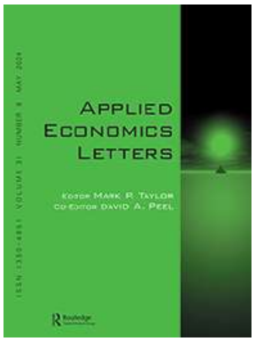

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Financial strain and loneliness in older adults

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ABSTRACT

This study assesses whether changes in older adults' financial situation after an economic shock are associated with feelings of loneliness. Data come from the 2006 and 2010 waves of the Health and Retirement Study (N = 2,510) which span the 2008 Great Recession. We conduct first-differencing and formal mediation analyses to determine whether change in financial situation is related to change in loneliness in older age and test potential mediation of personal and social resources. Results show that a higher level of loneliness in 2010 is associated with a higher level of subjective financial strain but not with changes in household income and net assets. The findings hold when accounting for personal and social resources. Knowledge of the direct link between financial strain and loneliness in older age provides an important insight for programmes and initiatives aimed at relieving widespread loneliness in later life.

KEYWORDS

Financial strain; household income; older adults; loneliness; social resources; personal resources

JEL CLASSIFICATION

D14; J14; I19

I. Introduction

Mental health has been identified as a top public health concern in the United States, and loneliness in older adults has gained particular attention – 1 in 3 older Americans reported feeling lonely even prior to the COVID-19 pandemic (National Academies 2020). Older adulthood is a time when individuals and households often experience changes in their financial situation. Lower retirement incomes and asset decumulation have been associated with feelings of financial strain (Lusardi, Mitchell, and Curto 2014). Only a small literature connects financial and loneliness concerns (Keene, Cowan, and Castro Baker 2015; MacDonald, Nixon, and Deacon 2018).

Despite some evidence of a link between loneliness and financial strain, possible mechanisms are not well understood. It is possible that there is a direct relationship between financial strain and loneliness. It is also possible that financial strain indirectly associates with loneliness. Following work by Drentea and Reynolds (2015) on financial strain and mental health for a general population sample and work by Loibl et al. (2022) for older adults in the Netherlands, we propose social and personal resources as potential mediators of the relationship between financial strain and loneliness. Social resources, especially the number and frequency of social contacts, may be one factor linking financial strain with loneliness among older adults (Cacioppo and Cacioppo 2014). Personal resources, especially self-efficacy, on the one hand, and anxiety and depression, on the other hand, may also mediate the relationship between financial strain and loneliness (Pearlin et al. 1981). Pearlin's et al. (1981) stress process model provides a conceptual framework for understanding how stressful events and resources can produce negative mental health outcomes. As outlined in the stress process model, financial shocks can be associated with feelings of anxiety and depression (Gao, Hu, and He 2022).

This study examines the relationship between financial strain and loneliness in the context of a macroeconomic shock. We distinguish between subjective and objective financial measures and use a two-period model design that spans the 2008 Great Recession.

II. Methods

We use data from the Health and Retirement Study (HRS) of community-dwelling adults age 62 and older who completed the supplementary Psychosocial and Lifestyle Questionnaire (N = 3,542) in 2006 and 2010 (Sonnega et al. 2014). We use these survey years

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Table 1. Descriptive statistics and stepwise results of first-differenced OLS regressions.

	Descriptive statistics	Model 1	Model 2	Model 3
	% or Mean (SD)	Beta (S.E.)	Beta (S.E.)	Beta (S.E.)
Δ Loneliness (−6–6)	0.01 (1.45)			
Financial Strain				
Δ Household Net Assets (log)	-$54,167 ($422,165)	0.02 (0.02)	0.02 (0.02)	0.02 (0.02)
Δ Household Income (log)	-$3,519 ($42,248)	0.01 (0.03)	0.02 (0.03)	0.02 (0.03)
Δ Subjective Financial Strain (−3–3)	0.06 (0.81)	0.14*** (0.04)	0.10** (0.04)	0.10** (0.04)
Personal resources				
Δ Self-Efficacy (−32–27)	−0.77 (6.9)		−0.03*** (0.004)	−0.03*** (0.004)
Δ Anxiety (−2.4–2.2)	0.03 (0.51)		0.19** (0.06)	0.19** (0.06)
Δ Depression (−8–8)	0.08 (1.7)		0.09*** (0.02)	0.08*** (0.02)
Social resources				
Δ Friends Close (−1–1)	0.01 (0.47)			−0.07 (0.06)
Δ Child Close (−1–1)	0.02 (0.41)			−0.09 (0.07)
Δ Contact Frequency (−30–30)	−0.69 (10.5)			−0.003 (0.003)
Socio-demographic controls	Included	Included	Included	Included
Constant		−0.51	−0.33	−0.35
F Statistic		3.86***	6.70***	6.23***
Adjusted R^2		0.03	0.06	0.06
N		2,510	2,510	2,510

Δ: Change 2006 to 2010.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

because they span the 2008 Great Recession and thus can inform researchers and policymakers about the experience of older adults during economic shocks.

Our outcome variable is change in loneliness, measured with three items from the R-UCLA Loneliness Scale (Hughes et al. 2004). The composite change measure ranges from −6 to 6, with higher scores indicating higher levels of loneliness (Cronbach's alpha = 0.802 in 2006).

The focal predictor variables are changes in objective and subjective financial strain. Change in objective financial strain is measured as the difference in household income and net assets between 2006 and 2010. Change in subjective financial strain is assessed with the question, 'Have you experienced ongoing financial strain that has lasted 12 months or longer?' The change measure ranges from −3 to 3.

Mediator variables include changes in personal and social resources. Changes in personal resources include self-efficacy, anxiety, and depression. Self-efficacy is measured with the Midlife Developmental Inventory Scale of Control (7 items; Cronbach's alpha = 0.842 in 2006; O'Shea, Dotson, and Fieo 2017). Anxiety is measured with the Beck Anxiety Inventory (5 items; Cronbach's alpha = 0.794 in 2006). Depression is measured with the CES scale (8 items; Cronbach's alpha = 0.776 in 2006 (Wilkinson 2016)). Changes in social resources are examined with binary indicators of living close to children, living close to friends, and a continuous measure of the frequency of monthly chats or social visits.

Socio-demographic control measures include binary measures of gender, homeownership (2006), homeownership status change (2006/2010), problems with activities of daily living (ADLs; 2006), and changes in number of ADLs (2006/2010). Categorical measures are race, educational attainment, marital status (2010), marital status change (2006/2010), employment status (2006), employment status changes (2006/2010). Continuous variables include age and household size. Do not know responses and refusals represented less than 7% of the sample and were not replaced. Sample descriptive statistics are shown in Table 1, Column 1.

III. Results

Table 1 shows the results of three Ordinary Least Squares (OLS) regressions predicting loneliness using a first-differences approach; for full results see Appendix Table 1. First differences, rather than levels, are recommended for data that are more than weakly dependent in time series (Wooldridge 2013). Model 1 is a reduced-form specification that regresses change in loneliness on change in objective and subjective financial strain. Change in subjective financial strain is positively associated with change in loneliness from 2006 to 2010. The results do not indicate an association of changes in net assets and income with changes in loneliness from 2006 to 2010.

Model 2 adds the three personal-resources change measures. Change in self-efficacy is negatively associated with change in loneliness, while changes in anxiety and depression are positively associated with change in loneliness from 2006 to 2010; the association between subjective financial strain and loneliness remains significant at the 1% level; however, the coefficient is smaller.

Model 3 adds the three social-resources change measures. The results do not indicate an association of changes in social resources with change in loneliness. In this focal specification, change in subjective financial strain remains positively associated with change in loneliness from 2006 to 2010. The results were confirmed using formal mediation analysis with the PROCESS macro for SPSS (Model 4), see Online Appendix Table 2. In addition, the results of regressing changes in the personal-resources change measures on change in subjective financial strain in three individual OLS regressions, see Online Appendix Table 3, indicate an association of subjective financial strain with self-efficacy and anxiety. Subsample analysis by race shows that the main results are driven by White older adults. We do not find an association of change in loneliness with change in subjective financial strain for Black and Hispanic older adults, possibly due to the small sample size ($n = 388$), see Online Appendix Tables 4 and 5.

IV. Discussion

This study contributes new knowledge of the relationship between older adults' financial strain and loneliness. It is one of the first studies to quantitatively investigate the association of loneliness and financial strain in the US. Previous studies focused on objective financial measures such as income (MacDonald, Nixon, and Deacon 2018; Tanskanen and Anttila 2016), personal income-to-neighbourhood income disparities (Deeg and Thomése 2005), and financial downturn (De Jong Gierveld, Keating, and Fast 2015). Few studies have used subjective measures of financial strain, such as mortgage stress (Keene, Cowan, and Castro Baker 2015) and income dissatisfaction (Dahlberg and McKee 2014). This study highlights that older adults' worries about their economic situation are a stronger predictor of loneliness than their objectively measured financial situation, measured over a four-year period that spans the Great Recession of 2008. The findings hold when accounting for personal and social resources of older adults. We find that the association between change in subjective financial strain and change in loneliness is particularly strong for White older adults. Knowledge of the direct link between financial strain and loneliness in older age provides an important new insight for programmes and initiatives aimed at relieving widespread loneliness in later life. Future studies should future explore the relationship between financial strain and loneliness among Black and Hispanic older adults by collection larger sample sizes for these groups and investigate a wider range of social and personal resources, such as church activities and knowing neighbours.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Author contributions

This manuscript is based on the Master's Thesis of the corresponding author. All authors contributed to study design and analyses. The corresponding author conducted the statistical analysis and drafted the manuscript; all authors providing critical comments and approved the final version.

Declarations and ethics statements

Data availability statement for Basic Data Sharing Policy: Data access is at https://hrsdata.isr.umich.edu/data-products

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