Project Number: 101015924

Project Acronym: SHARE-COVID19

Project title:

Non-intended health, economic and social effects of the COVID-19 epidemic control decisions: Lessons from SHARE

Policy recommendations of the SHARE-COVID19 project

Key output of this project are our policy recommendations that are based on the scientific analyses, which the project team has made during the project duration. These analyses make heavy use of the SHARE data that has been collected before, during and after the pandemic. After some general remarks, these policy recommendations are structured broadly by healthcare, economic and social issues.

An overarching recommendation is to have data infrastructures in place before a new crisis comes up. The existence of SHARE since 2004 and the experiences gained in the financial crisis 2008 which data to collect in times of crisis made it possible to observe changes in the health, economic and social environment of our respondents and thus quickly detect trouble spots and target interventions based on available data.

Since **SHARE is a survey of Europeans aged 50 and older**, the recommendations focus on this age group, which was most heavily impacted by the illness itself, especially in old-age homes and through a significant excess mortality. The older individuals in this age group also suffered most from the epidemic control measures, especially when dependent on help by family, friends and professionals.

While much attention has been devoted here and elsewhere on this older population, we want to stress that **younger individuals, especially schoolchildren, may have ended up carrying the largest burden of the pandemic**. The decline of PISA-type indicators of educational performance in the aftermath of the pandemic may have long-term implications for the life course of the affected young individuals and the productivity of the society as a whole. We are well aware that the concerns of the young generation are not reflected in our research on individuals aged 50 and older. They are the object of parallel projects in the EU Commission's call „Innovative and rapid health-related approaches to respond to COVID-19 and to deliver quick results for society for a higher level of preparedness of health systems (SC1-PHE-CORONAVIRUS-2020-2)" under the topic of "behavioural, social and economic impacts of the outbreak responses".

We are also aware that **our recommendations profit from hindsight, and that every new epidemic will start with great uncertainty**. Striving for perfectness is not the aim of these recommendations as the perfect is the enemy of the good. Rather, we aim for robustness in being prepared. Since the transmission mechanisms of a new epidemic are likely to be as unknown in its initial phase as it was with the new SARS-CoV-19 virus, preparing ahead of time for this initial phase is a key recommendation in all three domains: healthcare, economics and social relationships.

A. Recommendations for the healthcare sector

1. **Maintain healthcare stability amidst health crises. Minimize disruptions in healthcare provision to mitigate deteriorating health outcomes and mortality rates. Focus on population groups vulnerable to unmet healthcare needs, such as those with poor socioeconomic status.**
   Disruptions of healthcare access varied significantly across Europe. Almost 5% of those aged 50+ were denied medical treatment. Disruption in specialist and primary care varied extensively. While older adults in Bulgaria and Romania barely felt the adverse effects of health systems lockdowns, in Luxembourg and Portugal one out of two older adults reported postponing their scheduled medical treatment. Risk factors for unmet healthcare in the initial stage of the pandemic were female sex, poor economic situation, poor health and underlying medical conditions. Hence:

2. **Prioritise addressing the healthcare needs of older individuals with chronic health conditions and lower socioeconomic status.**

   and

3. **Prepare systems for an increase in healthcare demand post-pandemic. Post-crisis surge in healthcare demand requires careful planning for services to address backlogs.**

4. **It is important to understand healthcare avoidance due to fears of infection in older adults. Improve patient adherence and trust in healthcare systems.**
   Women, individuals with higher levels of education, and older adults facing financial difficulties were notably more inclined to avoid seeking medical care due to fear of infection. This tendency also applies to older adults reporting poorer self-rated health, managing multiple chronic conditions, regularly taking prescription medication, or recently diagnosed with a significant illness.

5. **Remote medical care can ensure stable healthcare access and strengthen health system readiness. Policymakers should therefore enhance telemedicine regulations and define initiatives for remote healthcare for future health crises, particularly for older adults living in remote or rural areas. Redefine reimbursement policies and improve healthcare provider availability during health crises.**
   While individuals aged 80+ were least likely to utilize remote medical care, there is increasing demand for telemedicine: women, those with higher education, older adults residing in urban areas, financially secure individuals, and active Internet users were more inclined to use remote medical consultations. In addition, those reporting poor health status, multiple chronic diseases, or recent hospitalization were also more likely to utilize remote healthcare. Furthermore, individuals whose healthcare was postponed or who have forgone healthcare due to fear of COVID-19 infection were more likely to engage in remote medical consultations.

6. **Refine public health guidelines to balance health safety and mental well-being, with flexibility to adapt to the needs of vulnerable populations. Increase initiatives to raise awareness about the mental health impacts of loneliness and encourage active social engagement and utilization of mental health services. Develop targeted interventions for specific vulnerabilities such as loneliness, focusing on high-risk groups including older adults with chronic health conditions and those without live-in partners.**
   Contrary to initial expectations, older individuals generally experienced improvements in specific aspects of mental health during the pandemic compared to before. Notably, there was a significant decrease in feelings of sadness or depression and fewer complaints about sleeping problems, but

these improvements were temporary. Post-pandemic wave 9 results showed levels of negative mental health symptoms similar to pre-pandemic wave 8. However, despite these temporary improvements, the risk of feeling lonely slightly increased during the pandemic. This increase in loneliness was more pronounced in countries with stricter COVID-19 restrictions.

7. **Target individuals who underestimate the spread of the virus and the risk of infection at gatherings due to their trust in others. Personality traits and beliefs have influenced the adherence to preventive policies (especially vaccination or barrier gestures). Strengthen trust in health information through transparent, consistent, and factual public health messaging. Actively manage and curb the spread of misinformation on social media platforms. Utilize social networks to spread positive health messages, including vaccination efforts. Engage community leaders and religious communities to improve communication and build trust, using targeted strategies that address specific concerns and beliefs, including multilingual and culturally sensitive campaigns.**
   More far-sighted individuals were more likely to reduce family visits, wear masks, and keep their distance from others when outside, wash their hands more regularly and cover their cough. Seeking health information online is significantly associated with less vaccine hesitancy among Europeans aged 50 and older. Individuals who frequently searched for health-related information online showed a 10% lower vaccine hesitancy rate compared to those who did not. Key socio-demographic factors associated with vaccination hesitancy included age, educational level, and living situation. Older age groups showed less hesitancy, while those with lower educational levels displayed more reluctance towards vaccination. Higher levels of trust were correlated with lower vaccine hesitancy, suggesting that individuals who trust public health messages and institutions are more likely to accept vaccination.

8. **Target vaccination campaigns on those with fewer children. Provide more reliable information in post-communist regions**
   Having more than two children compared to just two increased the probability of getting the COVID-19 vaccine, especially in places with strong family ties (Italy and Spain). This suggests to target vaccination campaigns on those with fewer children. Broader living conditions beyond observed housing conditions and living arrangements, such as living or being born in a former Communist country negatively influenced vaccination.

9. **Develop interventions for older adults and individuals with lower educational levels to address prevention and management of post-COVID-19 conditions. Improve health literacy through community-based programs that teach health information comprehension and system navigation, focusing on populations with lower educational attainment.**
   Older adults (aged 70 and above) are at an increased risk of developing post-COVID-19 conditions. Individuals with medium and lower educational levels exhibit a higher risk of experiencing post-COVID-19 conditions.

10. **Implement support measures specifically for women, focusing on mental health and social reintegration to address the disproportionate impact. This includes programs that facilitate safe social interaction for those who have faced significant isolation.**
    We found significant sex differences in the impact of COVID-19 across Europe, with women experiencing larger negative changes in social activities and health outcomes. Women reported greater declines in activities such as shopping, and higher increases in mental health issues such as feeling nervous, depressed, having sleep problems, and feeling lonely.

11. **Use established data infrastructures like SHARE to target specific population groups before a new healthcare crisis. Develop rule sets to identify people in need of additional effort. The rule sets should foster older adults' retention in care.**
    We developed four machine learning algorithms to target individuals in need. Given a prevalence of unmet essential health care of 16% in the first six months of the pandemic (1st SHARE Corona Survey - SCS 1), the models correctly identified between 52% and 62% of the individuals at risk of unmet care while correctly identifying between 52% and 64% of the individuals without unmet care needs. The models can be used to reduce missed visits during future disruptions to healthcare services.

B. Recommendations for economic policy

12. **Maintain human capital, in terms of education and digital skills, by mitigating labour market shocks and preventing work disruptions. Identifying more "vulnerable" job/worker categories is a first step in designing effective policies aimed at providing protection to such groups in situations of economic downturns.**
    Our results indicate that occupational features are significantly related to the probability of work disruptions. Higher feasibility of remote work and lower intensity of social contacts are associated with smaller probability of having undergone work interruptions, during the first wave of the pandemic. In particular, the gap in the probability of work disruptions between essential and unessential workers (jobs) vanishes for larger values of the tele-workability index and lower values of the social interaction one. Moreover, education proves to have a mitigating effect per se, even after controlling for job characteristics and IT-skills.

13. **Work disruptions of older workers, due to the pandemic, were gendered, mainly due to the intrinsic characteristics of gender specific jobs. This calls for specific safety measures of the work environment.**
    We found that women aged 50 and older were more likely to have experienced work interruptions and for longer periods. Potential causes are the gender selection into specific work activities that are often characterized by higher intensity of social contacts (e.g. primary school and early childhood teachers, retail activities or personal services). This highlights that women represent a more "vulnerable group" in relation to "exposure" to certain labour market risks.

14. **Target occupations which are "at risk" and prioritize such categories by designing policies aimed at protecting work during economic downturns. A more careful organization at the workplace, paying attention to the nature of the tasks performed and to exposure to risks, may greatly benefit workers in vulnerable position, such as those engaged in low-skill jobs.**
    Our research provides key indicators on how to identify such jobs and related risks for older workers; older women are a particularly vulnerable group.

15. **Take account of the ex post implications of experiencing work disruptions on the labour market participation of older workers.**
    Older workers represent a particular category: (i) they have extensive work experience but (ii) the important recent evolution/changes in the labour market, due to the digital revolution, may have unexpectedly turned obsolete/outdated some of their skills (iii) they may be affected by the age-bias in the recruitment process when applying to a new job.
    Our results show a positive and significant association between the strictness of the restrictions and the probability of job loss in the first wave of the pandemic, but the effect loses significance at medium term. Older, less educated and workers in worse health conditions prove to be more "vulnerable" to the risk of job loss.

16. **The shock due to the pandemic led to changes in the patterns of retirement. Social welfare systems have to consider the direction and the extent of such changes in order to be prepared to new potential challenges/requirements. Policymakers should pay more attention to the relationship between health and work in designing pension eligibility rules.**
    Older individuals approaching retirement age face a unique set of challenges, including age-related job market biases, changes in work conditions, increased caregiving responsibilities, and concerns about health.

17. **During a crisis, more attention is needed to realize the joint effects of welfare regimes and job protection policies on the labour market participation of older workers.**
Job protection policies have been enacted or enhanced in most European countries in order to preserve jobs and to guarantee decent levels of income to workers. Our results indicate that the percentage of GDP allocated to job retention schemes in 2020 is positively related to the likelihood of retiring a year later.

18. **Short time employment aid policies should be designed in a more effective way. While they may have beneficial effects in the short-run, they are likely to produce undesirable effects in the longer-run.**
In countries in which access to short time employment aid was relatively easy, where employer contributions to job protection policies were low and where replacement rates of wage substitution measures were comparably high, we observe relatively higher utilization rates. We also found that targeting of short-time employment aid was successful in helping those who were mostly affected by enforced short-time work. Whether the recipients of short time employment aid were made better off is less clear. We actually find statistically significant negative effects of short time employment aid on the recipients' ability to make ends meet in the initial period of the pandemic, and only insignificant positive effects a year later. Most importantly, our evidence shows that short time employment aid has significantly increased the likelihood of unstable employment among 50+ recipients later on. This suggests that while short time employment aid prevented immediate job losses, it may have delayed the inevitable restructuring needed in certain sectors.

19. **Work from home increased dramatically at the time of the pandemic. Policy should provide older workers with the necessary knowledge to deal successfully with these new work arrangements which may also counteract the effects of long-term work disruptions. Training of older workers that enhances their IT skills should mitigate the increase in unemployment and early retirement among older workers.**
Our data document that while the use of work from home reduced to some extent after the enormous increase during the pandemic, it remains much higher than the pre-pandemic levels even for older workers. The work arrangement largely depends on the occupations' characteristics, such as suitability to telework or cognitive content of the job, but also on the level of education and IT skills of the individuals.

20. **Women at ages 50-65 took on the burden of caring for older parents or relatives, even if working. Hence, in emergency situations such as a pandemic, policy makers should provide more structured solutions rather than to rely completely on the "reserve of informal care" available because of the supply of time by women in the age group 50-65 since this is both unequal and inefficient.**
Because the Covid-19 pandemic rationed formal care, informal care was needed to cope with the needs of older people who suffered health problems and mobility limitations. Our results show that women were mostly covering for personal care during the pandemic. The typical care giver was a woman of age 50-65. The striking result is that even if engaged in working activities, this group of the population was more likely to provide care than other groups.

21. **Government financial support relieved financial distress only when targeted to households whose members worked in jobs potentially affected by lockdown restrictions. Targeting of support measures is of the utmost importance even under exceptional circumstances, like a pandemic.**
The SHARE data show that the pandemic caused in all countries "financial hardship through reduction or loss of labour income". Despite this, not all governments targeted their financial

support to individuals more at risk of a job interruption. We found only a weak positive correlation between increased financial distress and receipt of government support. Households with at least one respondent working in a COVID-19-sensitive industry or in the private sector during the first wave of the pandemic were more likely to receive government financial support, and this support was successful in alleviating household financial distress. At least the portion of government support targeted towards those most likely to face a job interruption has achieved its aim of alleviating financial distress.

22. **Need to better consider the long-run effects of economic-stimulus programs on the middle class. Large fractions of older households experienced reductions in real incomes and increases in the difficulties to make ends meet after the COVID pandemic, likely due to inflation. Low-income households suffered less, thanks to the welfare state safety net.**
SHARE data show a marked increase in the proportions of households reporting an income loss during the pandemic that was only partially attenuated when economic activity was back to normal. The proportion of households reporting difficulties in making ends meet is actually highest after the pandemic.

C. Recommendations for social policy

23. **Policymakers should consider both restrictions and voluntary adjustments to reduce the spread of the virus among older people in Europe, while being aware that restrictions may have limited impact on activity reduction and potential negative effects on health and well-being. Potential negative effects of activity reduction should be considered in advice aimed at reducing the activities of older people.**
    Older people in Europe have substantially reduced their daily activities during the pandemic. Both restrictions and information about the spread of the virus are associated with this reduction. We found relatively weak associations between restrictions and activity reduction, suggesting that older people adjust their behaviour independently of restrictions due to a higher risk of severe illness. Policy restrictions were most strongly correlated with reduced walking, which can be seen as unfortunate since walking is relatively safe and can improve the health and well-being of the elderly.
24. **Policymakers should also consider the consequences of restrictions for different sociodemographic groups, with particular focus on the most vulnerable groups - the oldest-old, those with poorer health - as these groups consistently showed greater activity reduction regardless of the stringency of restrictions.**
    SHARE data show that older age, poorer health, and being female were consistently associated with greater activity reduction in both countries with weak and strong restrictions. The associations between education, employment, and living situation on the one hand, and activity reduction on the other, were weaker and less consistent. Since the differences between sociodemographic groups were similar regardless of the stringency of restrictions, group-specific policy recommendations are relevant independent of the extent of restrictions.

25. **Policymakers should prioritize the maintenance of daily activities, especially walking, to mitigate the negative psychological effects of restrictions among older people in Europe, by promoting physical activity through safe outdoor environments and public health campaigns, as well as ensuring safe access to essential services and considering alternative ways to maintain social contacts during restrictions.**
    We showed that reductions in walking and shopping had a stronger association with increased mental ill-health compared to social activities, and that a decrease in walking could account for about a quarter of the relationship between restrictions and increased mental ill-health. These results underscore the importance of maintaining daily activities, especially walking, to mitigate the negative psychological effects of restrictions among older people in Europe.

26. **Reconsider strict measures for older caregivers, particularly those caring for their parents. Provide recommendations for older adults on reducing mental health burdens related to caregiving, particularly focusing on older caregivers who had poorer relationships with their parents in childhood and had to increase the frequency of caregiving due to the pandemic.**
    SHARE data show that more stringent pandemic control measures were associated with increased depression in adults who provided care to their parents more frequently since the pandemic onset. Better quality of relationship with mother in childhood was associated with lower depression in people who provided care to their parents more frequently since the pandemic onset.

27. **Encourage older adults to provide personal care to their parents and life partners. Develop special instructions on how to provide this type of care safely, with regards to physical health, and less burdening on mental health. Allocate resources to the development of formal care on municipal, regional, and nationwide levels. Support the institutions providing it.**
    End-of-life care primarily relied on informal care, with adult children and spouses playing key roles. Formal care served as a secondary source of support within the spouse network but became

the primary source of support when spouses were not involved in the care network. A mixed-care network, primarily involving adult children, was linked to a higher likelihood of the individual passing away at home, while a professional care network showed the opposite association.

28. **Develop programs for older individuals who provide personal care to people within their personal networks. Highlight the mental health challenges for older individuals who provide personal care and offer suggestions to help older caregivers alleviate this burden.**
    SHARE data show that providing personal care was positively associated with loneliness. Respondents who began providing personal care during the pandemic were 22% more likely to experience loneliness than those who kept on not providing it. Resuming providing personal care during the pandemic was positively associated with loneliness. Respondents who provided personal care were 43% more likely to feel lonely than those who did not provide such care to anyone from their social networks .

29. **Encourage older adults to provide instrumental care and offer a list of recommendations on how to make this type of support safer for both older adults and their social network members..**
    . Providing instrumental care was generally negatively associated with loneliness, but somewhat weaker than providing personal care. Respondents who began providing instrumental care since the pandemic onset were 8% less likely to feel lonely than those who kept not providing it. Respondents who kept on providing instrumental care to someone from their social networks during the pandemic were 26% less likely to feel lonely than those who did not provide it to anyone between the SHARE survey waves.

30. **Enable older adults to have more in-person contact with people in their networks. Develop recommendations on how to make face-to-face meetings safe for both older adults and members of their personal networks. Reconsider stringency policies for older adults. Place special emphasis on at-risk groups such as women, older individuals, those with lower financial capacity, lower extraversion, greater neuroticism, and those having mobility limitations.**
    SHARE data for 2020 show that greater face-to-face contact was associated with lower depression, while greater stringency was associated with greater depression.

31. **Provide older individuals with more opportunities to benefit from electronic communication by offering courses to enhance their digital literacy. Guide achieving a better balance between in-person and electronic communication during a pandemic. Create guidelines on how to avoid problematic Internet use, which can stem from increasing mental health issues. For example, develop guidelines on how to prevent online panic buying when feeling depressed.**
    SHARE data showed that more frequent electronic contact was associated with worsening anxiety.

32. **Take steps to combat ageism both online and offline. Provide recommendations for mass media, organizations, and individuals on using more age-inclusive language. Focus on combating ageism directed towards older individuals.**
    According to the new SHARE data only collected in Israel, 50% of respondents experienced ageism to some degree before the pandemic.. Greater experience of ageism was associated with greater loneliness during the pandemic, and the effect of ageism on loneliness was more dominant in those aged 70+.

33. **Reduce the power of contagion by increasing house rather than apartment living; adapt home space to allow employees to safely work remotely. Balance this against environmental concerns about urban sprawl.**

Living in a larger household increased the likelihood of contracting COVID-19, while living in a house rather than an apartment had a small but robust protective effect. Adult children were a source of contagion for older parents, regardless of whether they shared their home. Working remotely rather than commuting reduced the risk of contagion, hence the desirability to adapt home space to allow employees to safely work remotely at least part of the time.

34. **Housing supply as well as transportation policies will have to take it into account that the pandemic with its accompanying lockdown policies have decreased the attraction of large cities and increased the demand for home space and for closeness to family members.**
Living in a large city, with only a spouse, or without very close children became less beneficial for mental well-being. While living in an apartment in a city was previously linked to feeling less lonely, it was associated with increased feelings of loneliness and depression, especially among women.
Closeness to children became more important in all three dimensions of mental well-being: depression, loneliness, and trouble sleeping. The mental well-being of couples declined, particularly if they were not living with other family members. More than a direct effect of the virus, this can be attributed to lockdown policies.

35. **Strengthen policies for "ageing in place" and for improving the management, design and financing of nursing homes.**
Nursing homes had a particular high contagion rate. Nursing home residents were more likely to develop symptoms or to test positive for the virus than people living in private homes. The lower rate of living in nursing homes of the 65+ observed on SHARE data after Covid-19 in 2022 (73% that of 2015 for women, and 75% for men) is compatible with a new reluctance to institutionalisation