

Lockdown intensity and mental health effects of older Europeans

Executive summary

January 2022

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*Note: This document is a brief and non-technical executive summary of the academic working paper, where further details on the analysis and technical aspects are developed in depth.

Key findings

- Social distancing, lockdown, and a temporary stop to some economic activities have long been among the most common policy tools to confront infectious diseases, where the policy design still play an important role.
- Lockdown policies increased insomnia, anxiety, and depression by 5.7, 5.6 and 5.3 percentage points, respectively.
- The effect is stronger for women, individuals employed at the outbreak of the pandemic, and those aged between 50 and 65.

Recommendations

- Highlighting the importance of face-to-face social interactions on individuals' mental health is keystone to design public policies focused in improving the use of technological resources to avoid the social isolation of the elderly population.
- The resulting lockdown has not been adequately addressed by existing mental health services. Governments must urgently address this need.
- Gender gap in mental health is important and reveals the high costs of strict lockdown for certain populations.

Principales resultados

- El distanciamiento social, el confinamiento y el cese temporal de algunas actividades económicas han sido durante mucho tiempo las herramientas políticas más comunes para hacer frente a las enfermedades infecciosas y cuyo diseño juega un papel importante.
- El confinamiento causó un aumento del insomnio, la ansiedad y la depresión en 5,7, 5,6 y 5,3 puntos porcentuales, respectivamente.
- El impacto en la salud mental es mayor para mujeres, individuos empleados en el momento de irrupción de la pandemia y para aquellos que tienen entre 50 y 65 años.

Recomendaciones

- Resaltar la importancia de las interacciones sociales cara a cara en la salud mental de los individuos es clave para diseñar políticas públicas enfocadas en mejorar el uso de los recursos tecnológicos para evitar el aislamiento social de la población mayor.
- El aislamiento resultante no ha sido abordado adecuadamente por los servicios de salud mental existentes. Los gobiernos deben abordar urgentemente esta necesidad.
- La brecha de género en la salud mental es importante y revela los altos costos del encierro estricto para ciertas poblaciones.

Restriction of mobility and social contacts during the pandemic

The COVID-19 pandemic declared by the World Health Organization (WHO) on March 11, 2020 led governments around the world to implement a wide range of response measures, including “stay at home” orders and the closure of all non-essential businesses to restrict citizens’ mobility and thereby reduce the transmission and incidence of the virus. While these unprecedented “social distancing” strategies have been crucial for limiting the spread of the virus and alleviating pressure on health systems, they have had other adverse consequences for the well-being of affected populations.

Thus, governments relied on a wide range of non-pharmaceutical interventions (NPIs) to slow down the pace of infections during the Covid-19 epidemic. Spain, as numerous other countries, allowed only a limited set of essential sectors to keep operating during the pandemic. These were sectors deemed necessary to sustain citizens’ livelihoods and to produce and deliver necessary goods to navigate the pandemic (e.g. grocery shops, manufacturing plants building medical equipment, and banks). Large scale lockdowns, however, entail costs including lost revenues for firms, lower productivity, and higher unemployment.

As we can observe in Figure 1, there was not homogeneity in the application of restriction measures among European countries¹. For the aim of the analysis, information from the Oxford COVID-19 Government Response Tracker (OxCGRT) database is used to build a containment index of COVID-19 policies. This index measures the strictness of the COVID-19 containment policies implemented in each country for the months April and May 2020, in which the disruption of the virus affected to a larger extent.

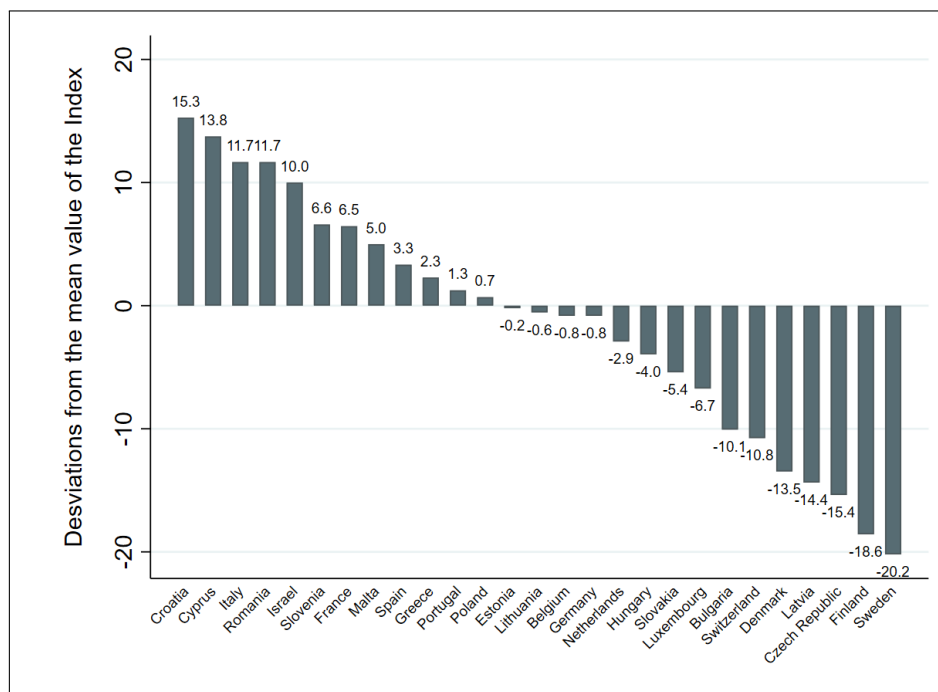


Figure 1: Which countries are more restrictive in terms of mobility?

¹We show 27 European countries that participated in the SHARE survey.

The main goal of the study in which this report is based is to investigate whether the COVID-19 lockdown policies implemented by governments during the first wave of the pandemic have caused mental health problems in senior and older Europeans. As we have seen, lockdown policies have differed among European countries and this heterogeneity is not always linked to the incidence of COVID-19 as we can observe in Figure 2.

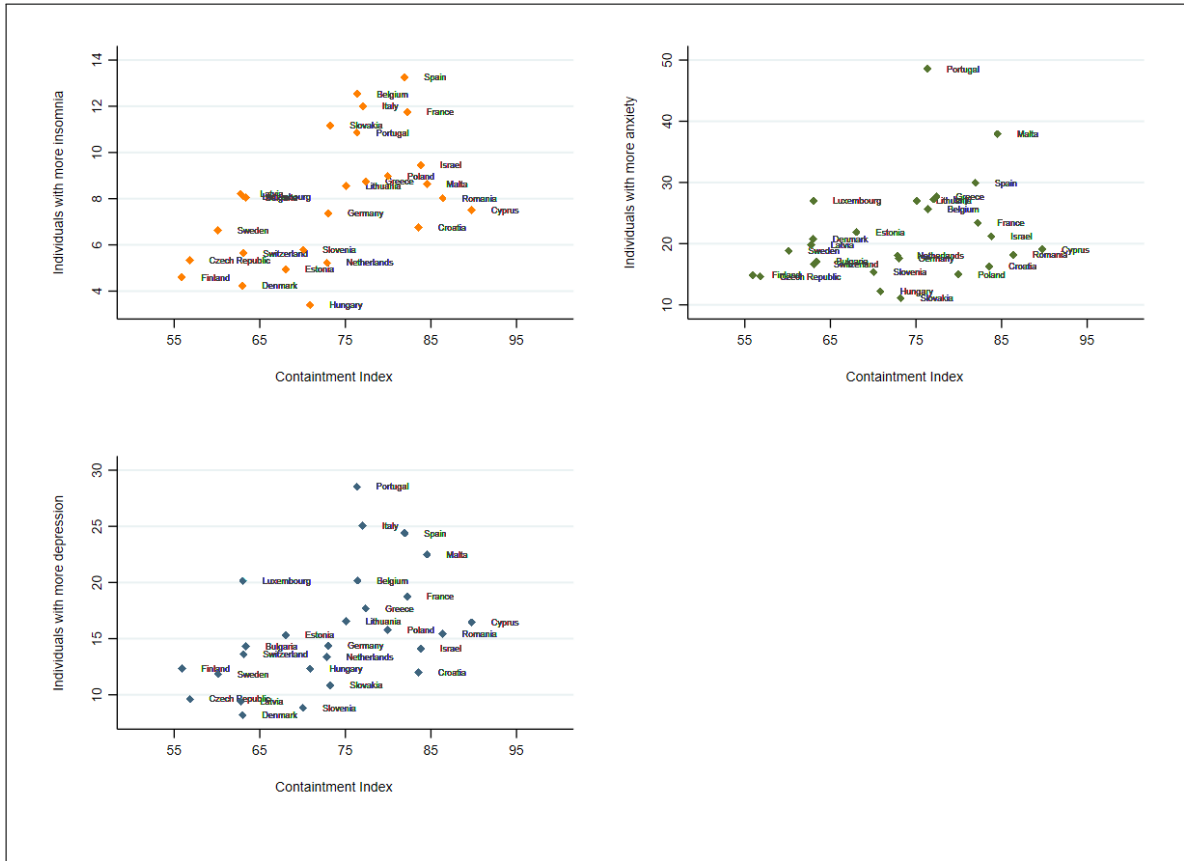


Figure 2: Is the lockdown related with a worsened mental health?

Although there was an uneven relationship between the containment measures implemented as a consequence of the outbreak of Corona and a worsened mental health, the relation is anything but clear due to the heterogeneity that characterizes both terms. The interest in establishing causal relationships relies on the desire of clarifying if the lockdown was the responsible of those mental health losses or the individuals had, for any other reason, a lower level of mental health outcomes without being affected by the COVID-19.

Microdata on anxiety, depression, and insomnia after the COVID-19 outbreak for 16 European countries and Israel is used. Data comes from the COVID-19 portion of the Wave 8 of the Survey of Health, Ageing and Retirement in Europe (henceforth SHARE), which interviewed respondents between June and August 2020 about their COVID-19 living situation. We include three mental health outcomes in our analysis: anxiety, depression and insomnia. Depression and anxiety are prototypical mental health disorders as they are among the most common health causes of days off work, unemployment, and years of life lived with disability. We also include insomnia because of its various associations with mental illness and because of the way it can exacerbate the symptoms of

many mental conditions.¹ Moreover, insomnia self-reporting has proved to be useful and reliable, while anxiety and depression are usually under-diagnosed because of low self-reporting, which means that our results for these two outcomes might be biased downwards.

The working sample size includes 41,792 respondents residing in the following 17 countries: Belgium, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Greece, Italy, Israel, Luxembourg, Poland, Portugal, Slovenia, Spain, Sweden and Switzerland. In addition, we use information from the Oxford COVID-19 Government Response Tracker (OxCGRT) to construct an index of containment strictness. Our index focuses exclusively on policies that restrict mobility and social contacts in order to slow down the spread of the COVID-19 epidemic. Hereafter we refer to these policies as lockdown policies.

The data clearly shows that mental health is a major problem for older populations in Europe. Of the COVID-19 survey respondents, 27% reported to have insomnia during the month before the interview, 30% reported that they suffered from anxiety and 28% reported depression. More importantly, many of these individuals declared that these mental problems were aggravated after the outbreak of the pandemic (34%, 73% and 63% for insomnia, anxiety and depression respectively). However, as there are many possible causes for psychological distress during a pandemic, our goal is to quantify the causal impact of lockdown policies, in particular those that restricted mobility and social contacts, in Europe on these measures of mental health.

The Causal Impact of Variations in COVID-19 Lockdown Policies on the Mental Health of Older Populations in Europe

Our causal analysis is based on the idea that individuals who had frequent pre-COVID face-to-face contacts will suffer more from strict lockdown policies than their counterparts in less strict countries.

Without going into specifics, the assignment rule for treatment and control groups is based on the distribution of the pre-COVID social score : individuals are assigned to the treatment group if their social score is above the median and to the control group if their social score is below the median. Our policy of interest is the lockdown imposed by countries, which is measured using the Oxford containment index described above. As already mentioned, strict lockdown countries - treated countries- are those with a containment index above the median value. Using this approach, our strategy is to examine how differences in outcome between the treated and control individuals in strict lockdown countries evolve, compare to differences in outcome between treated and control individuals in non-strict lockdown countries.

The analysis is based on two assumptions. First, lockdown policies affect mental health of individuals differently depending on their pre-COVID level of face-to-face contacts, and secondly, there are no systematic differences in the way the pandemic affects the behaviour of treatment versus control groups apart from those stemming from lockdown policies.

As we can observe in Figure 3, individuals with higher levels of social interactions are related with higher levels of anxiety, depression and insomnia. In addition, individuals living in countries with more relaxed containment measures are related with lower levels of insomnia but the anxiety and depression persist related with the lockdown although the country is not one of those with more restrictions.

Our estimates suggest that lockdown policies increased the incidence of insomnia, anxiety, and depression by 5.7, 5.6, and 5.3 percentage points, respectively. This is equivalent to an increase of 74%, 31% and 38% of insomnia, anxiety and depression for individuals of the treatment group who live in countries with strict lockdown policies relative to their counterparts in less strict countries.

Countries								
	Mean	Strict lockdown ($T_j = 1$)			Less strict lockdown ($T_j = 0$)			DiD (pp.)
		Treated ($S_k = 1$)	Comparison ($S_k = 0$)	Diff (pp.)	Treated ($S_k = 1$)	Comparison ($S_k = 0$)	Diff (pp.)	
Outcomes								
Insomnia	9.70%	13.70%	10.70%	3.0*** (0.4)	6.90%	8.60%	-1.6*** (0.4)	4.6*** (0.6)
Anxiety	22.80%	32.90%	23.30%	9.6*** (0.6)	18.40%	14.90%	3.5*** (0.6)	6.2*** (0.8)
Depression	18.50%	26.00%	19.30%	6.7*** (0.5)	14.50%	13.70%	0.8*** (0.6)	5.9*** (0.8)
Notes: Diff (pp.) columns display a two-sample t test. Standard errors taking into account sample weights in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$								

Figure 3: Are those individuals in the *Treatment* group different than those in the *Control* group? and, Among countries with different levels of containment measures against the virus?

The fact that the causal effect of strict lockdown on mental health vanishes when pre-COVID 19 social contact was maintained mostly by phone, mail, or internet (rather than face-to-face interaction) also supports our main finding. We also explore whether the effect of lockdown policies is concentrated in particular population groups. Interestingly, the estimated causal effect is present in almost all types of individuals considered, that is, lockdown policies restricting face-to-face contacts caused mental health problems for senior and older Europeans, independently of their age or physical health. The one noteworthy exception to this general finding is the differential effect related to gender as the estimated causal effect for men is not statistically significant. To a lesser extent, individuals who were employed at the outbreak of the pandemic and individuals aged between 50 and 65 were more affected by lockdown policies.

Beyond the stresses inherent to the illness itself and other factors, in this study we find that lockdown restrictions imposed during COVID-19 pandemic have worsened the mental health of senior and older Europeans. All the robustness tests performed allow us to conclude that we have been able to isolate the effect of the lockdown intensity on the mental health of older Europeans.