
AQI CRISIS IN INDIA: MENTAL & SOCIAL IMPACT

***Dr. Sneh Kumar Meshram**

Assistant Professor Department of Sociology, Shri Shankaracharya Professional University,
Bhilai, Chhattisgarh, India.

Article Received: 27 August 2026, Article Revised: 17 September 2026, Published on: 07 October 2026

***Corresponding Author: Dr. Sneh Kumar Meshram**

Assistant Professor Department of Sociology, Shri Shankaracharya Professional University, Bhilai, Chhattisgarh, India.

Doi: <https://doi-doi.org/101555/ijarp.6600>

ABSTRACT

AQI crisis in India is one of the most challenging issues among the nation in the current scenario, which badly affects social harmony and public health as well in many dimensions. Across the nation air pollution has turned into a severe and protracted problem has a profound impact on people's social life along with physical and mental health degradation. This paper concludes the social and mental fallout of India's air pollution crisis with policy recommendations. Poor air quality affects every day social behavior, social harmony along with the psychological states such as anxiety, depression and cognitive decline. In this research work sociological theories, health surveys and recent events are used. India's air pollution problem related suggestions are also provided here to deal with social and psychological challenges.

KEYWORDS: Air Quality Index, India, Air pollution, mental health, Public health, Social Impact.

INTRODUCTION

All kinds of pollutions had already reached in India on dangerous level with many cities are frequently ranking among the most polluted cities of the world. During winter months, especially AQI readings are severe in nationwide affecting 10 million residents. Recently in December 2025, northern India's much area has hazardous AQI levels, which prompts emergency restrictions and health advisories. Air pollution can affect respiratory and cardiovascular health. Toxic air also caused psychological stress, mood disorder, cognitive impairment and broader social consequences.

AQI (AIR QUALITY INDEX)

The AQI provides a simplified representation of air pollution levels, helping to communicate the possible health implications of exposure to polluted air. AQI range is between 0-300 based on the concentration of major pollutants such as particulate matter (PM_{2.5} & PM₁₀), NO₂, SO₂, CO, O₃, NH₃ & Pb. AQI have the sociological relevance as well as scientific significance. AQI crisis reflects structural inequality in urban planning, industrial regulation and access to clean environment, threatened physical and mental health.

MAJOR AIR POLLUTANTS

1) Sulphur dioxide (SO₂): SO₂ is a byproduct of consumption of fossil fuels (oil, coal and natural gases). Reacts with water and produces acid rain. SO₂ is responsible for respiratory problems.

2) Nitrogen dioxide (NO₂): NO₂ releases from road transport, industry and energy production. NO₂ can harm lungs severely.

3) Ammonia (NH₃): NH₃ is a byproduct of amino acid and other nitrogenous compounds. NH₃ can harm eyes, nose, throat and respiratory tract.

4) Ozone (O₃): O₃ is a secondary pollutant formed from other pollutants reaction with sunlight.

5) Carbon mono-oxide (CO): It appears by the incomplete combustion of carbon-containing compounds. CO can create fatigue, confusion and dizziness due to inadequate oxygen delivery to the brain.

6) Lead (Pb): It is released as waste product from extraction of metals like silver, platinum and iron. It can create anemia, weakness, kidney and brain damage.

7) Particulate Matter (PM): PM is a kind of particles such as dirt, dust, smoke can be seen direct through eyes or can be needed to be observed by microscope, it has basically of two types: **PM₁₀:** the size of PM₁₀ can be up to 10 micrometer. These are smaller particles and can be inhalable.

PM_{2.5}: this PM can be generally size of 2.5 micrometer and smaller than that.

Source of PM is construction sites, unpaved roads, field and fire. It can harm as irregular heartbeat, aggravated asthma, diabetes and lung function.

REVIEW OF LITERATURE

Pandey, Meenakshi, 2023, in her research work “Effects of India’s Air Pollution on Human Health: A Case Study of Prayagraj District” described the various aspects and consequences

of air pollution in India. The researcher described the Prayagraj districts highly polluted area with condensed population density facing enormous pollution issues due to lack of awareness, population, unplanned township, industrial disorder.

Sharma (2022), in “Right to Clean Air: A Socio-Legal Study of Air Pollution in Jammu District,” examined environmental concerns in Jammu from social and legal perspectives.

Maity, Santu, 2021, in this research work titled “Air Pollution in Delhi: A Study of Historical Discourse: Public Perception & Response” researcher has explained the drastic crisis of AQI in Delhi-NCR area precisely. The Researcher during his research work collects the views of public related to this AQI Crisis in Delhi-NCR to find the causes of their perception about the issues.

Tiwari, Hansraj, 2010, in his research work “The Environment Degradation & its Consequences, Abundance and scarcity: A Sociological Study refers to Ballia” researcher studied the problem of environment degradation due to industrialization and various other sources of different kind of pollutions, which is a major cause of various health problems. This mental and physical illness obviously generating much kind of social issues and challenges in the district of Ballia, UP.

SOCIOLOGICAL IMPORTANCE OF THE TOPIC

This research problem is concerning high relevance with sociological realm because it examines how modern society has created environmental problem, which directly affect mental health, social behavior and quality of life. The degenerative air quality in India initiates the consequences of rapid urbanization, industrial growth & policy failure. The problem of stress, anxiety, fear and depression demonstrating that mental health affected by social and environmental condition due to AQI crisis. Limiting mobility, social distance, limited outdoor activities are affecting society's daily routine, social interaction & community life. The poor, backward and suppressed people of the society are the main sufferer of AQI crisis, which is actually a created misfortune by the capitalistic blind ambitions and insensitive governing system. This research work is highlighting the relationship between environment, mental health, social inequality & governance in the current scenario of Indian Society.

OBJECTIVES

The objectives related with this research work are as such:

1. To study the social impact of AQI crisis in India.

2. To study the AQI crisis impact on mental health therefore deprive social harmony.

HYPOTHESIS

The hypothesis related with this research work is as such:

1. AQI crisis increased social vulnerability especially among children, elders & economic weaker sections in India.
2. AQI crisis increased dispersion of stress, anxiety and depressive symptoms among urban population in India.

METHODOLOGY

Descriptive-Analytical research design has used for this research work based on secondary data to describe and critically analyze the relationship between AQI crisis and its relationship with social-mental health aspect of contemporary Indian Society.

AQI CRISIS IMPACT ON SOCIETY

***Lack of Social Interaction**

AQI crisis limits the outdoor activities such as public gathering and community festivals, outdoor play & friend's reciprocal activities. It leads to reduce social cohesion & weaken community networks, ultimately it deteriorate social capital & psychological resilience.

***Educational & Occupational deprivation**

Online mode schooling and colleges, work from home conditions, remotely working arrangements are the drawback of severe air pollution conditions. These changes can affect productivity, learning process and social cohesion.

***Economical Expenditure**

AQI crisis can be lead the society to economical burden such as increased healthcare expenses, loss of workdays due to illness caused by air pollution, long term healthcare needs because of severe pollution conditions. Such burdens sink the savings of low income group people & create economic crisis for them. There is also lack of access to proper healthcare facilities, essential equipments reach like air purifier and greener living environment.

MENTAL HEALTH IMPACTS OF AQI CRISIS

***Biological & Psychological Challenges**

PM_{2.5} can affect the blood brain barrier function, it can cause neuroinflammation & oxidative stress. These biological processes associate with anxiety, depression, cognitive decline,

irritability & mood disorders. High AQI conditions can mental illness symptoms like impaired cognitive function, increased anxiety level etc.

***Anxiety, Depression & Cognitive effects**

Various challenges are related with mental health issue due to AQI crisis such as people who are residing in highly polluted area are more likely to experience anxiety, depression, restlessness and reduced psychological well being, cognitive performance, memory issue and neurodevelopment disorder.

POLICY RECOMMENDATION

Environment and Health Regulatory Board

Formation of a government body should look after environment and health related issue & may create safeguard which can run proper awareness campaign throughout the nation. This board can be function as conjunction between public & private sector.

CONCLUSION

AQI crisis in India is a major sociological challenge that affects mental health, social behaviour, community life and structural inequalities. Poor air quality increase stress, anxiety, depression, cognitive impaired functions and lack of social interaction. These psychological effects imprints on families, work place, schools and colleges, communities etc. To create holistic and sustainable solutions regarding air pollution, Collaboration of policymakers, urban planners and civil society is needed must.

REFERENCE

1. Central Pollution Control Board. (2025). *National air quality index (AQI) bulletin*. Ministry of Environment, Forest and Climate Change, Government of India. <https://cpcb.nic.in>
2. Economic Times. (2025, December 14). *Delhi air quality worsens as pollution curbs tighten across India*. <https://economictimes.indiatimes.com>
3. Examples of severe AQI events and emergency responses in India (December 2025). Reuters
4. Evidence of cognitive, behavioural, and developmental impact of toxic air on children and vulnerable groups.
5. Government and clinical findings on pollution's link to anxiety, panic, and mental strain in Indian cities. www.ndtv.com

6. Hindustan Times. (2025, November 18). *How toxic air affects mental health: Anxiety, depression and memory decline*. <https://www.hindustantimes.com>
7. India Today. (2025, November 4). *How Delhi-NCR's toxic air is affecting brain health*. <https://www.indiatoday.in>
8. Ministry of Environment, Forest and Climate Change. (2023). *National Clean Air Programme (NCAP): Framework for implementation*. Government of India. <https://moef.gov.in>
9. NDTV. (2025, December 10). *Air pollution can heighten anxiety and trigger panic-like symptoms, doctors warn*. <https://www.ndtv.com>
10. Pandey A., et al. "Acute and Brief Air Pollution Exposure Impairs Personal and Social Well-Being and Quality of Life." *Mind and Society* (2025). Mind and Society
11. Reports on air pollution triggering mood disorders and cognitive decline. Hindustan Times
12. Reuters. (2025, December 14). *India tightens pollution curbs as air quality deteriorates*. <https://www.reuters.com>
13. Times of India. (2025, November 9). *Air pollution impacts mental health, experts caution*. <https://timesofindia.indiatimes.com>
14. World Health Organization. (2021). *WHO global air quality guidelines: Particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide*. <https://www.who.int>
15. Zhang, X., Chen, X., & Zhang, X. (2018). The impact of exposure to air pollution on cognitive performance. *Proceedings of the National Academy of Sciences*, 115(37), 9193–9197. <https://doi.org/10.1073/pnas.1809474115>