Depression and anxiety disorders during the COVID-19 pandemic: knowns and unknowns

The COVID-19 pandemic has taken a toll on people's mental health. Yet, the global extent of this impact remains largely unknown. By leveraging the best available data from surveys around the world with measurements of anxiety and depression both before and during the pandemic, and analysing these data using the Global Burden of Disease Study (GBD) model, the COVID-19 Mental Disorders Collaborators[1] provide global insight into the burden of depression and anxiety disorders during the pandemic to date. The authors estimated a significant increase in the prevalence of both major depressive disorder (with an estimated additional 53·2 million [95% uncertainty interval 44·8–62·9] cases worldwide—ie, a 27·6% [25·1–30·3] increase) and anxiety disorders (76·2 million [64·3–90·6] additional cases—ie, a 25·6% [23·2–28·0] increase) since before the pandemic. Increased prevalence was seen for both males and females across the lifespan. These findings are all the more concerning because depressive and anxiety disorders were already leading causes of disability worldwide.[2]

The study has unique strengths. First, by using the GBD model, it translates crude estimates from heterogeneous surveys into numbers of additional cases and disability-adjusted life-years. This makes the findings more tangible for policy makers, academics, charities, and the general public. Second, the study leverages data on COVID-19 impact indicators (ie, human mobility, SARS-CoV-2 infection rates, and excess mortality). The COVID-19 Mental Disorders Collaborators estimated these indicators for all countries and territories and used them to inform the extrapolation of changes in prevalence to countries with no available survey data. Furthermore, the authors assessed the generalisability of their estimates for countries with no available surveys using a leave-one-country-out cross-validation approach, in which changes in prevalence were estimated using the GBD model as if survey data for one country were not available and the prediction was then compared with the actual survey data.

The study also has a few key limitations, largely resulting from the available data rather than the approach used to analyse them. First, direct measurements on changes in prevalence of depressive and anxiety disorders are not available in large regions of the world (eg, within South America and Africa). For these regions, the GBD model has to extrapolate estimates from other regions (eg, the USA or Europe), which are very different on many levels (economically, demographically, politically, and culturally). This extrapolation might be unreliable, as shown in the cross-validation results. For instance, the GBD model predicts a substantial increase in the prevalence of major depressive disorder in Denmark and almost no change in China whereas the opposite is observed in surveys (appendix of Article [p 24]). Second, most of the available data are based on self-report scales (eg, Patient Health Questionnaire-9 or General Anxiety Disorder-7 [GAD-7]), which measure symptoms rather than actual diagnoses. Although both symptoms and diagnoses are important, the difference between them is relevant in the pandemic context. A diagnosis of anxiety disorder according to the tenth International Classification of Diseases and Related Health Problems requires that individuals recognise their emotional distress as excessive or unreasonable. GAD-7 does not capture this aspect. For an individual at high risk of COVID-19 complications to constantly feel nervous and afraid would not be unreasonable (hence, not meeting requirements for an anxiety disorder), yet it would yield a high GAD-7 score. Finally, the study is unable to identify what is causing the increased burden of major depressive disorder and anxiety. In particular, the relative contributions to the prevalence of depression and anxiety disorders of direct consequences of COVID-19 illness,[3] some measures used to curb the propagation of the virus (eg, lockdowns),[4] and other correlates of the pandemic (eg, economic austerity) remain elusive.

By synthesising the best available data, this study not only reveals what we do know, but also—crucially—exposes what we still do not know. These known unknowns have implications for interpretation of the findings. The paucity of direct measurements in most countries implies that the findings are unable to inform on specific countries that have been more affected than

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others. Aid programmes aimed at improving population mental health are clearly needed widely, and this study is unable to suggest specific countries to be targeted first. Measurement of clinical diagnoses will be needed to plan service provision, ascertain the burden of the pandemic in terms of mental disorders, and forecast social and economic consequences. Crucially, identifying causal mechanisms, and modifiable mechanisms in particular, will be important to design and deliver the right interventions to the right people.[5]

The findings of this study should urgently incentivise more research to determine the fuller geographical distribution of depression and anxiety disorders, the prevalence of depressive and anxiety disorders, and the underpinning mechanisms to improve mental health in the context of the COVID-19 pandemic globally.

We declare no competing interests.

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