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Longevity, Linked Lives, and Generational Time: Does Changing Late-Life Activity Impact Older Adults' Help to Their Adult Children?

Anu Siren and Anna Amilon

Running head: Late-Life Activity and Older Adults' Help to Adult Children

ABSTRACT Although a growing proportion of older adults lead active and productive lives until later ages, little is known about how they balance paid work, other forms of productive aging, family, and leisure, or how this balancing may affect the interconnectedness of different generations. Using longitudinal, population-based data from Denmark, we investigate informal intergenerational help provision over time and the factors influencing the observed change from 1997 to 2017 for adults aged 52–77. Applying the Blinder–Oaxaca decomposition technique, we analyze trends in intergenerational help by older adults and examine whether changes in helping behavior are attributable to active aging or other changes within the population. We observe distinctly different helping behavior trends by age: a lower percentage of individuals aged 52–62 provided help in 2017 than in 1997, whereas a larger percentage of those aged 67–77 provided help in 2017 than in 1997. Although the increase in work participation does not add to declining levels of help to adult children, declining grandparenthood had a significant negative effect on helping behavior. In contrast, for those with grandchildren, helping behavior intensified over time.

KEYWORDS Intergenerational relationships • Extended work life • Active aging • Grandparents • Longevity •

Introduction

The increase in human longevity changes cultural perceptions and norms of late life and forces societies to respond to the lengthening life course of individuals and the changing age structure of populations. In response to population aging, many developed societies have implemented explicit policies promoting various forms of productivity in late life. Given that many countries have policies supporting longer work lives (OECD 2021), a growing proportion of adults aged 55 or older across these societies work—and continue to work—until later ages. Beyond their increasing contribution to the labor market, older adults are important providers of volunteer and community work (Amilon and Larsen 2021; Han et al. 2023), childcare (Buchanan and Rotkirch 2018; European Commission 2020), and other informal care, including care for older parents (Herlofson and Brandt 2020; Vangen et al. 2021). These contributions have increased over time because more older individuals lead more active and healthy lives. Because a longer healthy life span offsets the increasing delays in grandparenthood (Margolis and Wright 2017), the period for intergenerational transfers is also expanding.

However, very little is known about how older adults balance leisure, family relationships, and various forms of productive aging or how this balancing may affect the interconnectedness of different generations. Using longitudinal, representative data from Denmark, we investigate the implications of changing late-life lifestyles for the intergenerational contributions of older adults. More specifically, we investigate changes in the helping behavior of adults aged 52–77 to their adult children over time and the factors contributing to those changes.

Increasing Productivity in Late Life

Research has demonstrated vast changes over time in life expectancy, health, wealth, and the everyday activities of people aged 60 or older (e.g., Chatterji et al. 2015; Christensen et al. 2013; Taylor et al. 2011; Vilhelmson et al. 2022). This development, generally called "active aging," has tremendously changed older adults' opportunities for remaining active contributors in their communities through both paid and unpaid work in late life (Carr et al. 2015; Foster and Walker 2015). More older adults choose to remain in the workforce (Hofäcker et al. 2015), and many older adults are volunteering, looking after grandchildren, and helping aged parents (Amilon and Larsen 2021; European Commission 2020; Han et al. 2023; Vangen et al. 2021).

Nevertheless, although active and healthy aging and the prospect of the lengthening life span increase people's opportunities for pursuing an active lifestyle, engaging in intergenerational relationships, and postponing retirement transition, life is finite. People's awareness of this limited time may eventually result in time pressure and competing time allocation between various activities, such as leisure, family care, volunteering, and paid work (Vangen et al. 2021). Yet, despite the increasing roles of productivity and activity in contemporary late life, how older adults balance their leisure time, generational relationships, and paid and unpaid work (Hank and Buber 2009) remains unclear.

Some evidence suggests that paid and informal work tend to crowd each other out. Several studies have demonstrated that grandparental caregiving increases the likelihood of those grandparents leaving full-time employment (Proulx and Le Bourdais 2014; Van Bavel and De Winter 2013; Zanasi et al. 2020). Moreover, a large literature shows that retirement transition frees resources for unpaid work and induces increasing rates of volunteering (Erlinghagen 2010; Hank and Erlinghagen 2010; Mutchler et al. 2003; van den Bogaard et al. 2014a), informal

caregiving, and involvement with family and grandchildren (e.g., Eibich et al. 2022; Hank and Stuck 2008; Settels and Schafer 2018; Szinovacz and Davey 2006; Vangen et al. 2021). Researchers have suggested that extending productivity into late adulthood will likely limit older adults' abilities to balance unpaid care and other obligations, likely limiting their ability, time, or willingness to help their adult children (Siren and Casier 2019). However, other studies have also reported more mixed and possibly gendered effects of retirement on helping behaviors (Kahn et al. 2011; Tang 2016; van den Bogaard et al. 2014b; van der Horst et al. 2017).

Nevertheless, scholarly knowledge on how the changing, active late-life lifestyles affect intergenerational help relationships remains sparse, possibly owing to the rapid change in contemporary late-life lifestyles and policies. Because most of the detectable changes in manifestations of active aging are recent, the available longitudinal data have been insufficient for investigating their effects on unpaid and informal work. Even in countries with reliable longitudinal data, the heterogeneity in employment and retirement patterns by gender, cohort, and socioeconomic status is often substantial, resulting in an incomplete picture of how late-life activities may compete.

Intergenerational Ties, Linked Lives, and Longer Life Span

Individuals' decisions about their time use are multidetermined in the nexus of financial, institutional, and social factors. Life course theory emphasizes the generational dimensions in such determination processes and applies the principle of *linked lives*, which suggests that individuals' lives interconnect with and depend on one another and that the experiences and outcomes of one person influence those of others (Bengtson et al. 2005; Settersten 2015). For example, the availability of grandparental support influences individuals' decisions about

whether and, if so, when to have children (Kaptijn et al. 2010; Okun and Stecklov 2021; Rutigliano 2020; Waynforth 2012), and proximity to family facilitates intergenerational support exchange, with positive implications for fertility decisions (Thomas and Dommermuth 2021). Likewise, older adults' decisions to retire or shift to part-time work are influenced by the number and ages of grandchildren (Backhaus and Barslund 2021; Bertogg et al. 2021; Lumsdaine and Vermeer 2015) and responsibilities related to aging parents and parents-in-law (Grundy and Henretta 2006).

Understanding the time use decisions of contemporary older adults is essential because rapidly increasing human life expectancy shifts milestones throughout the entire life course, possibly disrupting the interconnectedness across generations. Increased longevity means that more generations coexist, increasing the likelihood of intergenerational connections and transfers (Bengtson 2001). However, as people live longer, the timings of their life events—including milestones such as work entry, marriage, parenthood, grandparenthood, and retirement—are likely to shift. Contemporary trends suggest that such milestones are generally shifting to later in the life course, with prolonged education and a longer period of youth and early adulthood (Bynner 2005; Manning 2020), delayed marriage and later parenthood (e.g., Mills et al. 2011), and later grandparenthood (Margolis 2016). In late life, the transition to retirement occurs later (OECD 2021), coupled with having aged parents and parents-in-law for a longer period (Grundy and Henretta 2006) and active aging in late adulthood (Foster and Walker 2015).

However, when the life course becomes stretched, the shifting milestones are not necessarily synchronized. Some transitions have a longer life course window of opportunity than others. For example, for women, fertility has biological limits independent of the timing of eventual death, whereas entry into and exit from work life are more connected to the potential

length of the life span. The overlapping events and time windows may also make certain life course phases more crowded, demanding time, energy, and financial resources (Arora and Wolf 2014). In addition, the prospect of a long, healthy life span varies considerably between birth cohorts and socioeconomic groups (Beltrán-Sánchez and Subramanian 2019), and the life course milestone shifts differ across both generations and the socioeconomic strata. Finally, contemporary life course transitions and their timing are becoming more fractured and increasingly subject to the uncertainty and vulnerability of human life (e.g., Spini et al. 2017), reducing the synchronization of life courses.

Study Context

This study, situated in Denmark, is highly useful from a comparative perspective because of Denmark's combination of a generous welfare state and the high employment rate among women and men (more than 84% in the population aged 25–54; OECD 2023). In addition, the longitudinal, population-based data available from Denmark are both highly detailed and highly representative of the target population.

In Denmark, institutional structures support participation in paid work through generous welfare state services (e.g., universal childcare), minimizing the need for informal care arrangements. Roughly 90% of children aged 1 to 5 are in institutional daycare (Statistics Denmark 2023), with grandparental childcare being purely supplemental. Comparative studies have shown that grandparental involvement in Denmark is more frequent but less labor-intensive than in countries with different welfare state models (e.g., Deindl and Brandt 2011; Di Gessa et al. 2016). However, substantial changes in Danish retirement policies increased the average retirement age from 63.1 to 66.9 years between 2010 and 2025 (Forsikring & Pension 2025),

with an increasing proportion of people working in their early and mid-60s—an age when the grandparent role typically emerges (Margolis and Wright 2017). This development suggests that the competitive relationship between paid and unpaid work may have become more salient.

Parents can help their adult children in multiple ways (e.g., tangible, emotional, financial) that vary in intensity and function. Our study focuses on tangible help that older adults provide to their offspring, including practical support in mundane tasks (cleaning, shopping, cooking, gardening, and home maintenance) and childcare. These types of help are concrete and measurable and because they also involve time use, they may compete with other everyday activities. Moreover, because research indicates that financial transfers from parents to children are increasing (Henretta et al. 2018) and that people may use monetary help to compensate for not providing practical help when their time is limited, our analyses include information on financial help to offspring.

The informal help that older adults provide has great value for both their immediate surroundings and society at large. Understanding the trends in intergenerational informal help from older adults is critical for estimating future trends of informal help activities and developing active aging policies allowing older people to engage in types of productive aging other than paid work. This study is the first to investigate the effects of compositional changes over time in older adults helping their adult children. By identifying and quantifying the separate contributions of compositional and behavioral changes in helping behavior, we investigate the temporal trends in practical help provided by older adults to their adult children. In empirically investigating the dynamics between changes in late-life activities and intergenerational relationships, we use longitudinal data spanning 20 years, drawn from a nationally representative sample of the Danish population aged 52 or older.

Hypotheses

Given the changes in contemporary late life discussed in the preceding sections, we formulate four hypotheses on the behavior of older adults:

Hypothesis 1: Extended work life is associated with decreasing helping behaviors.

Hypothesis 2: An active, healthy aging lifestyle is associated with increasing helping behaviors.

Hypothesis 3: Providing financial help to offspring substitutes for practical help and decreases helping behaviors.

Hypothesis 4: Manifestations of changing family structures (such as delayed grandparenthood and greater distance from offspring) are associated with decreasing helping behaviors.

Methods

Data Source

Our analysis builds on data from the Danish Longitudinal Study of Ageing (DLSA), a representative ongoing longitudinal study of living conditions among older adults in Denmark, whose data have been collected every five years since 1997 (Kjær et al. 2019). It includes every

fifth cohort born between 1920 and 1965. The initial 1997 wave surveyed 5,864 respondents aged 52–77 (1920–1945 cohorts). Each successive wave has added a new cohort of 52-year-olds while following up on the older cohorts. The latest available wave (2017) includes 10,062 respondents (1920–1965 cohorts).

From the DLSA, we use self-reported information on health, provision of financial support, work and leisure activities, and the provision of practical support and help with childcare. Information about the sex and education of the respondents comes from Danish administrative registries.

Study Sample

We use data from the 1997 and 2017 waves of the DLSA. The initial wave included six age groups: those aged 52, 57, 62, 67, 72, and 77. We use the same age groups for analysis in the 2017 data. For these age groups, we compare factors that influence the probability of their providing practical support to adult children (including childcare) in 1997 and 2017. Response rates for both waves were similarly high (70% in 1997 and 68% in 2017); thus, differences in attrition across the two waves are unlikely to influence the results.

Because we limit the analysis to respondents with at least one non-coresiding child, our sample includes 9,806 respondents and 10,491 observations. Because of limited overlap, we treat the 1997 and 2017 samples as independent.

Measures

The outcome measure, *practical support or help with childcare,* is based on the following question: “Within the past month, have you helped your child(ren) with the following tasks: (a)

cleaning, shopping, or cooking; (b) gardening or home maintenance; (c) taking care of grandchildren?" Responses were coded as 1 = helped with at least one task and 0 = did not help child(ren) within the past month.

Financial support is measured in the explanatory variable *provides financial support to children*, based on the following question: "Within the past year, have you provided financial support to your child(ren), in addition to regular gifts?" Responses were coded as 1 = provided financial support and 0 = did not provide financial support.

Works is based on the question, "Are you currently in the labor market?" Responses were coded as 1 = currently employed and 0 = temporarily unemployed, retired, or never employed.

Married or cohabiting is based on the question, "Do you live with a spouse or partner?" Responses were coded as 1 = yes and 0 = no.

Has at least one grandchild is measured through the question, "How often do you spend time with your grandchildren?" Responses were coded as 1 = contact several times a week, contact several times a month, contact less than once a month, or no contact versus 0 = do not have grandchildren.

Engages in leisure activities at least once a month is based on the question, "How often do you normally do the following: (a) low-impact exercise; (b) heart rate-increasing exercise; (c) attending lectures; (d) participating in senior clubs; (e) attending religious services; (f) going to the theater, movies or concerts?" Responses were coded as 1 = the respondent participated in at least one activity at least once a month and 0 = participation rarely or never in all activities.

Volunteers is based on information about volunteering in a wide range of areas within the past year (for details, see Amilon and Larsen 2021). We coded the responses as a binary variable,

where 1 = volunteered in at least one area (at least once) within the past year and 0 = did not volunteer within the past year.

In good or very good health is measured with the question, "How would you rate your health?" Responses were coded as 1 = very good or good versus 0 = satisfactory, poor, or very poor.

Has a driver's license is based on the question, "Do you have a driver's license?" Responses were coded as 1 = have a driver's license and 0 = do not have a driver's license.

Provides help to parents or in-laws is based on the question, "Within the past month, have you helped your parents or parents-in-law with the following tasks: (a) cleaning, shopping or cooking; (b) gardening or home maintenance; (c) taking care of financial matters or contacting public services; (d) transportation to doctor's appointments or treatment; (e) going outside or participating in leisure activities?" Responses were coded as 1 = helped with at least one task and 0 = did not help parents or in-laws within the past month or did not have parents or in-laws.

Distance is based on the question, "How long does it normally take you to go to your nearest living child?" Responses were coded as 1 = more than 30 minutes and 0 = at most 30 minutes.

Information on respondents' *sex* (coded as 1 = female vs. 0 = male) and their highest completed level of *education* (coded as 1 = university-level education vs. 0 = less than university-level education) is drawn from the Danish registries.

Analytic Strategy

To explain the differences over time in help provided by older adults, we examine patterns in two groups of older adults: those aged 52, 57, or 62 (hereafter, the "younger group") and those

aged 67, 72, or 77 (hereafter, the "older group"). The utility of this grouping, based on previous research on the direction of change in helping behavior by age (Siren and Casier 2019), is confirmed by our observations of current data. Figure 1 illustrates the helping behavior pattern over time for the two age groups, showing that the trend is decreasing for the younger group but increasing for the older group.

[Set Figure 1 about here]

To analyze these changes, we use the Blinder–Oaxaca decomposition method, which separates the observed change over time into two components (Powers et al. 2011). The *characteristics* component covers the part of the differential that we can attribute to differences in older adults' characteristics between 1997 and 2017. The *coefficients* component covers the part of the differential that we can attribute to differences in coefficients. We assume that the dependent variable (helping adult children or not) is a function of explanatory variables and regression coefficients:

$$\mathbf{Y} = F(\mathbf{X}\boldsymbol{\beta}),$$

where $\mathbf{Y}$ is the binary dependent variable vector, $\mathbf{X}$ is a matrix of explanatory (independent) variables, $\boldsymbol{\beta}$ is a $K \times 1$ vector of coefficients, and F is the logit function. We can then decompose the mean difference in the proportion of older adults helping adult children ($\mathbf{Y}$) between 1997 and 2017 into a characteristics component and a coefficients component:

$$\bar{Y}_{2017} - \bar{Y}_{1997} = \overline{F(\mathbf{X}_{2017}\boldsymbol{\beta}_{2017})} - \overline{F(\mathbf{X}_{1997}\boldsymbol{\beta}_{1997})}$$

$$= \underbrace{\left\{\overline{F(\mathbf{X}_{2017}\boldsymbol{\beta}_{2017})} - \overline{F(\mathbf{X}_{1997}\boldsymbol{\beta}_{2017})}\right\}}_{Characteristics} + \underbrace{\left\{\overline{F(\mathbf{X}_{1997}\boldsymbol{\beta}_{2017})} - \overline{F(\mathbf{X}_{1997}\boldsymbol{\beta}_{1997})}\right\}}_{Coefficients}.$$

The characteristics component reflects the differences in respondents' characteristics between 1997 and 2017 (e.g., respondents were healthier and more educated in 2017). The

characteristics component thus reveals the extent to which this difference (and other compositional differences) can explain the observable difference in the probability of helping adult children over time. The coefficients component reflects the differences over time in how the explanatory variables are associated with the probability of helping adult children.

We use a decomposition method tailored for nonlinear response models (*mvdcmp* procedure; Powers et al. 2011) and perform all estimations in STATA version 18. In a nonlinear setting such as ours, calculating the unique contribution of each explanatory variable to the characteristics and coefficient components requires a detailed decomposition that acknowledges path dependence. We follow Powers et al.'s (2011) procedure.[1]

To aid in the interpretation of the behavioral coefficients, we present logit models for the two groups, including interactions between the explanatory variables and year (2017), in Table A1 (shown in the online appendix, along with all other tables and figures designated with an "A" or "B"). These models reveal patterns consistent with the decomposition analysis, demonstrating similar changes from 1997 to 2017 in the association between the explanatory variables and the probability of providing help to adult children.

In a decomposition analysis, a term with low statistical significance cannot be set to 0 because the summation of all terms must equal the total observed gap (Etezady et al. 2021). Therefore, we focus our discussion of the results on the magnitude of terms, regardless of their

[1] For categorical explanatory variables, the sum of the detailed coefficient effects depends on the choice of reference category. Although normalization techniques can mitigate the influence of the base category on coefficients (e.g., Gardeazabal and Ugidos 2004; Jann 2008; Yun 2005), these techniques can reduce comparability across studies and may leave the estimation and decomposition without a straightforward and meaningful interpretation (Fortin et al. 2011). Given these concerns, we do not apply normalization techniques in our analysis.

statistical significance, noting when these effects are statistically nonsignificant (≥.10; n.s. = not significant).

Results

Descriptive Findings

Table 1 presents the descriptive characteristics of the study sample by year. Comparing 1997 and 2017, we find a considerable change in the percentage of older adults providing support to their adult children. However, we observe contradictory development for the two age groups. Whereas the percentage of older adults providing help decreased by 11.1 percentage points (pp) among the younger group between 1997 and 2017, it increased by 8.8 pp among the older group.

[Set Table 1 about here]

We compare background characteristics in 1997 and 2017, respectively, for the two groups, identifying characteristics that may help explain older adults' helping behavior. We find changes in characteristics (e.g., grandparenthood, employment, availability of a driver's license) that may be associated with the shift in the percentages related to helping adult children.

For the younger group, whose helping behavior decreased over time, we find a decrease in the proportion of respondents with grandchildren and an increase in the proportion that reported pursuing activities that could potentially compete with helping behavior toward adult children. In addition, a larger proportion provided financial support to adult children in 2017. However, examining the trend by differentiating between childcare and other mundane help shows that the proportion of grandparents providing childcare remained stable over time. Thus, two factors drive the overall decline in helping behavior in the younger group: (1) a smaller

proportion of individuals being grandparents and (2) a slight reduction in other types of helping behavior.

Despite the different developments in helping behavior, the changes in characteristics we observe for the older group are very similar to those observed for the younger group. In 2017, a larger proportion of the older group were in paid work, engaged in leisure activities, volunteered, had a driver's license, helped parents or in-laws, and provided financial support to their adult children. However, unlike the younger group, the proportion of older group respondents with grandchildren did not change significantly over time.

Furthermore, examining the trend in the older group by types of help and grandparental status shows that grandparental status was stable over time and that grandparents' provision of childcare increased substantially from 1997 to 2017. We also observe a modest increase in help other than childcare; this increase contributes to an overall increase in helping behavior within this group. Taken together, the descriptive results indicate that childcare largely drives the helping behavior of both groups of adults toward their adult children, albeit in different ways for the different age groups.

Decomposition Findings

Table 2 provides results from a Blinder–Oaxaca decomposition, showing the extent to which the observed differences between 1997 and 2017 are due to (1) changes in the *characteristics* (changes described in Table 1) and (2) changes in the *behavior* of older adults. A change in behavior refers to a change in the association between a characteristic and the probability of helping adult children from 1997 to 2017. Given that the change across the two years has a different sign for the two age groups, we perform two decomposition analyses (i.e., by age

group). We present results in terms of how much of the total gap (as a percentage) each variable explains.[2] In both age groups, changes in both characteristics and coefficients contributed substantially to the difference in the percentages of older adults who help adult children from 1997 to 2017.

[Set Table 2 about here]

Changes in Characteristics

In the younger group, changes in characteristics across the two years explain 36.8% of the total gap (–11.1 ppt). Most of the decrease in the percentage of individuals helping their adult children is attributable to a smaller proportion having grandchildren in 2017 than in 1997. This factor alone accounts for 64.1% of the overall reduction. Moreover, a larger proportion of respondents living more than 30 minutes away from their nearest child explains an additional –17.0% of the gap.

However, what reduces the gap is that more people in the younger group helped parents or in-laws (14.5%), provided financial support to their children (10.5%), had a driver's license (4.5%), worked (4.1%, n.s.), and engaged in leisure activities (1.4%, n.s.) in 2017 than in 1997. The reduction in helping behavior would have been even larger had engagement in these activities not increased between 1997 and 2017. Therefore, we find no evidence of other activities crowding out help to children or of financial support substituting for hands-on help. Instead, older adults in the younger group tend to be active in many domains simultaneously

[2] Because the gap has a different sign for the younger and older groups, we reverse the signs of the estimated percentages for the younger group. Thus, a positive percentage implies a positive contribution to the probability of providing practical support or childcare to adult children.

(e.g., helping children and older parents). Moreover, practical and financial help often go hand in hand, with the younger group tending to provide both kinds of support.

In the older group, changes in characteristics between 1997 and 2017 explain 62.5% of the total gap (8.8 ppt). The observed increase in helping behavior is due to increasing proportions providing financial support (8.3%), participating in leisure activities (4.7%), volunteering (9.7%), and possessing a driver's license (14.8%). Increasing percentages of those reporting good or excellent health and those with university education also contributed to the increase in the helping behavior in the older group (by 6.1% and 20.1%, respectively). However, several factors reduced the gap, including a slight decrease in the percentage having grandchildren (–5.3%) and an increase in the percentage living more than 30 minutes away from their children (–11.4%).

A notable difference between the older and the younger groups, albeit not statistically significant, appears in the variable *works*. Although in both groups, the proportion of respondents working increased, this increase had a small positive effect on helping behavior in the younger group (4.1%) but a small negative effect in the older group (–1.8%). Another difference is the influence of being partnered (married or cohabiting). In the younger group, the proportion who was partnered decreased from 1997 to 2017, negatively influencing helping behavior (–3.4%). In contrast, the proportion of the older group who were partnered increased, positively influencing helping behavior (3.0%).

Changes in Behavior (Associations)

Overall, changes in behavior explain 63.2% of the observed decrease in helping behavior among the younger group and 37.5% of the observed increase among the older group. The detailed

decomposition results in Table 2 show that only a few behavioral changes are statistically significant in explaining the observed change in helping behavior. Nevertheless, for the younger group, the positive associations between helping adult children and having grandchildren (32.1%) and providing financial support to children (21.0%) increased significantly. Albeit not statistically significant, the associations between helping adult children and working (9.9%), possessing a driver's license (4.4%), and helping parents or in-laws (5.7%) also strengthened. Thus, the strengthening of the positive association between these factors and the probability of helping adult children mitigated the overall decrease in helping behaviors between 1997 and 2017.

Other factors strengthened this decrease in helping behavior. Albeit not statistically significant, the positive association between helping adult children and being partnered (–34.9%), engaging in leisure activities (–46.8%), and being in good health (–28.4%) weakened, contributing to the decrease in the younger group's helping behavior. Among the older group, the strongest behavioral change was the increase in the association between having a grandchild and helping adult children (148.7%): grandparents in 2017 were much more likely to help than grandparents in 1997. In addition, the positive association between giving financial support (2.3%, n.s.) and helping behavior grew over time, contributing marginally to the positive development.

Although working was negatively associated with helping behavior among the older group in both years, this negative association weakened over time, explaining 9.9% (n.s.) of the increase in helping behavior. A corresponding reduction in the negative association between helping and living more than 30 minutes away from one's closest child explains 33.6% of the increase in helping behavior. Moreover, as the association between having good or excellent

health and helping behavior weakened significantly over time, self-reported good or excellent health (–48.9%) lost much of its importance for helping adult children. Other factors putting downward pressure on the positive development among the older group were a weakening association between helping and being partnered (–29.7%, n.s.), engaging in leisure activities (–66.0%, n.s.), and possessing a driver's license (–22.5%, n.s.). Thus, in relative terms, these factors lost some of their importance as predictors of helping adult children for this group from 1997 to 2017.

In both groups, the relatively large constant terms (–37.7%, n.s., for the younger group; 14.2%, n.s., for the older group) suggest that factors beyond those in our model account for a substantial portion of the observed changes in helping behavior. Unobserved shifts over time in, for example, parental altruism, children's needs, or the quality of relationships may have contributed to the observed differences.

Sex Differences

Because earlier research has indicated that the helping behavior is gendered (e.g. Di Gessa, Zaninotto et al. 2020), we conduct decomposition analyses separately for men and women. Descriptive results (Table B2) and logit analyses (Table B1) by age group and sex and with interaction terms between explanatory variables and year (2017) appear in the online appendix. The overall pattern displayed in Figure 1 applies to both sexes: the change in the proportions helping adult children is negative for the younger group and positive for the older group (Figures B1 and B2). Table 3 outlines the decomposition results and shows similar results for both sexes, with three notable differences.

[Set Table 3 about here]

First, the association between working and helping adult children is strongly gendered, particularly among the younger group. Changes in both characteristics and coefficients show that among women, working increasingly crowds out the helping behavior; by contrast, among men, working is increasingly positively associated with providing help. Thus, with relatively more individuals aged 52, 57, and 62 in the labor market, men have been increasingly able to combine work and family obligations, whereas women have not.

Second, sex differences appear in the association between having a partner and helping behavior. Although this association weakened between 1997 and 2017 for men in the younger group and women in the older group, we find important differences in each group's development. The proportion of men in the younger group who were partnered decreased, but in relative terms, having a partner became less associated with the probability of helping adult children. The proportion of women in the older group who had a partner greatly increased, but the association between helping and having a partner weakened. These results show that both men in the younger group and women in the older group helped their adult children more independently of whether they were partnered.

Third, although the presence of grandchildren is an important predictor for helping behavior for both men and women, the growth in the positive association between having grandchildren and helping adult children is, by far, the strongest among women in the older group.

Discussion

Because increasing longevity prompts productive, active aging and is thus likely to affect how older adults divide their time among work, leisure, and family, this study aims to uncover trends in intergenerational help by older adults within the context of active aging. Using longitudinal data from Denmark, we investigate older adults' help to adult children between 1997 and 2017 and analyze the factors explaining the observed changes in helping behavior by decomposing the changes into characteristics and associations. This study finds profound changes in older adults' helping behavior and their compositional characteristics over time and demonstrates that although active aging lifestyles involve more people working and engaging in activities in late life, these activities do not crowd out engagement with family. Instead, paid work, in particular, fills the time and space that declining grandparenthood frees up.

Trends Over Time, Across Age Groups, and Across Sexes

Among our sample of Danes aged 52–77, the percentages helping their adult children ranged between 46.9% and 61.8%, depending on the year of observation and the age group. The highest percentages of helping behaviors were among those aged 67 and 72 in 2017. Our findings are consistent with earlier research (e.g., Di Gessa, Zaninotto et al. 2020; European Commission 2020) reporting a large proportion of older adults helping their offspring. However, despite Han et al.'s (2023) recent finding that helping behaviors are declining among older adults, we do not find unequivocal support for decreasing trends in helping over time. Instead, we observe distinctly different trends by age within the group. For individuals aged 52–62, the 20-year trend in helping behavior decreased, whereas the reverse is true for individuals aged 67–77.

Our findings complement those from an earlier study (Siren and Casier 2019) showing such distinct trends for younger and older groups of older adults and identify factors associated with helping behavior. However, we extend their analysis by investigating not only the change in helping behavior but also the change in the composition of the population. We find significant changes over those 20 years: in 2017, more older adults were in paid work, led active lifestyles, helped their aged parents, and provided financial support to their children and grandchildren. We also observe changes in family structures and characteristics over time: more older adults lived farther from their adult children in 2017 than in 1997, and fewer older adults, particularly those in their 50s and early 60s, had grandchildren.

Although we cannot fully differentiate between cohort and period effects, we can identify cohort patterns for respondents born in 1940 and 1945. The observed trend of these aging cohorts, first noted in 1997 when they were in their 50s and again in 2017 when they were in their 70s, generally supports the notion that over time and across cohorts, life course milestones are shifting to later in life.

In addition, we observe trends differentiated by sex. First, although participation in paid work increased for both age groups and sexes, the increase was notably large among women in the younger group (15.1 pp). Furthermore, for this group, we find evidence that combining paid work and help to adult children is challenging, with work possibly crowding out help. Research has demonstrated that because of gendered roles and norms (Schmidt et al. 2023) and gender-segregated labor markets (Kreimer 2004), mothers often struggle to combine paid work and family care (Wang and Tan 2024). Our findings indicate that this pattern is not limited to young women and mothers of small children—it also applies to women in late midlife.

Second, we find that men are increasingly successful at combining paid work and family obligations in late midlife and contributing more time to helping, regardless of partner status. These findings may reflect fathers' increasing investment in the family, the shift from breadwinning responsibilities to caregiving and family engagement, or both (Carlson et al. 2017; Craig et al. 2014). Supporting this interpretation of a cultural shift across the generations, we find that these trends are more pronounced for men in the younger group and that women in the older group are still more likely to be providers of care than their male counterparts.

Extended Work Life

The proportion of respondents who participated in paid work increased over 20 years among both age groups. However, the findings indicate a particularly remarkable shift in the everyday lives of our youngest respondents, those aged 52–62. Because earlier research argued that extended work life crowds out other activities of value, including helping behaviors (Hank and Buber 2009; Siren and Casier 2019; Vangen et al. 2021), the assumption that increasing work participation contributes to declining levels of help to adult children guided our investigation (Hypothesis 1). However, we find no support for this hypothesis.

In contrast to Siren and Casier's (2019) interpretation of the association between decreasing helping behavior and extended work life among people in their late 50s and early 60s, our results show that although helping behavior decreased among the younger group and increased among the older group, participation in paid work increased for both groups. Moreover, changes in work participation did not significantly contribute to observed changes in helping behavior, and the observed statistically insignificant contribution has a direction contrary to our expectation. Among the younger group, contrary to our expectation of a negative effect

from increasing work participation, we find an insignificant positive effect; among the older group, as expected, the (insignificant) contribution was negative.

Active Aging and Active Grandparenting

We observe a change in older adult characteristics called "active aging" (Foster and Walker 2015; Villar et al. 2018). Hypothesis 2 suggests that active aging will increase older adults' helping behavior. Compared with 1997, more older adults in 2017 were in better health, had more education, could provide their offspring with financial help, and led an active lifestyle with volunteering and leisure activities. All these factors are positively associated with helping behaviors, supporting Hypothesis 2. Changes in these characteristics, most marked among the older group, contributed to the observed increase in helping behaviors. Our findings confirm earlier results demonstrating that characteristics and behaviors constituting active aging have value for the aging individuals, their communities, and their society (Foster and Walker 2015).

Nevertheless, this finding also indicates that, contrary to Hypothesis 3, providing financial help to children does not replace providing practical help. Our study finds that grandparental childcare largely drives help to adult children—a behavior people perform to both help and engage in their grandchildren's lives. This behavior may reflect the reciprocal nature of grandparental childcare and the positive gains that such help may bring to the provider of the support (Di Gessa, Bordone et al. 2020). Instead of mere helping, grandparental care is a form of both generativity and spending time together, particularly in Scandinavian welfare states, where such care is supplemental.

Although active aging is positively associated with helping behavior, our analysis does not confirm the implicit assumption about the increasing importance of active lifestyles for

helping behavior over time. On the contrary, over time, active aging lost its relative importance in determining helping behavior, particularly for the older group. Our decomposition analysis reveals that having substantial health, human capital, and social capital was less strongly associated with helping adult children in 2017. Although most changes in the association between such active-aging characteristics and helping behavior are not statistically significant, they follow a similar pattern. Consistent with this finding, Amilon and Larsen (2021) found that as the average health, human, financial, and social resources among older adults increase, having such resources becomes, in relative terms, less important for volunteering behavior.

Moreover, with grandparents more intensively attending to the lives of their grandchildren, a similar global cultural shift in grandparenting has been identified (The Economist 2023). Our findings confirm this shift toward more intense grandparenting by showing that a more varied group of older adults—in terms of socioeconomic status, health, and participation in leisure activities—engaged in helping behavior in 2017, indicating a potential change in cultural norms related to helping relationships between older adults and their children. Taken together, these trends among older adults may reflect a compositional change resulting from longevity. As various social, financial, and health resources become more common among the older population, these characteristics become less salient predictors of late-life activity. Furthermore, as engaging in late-life activities becomes a more common lifestyle for all, such a lifestyle becomes less selective.

Generational and Family Ties

We observe several changes in older adults' family structures, relationships, and characteristics over time. Consistent with the trends described earlier (e.g., Hank et al. 2018), we detect a

decline in grandparenthood among older adults, especially among the younger group, finding that this decline contributed significantly to the observed decrease in helping behavior. The decline in grandparenthood is related to widely observed delayed parenthood and declining fertility among the adult children of these older adults (Bianchi 2014; Hellstrand et al. 2021). Moreover, we find that increasingly longer residential distances between older adults and their adult children contribute to the decrease in helping behaviors. This finding supports the argument that proximity constitutes an important opportunity for intergenerational relationships (Bengtson 2001; Holmlund et al. 2013). Overall, our findings about the declines in grandparenthood and proximity and their implications for helping behaviors support late-modern arguments that structural changes drive both changes in social norms and their consequent familial patterns and social commitments (Beck and Beck-Gernsheim 2002; Giddens 1991).

Nevertheless, the findings do not fully support Hypothesis 4 regarding the effect of changing family structures on helping behavior. We find no support for loosening generational ties as a result of changing family-related structures for those with grandchildren. Although many social scientists argue that this era is one of increasing disconnect from social relationships (e.g., McPherson et al. 2006; Parigi and Henson 2014; Putnam 2020) and some family sociologists maintain that the family as a social institution is declining (e.g., Popenoe 1993), our findings show that having grandchildren, providing financial support to offspring, and helping older parents are all positively associated with helping adult children. Moreover, this positive association has clearly strengthened over time: those with a family are even more engaged than previously. The strengthening positive association from 1997 to 2017 between these family-related factors and the probability of helping adult children has influenced the trends in helping behavior among both groups. For the younger group, this strengthening association mitigated the

observed overall declining development in helping behavior; for the older group, it amplified the overall increasing development.

Our findings regarding the intensification of helping relationships between older adults and their adult children over time extend earlier cross-sectional observations of the importance of intergenerational kin relationships in an era of changing family institutions and longevity (Bengtson 2001; Hank 2007). Our analysis allows us to investigate the development of these relationships over time while controlling for a variety of compositional changes. It confirms the previously predicted development of postindustrialized low-fertility and low-mortality societies (Bianchi 2014), with a "beanpole structure" of families that increasingly allow older adults to be a source of support to their children and grandchildren (Bengtson 2001; Margolis and Wright 2017).

Limitations and Contributions

Contemporary late life with active lifestyles is a relatively recent phenomenon. Thus far, the available longitudinal data for analyzing the effects of increasingly competing late-life activities on unpaid and informal work has been limited. This study is the first to investigate the effects of compositional changes over time in older adults' provision of help to their adult offspring. Our study has the advantage of a large, detailed, and representative dataset combining survey- and register-based data. For the response rates and their representativeness of the Danish population in selected cohorts, the two waves of the DLSA survey in the analysis are comparable and thus suitable for decomposition analysis. The data allow us to investigate various types of compositional characteristics, including educational level, work participation, activities, and family relationships.

Our results demonstrate the relative effects of compositional characteristics and behavioral associations on helping behaviors. Nevertheless, the factors in our models could not explain all the observed change over time. For example, our model for the younger group had a large constant term, indicating that the change over time was largely attributable to factors other than those in the model.

In addition, our measures of both helping behavior and its determinants are likely to have implications for the findings. First, our focus on practical, mundane helping behavior and childcare excludes types of help (e.g., emotional support, paid external help) that constitute an important part of intergenerational transfers. Our operationalization of helping may therefore shape the results and do so differently for the younger and older groups. Furthermore, the DLSA survey measures help provided only to nonresident children. Recent studies have indicated that coresidence between adult children and older parents is increasing (Caputo and Cagney 2023; Seiter et al. 2025). Thus, excluding the support exchanges in these relationships may contribute to the observed declining trend in helping behavior in the younger group. However, although an increasing coresidence trend has been observed in Denmark (Nortoft 2024), we estimate this source of bias in our study as small: Danish statistics show that only 3% of adult children aged 30–44 live with their parents.

Second, the implications of the studied determinants of helping behavior may differ for different types of help. Extended active and productive aging may mean that older adults have less time but more resources, a shift that may influence the ways of helping. Our findings do not support the assumption that financial support is increasingly substituted for practical help. However, including, for example, paying for hired external help (e.g., for cleaning, childcare) as a form of financially helping offspring may produce a different result. Third, we use a self-

reported measure of helping behavior, which may differ from actual help and do so differentially by age and gender.

Our study context is Denmark, a country experiencing changes similar to those in many developed countries, with delayed and declining fertility and delayed mortality. Thus, the results of this study provide a valuable point of reference for future comparative studies and contribute to scholarly understanding of the effects of changing late life beyond Scandinavian welfare states. Moreover, situating our study in Denmark has the advantage of two factors likely to minimize the effects of extraneous and confounding factors. First, Danish society is egalitarian and culturally and socially homogeneous, with high employment rates for both women and men and stable increases in active and healthy aging (Our World in Data 2025; Rapp et al. 2022). Second, the statutory retirement age—a major structure modifying the time use of older adults—has increased in Denmark systematically and markedly since the 1990s, with the policy on retirement age applying to aging workers somewhat equally for both sexes and all professions (OECD 2021).

However, generalizing the findings from this study calls for carefully distinguishing between Denmark and both other countries and other types of welfare systems. Research showing that grandparents in Scandinavia generally choose to care for grandchildren more out of motivation and less out of necessity (e.g., Di Gessa et al. 2016) has found that the extensive availability of public care services increases the likelihood of support from parents to adult children (e.g., Albertini et al. 2007; Brandt and Deindl 2013; Daatland and Lowenstein 2005; Hank and Buber 2009). This context specificity may partly explain why our findings of the increasing rates of helping behaviors among older adults differ from some recent findings from the United States (Han et al. 2023).

Moreover, considerable variation across countries in retirement timing, financial security in late life, and work–life balance and care policies is likely to result in mixed findings globally. In some countries, structures and benefits allow and may support an early retirement, whereas other countries have incentives for extending work life (OECD 2021). Furthermore, in some countries, women's workforce participation is largely dependent on unpaid childcare contributions from grandparents (e.g., Di Gessa et al. 2016), a dependency that may affect retirement decisions, especially for women (Arpino et al. 2014; Bratti et al. 2018; Kanji 2018). More studies should investigate the dynamics between extended late-life productivity and helping behaviors in different welfare systems and cultures.

Conclusion

With longer, healthier life expectancies, older adults increasingly face the task of balancing productive aging, family relationships, and leisure activities. Earlier research has considered the net effects of fertility, mortality, and morbidity on grandparenthood (Margolis and Wright 2017) but has overlooked the competing activities in older adults' lives and the effect of these activities on intergenerational transfers. Participation in paid work is significantly increasing among older adults, entailing a growing proportion of the time available in their lives and possibly disrupting intergenerational connectedness.

However, this study finds no support for the idea that the competitive relationship between various late-life activities has become more salient in the era of active, productive aging. Given the decreasing fertility rates across postindustrialized societies, grandparenthood is declining, freeing time for paid work and other activities and resulting in the declining trend in

helping behaviors among those in their late 50s and early 60s. In contrast, older adults with grandchildren are increasingly investing time in helping their offspring, even while working.

Longevity is a demographic development that neither takes place in a social vacuum nor matters only to the lives of older adults. Although the lives of different generations are clearly linked, scholars and policymakers still lack a full understanding of how shifting milestones of the life course, together with contemporary mortality and fertility changes, affect this interconnectedness. This study shows that the contemporary cultural shift toward more active aging and extended work life does not weaken social connectedness between generations. Nevertheless, our study indicates that the interlinked decisions of different generations about time use, family formation, and desired timing of life events in the context of long lives may induce behavioral patterns that amplify demographic transitions and changes in intergenerational relationships.

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Anu Siren (corresponding author)
anu.siren@tuni.fi

Anna Amilon
ame@vive.dk

Siren • Gerontology Research Centre, Faculty of Social Sciences, Tampere University, Tampere, Finland; https://orcid.org/0000-0002-2634-4990

Amilon • The Danish Centre for Social Science Research, Copenhagen, Denmark; https://orcid.org/0000-0002-8433-5638

Table 1 Sample characteristics: Proportions for variables, by age group and year (% of sample)

	Individuals Aged 52, 57, or 62			Individuals Aged 67, 72, or 77		
	1997	2017		1997	2017	
Provides Help to Adult Children	61.8	50.7	***	46.9	55.7	***
Practical support	34.8	28.9	***	23.0	25.2	†
Childcare[a]	68.5	68.4		39.7	52.0	***
Age 52	42.2	28.2		—	—	
Age 57	31.6	34.0		—	—	
Age 62	26.2	37.8	***	—	—	
Age 67	—	—		39.5	39.5	
Age 72	—	—		33.5	37.5	
Age 77	—	—		27.0	23.0	**
Female	51.5	53.5		49.0	52.8	*
University-Level Education	17.0	36.6	***	3.2	29.6	***
Married or Cohabiting	84.0	77.9	***	66.7	72.6	***
Has at Least One Grandchild	66.7	52.7	***	92.8	91.7	
Provides Help to Parents or In-Laws	13.1	33.0	***	0.3	8.9	***
Works	68.9	81.6	***	7.5	11.4	***
Volunteers	33.5	33.8		25.6	39.5	***
Engages in Leisure Activities at Least Once per Month	91.7	94.1	***	89.1	93.9	***
Provides Financial Support to Children	36.1	43.2	***	17.6	25.2	***
In Good or Very Good Health	73.8	72.6		61.3	69.4	***
Has a Driver's License	89.6	94.4	***	65.8	89.8	***
Distance to Nearest Child >30 Minutes	25.4	33.6	***	25.8	31.6	***
Number of Observations	2,834	3,027		1,676	2,954	

[a] Shares providing childcare among older adults who have at least one grandchild.
†$p < .10$; *$p < .05$; ** $p < .01$; ***$p < .001$

Table 2 Blinder–Oaxaca decomposition of the difference in the percentages of older adults providing help to children in 2017 versus 1997, by age group

	Percentage of Gap			
	Individuals Aged 52, 57, or 62		Individuals Aged 67, 72, or 77	
Total Gap (percentage points)	–11.1		8.8	
Total Change Due to Characteristics	36.8	***	62.5	***
Total Change Due to Coefficients/Behavior	63.2	***	37.5	*
Change Due to Characteristics				
Age 52	ref.		—	
Age 57	0.5		—	
Age 62	8.0	*	—	
Age 67	—		ref.	
Age 72	—		–5.1	***
Age 77	—		12.9	***
Female	1.9	***	–2.0	**
University-level education	2.4		20.1	***
Married or cohabiting	–3.4	*	3.0	*
Has at least one grandchild	–64.1	***	–5.3	***
Provides help to parents or in-laws	14.5	**	8.4	**
Works	4.1		–1.8	
Volunteers	0.1		9.7	***
Engages in leisure activities at least once per month	1.4		4.7	*
Provides financial support to children	10.5	***	8.3	***
In good or very good health	–0.2		6.1	***
Has a driver's license	4.5	*	14.8	†
Distance to nearest child >30 minutes	–17.0	***	–11.4	***
Change Due to Coefficients				
Age 52	—		—	
Age 57	4.0		—	
Age 62	13.1	†	—	
Age 67	—		ref.	
Age 72	—		11.4	

Age 77	—		9.9	
Female	0.5		–32.5	†
University-level education	0.4		4.9	*
Married or cohabiting	–34.9	$p = 0.121$	–29.7	
Has at least one grandchild	32.1	*	148.7	*
Provides help to parents or in-laws	5.7	$p = 0.115$	0.0	
Works	9.9		3.9	
Volunteers	3.1		0.8	
Engages in leisure activities at least once a month	–46.8		–66.0	
Provides financial support to children	21.0	*	2.3	
In good or very good health	–28.4	$p = 0.123$	–48.9	*
Has a driver's license	4.4		–22.5	
Distance to nearest child >30 minutes	–8.6		33.6	
Constant	–37.7		14.2	
Number of Observations	5,861		4,637	

†$p < .10$; *$p < .05$; ** $p < .01$; ***$p < .001$

Table 3 Blinder–Oaxaca decomposition of the difference in the percentages of older adults providing help to children in 2017 versus 1997, by age group and gender

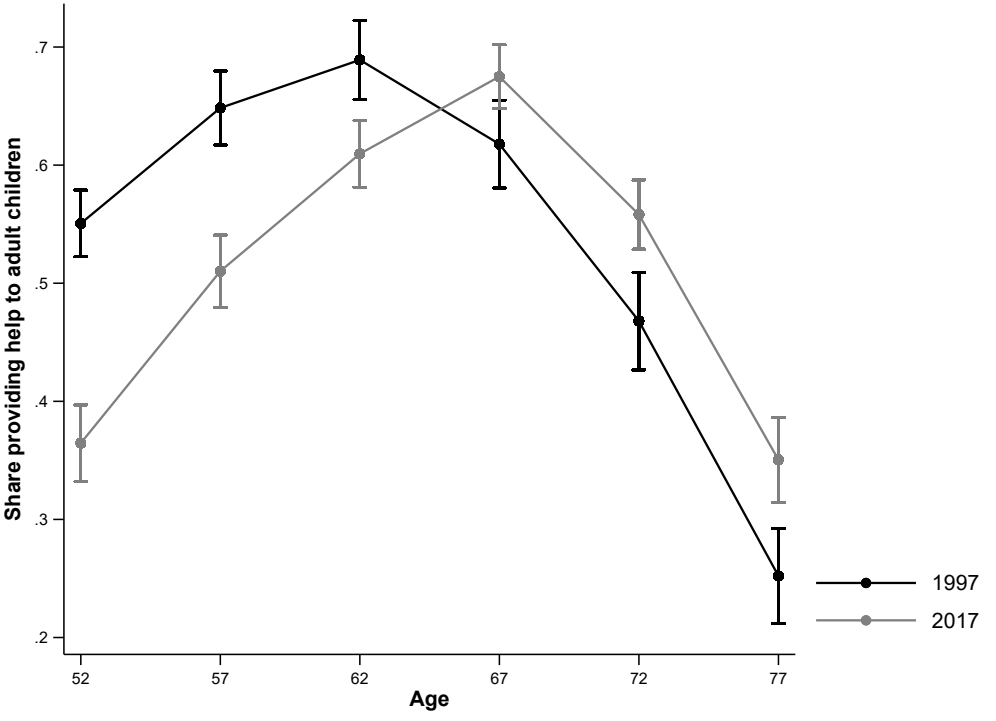
	Percentage of Gap							
	Individuals Aged 52, 57, or 62				Individuals Aged 67, 72, or 77			
	Men		Women		Men		Women	
Total Gap (percentage points)	–12.1		–10.5		8.6		9.4	
Total Change Due to Characteristics	46.3	***	48.2	***	19.5		66.8	***
Total Change Due to Coefficients/Behavior	53.7	**	51.8	**	80.4	**	33.2	
Change Due to Characteristics								
Age 52	ref.		ref.		—			
Age 57	0.3		0.6		—			
Age 62	4.8		7.8	†	—			
Age 67	—		—		–2.6	**	–8.3	***
Age 72	—		—		9.5	***	16.6	***
Age 77	—		—		ref.		ref.	
University-level education	–0.4		7.9		4.9		28.4	***
Married or cohabiting	–7.5	**	–1.0		–1.2	***	–2.5	
Has at least one grandchild	–53.3	***	–65.4	***	–4.7	***	–6.1	***
Works	12.9	**	–4.5		–4.3	†	0.1	
Volunteers	1.2	*	0.2		12.1	**	6.1	†
Engages in leisure activities	0.8		1.7	†	3.8	†	4.7	†
Provides financial support to children	7.0	***	13.1	***	7.5	**	8.2	***
In good or very good health	–0.3		0.0		9.1	**	3.8	*
Has a driver's license	0.6		10.0	*	5.8		17.6	
Distance to nearest child >30 minutes	–12.5	***	–18.7	***	–20.3	***	–1.8	***
Change Due to Coefficients								
Age 52	ref.		ref.		—		—	
Age 57	1.9		8.7		—		—	
Age 62	6.5		21.2	†	—		—	
Age 67	—		—		ref.		ref.	
Age 72	—		—		30.4		–6.9	
Age 77	—		—		14.7		1.9	

University-level education	–2.4		1.4	3.4	6.1	†
Married or cohabiting	–97.5	*	0.2	–0.4	–31.1	
Has at least one grandchild	24.5		35.9	51.8	301.4	*
Works	84.3	*	–19.5	4.7	3.9	
Volunteers	11.2		–2.0	9.1	–8.2	
Engages in leisure activities	–23.1		–72.4	–40.3	— 108.6	
Provides financial support to children	24.7	*	17.8	–2.3	4.8	
In good or very good health	–37.8		–22.2	–17.6	–65.2	*
Has a driver's license	–86.0		40.8	–84.5	–3.4	
Distance to nearest child >30 minutes	–2.8		–20.2	60.7	9.4	
Constant	44.7		41.6	51.0	–70.5	
Number of Observations	2,783		3,078	2,250	2,380	

†$p < .10$; *$p < .05$; ** $p < .01$; ***$p < .001$

Fig. 1 Percentage of older adults providing practical support or help with childcare to adult children, by age and year (1997 and 2017). The difference between 1997 and 2017 is statistically significant (at $p < .05$).

Alt text: Line graph comparing the percentage of older adults in different age groups who provided practical support to their adult children in 1997 and 2017.


Share providing help to adult children
.7
.6
.5
.4
.3
.2
52
57
62
67
72
77
Age
1997
2017