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27 Bereavement, loneliness and health

- When a spouse or close confidant dies, loneliness and depressive symptoms increase
- The death of a confidant reduces one's satisfaction with one's social network
- Policymakers should pay extra attention to bereavement in old age given its effect on loneliness and health

27.1 Introduction

Loneliness and social isolation are important public health issues. A recent meta-analysis of research on the subject, mostly from the medical literature, concludes that being lonely and socially isolated – i.e., lacking social connections – may be at least as devastating to a person's health and survival as being obese or a heavy smoker (Holt-Lunstad et al. 2015). Using SHARE cross-sectional data, Deindl et al. (2013) found a positive correlation between one's degree of integration in social networks and one's self-assessed health.

Spousal bereavement – known as the 'widowhood effect' in the literature – also has potential health impacts. For example, a meta-analysis by Moon et al. (2011) found a positive association between widowhood and mortality. Moreover, the death of close relations or friends is likely to impact loneliness and social isolation. These issues are important because individuals are increasingly exposed to bereavement as they age.

The study reported in this chapter uses SHARE data to investigate the consequences of bereavement for loneliness, social isolation and health. We exploit longitudinal data on health outcomes and loneliness, as well as information on respondents' social networks. Our study considers two explanatory variables. First, we examine indicators of whether or not a respondent lost a spouse in the interval between any two consecutive waves. Second, we study the death of a confidant in a person's social network between Waves 4 and 6, when the network data were collected. We look at the effect of both of these events on selected health outcomes, measures of loneliness and the quality of the social network. We hypothesize that bereavement is associated with: (1) more loneliness and lower quality networks and (2) worse health outcomes through its effect on loneliness and isolation.

https://doi.org/10.1515/9783110617245-027

27.2 Data and analysis

Sample: We included all SHARE respondents aged 60+ who were observed in more than one wave between Waves 1–6. Because our analysis is longitudinal, a unit of observation contains information on a respondent in two waves, referred to here as initial and subsequent waves. For example, a respondent observed in Waves 4, 5 and 6 contributed one observation with initial information obtained from Wave 4 and subsequent information obtained from Wave 5, and a second observation where Waves 5 and 6 were the initial and subsequent waves, respectively. We pooled multiple observations for the same respondent.

Health outcomes: We focused on three variables that capture different dimensions of health. Mental health was measured using the EURO-D score, which is the sum of 12 depressive symptoms in older adults. Physical health was measured using an index of frailty (Fried et al. 2001) that combines the following conditions: unintentional weight loss, self-reported exhaustion, weakness (grip strength), slow walking speed and low physical activity. Functional health was measured by summing the difficulties in activities of daily living (ADLs) and in instrumental activities of daily living (IADLs) in a single measure. The descriptive statistics of these health outcomes in the latest wave (Wave 6) are displayed in Table 27.1 (the data for other waves are similar). All health variables were coded such that greater values reflect worse outcomes.

Social Isolation and Loneliness: The Social Network (SN) module available in Waves 4 and 6 of SHARE uses a name generator to identify and describe a person's network of confidants (Litwin et al. 2013). In our analysis, we employed variables that measure the quality of this network as markers of isolation. They included: 1) the size of the SN (the number of confidants) other than the spouse; 2) satisfaction with respect to one's SN measured on a scale from 0 to 10, where 10 indicates 'completely satisfied' and 3) frequency of contact with the most frequently contacted confidant measured on an ordinal scale from 1 (never) to 7 (daily), again excluding the spouse. Loneliness, or 'felt' isolation, was measured using the short form of the RUCLA loneliness scale. We combined the three items of the scale into a single measure that reflected how often respondents felt: a) a sense of being left out, b) a lack of companionship and c) isolation. The total RUCLA index score ranged from 3–9, with a higher score indicating a more intense feeling of loneliness.

Bereavement: We considered two types of personal losses that are prevalent in the lives of older people. First, the death of a spouse between two consecutive waves was experienced by 2,639 respondents, or an incidence of 3.7% per wave. Second, we examined the death of confidants in the SN between Waves 4 and 6. In Wave 6, survey participants who did not mention a confidant who was cited

Table 27.1: Variable descriptions.

	Mean	Sd	Min	Max	N
Health Outcomes					
Frailty	1.06	1.18	0	5	21,119
Limitations	0.83	2.16	0	15	23,462
EURO-D	2.46	2.22	0	12	23,088
Loneliness and Social Isolation					
RUCLA	3.87	1.34	3	9	21,483
SN size	2.16	1.61	0	7	23,489
SN satisfaction	8.96	1.30	0	10	21,847
SN contact frequency	6.22	0.96	1	7	15,551
Bereavement incidence					
Widow	0.04	0.19	0	1	72,217
SN: dead	0.05	0.23	0	1	23,896
SN: dead close	0.01	0.11	0	1	23,896
SN: dead not close	0.04	0.20	0	1	23,896

Note: SHARE Wave 6 for health outcomes, loneliness and social isolation. SHARE Waves 1–2, 2–4, 4–5, 5–6 for the spousal bereavement variable (widow), SHARE Waves 4–6 for the non-spousal bereavement variables (deaths within one's social network).
Source: SHARE Wave 1–6.

earlier in Wave 4 were asked why that person was not named again. We used a binary indicator to indicate the death of at least one member of the individual's SN – excluding the spouse. As displayed in Table 27.1, 5% of our sample – i.e., 1,311 individuals out of 23,896 observed in Waves 4 and 6 – experienced this type of network confidant loss. We also used information on how close the deceased SN person was to the respondent. In this case, we defined indicators for 'death of an SN member who was extremely close' (n = 272), 'death of an SN member who was less than extremely close' (n = 1,048) and 'no confidant died between W4 and W6′ (n = 22,585). We note that the first two categories are not mutually exclusive.

Analysis: First, we regressed health outcomes in the subsequent wave on the bereavement indicators in the initial wave. We entered a set of controls into the procedure because they are potential confounders. They included the respective initial health outcome, the duration between initial and subsequent interviews, gender, age, age squared, being in a couple, having children, education

(categories), working status, income and wealth quartiles and country. Second, we regressed measures of loneliness and social isolation in the subsequent wave on the bereavement indicators. We included the same baseline controls as in the previous regression, adding the initial loneliness or SN outcome and replacing the initial health outcome by initial self-assessed health. In the regressions that used the death of a confidant, we added initial SN size; in the regressions that used the death of a close confidant, we included both SN size and the number of close confidants. To isolate the effect of the death of a spouse, which we report, the corresponding regressions included binary indicators for 'widow in subsequent wave', 'widow in initial wave' and their interaction, in addition to 'in couple' and other controls. Given the extensive set of controls and our use of longitudinal data, the regression design can be considered quasi-experimental, such that a causal interpretation of the bereavement coefficients is warranted.

27.3 Results and discussion

Table 27.2 reports the coefficients of the bereavement events in the regressions of the health outcomes.

Table 27.2: Effect of widowhood transitions and death of an SN member on health outcomes.

	(1)	(2)	(3)
	Frail	**Limitations**	**EURO-D**
Widow	0.139***	0.187***	1.013***
	(0.020)	(0.034)	(0.037)
SN: dead	0.039	0.043	0.115**
	(0.029)	(0.051)	(0.055)
SN: dead close	0.085	−0.024	0.259**
	(0.062)	(0.107)	(0.117)

Significance: *** = 1%; ** = 5%; * = 10%.
Note: Standard errors in parenthesis. SHARE Waves 1 to 6 for widowhood, Waves 4 and 6 for the SN bereavement indicators. Controls at baseline: (lagged) health outcome, gender, age, age squared, being in a couple, having children, education categories, working status, income and wealth quartiles and country dummies. The second panel includes baseline SN size as a control; the third panel includes baseline SN size and number of extremely close confidants.
Source: SHARE Wave 1–6.

The coefficients for 'widow' in the first row measure the effect on health, conditional on past health, of becoming a widow in the interval between two consecutive waves as opposed to remaining married. The coefficients show that becoming a widow is associated with modest detrimental effects on our measures of physical and functional health. Moreover, we find a large detrimental effect on mental health. The coefficient for the EURO-D depression score implies a relative increase by more than 1 point. This increase is substantial because the threshold for clinical depression is 4 or more depressive symptoms. Adding 1 to the EURO-D score of every respondent would increase the prevalence of depression from 31% to 44%.

The other rows of Table 27.2 show the effect of the death of a confidant who is not a spouse. Almost all of the coefficients point to a small negative effect of this event on health but few are statistically significantly. However, non-spousal bereavement leads to a significant 0.12-point increase in the EURO-D depression score. Moreover, when the confidant who died was extremely close to the respondent, the coefficient more than doubles, increasing the EURO-D by 0.26 points or equivalent to a quarter of the large effect of spousal bereavement.

In Table 27.3, we show how bereavement affects loneliness and several indicators of quality of the social network. The results show that becoming a widow leads to a substantial increase in feelings of loneliness. In contrast, widows seem to respond to the death of their spouses by adding confidants to their network and increasing their frequency of contact. Losing their spouse may allow them to expand their social network by leaving them with more free time, or they may increase their social contact to make up for that loss. There is no effect on satisfaction with the network of confidants; however, note that the deceased spouse may or may not have been a confidant.

The remaining rows of Table 27.3 point to the death of a confidant as having a detrimental effect on the person's feeling of loneliness and satisfaction with his/her social network. If the deceased confidant was close, these effects are again much larger. However, non-spousal bereavement does not seem to imply any change in the SN size or contact frequency.

27.4 Conclusion

We found that the death of a spouse or a close confidant is correlated with an increase in loneliness and the number of depressive symptoms. In addition, the death of a confidant reduces the quality of a person's social network in terms of satisfaction, all the more so when the confidant was extremely close to the respondent.

Table 27.3: Effect of bereavement and social isolation on loneliness and SN quality.

	(1)	(2)	(3)	(4)
	RUCLA	**SN Size**	**Satisfaction**	**Frequency**
Widow	0.856***	0.636***	0.075	0.142***
	(0.041)	(0.057)	(0.055)	(0.044)
SN: dead	0.083**	−0.053	−0.068*	−0.007
	(0.034)	(0.041)	(0.038)	(0.027)
SN: dead close	0.178**	0.099	−0.191**	−0.008
	(0.073)	(0.089)	(0.080)	(0.059)

Significance: *** = 1%; ** = 5%; * = 10%.
Note: SHARE Waves 5 and 6 for column (1), Waves 4 and 6 for columns (2) to (4). Controls at baseline: lagged outcome, self-assessed health, gender, age, age squared, being in a couple, having children, education categories, working status, income and wealth quartiles and country dummies. Columns (2) to (4) include controls for baseline SN size (2nd panel), baseline SN size and number of extremely close confidants (3rd panel).
Source: SHARE Wave 1–6.

Our analysis of the effect of bereavement is limited to fairly short-term intervals: 1-wave intervals for widowhood and 2-wave intervals for the death of confidants. Future research should explore the effects at longer horizons, controlling for time since bereavement. Whether we would find stronger effects over longer horizons or that, instead, individuals adjust to the death of spouse and confidants remains to be seen.

In sum, the SHARE data confirm the high incidence of bereavement in old age. Our findings suggest that policymakers concerned with loneliness and social isolation as a public health issue should pay special attention to bereavement as an important factor in the nexus between social connectedness (or the lack thereof) and health.

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