

Intergenerational Care Dynamics: Examining the Impact of Grandchild Care on Loneliness in Aging Populations

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Introduction and theoretical background

Demographic change affects how long individuals spend in various family roles. Improvements in mortality and life expectancy increase the duration of the relationship between grandchildren and grandparents. On the other hand, changes in fertility have altered the balance between young and old. Childlessness reduces the number of people who will eventually become grandparents, and delayed fertility will postpone the beginning of grandparenthood. Margolis and Verdery (2019) argued that demographic processes are crucial in analyzing the *demography of grandparenthood* because they determine when intergenerational relationships begin and how long they last. In Europe, approximately 58% of grandmothers and around 49% of grandfathers provide care for at least one grandchild who is under the age of 16 (Hank and Buber, 2009), meaning that almost half of the aging population does not contribute to grandchild caregiving, which may lead to higher rates of loneliness among seniors.

Loneliness can have a range of adverse effects on a person's physical or mental health. In addition to partners or spouses, adult children are the primary source of emotional and practical support for older people as they increase opportunities for interaction and companionship (Broek et al., 2019). As a result of having children, it is possible to become a grandparent, and the transition to grandparenthood is associated with a potential reduction in loneliness. While there is a substantial body of literature on the relationship between having children and experiencing loneliness, the protective effect of having grandchildren against loneliness has garnered much less scholarly attention.

Nowadays, society considers loneliness as one of the major issues. It can be defined as the discrepancy between the desired and achieved personal network of relationships (de Jong Gierveld et al., 2018). Zhang et al. (2022) argue that loneliness is a part of ageing, and that the connection between ageing and loneliness can mostly be attributable to ageing-related risk factors (e.g., retirement, loss of friends and family, mobility limitations etc). Grandparenthood has evolved into a fundamental part of the ageing process. Among aging individuals, the role of grandparent has been characterized as significant and fulfilling. The arrival of grandchildren into an elderly individual's social circle may have an impact on their self-esteem, perception of future optimism and social cohesion (Taubman-Ben-Ari et al., 2013). Older people can gain a new sense of purpose by taking the role of mentors and caregivers. Grandchildren can also be an inspiration for a hopeful outlook and become a source of motivation and optimism. The arrival of grandchildren not only affects grandparents but also affects family dynamics and social bonding. It is a transformative experience that not only positively influences the health conditions of the elderly but also serves as a buffer against loneliness (Zhang et al., 2022).

Social interactions in later life have been emphasized as a key tenet of prosperous ageing frameworks. Growing concern over loneliness among the elderly has pointed to clear links between loneliness, social interactions and health outcomes (Quirke et al., 2019). However, research that examines the role of grandchild caregiving on feelings of loneliness and social isolation yields mixed results. Quirke et al. (2021a) provided a concise summary of the key studies addressing this issue in their literature review. Although most analyzed studies found a link between reduced loneliness and the provision of grandchild care (e.g. Tsai et al., 2013; Quirke et al., 2019), the literature to date also highlighted disparities in the ways in which men and women experience grandchild caregiving. Men who engage in grandchild caregiving tend to exhibit increased loneliness scores (Quirke et al., 2021b) implying that male

grandparents may not subjectively experience social connections with grandchildren in the same way as their counterparts.

According to Zhang et al. (2022), gender is a critical aspect to consider when studying family relationships and caregiving because men and women have different levels of engagement in grandparent roles. On average, grandmothers tend to provide more grandchild care than grandfathers (Bordone and Arpino, 2019) and they transition to grandparenthood earlier than men (e.g. Margolis and Verdery, 2019). Economic theory emphasizes the importance of time availability and the specialization of tasks into market and non-market work, with little variation in gender differences. However, empirical data support sociological theories that gender roles extend beyond the rational distribution of tasks. The division of grandparental duties is likely to result from historical gender-specific roles and expectations related to grandparenthood, which has resulted in a persistent increase in grandmothers' involvement in the care of grandchildren.

This topic is of particularly important during the COVID-19 pandemic in which interactions, even with family members, have undergone sudden and profound changes. The impact of grandparenting and the inability to provide childcare for grandchildren on the isolation and mental well-being of grandparents remains relatively uncertain.

Research questions and data

This study aims to explore the association between caring for grandchildren and the feeling of loneliness during the COVID-19 pandemic. In addition, we pay particular attention to sex differences as well as differences between different parts of Europe. To what extent do gender differences influence the feeling of loneliness in the population aged 50+? What are the underlying factors associated with the difference in loneliness score? Is there a similar pattern between different European regions? These research questions will guide our analysis and form the basis for our analytical approach.

We use data from the Survey of Health, Ageing and Retirement (SHARE), particularly focusing on the regular SHARE Wave 9 (Börsch-Supan, 2023). Wave 9 of the SHARE study was conducted between late 2021 and 2022, and while the data remains preliminary, it provides valuable insights into the COVID-19 pandemic in the later stages. In addition, we plan to use data from previous SHARE waves in order to offer a more comprehensive perspective and allow us to assess how loneliness has evolved both before and after the onset of COVID-19 pandemic.

First results

Our initial findings are derived from two logit models in which loneliness is the dependent variable (coded 0 if the respondents were hardly ever or never lonely, and 1 if they were often or some of the time lonely), while our main independent variable is care to grandchildren in the last 12 months. We pay special interest if this effect varies by gender and by country. In general, respondents aged 50+ who regularly provide care for their grandchildren and do not live alone, have on average better health, are on average more educated, the elderly and men have a higher chance of having lower levels of loneliness compared to their counterparts.

In addition to first model (Model 1 in Table 1), we used an interaction term in the second model (Model 2 in Table 1) which turned out to be significant, indicating that taking care of grandchildren has a significant effect on loneliness levels and that it varies between genders, with women reporting higher levels of loneliness. In Model 3 (data not shown in Table 1) we further explored whether disparities in loneliness levels related to caregiving for grandchildren varied across different countries. However, three-way interaction term did not yield statistically significant results in this analysis.

Table 1 Coefficient estimates from two logistic regression models

	Model 1		Model 2	
Taking care for grandchildren				
Yes	-0.222	***	-0.290	***
	(0.301)		(0.050)	
Living alone				
Yes	1.425	***	1.425	***
	(0.287)		(0.287)	
Rating of subjective health (ref. Good)				
Excellent	-0.571	***	-0.571	***
	(0.077)		(0.077)	
Very good	-0.373	***	-0.373	***
	(0.044)		(0.044)	
Fair	0.440	***	0.440	***
	(0.300)		(0.300)	
Poor	1.156	***	1.156	***
	(0.042)		(0.042)	
Age	-0.039	**	-0.037	*
	(0.020)		(0.019)	
Age squared	0.000	**	0.000	**
	(0.000)		(0.000)	
Gender (ref. Male)				
Female	0.339	***	0.311	***
	(0.027)		(0.031)	
Education (ref. Low)				
Medium	-0.155	***	-0.155	***
	(0.030)		(0.030)	
High	-0.234	***	0.235	***
	(0.038)		(0.038)	
Female ×				
Taking care for grandchildren			0.103	*
			(0.059)	
Country controls	YES		YES	
R squared	0.152		0.152	
N	38.618		38.618	

Note: Ref. = reference category; *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$.

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