



Yours, mine, and ours: Childhood disadvantage and late-life social connectedness in marital dyads

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ARTICLE INFO

Keywords:

Marriage
Family
Inequality
Life course
Social connectedness
Childhood disadvantages
Gender differences
Partner spillover

ABSTRACT

Life course theory describes each person's trajectory as intertwined with others, with the family serving as a key conduit through which resources and experiences, including those in childhood, are exchanged. We apply the framework of "linked long arms" that extends the linked lives perspective within intimate dyads, allowing for the early-life experiences and resources of one partner to affect both their own experiences and resources and those of their partner later in life. Using dyadic models with couple-level data from the National Social Life, Health, and Aging Project (N = 1214 couples), we estimate how childhood disadvantage is associated with one's own and one's partner's later-life social connectedness. Results show that people carry the influence of childhood socioeconomic and family disadvantages, but not that of violence, into their family social lives many decades later. Older women who experienced disadvantage in childhood, particularly low parental education and family unhappiness, report having fewer friends and fewer confidants, less frequent socializing, and lower participation in community organizations than others. Husbands of women whose families were unhappy report fewer friends than others, but we see no other spillovers from the wife's early disadvantage to the husband's later social life. In contrast, the wives of men who experienced disadvantage in childhood, especially lower parental education, report fewer friends and less frequent formal community participation. Older adults who grew up in families that were socially, economically, or emotionally disadvantaged show diminished late-life social well-being, and often so do their spouses, with women particularly sensitive.

1. Introduction

The family is the site of production, consumption, socialization, and exchange of resources. These resources include each person's relationships and relationship skills, formed initially in childhood. In this paper, we ask: how do childhood experiences and resources affect social well-being at older ages, and how do the early-life resources of each of the spouses affect the social life of the other spouse?

Durkheim's (1997) analysis of organic solidarity underscored how modern specialization renders individuals ever more dependent on one another, while Simmel (1908) envisioned society as a dense lattice of intersecting affiliations that bind personal biographies to collective structures. Social interdependence is, therefore, the medium through which meaning, resources, and life chances flow, and the study of social lives should be approached as fundamentally interdependent projects rather than atomized trajectories. Empirical

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research has shown how the social interdependence operates as peer effects in academic achievement (Frank et al., 2013; Hasan and Bagde, 2013), diffusion of workplace gender norms (Cha and Weeden, 2014), and adolescent socialization in disadvantaged neighborhoods (Harding, 2007, 2009; Sampson et al., 1997).

The relationship with an intimate partner is another key site of social interdependence, with couples' lives becoming deeply intertwined across various domains. One partner's attitudes, behaviors, and experiences often influence the other, as "linked lives" extend throughout the life course (Carr, 2018; Elder Jr, 1998). These 'partner spillover effects' happen when one partner's resources, such as education, income, and time (Flood and Genadek, 2016; Halpern-Manners et al., 2022), and life-course transitions, such as unemployment, retirement, and caregiving, shape the relationship satisfaction, health, and financial stability of the other partner (Blom et al., 2020; Chen et al., 2022; Kim et al., 2011; Zang, 2020). We focus here on linked lives among older married or cohabiting couples. Since the vast majority of older co-residential couples are married (Brown and Wright, 2017; J. S. Wong and Hsieh, 2021), we use the terms 'marriage' or 'partnership' to refer to both.¹

An emerging area of research extends the concept of partner spillover into the domain of social connectedness, a key component of well-being among older adults that is closely linked to psychological health and physical functioning (Kotwal et al., 2016; Santini et al., 2020; Waite et al., 2021). Social connectedness varies systematically by early-life resources and life-course experiences, producing a stratified landscape of social exposure and support. As intimate partners navigate their social lives together, their family ties, friendships, and social connections tend to blend into a shared social environment (Antonucci et al., 2014; Berkman et al., 2000; Kahn and Antonucci, 1980). These ties become even more prominent in older age as individuals increasingly prioritize intimate relationships while reducing peripheral social connections (Carstensen, 1992; Lang and Carstensen, 1994), such that the romantic partnership becomes a primary source of companionship, emotional support, and social interactions (Cornwell, 2012).

While much of this work focuses on contemporaneous partner effects, less is known about how early-life conditions shape couples' social lives in later adulthood. Drawing on the life course perspective (Elder et al., 2003), we turn attention to how childhood family disadvantage can shape people's own social relationships and those of their partner decades later. Childhood disadvantage encompasses a constellation of early-life conditions that extend beyond economic hardship. In this paper, we define disadvantage to incorporate family socioeconomic and relational dynamics, including low parental education, a lack of perceived family happiness, and exposure to violence. Together, they capture the three principal domains through which early family environments inscribe durable social legacies—material resources, emotional climate, and social adversities (Edin and Nelson, 2013; Lareau, 2011; McEwen and McEwen, 2017). Examining these three facets in tandem, therefore, allows us to examine the extent to which later-life social connectedness is sensitive to deficits in socioeconomic scaffolding, emotional security, and felt safety, and, crucially, to trace how each type of disadvantage may diffuse across partners through the intertwining of their everyday social worlds. Because childhood is a critical period for cognitive and socio-behavioral development, such disadvantages can have lasting impacts on socioeconomic attainment, health, and psychosocial and behavioral outcomes in adulthood (Ferraro et al., 2024; Houtepen et al., 2020; Umberson et al., 2016).

Recent research shows that these early disadvantages may shape one's own social connectedness in later life (Goldman, 2022; Groenou and Tilburg, 2003; Petrova et al., 2024). For example, economic hardship in childhood may limit later education and career choices through which people can build supportive social relationships. Moreover, growing up in emotionally distant or violent households may diminish social skills and confidence, leading to relational withdrawal or hypervigilance that constrain social ties in adulthood (Bürgin et al., 2023; Koyama et al., 2024).

However, we know little about how childhood disadvantage spills over across romantic dyads to shape the social lives of romantic partners. Early-life disadvantage of one partner may shape the other partner's social engagement, for example, through heightened kin obligations or relational demands that divert time and energy away from outside ties (Mueller and Johnson, 1975; Pinquart and Sörensen, 2006). One partner's early-life disadvantage may also set in motion joint socioeconomic and life course trajectories in ways that alter the couple's shared social activities, engagement, and networks (Pinquart and Sörensen, 2006; Sayer et al., 2016). Additionally, individuals who grow up in disadvantaged households may be more likely to marry partners with similar backgrounds (Schwartz, 2013), which can shape household trajectories of residential mobility, wealth accumulation, occupational advancement, and caregiving demands that persist across the life course and affect social connectedness in later life (Lersch and Schunck, 2023; Miller, 2020; Sweeney and Cancian, 2004). We elaborate on these mechanisms in the sections that follow.

Social connectedness is an important social stratifier and has been shown to have strong associations with adulthood economic achievement and later life cognitive function, physical health, and psychological well-being (Cornwell, 2014; Reinwarth et al., 2025; York Cornwell and Waite, 2009b). Using data from the National Social Life, Health, and Aging Project (NSHAP), a nationally-representative survey of community-dwelling older adults, we investigate how each partner's childhood disadvantage shapes both their own and their partner's social connectedness in later life. Integrating the long arm of childhood perspective (Hayward and Gorman, 2004) with the linked lives principle (Antonucci et al., 2014), this study highlights the concept of "linked long arms" in romantic partnerships. We employ the Actor-Partner Interdependence Model (APIM) (Cook and Kenny, 2005) to examine how childhood disadvantage is associated with both own and partners' social connectedness at older ages. Specifically, we focus on three types of childhood experiences—parental education, family happiness, and exposure to violence—and investigate their distinct impacts on social connectedness. We begin by analyzing social relationships captured by the number of friends and the number of confidants with whom one discusses important matters. Next, we examine the frequency of informal socialization with friends and relatives and formal community participation, including the frequency of attending meetings of organized groups, volunteering, and engagement in religious activities. To the extent that spillover effects of one partner's background on the other partner occur within partnership dyads, they provide empirical support for the linked lives perspective.

2. Theoretical background

2.1. Childhood disadvantage and later-life social connectedness: life course perspective

Social connectedness can be a cumulative consequence of childhood disadvantages that persist across the life course (Goldman, 2022; Umberson et al., 2014). Broader sociological perspectives, such as the “long arm of childhood” (Hayward and Gorman, 2004) and cumulative disadvantage theory (Ferraro and Kelley-Moore, 2003; Ross and Wu, 1996), emphasize that early-life misfortune can have an enduring imprint. Although disadvantage is often understood in economic terms, we adopt a broader conception that encompasses material, emotional, and social adversities within the family environment. In this paper, we define disadvantage as including low parental education, perceived family unhappiness, and exposure to violence. We discuss each in detail next.

Parental education is a core indicator of childhood socioeconomic disadvantage, shaping early material conditions and the social environment in ways that are associated with long-term social connectedness. Lower parental education is linked to fewer economic resources, which may limit children’s access to structured, diverse social settings, such as extracurricular activities or community programs, that facilitate the accumulation of social ties (Goldman, 2022). Parental education also reflects broader socioeconomic differences in parenting practices and the transmission of social capital (Mayer, 1997; Torche, 2011). Children raised in lower-educated households are more likely to experience “natural growth” in social environments concentrated within small, kin-centered networks, which restricts the flow of resources and information beyond the immediate family (Ajrouch et al., 2005; Goldman, 2022). In contrast, parents with higher education often engage in “concerted cultivation” and expand their children’s social participation beyond the family unit (Lareau, 2011, p. 21; Streib, 2015). Beyond socioeconomic pathways, children raised in lower-educated households may also develop lower self-confidence in navigating formal social settings, which can further discourage expanding social networks beyond close kin (Harvey et al., 2014; Streib, 2015; Umberson et al., 2014). These early differences in upbringing shape not only immediate social opportunities but more durable patterns of social engagement over the life course, as individuals carry forward predispositions, social norms, and interactional capacities developed during childhood (Cattell, 2001; Lareau, 2011; Streib, 2015).

Family unhappiness during childhood also plays a pivotal role in shaping children’s psychosocial functioning and, consequently, their social connectedness in later life. Attachment theory (Bowlby, 1969; Holmes, 1993) underscores the significance of secure attachment, which is formed initially between mother and infant, in shaping an individual’s emotional and cognitive development. Bowlby (1969) contends that “secure attachment” serves as a foundational element, fostering a sense of security and self-esteem that influences the capacity to forge stable and affectionate relationships in adulthood and later life (Ainsworth et al., 2015; Berkman et al., 2000; Shepherd et al., 2021). Conversely, emotional neglect or conflict experienced in the family in childhood may undermine one’s capacity for establishing emotionally intimate and secure interpersonal relationships (Colman and Widom, 2004; Sinnott et al., 2015; Zhang et al., 2024).

Exposure to violence in childhood may disrupt the formation of meaningful relationships and have enduring effects on social connectedness. Such experiences can foster deep-seated mistrust of others and heightened anxiety or hypervigilance that persist into adulthood, making it difficult to establish and maintain stable interpersonal ties (Kong et al., 2023). Particularly damaging are instances of violence perpetrated by trusted individuals, especially within the family, which can generate feelings of betrayal and powerlessness (Browne and Finkelhor, 1986). These experiences may also leave physiological imprints, such as disrupted hormonal responses or impaired brain development, that constrain social capacity in later life (Shanahan et al., 2003). Individuals exposed to early violence may also adopt avoidant attitudes or engage in alcohol or substance use as a coping mechanism, thereby further limiting their community participation and weakening their social ties over time (Henderson, 2024; Merz and Jak, 2013; Petrova et al., 2024).

Several recent life-course studies document associations between childhood disadvantages and different dimensions of social connectedness in later life. These studies typically rely on retrospective measures of early-life conditions and prospective assessments of social relationships in older adulthood. For example, using data from NSHAP, Goldman (2022) finds that higher parental education is associated with larger networks that are less centered on kin, whereas greater childhood family happiness is linked to denser, more kin-based networks in later life. Similarly, Lee et al. (2021) find that individuals raised in happier families receive more social support from partners, relatives, and friends in older adulthood. There is also evidence that early-life disadvantages, such as a disruptive family environment and low socioeconomic status, are linked to fewer available social connections in later life, even after adjusting for adult socioeconomic status and health conditions (Furuya and Wang, 2023).

These research findings have demonstrated a link between early-life disadvantage and later-life social connectedness. However, most studies have focused exclusively on individual outcomes, overlooking interdependence within intimate relationships, a key limitation given that partners often merge their social networks and shape each other’s social environments. In the section that follows, we argue that childhood exposure to family disadvantage may also have spillover effects that shape a partner’s social connectedness in later life.

2.2. The linked long arms: the partner spillover effects of childhood disadvantage

In this paper, we extend the analytic focus from individuals’ own experiences of childhood disadvantage to the spillover effects on their partners’ social connectedness in later life. By incorporating both partners’ childhood family backgrounds, we adopt a relational perspective of life course trajectories to view romantic partnership as one of the mechanisms through which childhood disadvantage shapes shared social outcomes. This approach builds on the “long arm of childhood” thesis, which posits an enduring association between childhood conditions and adult health and well-being (Hayward and Gorman, 2004), and extends it by examining how the

“long arm of childhood” results in the socio-behavioral outcomes and ripples across intimate partnerships. We emphasize the interconnections and mutual embeddedness of “linked lives” within romantic partnerships across the life course (Carr, 2018; Elder Jr, 1998). Events experienced by an individual over the life course are rarely isolated to that individual but are deeply intertwined within the shared lives of their partners (Li et al., 2026; Liu et al., 2024; J. S. Wong and Hsieh, 2019). A partner’s early-life experiences can shape their own social attitudes and trust in others as well as those of their spouse, with effects on the couple’s social environment that may persist throughout the life course. We term this framework “linked long arms.”

The “linked long arms” framework provides a novel understanding of romantic relationships from a life course perspective. On the one hand, it extends the “long arm of childhood” model, which focuses on how childhood disadvantage shapes later psycho-cognitive, biophysical, and social resources. The “linked long arms” highlights how an individual’s early-life disadvantage can reverberate through intimate partnerships, shaping patterns of social engagement and support systems over time. While partnerships are typically formed in early adulthood, partners bring into their unions varying amounts and types of social capital accumulated since childhood, resources that may persist and evolve throughout the life course (Hoppmann et al., 2010).

On the other hand, the “linked long arms” framework underscores the processes through which individuals select romantic partners with similar backgrounds or characteristics, shaping household socioeconomic resources and life course trajectories (Schwartz, 2013; Schwartz et al., 2021). The formation of new households after marriage may geographically reconfigure friend and kinship networks through residential relocation, especially for women, as wives often move to their husbands’ residences, where work and family ties are already established (Brandén and Haandrikman, 2019; Vidal and Lersch, 2019). To the extent that childhood disadvantages disrupt husbands’ social networks, wives’ networks may also be affected. Childhood disadvantages may also increase the likelihood of experiencing repeated residential mobility that disrupts tie maintenance and increases the spatial dispersion of personal networks, reducing the number of friends and confidants available in later life, and lowering the frequency of informal socializing and community participation (Magre et al., 2016; Viry, 2012). In addition, other household-level events across the life course can consolidate individuals’ own disadvantage into the couple’s shared resources that shape both one’s own and their spouse’s social connectedness. Childhood disadvantages could be linked to the process of wealth accumulation, which shapes the couple’s resources needed to sustain friendships and to remain engaged in formal organizations, while occupational attainment structures access to the couple’s workplace-based affiliations and the time regularity that facilitates routine socializing and volunteering (Behrman and Taubman, 1976; Engzell and Wilmers, 2025). Finally, caregiving demands can impose time and emotional constraints that crowd out both informal socializing and formal participation, potentially shrinking couples’ social worlds and altering reliance on spouses and close confidants in later life (Miller, 2020; Pinquart and Sörensen, 2006; Sayer et al., 2016). These couple-level dynamics through the process of partnership choices show how childhood disadvantages structure the resources available to couples and suggest that any investigation of the imprint of childhood disadvantage must consider relational contexts that influence well-being and connectedness in older age.

Focusing on the dyadic level of analysis thus complements prior research that has primarily examined the long reach of childhood disadvantage at the individual level (van Harmelen et al., 2021; J. S. Wong et al., 2020; J. S. Wong and Waite, 2017). Moreover, much of the existing literature has focused narrowly on a single facet of social connectedness, such as immediate social networks of relatives and friends (Frederick and Goddard, 2008; Goldman, 2022; Odd et al., 2021) or generalized social support and strain (J. S. Wong and Hsieh, 2021). We extend this work by examining three distinct dimensions of social connectedness—number of social relationships, informal social interaction, and formal community participation—to more comprehensively capture the distinct pathways through which childhood disadvantage may shape later-life social connectedness. Using couple-level data, we demonstrate how unfavorable childhood conditions can shape not only individuals’ own social engagement but also the shared social environments of their intimate partnerships.

Childhood disadvantage can shape a partner’s later-life social connectedness through the shared nature of couple-level social connections. As romantic partners often coordinate their social lives together, early-life disadvantage experienced by one partner may constrain the other partner’s access to social ties as well. For instance, individuals from low-socioeconomic status households may have had fewer opportunities to form broad friendship networks (Goldman, 2022), which may reduce the number of social relationships they bring into adulthood and, consequently, constrain the couple’s shared network (Kalmijn, 2003; York Cornwell and Waite, 2009a). Smaller or weaker networks may, in turn, reduce day-to-day social interaction with friends or neighbors. Moreover, because religious and civic participation are commonly embedded in shared household routines, adverse childhood experiences affecting one partner may dampen the couple’s broader engagement in public and community life (Mueller and Johnson, 1975; Waite and Lehrer, 2003).

Romantic partnerships can be a “greedy institution,” demanding substantial time and emotional investment that displaces outside social relationships (Ayotte et al., 2010; Gerstel and Sarkisian, 2006; Nock, 1998; Sarkisian and Gerstel, 2008). When one partner’s childhood disadvantages generate greater relational needs or emotional strain, the other may redirect attention inward, further reducing their engagement in broader social life. For example, individuals from disadvantaged backgrounds may face greater obligations to extended kin, such as caregiving or financial support, that disproportionately fall upon women and constrain their time and energy for social engagement, even when their husbands remain relatively unburdened (Pinquart and Sörensen, 2006; Sayer et al., 2016). In these ways, disadvantages can diffuse across intimate ties, shaping the patterns of each partner’s social connectedness in later life. The extent to which partners “share” resources, including social characteristics such as social skills, social connections, financial, social, and emotional support and strain from extended family, affects the behavior and well-being of the couple jointly and the partners individually.

2.3. Gendered differences in the spousal spillovers

The spousal spillover effects of childhood disadvantage for social connectedness may differ by gender. On the one hand, women's adverse childhood experiences are more likely to shape their partners' social relations than the reverse. This asymmetry can be explained by gendered role specialization within households. Gender-as-relational theory posits that gender, as a socially constructed framework, organizes expectations around relational responsibilities across the life course (Cislaghi and Heise, 2020; Ridgeway, 2011; Umberson et al., 2022; West and Zimmerman, 1987). Women often assume primary responsibility for kin-keeping and friend-keeping roles, acting as facilitators of couples' shared connections with extended family and friends (Gerstel and Sarkisian, 2006). Men, by contrast, tend to rely on their partners to sustain ties with kin and close friends and to preserve family cohesion and emotional connectivity (Rosenthal, 1985; Umberson et al., 2016). This relational labor positions women as responsible for sustaining not only their own networks but also those of their partners (Erickson, 2005). To the degree that women's childhood disadvantage diminishes their investment or skills in kin-keeping, these effects may spill over to their partners to reduce their partners' number of social relations (Browne and Finkelhor, 1986; Kong et al., 2023).

On the other hand, in the domain of social participation, men's childhood disadvantages are more likely than women's to spill over into their partners. Under traditional gendered specialization, men have deeper attachments to the labor market and face stronger social expectations to cultivate connections through activities structured in settings such as the workplace and civic organizations (Gonalons-Pons and Gangl, 2021; Umberson et al., 2022). Masculinity ideals emphasizing self-reliance, competitiveness, and emotional restraint align more closely with participation in public or professional contexts than with emotionally intimate or family-centered ties (Rosenfield and Mouzon, 2013; Umberson et al., 1996, 2016). Consequently, men's social connectedness tends to involve activities with broader, encompassing coworkers or fellow group members, but less emotionally close (Chatters et al., 2018; Cornwell and Schafer, 2016). To the extent that men's childhood family disadvantages undermine their social participation in community groups, their partners' opportunities for engagement in these activities are also likely to be diminished.

2.4. The present study

The main objective of this study is to examine how childhood family disadvantage—including low parental education, family unhappiness, and exposure to violence—is associated with both individuals' and their partners' social connectedness in later life, as measured by the number of social relationships and levels of informal and formal social participation. Drawing on theories and empirical findings that link early-life circumstances to later-life social connectedness (Furuya and Wang, 2023; Goldman, 2022; Lee et al., 2021), we hypothesize that childhood family disadvantage will predict a smaller number of social relationships, lower levels of informal social interactions with family and friends, and lower levels of community participation in formal organizations for individuals in later life (*Hypothesis 1*).

In addition, based on our linked long arms framework, we expect that the disadvantage experienced by one partner may have spillover effects on the social lives of the other partner. Therefore, we hypothesize that partners' childhood family disadvantage will predict fewer social relationships, lower levels of informal social interactions, and lower levels of formal community participation in later life, net of one's own childhood disadvantage (*Hypothesis 2*).

Finally, we expect differences in the spousal spillover effects for men and women. As we suggested earlier, women are more likely to have responsibility in dyads for relationships with kin and friends in informal activities, whereas men's ties and interests may carry more weight in the couple's participation in formal organizations. Building on theory and research suggesting that the direction of spillover may depend on the type of social connectedness (Rosenfield and Mouzon, 2013; Umberson et al., 1996, 2016), we hypothesize that women's childhood family disadvantage will predict their partners' informal ties, whereas men's childhood family disadvantage will predict their partners' social participations (*Hypothesis 3*).

3. Data and methods

3.1. Data

This study uses couple-level data from the 2015–2016 wave (Round 3) of NSHAP, a nationally representative survey of community-dwelling older adults in the United States. The Round 1 of the NSHAP was conducted in 2005, comprising 3005 older adults aged 57–85 (Waite et al., 2007), with a weighted response rate of 75.5 % (O'Muircheartaigh et al., 2009). In NSHAP Round 3 (2015–2016), co-residential spouses and cohabiting partners were empaneled as full respondents, with the exception of a random small subset used in an experiment to assess the impact of this addition. This experiment showed that the inclusion of partners did not compromise data quality (O'Muircheartaigh et al., 2019). NSHAP Round 3 has, in total, 1389 couples (O'Muircheartaigh et al., 2014; J. S. Wong and Hsieh, 2021). Because patterns of social connectedness differ substantially between younger and older adults, we exclude 166 couples with one partner aged below 50 to maintain consistency with our focus on social connectedness in later life. Additional analyses that include these couples yield substantively similar results (See Appendix D). Then, due to limited power for statistical inference, we exclude seven same-sex couples (J. S. Wong and Hsieh, 2019), leaving an analytic sample of 1214 heterosexual couples. Our results remain substantively consistent when including seven same-sex couples.

The NSHAP data are well-suited for our research questions as they contain a comprehensive set of measures concerning both partners' social and demographic statuses, allowing for dyadic analysis. Moreover, NSHAP includes extensive measures of social network characteristics alongside informal and formal community participation for all older adults. NSHAP employs a multi-stage

probability sampling strategy, with oversampling of men, adults aged 75 and older, and African Americans and Hispanics. All descriptive results and analyses presented account for the complex survey design, utilizing weights designed for couple analysis in Round 3 (O'Muircheartaigh et al., 2021; J. S. Wong and Hsieh, 2021). These weights consider both the inverse probability of couple selection during sampling and the likelihood of nonresponse (O'Muircheartaigh et al., 2014). The item-level missing in the analytic sample is mainly driven by the non-response to the Leave-Behind Questionnaire (17.4 %), in which the childhood variables were asked. Following the NSHAP guidelines (Hawkey et al., 2014), we use multiple imputation to handle item-level missing values with 10 replications and then combine our estimates reported below using Rubin's rule (1987).

3.2. Measures

3.2.1. Independent variables

We consider three measures of childhood disadvantage from comprehensive assessments of childhood background in the NSHAP Leave-Behind Questionnaire (LBH), specifically focusing on experiences at ages 6 to 16: i) *family unhappiness* is captured by the level of agreement with the statement, "When I was growing up, my family life was always happy," reverse recoded to the scale from 1 ("agree very much") to 6 ("disagree very much"); ii) *childhood experiences with violence* on whether respondents ever (a) witnessed or (b) experienced a violent event in childhood coded as "neither" = 0, "either or both" = 1; iii) *the highest level of education achieved by either of the parents*, which is coded with categories of "less than high school" (omitted as the reference category), "high school graduates", "some college", and "more than high school".

3.2.2. Dependent variables

We begin by assessing the number of social relationships in later life using two distinct measures that capture different types of social connections. First, we examine the number of confidants with whom respondents discuss important matters as a measure of close social interactions. In NSHAP's social network module, respondents (ego) were asked to name important members (alters) of their social networks over the last 12 months (Cornwell et al., 2009). Following prior studies, we count the number of alters in Roster A that includes up to five core confidants (range: 0–5) (Cornwell et al., 2009). Second, we complement a broader measure of social relationships by drawing on the number of friends reported by respondents. These friends may not necessarily be individuals with whom one discusses important matters, but they represent a broader array of social ties that enhance access to diverse resources and social contexts. Respondents were asked how many friends they have, and responses are measured on an ordinal scale: "none", "one", "2–3", "4–9", "10–20", and "20 or more friends".

Additionally, we investigate social connectedness in the form of *social participation*. The formal social interaction is assessed using three separate items: frequency of i) attending organized group meetings; ii) attending religious services; and iii) engaging in volunteer work. Response categories are on an ordinal scale and range from 0 ("never") to 6 ("several times a week"). The exploratory factor analysis suggested that the three variables load into a common factor, and we constructed a summary score of formal social participation based on the answers. The reliability scores suggest good internal consistency (Cronbach's alpha: 0.7295 and 0.7308 for wives and husbands, respectively). In Appendix A, we show the results that analyzed social participation in each activity separately, which are substantively the same as the results we report below. Additionally, respondents were also asked about the frequency of socializing with friends or relatives in the past year, on an ordinal scale ranging from 0 ("never") to 6 ("several times a week"), which we use as a measure of informal social participation.

3.2.3. Covariates

We control for basic demographic characteristics of both partners, including age (continuous), race/ethnicity (White, non-Hispanic Black, Hispanic non-Black, and Other). We additionally control for self-rated health status from ages 6 to 16, with the reverse-coded scale ranging from 1 ("excellent") to 5 ("poor") that may affect both the childhood family experiences and social connectedness over the life course (Kana'iaupuni et al., 2005). We also control for region of birth based on the U.S. Census Bureau's definition (1 = born in the Southern U.S., 0 = otherwise) following literature on the disparities in childhood experiences and late-life outcomes by the geographic birthplace (J. Wong and Zang, 2025). Lastly, we control for the childhood family structure (1 = lived with only one parent; 0 = lived with both parents) due to their potential influence on both the family experiences in the childhood and cumulative impacts along the

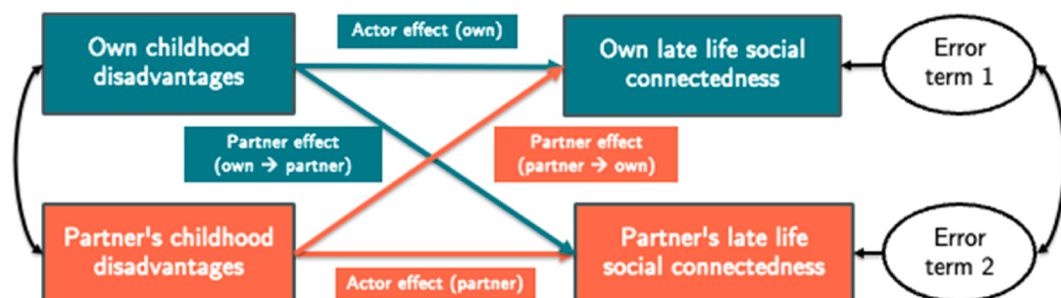


Fig. 1. Actor and partner effects in the actor-partner interdependence model.

life course (Lee and Schafer, 2021). These three childhood measures are based on retrospective reports, and the results we report below remain substantively the same in models excluding them. We avoid overcontrolling for potential mediators in the conceptual association we study (known as suppressors) that may amplify the confounding bias (Kim, 2019). These variables include education, occupation, marital biography, and duration of partnership.

3.3. Analytic approach

We begin with presenting weighted demographic characteristics of the older adults in the analytic sample by gender, including age, race, ethnicity, and education. We examined gender differences in these distributions using t-tests for continuous variables and the Wald test of independence for categorical variables.

Then, we employed the Actor-Partner Interdependence Model (APIM) to study the dyadic association of childhood disadvantage within partnership dyads who share linked lives and occupy divergent social roles based on gender. APIM simultaneously estimates the effects of childhood disadvantage on an individual's own social connectedness (actor effects) and on their partner's social connectedness (partner effects), as visualized in Fig. 1 (Cook and Kenny, 2005). Essentially, APIM fits two regression equations simultaneously, accounting for the correlated error terms between partners' characteristics for consistent regression estimates (*sem* in Stata). We estimate the association of three measures of childhood family disadvantages with late-life social connectedness one-at-a-time. For the count outcomes, we used the extensions of the APIM models as seemingly unrelated bivariate Poisson regressions (*bivcnto* in Stata) and we report estimates in Incidence Rate Ratio (IRR) (Xu and Hardin, 2016). Similarly, we used the probit link function estimated using *bioprobit* in Stata for ordinal outcomes (Sajaia, 2008). In probit regressions, since one unit change in the predictor reflects a change in the z-score, we emphasize the significance and direction of the relationships (Long and Freese, 2006). All analyses were performed using R statistical software (R Core Team, 2021) and Stata 17.0 (StataCorp, 2021).

Table 1

Descriptive Statistics of Variables, by Gender. NSHAP Round 3 Partnered Sample (N = 1214 couples).

Characteristic	Female N = 1,214 ^a	Male, N = 1,214 ^a	p-value ^b
Age, yrs, mean, (SD)	62.62 (8.62)	65.11 (9.21)	<0.001
Race and Ethnicity, (%)			0.10
White	79.96 %	79.95 %	
Black	7.59 %	8.41 %	
Hispanic, non-Black	8.71 %	8.26 %	
Other	3.75 %	3.38 %	
Education, (%)			<0.001
Less than High School	8.16 %	10.42 %	
High School or Equivalent	21.29 %	21.11 %	
Some College	40.25 %	31.37 %	
Bachelors or More	30.30 %	37.10 %	
Childhood - Family financially struggle (1–5)	3.35 (0.95)	3.37 (0.93)	0.7
Childhood - Live without both/either parent	14.46 %	14.87 %	0.8
Childhood - Illnesses from age 6–16 (1–5)	1.80 (0.96)	1.78 (0.88)	0.7
Childhood - Born in the Southern U.S.	20.50 %	20.84 %	0.8
Childhood - Unhappiness of the Family Life (1–6)	2.62 (1.55)	2.56 (1.39)	0.4
Childhood - Parental Education (Highest)			0.071
Less than high school	18.68 %	21.36 %	
High school graduates	37.54 %	39.68 %	
More than high school	43.78 %	38.96 %	
Childhood - Witnessed or Experienced Violence	19.27 %	18.01 %	0.5
Later Life - Number of Confidant (0–5)	4.13 (1.16)	3.74 (1.38)	<0.001
Later Life - Number of Friends			0.01
None	0.89 %	1.78 %	
One	2.77 %	2.21 %	
2–3	20.62 %	26.27 %	
4–9	41.99 %	37.01 %	
10–20	20.30 %	21.04 %	
More than 20	13.43 %	11.69 %	
Later Life - Frequency of Socializing with Friends of Relatives in the Past Year (0–6)			0.12
Never	0.80 %	0.75 %	
Less than once a year	0.73 %	1.56 %	
About once or twice a year	4.33 %	4.36 %	
Several times a year	13.30 %	16.89 %	
About once a month	25.51 %	26.64 %	
Every week	39.30 %	34.74 %	
Several times a week	16.03 %	15.06 %	
Later Life - Formal Community Participation (0–17)	7.43 (4.86)	6.50 (4.78)	<0.001

^a Mean (SD); %.

^b Design-based t-test; Design-based Wald test of association.

4. Results

4.1. Descriptive statistics

Table 1 presents the weighted descriptive statistics of the individual members of the couples included in the analytic sample by gender. In our dyadic data, men are, on average, significantly older and more educated than their partners. There is no significant gender difference in racial composition, with approximately 80 % of the sample identifying as White. Both male and female participants, on average, rated their health in childhood between "very good" and "excellent." The vast majority of the sample, around 85 %, lived in a two-parent family structure, and around 80 % were born outside the Southern U.S., with no differences by gender.

Then, we show the weighted descriptive statistics of the three measures of early life disadvantages, for which we find no statistically significant difference by gender. Overall, participants varied moderately in how much they agreed with the statement that their family life during childhood was always happy, ranging from "a little" to "pretty much." Slightly below 40 percent of participants in our sample indicated that at least one parent had attained education beyond high school, while around 20 % had parents whose highest level of education did not exceed high school. There is only a marginal difference that women were more likely than men to have parents with higher education in our sample, but this difference is not statistically significant at the 95 % confidence level. Around 26 % experienced or were exposed to violence between the ages of 6 and 16, with similar prevalence among men and women. For later life social connected measures, women, on average, have more confidants, more friends, and more active formal community participation than men. In Appendix B, we show the correlations between male and female partners across eight measures of social connectedness. Most Pearson correlation coefficients range from 0.23 to 0.40, and the correlation for religious attendance is high (coefficient = 0.64).

4.2. Childhood disadvantage and number of social relationships

We present results from the APIM models, which estimate how each partner's childhood disadvantage relates to both their own and their partner's social outcomes. Specifically, we assess whether one partner's childhood disadvantage is associated with the other partner's number of social relationships and level of social participation (partner effects), above and beyond the association between individuals' own childhood disadvantage and their own outcomes (actor effects).

Table 2 reports associations between childhood disadvantage and the number of social relationships. Panel A shows that among

Table 2

Actor and Partner Effects of Childhood Disadvantage on Social Relations (N = 1214 couples, 2428 Respondents).

	Number of Friends				Number of Confidant			
	Husbands		Wives		Husbands		Wives	
	Estimate (SE)	P-value	Estimate (SE)	P-value	Estimate (SE)	P-value	Estimate (SE)	P-value
Childhood Disadvantage								
Panel A								
Family life unhappy								
Husbands	−0.049 (0.030)	0.111	−0.015 (0.028)	0.584	−0.005 (0.010)	0.612	0.002 (0.008)	0.770
Wives	−0.045* (0.022)	0.042	−0.064* (0.025)	0.012	−0.004 (0.008)	0.622	−0.012 (0.008)	0.099
Panel B								
Witness/Experience Violence								
Husbands	−0.122 (0.091)	0.181	0.004 (0.097)	0.967	0.015 (0.037)	0.691	−0.011 (0.028)	−0.400
Wives	−0.047 (0.108)	0.661	−0.154 (0.099)	0.123	0.002 (0.032)	0.960	−0.047 (0.029)	0.101
Panel C								
Parental Education								
Husbands - Bachelors or more	−		−		−		−	
Husbands - Some college	−0.010 (0.116)	0.930	−0.231 (0.135)	0.248	−0.025 (0.048)	0.597	−0.021 (0.032)	0.509
Husbands - High school graduates	0.003 (0.105)	0.978	−0.356 (0.096)	0.108	0.012 (0.043)	0.780	−0.032 (0.024)	0.197
Husbands - Less than high school	0.046 (0.136)	0.733	−0.261* (0.124)	0.037	−0.046 (0.047)	0.330	−0.076* (0.032)	0.019
Wives - Bachelors or more	−		−		−		−	
Wives - Some college	0.015 (0.124)	0.903	−0.154 (0.126)	0.224	0.009 (0.042)	0.822	−0.008 (0.029)	0.792
Wives - High school graduates	0.071 (0.120)	0.331	−0.205 (0.108)	0.059	0.014 (0.036)	0.710	−0.036 (0.025)	0.152
Wives - Less than high school	0.071 (0.130)	0.587	−0.153 (0.129)	0.240	−0.061 (0.047)	0.189	−0.177*** (0.034)	<0.001

Note: ***p < 0.001, **p < 0.01, *p < 0.05, + p < 0.10 each model. Values in regular type are actor effects and values in bold are partner effects. All analyses were adjusted for age, racial/ethnic groups, childhood family structure, childhood illness and childhood birth region.

women, greater childhood family unhappiness is associated with fewer friends (actor effect = -0.064 , $SE = 0.025$, $p = 0.012$). In addition, women's childhood family unhappiness is negatively associated with their husbands' number of friends (partner effect = -0.045 , $SE = 0.022$, $p = 0.042$). No statistically significant actor or partner effects are observed for men on either outcome.

Panel B presents results for childhood exposure to violence. We do not observe any actor or partner effects for either gender at the 95 % confidence level.

Panel C focuses on parental education. We observe only one actor effect overall, women whose parents did not complete high school reported fewer confidants in later life (actor effect = -0.177 , $SE = 0.032$, $p < 0.001$). Several partner effects are noticeable. Women whose husbands' parents did not complete high school reported fewer friends (partner effect = -0.261 , $SE = 0.124$, $p = 0.037$) than women whose partner had more highly educated parents. For confidant networks, Women whose husbands had parents with less than a high school education have fewer confidants (partner effect = -0.076 , $SE = 0.032$, $p = 0.019$). No significant partner effects are found for men in relation to their wives' parental education, which highlights the gendered pattern of the linked long arms that we discuss more in the discussion section.

4.3. Childhood disadvantage and formal and informal social participation

Table 3 presents estimates of the dyadic associations between childhood disadvantage and the frequency of later-life social participation among older couples. For informal social participation, measured as frequency of socializing with friends or relatives, there is limited evidence of statistically significant actor or partner effects. Women whose parents had a high school education reported lower levels of informal social participation compared to those whose parents had a bachelor's degree or above (actor effects = -0.199 , $SE = 0.099$, $p = 0.046$; Panel C). No other actor or partner effects are found for either gender with respect to family unhappiness or exposure to violence at the 95 % confidence level.

Stronger and more consistent associations are observed for formal community participation. As shown in Panel A, men who reported having an unhappy family in childhood participated less frequently in formal community activities (actor effect = -0.253 , $SE = 0.116$, $p = 0.030$), and their wives also reported reduced participation (partner effect = -0.298 , $SE = 0.120$, $p = 0.015$). However, no significant effects are observed for exposure to violence (Panel B). In contrast, we find strong associations for parental education (Panel C). Among women, having parents with a high school education or less is associated with lower levels of formal community participation for both themselves (actor effects = -1.372 , $SE = 0.482$, $p = 0.006$ and -1.488 , $SE = 0.534$, $p = 0.007$, respectively) and their

Table 3

Actor and Partner Effects of Childhood Disadvantage on Social Participation (N = 1214 couples, 2428 Respondents).

	Frequency of Socializing with Friends/Relatives				Frequency of Formal Community Participation			
	Husbands		Wives		Husbands		Wives	
	Estimate (SE)	P-value	Estimate (SE)	P-value	Estimate (SE)	P-value	Estimate (SE)	P-value
Childhood Disadvantage								
Panel A								
Family life unhappy								
Husbands	-0.022 (0.025)	0.386	0.023 (0.028)	0.413	-0.253^* (0.116)	0.030	-0.298^* (0.120)	0.015
Wives	-0.033 (0.025)	0.190	-0.033 (0.027)	0.218	-0.046 (0.106)	0.665	-0.190 (0.122)	0.121
Panel B								
Witness/Experience Violence								
Husbands	-0.066 (0.097)	0.500	0.080 (0.098)	0.420	-0.690^+ (0.402)	0.088	-0.640 (0.467)	0.174
Wives	0.023 (0.094)	0.810	0.144 (0.088)	0.101	0.161 (0.439)	0.715	-0.563 (0.444)	0.207
Panel C								
Parental Education								
Husbands - Bachelors or more	—		—		—		—	
Husbands - Some college	-0.071 (0.116)	0.538	0.102 (0.122)	0.407	-1.103^+ (0.564)	0.053	-0.142 (0.544)	0.975
Husbands - High school graduates	-0.092 (0.100)	0.364	-0.013 (0.098)	0.891	-1.372^{**} (0.482)	0.006	-0.865^+ (0.468)	0.067
Husbands - Less than high school	-0.076 (0.124)	0.539	-0.135 (0.104)	0.193	-1.488^{**} (0.534)	0.007	-1.112^* (0.499)	0.028
Wives - Bachelors or more	—		—		—		—	
Wives - Some college	-0.006 (0.120)	0.960	0.002 (0.120)	0.984	-0.386 (0.534)	0.472	0.084 (0.551)	0.88
Wives - High school graduates	-0.062 (0.106)	0.558	-0.199^* (0.099)	0.046	-0.937^* (0.430)	0.032	-1.580^{***} (0.426)	<0.001
Wives - Less than high school	0.006 (0.120)	0.963	-0.110 (0.133)	0.408	-1.368^* (0.607)	0.030	-2.132^{***} (0.557)	<0.001

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$ each model. Values in regular type are actor effects and values in bold are partner effects. All analyses were adjusted for age, racial/ethnic groups, childhood family structure, childhood illness and childhood birth region.

husbands (partner effects = -0.865 , $SE = 0.468$, $p = 0.067$ and -1.112 , $SE = 0.499$, $p = 0.028$, respectively). Similarly, the wives of men whose parents are high school graduates or did not complete high school reported lower social participation in formal organizations compared to their counterparts with a bachelor's degree or higher ($b = -0.937$, $SE = 0.430$, $p = 0.032$, $b = -1.368$, $SE = 0.607$, $p = 0.030$, respectively).

Taken together, these findings support Hypothesis 3 by demonstrating a gendered asymmetry in spousal spillover effects. The findings that women's childhood disadvantage is linked to their husbands' informal participation, while men's disadvantage is associated with their wives' formal participation, is consistent with ideas that childhood family disadvantage reverberates across marital dyads in domain-specific ways shaped by broader gendered norms.

4.4. Sensitivity analysis

Our analytic sample includes couples who are either married or cohabiting. As a robustness check, we re-estimated all models for couples in which both partners reported being married. Around 95 % of the NSHAP couples in the dyadic data are marital unions, with 3.4 % cohabiting partners and 1.7 % of the couples who reported discrepant partnership status (J. S. Wong and Hsieh, 2021). Results shown in Appendix C were substantively consistent for the 1151 married couples in our analytic sample, indicating that the spillover effects of childhood disadvantage may not be confined to marital relationships. Due to limited statistical power, we cannot replicate the analysis by restricting the sample to cohabiting couples.

In the main analysis, we decided to exclude couples in which one partner was younger than 50 because patterns of social connectedness differ markedly between younger and older adults. Further, the NSHAP respondents were selected to represent the US population of community-dwelling adults ages 56 to 85 and the spouses older or younger than those ages included for the couple study are not representative of any population. In Appendix D, we test the sensitivity of results when expanding the sample by including these couples whose one partner is below the age of 50. The estimates remain consistent with those we described above.

The extent to which the partner influences their partner's social connectedness may depend on the duration of the union and may exert continuous influence since the union formation. In Appendix E, we showed that the association does not differ by the duration of the years the couple has been married or cohabiting. In Appendix F, we estimated whether childhood disadvantages are dyadically linked to the decline in social connectedness within the 5 years during later life between Round 2 and 3 of the data collection. The results indicate the absence of the association of one's childhood disadvantages with their partner's late-life decline in social connectedness. It could potentially be that we are underpowered to detect the granular changes, given our respondents may have their social lives changing since their marriage decades ago, or that the processes of the partner spillover are not linear, such that we will observe the same effect at the 5-year late-life decline as the level of late-life social connectedness.

The linked long arms of childhood disadvantages on late-life outcomes may operate through multiple mechanisms. In Appendix G, with the measures available in the data, we attempted to estimate path-specific effects using a regression imputation approach (Alwin and Hauser, 1975; Zhou and Yamamoto, 2023) that decomposes the association between the childhood disadvantages and partner's social connectedness into the component that is direct, indirectly operating through own education (Mediator 1), and indirect, operating through education and then any of the adulthood socioeconomic characteristics (Mediators 2) including wealth, employment status, residential mobility, and assortative mating by education and racial ethnic groups. We also include additional details on the estimation and interpretation in Appendix G. The results indicate that the partner effects of childhood disadvantages on the number of friends are largely direct, not operating through either pathway, whereas the partner effects of childhood disadvantages on the number of confidants operate only through the pathway involving both education and adulthood characteristics. For the partner effects on formal community participation, the results show different path-specific effects by types of childhood disadvantages. Family happiness affects the frequency of formal community participation directly, independent of education and any adulthood characteristics, whereas parental education exerts influence primarily through both education and adulthood characteristics included in the model. With the limited midlife measures from the data, our assumption on the temporal order of exposure, mediators, and outcomes is strong, and we call for future studies with multiple observations in adolescence, emerging adulthood, midlife, and later life to replicate our mediation analysis.

5. Discussion and conclusions

Grounded in the principle of social interdependence, this study contributes to the literature by examining how childhood disadvantage is associated with social connectedness at older ages within married and cohabiting couples. Extensive sociological research has shown that childhood disadvantage is linked to a range of adult outcomes, including educational opportunities, socioeconomic status, and health (Ferraro et al., 2016, 2024; Luo and Waite, 2005; Wodtke and Parbst, 2017). Yet, little is known about whether these early-life experiences are also related to patterns of social engagement in older adulthood or have any spillover effects within partnership dyads. Using a nationally representative dyadic sample of older Americans, we study how indicators of childhood disadvantage, specifically low parental education, family unhappiness, and violence exposure, are associated with the number of social relationships and the frequency of formal and informal social participation in later life.

Our study has three main findings. First, consistent with prior research on the long arm of childhood (Ferraro et al., 2016, 2024; Luo and Waite, 2005), our results suggest that childhood disadvantage has long-term implications for later-life social connectedness across all three measures. For actor effects on social relationships, we find that women who experienced family unhappiness during childhood report having fewer friends, and those whose parents had lower levels of education report fewer confidants with whom they can discuss important matters in later life. A key implication of this finding is that disadvantages extend beyond the overall number of

social connections, which provides access to broader social resources and information, to the availability of confidants, which represents close ties for emotional support. The erosion of both weak ties and strong ties underscores the doubly damaging consequences of childhood disadvantage for social integration in later life.

For social participation and interactions, men who grew up in unhappy families show lower levels of formal social participation, such as group meetings and religious services, and women with less educated parents are less likely to participate in informal social interactions with friends or relatives. In addition, results show that both men and women with less educated parents have fewer formal social interactions in later life. Overall, these findings align with previous literature (Furuya and Wang, 2023; Goldman, 2022; Lee et al., 2021) and support Hypothesis 1 that early-life disadvantage is associated with fewer social relationships and lower engagement in both formal and informal social participation in later life.

Second, we extend prior research on childhood disadvantage and later-life social connectedness by providing evidence of partner spillover effects within romantic dyads. Our findings offer empirical support for the “linked long arms” framework that conceives individuals linked in intimate dyads as allowing the experiences and resources of one partner to affect the experiences and resources of the other. Generally consistent with Hypothesis 2, we find that one partner’s childhood disadvantage is associated with the other partner’s number of social relationships and level of formal community participation in later life. These partner spillover effects underscore how early-life disadvantage can permeate intimate partnerships, shaping shared social experiences well into older adulthood. This underscores the importance of considering both individual and dyadic processes when examining the long-term consequences of childhood disadvantage. Our findings align with the “linked lives” principle (Carr, 2018; Elder Jr, 1998), illustrating how marital and cohabiting partnerships serve as conduits through which early-life disadvantages reverberate across couples. The partner spillover effects we observe here also speak to the long-standing debate about the institutional role of marriage and cohabitation (Cherlin, 2020; Nock, 1998; Sarkisian and Gerstel, 2008). While some scholars have raised concerns about the declining significance of partnerships in American society, our findings echo recent evidence suggesting that among older cohorts, partners remain deeply interdependent, and one partner’s childhood experiences can shape the other partner’s social lives in later adulthood (Cherlin, 2020; Hawkey et al., 2014; Manning and Cohen, 2015).

Finally, consistent with Hypothesis 3, our results point to distinct gendered patterns in how childhood disadvantage shapes later-life social connectedness within couples. We find that women’s, but not men’s, childhood disadvantage, particularly unhappy family environments and low parental education, is strongly associated with their own informal social ties, and in some cases, those of their partners. Men’s childhood disadvantages have important implications for their own and their partners’ formal community participation. These patterns are consistent with longstanding gendered expectations in heterosexual partnerships, at least for older women in these cohorts who picked partners and had families before the gender revolution. The traditional social institution of partnership lays out expectations for men and women (Killewald, 2016; Li et al., 2026; Y. Li and Waite, 2025; Nock, 1998; Umberson et al., 2014), in which women are often responsible for maintaining family kinship ties and managing the couple’s informal social life, whereas men took care of the family’s relationship with the outside world (Sarkisian and Gerstel, 2008; Umberson et al., 1996, 2014). When women’s capacity to fulfill these “friend-keepers” or “kin-keepers” roles is compromised by early-life disadvantages, it may disrupt not only their own social engagement but also that of their partners.

We also find evidence that the wives of men with parents with relatively low levels of education have fewer social relationships than others. This may reflect the gendered burden women face in fulfilling kin-related obligations linked to their partners’ disadvantaged backgrounds, such as caregiving or extended family responsibilities, which can limit their own opportunities for social engagement (Pinquart and Sörensen, 2006; Sayer et al., 2016). Men’s childhood disadvantage, particularly family unhappiness and low parental education, is consistently linked to lower levels of formal community participation for both them and for their wives. This pattern supports the idea that men may serve as gatekeepers to formal social domains such as civic groups and religious organizations (Booth, 1972; Monin and Clark, 2011; Nock, 1998). When early disadvantages may drive men to withdraw from these settings, their wives’ engagement in formal activities may also be diminished. Taken together, our study illustrates the gendered pathways through which early-life disadvantage may shape later-life social connectedness with romantic partnerships.

Two surprising null results merit special consideration. First, why does childhood violence exposure show no detectable legacy? The NSHAP item collapses witnessing and experiencing violence of any type before age 16; such breadth may mute effects that depend on severity, perpetrator identity, or chronicity. Survivorship bias may further obscure associations if individuals with the most toxic exposures experience earlier mortality, non-response, or partnership dissolution. It is also possible that violence triggers compensatory resilience pathways. For example, victims may cultivate especially tight confidant circles that offset later social deficits, rendering average effects indistinguishable from zero. Second, why are men’s friendships apparently immune to both their own and their wives’ childhood histories? Extensive research suggests that many heterosexual men outsource the maintenance of friendship networks to their spouses and rely more heavily on couple-based or activity-based ties. If men’s “friends” are largely drawn from workplace or hobby contexts that are less permeable to early-life influences, and if wives act as social gatekeepers, the childhood shocks we measure may bypass men’s friend counts altogether. A refined measurement of friendship quality and multiplexity, not just quantity, may reveal subtler vulnerabilities.

Overall, our findings point to several theoretical avenues around social interdependence that could sharpen our understanding of how the “linked long arms” operates. First, future work should study couples from a life course perspective whose network, emotional, and resource exchanges change across the life course. Longitudinal, dyadic panel data would allow researchers to model feedback loops in which one partner’s early disadvantage depresses joint social engagement, which in turn erodes later marital quality or economic security, a cascade reminiscent of cumulative (dis)advantage processes. Second, our data lack direct measures of midlife psychosocial behaviors or socioeconomic attainment, and we are unable to provide causal estimates of the intermediary pathways. Future work should draw on longitudinal data that include more comprehensive adult measures to investigate how early-life

disadvantage unfolds over time to shape social connectedness in later life. This calls for models that integrate (1) multiple midlife turning points such as romantic union formation, career shocks, caregiving spells, and retirement (2) meso-level social ecologies (e.g., neighborhood change, residential mobility); that couples jointly inhabit; and (3) intersectional stratifiers, such as race and cohorts, that condition both childhood disadvantage exposure and the meaning of social connections. Third, our results are consistent with an interactive process in which one partner's childhood disadvantage is associated with the other partner's later-life social connectedness, net of the actor's own childhood disadvantage, but do not directly adjudicate whether disadvantages are compounding at the couple level because it estimates additive actor and partner associations rather than the joint distribution of spouses' early-life disadvantage. Future research should therefore examine another dimension of the "linked long arms," in which assortative mating on childhood disadvantage concentrates early-life disadvantages within unions and produces compounded disadvantage in couples' shared social connectedness.

Our study has several limitations that should be acknowledged. First, although commonly used in life-course research, our measures of childhood disadvantage rely on retrospective self-reports, which are likely subject to recall bias and may be shaped by how individuals reinterpret their childhood experiences in light of subsequent life events (Amato, 1991; Hardt and Rutter, 2004). Relatedly, these measures, particularly those on violence exposure, were broadly defined and may not fully capture the frequency, severity, or context of the exposure. Because we lack information on life course residential history, we also do not examine geographic mobility before and after marriage, which may be an important mechanism shaping network formation and later-life social connectedness. Future work with longitudinal residential histories would be valuable for assessing how moves across the life course interact with or mediate the effects of early disadvantage on social ties in later life.

Second, while our sample is nationally representative of older couples in the U.S., only a small proportion of couples in our sample identify as racial and ethnic minorities, and we have limited statistical power to provide accurate estimates of differences by race-ethnic groups in dyadic interactions. Further, we excluded seven same-sex couples from the analytic sample due to limited statistical inference power. Studies show that same-sex couples are more likely to challenge gender norms with greater equality in the division of household labor than heterosexual couples (Bauer, 2016; Hopkins et al., 2013). Therefore, one might expect more equal and neutral "linked long arms" effects for both partners than differences for men and women in heterosexual couples than among same-sex couples.

The findings may not be generalizable to other age groups or cultural contexts. The nature and long-term implications of childhood disadvantage for social connectedness within marriage may differ across geographic regions and cultural lines due to differences in norms, social structures, and support systems (Bloome and Pace, 2024; Edin and Nelson, 2013; Kim et al., 2011; Pachucki and Breiger, 2010). The developmental stage also likely shapes how individuals perceive and interact with their social connections. Prior research suggests that social needs and behaviors change across the lifespan, with adolescents and younger adults often having different priorities and experiences in their social relationships compared to older adults (Bruine de Bruin et al., 2020; Morgan, 1988). Future research should examine whether similar patterns hold in younger populations and more diverse cultural contexts to assess the generalizability of these life-course associations.

Lastly, our sample includes only older couples who remained in marital or cohabiting relationships, which may underestimate the influence of childhood disadvantage on partnership dissolution. From a family developmental perspective, partner support serves as an important source of emotional support for victims to overcome previous traumatic experiences (Spanier and Lewis, 1980). Conversely, partnership strain may exacerbate the negative effects of childhood disadvantage on later-life social connectedness by intensifying feelings of alienation, lack of overlapping social interactions, and dysfunctional interpersonal relationships (Seeman, 1996).

Despite these limitations, our paper provides strong theoretical underpinnings for understanding how life course processes shape social connectedness, an important dimension of social stratifier for health and well-being, especially in old age. When women, already the principal social conveners, enter later life with restricted friendship bases, they face a double jeopardy: diminished personal support and disproportionate responsibility for sustaining their partner's well-being. Declining social connectedness can undermine access to caregiving assistance, timely medical information, and emotional respite, heightening risks of loneliness, cognitive decline, and financial precarity (Berkman et al., 2000; Kotwal et al., 2016; York Cornwell and Waite, 2009b). At the couple level, asymmetric or impoverished networks may erode mutuality, making partnerships more inward-looking and less resilient to shocks such as bereavement or functional loss.

Theoretically, our perspective of linked long arms highlights how childhood disadvantage may not simply echo through individual lives but may recalibrate the *social infrastructure* available to couples as they navigate the challenges over the life course. It urges policymakers to design interventions (e.g., couple-based community engagement programs, trauma-informed social-skills training) that reach back across the life course to fortify social health in later years. That is, programs aimed at enhancing social participation among older adults should consider couples as a unit and recognize the gendered pathways through which early-life disadvantage continues to exert its influence. Moreover, policies that support the development of social skills and networks throughout the life course could help mitigate some of the long-term impacts of childhood disadvantage.

6. Author notes

1. Although romantic relationships among older adults have primarily been marital unions, an increasing number of older adults are entering cohabiting relationships, where partner caregiving and resource exchanges continue to take place (Brown et al., 2012; Smock and Schwartz, 2020).

CRedit authorship contribution statement

Yiang Li: Writing – original draft, Validation, Methodology, Formal analysis, Data curation, Conceptualization. **Jason Wong:** Writing – original draft, Writing – review & editing, Validation, Conceptualization. **Linda J. Waite:** Writing – review & editing, Supervision, Funding acquisition, Conceptualization.

Data availability statement

The data of the National Social Life, Health, and Aging Project used in this study are available as restricted-use files from the Inter-university Consortium for Political and Social Research (ICPSR) via <https://www.icpsr.umich.edu/web/NACDA/studies/34921>.

Acknowledgment

We are grateful to participants in seminars at the University of Chicago, Yale University, and the National Opinion Research Center for their helpful feedback. Earlier versions of this article were presented at the Annual Meeting of the American Sociological Association in Montreal in 2024, the Annual Meeting of the Gerontological Society of America in Seattle in 2024, the Annual Meeting of the Population Association of America in Washington DC in 2025, and the National Social Life, Health, and Aging Project Data User Workshop in Chicago in 2025. This paper is supported by funding for the National Social Life, Health, and Aging Project from the National Institute on Aging, National Institutes of Health (R01AG021487; R37AG030481; R01AG033903; R01AG043538; R01AG048511), and NORC at the University of Chicago. The author also acknowledges the support and facilities of the Center on Healthy Aging Behaviors and Longitudinal Investigations at the University of Chicago, funded by the National Institute on Aging (P30AG066619) and NORC at the University of Chicago. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Aging, National Institutes of Health, or NORC.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ssresearch.2025.103301>.

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