarity involves six distinct elements including associational (frequency of contact), structural (geographical proximity), affectual (sentiments about and evaluations of the relationship), consensual (agreement on values, attitudes, and beliefs), functional (exchanges of social support), and normative (strength of filial obligations/commitment) solidarities (Bengtson, 1996; Bengtson & Roberts, 1991; Bengtson & Oyama, 2007).

Affectual solidarity. Among several solidarity elements, this study focuses on the effect of childhood abuse on affectual solidarity with the abusive parent. Affectual solidarity represents emotional complexity involving a range of intimacy and distance within intergenerational relations, which is often empirically operationalized as ratings of affection, closeness, or quality of the relationships (Bengtson & Roberts, 1991; Hammarstrom, 2005). Along with normative solidarity, affectual solidarity is known as the core element of intergenerational solidarity (Robert et al., 1991). Studies showed that affective sentiments within parent-adult child dyads were the key predictor of enhancing psychological well-being, reducing relationship conflict, and improving caregiving outcomes (Merz, Consedine, Schulze, & Schuengel, 2009; Merz, Schuengel, & Schulze, 2009; Crispi, Schiaffino, & Berman, 1997; Fauth et al., 2012).

Continuities of intergenerational solidarity over time. A number of studies have examined the long-term change/stability of intergenerational solidarity over the life course (Bengtson, 1996; Bengtson et al., 2000; Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002). These studies concluded that there was a persistent influence of the past parent-child relationship on contemporary intergenerational solidarity.

Rossi and Rossi (1990) argues that emotionally detached parenting "may so reduce the intimacy of the relationship between parent and child that no subsequent events later in life can activate an increase in warmth and closeness between the generations" (p. 252). In support of the argument, empirical evidence showed that the past parent-child relationship is highly correlated with contemporary intergenerational solidarity. In a study examining adult children in midlife (29-68 years old), parental rejection or hostility experienced in childhood weakened emotional cohesiveness with parents, which in turn reduced the provision of social support and increased relational conflict (Whitbeck, Simons, & Conger, 1991; Whitbeck, Hoyt, & Huck, 1994). In addition, Kong and Moorman (in press) examined intergenerational support provision among a sample of adult children (32-77 years old) and found that maternal childhood abuse was associated with lower levels of provision of emotional support to the abusive mother. Pertaining to the current study, these findings imply that a history of childhood abuse may have a lingering negative effect on contemporary solidarity with the aging abusive parent.

Furthermore, some solidarity constructs remain stable over time. Bengtson (1996) examined the changes in affectual solidarity and consensual solidarity of 827 young adult children over 23 years. Until the children reached mid-adulthood, the author observed remarkably stable patterns in the average scores of both affectual and consensual solidarities. In the follow-up study conducted three years later (Bengtson et al., 2000), the scores of affectual solidarity were highly correlated over 26 years. This result confirmed that levels of affectual solidarity remain stable over time without significant fluctuations. Based on findings of the previous studies, it can be speculated that relatively low levels

of intergenerational solidarity will be observed among adults with a history of childhood abuse compared to those without, and this pattern will last over time.

Long-term Sequelae of Childhood Abuse

Life course research has showed that childhood abuse has a long-lasting impact on several aspects of the victim's life (Child Welfare Information Gateway, 2013). Repetti, Taylor, and Seeman (2002) synthesized literature on the long-term effects of childhood abuse and argues that parenting practices involving abuse and neglect not only lead to an imminent risk to child safety, but also affect stress-responsive biological regulatory systems, emotional processes, and social competences throughout the child's infancy and early childhood. These outcomes increase the vulnerability to behavioral problems, such as substance abuse and high-risk sexual activity in adolescence, which could ultimately result in physical and mental health problems in adulthood.

Particularly, the authors stressed that deficits in emotional regulation and social competence can be the key intervening factors diminishing social and interpersonal functioning of adult victims of childhood abuse. This argument was empirically supported by other studies. For example, Crawford and Wright (2007) showed that emotional inhibition and mistrust of others partially mediated the association between childhood psychological maltreatment and relationship aggression in adulthood. Another study also found that adults with a history of physical abuse and neglect were more likely to have poor interpersonal functioning in adulthood due to negative self-regard and mistrust in the availability of others (Drapeau & Perry, 2004). Therefore, this study posits that the correlates of childhood abuse, in this case emotional dysregulation and poor

social competence, may impair the solidarity with the abusive parent in similar ways of interrupting other social relationships.

Based on the theoretical consideration and review of literature, this study examines the following research questions:

a) What are the age trajectories of affectual solidarity with mothers for adults with a history of childhood abuse and those without?
b) Do emotional dysregulation and poor social competence moderate the association between a history of childhood abuse and affectual solidarity with the aging mother?

Methods

Data Set

The WLS started surveying all high school seniors in the public, private, and parochial schools of Wisconsin in 1957 mainly to assess the seniors' educational plans. In 1964 and 1975, a randomly selected one-third sample of the graduates, consisting of 10,317 cases, and their parents were surveyed using mail and telephone to obtain a full record of social background, youth aspirations, labor market experiences, and social participation (Hauser, 2009). Survey data were further collected from the graduates in 1993-1994 (Wave 1), 2004-2005 (Wave 2), and 2010-2011 (Wave 3), which provides an extensive amount of information on the respondents from their late adolescence through the mid-70s. The retention rates have been high among the surviving graduates. In Wave 1, 87.2% of surviving graduates (n = 8,493) completed the telephone survey and 80.9% of the telephone sample (n = 6,875) completed the mail survey. In Wave 2, 85.9% of living graduates (n = 7,265) completed the telephone survey and 94.2% of these

participants (n = 6,845) returned the mail survey. In Wave 3, 72.7% of living graduates (n = 5,928) completed the telephone survey and 90.9% of the telephone sample (n = 5,391) returned the mail survey.

Study Sample

This study used the three waves of the WLS to examine long-term changes of emotional closeness with aging mothers over time. The final study sample consisted of 1,968 graduates whose mothers were alive at the Wave 1 data collection because those with living parents provided information on key intergenerational relations, including *affectual solidarity* and *associational solidarity*. The relationship with the father was not assessed because most fathers were deceased in Wave 3 (i.e., the number of living fathers was 24).

Measures

All the variables of interest were measured repeatedly over the three waves except the set of items measuring childhood abuse at Wave 2.

Affectual solidarity with mother (time-varying). The dependent variable of this study was *affectual solidarity with mother* reported by an adult child. Affectual solidarity with mother was measured by an item: "How close are you and your mother?" Respondents rated this item using a four-point Likert scale: "Not at all close (1)," "not very close (2)," "somewhat close (3)," and "very close (4)." In order to deal with the skewness of the variable, the two categories – "not at all close" and "not very close" – were combined yielding the variable with three categories. A sensitivity test showed that there were no substantial differences in terms of the size and significance level of

coefficients between the model with the three-category variable and with the original four-category variable.

Childhood abuse (time-invariant). The respondents reported their experience of parental verbal and physical abuse during childhood at Wave 2. Drawn from the Conflict Tactics Scale (Straus, Gelles, & Steinmetz, 1980), childhood abuse was measured by four items: "Up until you were 18, to what extent did your (a) father, (b) mother insult or swear at you?; to what extent did your (c) father, (d) mother treat you in a way that you would now consider physical abuse?" Respondents rated this item using a four-point Likert scale: "Not at all (1)," "a little (2)," "some (3)," and "a lot (4)."

Based on the four items, the childhood abuse variable with four categories was created: "Never experienced parental abuse in childhood (1; reference category)," "experienced verbal or physical abuse from mother (2)," "experienced verbal or physical abuse from father (3)," and "experienced verbal or physical abuse from both parents (4)". In the case of verbal abuse, those who reported "some" or "a lot" were coded as having experienced verbal abuse as children; "a little" and "not at all" responses were coded as having no abuse experience. In the case of physical abuse, those who reported "a little," "some," or "a lot" as opposed to "not at all" were coded as having experienced physical abuse as children.

Hostility (time-varying). Emotional dysregulation was assessed by the level of *hostility*. Drawn from the State-Trait Anger Expression Inventory (Spielberger, 1988), three items were used to measure the hostility construct and the total score was computed by summing the following items: "On how many days during the past week did you (a) feel irritable, or likely to fight or argue?; (b) feel like telling someone off?"; (c) feel angry

or hostile for several hours at a time?" Respondents rated each item using an eight-point Likert scale (0-7) to mark the number of days in the past week a respondent had experienced a specific symptom. The total score ranged from 0 to 21. To deal with the skewness, the variable was top-coded at 5, which was the score at the 5% upper bound.

Positive relations with others (time-varying). Social competence was assessed by *positive relations with others*, which is one of the six dimensions in the Ryff Scales of Psychological Well-being (Ryff & Keyes, 1995). Four items were used to measure the construct and the total score was computed by summing the following items: "To what extent do you agree that (a) you enjoy personal and mutual conversations with family members and friends?; (b) you often feel lonely because you have few close friends with whom to share your concerns?; (c) it seems to you that most other people have more friends than you do?; (d) people would describe you as a giving person, willing to share your time with others?" Respondents rated each item using a six-point Likert scale (1 = disagree strongly; 6 = agree strongly). The items (b) and (c) were reverse-coded prior to summing the variable. The total score ranged from 1 to 24.

Associational solidarity (time-varying). Associational solidarity was included in the model because the literature on solidarity showed that affectual solidarity and associational solidarity are mutually reinforcing (Lawton et al., 1994; Hogerbrugge & Komter, 2012). Associational solidarity was operationalized as *frequency of contact with mother* that was measured using an item: "How frequently do you have contact with your mother?" This item was a scale variable top-coded at 950 times per year. To deal with the skewness, the square root of the variable was taken.

Socio-demographic characteristics. I controlled for sociodemographic characteristics of adult children including gender, marital status (*married* vs. *non-married* as a reference category), education (in years), and self-reported health status (*good* or *excellent* vs. *very poor*, *poor*, or *fair* as a reference category*)*. Marital status and self-reported health status variables were treated as time varying; gender and education variables were treated as time invariant.

Analytic Strategy

To take advantage of the three-wave longitudinal data, growth curve modeling techniques were employed. The growth curve model included two levels: Level 1 being *time* (age) and Level 2 being *individual* (graduates). The first goal of the data analyses was to estimate and graphically display the age trajectories of affectual solidarity with mother for adults with and without a history of childhood abuse. Next, affectual solidarity with mother was regressed on hostility, positive relations with others, and frequency of contact with the mother, and cross-level interaction effects were estimated to see whether the time effects of hostility, positive relations with others, and frequency of contact with mother covaried with individual-level effect of being abused.

In the final model, the level-1 model can be expressed as:

$Y_{ij} = \beta_{0j} + \beta_{1j}(\text{age})_{ij} + \beta_{2j}(\text{hostility})_{ij} + \beta_{3j}(\text{positive relations with others})_{ij} + \beta_{4j}(\text{frequency of contact with mother})_{ij} + \beta_{5j}(\text{married})_{ij} + \beta_{6j}(\text{good health})_{ij} + r_{ij}$

where Y_{ij} indicates affectual solidarity with mother at time *i* of person *j*, and β_{0j} is the level-1 intercept (i.e., the predicted affectual solidarity with mother of non-married individuals with poor-fair health status who were 60 years old with average values on hostility, positive relations with others, and frequency of contact with mothers). β_{1j} through β_{6j} are regression coefficients associated with each of the given variables. In

addition to the intercept (β_{0j}), the effect of age/time (β_{1j}) was modeled as random in order to assess how the age trajectories varied by individual characteristics; specifically, the effect of abuse history was the focus of this study.

In the final model, the complete level-2 model can be expressed as:

$\beta_{0j} = \gamma_{00} + \gamma_{01}(\text{male})_j + \gamma_{02}(\text{education})_j + \gamma_{03}(\text{abused by mother only})_j + \gamma_{04}(\text{abused by father only})_j + \gamma_{05}(\text{abused by both parents})_j + u_{0j}$

$\beta_{1j} = \gamma_{10} + \gamma_{11}(\text{abused by mother only})_j + \gamma_{12}(\text{abused by father only})_j + \gamma_{13}(\text{abused by both parents})_j + u_{1j}$

$\beta_{2j} = \gamma_{20} + \gamma_{21}(\text{abused by mother only})_j + \gamma_{22}(\text{abused by father only})_j + \gamma_{23}(\text{abused by both parents})_j$

$\beta_{3j} = \gamma_{30} + \gamma_{31}(\text{abused by mother only})_j + \gamma_{32}(\text{abused by father only})_j + \gamma_{33}(\text{abused by both parents})_j$

$\beta_{4j} = \gamma_{40} + \gamma_{41}(\text{abused by mother only})_j + \gamma_{42}(\text{abused by father only})_j + \gamma_{43}(\text{abused by both parents})_j$

$\beta_{5j} = \gamma_{50}$

$\beta_{6j} = \gamma_{60}$

where γ_{00} is the intercept for the level-2 model indicating the predicted affectual solidarity with mother for women with no history of parental childhood abuse who had an average level of educational attainment.

Table 2 presents frequency and missingness (%) of time-varying variables. Two intergenerational solidarity variables – affectual solidarity and frequency of contact - showed high attrition rates in Wave 3. Approximately 90% of cases were missing. This is mainly because most mothers were deceased by that time, and thus respondents did not respond to the solidarity items. Without accounting for these two variables, 54.9% of cases provided complete data. To properly address missing values, multiple imputation procedures were employed and generated five imputed datasets. For the dependent variable, multiple imputation, then deletion (MID) strategy was used. Assumptions of the

multilevel regression model, including multicollinearity and homoscedasticity were met. Data analyses were conducted using STATA 13 and HLM 6.

A robustness check was performed by analyzing only Wave 1 and Wave 2 because of the high attrition issues of some variables in Wave 3. The summary of the findings is presented in Appendix Table 4. Model 1 included the abuse variables, hostility, positive relations with others, and frequency of contact as well as control variables. Model 2 added the interaction effects of hostility, positive relations with others, and frequency of contact with the abuse variables to Model 1. The results of the two-wave data were substantially consistent with that of the three-wave analysis.

Results

Descriptive statistics of the key variables are shown in Table 1. Overall, 17.3% of the study sample experienced parental abuse during childhood: 4.4% had been abused only by mother; 8.8% only by father; and, 4.1% by both parents. About half of the total sample were male (46.5%), and the average educational attainment was 13.7 years (*SD* = 2.3). At the Wave 1 data collection, 83.6% were married, 88.4% reported having a good or excellent health status, and the average age of adult children was 54.1 (*SD* = .49). Table 2 shows descriptive statistics of time-varying measures. Adult children reported being emotionally "somewhat close" to their mother with mean values ranging from 3.47 ~ 3.56 over the three waves of data collection. On average, they contacted their mother between 109 ~ 127.8 times per year over the three waves.

Growth Curve Models

Parameter estimates of the growth curve analyses are shown in Table 3. In Model 1, the average affectual solidarity with mother across the total sample was 2.49 (*p*

< .001), which would correspond to the "somewhat close" category as the categories of "not at all close" and "not very close" were combined to have a value of 1, "somewhat close" of 2, and "very close" of 3. The level-2 intercept variance was statistically significant ($p < .001$) indicating that there would be individual differences in baseline affectual solidarity with mother across the sample of adult children.

In Model 2 where the age variable was added, the fixed effect of age was not statistically significant at the .05 significance level ($\beta_1 = -0.00$, $p < .10$) indicating that affectual solidarity with mother did not change over time. However, the random effect of age slope (τ_{11}) was statistically significant ($p < .001$) indicating that there would be significant variations in the age effects across the adult children sample.

Model 3 added the childhood abuse variables. The results show that adult children who were abused by mother reported less affectual solidarity with mother than those who never experienced parental abuse ($\gamma_{03} = -0.56$, $p < .001$). Those abused by fathers ($\gamma_{04} = -0.11$, $p < .05$) and those abused by both parents ($\gamma_{05} = -0.29$, $p < .001$) also reported significantly less affectual solidarity with mother. The effect of age remained non-significant for adults who did not experience parental abuse ($\beta_1 = -0.00$, p = ns). Also, there were no statistically significant age effects between abused adult children and non-abused adult children ($\gamma_{13} - \gamma_{15}$). This result indicates that the pattern of change in the affectual solidarity with mother seemed to be similar between abused and non-abused adult children. The level-2 variances of intercept and age slope were statistically significant (ps < .001).

Model 4 added time-varying and time-invariant covariates, including gender (male), years of education, marital status (married), and self-reported health status (good

or excellent health). The effects of abuse were statistically significant for those abused by mother only and those abused by both parents ($\gamma_{03} = -0.56$, $p < .001$; $\gamma_{05} = -0.29$, $p < .001$, respectively). By adding the covariates, abused by father only was no longer statistically significant at the .05 significance level ($\gamma_{04} = -0.09$, $p < .10$).

Model 5 added the main effects of hostility, positive relations with others, and frequency of contact with mother to examine how these variables were associated with affectual solidarity with mother over time. The results showed that positive relations with others and frequency of contact with mother were positively associated with affectual solidarity among the overall sample ($\beta_3 = 0.02$, $p < .001$; $\beta_4 = 0.03$, $p < .001$, respectively).

In order to examine the effects of these variables on abused adult children, Model 6 added the cross-level interactions with individual-level variables including the childhood abuse variables. The results of Model 6 show that the conditional grand mean of affectual solidarity with mother was 2.58 (refers to the "somewhat close" category) when all other predictors were zero or at their mean ($\beta_3 = 2.58$, $p < .001$). Adult children who were abused by their mother reported less affectual solidarity with mother compared to those who never experienced parental abuse ($\gamma_{03} = -0.46$, $p < .001$). Likewise, those who were abused by both parents reported less affectual solidarity with mother than non-abused adults ($\gamma_{05} = -0.25$, $p < .01$). One noticeable change was that the age effect of being abused by both parents became statistically significant ($\gamma_{15} = 0.02$, $p < .05$). This result indicates that for those who were abused by both parents, affectual solidarity with mother increased over time in contrast to non-abused adult children who did not show a

significant change ($\beta_1 = 0.00$, p = ns). Figure 1 illustrates the age trajectories of affectual solidarity with mother by different abuse status.

In terms of variables related to the correlates of childhood abuse, the effect of hostility was not different between abused and non-abused adult children. However, social competence seemed to matter. There was a significant cross-level interaction between positive relations with others and being abused by both parents: For those who were abused by both parents, the positive effect of positive relations with others was stronger (0.01 (β_3) + 0.04 (γ_{35}) = 0.05) than non-abused adult children. Figure 2 provides the visual illustration of the association.

Lastly, there was a significant cross-level interaction between frequency of contact with mother and being abused by their mothers. For both abused and non-abused adult children, as the frequency of contact increased, affectual solidarity with mother increased as well ($\beta_4 = 0.02$, $p < .001$; $\gamma_{43} = 0.03$, $p < .05$, respectively). The effect of frequency of contact was stronger for those who were abused by their mother (0.02 (β_4) + 0.03 (γ_{43}) = 0.06) compared to non-abused adult children, which may indicate that the effect of being abused became offset by having frequent contact with the abusive parent. Figure 3 provides the visual illustration of the association.

In summary, adult children who experienced maternal abuse (i.e., abused by mother only and abused by both parents) had lower levels of affectual solidarity (i.e., emotional closeness) with mother compared to those who did not experience parental abuse. For adult children who were abused by both parents, the level of affectual solidarity with mother increased over time. This was contrasted with non-abused adult children who did not show any change in affectual solidarity with mother over time.

Lastly, greater positive relations with others predicted higher affectual solidarity with mother, and for those who were abused by both parents, the positive effect of positive relations was stronger than non-abused adult children.

Discussion

The primary purpose of this study was to examine whether and how a history of childhood abuse affects later-life affectual solidarity with the aging mother. In addition to the direct effect of childhood abuse, the moderating effects of correlates of childhood abuse (i.e., hostility and positive relations with others) were assessed.

Long-term Change of Affectual Solidarity

Key findings showed that, first, a history of childhood abuse was associated with lower affectual solidarity with the aging mother. Adults who experienced maternal childhood abuse showed lower levels of affectual solidarity with the aging mother compared to adults with no history of abuse. This result is consistent with previous studies that the past and current relationship qualities within parent-adult child dyads are similar across the life course (Silverstein et al., 2002; Whitbeck et al., 1991; 1994).

Another consistent result was that for non-abused adult children, affectual solidarity with the aging mother did not change over time. The levels of affectual solidarity remained stable for more than two decades without any significant changes (Bengton, 1996; Bengtson et al., 2000). However, an unexpected result was found among adult children who experienced maternal childhood abuse. At the baseline, adults with a history of childhood abuse (i.e., abused by mother only and abused by both parents) had lower affectual solidarity with the abusive mother compared to non-abused adult children. However, affectual solidarity with the abusive mother increased over time by

narrowing the gap between adults who were abused by both parents and those who did not experience parental abuse. As mentioned earlier, this finding is contrasted to non-abused adult children whose level of affectual solidarity with mothers did not change over time. This study is limited in explaining why this trend might occur. One possible speculation is that non-abused adult children are experiencing a ceiling effect and not achieving higher solidarity whereas abused adult children have a greater potential for increase. Another speculation is that advancing age of either abused adult children or abusive parent was functioned as a healer. It may not be appropriate to say "time will cure" because abused adult children showed significantly lower emotional closeness with the abusive parent when they were in mid-50s (baseline at Wave 1). What mattered was the time when the abuse adult children were in mid-50s until the mid-70s. It was also the time when their abusive parent shows a rapid functional decline due to very old age.

Adult children who were abused by both parents seem to get emotionally closer to their abusive parent, which may be the act of forgiving the abusive parent. Further research may explore whether aging itself can be a healing mechanism of the past adverse event. Conducting qualitative research will be beneficial to better understand complex dynamics within the dyads.

Correlates of Childhood Abuse and Affectual Solidarity

Another notable finding is that there were significant moderating effects of positive relations with others and frequency of contact with mother in the association between a history of childhood abuse and affectual solidarity with the aging mother. First, the main effect was significant that there was a positive association between positive relations with others and affectual solidarity with mother. Adults with higher

social competency are likely to be emotionally closer to their parents. An interesting finding is that this positive effect of positive relations with others on affectual solidarity was stronger for adults who were abused by both parents compared to non-abused adult children. For adult children who were abused by both parents, social competency may function as a protective factor that helps them to be more emotionally intact to their parent. Fostering social relationships based on enhanced interpersonal skills may be helpful for adults with a history of parental childhood abuse to improve emotional closeness with their abusive mother. Conversely, it could be possible that adults with a history of childhood abuse who have recovered a quality relationship with their abusive parent are also capable of building up functional relations with others because they have resolved the origin of their problem – the dysfunctional relations with their own parent.

Furthermore, a similar result was found in the association between frequency of contact and affectual solidarity with mother. For both abused and non-abused adult children, more frequent contact was associated with higher affectual solidarity with mother. However, the positive effect of frequency of contact was stronger for adults who were abused by their mother. In other words, for adults who experienced maternal childhood abuse, less frequent contact indicated lower affectual solidarity with the abusive mother, but as the frequency of contact increased, the gap of affectual solidarity between abused and non-abused adults was closely narrowed.

This result was consistent with previous studies based on the intergenerational solidarity theory that associational solidarity and affectual solidarity are highly correlated (Lawton et al., 1994; Hogerbrugge & Komter, 2012). Similar to what was established in general parent-adult child relationships, more frequent interactions may indicate greater

emotional cohesiveness for adults with a history of childhood abuse. This may provide a clue that intergenerational solidarity theory can be used as a theoretical tool to understand the relationship between adult victims of childhood abuse and their abusive parent.

In addition, this result may show another sign of resilience among adults with a history of childhood abuse. Abused adults who have frequent contact with their abusive parent seemed to be emotionally closer to the abusive parent. Further research should be in place to explore the nature of strength or resilience of these abused adult children who have frequent contact with their parents. Several mechanisms may interplay including severity of abuse, type of abuse, experience of turning point in life, or remarkable change of their abusive parent, and so forth (Easton, Coohey, Rhodes, & Moorthy, 2013).

Furthermore, future research may examine the association between affectual solidarity with the abusive parent and individual well-being among adults with a history of childhood abuse. According to intergenerational solidarity theory, higher affectual solidarity means better mental health outcomes. For adults with a history of childhood abuse, it is hasty to conclude that for better mental health outcomes, they should be more emotionally closer to their parents. More careful assessment of variations among abused adult children will be needed to provide appropriate intervention strategies for each particular case. What is obvious is that the unresolved issue from the past should be properly addressed so that it no longer affects adults with a history of childhood abuse in the relationships with their abusive parent.

Lastly, several studies on adults with a history of childhood abuse tend to focus on negative aspects of their experiences and consequences (Repetti et al., 2002). However, this study suggests the importance of examining positivity that abused adult

children may hold, such as resilience or post traumatic growth, considering that some abused adult children did show a hint of regaining relationship quality with their abusive mother. As there is a well-established literature, such as the field of post traumatic growth (Calhoun & Tedeschi, 1999, 2001), further research may investigate who recovers better from the past adversities, how to facilitate building up this positive strength, and what consequences are followed on those 'resilient' abused adults.

Limitations

This study has limitations to consider. First, childhood abuse was measured by self-reported retrospective questions which may involve recall errors (Raphael, 1987). However, the recollection of childhood abuse can still be a good measurement because it is based on the adult victims' perceived assessment of the past parent-child relationship quality. Future research should incorporate a prospective research design to better assess the consequences of childhood abuse.

Because this study used the specific study sample of adults with living mothers, it may be limited to generalize the study findings. Also, due to a small sample size of living fathers, this study did not analyze the effect of childhood abuse on later-life relationships with the abusive father. It warrants future research to examine the effects of childhood abuse on later-life relationships with the abusive father and compare how the relational patterns will differ from those of mothers. It has been reported that a greater number of fathers than mothers were perpetrators of childhood abuse, and paternal abuse tends to be much more severe leading to devastating effects on the victims (National Child Abuse and Neglect Data System, 2013).

In addition, although this study employed rigorous longitudinal data analysis techniques, it has potential limitations inherited in the longitudinal studies (Goldstein, 2009). The first problem is related to the attrition of the study sample. It was difficult to clearly identify the differences between the initial and final samples other than due to the death of the parent. Secondly, it was difficult to rule out the effects of third explanatory variables, such as current life events that can impact the associations between key variables.

Lastly, it is worth noting the unique characteristics of the WLS dataset. The respondents were limited to those living in the Wisconsin area. Also, the majority of participants in the WLS tend to be non-Hispanic White, economically wealthy, and having at least a high school education, which limits the generalizability of the study findings.

Implications

Despite the limitations, this study provides important implications for theory and practice. First, although Bengton's intergenerational solidarity theory has been focused on explaining issues around general parent-adult child relationships (Bengton, 1996), this study supports that intergenerational solidarity theory can be served to understand later-life intergenerational relationships between adults with a history of childhood abuse and their abusive parent. Therefore, an interesting future direction is to examine the effects of childhood abuse on other issues related to later-life intergenerational relationships through the lens of intergenerational solidarity theory.

In terms of practice implications, the findings of this study can inform practitioners that there must be some unmet needs among adults with a history of

childhood abuse, such as counseling services, that may occur in the relationships with their abusive parent. Also, direct practitioners need to be aware of the potential vulnerabilities and difficulties of this group of adult children – who used to be abused by their own parents and continue to be involved in the relationship with their abusive parent. To inform practitioners of specific intervention strategies, further research should be conducted on this issue. When it comes to the intergenerational relationships that involve past abuse history, research has been conducted until the child victim becomes an adolescent (Moylan et al., 2010; Perry, 2001; Trickett, Negriff, & Peckins, 2011). However, the current study urges the importance of examining the effects of childhood abuse on intergenerational relationships in the later stages of life.

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Appendix

Table 1

Descriptive Statistics of Key Variables

Variables	Never experienced abuse[d] (n = 1,304)	Abused by mother only[e] (n = 86)	Abused by father only[f] (n = 174)	Abused by both parents[g] (n = 81)
	Grand Mean (*SD*)	Grand Mean (*SD*)	Grand Mean (*SD*)	Grand Mean (*SD*)
Affectual solidarity with mother[a]	2.55 (.60) [d/e, d/g]	1.99 (.74) [d/e, e/f, e/g]	2.46 (.62) [e/f, f/g]	2.27 (.64) [d/g, e/g, f/g]
Age	63.80 (7.43)	63.80 (7.43)	63.80 (7.43)	63.84 (7.43)
Hostility	1.04 (1.53) [d/e, d/f, d/g]	1.28 (1.63) [d/e, e/g]	1.39 (1.71) [d/f, f/g]	1.57 (1.83) [d/g, e/g, f/g]
Positive relations with others	18.79 (3.70) [d/f]	18.98 (3.75) [e/f, e/g]	18.17 (3.83) [d/f, e/f]	18.53 (3.83) [e/g]
Frequency of contact with mother	9.58 (5.19) [d/e, d/f]	7.82 (4.67) [d/e]	8.19 (4.62) [d/f]	8.72 (4.66)
Educational attainment	13.65 (2.17)	13.74 (2.19)	13.70 (2.18)	13.56 (2.19)
	%	%	%	%
Male	45.17	27.34	55.41	43.54
Married[b]	80.22	75.66	77.78	75.03
Good or excellent health[c]	87.32	85.39	82.37	79.20

Notes. One-way analysis of variance (ANOVA) tests with post-hoc Tukey tests were conducted to evaluate significant differences among the groups. Significant subgroup differences are denoted as follows: [d/e] = never experienced abuse vs. abused by mother only; [d/g =] never experienced abuse vs. abused by father only; [d/g =] never experienced abuse vs. abused by both parents; [e/f] = abused by mother only vs. abused by father only; [e/g] = abused by mother only vs. abused by both parents; [f/g] = abused by father only vs. abused by both parents. Values are reported prior to multiple imputation. [a]Affectual solidarity with mother: 1 (*not at all close* and *not very close*), 2 (*somewhat close*), 3 (*very close*). [b]Married: 1 (*married*), 0 (*non-married*). [c]Good health: 1 (*good or excellent health*), 0 (*very poor, poor, or fair health*).

Table 2

Descriptive Statistics for Time-Varying Measures across Waves

	Wave 1 (n = 1,968)	Wave 2 (n = 635)	Wave 3 (n = 341)
Affectual solidarity with mother[a]			
Mean (S.D.) or %	3.47 (.66)	3.50 (.69)	3.56 (.67)
Range	1 ~ 4	1 ~ 4	1 ~ 4
Missing cases (%)	1 (.05)	1,323 (67.23)	1,783 (90.60)
Married[b]			
Mean (S.D.) or %	83.59	71.04	55.59
Range	0, 1	0, 1	0, 1
Missing cases (%)	1 (.05)	179 (9.10)	470 (23.88)
Good or excellent health status[c]			
Mean (S.D.) or %	88.41	68.80	57.01
Range	0, 1	0, 1	0, 1
Missing cases (%)	5 (.25)	378 (19.21)	621 (31.55)
Age			
Mean (S.D.) or %	54.14 (.49)	65.14 (.49)	72.14 (.49)
Range	53 ~ 56	64 ~ 67	71 ~ 74
Missing cases (%)	0 (0)	0 (0)	0 (0)
Hostility			
Mean (S.D.) or %	1.83 (2.70)	1.10 (2.12)	.94 (1.93)
Range	0 ~ 21	0 ~ 21	0 ~ 18
Missing cases (%)	31 (1.58)	330 (16.77)	676 (34.35)
Positive relations with others			
Mean (S.D.) or %	19.48 (3.65)	17.09 (4.14)	19.46 (3.97)
Range	5 ~ 24	3 ~ 24	3 ~ 24
Missing cases (%)	7 (.36)	315 (16.01)	624 (31.71)
Frequency of contact with mother			

Mean (S.D.) or %	108.96 (129.00)	127.76 (145.90)	125.21 (131.42)
Range	0 ~ 950	0 ~ 730	0 ~ 730
Missing cases (%)	81 (4.12)	1,344 (68.29)	1,819 (92.43)

Notes. Values are reported prior to data transformation and multiple imputation. [a]Affectual solidarity with mother: 1 (*not at all close*), 2 (*not very close*), 3 (*somewhat close*), 4 (*very close*). [b]Married: 1 (*married*), 0 (*non-married*). [c]Good health: 1 (*good* or *excellent health*), 0 (*very poor, poor,* or *fair health*).

Table 3

Growth Curve Models Predicting Affectual Solidarity with Mother[a]

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept (β_0)	2.49***	2.50***	2.56***	2.63***	2.57***	2.58***
Male (γ_{01})				-0.12***	-0.04	-0.05†
Education (γ_{02})				-0.01*	-0.01*	-0.01†
Abused by mother only (γ_{03})			-0.56***	-0.56***	-0.50***	-0.46***
Abused by father only (γ_{04})			-0.11*	-0.09†	-0.04	-0.03
Abused by both parents (γ_{05})			-0.29***	-0.29***	-0.25**	-0.25**
Age[b] (β_1)		0.00†	0.00	0.00	0.00	0.00
Male (γ_{11})						
Education (γ_{12})						
Abused by mother only (γ_{13})			-0.01	-0.01	-0.01	-0.01
Abused by father only (γ_{14})			0.00	0.00	0.00	0.00
Abused by both parents (γ_{15})			0.02†	0.02†	0.01†	0.02*
Hostility (β_2)					-0.01	-0.01
Male (γ_{21})						
Education (γ_{22})						
Abused by mother only (γ_{23})						0.06
Abused by father only (γ_{24})						-0.00
Abused by both parents (γ_{25})						0.01
Positive relations with others (β_3)					0.02***	0.01**
Male (γ_{31})						
Education (γ_{32})						
Abused by mother only (γ_{33})						0.01
Abused by father only (γ_{34})						0.02
Abused by both parents (γ_{35})						0.04*

Frequency of contact with mother (β_4)					0.03***	0.02***
Male (γ_{41})						
Education (γ_{42})						
Abused by mother only (γ_{43})						0.03*
Abused by father only (γ_{44})						0.01
Abused by both parents (γ_{45})						0.01
Married[c] (β_5)				-0.06†	-0.06†	-0.06†
Good or excellent health[d] (β_6)				0.04	0.04	0.04
Variance components						
Level-1 variance (σ^2)	0.18	0.14	0.14	0.14	0.15	0.15
Level-2 intercept variance (τ_{00})	0.21***	0.23***	0.21***	0.21***	0.18***	0.18***
Level-2 age slope variance (τ_{11})		0.00***	0.00***	0.00***	0.00***	0.00***

Notes. [a]Affectual solidarity with mother: 1 (*not at all close* and *not very close*), 2 (*somewhat close*), 3 (*very close*). [b]Age was mean-centered at age 60. [c]Married: 1 (*married*), 0 (*non-married*). [d]Good health: 1 (*good or excellent health*), 0 (*very poor, poor, or fair health*). Significance levels were denoted as: † $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

Random Effects Model Predicting Affectual Solidarity with Mother[a] using Two-wave Data (1993 and 2004)

	Model 1 b (S.E.)	Model 2 b (S.E.)
Abused by mother only	-.50 (.07)***	-.47 (.07)***
Abused by father only	-.05 (.05)	-.03 (.05)
Abused by both parents	-.28 (.06)***	-.26 (.07)**
Hostility	-.02 (.01)*	-.02 (.01)*
Positive relations with others	.01 (.00)**	.01 (.00)*
Frequency of contact with mother	.03 (.00)***	.02 (.00)***
Frequency of contact with mother *Abused by mother only		.02 (.01)*
Male	-.03 (.03)	-.03 (.03)
Education	-.02 (.01)*	-.02 (.01)*
Married[b]	-.04 (.05)	-.04 (.05)
Good or excellent health[c]	.05 (.04)	.05 (.04)
Constant	2.55 (.06)***	2.55 (.06)***
Level 1 variance	.43	.43
Level 2 variance	.40	.39

Notes. Model 2 only reports a significant interaction term. [a]Affectual solidarity with mother: 1 (*not at all close* and *not very close*), 2 (*somewhat close*), 3 (*very close*). [b]Married: 1 (*married*), 0 (*non-married*). [c]Good health: 1 (*good or excellent health*), 0 (*very poor, poor, or fair health*).
Significance levels were denoted as: † $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

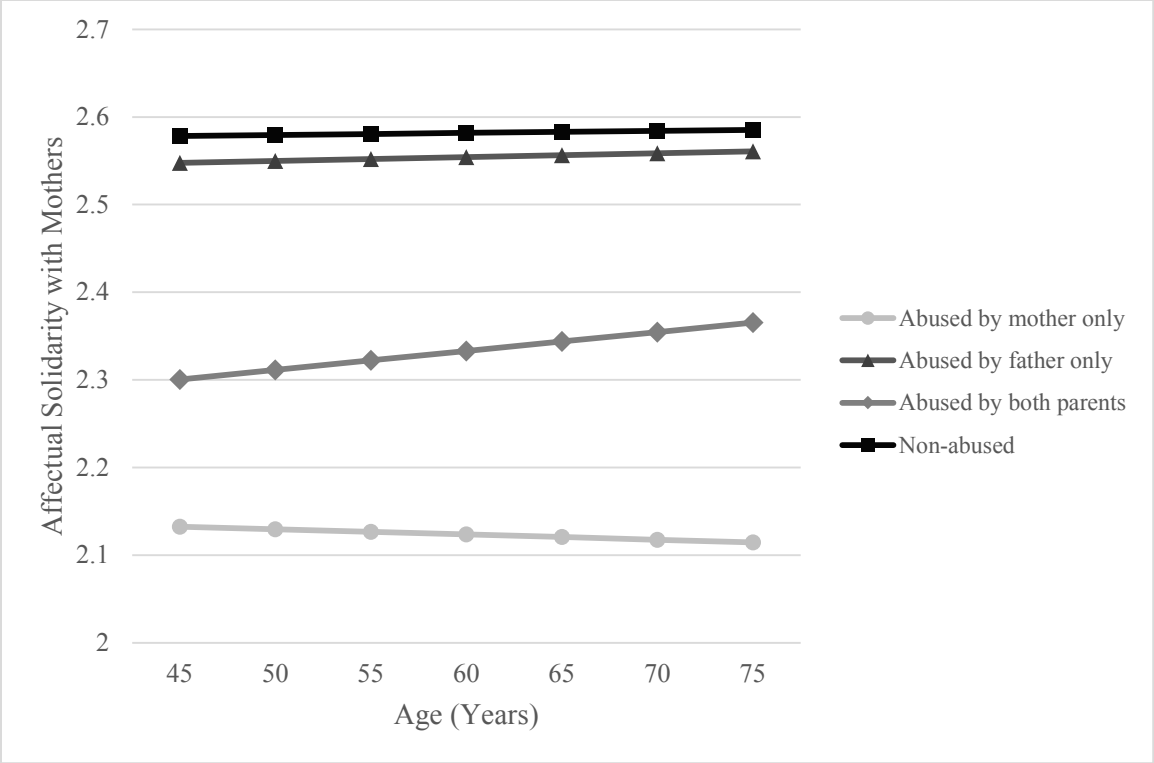

Figure 1. Cross-level Interaction between Age and Abuse Status. Age was mean-centered at 60 years old.

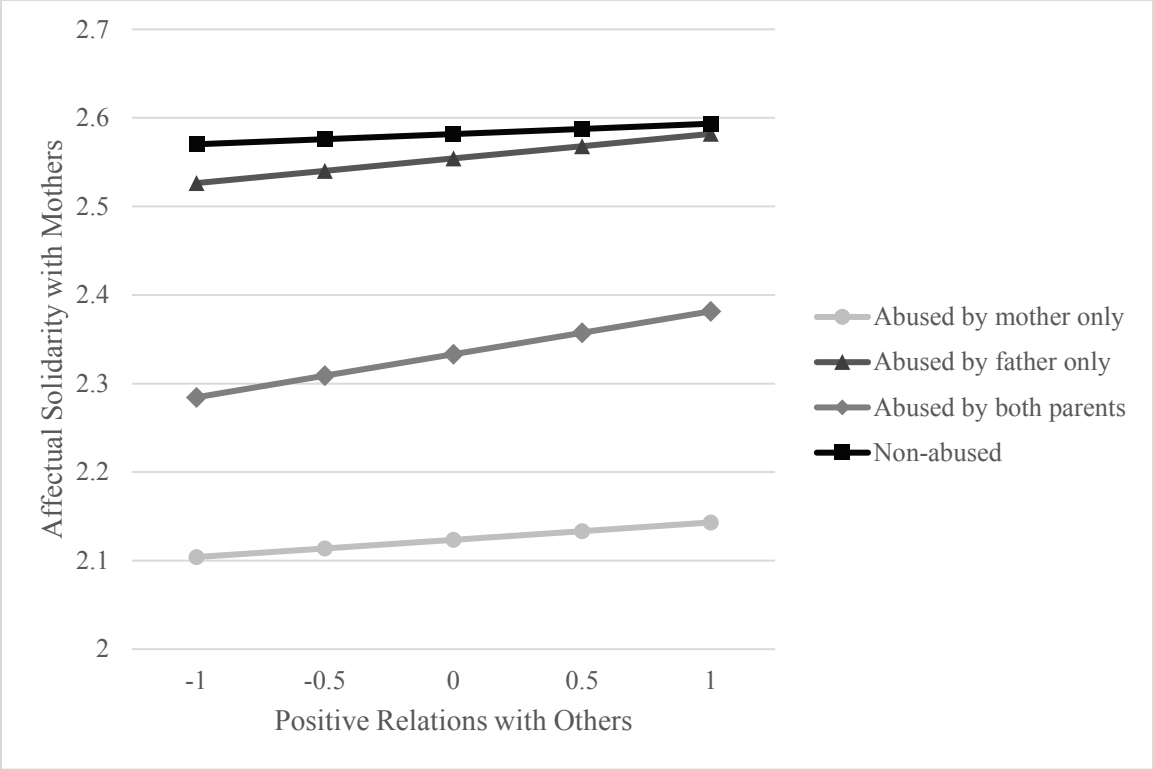

Figure 2. Cross-level Interaction between Positive Relations with Others and Abuse Status. Positive relations with others was mean-centered.

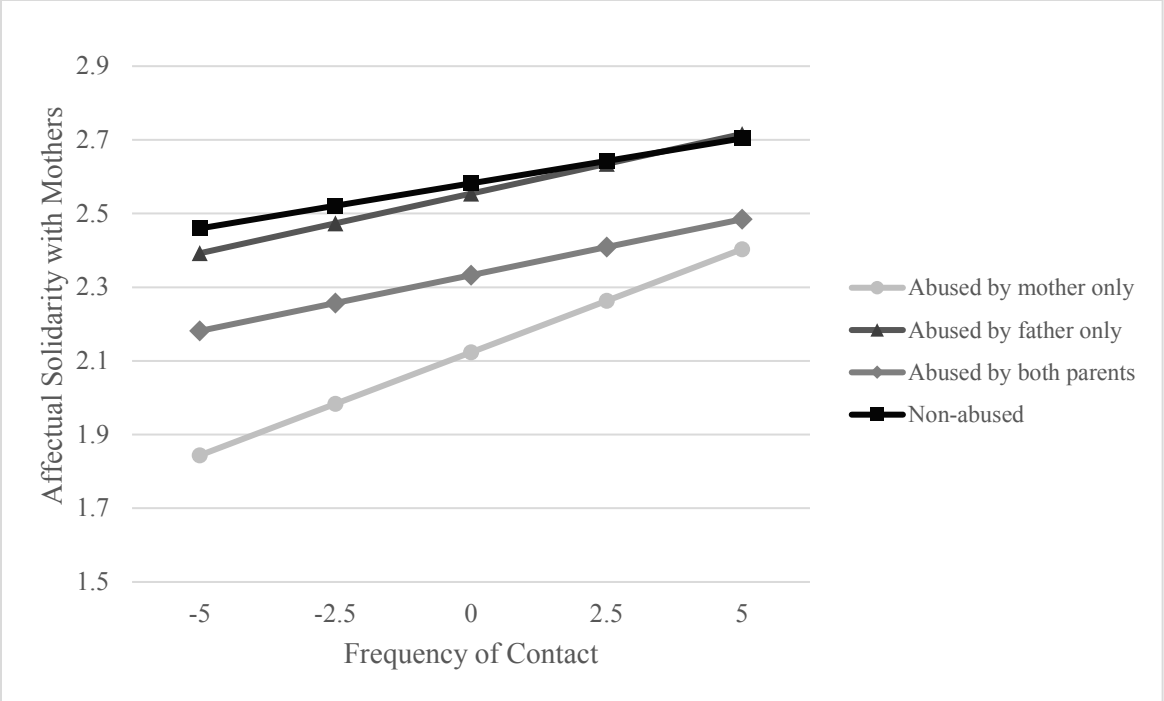

Figure 3. Cross-level Interaction between Frequency of Contact with Mother and Abuse Status. Frequency of contact with mother was square-rooted and mean-centered.

Chapter IV: Paper III. Caring for My Abuser: Threats to Self-esteem

Abstract

This study focused on adult victims of childhood abuse and examined whether and how providing care to the abusive parent is associated with depressed affect. I also investigated the mediating effect of self-esteem in the association between caregiving for the abusive parent and depressed affect. Using data from the 2004-2006 National Survey of Midlife Development in the United States, 219 filial caregivers were analyzed.

Approximately 40% of the study sample experienced verbal, physical, or severe physical abuse in childhood. Also, the results of mediation analysis showed that in the model unadjusted for self-esteem, providing care to the abusive parent was associated with greater depressed affect above and beyond the effects of socio-demographic characteristics and caregiving demands. When adding self-esteem to the model, providing care to the abusive parent was associated with lower self-esteem, which was then associated with greater depressed affect. The mediation path involving providing care to the abusive parent, self-esteem, and depressed affect was statistically significant, confirming self-esteem as a significant mediator.

The results of this study provide important clinical implications. Adults with a history of childhood abuse should be acknowledged as a high risk group of caregivers so that they gain attention for social work interventions. Practitioners can help them access proper support resources, such as counseling or respite care services. In addition, evidence-based programs should be designed and implemented to address the unique challenges and concerns of adults with a history of childhood abuse who provide care to their abusive parent in old age.

Introduction

It is well-documented that parental childhood abuse has long-term negative consequences on the victims throughout the life course (Corwin & Keeshin, 2011). Developing a secure bond with parents is an important developmental task for a child because the relationship experience with parents serves as the prototype of future social relationships (Mikulincer & Shaver, 2007). This argument is supported by research finding that parental childhood abuse is associated with relational difficulties in adulthood (Riggs, 2010). Adults with a history of childhood abuse have reported a greater fear of intimacy (Paradis & Boucher, 2010), interpersonal conflicts (Messman-Moore & Coates, 2007), poor quality of later intimate relationships (Riggs, Cusimo, & Benson, 2011), and limited access to social support (Sperry & Widom, 2013).

Despite established literature related to the effects of childhood abuse on adult interpersonal relationships, little attention has been given to understanding how a history of childhood abuse affects later-life relationships with the abusive parent. People may assume that the adult victims sever relationships with their abusive parent, but empirical and clinical evidence suggests that some adults with a history of childhood abuse maintain a relationship with their abusive parent (Kong & Moorman, 2015; Span, 2014). Particularly, little is known about what it is like to provide care to the abusive parent when the parent gets old and requires long-term care assistance. Considering that caregiving for a non-abusive parent invokes substantial stress (Hansen, Slagsvold, & Ingebretsen, 2013), it is foreseeable that providing care to the abusive parent may lead to mental health issues for abused caregivers.

This study aims to address the gap in the literature by examining the caregiving experience of adult victims of childhood abuse. Using the stress process and life course perspectives, the current study examines the association between caregiving for the abusive parent and depressed affect. It also investigates the mediating effect of self-esteem in the aforementioned association. A sample of filial caregivers was analyzed using data from the 2004-2006 National Survey of Midlife Development in the United States (MIDUS II). This study has significant contributions to the existing literature: It will add new knowledge to the literature by acknowledging the vulnerability of filial caregivers with a history of childhood abuse, and provide directions for intervention strategies to address their specific challenges and concerns.

Literature review

Theoretical Consideration: Stress Process Model and Life Course Perspective

To examine whether and how providing care to the abusive parent affects depressed affect, this study employed theoretical frameworks of stress-process model (SPM) and life-course perspective. First, the SPM (Pearlin, 1989) focuses on social aspects of stress and the process of how social stress impacts individual health or well-being. SPM has been used in the caregiving literature to explain how chronic demands of caregiving are manifested as negative caregiver outcomes (Pearlin, Mullan, Semple, & Skaff, 1990).

In the context of caregiving, stressors include characteristics of caregiver (e.g., age, gender, ethnicity, socio-economic status), conditions of care recipient (e.g., daily dependencies, problematic behaviors and cognitive status), and caregiving demands (e.g., subjective feeling of overload, burnout; Pearlin, 1989). These stressors result in stress

outcomes that involve diminished physical, mental health and well-being, or disrupted social and cognitive functioning (Pearlin et al., 1990). Stressors do not solely predict stress outcomes; stress mediators intervene in the relationship between stressors and stress outcomes or change the direction/magnitude of stress effects on stress outcomes (Pearlin & Schooler, 1978; Thoits, 1995). The mediators include psychological resources, such as self-esteem and mastery, or specific coping responses, such as problem-focused coping and emotion-focused coping (Thoits, 1995).

Integrating SPM with the life course perspective helps to better understand the nature and process of caregiver stress. A central tenet of the life course perspective is that life trajectories are continuous, and thus early childhood experiences and conditions have profound impacts on the rest of the life course (Elder, Johnson, & Crosnoe, 2003). Ample evidence exists that adversities experienced in childhood are the root cause of negative consequences in later-life health and well-being (Nurius, Green, Logan-Greene, & Borja, 2015).

The SPM and life course perspective can provide useful explanations when understanding filial caregivers with a history of parental childhood abuse. First, Pearlin (2010) stated that earlier traumatic experience may be a distal stressor that can explain current stress-related outcomes. This may be very true for adults with a history of childhood abuse that the experience of being abused may be the key stressor leading to mental health problems later when providing care to the abusive parent.

In addition, based on the integrated frameworks, it can be speculated that self-esteem can be the mechanism that explains why filial caregivers with a history of parental childhood abuse suffer in the process of caregiving. Life course studies argue that adults

with a history of childhood abuse may have low self-esteem (Sachs-Ericsson et al., 2010; Steele, 1986). Children who are raised by abusive caregivers may perceive themselves as unworthy, unimportant, and unlovable, and this negative view toward self could persist through a lifetime (Riggs, 2010). The problematic issue is that self-esteem is the key psychological resource that can determine how individuals cope with stressful situations (Steele, 1986). High self-esteem can mitigate the negative effect of caregiving on mental health outcomes because it may lead the individuals to use effective coping strategies (Thoits, 1995). This implies that filial caregivers with a history of childhood abuse may be distressed because they have lack of confidence/belief that they can cope well with caregiving demands.

History of Childhood Abuse as a Potential Stressor

Tenuous evidence exists in terms of how childhood abuse affects caregiving for the abusive parent. Kong and Moorman (2015) is the first study that provided empirical evidence that caregiving for the abusive parent was associated with more frequent depressive symptoms. Using the 2004-2005 Wisconsin Longitudinal Study, the study analyzed 1,001 filial caregivers at the age of 65. About 20% of the study sample reported the experience of being verbally, physically, or sexually abused by either or both parents. The key finding was that for adults with a history of childhood abuse and neglect, providing care to the abusive parent was significantly associated with more frequent depressive symptoms than non-maltreated caregivers. In addition, the use of emotion-focused coping (i.e., avoidance, denial, or disengagement) was more harmful for the abused caregivers, strengthening the negative effect of caregiving for the abusive parent.

Although the direct effects of childhood abuse on caregiving outcomes have not been examined, some studies suggest that the quality of childhood relationship with parents has a lingering impact on contemporary caregiving behaviors. Kong and Moorman (in press) found that a history of childhood abuse reduced the frequency of providing emotional support. Also, in a study examining adult children in midlife (29-68 years old), the memory of experiencing parental rejection or harsh discipline around the age of 7th grade undermined the contemporary parent-adult child relationships, which in turn reduced assistance to aging parents (Whitbeck, Simons, & Conger, 1991). Using the same study sample, Whitbeck and colleagues (1994) also found that recollections of parental rejection diminished filial concern regarding parents' well-being, but this filial concern was a significant predictor increasing instrumental and emotional support to parents.

Self-esteem as a Potential Mediator

Empirical evidence suggests that adults with a history of childhood abuse may have low self-esteem. The failure to establish a secure relationship with parents could jeopardize a child developing a strong sense of self-worth (Widom, Kahn, Kaplow, Kozakowski, & Wilson, 2007). Children who experienced inconsistent and abusive care may believe that their own inner feelings and desires are relatively unimportant. They perceive themselves as being unworthy and unlovable, and this internalized belief persists into adulthood undermining healthy interpersonal relationships (Riggs, 2010). Low self-esteem, however, may lead to mental health problems. Studies suggest that adults with a history of childhood abuse may suffer from depression, anxiety, chronic homelessness, and drug and alcohol problems, and low self-esteem may explain why abused adults deal

with the negative mental health concerns (Finzi-Dottan & Karu, 2006; Sachs-Ericsson et al., 2010, Stein, Leslie, & Nyamathi, 2002).

In the caregiving literature, self-esteem plays a protective role in reducing caregiver stress. Au and colleagues (2010) found high self-efficacy of controlling negative thoughts related to caregiving tasks lowered depressive symptoms of caregivers. Rabinowitz and colleagues (2007) also found that caregivers' self-efficacy reduced health risk behaviors such as smoking and lack of exercise, which in turn improved physical health of caregivers. These findings imply that caregivers' positive appraisal of being able to cope effectively with caregiving demands can prevent negative caregiver outcomes. This may indicate that for adults with a history of childhood abuse, caregiving for the abusive parent can be particularly challenging because they have lack of resilient psychological resources (i.e., self-esteem) in coping with caregiving demands and burdens. This could ultimately impair psychological well-being of the abused filial caregivers.

Based on the theoretical consideration and the review of literature, this study aims to examine whether and how providing care to the abusive parent is associated with depressed affect. This study also investigates the mediating effect of self-esteem in the association between a history of childhood abuse and caregiver depressed affect. Hypotheses were formulated as:

Hypothesis 1. Caring for the abusive parent will be associated with greater depressed affect, controlling for caregiver characteristics and caregiving context characteristics.

Hypothesis 2. Self-esteem will mediate the association between caring for the abusive parent and depressed affect.

Methods

Sample

This study used data from the National Survey of Midlife Development in the United States (MIDUS). The first MIDUS was conducted in 1995-1996 surveying a nationally representative sample of 7,108 non-institutionalized English-speaking adults. The MIDUS II was conducted in 2004-2006, and a total of 4,963 adults, 69.8% of the MIDUS I respondents, participated in the telephone interview and 81% of these respondents (n = 4,041) responded to a self-administered questionnaire (Ryff et al., 2012). The final study is comprised of 219 filial caregivers based on the caregiving items available in the MIDUS II. This study sample has given personal care for a period of one month or more to their father or mother because of a physical or mental condition, illness, or disability during the last 12 months.

Measures

Depressed affect. Depressed affect was measured by six items suggested by Mroczek and Kolarz (1998). Items include "During the past 30 days, how much of the time did you feel (a) so sad nothing could cheer you up; (b) nervous; (c) restless or fidgety; (d) hopeless; (e) that everything was an effort; and (f) worthless?" Participants rated the items on a 5-point scale (1 = *none of the time*, 2 = *a little of the time*, 3 = *some of the time*, 4 = *most of the time*, 5 = *all of the time*). The total score was calculated by averaging the six items, and the internal consistency was high with Cronbach's alpha value of .86. To correct a positive skew, the variable was top-coded at 3.

Childhood abuse. Parental childhood abuse was assessed by three dimensions: verbal abuse, physical abuse, and severe physical abuse. The items were drawn from the Conflict Tactics Scale (Straus, Gelles, & Steinmetz, 1980), which has been widely used in family violence research (Straus, 2007). Verbal abuse was measured by the item: "During your childhood, how often did your mother/father or the woman/man raised you, insult you or swear at you, sulk or refuse to talk to you, stomp out of the room, do or say something to spite you, threaten to hit you, smash or kick something in anger?" Physical abuse was measured by the item: "During your childhood, how often did your mother/father or the woman/man raised you, push, grab, or shove you, slap you, throw something at you?" Severe physical abuse was measured by the item: "During your childhood, how often did your mother/father or the woman/man raised you, kick, bite, or hit you with a fist, hit or try to hit you with something, beat you up, choke you, burn or scald you?" Participants rated each item on a 4-point scale (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *often*). Those who reported the *sometimes* or *often* categories were considered as being abused.

In order to assess the effect of being abused by a particular parent on caregiving outcomes, the childhood abuse variable was matched with the information regarding to whom the care has been provided. This yielded the final childhood abuse variable that has three mutually exclusive categories: (a) no history of childhood abuse and caregiving for a parent (reference category); (b) experienced parental abuse and caring for that abusive parent; and, (c) experienced parental abuse and caring for a non-abusive parent. When a caregiver provided care for both an abusive parent and a non-abusive parent, the case was coded as (b) experienced parental abuse and caring for that abusive parent.

Self-esteem. Self-esteem was assessed by six items from the Rosenberg's Self-esteem scale (Rosenberg, 1965). The items include "I take a positive attitude toward myself," "At times I feel that I am no good at all," "I am able to do things as well as most people," "I wish I could have more respect for myself," "On the whole, I am satisfied with myself," "I certainly feel useless at times." Participants rated the items on a 7-point scale (1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *a little disagree*, 4 = *neither agree or disagree*, 5 = *a little agree*, 6 = *somewhat agree*, 7 = *strongly agree*). The total score was calculated by averaging the six items, and the reliability for the scale was high with Cronbach's alpha value of .83.

Caregiving context. Caregiving context was assessed by three dimensions: years of caregiving, weekly hours of caregiving, and coresidence with care recipient. First, years of caregiving was calculated by subtracting the date of respondents started caregiving from the date when they completed the telephone survey. Weekly hours of caregiving was to assess the intensity of caregiving. Respondents were asked how many hours per week on average they helped the care recipient. Coresidence with care recipient was another measure to assess the intensity of caregiving. Respondents were asked whether their care recipient lived with them in their household during the period of providing care (1 = *yes*, 0 = *no*).

Covariates. Several covariates were added to control for socio-demographic characteristics, including respondents' age, gender, race (*White*, *others*), marital status (*married*, *non-married*), and self-rated health (*excellent*/*very good*/*good*, *fair*/*poor*), and education (1 = *no school/some grade school* ~ 12 = *PhD-level degree*).

Analytic Strategy

A mediation analysis with ordinary least squares (OLS) regression was performed. Based on the causal steps strategy proposed by Baron and Kenny (1986), multiple steps were followed to estimate the mediation model. First, an OLS model was conducted to estimate the associations between caring for abusive/non-abusive parent and depressed affect, controlling for socio-demographic and caregiving related characteristics (Model A). Then, two additional OLS models were estimated to examine the mediating effect of self-esteem: the association between caring for abusive/non-abusive parent and self-esteem (Model B) and the association between self-esteem and depressed affect (Model C) were estimated. Finally, Model A added self-esteem (Model A') to examine whether the effects of caring for abusive/non-abusive parent would be reduced by adding the mediator, self-esteem. The significance of mediation was determined by a product of coefficients approach with standard errors calculated by delta method. The mediation effect coefficients and *p*-values were calculated using the *sureg* command in Stata version 13.1.

Completed data were provided by 65.8% of participants. The self-esteem variable reported the most missing data (n = 45; 20.6% of the total sample size). To address missing cases, multiple imputation was conducted using the Stata imputation by chained equations procedure by generating twenty imputed datasets (Royston, 2004).

Results

Table 1 presents summary statistics for the study sample of filial caregivers. More than a quarter of the caregivers (26.03%) reported experienced verbal, physical, or severe physical abuse and provided care to the abusive parent. Another 13.70% experienced

verbal, physical, or severe physical abuse and provided care to their non-abusive parent. Approximately one third of the caregivers (33.79%) were male with an average age of 52.05 years old. The majority was White (82.65%), married (63.47%), and reported good, very good, or excellent health status (85.39%). Approximately, one third of the caregivers (32.88%) lived with their care recipient when providing care, and about half (49.32%) provided care for more than 14 hours a week. Most caregivers (71.24%) had been providing care less than three years.

Figure 1 shows the result of one-way ANOVA comparing the mean levels of depressed affect among three groups of filial caregivers: no history of parental abuse, experienced parental abuse, caring for the abusive parent, and experienced parental abuse, caring for a non-abusive parent. There was a significant difference among the groups ($F = 8.59$, $p < .01$). Specifically, abused adults who cared for the abusive parent ($M = 1.83$, $SD = .60$) had significantly higher depressed affect than non-abused adults ($M = 1.45$, $SD = .45$). There was no significant difference in the mean levels of depressed affect between adults who were caring for the abusive parent and those who had been abused but were caring for their non-abusive parent ($M = 1.55$, $SD = .54$).

Table 2 provides the results of mediation analyses. In the model unadjusted for self-esteem (Model A), for those who experienced parental childhood abuse, providing care to the abusive parent was associated with higher depressed affect ($b = .20$, $p < .05$) above and beyond the effects of socio-demographic (gender, race, marital status, age, educational attainment, self-reported health status) and caregiving characteristics (coresidence with care recipient, weekly hours of caregiving, duration of caregiving). Providing care to a non-abusive parent was not significantly associated with depressed

affect. Assessing the association between caring for abusive/non-abusive parent and self-esteem (Model B), providing care to the abusive parent was associated with lower self-esteem (b = -.44, p < .05) whereas providing care to a non-abusive parent was not significantly associated with self-esteem. In addition, self-esteem was associated with lower depressed affect (Model C; b = -.23, p < .001). In Model A' where adding the self-esteem variable into Model A, providing care to the abusive parent was no longer significantly associated with depressed affect, indicating a full mediating effect of self-esteem according to Baron and Kenny (1986). Based on the product of coefficients approach, the mediation path that involved providing care to abusive parent, self-esteem, and depressed affect was statistically significant (b = .10, p < .05).

Discussion

Based on the stress process model and life course perspective, this study focused on adult victims of childhood abuse and their caregiving for the abusive parent. It was hypothesized that providing care to the abusive parent would be associated with greater depressed affect and self-esteem would mediate the association. This study found support for the hypotheses.

Caregiving of the Abusive Parent: Stress Proliferation

Consistent with the findings of Kong and Moorman (2015), providing care to the abusive parent was associated with greater depressed affect. The current study has unique contributions as it addressed lingering questions of Kong and Moorman (2015). First, because of the limited availability of variables in the secondary data set, Kong and Moorman (2015) did not control for characteristics related to caregiving context, which are known to be strong predictors of caregiver depression (e.g., Pioli, 2010). In this study,

three variables – weekly hours of caregiving, years of providing care, and coresidence with care recipient were included to control for the effect of caregiving burden. Also, Kong and Moorman (2015) used the data from the Wisconsin Longitudinal Study, of which samples were collected only within the state of Wisconsin. The current study employed MIDUS II that covered nationally representative geographical areas in the sample selection.

The result that caregiving for the abusive parent is associated with negative mental health outcomes can be understood as the phenomenon of *stress proliferation*. It refers to the process in which "exposure to one stressor, regardless of whether it is an event or more chronic hardship, may lead over time to exposure to other, secondary, stressors" (Pearlin, 2010, p. 209). In conjunction with the life course perspective, the process of stress proliferation unfolds over time resulting in clustered stressors and interrelated hardships across a lifetime (Pearlin, 2010). In the case of adults with a history of childhood abuse, stress proliferates in a way that abused adult children take the role of caregiving, but this transition and experience could be particularly stressful because of the earlier experience of being abused.

Threats to Self-esteem

Another key finding is that self-esteem was a significant mediator in the association between caregiving for the abusive parent and greater depressed affect. It may be that providing care to the abusive parent is a potential trigger of the painful experience of being abused. In the context of caregiving, the concepts of role captivity and loss of self may explain why self-esteem can be threatened (Pearlin et al., 1990). Caregiving is considered to be a stressful life event that brings about changes in behaviors, role

arrangements, or interpersonal relationships (Pearlin, 2010; Ume & Evans, 2011). In this process, abused caregivers may feel the sense of being captive and feel compelled to engage in a caregiving role (Pearlin et al., 1990). Similarly, they could feel loss of self as their life has been closely bound to the care recipient, and caregiving comes to exclude self-validating activities and roles (Pearlin et al., 1990).

However, this result is concerning because previous studies suggest that self-esteem is the key psychological resource that influences the types of coping strategies that people are able to use in stressful situations (Pearlin & Schooler, 1978; Thoits, 1995). High self-esteem can give individuals the confidence and motivation to use effective coping strategies (e.g., problem-focused coping) whereas low self-esteem leads to adopt less effective or harmful coping strategies (e.g, denial or disengagement, avoidance) that may result in negative mental health outcomes (Mausbach et al., 2012).

Abuse Continued?

The possibility of continued abuse cannot be ruled out. The parent may still be abusive to their adult children, such as verbal abuse. If not being abusive, they could still be a difficult person to care for (Kong & Moorman, 2015). According to SPM literature, care recipients' behavior problems or personality traits are one of the most intense stressors that are associated with negative caregiving outcomes (Pinquart & Sorensen, 2003). Therefore, it warrants future research to investigate specific causes of what makes it difficult to provide care to the abusive parent and lead to greater depressed affect.

Limitations

This study has limitations to consider. First, the items measuring childhood abuse were based on the retrospective reports of adult children that can involve recall bias

(Ayhan & Işiksal, 2005). In addition, although the childhood abuse items are based on the Conflict Tactics Scale (Straus, 2007), these items asked several distinct behaviors in a single question (e.g., "during your childhood, how often did your mother/father or the woman/man raised you, insult you or swear at you, sulk or refuse to talk to you, stomp out of the room, do or say something to spite you, threaten to hit you, smash or kick something in anger?"). The wording of these items could be the source of measurement errors. It may explain the high percentage of caregivers with abuse history in the study sample (i.e., approximately 40% of the entire sample). In addition, this study analyzed the cross-sectional data. To make a causal argument and strengthen the robustness of the mediation model, longitudinal analysis approach should be employed. Finally, although MIDUS I is comprised of a nationally representative data, MIDUS II has the attrition issue that about 30% of the MIDUS I respondents did not participated (Ryff et al., 2012). This limits the generalizability of the study findings.

Implications

Despite limitations, this study provides important clinical implications – first of all, it will be important to acknowledge that some adult children provide care to parents despite the parents' abusive treatment in the past, and caregiving for the abusive parent may cause psychological distress above and beyond general caregiving stress. So far, this issue has rarely been discussed in the academic literature as well as social work practice. For example, the issue of abused caregivers is not addressed in any of the caregiving resources, such as Family Caregiver Alliance (https://www.caregiver.org/) or American Psychological Association Caregiver Briefcase (http://www.apa.org/pi/about/publications/caregivers/). This may indicate that filial

caregivers with a history of childhood abuse have difficulties locating proper support resources, such as counselling therapy for depression or respite care. Therefore, it will be necessary to list support resources for caregivers with a history of childhood abuse and make it available at the caregiving organizations and institutions. Also, based on further research, evidence-based programs should be designed and implemented to properly intervene and support the concerns and challenges of caregivers with a history of childhood abuse.

For direct practitioners, when addressing mental health problems of caregivers, they should assess the past parent-child relationship quality because the traumatic and dysfunctional relationship with parents can be the major source of caregiver distress. When practitioners are designing intervention programs for caregivers with a history of parental childhood abuse, focus should be made on enhancing self-esteem of these caregivers. It may help to validate the importance of their work or their choice of helping their parents. It also should be emphasized that competence, gain, or inner growth that they could achieve through the caregiving process rather than focusing solely on the negative aspects of the caregiving. When dealing with caregivers with a history of parental childhood abuse who are in extreme difficulties, the priority is to help them access to alternative long-term care services such as respite care services.

Conclusion

The consequences of childhood abuse lasts for life, and likewise intergenerational relationships persist throughout life. Some adult victims of parental childhood abuse provide care to their abusive parent. However, they continue to be challenged in the relationship: Caregivers' self-esteem may be damaged and they may experience greater

depressed affect. Now, parents and their adult children share extended time together as people live longer (Settersten, 2007). Under the current long-term care system, adult children carry the primary responsibility of caregiving for their older parents (Bookman & Kimbrel, 2011). Therefore, it will be important to be aware that adults with a history of childhood abuse are the high risk group of caregivers who require proper societal concerns and specific social work interventions.

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Appendix

Table 1

Descriptive Statistics of Filial Caregivers in MIDUS II (N = 219)

Variables	N	%	N Missing (%)
Child Abuse			20 (9.13)
No history of parental abuse	112	51.14	
Experienced parental abuse, caring for the abusive parent	57	26.03	
Experienced parental abuse, caring for a non-abusive parent	30	13.70	
Gender			0 (0)
Male	74	33.79	
Female	145	66.21	
Race			20 (9.13)
White	181	82.65	
Others	18	8.22	
Marital status			0 (0)
Married	139	63.47	
Non-married	80	36.53	
Self-reported health			0 (0)
Excellent/ very good/good	187	85.39	
Fair/poor	32	14.61	
Coresidence with care recipient			0 (0)
Yes	72	32.88	
No	147	67.12	
Weekly hours of caregiving			15 (6.85)
Less than 7 hours	50	22.83	
7 ~ less than 14 hours	46	21.00	
14 ~ less than 28 hours	57	26.03	
28 ~ less than 42 hours	21	9.59	
42 hours or more	30	13.70	
Duration of caregiving			5 (2.28)
Less than a year	87	39.73	
1 year ~ less than 3 years	69	31.51	
3 years ~ less than 5 years	22	10.05	
5 years and more	36	16.44	
	Mean (SD)	Observed Min./Max.	N Missing (%)
Age	52.05 (9.29)	34/84	0 (0)
Educational attainment	7.27 (2.33)	1/12	0 (0)
Depressed affect	1.60 (.59)	1/3.83	39 (19.63)
Self-esteem	5.66 (1.15)	2.17/7	45 (20.55)

Notes: Descriptive statistics are reported prior to correction for skew and multiple imputation. Higher mean scores indicate greater depressive symptoms and greater use of each coping strategy.

Table 2

Mediation Analyses by OLS Regression (N = 219)

	Path	Unstandardized coefficient (s.e.)
Model A	Caring for abusive parent → Depressed affect	.20 (.10)*
	Caring for non-abusive parent → Depressed affect	.10 (.13)
Model B	Caring for abusive parent → Self-esteem	-.44 (.19)*
	Caring for non-abusive parent → Self-esteem	-.45 (.26)
Model C	Self-esteem → Depressed affect	-.23 (.03)***
Model A'	Caring for abusive parent → Depressed affect	.10 (.08)
	Caring for non-abusive parent → Depressed affect	.00 (.10)
	Self-esteem → Depressed affect	-.23 (.03)***

Notes. Each Model controlled for gender, race, marital status, age, educational attainment, self-reported health status, coresidence with care recipient, weekly hours of caregiving, duration of caregiving (years). Significance levels are denoted as * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3

Mediating Effect of Self-esteem (N = 219)

	Indirect coef. (s.e.)	95% CI
Caring for abusive parent → Self-esteem → Depressed affect	.10 (.04)*	.012 - .188
Caring for non-abusive parent → Self-esteem → Depressed affect	.10 (.06)	-.020 - .225

Notes. Significance levels are denoted as * $p < .05$, ** $p < .01$, *** $p < .001$.

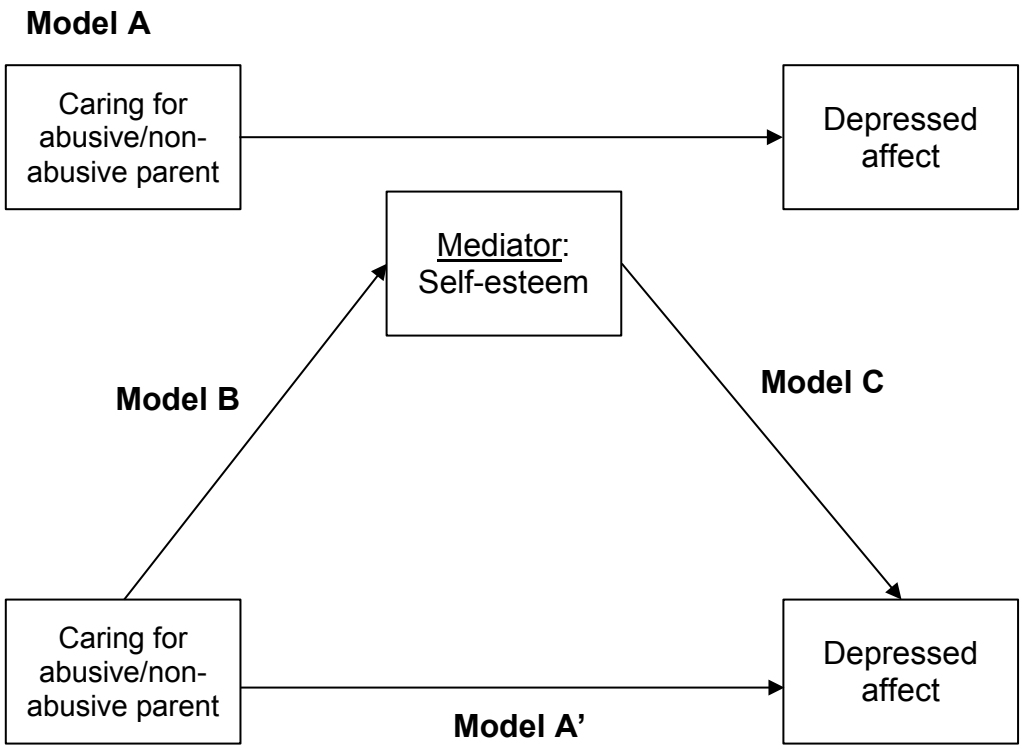

Figure 1. Mediation Model

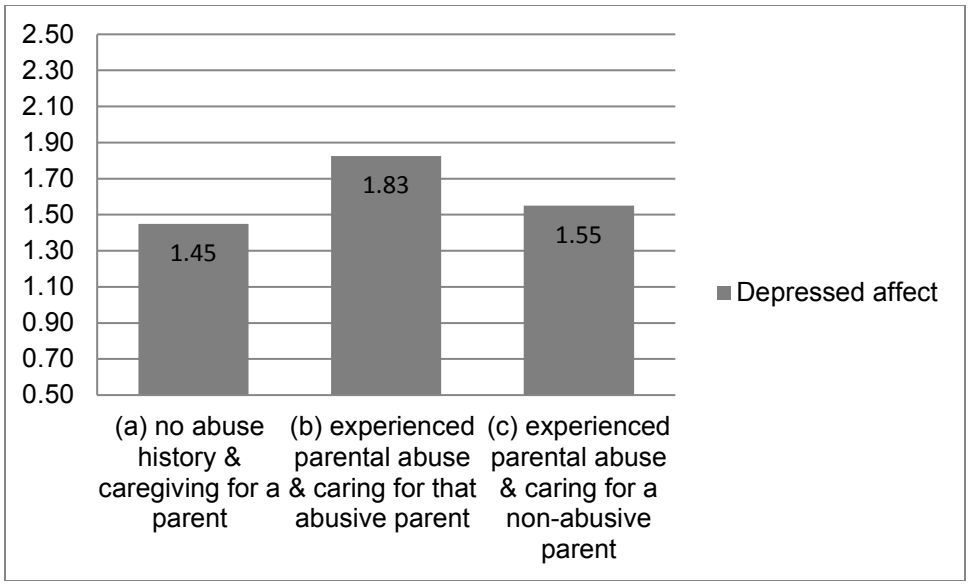

Figure 2. Mean Differences in Depressed Affect among Filial Caregivers. One-way ANOVA analysis showed that there was a significant difference ($p < .001$) between group (a) and (b).

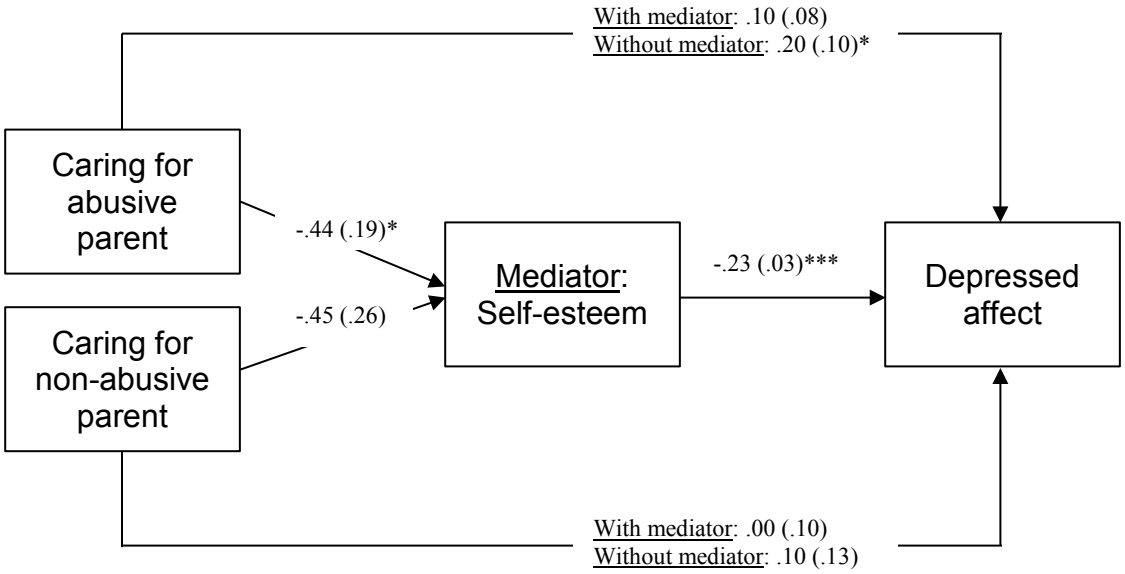

Figure 3. Mediation Analyses among Caring for Abusive/Non-Abusive Parent, Self-esteem, and Depressed Affect. Unstandardized coefficients are shown. Each Model controlled for gender, race, marital status, age, educational attainment, self-reported health status, coresidence with care recipient, weekly hours of caregiving, and duration of caregiving (years). Significance levels are denoted as * $p < .05$, ** $p < .01$, *** $p < .001$.

Chapter V: Dissertation Conclusion

This dissertation focuses on later-life relationships between adults with a history of childhood abuse and their abusive parent. Despite scant research on this topic, these three papers found empirical evidence that parental childhood abuse may undermine later-life intergenerational relationships with the abusive parent. Some abused adults provide care to their abusive parent, which can be particularly challenging, leading to greater psychological distress. The key contribution of this dissertation is to increase awareness about adults with a history of childhood abuse and their vulnerability in their relationships with the aging abusive parent. This concluding section discusses major findings, limitations, implications, and future directions of this dissertation.

Major Findings

An important finding of this dissertation is that relationships between adults with a history of childhood abuse and their abusive parent are closely intertwined over the life course. This dissertation approached this issue from different angles: The first paper focused on examining how intergenerational solidarity with the aging mother mediated the association between maternal childhood abuse and adult psychological functioning (i.e., psychological well-being and depressive symptoms). The second paper investigated the longitudinal trend of affectual solidarity with the abusive mother and examined the moderating effects of positive relations with others, hostility, and frequency of contact in the association between parental childhood abuse and affectual solidarity with the mother. The focus of the third paper was on the caregiving experience of adults with a history of childhood abuse and its consequences on psychological distress.

In Paper 1, total sample of 1,371 adults were analyzed using cross-sectional data from the WLS (2004-2005). Approximately, 13% of the study sample was neglected, 17% verbally abused, and 9% physically abused by their mother. In terms of the five dimensions of intergenerational solidarity, the study sample contacted their mother on average "once a week" (associational solidarity), and they lived "30-780 miles" away from mother's residence (structural solidarity). The respondents were "somewhat" emotionally close to their mother (affectual solidarity), and had "somewhat" similar values or attitudes (consensual solidarity). Lastly, the respondents exchanged one type of social support, either emotional or instrumental (functional solidarity). Hypotheses were supported that maternal childhood maltreatment was associated with lower associational, affectual, and consensual solidarities. In other words, the childhood experience of being abused may decrease the frequency of contact, emotional closeness, and similarities in outlook with the abusive mother. Furthermore, I found affectual solidarity with mother as a significant mediator between maternal childhood abuse and psychological well-being. A history of maternal abuse may impair the affective bonding with the abusive mother, which in turn leads to diminished psychological well-being of the abused adult children.

In Paper 2, total of 1,968 adults were analyzed using the three-wave dataset from the WLS (1993-1994, 2004-2005, and 2010-2011). Among the study sample, approximately 17% experienced parental abuse in childhood: 4% abused only by mother, 9% only by father, and 4% by both parents. On average, the respondents were "somewhat" emotionally close to their mother, and they contacted their mother around every three days. Growth curve analyses showed that adult children who experienced maternal abuse (i.e., abused by mother only and abused by both parents) had lower levels

of affectual solidarity (i.e., emotional closeness) with their mother compared to adult children who did not experience parental abuse. An interesting finding was that, for adult children who were abused by both parents, the level of affectual solidarity with mother increased over time. This was contrasted with non-abused adult children who did not show any change in affectual solidarity with mother over time. I also found significant moderating effects of positive relations with others and frequency of contact in the association between a history of childhood abuse and affectual solidarity. First, there was a significant cross-level interaction between positive relations with others and being abused by both parents. Greater positive relations with others predicted higher affectual solidarity with mother, and for those who were abused by both parents, the positive effect of positive relations was stronger than non-abused adult children. Secondly, for both abused and non-abused adult children, as the frequency of contact increased, affectual solidarity with mother increased as well. But then, the positive effect of frequency of contact was stronger for those abused by their mother than non-abused adult children. This result may indicate that the effect of being abused became offset by having frequent contacts with the abusive parent.

In Paper 3, total sample of 219 filial caregivers were analyzed using the cross-sectional data from the MIDUS II (2004-2006). Approximately, 26% of the caregivers experienced verbal, physical or severe physical abuse and provided care to the abusive parent. Another 14% experienced verbal, physical, or severe physical abuse and provided care to a non-abusive parent. About 30% of the total sample lived with their care recipient when providing care and about 50% provided care for more than 14 hours a week. About 70% of the caregivers have provided care for less than three years.

Multivariate analyses showed that providing care to the abusive parent was associated with greater depressed affect. When adding self-esteem to the model, the product of coefficients approach confirmed that self-esteem significantly mediated the association between providing care to the abusive parent and depressed affect. In other words, providing care to the abusive parent was associated with lower self-esteem, which in turn increased depressed affect.

Limitations

These three papers have limitations to note. The key limitation is that a history of childhood abuse was measured by self-reported retrospective items, which may involve recall errors (Ayhan & Işiksal, 2005). Future research should incorporate prospective research design to better assess the effect of childhood abuse on later-life intergenerational relationships. In addition, although the childhood abuse items were based on the Conflict Tactics Scale (Straus, 2007), the items were based on a 4-5 point Likert scale asking about the overall intensity of earlier abuse. This measurement is limited to properly assess the severity of abuse, but this information is known to be a key variable when predicting consequences of abuse (Child Welfare Information Gateway, 2013). Based on more improved measures, future research may examine the effect of abuse severity on intergenerational relationships. The experience of severe abuse involving court interventions will have different implications than the experience of moderate levels of abuse.

Secondly, caution is required when generalizing the findings of this study. The first two papers used the WLS dataset where the samples were collected only within the Wisconsin area. In terms of the third paper, although MIDUS I is a nationally

representative data, MIDUS II has an attrition issue that about 30% of MIDUS I respondents did not participate in the second survey. Furthermore, the first two papers were based on the specific study sample of adult children with living mothers. It was because first, adults with living parents responded to the items related to intergenerational solidarity. Second, there were only few adults with living fathers, and the small sample inhibited to analyze the effect of paternal childhood abuse on the relationships with abusive fathers. This issue may warrant future research because there is a greater prevalence of paternal abuse, which involves multiple forms of violence (e.g., verbal and physical abuse) and leads to severe consequences (National Child Abuse and Neglect Data System, 2013).

Implications

Theoretical Implications

This dissertation offers important theoretical implications for intergenerational solidarity theory and stress process model. First, intergenerational solidarity theory has explained dynamics within parent-adult child dyads that are functional and involve normal conflicts (Bengtson, 1996; Bengtson & Roberts, 1991). The first two papers confirm that this theoretical perspective can be used to understand later-life intergenerational relationships that involve parental childhood abuse. These studies add new knowledge to the intergenerational solidarity literature by linking a history of childhood maltreatment and five distinct dimensions of intergenerational relationships: associational, structural, affectual, consensual, and functional solidarities. Furthermore, this dissertation emphasizes the life-course component within the intergenerational solidarity theory. One of the key aspects of the solidarity theory is that it connects the

past and current solidarity patterns. It may be true that the contemporary relationship quality depends on the past relationship history, and childhood abuse can be the key factor affecting later-life intergenerational solidarity. In this regard, long-term effects of dysfunctional parent-child relationships should be explored more in the realm of intergenerational solidarity theory, which will provide valuable insights to understand the abused adult children and their aging abusive parents.

The third paper also showed that the integrated stress process and life course perspectives neatly converge at several points when examining adult victims of childhood abuse and their relationships with the abusive parent. The first point of convergence is related to the identification of stressors – instead of just looking at proximal circumstances to account for current caregiving outcomes, stressors can be more distally located in the life course (Pearlin, 2010). A second point of convergence is related to the specific mechanism that connects or mediates past and present. In this paper, I focused on the role of self-esteem as the key personal resource that mitigates the negative impact of stressors. Examining the effects of other mechanisms, such as specific coping strategies or social supports will be beneficial to better understand stress processes across a lifetime and to identify specific intervention points to relieve the impact of stress (Pearlin et al., 1981; Thoits, 1995).

Practice Implications

For practitioners working with adults with a history of childhood abuse, it is important to be aware that contemporary relationships with the abusive parent as well as past abuse history could be the source of stress, leading to greater psychological distress. Therefore, when creating intervention plans for adults with a history of childhood abuse,

focus should be made on addressing unresolved issues with their abusive parent, which may help reduce stress by interacting with the abusive parent. Practitioners can help improve interpersonal functioning of adult children so that it helps with fostering social relationships as well as avoiding conflicts with the abusive parent (Baxter, 2014). Self-help group can be organized to share mutual support with members who have similar experiences.

It is also important for practitioners to be informed that some of these abused adults are engaged in providing care to their abusive parent, and that they are among the high risk group of caregivers. Despite heightened stress originated from the process of caregiving, filial caregivers with a history of parental childhood abuse have been unacknowledged in the caregiving literature and in social work practice. They are the invisible group in the support resources or caregiving organizations such as Family Caregiver Alliances, implying that these abused caregivers may not access to proper support programs. Therefore, it will be an urgent task to compile the list of support resources specifically addressing the concerns of the abused caregivers.

More importantly, evidence-based programs should be designed and implemented to better deal with the needs and challenges of these caregivers. Self-esteem can be threatened in the caregiving process (Paper 3), the intervention programs should focus on ways to improve caregivers' self-esteem, which can be done through validating what important work they are doing. Along this line, intervention strategies can be based on the strength-focused approach emphasizing positive aspects of the caregiving, such as competence, gain, or inner growth that they could achieve through the process (Chan, Chan, & Ng, 2006).

Furthermore, it is important to note that for abused adult children, affectual solidarity with the abusive mother increased over time (Paper 2). This result is contrast to non-abused adult children who did not show any significant change. The effect of abuse seemed to relieve in the end-stage of the parent's life. Therefore, the themes of forgiveness and resilience can be weighted in the intervention contents to facilitate this aspect of healing and empower the caregivers (Coleman, 2008).

Policy Implications

In terms of policy implications, the potential vulnerabilities and challenges of adult victims of childhood abuse should be acknowledged so that this high risk group of caregivers can be prioritized in terms of policy support. Adults with a history of childhood abuse need societal support and intervention to better deal with their concerns because they are the marginalized group who lack personal resources such as self-esteem, or systematic resources such as affordable long-term care options. For example, it is unknown why adult victims of childhood abuse provide care to their abusive parent despite earlier abuse, but one possibility is that they cannot afford expensive long-term care services. This is where the individual issue intersects with the societal limitations implying that adult victims of childhood abuse may experience cumulative distress/disadvantage (Ferrarro & Shippee, 2009). To be better informed of the unmet needs of adults with a history of childhood abuse, the key priority is to expand further research on this issue and to facilitate funding opportunities specific to support these research efforts.

Future Directions

As the issues around adult victims of childhood abuse and their abusive parent have been rarely examined in the existing literature, several research agenda can be identified. First of all, in order to enhance the understanding of parent-adult child dyads with past abuse history, latent class analysis can be examined to discern different relational dynamics within the dyads. Some abused adult children may have a close relationship with their abusive parent having higher levels of solidarity dimensions while others may have serious conflicts with their parent. Investigating what makes these differences may warrant important future research. End of life care and grief and bereavement of adult children who lose the abusive parent will be another interesting future direction. Caregiving for loved ones in the last stages of life can be uniquely challenging by requiring extensive levels of care that involves complex end of life decisions, emotional overwhelm, and intensive care demands (Woo, Maytal, & Stern, 2006). For adults with a history of childhood abuse, going through this whole process with their abusive parent can be particularly difficult. In addition, rather than just focusing on the parent-adult child dyads, future research may consider exploring broader family dynamics around the dyads. Possible inquires may include examining how siblings negotiate dividing the caregiving roles/ demands and what types of conflicts they experience in this process. Spousal support may be another significant factor that can mitigate the negative impact of providing care to the abusive parent. To answer more diverse questions, qualitative research should be conducted to examine why adults with a history of childhood abuse provide care to their abusive parent, and what is the experience like, and how they overcome possible challenges. Lastly, research should be

conducted to examine not only adults with a history of childhood abuse but also the abusive parents. In case when their adult children refuse to provide support, abusive parents are likely to be isolated from accessing adequate social support or long-term care assistance. The issue of social isolation should be carefully addressed because it can lead to other problems, such as elder abuse and neglect (Lubben, Gironda, Sabbath, Kong, & Johnson, 2015).

Conclusion

Parental childhood abuse has a devastating impact on the victim, and its consequences can linger across a lifetime. Parental verbal or physical violence dismantles the victim's self-concept and paralyze capacity to trust others, which are two important aspects that can help social relationships to flourish. Some argue that childhood abuse disrupts biological sensory system that can ultimately lead to physical or mental health problems in adulthood. The poisonous experience of being abused seems to be deeply imprinted in the victims, and they have to fight against its negative consequences throughout the life course.

Unlike other abusive relationships, adult victims of childhood abuse cannot simply walk away from their abuser. This dissertation suggests that the relationships between abused adult children and their parents are closely intertwined until the later stage of life. In addition to surviving off of the negative consequences of the past traumatic experience, the adult victims may have to endure the relationship with their abusive parent, adding more reasons why they are psychologically distressed. Why not just sever the relationships with the abusive parent? The answer may not be simple. Some may be ethically bound to stay in the relationship with the parent. Others may be forced

to do so. Under the current societal system, adult children often have the primary responsibility of caring for aging parents, and adults with a history of childhood abuse may not be the exception.

The key takeaway from this dissertation is that adult victims of parental childhood abuse may still be suffering in the relationship with their abusive parent. They are not emotionally intact with their abusive parent, but this could diminish psychological well-being of the adult children. Some adult victims provide care to their parents, but the experience is harmful to their mental health: Their self-esteem can be threatened and they feel greater depressed affect in the caregiving process.

However, it should be noted that a hint of resilience was observed among adults with a history of childhood abuse. Unlike non-abused adult children who did not show any significant change, for abused adult children, emotional closeness with the abusive parent increased over time. In addition, having frequent contact increased emotional closeness with aging mothers, and this effect was much stronger for the abused adult children. These findings should be interpreted with caution, but the effect of abuse seems to disappear in the relationship with the abusive parent. Some people may call it forgiveness.

The issues around adults with a history of childhood abuse and their abusive parent have multiple layers. The issue may be beyond the dyadic relationship and involve the whole family dynamics. Not only adult children with a history of childhood abuse, but also the abusive parent may require social work interventions because they could be isolated from social support or long-term care assistance.

Despite its importance, this issue has been rarely discussed in the academic literature and social work field. Further research should be conducted to better understand adults with a history of childhood abuse in the relationship with their abusive parent. Once they are recognized as the high risk group, proper intervention strategies should be in place to address their specific vulnerabilities and challenges.

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