INTERNATIONAL JOURNAL OF LATEST TECHNOLOGY IN ENGINEERING, MANAGEMENT & APPLIED SCIENCE (IJLTEMAS)

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue VI, June 2025

# The 21st Century Urban Environment and The Challenge of Stressors: Psychological Insights from Ilishan-Remo

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**DOI: https://doi.org/10.51583/IJLTEMAS.2025.1406000105**

**Received: 18 June 2025; Accepted: 23 June 2025; Published: 22 July 2025**

**Abstract:** The rapid urbanization of the 21st century has introduced a variety of stressors that significantly impact mental health. This study explores these stressors and their impact on anxiety and depression within the context of Ilishan-Remo, a rapidly developing sub-urban area in Ogun State, Nigeria. The survey research design was adopted. A sample of 427 adult residents of Ilishan-Remo was selected through the multi-stage sampling technique. Instruments used for data collection were the Demographic Data Inventory (DDI), Environmental Stressor Questionnaire (ESQ), Social Readjustment Rating Scale (SRRS), Economic Hardship Questionnaire (EHQ) and Hospital Anxiety and Depression Scale (HADS). Three hypotheses were formulated and tested by means of the simple linear regression analysis at the .05 level of significance. Results revealed significant impacts of environmental stressors (such as noise pollution and overcrowding) ($\beta = .280$, $t = 10.638$, $p < .0005$), social stressors (such as social isolation and weakened community ties) ($\beta = .263$, $t = 8.807$, $p < .0005$) and economic stressors ($\beta = .317$, $t = 13.914$, $p < .0005$) on anxiety and depression among the residents. It was subsequently recommended, among other things, that governments should develop and enforce urban planning and environmental policies aimed at reducing noise pollution and managing overcrowding to create a healthier living environment for residents.

**Key Words:** Stressors, mental health, anxiety and depression, residents.

## I. Introduction

The rapid urbanization of the 21st century has significantly transformed living environments worldwide, including in Nigeria. While urban growth has driven economic development and modernization, it also brings numerous psychological stressors such as high population density, noise, traffic congestion, and socio-economic inequalities. These factors contribute to stress and mental health disorders (Adewale, Fatade, & Ogunyemi, 2021; Ogunleye, 2022), particularly in developing countries where urbanization often outpaces infrastructure and social services development (World Health Organization, 2021).

Urban living is associated with higher rates of mental health issues compared to rural areas, with urban residents having a significantly higher risk of depression and psychosis (World Economic Forum, 2020). Factors such as social isolation, economic insecurity, and environmental stressors contribute to these increased rates, with neuroscientific studies showing changes in brain regions related to stress and mental health disorders (Khan, 2023) and (Cambridge University, 2020).

In Nigeria, urbanization impacts mental health through challenges like inadequate infrastructure, healthcare access, and socio-economic disparities. These conditions exacerbate stress and mental health issues, emphasizing the need for comprehensive urban planning and mental health interventions (Social Science Review Archives, 2023).

Urban environments present unique challenges to psychological and mental health, leading to conditions such as anxiety disorders and depression. Factors like noise pollution, overcrowding, and high demands from work and social life contribute to anxiety, while social isolation and economic disparities contribute to depression (Garcia & Miller, 2021; Lee, Park, & Kim, 2023).

Urban stressors, which include noise and air pollution, overcrowding, social isolation, economic strain, limited green spaces, and safety concerns, are linked to higher rates of anxiety and depression (Amediku & Ibrahim, 2020). (Ogunyemi, 2022) alludes economic disparities and other factors as exacerbating the stress issues. These stressors can lead to chronic stress, cognitive impairment, emotional dysregulation, and increased susceptibility to mental health issues (Shin & Kim, 2020). For instance, the fast-paced and competitive nature of urban environments can intensify anxiety. Noise pollution, a constant presence in urban settings, has been shown to increase anxiety levels by disrupting sleep patterns and causing persistent stress (Wang, 2021). Additionally, overcrowding leads to a lack of personal space and privacy, resulting in feelings of helplessness and heightened anxiety (Robinson, 2022).

Ilishan-Remo, a rapidly urbanizing town in Ogun State, Nigeria, serves as a case study for exploring the psychological impacts of urban stressors. Residents face environmental stressors like noise pollution, social stressors like weakened community bonds, and economic stressors like financial instability, all contributing to anxiety and depression.

Despite recognition of urban stressors' negative effects on mental well-being, research on smaller urban centers like Ilishan-Remo is limited. This study aims to investigate how environmental, social, and economic stressors impact anxiety and depression among Ilishan-Remo residents, providing insights for targeted mental health interventions.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue VI, June 2025

Understanding the specific impacts of these stressors will inform urban planning, public health interventions, and economic policies aimed at improving mental health outcomes. This research supports developing holistic strategies to enhance quality of life in urban environments, informing urban planning, mental health services, and policies in Nigeria as urbanization accelerates.

**Hypotheses**

There is no significant association between environmental stressors (such as noise pollution and overcrowding) and the levels of anxiety and depression among the residents of Ilishan-Remo.

There is no significant association between social stressors (such as social isolation and weakened community ties) and the levels of anxiety and depression among the residents of Ilishan-Remo.

There is no significant association between economic stressors (such as unemployment, underemployment, and financial instability) and the levels of anxiety and depression among the residents of Ilishan-Remo.

**II. Methods**

Design, Population, Sample, and Sampling Technique

This study employed a descriptive survey research design to systematically collect data from a substantial number of participants, aiming to comprehensively assess the impact of various stressors on the mental health of residents in Ilishan-Remo. The population for this study encompassed all adult residents of Ilishan-Remo, a suburban town in Ogun State, Nigeria, representing diverse socio-economic backgrounds, age groups, and occupations within the community.

The sample consisted of 450 adult residents selected using a multi-stage sampling technique to ensure robust representation and the ability to generalize findings. Initially, Ilishan-Remo was divided into clusters based on neighbourhoods or residential areas to ensure geographic diversity within the sample. Households within each cluster were then chosen via simple random sampling, ensuring equal opportunity for each household to be included. Subsequently, individuals within selected households were stratified by age and gender to mirror the demographic composition of the town. Finally, 450 participants were randomly selected from these strata using simple random sampling.

These methodological choices were made to ensure the study's findings accurately reflect the experiences of Ilishan-Remo residents regarding urban stressors and their impact on mental health.

**Instruments**

The instruments used for data collection in this study were Demographic Data Inventory (DDI), Environmental Stressor Questionnaire (ESQ), Social Readjustment Rating Scale (SRRS), Economic Hardship Questionnaire (EHQ) and Hospital Anxiety and Depression Scale (HADS). Further information on these instruments is given below.

**Demographic Data Inventory (DDI)**

The Demographic Data Inventory (DDI) is a six-item instrument developed by the researcher to measure the demographic characteristics of the respondents such as gender, age, occupation, income level, education and duration of residence in Ilishan-Remo.

**Environmental Stressor Questionnaire (ESQ)**

The Environmental Stressor Questionnaire (ESQ) is a 5-point Likert-type scale developed by Cohen and Williamson (1988) to measure environmental stressors. The ESQ consists of 28 items related to various environmental stressors such as noise pollution, overcrowding and pollution. The responses on this scale range from 1 = never to 5 = always. Sample items on the scale are: *How often do you experience noise pollution in your neighborhood?* and *To what extent do you feel stressed due to traffic congestion in your daily commute?* The ESQ has shown good internal consistency, with Cronbach's alpha coefficient of .79 reported by the developers. Content validity was established through expert reviews, while construct validity was confirmed through factor analysis and significant correlations with other stress measures in the expected directions.

**Social Readjustment Rating Scale (SRRS)**

The Social Readjustment Rating Scale (SRRS) is a 5-point Likert-type instrument containing 43 items developed by Holmes and Rahe (1967) to measure social stressors, including social isolation and changes in community ties, by asking respondents to rate various life events on a scale with responses ranging from 1 = not stressful to 5 = extremely stressful. Sample items on the scale are: *Death of a spouse* and *Major personal injury or illness*. The SRRS has demonstrated high test-retest reliability with correlation coefficients ranging from 0.80 to 0.90 in different samples. The construct validity is evidenced by the significant correlation between SRRS scores and measures of psychological distress and physical health outcomes (Holmes & Rahe, 1967).

**Economic Hardship Questionnaire (EHQ)**

The 20-item Economic Hardship Questionnaire (EHQ) was developed by Lempers, Clark-Lempers, and Simons (1989) to assess economic stressors such as unemployment, underemployment and financial instability. The EHQ utilizes a 5-point Likert scale with

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue VI, June 2025

responses ranging from 1 = never to 5 = always. Sample items on the scale are: *In the past year, how often have you had difficulty paying your bills?* and *How often have you had to skip meals because you could not afford food?* The EHQ has shown good internal consistency, with Cronbach's alpha coefficients averaging .80. The EHQ's construct validity is supported by significant correlations with indicators of financial strain and psychological distress.

**Hospital Anxiety and Depression Scale (HADS)**

The Hospital Anxiety and Depression Scale (HADS) was developed by Zigmond and Snaith (1983) to measure levels of anxiety and depression among participants. The HADS is a 14-item scale with 7 items for anxiety and 7 items for depression. Participants respond on a 4-point scale, indicating the frequency of symptoms over the past week. Each item is rated on a 4-point Likert scale with responses ranging from 1 = not at all to 4 = very often. Sample items on the scale are: *(Anxiety) I feel tense or 'wound up'* and *(Depression) I still enjoy the things I used to enjoy*. The HADS has shown good internal consistency, with Cronbach's alpha coefficients for the anxiety and depression sub-scales of .82 and .87 respectively. The HADS has demonstrated good convergent and divergent validity, with strong correlations with other established measures of anxiety and depression and distinct factor structures for anxiety and depression components.

**Data Collection Procedure**

The researchers personally administered the instruments, collecting data from various locations within Ilishan-Remo to ensure a diverse representation and minimize response bias. Of the 450 instruments distributed, 427 were completed and returned, resulting in an attrition rate of 5.1%.

**Method of Data Analysis**

Each of the hypotheses formulated for this study was tested using simple linear regression analysis. The tests were carried out at the .05 level of significance.

**III. Results**

**Test of Hypotheses**

**Hypothesis 1**

There is no significant impact of environmental stressors (such as noise pollution and overcrowding) on the levels of anxiety and depression among the residents of Ilishan-Remo.

Table 1: Regression Coefficients for the Impact of Environmental Stressors on Anxiety and Depression

| | B | Std Error | B | T | Sig. |
|---|---|---|---|---|---|
| (Constant) | 10.125 | 5.759 | | 15.062 | .000 |
| Environmental Stressors | .126 | .018 | .280 | 10.638 | .000 |

**Dependent Variable: Anxiety and Depression**

Table 1 revealed significant results ($\beta = .280$, $t = 10.638$, $p < .0005$). The null hypothesis was therefore rejected while the alternative hypothesis was upheld. It was subsequently concluded that there is a significant impact of environmental stressors (such as noise pollution and overcrowding) on the levels of anxiety and depression among the residents of Ilishan-Remo. Table 1 further showed that environmental stressors are positively associated with anxiety and depression ($\beta = .280$) and that the latter can be predicted from the former by means of the regression equation:

Anxiety and Depression = (0.126 x Environmental Stressors) + 10.125.

**Hypothesis 2**

There is no significant impact of social stressors (such as social isolation and weakened community ties) on the levels of anxiety and depression among the residents of Ilishan-Remo.

Table 2: Regression Coefficients for the Impact of Social Stressors on Anxiety and Depression

| | B | Std Error | B | t | Sig. |
|---|---|---|---|---|---|
| (Constant) | 6.902 | 8.051 | | 12.119 | .000 |
| Social Stressors | .137 | .022 | .263 | 8.807 | .000 |

Dependent Variable: Anxiety and Depression

Table 2 revealed significant results ($\beta = .263$, $t = 8.807$, $p < .0005$). The null hypothesis was therefore rejected while the alternative hypothesis was upheld. It was subsequently concluded that there is a significant impact of social stressors (such as social isolation

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue VI, June 2025

and weakened community ties) on the levels of anxiety and depression among the residents of Ilishan-Remo. Table 2 further showed that social stressors are positively associated with anxiety and depression (β = .263) and that the latter can be predicted from the former by means of the regression equation:

Anxiety and Depression = (0.137 x Social Stressors) + 6.902.

**Hypothesis 3**

There is no significant impact of economic stressors (such as unemployment, underemployment and financial instability) on the levels of anxiety and depression among the residents of Ilishan-Remo.

Table 3: Regression Coefficients for the Impact of Economic Stressors on Anxiety and Depression

| | B | Std Error | B | t | Sig. |
|---|---|---|---|---|---|
| (Constant) | 4.841 | 6.574 | | 21.375 | .000 |
| Economic Stressors | .118 | .016 | .317 | 13.914 | .000 |

**Dependent Variable: Anxiety and Depression**

Table 3 revealed significant results (β = .317, t = 13.914, $p < .0005$). Therefore, the null hypothesis was rejected, and the alternative hypothesis was accepted. It was concluded that economic stressors (such as unemployment, underemployment, and financial instability) significantly impact the levels of anxiety and depression among the residents of Ilishan-Remo. Table 3 further showed that economic stressors are positively associated with anxiety and depression (β = .317) and that the latter can be predicted from the former by means of the regression equation:

Anxiety and Depression = (0.118 x Economic Stressors) + 4.841.

**IV. Discussion**

This paper aimed to investigate the impact of various stressors on anxiety and depression levels among the residents of Ilishan-Remo. The study's findings offer significant insights into the relationship between environmental, social, and economic stressors and psychological well-being in this suburban context.

The test of the first hypothesis found a significant impact of environmental stressors, such as noise pollution and overcrowding, on the levels of anxiety and depression among the residents. The beta coefficient (β = .280) indicates a positive association, suggesting that higher levels of environmental stressors are linked to increased levels of anxiety and depression. The t-value (t = 10.638) and the p-value (p < .0005) further support the statistical significance of this relationship. Suburban environments frequently subject residents to elevated levels of noise pollution and overcrowding, which can increase stress and lead to mental health issues such as anxiety and depression. These findings are consistent with existing literature highlighting the negative effects of environmental stressors on mental health. The results emphasize the importance of addressing environmental factors in urban planning and policy-making. Efforts to reduce noise pollution, enhance housing conditions, and manage population density could help mitigate the impact of environmental stressors on mental health.

The test of the second hypothesis demonstrated a significant impact of social stressors, such as social isolation and weakened community ties, on anxiety and depression levels. The positive beta coefficient (β = .263) indicates that an increase in social stressors correlates with higher levels of anxiety and depression. This statistical significance is further confirmed by the t-value (t = 8.807) and p-value (p < .0005). Strong social connections and a sense of community are vital for mental well-being, as social isolation and weakened community ties can lead to loneliness and depression. These findings underscore the importance of social support systems in suburban areas. To address social stressors, community programs that promote social interaction and engagement could be beneficial. Activities fostering social cohesion and providing support networks for individuals at risk of social isolation can help improve mental health outcomes.

The test of the third hypothesis revealed that economic stressors, such as unemployment, underemployment, and financial instability, significantly impact anxiety and depression levels among residents. The positive beta coefficient (β = .317) indicates a strong association between economic stressors and increased anxiety and depression levels. This relationship is statistically significant, as evidenced by the t-value (t = 13.914) and the p-value (p < .0005). Economic insecurity is a major source of stress, adversely affecting individuals' mental health. Financial instability can lead to chronic stress, anxiety, and depression as people struggle to meet basic needs and secure their future. These findings highlight the critical importance of economic stability in maintaining mental health. Addressing economic stressors requires comprehensive strategies, including job creation, financial assistance programmes, and support for those experiencing unemployment or underemployment. Economic policies that promote financial stability can positively impact mental health by reducing the stress associated with economic insecurity.

Based on the foregoing findings, the following recommendations are proposed:

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue VI, June 2025

Governments should develop and enforce urban planning and environmental policies aimed at reducing noise pollution and managing overcrowding to create a healthier living environment for residents. This can be achieved by enforcing strict noise level regulations, especially in residential areas, increasing the number of green spaces and public parks in urban and suburban areas to provide residents with areas for relaxation and recreation, and promoting sustainable urban design principles to reduce density and improve the overall quality of life.

Governments and other stakeholders should enhance community engagement and social support programs to combat social isolation and strengthen community ties, thereby improving the mental health of residents.

Governments should implement initiatives aimed at reducing economic stressors by addressing unemployment, underemployment, and financial instability to improve the economic well-being and mental health of residents. These initiatives could include developing job creation programs, offering vocational training and educational programs, and providing financial assistance and counselling interventions.

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