

PHQ-8 scores and estimation of depression prevalence

Author's reply

We thank Brooke Levis and colleagues for their interest in our work and for suggesting that we might have overestimated the prevalence of depression by using the eight-item Patient Health Questionnaire (PHQ-8) in our study.¹ Although we acknowledged the limitations associated with the use of the PHQ-8, we believe that further discussion is required.

It should be noted that a study of this size, with a representative sample of 27 countries and 258 888 participants, would not be feasible using clinical interviews, and the use of an instrument such as the PHQ-8 is considered more appropriate. However, a two-phase procedure using the PHQ-8 as a first step, and a clinical interview in a randomly selected subsample as a second step,² might be an interesting alternative to study the prevalence of depression. To the best of our knowledge, no previous studies have used this two-phase methodology in a standardised way in different countries, which complicates periodic monitoring and international comparison.

Our results showed a higher prevalence of current depressive disorder than some studies specifically focused on major depressive disorder that used data from clinical interviews, however, the reported prevalence was lower than other previous studies.³ Although the diagnostic validity of the PHQ-8 is incomplete, we believe it is unlikely to have substantially affected the aims of our study, which were to obtain an estimate of the prevalence of current depressive disorder in Europe (not specifically of major depressive disorder) and to assess differences within and across countries.

A previous meta-analysis of 36 studies including more than

70 000 participants,⁴ considered the PHQ-9 as an instrument with acceptable diagnostic properties in different contexts using a cutoff score of 10 or higher (comparable to scores of ≥ 10 on the PHQ-8).⁵ Furthermore, considering that a balance between feasibility and accuracy is needed, and given its current use in different countries and settings (such as the general population or primary care), the PHQ-8 could be an important alternative for the monitoring of current depressive disorder. This monitoring is essential from a preventive perspective and requires consideration of the number of individuals in need of health care (regardless of clinical diagnosis) obtained from representative samples.

Therefore, although the prevalence of current depression presented in our study might be relatively overestimated, we believe that our findings are valid from epidemiological and public health perspectives. Furthermore, considering the reliability, validity, and feasibility of the PHQ-8 and its current use in different studies and contexts around the world, we consider the PHQ-8 a key instrument for the monitoring of current depression.

We declare no competing interests.

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1 Arias-de la Torre J, Vilagut G, Ronaldson A, et al. Prevalence and variability of current depressive disorder in 27 European countries: a population-based study. *Lancet Public Health* 2021; **6**: e729–38.

- 2 Dunn G, Pickles A, Tansella M, Vázquez-Barquero JL. Two-phase epidemiological surveys in psychiatric research. *Br J Psychiatry* 1999; **174**: 95–100.
- 3 Lim GY, Tam WW, Lu Y, Ho CS, Zhang MW, Ho RC. Prevalence of depression in the community from 30 Countries between 1994 and 2014. *Sci Rep* 2018; **8**: 2861.
- 4 Moriarty AS, Gilbody S, McMillan D, Manea L. Screening and case finding for major depressive disorder using the Patient Health Questionnaire (PHQ-9): a meta-analysis. *Gen Hosp Psychiatry* 2015; **37**: 567–76.
- 5 Wu Y, Levis B, Riehm KE, et al. Equivalency of the diagnostic accuracy of the PHQ-8 and PHQ-9: a systematic review and individual participant data meta-analysis. *Psychol Med* 2020; **50**: 1368–80.

