Anita Abramowska-Kmon (aabram@sgh.waw.pl)

Wojciech Łątkowski (wlatko@sgh.waw.pl)

Wiktoria Bąchorek (wbacho@sgh.waw.pl)

Institute of Statistics and Demography, SGH Warsaw School of Economics, Poland

Resilience as a determinant of receiving and providing care in later life – a road to sustainable ageing in European countries?

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Introduction

Inter- and intra-generational relations describe the ties between members of different generations or between persons of a similar age. Those relations usually involve family, but may also extend to non-kin networks. In the context of ongoing demographic changes, such as ageing populations, declining fertility, marital instability and increased geographical mobility, research on inter- and intra-generational solidarity is becoming increasingly important. Improvements in human longevity observed all around the world provide more opportunities throughout one's lifespan for intergenerational interactions. Among the most prominent are care transfers within and between generations. Caregiving is not unidirectional as it pertains both to adult children towards their older parents as well as to grandparents towards their grandchildren. Importantly, increasing life expectancy and fewer children reshape kinship networks from horizontal into more vertical structure affecting the size of potential care resources within families. At the same time, the prevalence of divorce and remarriage makes family networks more complex which influence the exchange of support between and across generations.

Family support and coherence, among other factors, have a major influence not only on individual (Hawley & DeHaan, 1996) but also family resilience (Nadrowska, Błażek, & Lewandowska-Walter, 2017). In fact, warm and cohesive intrafamilial exchanges during one's life, as well as experience of sensitive and emotionally responsive caregiving (especially during one's infancy) serves a key protective factor in all areas of human development (Egeland, Carlson, & Sroufe, 1993). Family cohesion – emotional bonding between family members and mutual support (working together as a unit) promotes the optimal use of various familial resources, contributing to the ability to solve common problems (Lavee, McCubbin, & Olson, 1987). It has been argued that family relationships based on contact, emotional attachment, agreement, instrumental support, and supportive familial norms translate into broader social cohesion and promote social inclusion (Furstenberg, 2005). The aforementioned affective and

behavioural orientations of a family were identified by (Bengtson & Roberts, 1991) as fundamental components of intergenerational solidarity, understood as the link between parents and their adult children (Bengtson & Roberts, 1991). Hence, the group of protective factors for positive adaptation linked to family support and aspects of family (intergenerational) solidarity correspond to one another.

Research has identified many individual and macro factors that influence the receipt and provision of care. Among other things, individual characteristics of both caregivers and care receivers (especially their age, gender, education, health status, marital status or family situation) play a role in the exchange of care (Di Gessa & Deindl, 2024; Marks, Lambert, & Choi, 2002; Montgomery, Rowe, & Kosloski, 2007; van Broese Groenou & Boer, 2016). The nature and quality of their relationship is also important. At the macro level, the model of care observed in a given country, the availability of formal care services and people's attitudes towards the responsibility of caring for parents and other dependent family members also have an impact on the inter- and intragenerational exchange of support (van Broese Groenou & Boer, 2016).

In the context of older adults, resilience can be perceived as individual's ability to adapt and flourish despite adversity and age-related challenges (Trică et al., 2024). Resilience can be demonstrated by using both internal and external resources, e.g. adaptive coping strategies or seeking social support, to maintain or improve overall wellbeing (Trică et al., 2024). Chappell & Welsh (2020) underline the significance of viewing resilience as a relational social process rather than in an individualised way. Based on a qualitative study they argue that the older people understand resilience as a social process created through intergenerational interactions in three themes. Firstly, the memory of intergenerational support from the past can be an important resource providing comfort throughout the life-course. Secondly, reciprocal exchange of caring obligations across generations is a key element of resilience. Lastly, the feeling of connectedness to communities, engagement in society supports resilience as well (Chappell & Welsh, 2020). Thus, it seems reasonable to assume that personal resilience may be a determining factor in the exchange of intergenerational and intergenerational support.

Therefore, the main aim of this presentation is to analyse the receipt and provision of care (to adults or grandchildren) taking into account the resilience markers of people aged 50+. In our analyses we approached resilience levels through a set of individual characteristics describing health status, mental and financial well-being (we follow the theoretical framework on resilience proposed by Aassve & Bastianelli (2024). In particular, we would like to answer the following research hypotheses:

1) Individuals with higher levels of resilience tend to provide care to others (younger and older generations).

2) Individuals with lower levels of resilience are more likely to be cared for by others.

Data and method

Data

We used the 9th wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) conducted in 2021/2022 (Bergmann, Wagner, & Börsch-Supan, 2024; Börsch-Supan et al., 2013). The original database contained information on 72,596 respondents aged 50 and over and their partners. For purpose of our analysis we limited the sample to individuals aged 50+ with no missing values and the final analytical sample included 39,570 respondents in 27 European countries: Austria, Germany, Sweden, Netherlands, Spain, Italy, France, Denmark, Greece, Switzerland, Belgium, Czechia, Poland, Luxembourg, Hungary, Portugal, Slovenia, Estonia, Croatia, Lithuania, Bulgaria, Cyprus, Finland, Latvia, Malta, Romania, and Slovakia.

Variables and model

Dependent variables in the models. The dependent variables in the models describe the fact of receiving or giving informal care to adults or grandchildren. For all variables, care given or received can be regular (daily) or less frequent and is binary.

Variables in Regression Modelling. We controlled for basic socio-demographic characteristics of the respondents (such as gender, age, presence of a cohabiting partner, level of education, employment status, presence of children in the social network, household size), variables describing social connectedness and satisfaction with the social network and European region (Northern Europe, Western Europe, Southern Europe and Central-Eastern Europe).

The key explanatory variable is based on membership of a class describing resilience. The approach is similar to that presented in Abramowska-Kmon, Chełchowska, Piotrowski, & Strzelecki (2024) (see appendix). Specifically, we used latent class modelling to group individuals into homogeneous classes describing resilience. To do this, we used the following variables describing psychological well-being (CASP-12 measure, short version of the UCLA loneliness scale, and depression level based on the EURO-D scale), health status (1+ ADL limitations, having at least two chronic diseases, having limitations in activities (GALI)), and subjective financial situation based on the household's ability to make ends meet. This variable has five classes, which can be characterised as follows:

- Class 1: Best overall health, well-being, and financial situation;
- Class 2: Second best overall, but worse physical health;
- Class 3: Good physical and mental health but worse financial situation;
- Class 4: Bad physical health, activity limitations and chronic diseases, combined with poorer financial situation and low quality of life;
- Class 5: Difficult financial situation, limitations in activities, the highest depression and loneliness scale and the lowest quality of life.

The higher the class, the worse the situation in terms of resilience. The detailed results of the latent class analysis for the resilience classes are presented in the Appendix.

Given the character of the dependent variables, logistic regression models were used.

Results

Table 1 presents the results of logistic regression models for the three dependent variables describing the provision and receipt of informal care. Below we present only the significant estimates.

The results of Model 1 show that the probability of receiving care from someone increased with age and that men were less likely to receive care than women. People living with a partner were less likely to receive it than those living alone or with someone other than a partner. People with higher levels of education were less likely to receive care than those with lower levels of education. Those employed were more likely to receive informal care compared to those not employed. Adults aged 50+ living with others in the same household were less likely to receive care than those living alone. Social network connectedness and social network satisfaction were associated with a higher likelihood of receiving informal care. Having children in one's social network increased the chances of receiving informal care, while their absence was associated with a lower likelihood of receiving care as compared to those with no children at all. In terms of European regions, people living in Northern and Western European countries were more likely to receive informal care, while those living in Southern European countries were less likely to receive informal care than those living in CEE countries. Finally, belonging to the higher resilience classes was associated with a greater likelihood of receiving informal care.

The results of Model 2 show that the likelihood of caring for adults decreases with age and that men are more likely to provide care than women. This result is rather surprising, as previous research has shown that women are more likely to be carers. This may be related to the fact that this variable covers both regular (daily) care and occasional care once a week. People with higher levels of education were more likely to provide care than those with lower levels of education. People in employment were less likely to provide informal care than people not in employment. Social network connectedness were associated with a higher likelihood of providing informal care. People without children in their social networks were more likely to provide adult care than those without children. Individuals living in Northern and Western European countries were more likely to provide informal care than those living in CEE countries. Last, belonging to the higher resilience classes (especially 3rd and 5th) was associated with a lower likelihood of providing informal care to adults.

The results of Model 3 show that the likelihood of caring for grandchildren decreased with age and that males were less likely to do so than women. Living with a partner increased the chances of caring for grandchildren. People with a tertiary

education were more likely to look after grandchildren than those with the lowest level of education. Being in employment reduced the likelihood of caring for grandchildren in comparison with those not in employment. Those living in two-person households were more likely to be involved in grandchild care, while those in larger households were less likely to be doing so than those in single-person households. Social network connectedness and social network satisfaction were associated with a higher likelihood of caring for grandchildren. Having children (regardless of whether they were in one's own social network) increased the likelihood of looking after grandchildren compared to those without children. Across European regions, people living in Northern, Western and Southern Europe were more likely to care for grandchildren than those in CEE. Finally, belonging to the higher resilience classes was associated with a lower likelihood of caring for grandchildren.

In conclusion, our results seem to show that belonging to a lower resilience class is associated with being more dependent on help from others and less inclined to provide support to others (both adults and grandchildren). Thus, in order to improve inter- and extragenerational support, resilience, its components and the factors that influence it (education, employment, etc.) should be a priority for social policy.

// Table 1 //

Conclusion

Our results show that receiving care can be associated with individual characteristics that describe lower resilience. Higher social capital, measured by social connectedness and social network, increases chances of both receiving and providing care, which is in line with the theoretical framework that we followed. Furthermore, informal care is provided to people that belong to latent classes with lower resilience, while at the same time reduced resilience leads to lower probability of providing informal care both to adults and grandchildren. People living in Northern and Western European countries, compared to those from Central and Eastern Europe, are more likely to provide care.

In conclusion, to build a resilient society in the future, individual resilience should be strengthened, which would translate into greater independence and a higher likelihood of needing care in old age. Social policies should therefore prioritise the enhancement of resilience, its components and the factors that influence it (education, employment, etc.). Promoting individual resilience over life course may lead to greater societal resilience in the future. This approach aligns with the concept of sustainable ageing, which involves building socially sustainable care and health systems, and creating a society that caters for people of all ages.

Table 1: Results of logit regression models for variables describing providing and receiving care

	Model 1 Receiving care from someone	Model 2 Giving care to adults	Model 3 Providing care to grandchildren
Age (in Yrs)	0.048***	-0.047***	-0.081***
	(0.002)	(0.002)	(0.002)
Sex (ref. Male)	-0.106***	0.108***	-0.197***
	(0.028)	(0.025)	(0.026)
Has Coresident Partner (ref. No)	-0.220***	-0.032	0.279***
	(0.040)	(0.040)	(0.041)
Educational level (ref. Primary or Less)			
Lower Secondary	-0.108**	0.035	-0.074
	(0.045)	(0.048)	(0.048)
Upper-Post Secondary	-0.149***	0.128***	0.049
	(0.040)	(0.043)	(0.043)
Tertiary	-0.178***	0.302***	0.217***
	(0.044)	(0.045)	(0.046)
Employed (ref. Not employed)	0.129***	-0.125***	-0.679***
	(0.049)	(0.037)	(0.040)
Household Size (ref. 1 Person)			
2 People	-0.408***	0.025	0.269***
	(0.043)	(0.043)	(0.045)
3+ People	-0.566***	-0.074	-0.234***
	(0.054)	(0.052)	(0.057)
Scale of Social Connectedness	0.299***	0.448***	0.258***
	(0.017)	(0.016)	(0.017)
Social Network Satisfaction	0.067***	0.015	0.076***
	(0.011)	(0.011)	(0.012)
Children in Social Network (ref. No Children)			
Has Children in Social	0.104**	0.024	4.328***

	Model 1 Receiving care from someone	Model 2 Giving care to adults	Model 3 Providing care to grandchildren
Network			
	(0.047)	(0.046)	(0.226)
Has Children, not in Social Network	-0.061	0.164***	4.268***
	(0.053)	(0.049)	(0.228)
European regions (ref. CEE countries)			
Northern European countries	0.330***	0.741***	0.442***
	(0.037)	(0.035)	(0.036)
Southern European countries	-0.440***	-0.067	0.188***
	(0.042)	(0.041)	(0.040)
Western European countries	0.353***	0.768***	0.440***
	(0.034)	(0.032)	(0.033)
Class of resilience (ref. 1st Class)			
2nd class	0.893***	-0.011	-0.259***
	(0.036)	(0.034)	(0.036)
3rd class	0.802***	-0.131***	-0.126***
	(0.033)	(0.030)	(0.030)
4th class	1.563***	-0.097	-0.461***
	(0.053)	(0.059)	(0.061)
5th class	1.488***	-0.172***	-0.654***
	(0.055)	(0.063)	(0.071)
Intercept	-6.088***	0.684***	-1.076***
	(0.184)	(0.177)	(0.291)
N	39570	39570	39570
Pseudo R-squared	.124	.0817	.136

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Source: Authors' calculations based on SHARE data.

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Appendix. The results of latent class modelling for classes of resilience

The key explanatory variable describing a group of individuals' resilience was identified using latent class modelling. To group individuals into homogeneous classes describing resilience, we used the following variables describing psychological well-being (CASP-12 measure, short version of the UCLA loneliness scale, and depression level based on the EURO-D scale), health status (1+ ADL limitations, having at least two chronic diseases, having limitations in activities (GALI)), and subjective financial situation based on the household's ability to make ends meet.

The Latent Class Model can be specified as follows:

$$P(Y = y|x_i) = \sum_{c=1}^{C} \gamma_c(x_i) \prod_{m=1}^{M} \prod_{k=1}^{r_m} \rho_{mk|c}^{I(y_{im}=k)} \quad (1)$$

In this equation, C represents the number of estimated classes based on *m* categorical items. Y_i is a vector of individual *i's* responses to *M* items, where Y_{iM} = 1, 2, ..., r_m, and c_i = 1, 2, ..., C denotes individual *i*'s latent class membership. The indicator function *I*(*y* = *k*) equals 1 if response *y* is *k*, and 0 otherwise. The covariate *x* for individual *i* is related to the probability of class membership (*g*), and the *r*'s represent item-response probabilities (or means for continuous items) conditioned on latent class membership, reflecting the relationship between observed items and latent classes. A multinomial logit model is estimated simultaneously, where latent class membership is predicted by observed exogenous variables. Logistic regression parameters (*b*) estimate class membership, with *g* parameters expressed for a single covariate *x* as:

$$\gamma_c(x_i) = P(C_i = c|x_i) = \frac{\exp(\beta_{0c} + x_i\beta_{1c})}{1 + \sum_{j=1}^{C-1}(\beta_{0j} + x_i\beta_{1j})} \quad (2)$$

for *c = 1*, ..., *C*-1 where class *C* is the reference class in the multinomial logistic regression.

Table A. 1 presents fit statistics for models with varying numbers of latent classes, used to identify the optimal number of classes. The five-class model provided the best fit, with the lowest values for log likelihood, Akaike's Information Criterion (AIC), and Bayesian Information Criterion (BIC).

Table A. 1 Fit Statistics for Model Selection

		LL	df	AIC	BIC
1	Class	-406689	12	813401.7	813504.7
2	Classes	-386592	22	773227.3	773416.2
3	Classes	-380519	32	761101.2	761375.9
4	Classes	-374899	42	749882.2	750242.8
5	Classes	-373442	52	746987.4	747433.9

Source: Authors' calculations based on SHARE data.

Table A.2 presents descriptive statistics for the full sample and by latent class, showing distinct characteristics across the five classes. These classes represent, respectively:

- Class 1: Best overall health, well-being, and financial situation;
- Class 2: Second best overall, but worse physical health;
- Class 3: Good physical and mental health but worse financial situation;
- Class 4: Bad physical health, activity limitations and chronic diseases, combined with poorer financial situation and low quality of life;
- Class 5: Difficult financial situation, limitations in activities, the highest depression and loneliness scale and the lowest quality of life.

Table A. 2 Item Responses in LCA

	Latent Classes				
	1	**2**	**3**	**4**	**5**
Household Ability to Make Ends Meet					
Great Difficulty	0.01	0.01	0.17	0.17	0.26
Some Difficulty	0.11	0.13	0.51	0.41	0.36
Fairly Easily	0.36	0.39	0.30	0.31	0.25
Easily	0.52	0.46	0.03	0.11	0.14
Limitation with activities	0.14	0.79	0.34	0.93	0.79
2+ Chronic Diseases	0.29	0.78	0.48	0.87	0.75
1+ Activity of Daily Living Limitation	0.00	0.15	0.01	0.33	0.28
CASP index: Quality of Life and Well-Being	42.31	38.91	35.03	31.28	28.80
EURO Depression Scale	1.25	2.43	1.63	4.80	5.45
UCLA Loneliness Scale (Short Version)	3.36	3.72	3.89	4.12	7.09

Source: Authors' calculations based on SHARE data.