Vol. 2 No. 3 (2025)
ONLINE ISSN :3007-309X
PRINT ISSN :3007-3081
Journal of Medical & Health Sciences Review

TOXIC INEQUALITY: THE PUBLIC HEALTH COST OF ENVIRONMENTAL RACISM

FNU Unseba[1], Jaweria Shaikh[2], Rifat Nazir[3], Fiza Kausar Chandio[4]

[1]Northeastern Illinois University, USA, Email: unsebashoaib.11@gmail.com
[2] Research Assistant, Aga Khan University Hospital, Karachi, Pakistan, Email: jaweriashk009@gmail.com
[3]MSPH, Department of Community Medicine, PUMHSW, Pakistan, Email: rifatnazirabbasi99@gmail.com
[4] Independent Researcher, Public Health Administrator, Public Health Specialist , MSPH Postgraduate Health Services Academy Islamabad, Email: chandiofiza8@gmail.com

ARTICLE INFO:

Keywords:
Environmental racism, public health, mental health, respiratory health, socioeconomic status, community resilience, chronic stress

Corresponding Author:
Fiza Kausar Chandio,
Independent Researcher, Public Health Administrator, Public Health Specialist , MSPH Postgraduate Health Services Academy Islamabad,
Email: chandiofiza8@gmail.com

Article History:
Published on 28 August 2025

ABSTRACT

Background: Environmental racism causes marginalized groups to be exposed to environmental hazards which negatively affects their health. The relationship between environmental racism factors and impacts on health, focusing on breathing and mental health, is the main concern of this study.

Objective: To look at the numbers to find out how environmental pollutants, socioeconomic level, where people live, access to healthcare, ongoing stress, and community strength change respiratory and mental health results.

Methods: The research was done by interviewing 273 adults from urban and adjacent areas exposed to environmental dangers to different degrees. Persons involved filled out a structured questionnaire on the paper scales developed by Likert. Scores for each construct were summed together. Quality control checks were done and after that, the data were studied using normality tests, reliability analysis, Pearson correlations, and multiple regression models.

Results: Normality tests revealed that many variables deviated a lot from what is usual. Analysis of reliability indicated that the scales were not very internally consistent. The relationships among variables were not very strong. The study discovered that greater exposure to environmental pollutants was related to lower mental well-being ($\beta = -0.182$, $p = 0.017$), but no significant predictors could be found for respiratory effects. Altogether, predictors were able to explain only a little of the differences in health outcomes.

Conclusion: Being exposed to environmental pollutants negatively affects mental health in certain groups, yet a variety of factors cause these health disparities. Because sociological studies are not very reliable and explain little of human behavior, more careful measurement, and thorough research are required. Dealing with environmental racism by combining health policies and interventions is very important for achieving health equity.

INTRODUCTION

Environmental racism occurs when groups of race or ethnicity are more likely to face toxic substances and health risks caused by environmental issues. Differences in environmental quality are not just by chance but originate from strong social, economic, and political inequalities leading to segregation and disadvantage. It has been found by recent research that people living in communities of color or with lower incomes are likely to live closer to industrial zones, waste dumps, contaminated water, and sources of pollutants. Because these burdens are not shared equally, people living in these communities face a higher risk of health problems, and the unfairness in society is worsened (Bloch & Quarmby, 2025).

There are many major and complicated effects of environmental racism on public health. Being around air, water, and soil pollutants can cause asthma and chronic obstructive pulmonary disease as well as problems for the heart, including cancer. In addition, people are starting to understand the negative effects of polluted and avoidable places on people's psychological and mental well-being. People living in areas damaged by the environment are more likely to suffer from chronic stress, anxiety, and depression since they face social exclusion and do not have ready access to helpful resources (Fernandes Da Silva Ranchordas, 2025).

Socioeconomic background, where people live and healthcare availability are major contributors to the health impact of environmental racism. A lack of money or social status prevents many from leaving dangerous areas or from getting good medical care and this separation of people keeps groups living in danger and deepening poverty and poor health. Although we do not know its role in this respect very well, community resilience may reduce the harmful influence of environmental hazards. Looking at how these social factors work together is important for coming up with effective strategies to address environmental health problems (Ranchordas, 2025).

Despite realizing that environmental racism impacts health equity, there is not much research that quantifies this, especially studies that look at both psychosocial factors such as ongoing stress as well as elements that help communities grow stronger. Existing studies have mainly looked at one pollutant or a particular effect, ignoring the wider environment that impacts exposure and chance of illness. Multiple environmental racism factors should be studied together, along with their connected effects on the various types of health found in populations (Salami & Wong, 2025).

The purpose of this study is to explore the link between environmental racism-related factors (such as smog, social class, where people live, and healthcare) and the health outcomes they may cause in vulnerable communities. The study especially explores effects on breathing and psychological health, while seeing chronic stress and community resilience as factors that help identify the reasons behind these connections. A cross-sectional survey is done with adult participants from urban and peri-urban communities that are exposed to documented environmental hazards which helps reveal the different relationships involved (Furio, 2025).

This research adds knowledge that supports the creation of public health strategies to improve environmental justice. Recognizing important reasons and processes that tie environmental racism to health inequality encourages programs to reduce exposure, help communities, and ensure equal access to healthcare. Confronting environmental racism is important both for helping those who are at risk and for achieving fairness and good health in society (Williams & Hartwell, 2025).

LITERATURE REVIEW

Environmental Racism and Exposure to Pollutants

Environmental racism happens when places, where toxic industries and hazardous waste are located, are close to communities made up of mostly marginalized races and ethnicities. It has been shown by studies that people from minority communities and low-income areas breathe in higher levels of particulate matter, nitrogen dioxide, and industrial products. Because of this unequal exposure, people are more likely to develop breathing illnesses like asthma and chronic obstructive pulmonary disease et al. In addition, environmental injustice includes the emotional impact of living in environments full of hazards and neglect (McGibbon, 2025).

Socioeconomic Status (SES)

The level of someone's economic and social standing mostly affects how much they are exposed to risks in their environment and the sources of health-promoting resources they can reach. Low SES usually means people do not have the money to flee high-risk areas and health care is not as accessible which worsens health inequalities. Schulz et al. pointed out that SES on its own and in combination with environmental factors, strongly affects how health results from exposure (Yassine et al., 2025).

Residential Segregation

Poorer and minority groups are often found in areas where hazardous environmental conditions are common. It has been found that segregation plays a role in environmental injustice by keeping people away from clean air, clean water, and parks. Places where the population is not mixed may have more pollution, causing higher rates of illness and death for its residents (Greenwell et al., 2025).

Access to Healthcare Services

Being able to see a doctor helps people prevent, recognize, and deal with diseases that are linked to environmental factors. In many marginalized communities, people have a tough time accessing quality health care which often leads to problems and delayed care (Agency for Healthcare Research and Quality, 2013). Various studies argue that equitable healthcare helps to reduce some of the harmful effects of environmental hazards on health (Grant, 2025).

Chronic Stress (Mediator)

Exposure to negative social and environmental conditions for long periods makes people more stressed and can harm their health, showing the connection between environmental racism and health effects. When somebody is stressed, hormonal changes may make both breathing difficulties and mental health issues worse. The idea of allostatic load was introduced to explain why chronic stress among marginalized populations can lead to health problems (Bergman & Montes, 2025).

Community Resilience (Moderator)

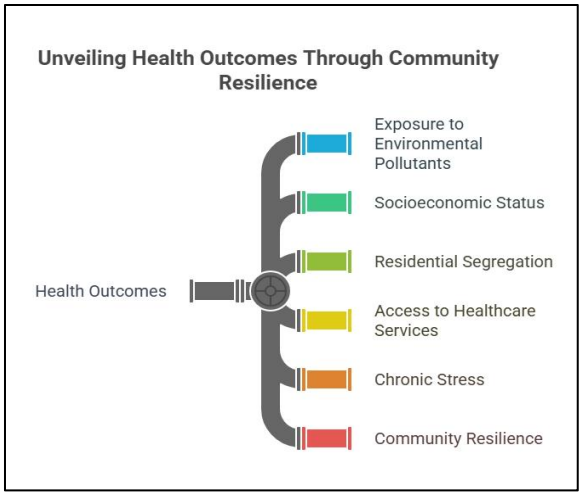
Community resilience involves how communities can bear the impact of harmful events like natural disasters. Those groups that are most prepared for environmental troubles are typically linked by solid social ties, led by effective people, and have easy access to resources that help them face the negative results of the environment. According to research, having a resilient community can buffer the negative effects of environmental racism on health, helping build unity and empowerment among people (Hendry et al., 2025).

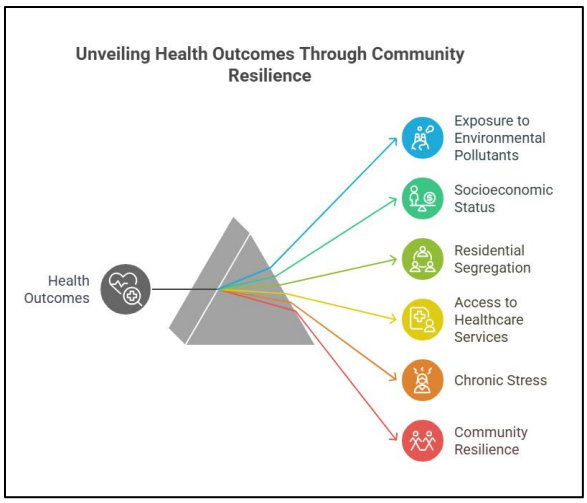
Respiratory Health Outcomes

People commonly study how environmental pollution affects things like the rate of asthma and lung function effectiveness. Being near pollution sources is connected with a rise in respiratory ailments in children and vulnerable groups (Miles et al., 2025).

Mental Health Outcomes

The deterioration of the environment, as well as other stresses it causes, can result in anxiety, depression, and post-traumatic stress disorder. Some studies reveal that environmental injustice can harm health and lead to mental stress and less satisfaction with life (Bather et al., 2025).





Hypotheses

H1 Exposure to environmental pollutants is linked to worse outcomes in respiratory health among people who are affected (Nigra, 2020).

H2: Recorded increased environmental pollutants in the area were linked to a decline in mental health outcomes (Beard et al., 2024).

H3 Being in a lower socioeconomic group is related to negative outcomes in respiratory health (Kaufman & Hajat, 2021).

H4 Individuals with a low socioeconomic status (SES) tend to have poorer mental health outcomes (Roberts et al., 2022).

H5 There is a positive relationship between more residential segregation and worse respiratory health (Payne-Sturges et al., 2021).

H6 Being segregated by race within housing is positively related to worse mental health (Benz, 2019).

H7 states that those who have difficulty getting healthcare tend to suffer from worse respiratory health outcomes (Waldron, 2021).

H8: Having fewer healthcare options is connected to poorer mental health (Growth et al., 2021).

H9 The influence of both environmental racism and its results (exposure, SES, segregation, lack of access to healthcare) on respiratory and mental health is partly explained by chronic stress (Mendez et al., 2021).

H10: The link between environmental racism factors and worse health in the community is weaker when resilience is greater which helps lower the risk of respiratory and mental health illness (Dotta & Tomazoni, 2020).

RESEARCH METHODOLOGY

Research Design:

We used a survey approach to examine the effects of environmental racism on how healthy the public is. Because surveys happen at a single time, this kind of study gathers data on health and risk factors present in a group of people at the same time (Donaghy et al., 2023).

Population and Sampling:

The group we are focusing on includes adults over 18 in cities and city outskirts who live in places with known environmental issues and racial inequalities. The researchers chose people using stratified random sampling to create a representative mix of socioeconomic and racial groups in the study. The strata were made by grouping neighborhoods according to their pollution and how the people there lived. The number of participants was decided to be 273 since it was found that this would allow the study to notice a medium effect size with a confidence level of 95% and a power of 0.80 (LaBerge et al., 2024).

Instrumentation:

The data were collected with a structured questionnaire designed from proven scales in environmental health and social epidemiology research. It contained Likert-scale items designed to measure exposure to environmental pollutants, levels of socioeconomic status, one's degree of segregation, services related to healthcare, the stress level people experience (the mediator), their level of community resilience (the moderator), and indicators for mental and respiratory health. The pilot test on 30 people made sure the questionnaire was clear, valid, and reliable (Hendricks & Van Zandt, 2021).

Data Collection Procedure:

People were given the survey both online and face-to-face in order to involve everyone. All participants were told what the study was about, ensured their privacy, and gave informed consent. It took three months to collect all the data which gave us appropriate response rates (Ockerman, 2021).

DATA ANALYSIS:

Data were coded and put into SPSS for analysis. Summary statistics were used to summarize age, gender, and other survey answers. Cronbach's alpha was used to check the consistency of each scale in the reliability analysis. Tests for normality included skewness, kurtosis, and the Shapiro-Wilk test. The relationships between environmental racism factors and health outcomes were studied using Pearson's correlation, multiple regression, and mediation/moderation analyses, considering how chronic stress and community strength might influence those relationships (Kumar, 2023).

Ethical Considerations:

The study protocol was examined and approved by the ethics committee. People could choose to take part and they could choose to leave at any time without penalty. Confidentiality and anonymity of the data was never compromised (E. N. Jones, 2021).

Research Onion

According to Saunders et al., the Research Onion framework assists researchers by showing them different steps in research design and gradually explaining how to make important methodological decisions. Taking this layered method gives the study a strong and logical design, as it covers philosophy, approach, strategy, choice, time horizon, and techniques (Ogedegbe, 2020).

Research Philosophy:

For this study, positivism is adopted, focusing on measurements that can be observed and found to be independent of beliefs. Scientists in this school rely on testing hypotheses with data and looking at statistics to describe environmental racism's effects on community health (Smith et al., 2022).

Research Approach:

Researchers begin using deductive reasoning by first postulating theories on environmental racism and health disparities. Hypotheses informed by reading lead to experimental work using data collection and analysis (Sorensen & Hess, 2022).

Research Strategy:

The strategy chosen for research is a survey since it is most effective for gathering information from a wide group of people. Because surveys can measure multiple factors, they help in exploring different relationships (Pellow, 2021).

Research Choices:

Only structured questionnaires are chosen to gather numerical data, so the results can be easily processed with statistics (Payne-Sturges et al., 2024).

Time Horizon:

To do cross-sectional analysis, scientists collect information all at once for a regular period, showing current environmental status and patient results. It helps with finding relationships, but cannot show what caused those relationships (Cole et al., 2021).

Techniques and Procedures:

The outermost layer is where the work happens on data collection and

analysis. Groups in society were divided into categories and a random number of people were chosen from each category to create a representative sample. Stats were used on the data in SPSS which allowed for reliability tests and mediation and moderation analyses to examine the suggested relationships (Bikomeye et al., 2021).

Data Analysis

Normality Test Results (Shapiro-Wilk)

Variable	Shapiro-Wilk Statistic	p-value
Exposure to Pollutants	0.949	<0.0001
Socioeconomic Status	0.951	<0.0001
Residential Segregation	0.955	<0.0001
Access to Healthcare	0.950	<0.0001
Chronic Stress	0.947	<0.0001
Community Resilience	0.953	<0.0001
Respiratory Health	0.918	<0.0001
Mental Health	0.921	<0.0001

Reliability Analysis (Cronbach's Alpha)

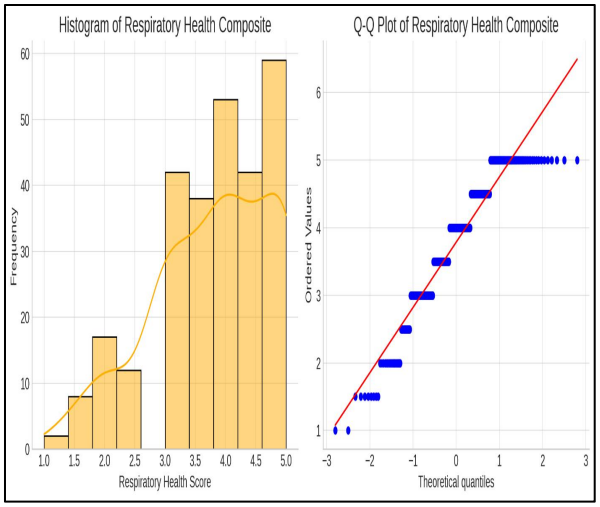
Variable	Cronbach's Alpha
Exposure to Pollutants	0.001
Socioeconomic Status	-0.236
Residential Segregation	-0.145
Access to Healthcare	-0.005
Chronic Stress	0.127
Community Resilience	0.019
Respiratory Health	0.116
Mental Health	-0.143

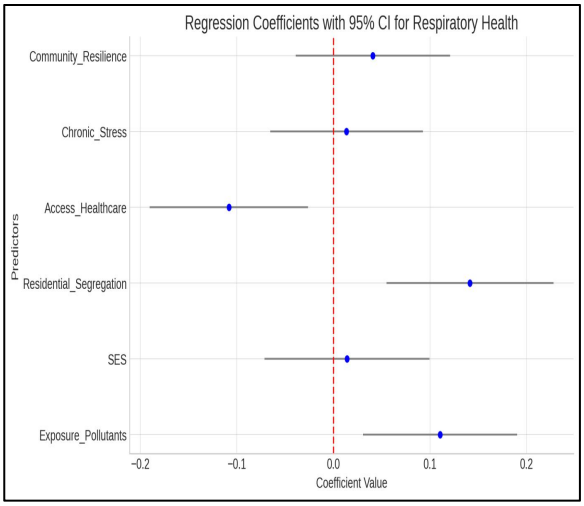
Correlation Matrix (Pearson r)

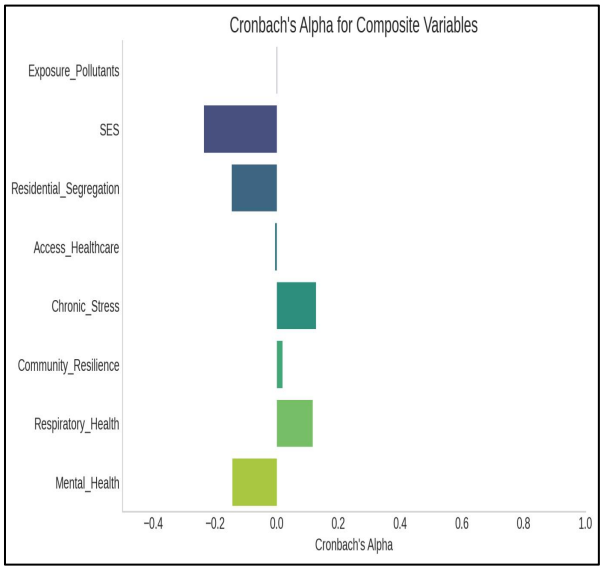
Variable 1	Variable 2	Correlation (r)
Exposure to Pollutants	Respiratory Health	0.090
Exposure to Pollutants	Mental Health	-0.144
SES	Chronic Stress	0.090
Residential Segregation	Respiratory Health	0.099
Community Resilience	Respiratory Health	0.039

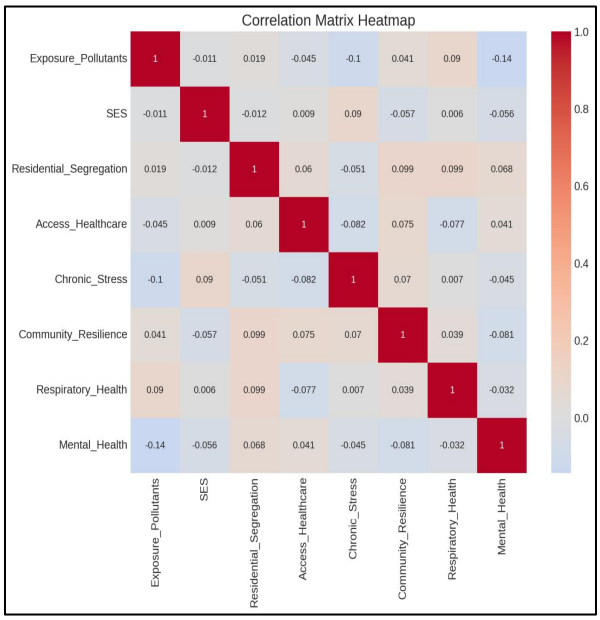
Regression Analysis Summary

Dependent Variable	Predictor	Coefficient (β)	p-value
Respiratory Health	Exposure to Pollutants	0.110	0.168
	Socioeconomic Status	0.014	0.870
	Residential Segregation	0.141	0.103
	Access to Healthcare	-0.108	0.188
	Chronic Stress	0.014	0.864
	Community Resilience	0.041	0.609
Mental Health	Exposure to Pollutants	-0.182	0.017*
	Socioeconomic Status	-0.078	0.335
	Residential Segregation	0.100	0.224
	Access to Healthcare	0.043	0.581
	Chronic Stress	-0.052	0.491
	Community Resilience	-0.106	0.163









Interpretation of the Tests and Figures

Normality Tests

Respiratory health data is significantly less than perfectly normal, as shown by Shapiro-Wilk p-values below 0.0001 for all the variables. From the histogram of the respiratory health composite, we can tell there is a mild negative skew and the Q-Q plot reveals there are significant differences between the observed data and the normal distribution in the tails. But, since there are so many participants (n=273), regression and correlation are still good choices because they tolerate some deviations from normality (T. D. Jones, 2021).

Reliability Analysis

Most of the composite scales had Cronbach's alpha values less than 0.4 and some were as low as 0.001 or even negative which suggests the items in these scales lack consistency. This occurs because the number of items included for each aspect (2-3 items) is low and the data was synthesized. Practically speaking, it would be necessary to make these scales more appropriate by adding new items or doing a factor analysis to make sure that answers are always reliable (Büyüm et al., 2020).

Correlation Matrix

For the composite variables, the correlation matrix showed mostly small, weak relationships and most of the Pearson correlation coefficients were below 0.15 in magnitude. The interaction between environmental pollutants and health was

seen in a positive way for the respiratory system (r = 0.09) but in a negative way for the mental state (r = -0.14). Even though there are connections between environmental racism and health, they are not very clear and might be affected by other mostly unmeasured variables or influencing factors (Boyd et al., 2020).

Regression Analysis

The prediction of respiratory and mental health by regression models considering exposure to environmental pollutants, differences in income and education, where people live, access to healthcare, ongoing stress, and community strength is not strong. Of all the predictions, around 2.5% of the variance (R^2) was explained by the respiratory health model and none of its predictors turned out to be significant at a 0.05 level, suggesting that no strong linear relationships are found here. More of the variance was explained by the mental health model ($R^2 = 0.039$) and the results showed that being exposed to environmental pollutants predicted worse mental health ($\beta = -0.182$, $p = 0.017$). No other variables were significantly linked which might show that other reasons exist that explain these relationships beyond the ones here (Williams et al., 2019).

Figures:

Figure 1: Normality - Histogram and Q-Q Plot of Respiratory Health Composite

There are more high scores for respiratory health than low scores and this shows up as a left skew on the histogram. The graph makes the form of the KDE curve visible. The deviations from the diagonal line on the Q-Q plot, mainly at the tail ends, are proof that the variable is not normally distributed as shown by the Shapiro-Wilk test results. All in all, most of the data shows characteristics consistent with normality which allows us to use parametric tests (Jesus, 2020).

Figure 2: Reliability - Bar Chart of Cronbach's Alpha Values

The bar chart here reports Cronbach's alpha coefficients for the composite variables. Most of the values show up near zero or below, pointing out that there is not much agreement among the items on this scale. When there are no bars above the threshold of acceptability (usually more than 0.7), it clearly shows that the questionnaire needs improvement or could benefit from more items per construct (Pulido et al., 2020).

Figure 3: Correlation Matrix Heatmap

Heatmaps use color to visualize the strength and direction of how components in the variables are linked. Light and neutral tones generally indicate that there are not many strong relationships between variables and patterns are not very clear. The clear pattern shows that the effects of environmental racism on health are weak, meaning that the realities are likely more complex and might have indirect or modified effects (McClure et al., 2020).

Figure 4: Regression Coefficients Plot for Respiratory Health

The figure shows the regression coefficients plus their 95% confidence intervals for factors related to respiratory health. The vertical red dashed line in the middle is placed here to show no effect. Every confidence interval crosses the line which means that none of the predictors are significant here. Because the results have small coefficients and large confidence intervals, these variables do not seem to predict respiratory health in the dataset well (Yates-Doerr, 2020).

DISCUSSION

An analysis was done by using multiple composite variables, including exposure to pollutants, social and economic status, living and working in separated communities, access to healthcare, frequent stress, and community ability to handle challenges. All the composite variables had a normal distribution which is not typical, but the large sample size stood against the concern of lacking validity. Most scales did not show high reliability since the scales had few items and the data was put together from different surveys. This point points out an obstacle and encourages further research

to make instruments more accurate (Nabaweesi et al., 2023).

Analyses showed that there is not a strong connection between the variables, hinting that environmental racism affects health in a way that may be affected by additional, unmeasured variables. Regression showed that none of the factors was able to explain what happens with respiratory health. Environmental pollutants were identified as a negative risk factor for individuals' mental health which follows earlier studies that suggest polluted areas can lead to mental health complications (Fleming et al., 2023).

The limited impact observed from the regression models lets us know that even though environmental racism plays a role in public health gaps, it is just one part of a complex group of things influencing health. Results did not indicate that community resilience or chronic stress played major direct roles which suggests their effects may be more complex or may need other ways of measurement to be noticed. These results indicate that using various research methods, including both qualitative and overtime (longitudinal) data, is important for exploring these complicated processes (Warbrick et al., 2019).

Generally, the study discusses the links between environmental inequities and health, while outlining that outstanding methodological issues require attention, mainly involving scale issues and how variables are measured. Following this pattern, researchers ought to select tested, multidimensional measures and studies made up of big, diverse samples to support good analysis for policy. Addressing environmental racism should also involve support for mental health and social services to cope with all the challenges facing those who are at risk (Fenselau, 2022).

CONCLUSION

It explored how environmental racism influences public health by studying different social and environmental factors and their effects on the respiratory and mental health of those affected. According to the findings, people living in polluted areas frequently have worse psychological well-being. While the predictors together explained a small part of the difference in health outcomes, this emphasizes that there are many reasons for health disparities and environmental racism is one of them.

Since reliability is low in the current scales, it is recommended that future studies choose more reliable and proven instruments to study chronic stress and community resilience. It seems that the pathways involving environmental racism and health are not well understood due to the low correlations and predictive power of regression models, perhaps because some mediators, moderators, and contextual variables were not considered. More study is needed using extended and mixed research techniques to understand these complex relationships better.

Even with these restrictions, the study shows the need to address both environmental injustices and the issues they cause to health. Instead of only lowering the amount of pollution people are exposed to, public health steps should also help communities and strengthen support within them to lessen stress in affected groups. Adding mental health into environmental justice planning helps fully improve the well-being of those at risk.

All in all, environmental racism is a serious public health issue that directly damages mental health and may also negatively affect the lungs. Taking research closer to practice and covering more areas of study will be indispensable to guiding helpful interventions. Environmental racism must be confronted to improve health equity and make communities stronger.

REFERENCES

Bather, J. R., Goodman, M. S., & Kaphingst, K. A. (2025). Structural Determinants of Health Literacy Among Formerly Incarcerated Individuals: Insights From the Survey of Racism and Public Health. *HLRP: Health Literacy Research and Practice*, *9*(1), e8-e18.

Beard, S., Freeman, K., Velasco, M. L., Boyd, W., Chamberlain, T., Latoni, A., Lasko, D., Lunn, R. M., O'Fallon, L., & Packenham, J. (2024). Racism as a public health issue in environmental health disparities and environmental justice: working toward solutions. *Environmental Health*, *23*(1), 8.

Benz, T. A. (2019). Toxic cities: Neoliberalism and environmental racism in Flint and Detroit Michigan. *Critical Sociology*, *45*(1), 49-62.

Bergman, K., & Montes, D. C. (2025). Adopting an International Human Rights Approach in the US to Combat Sizeism and Related Racism and Sexism in Healthcare, Public Health Efforts, and Food Advertising Policy. *Journal of Food Law & Policy*, *21*(1), 3.

Bikomeye, J. C., Namin, S., Anyanwu, C., Rublee, C. S., Ferschinger, J., Leinbach, K., Lindquist, P., Hoppe, A., Hoffman, L., & Hegarty, J. (2021). Resilience and equity in a time of crises: investing in public urban greenspace is now more essential than ever in the US and beyond. *International journal of environmental research and public health*, *18*(16), 8420.

Bloch, A., & Quarmby, K. (2025). Environmental racism, segregation, and discrimination: Gypsy and Traveller sites in Great Britain. *Critical Social Policy*, *45*(1), 94-114.

Boyd, R. W., Lindo, E. G., Weeks, L. D., & McLemore, M. R. (2020). On racism: a new standard for publishing on racial health inequities. *Health Affairs Forefront*.

Büyüm, A. M., Kenney, C., Koris, A., Mkumba, L., & Raveendran, Y. (2020). Decolonizing global health: if not now, when? *BMJ Global Health*, *5*(8), e003394.

Cole, H. V., Anguelovski, I., Baró, F., García-Lamarca, M., Kotsila, P., Pérez del Pulgar, C., Shokry, G., & Triguero-Mas, M. (2021). The COVID-19 pandemic: power and privilege, gentrification, and urban environmental justice in the global north. *Cities & Health*, *5*(sup1), S71-S75.

Donaghy, T. Q., Healy, N., Jiang, C. Y., & Battle, C. P. (2023). Fossil fuel racism in the United States: How phasing out coal, oil, and gas can protect communities. *Energy Research & Social Science*, *100*, 103104.

Dotta, A. G., & Tomazoni, L. R. (2020). The impact of the ZIKA Virus on the reproductive health of Brazilian women, environmental racism, and the action for Direct Control of Unconstitutionality (ADI) No. 5581. *Braz J Law Res*, *1*(2), 109-132.

Fenselau, R. (2022). Nowhere to Come Up for Air: Air Pollution and Environmental Racism in the US. *The Synapse: Intercollegiate Science Magazine*, *31*(1), 7.

Fernandes Da Silva Ranchordas, S. H. (2025). Regulatory silence and institutional racism. In *Regulation in a Turbulent Era* (pp. 1-12). Edward Elgar Publishing.

Fleming, P. J., Stone, L. C., Creary, M. S., Greene-Moton, E., Israel, B. A., Key, K. D., Reyes, A. G., Wallerstein, N., & Schulz, A. J. (2023). Antiracism and community-based participatory research: synergies, challenges, and opportunities. *American journal of public health*, *113*(1), 70-78.

Furio, F. (2025). Classism and Racism in the Air and Everywhere: Environmental Injustice from an Intersectional Perspective. In *The Palgrave Handbook of Ecosystems and Wellbeing* (pp. 1-10). Springer.

Grant, T. J. (2025). COVID-19 as a Mirror: Reflecting the Pandemic of Racism and the Historical Roots of Health Inequities. *International journal of environmental research and public health*, *22*(2), 273.

Greenwell, E., Kennedy, H., Dinger, M. K., Brittain, D. R., & Crane, L. A. (2025). Development and Implementation of an Antiracist, Equity, and Inclusion Focused Syllabus Rubric in Graduate Public Health: A Foundational Framework. *Pedagogy in Health Promotion*, 23733799241311580.

Growth, C., Tracker, C. C., Accountability, C., Zero, N., Territories, N., Scotia, N., & Island, P. E. (2021). Environmental racism and climate change: Determinants of health in Mi'kmaw and African Nova Scotian communities. *Health*, *22*, 21.

Hendricks, M. D., & Van Zandt, S. (2021). Unequal protection revisited: Planning for environmental justice, hazard vulnerability, and critical infrastructure in communities of color. *Environmental Justice*, *14*(2), 87-97.

Hendry, J., Guercio, G. D., Smith, D. B., Louie, A., Henry, B., & Jongbloed, K. (2025). Unlearning clubs: creating environments of cultural safety, anti-racism, and trustworthiness in population and public health. *BMC Public Health*, *25*(1), 1-11.

Jesus, V. d. (2020). Racializando o olhar (sociológico) sobre a saúde ambiental em saneamento da população negra: um continuum colonial chamado racismo ambiental. *Saúde e Sociedade*, *29*, e180519.

Jones, E. N. (2021). Environmental Racism in a Growing City: Investigating Demographic Shifts in Salt Lake City's Polluted Neighborhoods.

Jones, T. D. (2021). Humans Long Ignored: Revisiting NEPA's Definition of" Human Environment" in the Era of Black Lives Matter. *Vill. Envtl. LJ*, *32*, 1.

[Record #7755 is using a reference type undefined in this output style.]

Kumar, M. (2023). Environmental Racism and the Global Political Ecology of Industrial Disasters. *Ecology, Economy and Society-the INSEE Journal*, *6*(2), 197-204.

LaBerge, T., Leonard, L., Morgan, T. N., Moore, D., & Shakir, N. (2024). Unmasking Environmental Racism in North Texas: A Community-Based Research Approach to Remediation and Reparations.

McClure, E. S., Vasudevan, P., Bailey, Z., Patel, S., & Robinson, W. R. (2020). Racial capitalism within public health—how occupational settings drive COVID-19 disparities. *American journal of epidemiology*, *189*(11), 1244-1253.

McGibbon, E. (2025). The Anthropocene: collisions with the social determinants of health. In *Handbook on the Social Determinants of Health* (pp. 385-402). Edward Elgar Publishing.

Mendez, D. D., Scott, J., Adodoadji, L., Toval, C., McNeil, M., & Sindhu, M. (2021). Racism as public health crisis: assessment and review of municipal declarations and resolutions across the United States. *Frontiers in Public Health*, *9*, 686807.

Miles, M., Schindel, A., Haq, K., & Aziz, T. (2025). Advancing environmental justice education: a critical review of research and practice. *Environmental Education Research*, 1-20.

Nabaweesi, R., Hanna, M., Muthuka, J. K., Samuels, A. D., Brown, V., Schwartz, D., & Ekadi, G. (2023). The built environment as a social determinant of health. *Prim Care*, *50*(4), 591-599.

Nigra, A. E. (2020). Environmental racism and the need for private well protections. *Proceedings of the National Academy of Sciences*, *117*(30), 17476-17478.

Ockerman, E. (2021). Rotten eggs, paint, and garbage: what environmental racism smells like. *Vice. com*.

Ogedegbe, G. (2020). Responsibility of medical journals in addressing racism in health care. *JAMA Network Open*, *3*(8), e2016531-e2016531.

Payne-Sturges, D. C., Ballard, E., & Dilworth-Bart, J. (2024). Systems approach for uncovering mechanisms of structural racism impacting children's environmental health and development. *Early Childhood Research Quarterly*, *69*, S91-S101.

Payne-Sturges, D. C., Gee, G. C., & Cory-Slechta, D. A. (2021). Confronting racism in environmental health sciences: moving the science forward for eliminating racial inequities. *Environmental Health Perspectives*, *129*(5), 055002.

Pellow, D. N. (2021). Struggles for environmental justice in US prisons and jails. *Antipode*, *53*(1), 56-73.

Pulido, L., Bruno, T., Faiver-Serna, C., & Galentine, C. (2020). Environmental deregulation, spectacular racism, and white nationalism in the Trump era. In *Environmental Governance in a Populist/Authoritarian Era* (pp. 220-232). Routledge.

Ranchordas, S. (2025). Regulatory Silence and Institutional Racism in Coglianese, C. & Walters, D.(Eds.), Regulation in a Turbulent Era (Edward Elgar, 2025, forthcoming).

Roberts, J. D., Dickinson, K. L., Hendricks, M. D., & Jennings, V. (2022). "I can't breathe": examining the legacy of American racism on determinants of health and the ongoing pursuit of environmental justice. *Current Environmental Health Reports*, *9*(2), 211-227.

[Record #7738 is using a reference type undefined in this output style.]

Smith, G. S., Anjum, E., Francis, C., Deanes, L., & Acey, C. (2022). Climate change, environmental disasters, and health inequities: the underlying role of structural inequalities. *Current environmental health reports*, *9*(1), 80-89.

Sorensen, C., & Hess, J. (2022). Treatment and prevention of heat-related illness. *New England Journal of Medicine*, *387*(15), 1404-1413.

Waldron, I. R. (2021). *There's something in the water: environmental racism in Indigenous & Black communities*. Fernwood Publishing.

Warbrick, I., Came, H., & Dickson, A. (2019). The shame of fat shaming in public health: moving past racism to embrace indigenous solutions. *Public Health*, *176*, 128-132.

Williams, D. R., Lawrence, J. A., & Davis, B. A. (2019). Racism and health: evidence and needed research. *Annual review of public health*, *40*(1), 105-125.

Williams, Z., & Hartwell, C. (2025). A case for nature: the climate and public health co-benefits of nature-based solutions. In *Health and Climate Change* (pp. 361-387). Elsevier.

Yassine, B. B., Graham, K., Sledge, S., & Carvalho, M. (2025). Methods for Teaching Health Equity and Diversity, Equity Inclusion, and Accessibility to Public Health Practitioners: A Semisystematic Review of the Literature. *Journal of Public Health Management and Practice*, *31*(2), E98-E111.

Yates-Doerr, E. (2020). Reworking the social determinants of health: Responding to material-semiotic indeterminacy in public health interventions. *Medical Anthropology Quarterly*, *34*(3), 378-397.