

## The Impact of Urban Slum Conditions on Mental Health and Access to Mental Health Services

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### Abstract

**Background:** Urban slum conditions, characterized by overcrowding, poor sanitation, and socio-economic deprivation, are known to impact various aspects of health, including mental health. However, the specific effects on mental health and access to mental health services have not been thoroughly investigated.

**Objective:** To examine the impact of urban slum conditions on mental health outcomes and access to mental health services among residents of urban slums.

**Methodology:** This cross-sectional study was conducted in urban slums of Kalaburagi, involving 500 participants selected through stratified random sampling. Data were collected using structured interviews, standardized mental health assessment tools (e.g., GHQ-12, BDI), and a survey on access to mental health services. Descriptive and inferential statistics were used to analyze the data, including Chi-square tests and logistic regression.

**Results:** The prevalence of mental health issues was significantly higher among slum residents compared to the general population. About 45% of participants reported symptoms of depression and anxiety. Poor sanitation and overcrowding were significantly associated with higher mental health symptoms ( $p < 0.01$ ). Only 25% of participants reported having access to mental health services, with financial constraints and stigma being major barriers.

**Conclusion:** Urban slum conditions significantly impact mental health, contributing to a higher prevalence of depression and anxiety. Limited access to mental health services exacerbates these issues. There is a need for targeted interventions to improve living conditions and expand access to mental health care in urban slums.

**Keywords:** Urban Slums, Mental Health, Access to Services, Depression, Anxiety

## Introduction

Urban slums are characterized by extreme poverty, overcrowded living conditions, inadequate sanitation, and limited access to basic services, including healthcare. These environments pose significant challenges to the physical health of residents, but their impact on mental health remains underexplored. The prevalence of mental health disorders, including anxiety and depression, is reportedly higher in slum populations compared to more affluent areas (1,2). This disparity is driven by the chronic stressors associated with slum living conditions, such as poor housing quality, exposure to violence, and financial insecurity (3,4).

Mental health issues in urban slum populations are compounded by barriers to accessing mental health services. Financial constraints, lack of local services, and stigma associated with mental illness can severely limit residents' ability to seek and receive appropriate care (5,6). Studies have shown that despite the high need for mental health services in these communities, access remains minimal, exacerbating the impact of mental health issues (7,8). Understanding the specific effects of slum conditions on mental health and the factors influencing access to care is crucial for developing effective interventions and policies.

The urgency of this issue is underscored by the growing urban population worldwide, with a significant proportion residing in slum conditions (9). Addressing mental health in these settings is not only essential for improving individual well-being but also for enhancing overall community health and productivity. This study aims to fill gaps in the existing literature by examining the impact of urban slum conditions on mental health and identifying barriers to accessing mental health services, thereby informing targeted public health strategies and interventions.

## Methodology

This cross-sectional study was conducted in the urban slum area of Rajapur, Kalaburagi, to assess the impact of slum conditions on mental health and access to mental health services. The study aimed to capture a representative sample of the population within this high-density, socio-economically deprived area.

The study targeted residents of Rajapur, an urban slum with a population of approximately 5,000. A sample size of 500 participants was determined using stratified random sampling to ensure representation across different age groups and genders.

The sample was selected proportionately from various wards within the slum to reflect the diversity of the population. Data were collected through structured interviews conducted by trained fieldworkers.

The following instruments were used:

**Mental Health Assessment:** The General Health Questionnaire-12 (GHQ-12) and the Beck Depression Inventory (BDI) were employed to assess mental health symptoms, including anxiety and depression.

**Access to Services Survey:** A customized questionnaire was designed to evaluate participants' access to mental health services, including factors such as availability, affordability, and perceived stigma.

**Slum Conditions Assessment:** Information on living conditions, including overcrowding, sanitation, and housing quality, was gathered through a detailed environmental assessment checklist.

Descriptive statistics were used to summarize participant demographics, mental health status, and access to services. Chi-square tests were conducted to examine associations between slum conditions and mental health outcomes. Logistic regression analysis was employed to identify significant predictors of limited access to mental health services, adjusting for potential confounders such as socio-economic status and sanitation conditions. The study was approved by the Institutional Review Board of Mahadevappa Rampure Medical College, Kalaburagi. Informed consent was obtained from all participants, ensuring confidentiality and voluntary participation.

## Results

**Table 1: Demographic Characteristics of Study Participants**

Characteristic	Frequency (n = 500)	Percentage (%)
Age (years)		
15-18	200	40.0
19-22	250	50.0
23-26	50	10.0
Gender		
Female	300	60.0
Male	200	40.0
Educational Status		
No formal education	150	30.0
Primary education	200	40.0
Secondary education	100	20.0
Higher education	50	10.0

*Explanation: The table summarizes the demographic characteristics of participants, including age, gender, and educational status.*

**Table 2: Prevalence of Mental Health Issues**

Mental Health Issue	Frequency (n = 500)	Percentage (%)
Depression (BDI score $\geq 14$ )	275	55.0
Anxiety (GHQ-12 score $\geq 4$ )	300	60.0
Both Depression and Anxiety	200	40.0
Neither	125	25.0

*Explanation: This table presents the prevalence of depression and anxiety among the participants, with a notable percentage exhibiting both conditions.*

**Table 3: Association Between Slum Conditions and Mental Health Symptoms**

Condition	Depression (%)	Anxiety (%)	p-value
Poor Sanitation	65.0	70.0	< 0.01
Overcrowding	70.0	60.0	< 0.05
Inadequate Housing	60.0	55.0	0.07

*Explanation: This table shows the association between poor sanitation, overcrowding, and inadequate housing with mental health symptoms.*

**Table 4: Barriers to Accessing Mental Health Services**

Barrier	Frequency (n = 500)	Percentage (%)
Financial Constraints	300	60.0
Stigma	125	25.0
Lack of Local Services	75	15.0
Other	50	10.0

*Explanation: The table identifies key barriers to accessing mental health services, with financial constraints being the most common issue.*

**Table 5: Logistic Regression Analysis of Predictors of Access to Mental Health Services**

Predictor	Odds Ratio (OR)	95% CI	p-value
Financial Constraints	0.35	0.25 - 0.50	< 0.01
Stigma	0.45	0.30 - 0.70	< 0.05
Inadequate Services	0.55	0.35 - 0.85	0.10
Overcrowding	0.80	0.55 - 1.10	0.15

*Explanation: This table presents the results of logistic regression analysis, highlighting financial constraints and stigma as significant predictors of limited access to mental health services.*

## Discussion

The results of this study reveal a troubling prevalence of mental health issues among residents of Rajapur, an urban slum in Kalaburagi. The findings indicate that 55% of participants exhibit symptoms of depression, while 60% experience anxiety. These rates are notably higher than those reported in more affluent areas, highlighting the severe impact of socio-economic deprivation and poor living conditions on mental health. These results are consistent with existing research that demonstrates a strong association between urban slum conditions and increased mental health disorders (1,2).

The association between slum conditions and mental health symptoms was particularly pronounced in individuals living in environments characterized by poor sanitation and overcrowding. Specifically, 65% of participants living in areas with inadequate sanitation reported severe anxiety, and 70% of those in overcrowded conditions exhibited significant depressive symptoms. This supports the notion that environmental stressors, such as poor sanitation and overcrowding, contribute significantly to psychological distress (4,8). Poor sanitation can exacerbate stress by increasing the risk of disease and creating an environment of continuous discomfort, while overcrowding is linked to heightened feelings of stress and helplessness, both of which are known to contribute to mental health issues (5).

A key finding of this study is the limited access to mental health services in Rajapur, with only 30% of participants reporting access to such services. This significant gap highlights the barriers faced by residents in obtaining appropriate mental health care. Logistic regression analysis identified financial constraints and stigma as major predictors of limited access. Financial constraints were associated with a significantly lower likelihood of accessing mental health services (OR = 0.35,  $p < 0.01$ ), reflecting the high cost of care relative to the low income of many slum residents. Stigma also played a substantial role (OR = 0.45,  $p < 0.05$ ), underscoring how societal attitudes toward mental health issues can deter individuals from seeking help.

These barriers to accessing mental health services align with findings from other studies, which have documented similar challenges in marginalized populations (6,7). Financial barriers often prevent individuals from accessing care due to the high cost of treatment and related expenses, while stigma surrounding mental health issues can lead to reluctance in seeking help and a lack of support from the community (10,11). The results suggest that interventions aimed at reducing stigma and increasing the affordability and availability of mental health services are crucial for improving mental health outcomes in urban slums.

The study also highlights the need for comprehensive strategies to address both environmental and systemic factors impacting mental health. Improving sanitation and reducing overcrowding could mitigate some of the environmental stressors contributing to mental health issues. Additionally, integrating mental health services into primary healthcare settings and providing financial assistance or subsidized care could help bridge the gap in access to services (12,13). Community-based programs aimed at reducing stigma and promoting mental health awareness can also play a vital role in encouraging individuals to seek help and improving overall mental health literacy.

In conclusion, the study underscores the urgent need for targeted interventions to address the mental health challenges faced by residents of urban slums. By tackling both environmental stressors and systemic barriers to care, it is possible to improve mental health outcomes and enhance the quality of life for individuals living in these challenging conditions.

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