

The experience of older people instructed to shield or self-isolate during the COVID-19 pandemic

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EXECUTIVE SUMMARY

A vital weapon in the fight against COVID-19 has been the shielding of clinically extremely vulnerable individuals at high risk, and instructions to clinically vulnerable people at moderate risk to stay at home and avoid face-to-face contact as far as possible.¹ The consequences of this advice for mental health and well-being are not well understood. The English Longitudinal Study of Ageing COVID-19 Substudy provided an opportunity to evaluate impact on mental health, quality of life, social connectedness, worries, and health-related behaviour in more than 5,800 older men and women (mean age 70 years). We found that although most individuals instructed by the NHS or their GPs to isolate and avoid face-to-face contact stayed at home as far as possible (defined as high risk), only 60% were strictly isolating. The high risk participants experienced higher levels of depression, anxiety, and loneliness, and reduced quality of life compared with others, and this was particularly marked among those who were isolating. Poor mental health was not related to reductions in social contacts, but there were higher levels of worry about obtaining food and other essentials. Physical activity was reduced and sleep impaired among high risk participants. The advice to people at risk may have saved lives and reduced infection, but it has come at a cost. If future outbreaks of COVID-19 require the reintroduction of shielding and avoidance of face-to-face contact, efforts should be made to allay concerns and encourage health promoting behaviour so as to avoid further impairment of the quality of life and mental health.

Key findings

- 16.8% of ELSA participants were advised by the NHS or their GP that they were vulnerable and at risk, and should stay at home at all times and avoid any face-to-face contact (defined as high risk). Of these, two in five did not adhere to strict social isolation in April 2020, and the number fell to less than 50% in June / July 2020.
- There were markedly higher levels of depression and anxiety among the high risk group compared with the remainder. Severe depression and anxiety symptoms were twice as common among high risk individuals who were socially isolating compared with average risk participants. Satisfaction with life, happiness, sense of purpose, sleep, and general quality of life were also impaired, particularly in the high risk – isolating group.
- Loneliness was much more common in the high risk – isolating group, even when factors such as age, sex, number of people in the household, and whether or not the person had a partner were taken into account. Interestingly, however, there was little difference in social contact levels. More than 80% had real time contact by phone or videocall at least weekly with family and friends, and frequency of written contact (by letter, email or text) was also high.
- Though absolute numbers were low, participants in the high risk group were more likely to have been hospitalised with COVID-19, to have experienced death among their family and friends, and to be worried about obtaining food and other essentials.
- There were no differences in changes in smoking or alcohol consumption between groups, but the high risk group were more likely to be less physically active than usual and to spend more time sitting compared with others.

Introduction

Older people are at increased risk of serious illness and death following COVID-19 infection, with national statistics indicating that 88 out of every 100 people who die are aged over 65. Early in the pandemic, the Chief Medical Officer identified two groups of people who were at risk:

- High risk individuals with specific cancers or other health problems who were instructed to practise complete shielding;
- Moderate risk, clinically vulnerable people who were instructed to practise strict social distancing.

Advice was first issued in March 2020 with letters sent to people identified through health records as being at severe risk if they caught COVID-19. They were instructed

to stay at home at all times and avoid all face-to-face contact for at least 12 weeks. As well as not going out, these individuals were advised to minimise the time spent with others in their households, to sleep in different beds where possible, use separate towels, only use kitchens when others were not present, and other recommendations.²

These policies may be beneficial in reducing risk of infection, but could have undesirable consequences for emotional wellbeing and social function. Studies of the impact of quarantine have documented negative psychological effects on a wide range of measures.³ The ELSA COVID-19 Substudy provided the opportunity to measure the impact of instructions to stay at home and isolate on a representative sample of older men and women. Here, we describe effects on mental health, loneliness, worries about food and other essentials, health behaviours, and social connectedness.

Results

There were 7,040 respondents to the ELSA COVID-19 Substudy in June/July 2020, of whom 5,820 were core ELSA members. These analyses were carried out with the core sample. Of the core sample, 979 (16.8%) responded positively to the question ‘Have you been contacted by the NHS or your GP and advised that you are vulnerable and at risk of severe illness if you catch coronavirus (COVID-19), and should stay at home at all times and avoid any face-to-face contact’ (high risk group). Compliance with this advice is detailed in Table 1. Compliance in the high risk group was just under 60% in April 2020, falling to 44.2% in June/July 2020, though the vast majority were either isolating or staying at home. Most of the average risk participants also reported staying at home except for limited purposes.

Table 1. Social isolation and staying at home in high and average risk groups

		High risk	Average risk
Socially isolating – April	Yes	58.8%	17.5%
	No	41.2%	82.5%
Stayed at home except for limited purposes – April	Yes	51.0%	71.8%
	No	49.0%	28.2%
Either isolating or stayed at home – April	Yes	95.7%	85.4%
	No	4.3%	14.6%
Socially isolating – June/July	Yes	44.2%	10.4%
	No	55.8%	89.6%
Stayed at home except for limited purposes – June/July	Yes	52.3%	64.5%
	No	47.7%	35.5%
Either isolating or stayed at home – June/July	Yes	85.6%	72.3%
	No	14.4%	27.7%

Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data N = 5813. Seven participants did not answer

Mental health

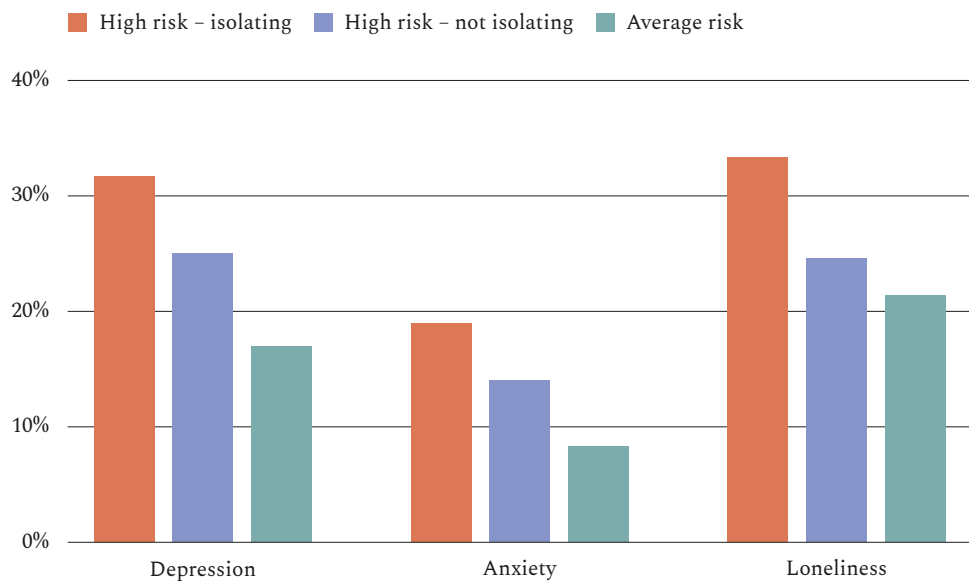
The ONS Shielding Behavioural Survey asked respondents whether their mental health had deteriorated during the COVID-19 pandemic, but did not involve standardised measures of mental health.⁴ In the ELSA COVID-19 Substudy, depression was measured with a shortened version of the CESD (Center for Epidemiologic Studies Depression Scale), with a score of 4 or more indicating significant depressive symptoms. Anxiety was assessed with the GAD-7 (General Anxiety Disorder-7) questionnaire, with the standard cut-off of 10 or more indicating significant anxiety symptoms. Loneliness was assessed with the short-form UCLA loneliness scale, in which a score of 6 or more indicates that the person felt lonely some or all of the time. We compared three groups: high risk individuals who said that they were isolating in April 2020, high risk individuals who were not isolating, and those of average risk. The analyses were adjusted statistically for age, sex, the number of people in the respondent's household, and whether or not the respondent has a marital or equivalent partner. Survey weights were applied to take account of non-response bias so results are representative for the older population in England.

The proportions of people with significant depression and anxiety symptoms and high levels of loneliness are summarised in **Figure 1**. A greater proportion of the high risk group had significant depression and anxiety symptoms, and greater loneliness compared with the average risk group. The difference was particularly marked for the high risk participants who were isolating. The high risk – not isolating group had raised levels of depression and anxiety compared with those of average risk, but their loneliness levels were not increased. One reason for these differences could be that high risk respondents already had poorer mental health before the COVID-19 crisis. However, differences between groups remained statistically significant after levels of depression and loneliness in wave 9 (2018/19) were taken into account.

Well-being and quality of life

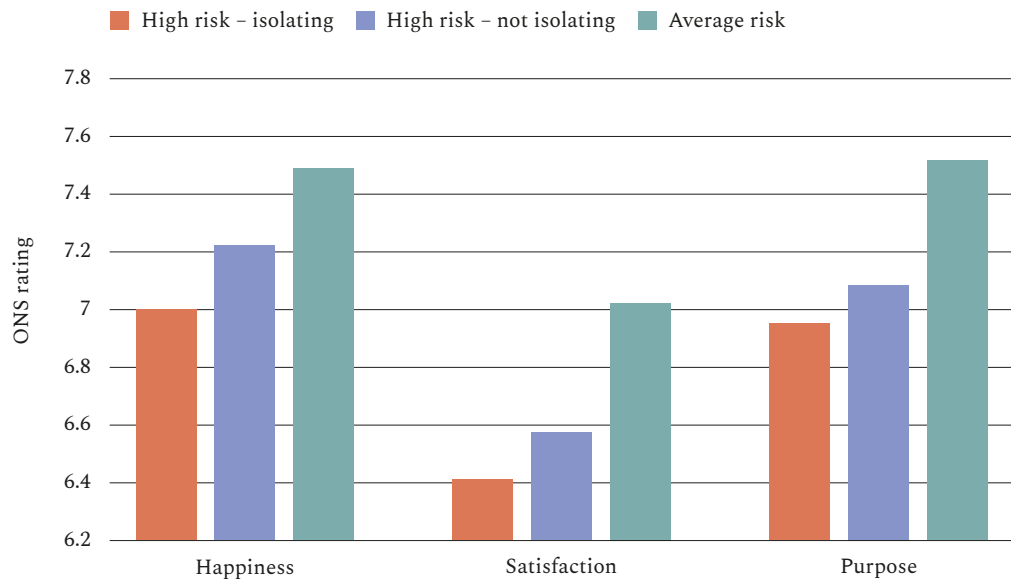
Differences were also evident in measures of quality of life, including the ONS ratings of happiness, life satisfaction, and purpose in life (**Figure 2**). Respondents at high risk were less happy, less satisfied with their lives, and had a lower sense that they were doing worthwhile things in their lives than those at average risk. These differences were larger in the high risk participants who were isolating in April. Differences remained significant after levels recorded in wave 9 were taken into account statistically. Ratings on the 12 item CASP quality of life measure were significantly lower in the high risk – isolating group (mean 22.58, SEM 0.09) than in the high risk – not isolating (mean 23.79, SEM 0.31) or average risk group (mean 26.03, SEM 0.27).

Figure 1. Mental health, shielding and self-isolation



Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data

Figure 2. Well-being, shielding and self-isolation

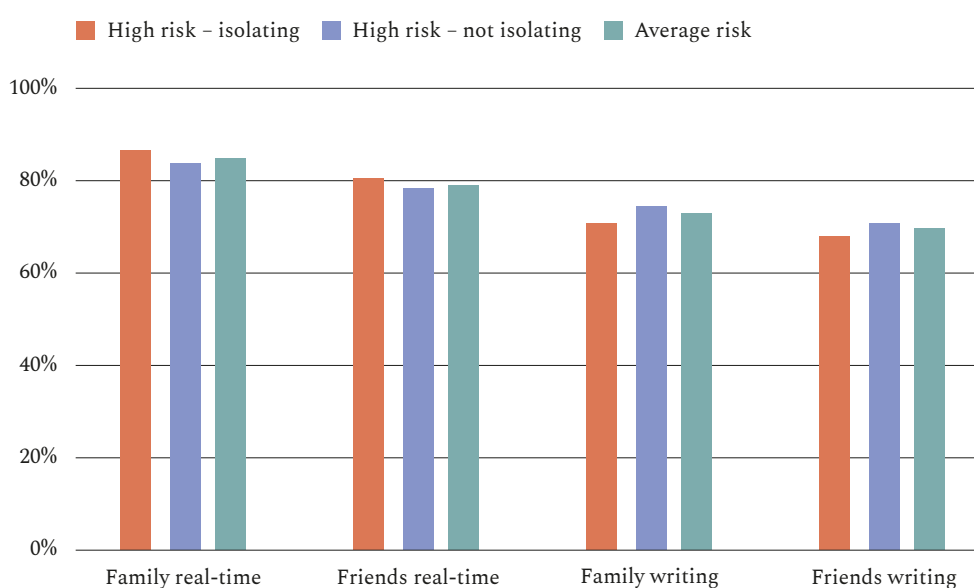


Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data

Social connectedness

We explored the notion that the poorer mental health and quality of life of high risk participants was exacerbated by reduced levels of social contact. We therefore asked about the frequency of contact with family outside the household and with friends, measuring two forms of ‘real-time’ communication (telephone and video-calling through Skype, FaceTime, Zoom and other methods), and forms of written communication (letter writing, email, and texts). **Figure 3** summarises the proportion of people in each group who had contact at least once a week with each of these types of communication. Levels were high, with no difference between participants in the high and normal risk groups. It would appear therefore that the poor mental health and greater loneliness of the high risk – isolating group was not due to lower levels of remote social contact.

Figure 3. Social connectedness, shielding and self-isolation



Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data

Experiences during the COVID-19 outbreak

Participants were asked whether they had experienced the core symptoms of COVID-19, had been hospitalised, and whether any family members or close friends had died. Although only a small proportion of the participants had been hospitalised, this experience was more common in the high risk than average risk groups, irrespective of whether respondents were isolating (Table 2). But there were no differences in the proportion who had experienced core symptoms or in the hospitalisation of household members.

More people in the high risk – isolating group also stated that they were somewhat, very or extremely worried about not having enough food and other essential items during the COVID-19 outbreak.

Table 2. Experiences of COVID-19

	High risk – isolating	High risk – not isolating	Average risk group	P ¹
One or more core symptoms	9.1%	11.1%	9.1%	n.s.
Hospitalisation for COVID-19	15.0%	13.0%	3.0%	<0.001
Hospitalisation of household member	2.0%	0.2%	3.0%	n.s.
Positive test for COVID-19 (household)	8.0%	10.0%	10.0%	n.s.
Death of family member or friend	10.0%	14.2%	6.5%	<0.001
Worried about not having enough food ²	12.2%	7.1%	5.6%	<0.001
Worried about having other essentials ²	16.1%	10.7%	9.5%	<0.001

¹ Significance of differences between groups after adjustment for age, sex, number of people in the household, and marital/partnership status

² Additionally adjusted for household wealth in wave 9 (2018/19)

Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data

Health-related behaviours

Shielding and self-isolation may have an impact on activities and behaviours related to health. We therefore assessed whether participants had changed in their physical activity, sitting time, eating, sleep, smoking and alcohol consumption since the outbreak began. The high risk respondents who were isolating were more likely to report less physical activity and more sitting than usual, compared both with the average risk and the high risk people who were not isolating (Table 3). There were no differences in changes in smoking or alcohol consumption. However, the high risk isolating group were also more likely to sleep less than usual and their quality of sleep was poorer. More of the high risk - isolating group reported eating less than usual. So many activities related to sleep were worse in the high risk - isolating than average risk group, with the high risk - not isolating group being in an intermediate position.

Table 3. Health-related behaviours

	High risk – isolating	High risk – not isolating	Average risk group	P ¹
Less physical activity than usual	47.4%	39.5%	33.4%	<0.001
More sitting than usual	48.1%	39.3%	38.4%	<0.001
More smoking (among smokers)	25.0%	28.0%	22.2%	n.s.
More alcohol (among drinkers)	19.4%	15.8%	20.8%	n.s.
Less sleep than usual	27.9%	24.2%	20.8%	<0.001
Sleep fair or poor quality	56.7%	45.6%	40.6%	<0.001
Eating less than usual	16.8%	12.2%	8.8%	<0.001

¹ Significance of differences between groups after adjustment for age, sex, number of people in the household, and marital/partnership status

Source: ELSA COVID-19 Substudy (June/July 2020). Weighted data

References

- ¹ Banerjee A, Paisea L, Harris S, et al. Estimating excess 1-year mortality associated with the COVID-19 pandemic according to underlying conditions and age: a population-based cohort study. *Lancet*. 2020;395(10238):1715-1725.
- ² Public Health England (2020). COVID-19: guidance of shielding and protecting people defined on medical groups as extremely vulnerable. www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19
- ³ Brooks SK, Webster RK, Smith LE, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet*. 2020;395(10227):912-920.
- ⁴ ONS statistical bulletin. Coronavirus and shielding of clinically extremely vulnerable people in England: 24 June to 30 June 2020. www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronavirusandshieldingofclinicallyextremelyvulnerablepeopleinengland/24juneto30june2020

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The ELSA COVID-19 Substudy has obtained full ethical and data protection approval and is fully GDPR compliant. For further information, please contact ELSA@ucl.ac.uk

This report and other ELSA publications, including the ELSA COVID-19 Substudy methodological report, are available from www.elsa-project.ac.uk

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