

Number of children and later-life depression in Eastern and Western Europe

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Short abstract

We use cross-sectional data from the Gender and Generations Surveys to investigate associations between number of children and depressive symptoms among adults aged 65-80 in five Eastern and three Western European countries. We also investigate whether exchanges of emotional and financial support mediate links between number of children and depression and analyse changes in depression in a subset of countries with longitudinal data. We hypothesised that links between having children and depression might be stronger in the Eastern compared with the Western European countries we consider because of higher mortality (and so higher prevalence of widowhood in particular) and the reduction of state supports for older people following the collapse of the Soviet Union. Preliminary results lend some support to this hypothesis as we found that having no or only one child was associated with higher risks of depression for men in Eastern, but not Western, European countries. However there were no significant differences in associations for women. As in previous studies, we found that long-term illness, low education and difficulties making ends meet were associated with higher chance of depression. Results from the longitudinal analysis suggested that involvement in caring for children was protective against depression among men.

In this paper we examine associations between family size, support exchanges and depression among older adults in a range of Western and Eastern European countries. Linkages between the presence of children and the mental well-being of older people in Europe– as well as intergenerational relations in general – have mostly been studied in Western and Southern European contexts with less scholarly attention paid to Eastern Europe (Dykstra, et al., 2013). However, for a number of reasons children, and support from them, may be more important influences on mental well-being, including depression, in Eastern compared with Western European countries. Firstly, higher mortality, and larger sex differences in mortality, in Eastern countries mean that the prevalence of widowhood is much higher. Secondly, reductions in state supports in many post-Soviet countries may mean that older people seek or want a higher level of support from children particularly as norms about the extent to which adult children should support older parents appear stronger in the East than the West (Daatland, Herlofson, & Lima, 2011), as is the extent of inter-

generational co-residence. Congruence between aspirations and achievements, and between actual and desired circumstances, is an important influence on subjective well-being (Brandtstadter, Wentura, & Greve, 1993; Gustavson & Lee, 2004). Small family size and lower extent of support from children might thus have a greater effect on depression in Eastern than Western countries because of higher expectations about filial support and perhaps weaker alternative networks.

In the current paper, we adopt a cross-national perspective that enables us to explore the links between the presence of children and older adults' depression in Eastern European countries and contrast these links with those in the West. We estimate regression models using data from the Generations and Gender Survey (GGS) data (Vikat, et al., 2007) from five Eastern European (Bulgaria, Czech Republic, Georgia, Romania, and Russia) and three Western European countries (Belgium, France, and Norway). Our sample consists of 6,060 men and 8,060 women aged 65-80. We conduct formal tests of mediation using the Karlson, Holm and Breen (KHB) method (Karlson & Holm, 2011) to assess to what extent the effects of number of children on depression can be attributed to contact and support exchange in order to better understand the mechanisms whereby children may mitigate later-life depression. In addition to cross-sectional analyses, we estimate longitudinal models for a subsample of countries for which two waves of data are available.

Key variables in our analyses are operationalized as follows. A short version of The Center for Epidemiological Studies Depression Scale (CES-D) is used to measure depressive feelings (Radloff 1977). Of the original 20 items on the CES-D scale the GGS includes seven items from the depressed affect subscale. Respondents are asked how frequently they have experienced the following symptoms during the past week: "I felt I could not shake of the blues even with help from my family or friends"; "I felt depressed"; "I thought my life had been a failure"; "I felt fearful"; "I felt lonely"; "I had crying spells"; "I felt sad". Each question uses a 0 to 3 response scale ranging from seldom or never to most or all of the time. We summed the question scores to an overall score ranging from 0-21 and used a cut-off point of 6 to identify respondents with depressive symptoms, which corresponds to widely used cut-off point of 16 on the original CES-D scale with a range of 0-60. We treat number of children as a categorical, rather than a continuous variable, with categories, being 0, 1, 2, 3, and 4+. We do so, because research from England has shown that although parents have more face-to-face social contact than their childless counterparts, the additional effect of larger family size is only small (Grundy & Read, 2012).

Receipt and provision of emotional support were captured with the questions "Over the last 12 months, have you talked to anyone about your personal experiences and feelings?" and "Over the last 12 months, has anyone talked to you about his/her personal experiences and feelings?", respectively. Provision and receipt of financial support was measured by a question asking whether the respondent or their spouse had received/given "for one time, occasionally, or regular money, assets

or good of substantive value". A final support measure was a dummy variable indicating whether or not the respondent had provided regular, unpaid help with childcare to other people over the last 12 months.

Descriptive statistics (not presented here) show that depression was much higher in the Eastern than the Western samples. Also, notable parity differences exist, with childlessness as well as high parity (3 or more children) being more common in the West than in the East. Provision and receipt of emotional support are largely similar in the Western and Eastern groups of countries, but older people in Western Europe more often provide financial support and childcare and less often receive financial support than older Eastern Europeans. Consistent with our expectations, preliminary multivariate analyses, presented in Table 1, show an increased late-life depression risk for childless men and men with 1 child in Eastern Europe, but not in Western Europe. These East-West differences in coefficient estimates are statistically significant. For women, we also find that childlessness is associated with an increased risk of late-life depression in Eastern Europe, but not in Western Europe. However, here the East-West differences in the coefficient estimates are not statistically significant.

There appears to be no substantial mediation of the effects of number of children on late-life depression via social support. Providing emotional support is associated with a lower risk of late-life depression whereas receiving emotional support is associated with an increased risk. In Eastern Europe, we find that men who provide care to young children are less likely to be depressed than those who do not provide childcare.

In addition to the cross-sectional analyses (not presented here), we estimated longitudinal models using data from four countries for which two waves of data were available (Bulgaria, Czech Republic, France, and Georgia). We did so to assess whether the presence of (more) children protects older persons against increases in depressive symptoms. Our analyses do not show that this is the case. We find, however, that providing childcare to young children is associated with a lower increase in depressive symptoms between waves.

In the preliminary analyses discussed here, childless older adults and parents are pooled. These analyses will be complemented by analyses restricted to parents, in which we will focus on differences between low-parity and high parity parents and those with and without grandchildren. In final models, multiple imputation will be applied to deal with missing data. We will also conduct additional longitudinal analyses to model transitions into and out of old-age depression.

Table 1. Coefficient estimates from logistic regression models for depression (CES-D 6+); robust standard errors

	Women			Men		
	East b	West b	Δb	East b	West b	Δb
Number of children (Ref.: 2):						
No children	0.525**	0.350	-0.174	0.675**	-0.323	-0.998*
1 child	0.120	0.299	0.180	0.366**	0.010	-0.355*
3 children	-0.027	0.089	0.116	0.023	-0.131	-0.154
4+ children	-0.142	0.045	0.187	-0.129	0.126	-0.255
Lives with partner / spouse	-0.857***	-0.454***	0.403**	-1.291***	-1.241***	0.050
Age (centered)	0.013	-0.013	-0.027	0.037***	0.017	-0.021
Education (Ref.: low (ISCED 0-2))						
Intermediate (ISCED 3-4)	-0.305***	-0.339*	-0.034	-0.487***	-0.208	0.280
High (ISCED 5-6)	-0.481***	-0.310	0.171	-0.909***	-0.482	0.427
Difficulties making ends meet	0.794***	0.498***	-0.296	0.519***	0.464*	-0.055
Long-standing illness	0.626***	0.421***	-0.205	0.880***	0.419**	-0.460*
At least one deceased child	0.604***	0.524**	-0.079	0.525***	-0.154	-0.680
Has grandchild(ren)	-0.168	-0.009	0.159	-0.093	-0.186	-0.093
Provided emotional support	-0.463***	-0.485***	-0.022	-0.459**	-0.161	0.298
Received emotional support	0.396***	0.606***	0.210	0.427*	0.399*	-0.028
Provided financial support	0.041	0.291	0.249	-0.180	0.189	0.369
Received financial support	-0.083	-0.196	-0.113	0.010	-0.860	-0.872
Provided (grand)childcare	-0.184	-0.011	0.173	-0.471*	-0.330	0.141
Bulgaria	-1.218***			-1.506***		
Russia	-1.317***			-1.729***		
Georgia	-0.846***			-0.833**		
Romania	-0.900***			-1.129***		
Czech Republic	-1.396***			-1.042***		
France		-1.489***			-1.516***	
Norway		-1.972***			-1.229***	
Belgium		-1.700***			-1.478***	
Observations	5687	2373		3838	2222	
AIC	6811.9	2299.1		3084.7	1263.8	
BIC	6958.1	2414.5		3222.3	1377.9	

Source: Generations and Gender Surveys; * $p < .05$, ** $p < .01$, *** $p < .001$