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The changing role of family as provider of intergenerational support during COVID- 19: a longitudinal study into the mental health consequences for older Europeans

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Abstract

Intergenerational support is an important determinant of mental health for all family members involved. Due to limited access to formal care, the role of the family as provider of support became more prominent during the COVID-19 pandemic. To date, it remains unclear how intergenerational support from adult children to older parents was affected during the pandemic and whether this had consequences for the mental health of the parent generation. Using data from the Survey of Health, Ageing and Retirement (SHARE) Corona Surveys, we explore whether changes in support going from non-coresident adult children to their parents are associated with parents' changes in depressive feelings. Additionally, we test whether the pandemic context and stringency of public health measures affected this relationship. Families responded to the increased needs of elderly parents by providing more informal support. These changes in intergenerational support, however, were related to increased depressive feelings for the older parents. Furthermore, both the strictness of public health measures and the concurrent epidemiological situation affected this relationship. We conclude that the family is an essential source of late-life well-being. But, stressful life events such as public health crises put pressure on these intergenerational relations with potential adverse mental health outcomes. Future policies should take into account the ambivalent nature of intergenerational relationships.

1 Introduction

2020 will forever be remembered as the year the world came to a halt, crippled by the coronavirus pandemic. Social distancing and stay-at-home orders were some of the main policy responses implemented to slow down the spread of the coronavirus. After the first wave of infections in 2020, it became clear that more waves were likely to follow and that people would continue to live in such 'new normal' in 2021 as well.

Due to their high risk profile, in about all countries, older adults were encouraged to self-isolate and to limit their contacts to the bare minimum. A strong emphasis was put on reducing contacts between different generations (Zhou et al., 2020). Although all European countries implemented a range of measures to curb the spread of infection, there was substantial variation in duration and levels of stringency (Hale et al., 2021), as well as in their effectiveness and adherence (Bergmann & Wagner, 2021). Given the strong connection between social interactions and mental health, concerns arose that strict social distancing measures put older adults at greater risk of depression, anxiousness and loneliness (Armitage & Nellums, 2020; Newman & Zainal, 2020).

During this period, the often dramatic situations in nursing homes were publicly debated (Doetter et al., 2021), but older adults living at home mainly flew under the radar. This despite the fact that epidemiological control measures restricted individuals' access to physical forms of social interaction, while at the same time increasing the demand for help and support (Tur-Sinai et al., 2021). Older adults living at home generally receive some sort of practical support (e.g. help to obtain groceries or medications, help to get dressed), usually related to mobility limitations and declining health (Deindl & Brandt, 2011). While these individuals were already reliant on support in pre-pandemic times, the containment interventions gave rise to a new group of older adults in need who were previously not depending on external support (Bertogg & Koos, 2022).

A key source of such support is the family (Blome et al., 2009). However, intergenerational physical contacts were supposed to be drastically reduced as a direct consequence of the public health measures (Arpino, Pasqualini, Bordone, et al., 2021), or avoided out of fear of contamination (Stokes & Patterson, 2020). Some studies found that, going against official guidelines, intergenerational contacts still remained prevalent, in some cases even more than in pre-pandemic times (Bergmann & Wagner, 2021; Tur-Sinai et al., 2021; Vergauwen et al., 2022). This may not only have been important in order to fulfil the (increased) need for help and support, but also for buffering the potentially negative impact of the COVID-19 restrictions on the mental health of the older population (McDarby et al., 2021). In contrast, increased dependency on family members may have aggravated depressive feelings among the older population (Thomas, 2010).

Although intergenerational support between parents and their (grand)children is one of the main determinants of late-life well-being (Suitor et al., 2022; Umberson et al., 2010), no study has looked into the association between changes in intergenerational support and mental health during the COVID-19 pandemic, while taking into account differences in the epidemiological situation and strictness of the sanitary measures. Based on data from the Survey on Health, Ageing and Retirement in Europe (SHARE) collected during different phases of the pandemic in 27 European countries, we (1) examine the effect of changes in levels of

received instrumental support from adult children on changes in depressive feelings among older Europeans; and (2) examine how the pandemic situation and the strictness of mitigation policies affected this relationship. In doing so, we consider a timeframe that spans from the first wave of COVID-19 until the Summer of 2021, while also controlling for relevant pre-pandemic characteristics.

2 Background

2.1 Intergenerational support and mental health: pre-pandemic evidence

Receiving adequate support is essential for one's well-being (Siedlecki et al., 2014), but the effect varies by who provides it and by the type of support. While emotional support is generally beneficial for someone's well-being (Thomas, 2010), receiving instrumental support is often a sign of loss of dependency and therefore associating negatively with well-being (Merz & Huxhold, 2010). Especially when adult children are involved, the relationship between receiving support and well-being can become more complex and ambivalent (Suitor et al., 2022). It can lead to conflict when social roles within the family are drastically altered or not living up to everyone's expectations (Hernandez & Colaner, 2022). While the mental impact of providing care and support to older parents is well studied (e.g. Kaschowitz & Brandt, 2017; Möhring et al., 2023), research focusing on the mental well-being of the older parents themselves is far less comprehensive.

Receiving support from adult children appears to be predictive of better health and well-being for older adults (Merz et al., 2009). Several studies, however, suggest that intergenerational support may negatively affect older adults' mental health under certain conditions (Byers et al., 2008; Suitor et al., 2022). Reciprocity is considered one such important condition for promoting the well-being of both donor and receiver (Jiang & Fung, 2022). From the older parents' point of view, this could mean that the balance of support becomes distorted when they are not (only) providing support anymore but also receiving, for example, due to increasing physical limitations related to ageing. Receiving support but not being able to give (equally) in return may translate into lower levels of mental health (Brandt, Haberkern & Szydlik, 2009; Kalmijn, 2014). Additionally, receiving support from children can violate norms associated with the parental role, along with reducing the parents' sense of independence and autonomy (Lee et al., 1995; Silverstein et al., 1996; Thomas, 2010).

2.2 Intergenerational support and mental health during the pandemic

While governments implemented measures to protect public health, results from studies conducted during the pandemic's early stages also signalled potentially negative psychosocial side-effects of the stay-at-home orders (Briggs et al., 2021). Intergenerational relationships in particular are crucial for mental health and well-being (Suitor et al., 2022; Umberson et al., 2010), as well as important sources of support (Blome et al., 2009). The COVID-19 pandemic, however, posed some serious challenges in order to maintain these intergenerational connections (Stokes & Patterson, 2020).

Caring for grandchildren, for example, was strongly discouraged, even though the need was high due to the closure of schools and childcare services in many countries (Blum & Dobrotić, 2021). Di Gessa et al. (2023) looked into grandparental childcare in the United Kingdom during the first wave of the pandemic. The fact that grandparents were not able to see and take care of their grandchildren for reasons beyond their control was hypothesized to be an important reason of increased levels of distress (Di Gessa et al., 2023).

Little is known about intergenerational support going in the other direction: from adult children to their parents. We would expect a general decline in these kind of intergenerational interactions during the pandemic (Stokes & Patterson, 2020). This could be detrimental for those who rely on support and care provided by their children if the remaining amount does not meet their needs anymore (Bergmann & Wagner, 2021). However, multiple studies proposed that parents and non-coresident children were actually more in touch with one another during the pandemic than before. This was possible due to a switch to alternative modes of communication (e.g. telephone and video calls) (Arpino, Pasqualini, & Bordone, 2021; McDarby et al., 2021), increasing concerns over each other's health and well-being (Giovanis & Ozdamar, 2022), and intensified exchanges of instrumental support (Tur-Sinai et al., 2021; Vergauwen et al., 2022).

The latter is especially relevant as older parents are likely to rely more on their adult children due to COVID-19 restrictions (Gilligan et al., 2020). Activities such as grocery shopping, accessing healthcare and receiving home care posed risks due to the coronavirus, and became tasks that were preferably done by others (D'herde et al., 2021). Bergmann and Wagner (2021) found a strong increase in the provision of personal care to parents living outside of the household across Europe. The reduced availability of paid services and care support due to COVID-19 related control measures (Arnault et al., 2022), thus seemed to be compensated by increased levels of family care.

As mentioned earlier, receiving support from adult children may conflict with the older adults' parental role or increased feelings of dependence (Merz et al., 2009). In the context of COVID-19 and restricted availability of formal care services, feelings of dependency are likely to increase and might exacerbate the negative association between receiving instrumental support from kin and late-life mental health. This might be fuelled by difficulties in short-term reciprocal behaviours as the pandemic limits the opportunities for older adults to support their family members in return (Jiang & Fung, 2022).

Moreover, the pandemic could also lead to rising conflict within families. When adult children and parents are not agreeing on the attitudes toward COVID-19 and compliance toward preventive measures (Thomeer et al., 2020), this could translate into diverging expectations about support exchanges and negative interactions as well. For example, parents can expect their children to fill in the void in formal care while adult children want to adhere to the precautions and limit personal contact as much as possible. Pre-pandemic studies already illustrated the negative effect of conflict in intergenerational exchanges for older adults' mental health (Suitor et al., 2022), while more recent studies warned for the declining quality of intergenerational contacts during the pandemic (Visintin & Tasso, 2022). The ambivalent character of intergenerational relationships (Connidis & McMullin, 2002) might be exacerbated during a public health crisis. These moderating effects of the pandemic are already signalled by Jiang and Fung (2022) for China, but are not yet considered in an European context.

2.3 Research questions and hypotheses

Intergenerational relations were previously examined in the context of the COVID-19 pandemic, but very few studies (exception: Jiang & Fung, 2022) investigated how changes in support from adult children to their parents affected the mental health of older adults during these turbulent times. Our main research question is therefore: "Are changes in receiving intergenerational support during the pandemic related to changes in feelings of depression?".

We expect that the increased dependency on family members during the pandemic will have a negative impact on the well-being of older adults. More specifically, we expect that parents who reported an increase in support from adult children during the pandemic are also more likely to experience an increase in depressive feelings, compared to older adults who did not experience such change (Hypothesis 1).

Nevertheless, we also acknowledge the fact that the pandemic potentially made it more difficult to maintain intergenerational in-person contacts. A sudden drop in support could lead to the older parent's needs not being met or conflicting expectations about within-family support, and thereby increasing mental distress. We expect that those who experience a decrease in received intergenerational support are more likely to have an increase in depressive feelings, compared to those who maintain receiving the same level of support (Hypothesis 2).

Lastly, we ask whether and how the pandemic affects this association between intergenerational support and mental health. Concretely, we propose that as restrictions and excess mortality become more severe, the effect of changes in intergenerational support on mental health will become stronger as well (Hypothesis 3). This comes from the assumption that when the severity of the pandemic increases – measured through either higher stringency or higher mortality – the potential for conflicting expectations and family roles rises accordingly, with negative mental health outcomes as a consequence.

3 Data and methods

3.1 Study population

We use data from the Survey of Health, Ageing and Retirement in Europe (SHARE) (Börsch-Supan, 2022b, 2022a). More specifically, the two rounds of the SHARE Corona Survey carried out between June and August 2020 (SCS1) and between June and August 2021 (SCS2). Additionally, we make use of the interview dates to capture the pandemic situation at the time of the interview. Our sample size includes respondents who participated in SCS1, SCS2 or both, with full information on the variables of interest. This results in 42,567 observation across 24,057 respondents aged 65 and over with at least one adult child living outside the household. Included countries cover five geographical regions: Northern Europe (Denmark, Finland, Sweden), Western Europe (Austria, Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland), Southern Europe (Croatia, Cyprus, Greece, Italy, Israel, Malta, Slovenia, Spain), Eastern Europe (Czech Republic, Bulgaria, Hungary, Poland, Romania, Slovakia) and the Baltic States (Estonia, Latvia, Lithuania).

3.2 Measures

Increased depressive feelings

Our dependent variable measures the change in subjective depressive feelings. Respondents were asked whether they felt sad or depressed. If so, they were asked if this was “More often”, “About the same” or “Less often” than before the outbreak (SCS1) or than during the first wave (SCS2). Following previous studies (Koch & Park, 2022; Lüdecke & von dem Knesebeck, 2022; Paccagnella & Pongiglione, 2022), these questions are dichotomised taking a value of 1 if respondents reported to feel ‘more often’ sad or depressed and 0 otherwise.

Changes in intergenerational support

Information on receiving intergenerational support was collected through the question “Since the outbreak of Corona, were you helped by others from outside of home to obtain necessities, e.g., food, medications or emergency household repairs?” in SCS1. In SCS2, the same question was asked but with the first outbreak as reference period. We focus on changes in support provided by non-coresident adult children. We classify respondents into three categories distinguishing between (1) experienced a decrease; (2) experienced an increase; (3) experienced no change, including those who never receive support from their non-coresident children.

Pandemic context

We use two measures from two different data sources in order to capture the pandemic context at the timing of the interview: stringency level from the Oxford COVID-19 Government Response Tracker (OxCGRT) (Hale et al., 2021) and excess mortality (Eurostat, 2022). These measures are included at the individual-level, since they are linked to each respondent’s date of interview to take due account of the volatility of the pandemic situation. The idea is that different interview dates corresponds to different phases of the pandemic context. We provide more detailed information in the Supplementary Material.

Control variables

We control for age, gender, number of children and geographical region. Pre-pandemic characteristics include subjective financial situation (i.e. household is able to make ends meet with great or some difficulty) and level of education. We also controlled for pre-pandemic physical and mental health. For physical health, we use measures of pre-pandemic (instrumental) limitations with instrumental activities of daily living (IADL and ADL), and pre-pandemic chronic diseases. For mental health, we control for whether they experienced depression before the pandemic or not. Additionally, we included a measure of subjective health change to indicate a change in health status during the first and/or second wave (i.e. improved health or no change and worsened health). The main characteristics of our analytic sample are summarized in Table 1.

3.3 Statistical analyses

Given the hierarchical nature of our data, with observations nested within individuals (survey year) which are in turn nested within countries, we conduct multilevel logistic modelling. More information about our modelling strategy can be found in the Supplementary Material. Additionally, several robustness checks are performed, including pooled OLS regressions. More information about these and their results are included in the Supplementary Material as well.

Table 1. Descriptive statistics of analytical sample (42,567 observations across 24,057 respondents).

	SCS1		SCS2	
	%	N	%	N
Age category				
65-74 years old	54	12,124	53	10,746
75 or older	46	10,236	47	9,461
Gender				
Female	57	12,761	58	11,621
Male	43	9,599	42	8,586
Number of children				
One child	20	4,415	19	3,875
Two or more children	80	17,945	81	16,332
Education				
Low (ISCED 0-2)	36	8,149	35	7,125
Medium (ISCED 3-4)	42	9,312	43	8,576
High (ISCED 5-6)	22	4,899	22	4,506
Partner in household				
Yes	67	14,973	67	13,529
No	33	7,387	33	6,678
Financial difficulties				
Yes	32	7,078	30	6,226
No	68	15,282	70	14,092
IADL (pre-pandemic)				
No	80	17,791	82	16,546
Yes	20	4,569	18	3,658
ADL (pre-pandemic)				
No	88	19,726	90	18,124
Yes	12	2,634	10	2,083
Chronic diseases (pre-pandemic)				
Less than 2 diseases	40	8,966	41	11,844
2 or more diseases	60	13,394	59	8,363
Change in health				
Improvement or no change	90	20,200	85	17,233
Worse health	10	2,160	15	2,974
Pre-pandemic depression				
Yes	27	6,100	26	5,267
No	73	16,260	74	14,940

Intergenerational support				
No change or support	74	16,636	84	16,909
Less often	4	797	6	1,208
More often	22	4,927	10	2,091
European region				
Northern	11	2,463	10	2,011
Western	29	6,395	29	5,772
Southern	28	6,369	30	6,398
Eastern	19	4,336	19	3,852
Baltic states	13	2,797	13	2,623

4 Results

4.1 Mental health during the pandemic

At the start of the pandemic, 16% of our respondents had more often depressive feelings after the first outbreak compared to before. Across all included countries, the share ranges from 9% (Denmark) to 31% (Spain). We observe the highest proportion of respondents with increased depressive feelings in Southern Europe (19%) and the lowest proportion in Northern Europe (12%) (see SCS1 in Fig. 1).

As COVID-19 continued to rage across Europe, 12% of the respondents reported a worsening of mental health after the second outbreak, compared to the first outbreak. During the second outbreak, the Baltic states reported the highest proportion (15%) of increased depressive feelings, while the lowest proportion was observed in Northern Europe (6%) (see SCS2 in Fig. 1). Although the proportion of individuals reporting a worsening of their mental health is highest after the first outbreak, we see that the pandemic continues to impact the mental health of older Europeans also after the first wave of infections. This is especially true for the Baltic states and Eastern Europe, where we do not observe a decline in the share of respondents indicating worsening mental health.

4.2 Intergenerational support during the pandemic

Looking at changes in receiving intergenerational support across Europe (see SCS1 in Fig. 2), it seems that the family took up the role of caregiver more intensively as a response to the first outbreak of COVID-19. This trend was noticeable all over Europe with differences across regions being rather limited. Increases in intergenerational support during the first wave ranges between 18% in the Northern countries and 26% in the Western countries. In parallel, between 5% (in Southern Europe) and 4% (in Northern Europe) of respondents indicate a decrease in intergenerational support. As the pandemic continued some discrepancies between geographical regions emerged. These descriptives show that increases in support between parents and their adult children were more prominent in Southern Europe (13%), Eastern Europe (13%) and the Baltic States (12%), compared to Northern (4%) and Western Europe (7%).

4.3 Effect of changes in intergenerational support on depressive feelings

In what follows, we explore whether and to what extent changes in receiving intergenerational support affected the mental health of older parents during the pandemic. The null model (See Table S1 in Supplementary Material) and its corresponding ICCs show that about 3% of the variability in experiencing increased depressive feelings is explained by between-country differences, and about 35% lies between time points within countries. It are thus primarily individual differences and temporal differences that account for the variation in increased depressive feelings, rather than differences across countries.

Model 1 (see Table 2) adds measures for change in intergenerational support, adjusted for potential confounding of pre- and intra-pandemic socio-economic characteristics, health and depression. Receiving more support from one's children during the pandemic is significantly related to a higher likelihood of experiencing an increase in depressive feelings, compared to those who maintained the same level of intergenerational support. In contrast, those who experienced a decrease in intergenerational support were not significantly more or less likely to experience an increase in mental distress. These results are in line with hypothesis 1 but not with hypothesis 2.

Looking at our covariates, the results also indicate important gender differences. Women were more likely to suffer from increased depressive feelings during the pandemic compared to men. Furthermore, those who were depressed before the pandemic, lived without a partner, experienced a decline in subjective physical health, and had financial difficulties were all more likely to experience an increase in depressive feelings during the pandemic. Across geographical regions, we see that respondents living in Western parts of Europe reported a higher likelihood of increased depressive feelings, compared to those living in Northern Europe. Respondents were less likely to report an increase in depressive feelings during SCS2, compared to SCS1.

In the following models, we include more specific measures of the pandemic context, i.e. stringency index and excess mortality at the time of interview. We find a positive association between increased depressive feelings and higher scores on the stringency index, and a negative association with excess mortality (Model 2 in Table 2). While lockdowns, social distancing and other restricting guidelines have significant negative mental health consequences, the pandemic can also give rise to feelings of unity, resilience, and sense of belonging, and thereby buffer against depressive symptoms.

Additionally, the effects of changes in intergenerational support depend on the level of these two measures of pandemic context, which is partially in line with hypothesis 3 (see Model 3 in Table 2). While the effect of more intergenerational support does not depend on the level of stringency, the effect of decreases in received intergenerational support does. Experiencing a decline in received support is related to a lower likelihood of increased depressive feelings but this negative effect is attenuated as more stringent measures are in force. Declines in support are potentially direct responses to high stringency levels, which might be detrimental for older adult's mental health. Visually, we see that the slopes of experiencing no change and increases in intergenerational support are quite similar, while the slope of decreases in support is much steeper (see left panel of Fig. 3). Indeed, the difference between those that are experiencing no change and those that report an increase in support remains continuously stable as stringency increases (see right panel of Fig. 3). The difference between no change (i.e. the reference category) and decreases in support, however, increases with stringency and becomes significant when the stringency level exceeds a value of approximately 65 (see right panel of Fig. 3).

Turning to excess mortality, a different pattern emerges (see Model 4 in Table 2). We now observe a positive effect of receiving more support, and this effect increases with higher excess mortality, visualized by a positive slope (see left panel of Fig. 4). Receiving less support is now related to higher likelihood of increased depressive feelings. This effect, however, decreases as excess mortality rises (see right panel of Fig. 4). For lesser support, the average marginal effect becomes more negative with mortality but the difference is only significant for high levels of excess mortality (see right panel of Fig. 4).

Our full model (see Model 5 in Table 2), including both interactions between pandemic context and changes in intergenerational support, confirms these results. Again, we see that the effect of decreases in support depends on the level of stringency, with a higher likelihood of increased depressive feelings as stringency rises. For excess mortality, increases in support are related to higher likelihood of increasing depressive feelings as excess mortality reaches higher levels. Decreases in support, on the contrary, lower the likelihood with rising excess mortality.

Table 2
Multilevel logistic modelling results (expressed in odds ratios) on increased depressive feelings.

	Model 1		Model 2		Model 3		Model 4		Model 5	
	OR	*SE*	*OR*	*SE*	OR	*SE*	OR	*SE*	OR	*SE*
Fixed part										
Intercept	0.03***	*0.01*	0.02***	*0.01*	0.02***	*0.01*	0.02***	*0.01*	0.02***	*0.01*
Age 75+ (ref. 65–74 years old)	0.98	*0.04*	0.98	*0.04*	0.98	*0.04*	0.98	*0.04*	0.98	*0.04*
IADL limitations (ref. no IADL limitations)	1.00	*0.05*	1.00	*0.05*	1.00	*0.05*	1.00	*0.05*	1.00	*0.05*
ADL limitations (ref. no ADL limitations)	1.07	*0.06*	1.07	*0.06*	1.07	*0.06*	1.06	*0.06*	1.06	*0.06*
Chronic disease (ref. no chronic disease)	1.24***	*0.05*	1.24***	*0.05*	1.24***	*0.05*	1.24***	*0.05*	1.24***	*0.05*
Female (ref. Male)	1.69***	*0.07*	1.69***	*0.07*	1.69***	*0.07*	1.70***	*0.07*	1.70***	*0.07*
Financial difficulties (ref. no)	1.31***	*0.05*	1.31***	*0.05*	1.31***	*0.05*	1.31***	*0.05*	1.31***	*0.05*
More than one child (ref. one child)	0.91*	*0.04*	0.91*	*0.04*	0.91*	*0.04*	0.91*	*0.04*	0.91*	*0.04*
Decline in health (ref. maintains health status)	4.68***	*0.21*	4.69***	*0.21*	4.69***	*0.21*	4.68***	*0.21*	4.67***	*0.21*
Depressed before the first outbreak (ref. no)	2.35***	*0.09*	2.35***	*0.09*	2.35***	*0.09*	2.36***	*0.09*	2.36***	*0.09*
Without a partner in household (ref. with partner in household)	1.13***	*0.04*	1.13***	*0.04*	1.13***	*0.04*	1.13***	*0.04*	1.13***	*0.04*
Educational level ISCED 3–4 (ref. ISCED 0–2)	0.97	*0.04*	0.98	*0.04*	0.98	*0.04*	0.98	*0.04*	0.98	*0.04*
Educational level ISCED 5–6 (ref. ISCED 0–2)	1.12*	*0.06*	1.12*	*0.06*	1.12*	*0.06*	1.12*	*0.06*	1.12*	*0.06*
Intergenerational support (ref. No change or support)										
Less often	1.11	*0.09*	1.11	*0.09*	0.23**	*0.14*	1.29**	*0.12*	0.30	*0.21*
More often	1.82***	*0.08*	1.82***	*0.08*	1.74	*0.57*	1.52***	*0.09*	1.14	*0.40*

	Model 1		Model 2		Model 3		Model 4		Model 5	
Time: Second outbreak (ref. first outbreak)	0.66***	*0.03*	0.73***	*0.03*	0.73***	*0.03*	0.72***	*0.03*	0.72***	*0.03*
European region (ref. Northern)										
Western	1.57*	*0.31*	1.46	*0.29*	1.46	*0.29*	1.47	*0.29*	1.48	*0.30*
Southern	1.57*	*0.33*	1.48	*0.30*	1.47	*0.30*	1.49*	*0.30*	1.49	*0.30*
Eastern	1.16	*0.24*	1.12	*0.23*	1.11	*0.23*	1.13	*0.23*	1.12	*0.23*
Baltic states	1.16	*0.29*	1.24	*0.29*	1.23	*0.29*	1.23	*0.29*	1.22	*0.23*
Stringency index at time of interview	-	-	1.01***	*0.00*	1.01**	*0.00*	1.01**	*0.00*	1.00	*0.29*
Excess mortality at time of interview	-	-	0.99**	*0.00*	0.99**	*0.00*	0.99**	*0.00*	0.99**	*0.00*
Stringency index * intergenerational support (ref. no change or support)										
Less often	-	-	-	-	1.02**	*0.01*	-	-	1.02**	*0.00*
More often	-	-	-	-	1.00	*0.00*	-	-	1.00	*0.00*
Excess mortality * intergenerational support (ref. no change or support)										
Less often	-	-	-	-	-	-	0.96*	*0.01*	0.97**	*0.01*
More often	-	-	-	-	-	-	1.02***	*0.01*	1.02***	*0.01*
Random part - *Variance parameters*										
Between-country variance	0.08	*0.02*	0.07	*0.02*	0.07	*0.02*	0.07	*0.02*	0.07	*0.02*
Between-time variance	1.00	*0.09*	1.00	*0.09*	1.00	*0.09*	1.00	*0.09*	1.00	*0.09*
-2 Log Likelihood	-15,420.77		-15,413.80		-15,410.55		-15,403.06		-15,400.17	
Notes: *p < 0.05; **p < 0.01; ***p < 0.001; OR: odds ratio; SE: standard errors										

5 Discussion and conclusion

An extensive body of research has looked into the mental health consequences of the pandemic, with a range of studies focusing on the older population (Atzendorf & Gruber, 2022; García-Prado et al., 2022). Nevertheless, the mechanisms behind potential mental health effects are far less illuminated. In this study, we examined the effect of changes in intergenerational support on the likelihood of experiencing an increase in depressive feelings among the 65 + population. In doing so, we cover the COVID-19 pandemic from its initial outbreak until the Summer of 2021 and thereby provide a comprehensive assessment of its impact.

We find that about 17% of individuals aged 65 and older reported feeling more sad or depressed during the first outbreak compared to before. This number decreases to 13% when comparing SCS2 with SCS1. At the same time, we also see a drastic increase in intergenerational support after the onset of the pandemic. Although social interactions were discouraged or even prohibited, many families maintained or even increased the support exchanges that they engaged in prior to the pandemic. Previous studies showed that older adults' level of intergenerational interactions were more likely to increase in countries with more stringent measures (Vergauwen et al., 2022). These increases in support are likely responses to intensified pre-existing needs for support as well as newly created needs among older adults who were previously not relying on external support (Bertogg & Koos, 2022).

With limited formal alternatives, the cost of exchanges between parents and adult children are likely to be higher than under normal circumstances. Family caregivers may be feeling obligated to fill in the care void or they may decide that the exchange is not worth the risk. Both scenarios may translate into ambivalence, tension between caregiver and care-recipient and increased mental distress for both parties (Archer et al., 2021; Gilligan et al., 2020).

Our first two research questions therefore examined whether these changes in receiving intergenerational support due to the pandemic were related to deteriorating mental health among 65 + Europeans. We found that older individuals who experienced an increase in received support during the pandemic were more likely to report an increase in depressive feelings, compared to those who did not experience a change in intergenerational support. This positive association between increases in intergenerational support and increases in depressive feelings may not only reflect the negative effects of increased dependence, loss of self-efficacy and control (Merz et al., 2009; Thomas, 2010), but also resonates with theories emphasizing the importance of reciprocity in intergenerational exchanges in order to produce positive mental health outcomes (Prigent et al., 2022). The balance between giving and receiving may become distorted due to the pandemic, as it limits all kinds of support exchanges (e.g. social support, grandchild care), making it difficult for older parents to fulfil this reciprocity condition. Nevertheless, it could also be the case that respondents who experienced an increase in depressive feelings, called upon their support network more often, resulting in increasing intergenerational support.

Our third research question focuses on the role of the epidemiological situation. Given the vast differences in the strictness of the sanitary measures as well as in the severeness of the pandemic, it is crucial to relate concurrent pandemic measures to both changes in intergenerational exchanges and mental health. Our results show that stringency levels are positively related to increased depressive feelings, while excess mortality is negatively related to increased depressive feelings. This contrasting finding highlights the complex interplay between individual experiences and societal responses to crises. While the pandemic can cause strain and challenges caused by social distancing and other measures, it can also be a source of community and resilience.

Furthermore, we find that the effect of decreases in intergenerational support actually depends on the level of stringency. The positive effect of less support increases as more stringency measures are implemented - but only when it surpasses a certain level. When decisions on intergenerational support are not the result of a deliberate choice but imposed by restricting policies, this arguably leads to worse mental health outcomes. Additionally, it may create intergenerational tension. As adherence to these measures might differ between adult children and their parents (Visintin & Tasso, 2022), expectations about support might not be in concordance as well. Greater stringency also prevents other sources of social contact and informal support (e.g. other family members, friends) as well as formal care alternatives, which are otherwise potential substitutes for intergenerational contacts. When older parents are left with unmet needs or expectations, this may not only impact their physical but also mental well-being (Miralles et al., 2021). This finding signals the importance of the family as source of support and well-being. But the causality can run the other way around as well: older parents experiencing worse mental health due to higher stringency levels, may become socially isolated and in turn limit their intergenerational contacts (Courtin & Knapp, 2017).

This mechanism, however, is not found for increases in intergenerational support with the detrimental effect of increases support on mental health being consistent across different levels of stringency. The fact that adult children may intensify their role as caregiver does not seem to interfere with the connection between changes in intergenerational support and mental health. For increasing mortality, on the other hand, we see that it is related to stronger effects of increases in intergenerational support on mental health. When COVID-19 related deaths are high, this may be associated with fear and anxiety for getting infected when receiving in-person support. The effect of decreases in intergenerational support on mental well-being, however, decreases with mortality rates. Respondents might feel that such decreases are necessary in the pandemic context which thereby decreases its negative mental health impact.

Interpretation of these results should take account of the limitations of the study. Findings are specific to older Europeans and exchanges of support with adult children and therefore not generalisable to younger age groups or support exchanged with other relatives or non-family members. Due to the question wording, we were not able to differentiate between different types and intensities of support. Potential mental health effects of, for example, emotional support should be addressed in future research. Additionally, our measure of mental health is captured by a single item instead of a composite depression scale. Our dependent measure should therefore be interpreted as a subjective indicator of change in depressive feelings that suffers from potential recall bias. An interesting pathway for future research may be to explore whether similar mechanisms are found when looking at measures of positive affect to capture late-life subjective well-being (e.g. life satisfaction). Our results also confirm prior research examining whether and how the pandemic's effects vary by gender. Women are found to be disproportionately affected by containment and closure policies when looking at mental distress outcomes (Koch & Park, 2022). In our sample, women indeed report higher levels of depressive feelings compared to men. Previous research already showed that men are more likely to report decreased parent-child contacts than women during the pandemic (Vergauwen et al., 2022). Whether these gender differences also translate into diverging mental health outcomes is still unknown.

To conclude, our study demonstrates the relevance of the family and intergenerational relations for the mental health of the older generation during the unprecedented time of the COVID-19 crisis. While receiving adequate support is essential for late-life well-being, we should acknowledge that intergenerational exchanges of care and support are also potential stress factors and sources of ambivalence, not only for the care provider but also for the recipient. When family relations are put under pressure, like during a global pandemic, this might translate into poorer mental health outcomes. Formal care alternatives should complement informal support in order to limit potential conflict in expectations and family roles. This is not only relevant for future policies designed to combat the spread of infectious diseases similar to COVID-19. Social policies targeting older adults living at home should take these consequential effects of intergenerational support into careful consideration as well, as good family ties are vital for late-life well-being.

Declarations

Author Contribution

LVH and WVL wrote the main manuscript text. Both authors contributed to the design and implementation of the research methodology and to the analysis of the results. LVH performed analyses and prepared all figures and tables. Both authors reviewed the manuscript.

Conflicts of interest: The author(s) declare none

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Figures

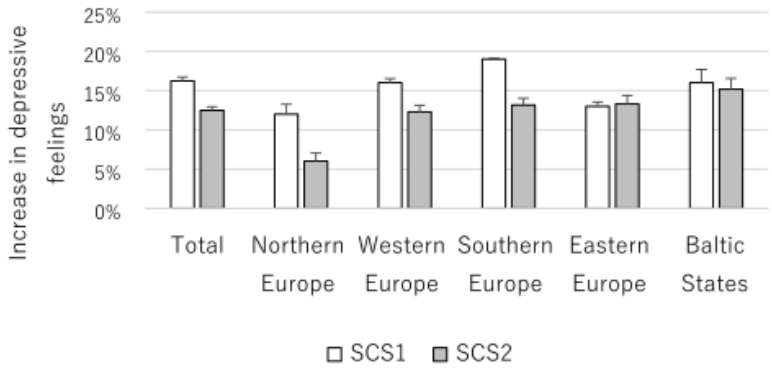

Figure 1

Increased feelings of depression during SHARE Corona Survey 1 (SCS1) and SHARE Corona Survey 2 (SCS2) by region.

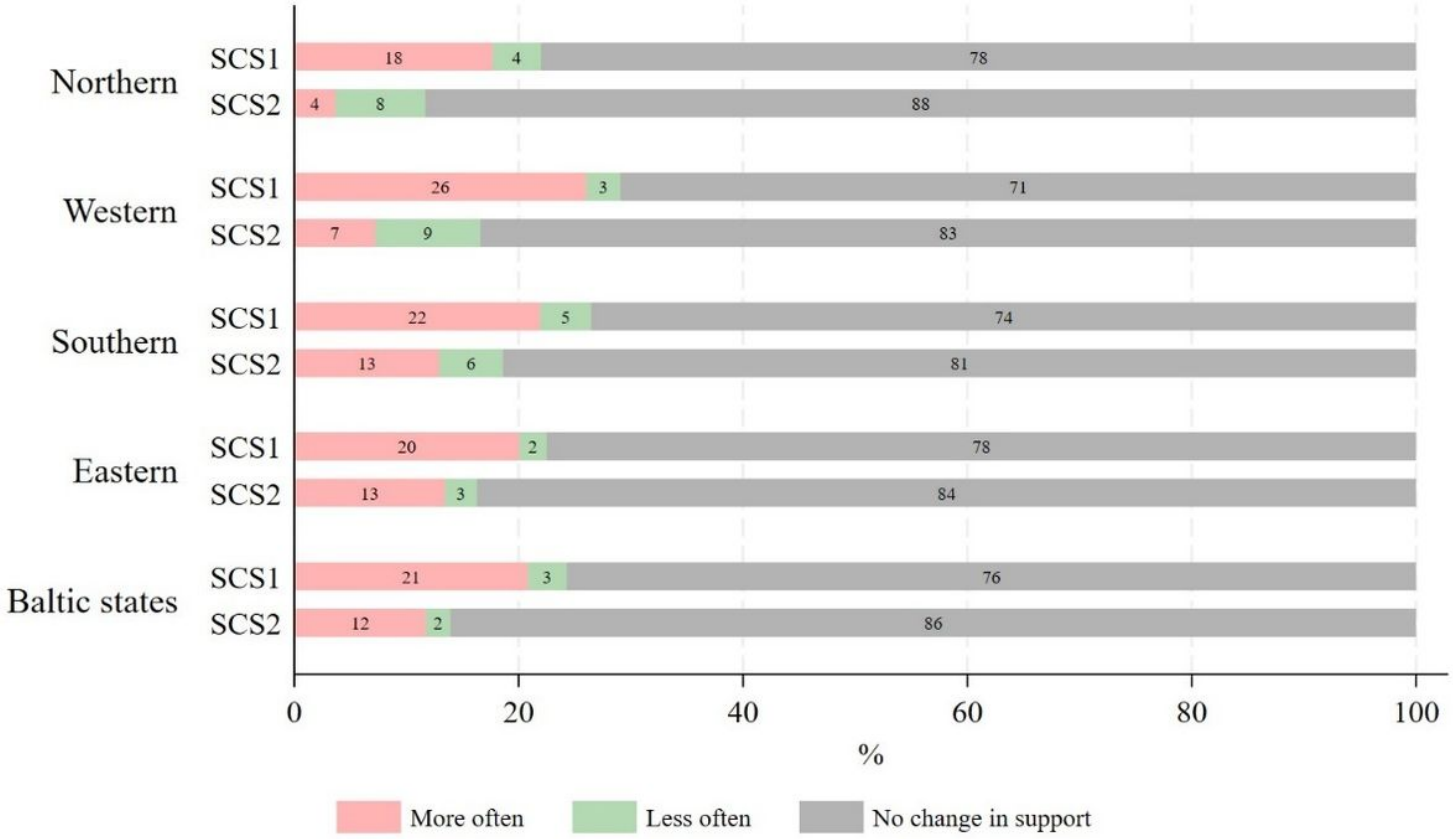

Figure 2

Changes in receiving intergenerational support during SHARE Corona Survey 1 (SCS1) and SHARE Corona Survey (SCS2) by region.

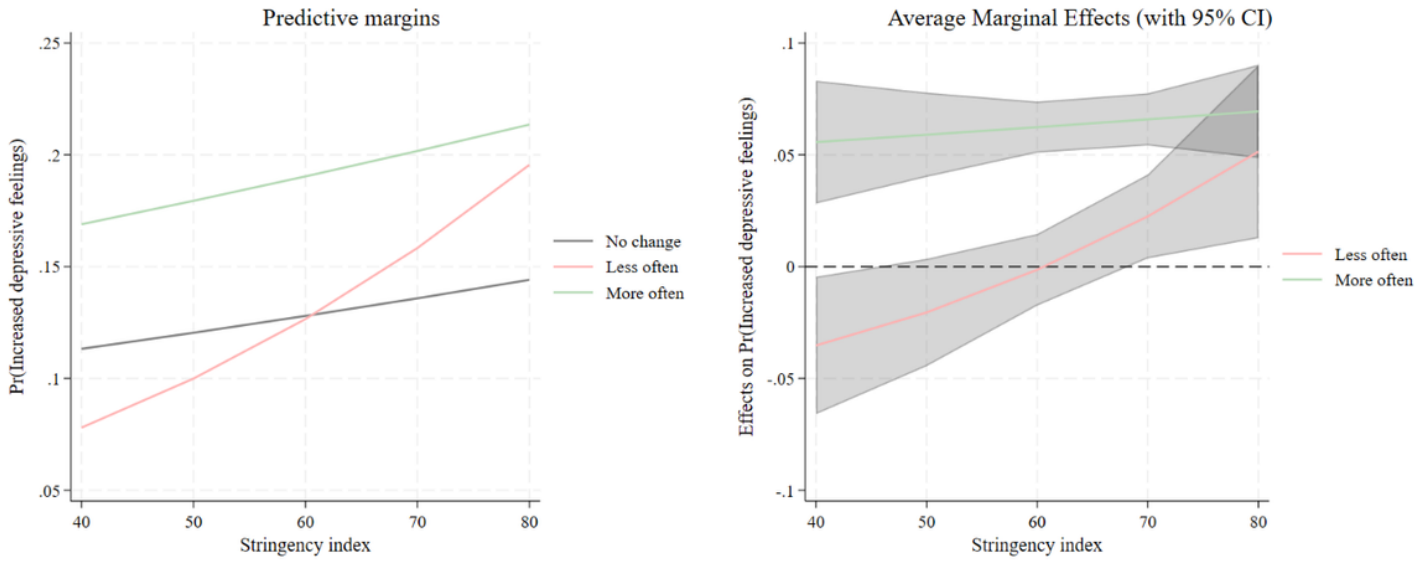

Figure 3

Interaction effect between changes in intergenerational support and stringency index (Model 3a).

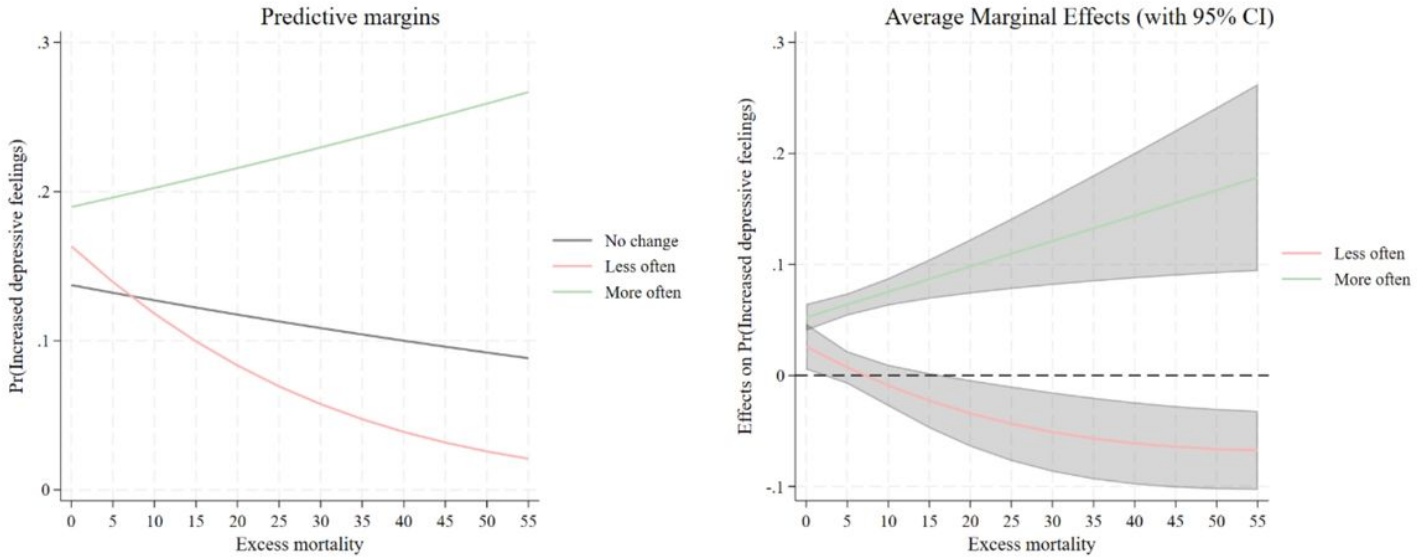

Figure 4

Interaction effect between changes in intergenerational support and excess mortality (Model 3b).

Supplementary Files

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- SupplementaryMaterialEJA.pdf