

COMMENTARY

Quarantine, restrictions and mental health in the COVID-19 pandemic

B.D. Kelly 

From the Department of Psychiatry, Trinity College Dublin, Trinity Centre for Health Sciences, Tallaght University Hospital, Dublin 24 D24 NR0A, Ireland. email: brendan.kelly@tcd.ie

The COVID-19 pandemic presents challenges to mental as well as physical health.¹ In addition to the illness caused by the virus, there is growing concern over the psychiatric consequences of infection, population anxiety about the pandemic and the possible mental health effects of public health measures such as mass quarantine and restrictions.²

For people infected with COVID-19, preliminary evidence shows that the incidence of any psychiatric diagnosis in the 14–90 days after COVID-19 diagnosis is 18.1%.³ There are, however, bi-directional associations between COVID-19 and psychiatric disorder, as having a psychiatric diagnosis in the previous year is associated with a higher risk of COVID-19 (relative risk: 1.6). This risk is independent of known physical health risk factors for COVID-19 and is consistent with previous evidence of poor access to physical health care among people with enduring mental illness, although the possibility of socioeconomic confounding remains.

In the general population, ~20% of people describe significant psychological distress associated with the COVID-19 pandemic, chiefly symptoms of anxiety or depression, although some estimates are higher.^{4,5} These problems appear to have grown as the pandemic progressed. In Ireland, an online study during mass public quarantine (27 March 2020 to 8 June 2020) asked participants to assess their depression, anxiety and stress during quarantine and to retrospectively assess their well-being, distress and mood prior to quarantine.⁶ Results showed that mean levels of depression, anxiety and stress rose during quarantine, with the greatest increase seen for depression.

There are similar results from other countries. One Italian study looked at young adults' mental health for each of 4 weeks during the lockdown from mid-March 2020 to mid-April 2020.⁷ This study found increases in anxiety/depression, withdrawal, somatic complaints, aggressive behaviour, rule-breaking behaviour and internalizing and externalizing problems, along with

decreases in intrusive behaviour and personal strengths. The authors suggest that these findings could usefully inform the debate about the psychological impact of the COVID-19 emergency and help develop appropriate interventions to safeguard the mental well-being of young adults.

Another Italian study focused on the effects of COVID-19 and quarantine measures on the lifestyles and mental health of people over the age of 60 years with mild cognitive impairment or subjective cognitive decline.⁸ In late April 2020 and early May 2020, trained psychologists conducted telephone interviews with 126 community-dwelling older adults, exploring variables related to the COVID-19 pandemic, lifestyle changes, depression, anxiety and apathy. Over one-third of this sample reported reduced physical activity and almost 70% reported an increase in idle time. Adherence to the Mediterranean diet decreased in almost one-third of respondents and just over one-third reported weight gain. Social activities were eliminated and one-sixth of participants reported decreased productive and mentally stimulating activities.

Mental health was also poor among this group of older adults: 19.8% were depressed, 9.5% were anxious and 9.5% were apathetic. There were significant associations between depression and living alone or having poor relations with cohabitants, and between anxiety and subjective cognitive decline, cold or flu symptoms and reduction in productive leisure activity. Overall, results showed a concerning decline in psychological well-being among Italian adults over the age of 60 with mild cognitive impairment or subjective cognitive decline.

These results are not a surprise. It is already established that measures such as quarantine can have negative psychological effects that include confusion, anger and post-traumatic stress symptoms.⁹ Particular stressors include longer duration of quarantine, fears of infection, boredom, frustration, inadequate supplies or information, financial loss and stigma. Emerging

results from the COVID-19 pandemic are clearly consistent with this position as they show significant deteriorations in mental health during recent lockdowns, quarantines and restrictions.

It is, however, considerably less clear to what extent these effects are attributable to quarantine measures themselves or to the pandemic that prompted them. As both the restrictions and pandemic are present simultaneously, and both tend to intensify and ease together, it is difficult to establish the precise proportion of psychological distress attributable to each of these factors. Moreover, it is possible that public health restrictions boost mental health once they are properly explained and implemented. In other words, the pandemic's impact on mental health might be worse in the absence of lockdowns, quarantines and restrictions which might reassure the public, reduce uncertainty and help protect psychological well-being. Protecting against COVID-19 infection itself also protects mental health.

In an effort to tease this issue out, one online survey of 6882 people across 59 countries explored the impact of the COVID-19 pandemic and subsequent social restrictions or quarantines on adult mental health.¹⁰ One quarter of respondents in this study reported moderate-to-severe depression and one fifth reported anxiety symptoms. Analysis of the correlates of depression and anxiety found that COVID-19-related life changes were the strongest predictors of higher depression and anxiety symptoms, over and above the effects of demographics, quarantine level and COVID-19 exposure. More specifically, poorer mental health was associated with difficulties paying bills, inability to access food, conflict at home and separation from loved ones.

These results suggest that the quarantine level in a country has minimal effect on mental health apart from the extent to which it impacts on day-to-day tasks such as earning an income and running a household. Although high levels of quarantine inevitably impact on these dimensions of human life, it is nonetheless noteworthy that mass quarantine does not seem to have an independent psychological impact apart from the impact mediated through these very pragmatic aspects of human life.

These findings suggest that any negative psychological effects of public health restrictions or mass quarantine can be potentially ameliorated by practical measures that reduce or minimize the impact of restrictions on the practicalities of day-to-day life. When quarantine is required, it should be for the shortest period necessary and accompanied by a clear rationale, information about protocols and sufficient supplies.⁹ It is also useful to appeal to the altruism of the public by articulating the

benefits of public health measures, some of which might accrue to people other than those who are in quarantine.

Conflict of interest. None declared.

References

1. Cullen W, Gulati G, Kelly BD. Mental health in the COVID-19 pandemic. *QJM* 2020; **113**:311–2.
2. Kelly BD. Coronavirus disease: challenges for psychiatry. *Br J Psychiatry* 2020; **217**:352–3.
3. Taquet M, Luciano S, Geddes JR, Harrison PJ. Bidirectional associations between COVID-19 and psychiatric disorder: retrospective cohort studies of 62,354 COVID-19 cases in the USA. *Lancet Psychiatry* 2020, doi:10.1016/S2215-0366(20)30462-4 [Online ahead of print].
4. Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *Int J Environ Res Public Health* 2020; **17**:1729.
5. García-Álvarez L, de la Fuente-Tomás L, García-Portilla MP, Sáiz PA, Lacasa CM, Dal Santo F, et al. Early psychological impact of the 2019 coronavirus disease (COVID-19) pandemic and lockdown in a large Spanish sample. *J Glob Health* 2020; **10**:020505.
6. Burke T, Berry A, Taylor LK, Stafford O, Murphy E, Shevlin M, et al. Increased psychological distress during COVID-19 and quarantine in Ireland: a national survey. *J Clin Med* 2020; **9**:3481.
7. Parola A, Rossi A, Tessitore F, Troisi G, Mannarini S. Mental health through the COVID-19 quarantine: a growth curve analysis on Italian young adults. *Front Psychol* 2020; **11**:567484.
8. Di Santo SG, Franchini SG, Filiputti F, Martone B, Sannino AS. The effects of COVID-19 and quarantine measures on the lifestyles and mental health of people over 60 at increased risk of dementia. *Front Psychiatry* 2020; **11**:578628.
9. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet* 2020; **395**:912–20.
10. Alzueta E, Perrin P, Baker FC, Caffarra S, Ramos-Usuga D, Yuksel D, et al. How the COVID-19 pandemic has changed our lives: a study of psychological correlates across 59 countries. *J Clin Psychol* 2020. doi:10.1002/jclp.23082 [Online ahead of print].