Personality traits and provision of grandparental childcare in Europe

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Abstract

Previous studies have analyzed how several grandparents' characteristics influence grandchild care provision but the role of grandparents' personality has been overlooked. We use data from the waves 7 and 8 of the Survey of Health and Retirement in Europe that included the *Big 5* personality traits (PTs) for the first time. Overall, we found a positive and substantial association between openness, conscientiousness, extraversion and agreeableness and any grandchild care provision. However, PTs did not have an impact on the frequency of grandchild care provision, with the exception of conscientiousness that was also positively and substantially associated with at least weekly grandchild care provision.

Introduction

More than 50% of grandparents in Europe provide some care to their grandchildren (Zanasi et al. 2023). Micro and macro-level determinants of provision of grandchild care have been widely analysed (Albertini et al. 2007; Bordone et al. 2017; Di Gessa et al. 2016; Hank & Buber 2009; Igel & Szydlik 2011; Silverstein et al. 2003). Among the micro-level determinants, several characteristics of the grandparents such as gender, health, marital and employment status are associated with the probability of grandparents being involved in caregiving to their grandchildren and also to the intensity of this activity. In this study, we focus on the role of personality traits as possible additional determinants of grandchild care provision.

Personality traits (PTs) reflect people's characteristic patterns of thoughts, feelings, and behaviors (John and Srivastava 1999). They have been found to influence human

relations and activities in many ways and thus it may seem obvious to put forward a possible link with grandchild care. Although recent studies have attempted to control for time-invariant unobserved factors (including PTs) when analysing grandchild care provision, to our knowledge the influence of PTs on grandchild care has not been formally investigated so far. Psychologists tend to consider PTs as innate characteristics of individuals formed during childhood and early adulthood due to genetic factors and early-life experiences (e.g., Bouchard & McGue 2003; Cobb-Clark & Schurer 2012). They are often considered as time-invariant characteristics of individuals during adulthood and most studies found no systematic changes in PTs by age (during adulthood) and by experience of different types of life events. Recently, Krämer et al (2022) found that transition to grandparenthood was not associated with a change in PTs.

In the intergenerational relationships literature, many studies have examined the influence of PTs on quality of relations (e.g. the meta-analysis review of Prinzie et al. 2009 on parenting). Some research has been devoted to understanding how PTs impact on the quality of relationships between grandparents and grandchildren (especially from the grandchildren's perspective) (e.g. Hakoyama & MaloneBeach 2013). Other studies considered the role of PTs in influencing health and wellbeing of grandparents.

PTs may influence the provision of grandchild care for different reasons. PTs may influence active engagement in general, and so influencing also the likelihood of providing care to grandchildren. Also, grandparents might prefer or not to engage in grandchild care as opposed to engage in other activities according to their PTs. PTs may also influence relationship quality with children and grandchildren and work through their influence on more distant determinants of caregiving. For example, it has been found that PTs affect the likelihood to get married, divorce (Boertien & von Scheve 2017; Solomon & Jackson 2014), have children and how many (Alvergne et al 2010; Tavares 2016), education (Komarraju et al. 2011), which are also determinants of grandchild care. Therefore, PTs may act as confounders that once controlled for might change the effects of other "standard" determinants of grandchild care.

In this study we adopt the widely used 5-dimensional model of personality, known as *Big 5*. According to this model developed on the basis of several independent contributions (e.g., Digman 1989; Fiske 1949; Goldberg 1993; John et al. 1991; McCrae & Costa 1987), personality can be represented along 5 dimensions or traits, also known as "OCEAN" from the initial letters of the five traits included:

- Openness to experience (vs. closedness)

- Conscientiousness (vs. lack of direction)
- Extraversion (vs. introversion)
- Agreeableness (vs. antagonism)
- Neuroticism (vs. emotional stability).

The *Big 5* taxonomy represents personality at the broadest level of abstraction, each dimension summarizing a large number of more specific personality characteristics (John et al. 1991). This taxonomy has been found to be replicable across samples, countries and cultures. Putting forwards possible links to grandchild care for each specific trait, we expect their association with provision of grandchild care as indicated in Table 1.

Table 1. Expected associations between personality traits and grandchild care provision

Big 5	**Direction of expected association with grandchild care**
Openness	-
Conscientiousness	+
Extraversion	-
Agreeableness	+
Neuroticism	-

Data and methods

We use data from the Survey of Health, Ageing and Retirement in Europe (SHARE) on respondents aged 50 years old or older (Börsch-Supan 2019). In particular, we use wave 7 that includes, for the first time, items measuring the *Big 5*. These items have also been included in the following wave (8) but, probably due to the assumed stability of PTs in adulthood (especially in the short-run), they were only collected on non-panel respondents. Wave 7 of SHARE mostly collected retrospective information among those individuals who did not participate in the retrospective data collection implemented in wave 3 (SHARELIFE). We thus consider respondents from wave 7 (excluding those who participate in the retrospective data collection) and non-panel respondents from wave 8 (i.e., those respondents from wave 8 who were not also interviewed in wave 7) (N=13,441). As a robustness check we repeated the analyses considering only regular respondents from wave 7 and we obtained similar results.

As for grandchild care, SHARE asks “During the last twelve months, have you regularly or occasionally looked after your grandchild without the presence of the parents?” (Yes/No). A first round of analyses uses logistic models on the dependent variable grandchild care as a dummy variable (“any care”). If the answer to the previous question is yes, it is asked how often the respondent provides grandchild care (at least daily, at least weekly, at least monthly, less often). Following Hank and Buber (2009),

we combine the answers “daily” and “weekly” building a dummy variable for intensive grandchild care (=1 if at least weekly). The models for intensive grandchild care are implemented on the subsample of respondents who provide grandchild care (N=5,599).

PTs are measured using the 10-item Big-Five inventory (BFI-10) suggested by Rammstedt and John (2007), an ultra-short measurement of personality suitable especially for multi-theme surveys in which assessment time and questionnaire space are limited. For each trait two items with scales between 1 and 5 (strongly agree to strongly disagree, or vice versa) are used. The score for each trait is the average between the two items for that trait. Despite the sufficient reliability of the abbreviated questionnaire, some losses in reliability were found for the Agreeableness dimension. Thus the third item recommended by Rammstedt and John (2007) from the domain of Agreeableness was added to increase the reliability of this dimension. For this trait the final score is the average of the three items.

All the models *control* for age, education, working status, partnership status, number of grandchildren, household income, diagnosed illness; Gali (global activity limitations).

For each dependent variable we estimated 7 logistic regression models. The first only includes control variables and does not include PTs. Then, we estimate five models that include in turn one of the PTs at the time. The seventh model includes all PTs simultaneously. The models for intensive grandchild care are implemented on the subsample of respondents who provide grandchild care.

Results

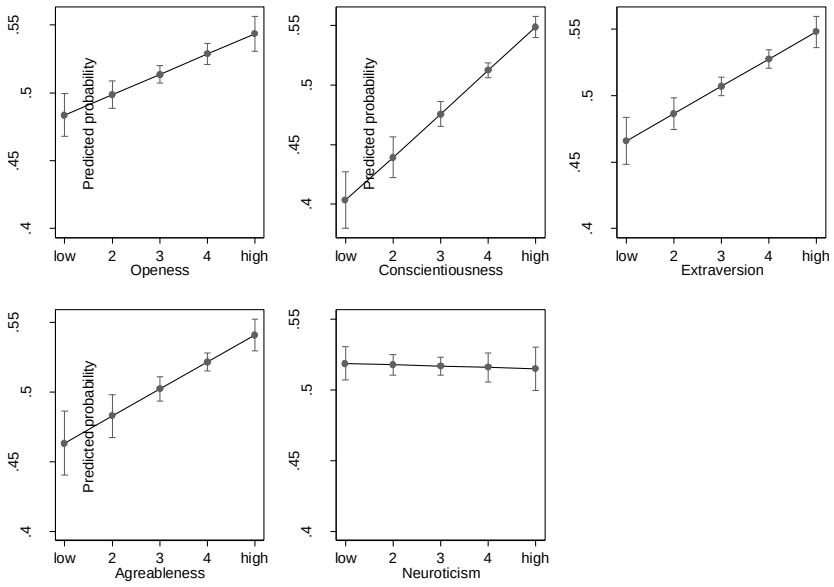
Figure 1 reports the predicted probability of grandchild care provision, obtained from fully adjusted regression models that include all PTs. The predicted probabilities are calculated averaging predictions obtained using observed values for the independent variables and are displayed together with confidence intervals for pair-wise comparisons at an approximate 5% level (Goldstein and Healy 1995). A non-overlap of the confidence intervals indicates that the corresponding predictions are significantly different (MacGregor-Fors and Payton 2013).

Four out of the five PTs are significantly associated with the probability of engaging in grandchild care provision: openness, conscientiousness, extraversion and agreeableness are all positively associated with grandchild care provision. The associations are also substantial: grandparents who score the highest on extraversion and

agreeableness are about 10 percentage points more likely to provide grandchild care compared to those who score the lowest (55% vs 45%).

Predicted probabilities of intensive grandchild care provision estimated on the sub-sample of grandparents who provide care show a statistically significant and substantial effect only for conscientiousness: grandparents who score the highest on this trait are about 10 percentage points more likely to provide grandchild care compared to those who score the lowest (about 57% vs 47).

Figure 1 – Adjusted predicted probabilities of (any) grandchild care provision as a function of personality traits estimated from fully adjusted logit models



Concluding remarks

Determinants of grandchild care have been widely examined, but the role of personality traits has been overlooked. We found that four PTs (openness, conscientiousness, extraversion and agreeableness) do have a substantial association with the probability for grandparents of engaging in grandchild care. Conscientiousness is also associated with the probability of intensive grandchild care provision. Previous studies justified the use of fixed effect models in the analysis of grandchild care associations with health and wellbeing because of the possible confounding effect of unobserved (mostly) time invariant variables, such as personality traits. Results bring support to this methodological choice because of the substantial associations we find between personality traits and grandchild care provision.

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