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Lifetime Abuse Victimization and Prospective Health Outcomes in Older Adults

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Abstract

Objectives: The current study examined the associations between lifetime abuse victimization and prospective health outcomes in late adulthood.

Methods: Data from 4907 older adults (mean age = 80) from the Wisconsin Longitudinal Study were analyzed. Multivariate analyses examined the associations of lifetime abuse victimization with depression, physical health status, and memory.

Results: Greater exposure to lifetime abuse was associated with a significantly higher risk of depression (OR = 1.13, CI: [1.08, 1.19], $p < .001$) and a greater number of limitations in physical functioning ($b = .08$, SE = .02, $p < .001$), but not with memory performance ($b = .01$, SE = .14, $p > .05$).

Discussion: Our results support the interrelations of interpersonal violence across the life course and the lasting health effects of exposure to lifetime abuse. Findings highlight the need for a life course-based, trauma-informed approach in prevention and intervention programs for older adults.

Keywords

adverse childhood experiences; depression; elder abuse; intimate partner violence; memory; physical health status

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Author Contributions

J. Kong planned the study, performed the statistical analyses, and wrote the major parts of the paper. S. Moorman helped develop the key research question, reviewed statistical analyses, and wrote and revised the paper. Y. Qin helped the review of the literature, reviewed statistical analyses, and revised the paper.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Statement

Ethical Approval

Institutional Review Board (IRB) review was not sought because all data were secondary, completely de-identified, and publicly available.

Supplemental Material

Supplemental material for this article is available online.

Introduction

Lifetime abuse victimization refers to cumulative violence exposures or repeated victimizations within and/or across different life stages (Codina et al., 2022; Jaffe et al., 2019). Finkelhor et al. (2007), for example, examined child poly-victimization and showed that some child victims reported multiple kinds of violence exposures throughout the childhood and adolescent period. Moreover, adults who experienced childhood violence have an increased risk of subsequent violence exposure (Papalia et al., 2017; Widom et al., 2008). Prior studies have consistently shown that lifetime abuse victimization is associated with adverse health outcomes (Andersen et al., 2014; Hughes et al., 2014; McKay et al., 2021).

Explanations entail the concept of cumulative disadvantage (Dannefer, 2003), where early life disadvantages can contribute to persistence in victimization across the life course. Some explanations highlight psychosocial harms to individual victims, including a sense of betrayal, psychological distress, and altered beliefs about self and the world, that place them at risk of future violence exposures (Finkelhor & Browne, 1985; Gobin & Freyd, 2009). Another stream of thought focuses on broader environmental factors, such as neighborhood context, public policies and protections, and societal values, and how the inter-related risks across different levels may lead to compounding risks of reoccurrence of victimization (Strom et al., 2020; Pittenger et al., 2016).

Despite the suggested persistence in victimization across childhood and midlife, an investigation of lifetime abuse victimization that spans the entire life course from childhood to older adulthood is still scarce. Only a few studies have examined the incidence of lifetime abuse victimization among the older population (Eslami et al., 2017, 2019; Simmons & Swahnberg, 2021; Wiklund et al., 2022), most of which were conducted in European countries, focused on examining mental health effects, and relied on cross-sectional designs. Extending the scope of the investigation to include later adulthood allows examining the phenomenon of re-victimization from a broader life course perspective and helps uncover a chain of mechanisms that cumulatively explain the persistence of abuse victimization over time. In such an effort, longitudinal follow-up with older adults is a superior method for understanding whether and how lifetime abuse victimization experiences have cumulative effects on a range of domains of health (Ferraro & Shippee, 2009).

To address these gaps, the current study examined the associations between lifetime abuse victimization and physical, psychological, and cognitive health outcomes using a sample of older adults in the US. We obtained large-scale, longitudinal data from the Wisconsin Longitudinal Study, which enabled us to yield robust evidence of prospective associations between lifetime abuse victimization and various domains of health among older adults. This study will highlight the importance of adopting a broader, longitudinal view of elder abuse that can inform novel approaches to intervene in vulnerable older adults in the US.

Methods

Study Sample

Data were obtained from the Wisconsin Longitudinal Study (WLS), a random sample of 10,317 men and women who graduated from Wisconsin high schools in 1957 and 9571 of their siblings. The graduate respondents participated in follow-up interviews in 1975 (35–36 years of age), 1993 (53–54 years), 2004 (64–65 years), 2011 (71–72 years), and 2020 (80–81 years). Data were also collected from a randomly selected sibling of each graduate in corresponding surveys in 1977, 1994, 2005, 2011, and 2020. The current study focused on 4907 graduates and siblings (3348 graduates, 1559 siblings) who participated in a telephone survey in 2020 (See Supplementary Table 1 for WLS Sample Retention).

Measures

Lifetime Abuse Victimization.—Consistent with prior studies (e.g., Finkelhor et al., 2007; Simmons & Swahnberg, 2021; Widom et al., 2008), we operationalized lifetime abuse victimization as the cumulative score of violence exposures across childhood, adulthood, and older adulthood. A total of 13 items measured abuse victimization across the life course. Childhood victimization was assessed by seven categories of neglect, father's verbal abuse, father's physical abuse, mother's verbal abuse, mother's physical abuse, sexual victimization, and having witnessed domestic violence before the age of 18. The items measuring these different categories were retrospective self-reports adapted from the Conflict Tactics Scale (Straus et al., 1980) and were asked during the 2004–2005 data collection (See Supplementary Table 2 for Childhood Victimization Items). Adulthood victimization was measured by exposure to intimate partner violence (IPV). At the 2004–2005 data collection, the following item was asked with the binary response choice of yes and no: "Has your spouse, or romantic partner, ever treated you in a way that some would think of as physical abuse?"

Elder abuse victimization was assessed by five items that correspond with key questions from the Abusive Behavior Inventory (Shepard & Campbell, 1992) and were asked during the 2011 data collection about respondents' experience in the past 12 months. The specific items included "In the past 12 months, (a) have you felt there is someone who is too controlling over your daily decisions and life?; (b) has anyone intentionally prevented you from having things you need, such as medication, food, money, or personal care?; (c) has anyone insulted you or put you down?; (d) has anyone hit, kicked, slapped, or thrown things at you?; (e) has anyone taken your money or belongings without your permission or prevented you from getting them even when you ask?" Each item was assessed by a binary response choice: yes (1) and no (0). The thirteen items of childhood, adulthood, and late adulthood victimization were then summed to produce a total score (range: 0–13; Cronbach's alpha: .66).

Health Outcomes.—The dependent variables were three aspects of health measured during the 2020 data collection: psychological (depression), physical (physical health status), and cognitive (memory) health outcomes. Depression was measured by an item adapted from a brief screening scale for lifetime major depression, which was found to

have high predictive value in detecting lifetime major depression (Hitsman et al., 2011). The item asked, “Since the last interview have you had a time lasting two weeks or more when nearly every day you felt sad, blue, depressed, or when you lost interest in most things like work, hobbies, or things you usually liked to do for fun?” Participants could choose yes or no. To examine physical health, we assessed limitations in physical functioning with eight questions (WHO, 2001) that asked, for example, about having any difficulty with stooping, crouching, or kneeling; sitting for 1 hour; reaching over head; and climbing one flight of stairs. The items had yes/no responses, and the eight items were summed to create a total score (range: 0–8). To examine cognitive health, we assessed three aspects of memory, including immediate recall, delayed recall, and digit ordering (See Supplementary Table 3 for Cognitive Health Items). We calculated the percentage of maximum possible scores for each test and then averaged the scores, such that the final measure ranged from 0 to 100 (Cohen et al., 1999).

Covariates.—We included gender (male vs. female), age (years), current marital status (married vs. non-married), and educational attainment (years). We also controlled for an indicator of childhood socioeconomic status, which combined parental education, parental income, and Duncan’s Socioeconomic Index (Hauser & Carr, 1995). Additionally, we controlled for total household income (logged and standardized) from the 2011 survey.

Analytic Approach

To predict the binary indicator of depression, logistic regression models were estimated, and odds ratios were reported. To predict physical health status and memory, ordinary least squares (OLS) regression models were estimated. We then repeated the model controlling for health outcomes from the previous data collection in 2011 to approximate change. We re-estimated the models using the generalized linear regression method, a flexible general framework allowing for non-normal distributions, which yielded substantially similar results in terms of the direction and significance of the coefficients. To correct for graduates and siblings being nested within families, we estimated models using robust standard errors. In terms of missing information, 89.24% of cases provided complete data. The years of education variable showed the most missingness (n = 294, 5.99%). We conducted multiple imputation using the ICE procedure based on all the variables including the outcome variables and generated 20 imputed datasets.

Results

Table 1 presents the descriptive statistics of the key variables. A little less than half of the respondents (44%) were male, about 60% were married, and their average age was 80 years (SD = 3.88). On average, respondents experienced 1.1 exposure to lifetime abuse victimization (SD = 1.53). About 18% of the respondents reported having a period of depression. The average respondent had 2.2 limitations in physical functioning (SD = 2.04) and reported memory performance of 36.07 (SD = 15.96).

Table 2 summarizes the results of the multivariate regression analyses using the cumulative sum scale that reflected the accumulation of different types of experiences. Greater exposure to lifetime abuse was associated with a higher risk of depression (OR = 1.13, CI: [1.08,

1.19], $p < .001$) and more health limitations ($b = .08$, SE = .02, $p < .001$), but not with memory performance ($b = .01$, SE = .14, $p > .05$). For a robust test of prospective health effects, we estimated a set of models that controlled for depression, physical health status, and memory from the previous data collection in 2011, so as to approximate a measure of change over time in health (Table 3). Lifetime abuse victimization significantly predicted change in depression (OR = 1.09, CI: [1.04, 1.14], $p < .001$).

Supplementary Analyses

In addition to the cumulative sum of lifetime exposure to abuse, prior studies have also examined the specific associations of abuse at different life stages on adult health (Easton & Kong, 2020; Widom et al., 2008). Supplementary Table 4 presents the respective association of lifetime abuse victimization with prospective health outcomes by using abuse at different life stages: any instance of abuse in childhood, any instance of adult IPV, and any instance of abuse in older adulthood. About 37% reported an experience of childhood abuse, 7% reported adulthood IPV, and 18% reported elder abuse victimization. We found that childhood abuse was significantly associated with more health limitations (childhood abuse: $b = .20$, SE = .06, $p < .01$). This result is consistent with established evidence about the lifelong harm of childhood adversity (Ehrlich et al., 2016). We also found that elder abuse was significantly associated with a higher risk of depression (OR = 1.79, CI: [1.47, 2.17], $p < .001$) and more health limitations (elder abuse: $b = .26$, SE= .08, $p < .01$). This result is consistent with the growing literature on elder abuse (Lachs & Pillemer, 2015), but our prospective investigation added further robustness to the known associations. None of the abuse measures was associated with memory. Most results remained consistent when we controlled for depression, physical health status, and memory from the previous data collection in 2011 (See Supplementary Table 5).

Additionally, we re-estimated the model predicting physical health status using zero-inflated negative binomial regression approaches to better address overdispersed count responses. The results were substantially similar to the model using OLS regression (See Supplementary Tables 6 and 7).

Lastly, prior studies have noted the health risks, such as premature death or poor health, associated with violence victimization (e.g., Nesca et al., 2021), and thus we conducted a series of bivariate analyses to examine whether abuse at different life stages would be associated with attrition in follow-up surveys. We did not find significant associations of childhood abuse and adult IPV with attrition both in the 2011 and 2020 surveys. We also did not find a significant association of elder abuse with attrition in the 2020 survey. These results may suggest a lack of support for greater attrition in those who experienced interpersonal violence.

Discussion

The current study was built upon prior studies that have shown the repeated occurrences of violence victimization over time (Jaffe et al., 2019; Widom et al., 2008). We broadened the timing of violence exposures to span across childhood through late adulthood and examined the effects of lifetime abuse victimization on several domains of older adults' health. Our

aim was to enhance the knowledge base of the phenomenon of lifetime abuse victimization that can inform violence prevention and intervention across the life course.

Greater lifetime abuse victimization was associated with a higher likelihood of depression and a greater number of limitations in physical functioning but was not associated with memory. These results are consistent with prior studies of European older adults that have found the significant impacts of lifetime abuse victimization on somatic/depressive symptoms (Eslami et al., 2017, 2019; Wiklund et al., 2022) and general physical and mental health status (Simmons & Swahnberg, 2021).

Notably, the non-significant relationship between lifetime abuse victimization and memory was contrary to a prior, U.S.-representative study that showed the long-term effects of childhood abuse on cognitive impairment in later life (Xiang et al., 2022). There was a significant lagged effect of depression from the prior data collection on memory (See Supplementary Table 5). Considering the tangled associations between depression and cognitive decline over time (Snowden et al., 2015), we cannot rule out the possibility that lifetime abuse victimization may indirectly affect cognitive health in later life through worsened mental health, which warrants further research.

The current study has limitations worth noting. The childhood abuse items were retrospective self-reports asked at the respondents' ages in their mid-60s, which may involve recall error. Adult victimization was specific to physical violence in intimate partner relationships and measured by a single item. Also, we focused on the violence that occurred mostly at home and did not cover a diverse scope of violence, including community violence, racism, and financial exploitation. Future research needs to develop validated, comprehensive measures of abuse victimization that encompass the entire life course. The health outcomes used in this study lacked psychometric properties by using a limited number or scope of the original measurements. The WLS is also limited with respect to representativeness as respondents were White non-Hispanic and completed a high school education. The prevalence of lifetime abuse victimization and its health effects may differ for older adults with low socioeconomic status or racial/ethnic minorities (Widom et al., 2008).

Despite the limitations, the key contribution of this study lies in exploring the effects of lifetime abuse victimization, spanning childhood to late adulthood, on prospective physical and mental health outcomes using a large-scale sample of U.S. older adults. An increased awareness about lifetime abuse victimization and its lasting health effects can lead researchers and practitioners to adopt a more comprehensive conceptualization of interpersonal violence victimization.

Ultimately, our findings can contribute to informing a trauma-informed approach (Substance Abuse and Mental Health Services Administration, 2014) to violence prevention and management across the entire life course. When working with older victims, an assessment of a life history of victimization can be considered and reflected in the intervention plans. Current trauma-informed approaches (e.g., the Four R's of Realization, Recognize, Respond, Resist; SAMHSA, 2014) acknowledge the persistence of victimization/traumatization but

do not proactively address how to prevent future harm. A better understanding of the phenomenon of lifetime abuse victimization can foster the need for and importance of violence prevention. To do so, future research should explore the clustered experience of violence exposures across the lifetime and uncover a holistic understanding of its causes, factors, or mechanisms that facilitate the persistence of victimization and its impact on older adults' health and well-being.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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What this paper adds

- Consideration of a lifetime abuse victimization that spans across childhood, adulthood, and late adulthood.
- Evidence regarding the associations between lifetime abuse victimization and prospective health outcomes among a sample of US older adults.

Applications of study findings

- To explore the persistence of violence victimization across the life course.
- To urge timely interventions to prevent revictimization for those who are exposed to childhood violence.
- To raise awareness about trauma-informed approaches in the prevention of elder abuse and neglect.

Table 1

Descriptive Statistics of the Key Variables (N = 4907).

	***N* (%)**	**Mean (SD)**	**Observed Min./Max**
Lifetime victimization		1.10 (1.53)	0/9
Childhood abuse (until age of 18, reported 2004)			
Neglect	486 (9.90)	-	-
Father's verbal abuse	1105 (22.52)	-	-
Mother's verbal abuse	642 (13.08)	-	-
Father's physical abuse	506 (10.31)	-	-
Mother's physical abuse	337 (6.87)	-	-
Sexual abuse	290 (5.91)	-	-
Witnessing domestic violence	336 (6.85)	-	-
Adulthood IPV (2004)			
Has your spouse/romantic partner ever treated you in a way that some would think of as physical abuse?	325 (6.62)	-	-
Elder Abuse (the past 12 months, 2011)			
Have you felt there is someone who is too controlling over your daily decisions and life?	322 (6.56)	-	-
Has anyone insulted you or put you down?	698 (14.22)	-	-
Has anyone intentionally prevented you from having things you need, such as medication, food, money, or personal care?	66 (1.35)	-	-
Has anyone hit, kicked, slapped, or thrown things at you?	23 (.47)	-	-
Has anyone taken your money or belongings without your permission or prevented you from getting them even when you ask?	9 (.18)	-	-
Socio-demographic characteristics			
Male	2170 (44.22)	-	-
Married	2948 (60.08)	-	-
Education (years)	-	14.08 (2.51)	5/20
Age	-	79.91 (3.88)	64/90
Childhood socio-economic status		17.14 (11.57)	1/97
Total household income, 2011 (US dollar)	-	53,106.31 (68,370.73)	0/60,000
Health outcomes (2020)			
Depression	878 (17.89)	-	-
Memory	-	36.07 (15.96)	0/100
Physical health status	-	2.16 (2.04)	0/8

Table 2.

Associations Between Lifetime Abuse Victimization and Prospective Health Outcomes.

	Depression	Physical Health Status	Memory
	OR (95% Cl)	***b* (s.e.)**	***b* (s.e.)**
Lifetime abuse	1.13 (1.08, 1.19)***	.08 (.02)***	.01 (.14)
Male	.89 (.76, 1.05)	−.49 (.06)***	−6.24 (.46)***
Married	.42 (.36, .49)***	−.22 (.06)***	−.15 (.47)
Education	.93 (.89, .96)***	− 11 (.01)***	1.28 (.10)***
Age	.97 (.96, .99)**	.06 (.01)***	−.94 (.05)***
Childhood SES	1.00 (.99, 1.01)	−.00 (.00)	.06 (.02)**
Total household income	1.04 (.96, 1.13)	−.03 (.03)	.08 (.25)
Constant	8.49 (1.81, 39.92)**	−.68 (.62)	95.01 (4.39)***

Note. Logistic regression was used to predict depression, and OR indicates odds ratios. Ordinary least squares regression was used to predict functional limitations and memory.

*** $p < .001$

** $p < .01$

* $p < .05$.

Table 3.

Associations Between Lifetime Abuse Victimization and Prospective Health Outcomes: 2011 Health Outcomes Controlled.

	Depression	Physical Health Status	Memory
	OR (95% CI)	***b* (s.e.)**	***b* (s.e.)**
Lifetime abuse	1.09 (1.04, 1.14) ***	.02 (.02)	.10 (.14)
Depression (2011)	1.65 (1.46, 1.86) ***	.19 (.04) ***	−1.28 (.36) ***
Physical health status (2011)	1.11 (1.06, 1.16) ***	.64 (.02) ***	−.69 (.14) ***
Memory (2011)	1.00 (.99, 1.00)	−.00 (.00)	.40 (.02) ***
Male	.96 (.81, 1.14)	−.09 (.05)	−4.53 (.46) ***
Married	.45 (.38, .53) ***	−.10 (.05)	−.62 (.44)
Education	.95 (.91, .99) **	−.06 (.01) ***	.73 (.10) ***
Age	.97 (.96, .99) **	.04 (.01) ***	−.77 (.05) ***
Childhood SES	1.00 (1.00, 1.01)	−.00 (.00)	.03 (.02)
Total household income	1.06 (.98, 1.16)	.01 (.02)	−.20 (.24)
Constant	3.29 (.64, 16.96)	−.78 (.54)	70.40 (4.39) ***

Note. Logistic regression was used to predict depression, and OR indicates odds ratios. Ordinary least squares regression was used to predict functional imitations and memory.

*** $P < .001$

** $p < .01$

* $p < .05$.