

The psychological toll of slum living—an assessment of mental health, disability, and slum-related adversities in Mumbai, India



Ramnath Subbaraman, Laura B Nolan, Tejal Shitole, Kiran Sawant, Shrutika Shitole, Kunal Sood, Mahesh Nanarkar, Jess Ghannam, David E Bloom, Anita Patil-Deshmukh

Abstract

Published Online
May 10, 2014

Brigham and Women's
Hospital, Massachusetts
General Hospital, Boston, MA,
USA (R Subbaraman MD);
Partners for Urban Knowledge,
Action, and Research, Mumbai,
Maharashtra, India
(R Subbaraman, T Shitole BSc,
K Sawant BA, S Shitole MA,
M Nanarkar,
A Patil-Deshmukh MD);
Princeton University,
Princeton, NJ, USA
(L B Nolan MSc); University of
California at San Francisco,
San Francisco, CA, USA
(K Sood MSc, J Ghannam PhD);
and Harvard School of Public
Health, Boston, MA, USA
(D E Bloom PhD)

Correspondence to:
Dr Ramnath Subbaraman,
Brigham and Women's Hospital,
Division of Infectious Diseases,
75 Francis St., Boston, MA
02115, USA
ramnath.sub@gmail.com

Background Few studies have examined mental health in developing country slums. We ascertain the prevalence of common mental disorders in adults and identify slum-related stressors associated with risk of common mental disorders in a slum of 14 000 people in Mumbai, India.

Methods Participants were selected with random sampling. We completed 521 interviews during February, 2012; the non-response rate was 9%. We administered the General Health Questionnaire-12 (GHQ) to screen for common mental disorders, the WHO Disability Assessment Schedule 2.0 to screen for disability, and a slum stressor questionnaire. Logistic regression was used to identify predictors of having a common mental disorder. Linear regression was used to assess the contribution of GHQ score and physical impairments to disability (ie, WHO Disability Assessment Schedule 2.0).

Findings 121 (23%) of 521 individuals had a GHQ score of 5 or more (ie, high risk of common mental disorder). Factors associated with a GHQ score of 5 or more in the multivariate logistic regression model ($R^2=0.32$, $n=502$) include age older than 45 years, having a loan, food insecurity, sleeping sitting up or outside because of overcrowding, being affected by rats, and paying a high price for water. 5–9 years of education and an income greater than 3000 rupees per month are protective against common mental disorders. In linear regression analyses, 22% of variation in the WHO Disability Assessment Schedule score is explained by GHQ score; only 19% is explained by physical impairments.

Interpretation This slum's burden of common mental disorders exceeds that for all other population-based Indian studies. Psychological distress contributes greatly to the disability burden of the slum. Interventions to address slum-related stressors and poverty might help to alleviate the high burden of mental illness and disability in slums.

Funding The Fogarty International Clinical Research Fellows Program at Vanderbilt (R24 TW007988), Harvard T32 post-doctoral clinical research fellowship (NIAID AI 007433), the Eunice Kennedy Shriver National Institute for Child Health and Human Development (5R24HD047879), the National Institutes of Health (5T32HD007163), the Rockefeller Foundation, and the Weatherhead Center for International Affairs at Harvard University.

Copyright © Subbaraman et al. Open Access article distributed under the terms of CC BY.

Contributors

SS, TS, RS, KSA, MN, AP, and KSo did the data collection. LN, RS, MN, and DEB did the data analysis: RS, LN, SS, TS, KSA, DEB, and AP drafted the Abstract. All authors have seen and approved the final version of the Abstract for publication.

Declaration of interests

We declare that we have no competing interests.