

Life satisfaction of older Europeans: the role of grandchildren

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Introduction

In contemporary, advanced societies, which are ageing fast and are characterized by high life expectancy, grandparents' lives and those of their grandchildren overlap markedly, creating an unprecedented opportunity for the grandparents' role (Bengtson 2001) (Grand)children can be an investment in old-age security (Billari and Galasso 2008) and a source of well-being for older individuals as well.

Research on the effect of grandparental childcare on grandparents' well-being has reported better health and health-related behaviours (Hughes et al. 2007; Di Gessa et al. 2015) and cognitive functioning (Arpino and Bordone 2014), but the effect of grandparenthood on grandparent's life satisfaction has so far received limited attention (e.g. Powdthavee 2011). In this study, we explore whether life satisfaction in later life is affected by having grandchildren. In this paper, we aim at integrating and extending two different streams of research: one on fertility and life satisfaction and one on grandparents' well-being.

Longitudinal studies focusing on how individuals' subjective well-being changes before and after the birth of a child (Myrskylä and Margolis 2014; Pollmann-Shult 2014; Balbo and Arpino, 2015) show that individuals tend to experience an increase in life satisfaction around childbearing, whereas they do report a sharp drop in their level of life satisfaction after the birth of the child. Most of these studies, though, only focus on short-term consequences of parenthood in term of subjective well-being. The longest period that has been considered is 18 years after the birth of a child, and no significant effects on life satisfaction have been found (Myrskylä and Margolis 2014). An interesting way to uncover long-term effects of fertility on subjective well-being is to

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look at whether becoming grandparent, having grandchildren, and looking after them impact on grandparents' life satisfaction. Similar to the event of becoming parent, the experience of becoming grandparent can be seen as part of the intergenerational exchange of emotional and relational support. Grandparents may have the opportunity to spend time with their grandchildren, while having more frequent contacts with their own children as well. Moreover, if they are asked to take care of the grandchildren, they can experience grandchild care as a fulfilling activity that increases their self-esteem (Drew and Silverstein 2004). In line with the above-mentioned argument, we pose our first hypothesis:

H1: Becoming a grandparent is associated with an increase in life satisfaction.

We are as well interested in uncovering whether a grandparent's life satisfaction increases when the number of grandchildren increases. Previous research studying the relationship between the number of children and parental life satisfaction has produced mixed results. Some studies emphasize that parents' life satisfaction declines with the number of children (Stutzer and Frey 2006) due to an increased level of stress and costs, whereas other studies have shown no relationship between life satisfaction and number of children (Nomaguchi and Brown 2011), arguing that emotional rewards deriving from parenthood do not increase with the number of children. Translating this literature into the grandparenthood context, we anticipate not to find a decrease in life satisfaction due to an increasing number of grandchildren, because we expect costs and stresses associated to grandparenthood to be lower than in the case parenthood. However, we might find a non-linear relationship between grandparents' life satisfaction and number of grandchildren, due to the fact that emotional benefits of being a grandparent might diminish with each additional grandchild. Therefore, we postulate the following hypotheses:

H2: A grandparent's life satisfaction increases with the number of grandchildren at a decreasing rate.

Data and methods

Our analyses are based on the Survey of Health, Ageing and Retirement in Europe (SHARE). SHARE is a multidisciplinary longitudinal survey, representative of the non-institutionalised population aged 50 and over (Börsch-Supan et al. 2005; 2008). Our sample selection includes only respondents with at least one child (N = 20,313). We used data from the second wave (2006) and the fourth wave (2010) because the dependent variable on life satisfaction (described below) was measured on a different scale in wave 1 and is not included in wave 3, the so-called SHARELIFE. Twelve countries participated in these waves (i.e., Austria, Belgium, Czech Republic, Denmark, France, Germany, Greece, Italy, Poland, Spain, Sweden, Switzerland, and the Netherlands).

Our dependent variable is *life satisfaction* (“how satisfied are you with life?”), ranging from 0 to 10, where 0 indicates the minimum satisfaction and 10 the maximum. Our main explanatory variables are related to number of grandchildren (0; 1 or 2; 3+, in order to explore whether the effect is non-linear), becoming grandparent for the first time, and number of additional grandchildren between the two waves. We control for age (50-54; 56-60; 61-65; 66-70; 71-75; 76-80; 81 or more), education (low; middle, high), whether the person lives with a partner, activity status (retired; working; other), IADL (number of difficulties with instrumental activities of daily living), whether the person lives in a rural setting. Dummy variables are included to account for country.

Engaging in a series of cross-sectional (on wave 2) and fixed-effects regressions, we study whether the birth of the first or further grandchildren increases a grandparent’s life satisfaction. We do not only explore the effect of having grandchildren on a grandparent’s overall level of life satisfaction, but also we analyze whether grandparenthood has a stronger effect in reducing a grandparent’s probability of being dissatisfied or conversely at increasing the likelihood of being very satisfied, using logistic regressions.

Preliminary results

Table 1 shows the cross-sectional association between different specifications of grandparenthood variables and life satisfaction at wave 2. Control variables described above are included in all models. We find that the association between the number of grandchildren and life satisfaction is positive and statistically significant for men but not for women. Similarly, when we consider having at least one grandchild, the association

is significant only for men. Finally, when we allow the effect of the number of grandchildren to be nonlinear, we find that life satisfaction of those men having 3 or more grandchildren is significantly higher than among grandchildless. No statistical effect is found when considering 1 or 2 grandchildren versus 0. This result may be due to the fact that having a high number of grandchildren makes geographical proximity and contact with (some of them) more likely. We will further investigate this as well as other aspects, such as the proximity of grandchildren and grandparents.

Table 1 – Estimates from cross-sectional regression models by gender, wave 2.

	Model 1		Model 2		Model 3	
	Men	Women	Men	Women	Men	Women
Number of grandchildren	0.013*	-0.005				
	(0.008)	(0.007)				
At least one grandchild			0.069*	0.003		
			(0.040)	(0.040)		
1-2 Grandchildren (Ref. 0)					0.051	0.014
					(0.043)	(0.043)
3+ Grandchildren					0.100**	-0.014
					(0.048)	(0.047)
N	9,155	11,158	9,155	11,158	9,155	11,158

Note: * p<0.10; ** p<0.05; *** p<0.01. All control variables are included in the models.

Table 2 reports estimates of linear regression models with individual fixed-effects, adjusting for individual time-invariant characteristics which may bias the relationship between the presence of grandchildren and life satisfaction. We find that becoming a grandparent as well as having more grandchildren been the two waves is statistically significantly associated with increases in life satisfaction for both men and women.

Table 2 – Estimates from fixed-effect regression models by gender.

	Model 1		Model 2	
	Men	Women	Men	Women
Becoming grandparent ¹	0.168** (0.072)	0.138* (0.074)		
1-2 Grandchildren vs 0			0.129* (0.069)	0.075 (0.070)
3+ Grandchildren vs 0			0.204** (0.094)	0.233** (0.095)
N	7,890	9,611	11,968	15,154

Note: * p<0.10; ** p<0.05; *** p<0.01. All time-variant control variables are included. 1. Sample with no grandchildren at wave 2.

However, for most individuals in our sample (about 70%), life satisfaction did not change by more than 1 point, and for about 34% life satisfaction remained unchanged. Therefore, treating life satisfaction as a continuous variable in a fixed-effects regression may lack variation in the dependent variable. As a consequence, instead of looking at numerical variations of an individual's life satisfaction, in Table 3 we focus on two possible binary changes: (i) a reduction in life satisfaction, or (ii) an increase in life satisfaction. The results are confirmed.

Table 3 – Estimates from logistic regression models by gender (odds).

	Model 1		Model 2	
	Men	Women	Men	Women
<i>Probability of reduced life satisfaction</i>				
Becoming grandparent	0.665*** (0.104)	0.555*** (0.091)		
Number of new grandchildren			0.926** (0.034)	0.872*** (0.030)
<i>Probability of increased life satisfaction</i>				
Becoming grandparent	1.848*** (0.220)	2.061*** (0.246)		
Number of new grandchildren			1.144*** (0.034)	1.187*** (0.033)
N	8,347	10,227	8,347	10,227

Note: * p<0.10; ** p<0.05; *** p<0.01. All control variables are included and measured at wave 2.

Concluding remarks

In this paper we bring together two different streams of research: one on fertility and life satisfaction and one on grandparents' well-being. We study whether fertility has indirect long-term effects on life-satisfaction in later life through grandchildren. We find that those who experience the event of becoming grandparents show higher life-satisfaction. Life-satisfaction increases with the number of grandchildren, especially for grandmothers.

In developing our work, we aim at investigating under which conditions the relationship between grandparenthood and life satisfaction changes. For instance, we will analyse whether the age of the grandchildren, the frequency of contact and proximity between grandparents and grandchildren, and the amount of grandparental childcare may lead to a different grandparenthood-life satisfaction association. We will also extend our work by including data from wave 5 that have been recently released. Following previous work on structural ambivalence and the effect of grandchild care (e.g., Neuberger and Haberkern, 2014), we also plan to assess whether the relationship between grandparenting and life-satisfaction is context-dependent by implementing separate analysis by countries or groups of countries.

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