



Psychological Medicine

# Depression and pain: primary data and meta-analysis among 237 952 people across 47 low- and middle-income countries

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## Abstract

### Background

Depression and pain are leading causes of global disability. However, there is a paucity of multinational population data assessing the association between depression and pain, particularly among low- and middle-income countries (LMICs) where both are common. Therefore, we investigated this association across 47 LMICs.

### Methods

Community-based data on 273 952 individuals from 47 LMICs were analysed. Multivariable

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International Classification of Diseases, 10th Revision depression/depression subtypes (over the past 12 months) and pain in the previous 30 days based on self-reported data. Country-wide meta-analysis adjusting for age and sex was also conducted.

### Results

The prevalence of severe pain was 8.0, 28.2, 20.2, and 34.0% for no depression, subsyndromal depression, brief depressive episode, and depressive episode, respectively. Logistic regression adjusted for socio-demographic variables, anxiety and chronic medical conditions (arthritis, diabetes, angina, asthma) demonstrated that compared with no depression, subsyndromal depression, brief depressive episode, and depressive episode were associated with a 2.16 [95% confidence interval (CI) 1.83–2.55], 1.45 (95% CI 1.22–1.73), and 2.11 (95% CI 1.87–2.39) increase in odds of severe pain, respectively. Similar results were obtained when a continuous pain scale was used as the outcome. Depression was significantly associated with severe pain in 44/47 countries with a pooled odds ratio of 3.93 (95% CI 3.54–4.37).

### Conclusion

Depression and severe pain are highly comorbid across LMICs, independent of anxiety and chronic medical conditions. Whether depression treatment or pain management in patients with comorbid pain and depression leads to better clinical outcome is an area for future research.

### Keywords

Comorbidity depression depressive symptoms pain

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