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## **THE IMPACT OF AIR POLLUTION IN THE BRAIN AGING OF MEXICAN-AMERICANS**

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In Utah, the majority of the population lives in what is known as the Wasatch Front. Throughout the state, the unequal distribution of environmental amenities and disamenities is visible as the division of land makes it so that the more affluent and predominantly White population receives the most resources. Although air pollution affects everyone, it does not impact everyone to the same extent. The Hispanic, Black, and other minorities in the state are disproportionately impacted by the ongoing air pollution problem.

Many minority communities find themselves exposed to higher levels of air pollution due to the constrained residential areas left for them by the White and wealthier population.<sup>1</sup> In contrast to the affluent White population, Hispanics, and other minorities live in some of the oldest, lowest elevation housing in the valley. In addition, these communities of color are surrounded by producers of pollution such as industrial factories, major highways, and landfills. This is due to environmental disamenities being placed in low-income communities usually inhabited by minority groups, while amenities tend to be located in areas that are already thriving and privileged.<sup>2</sup> What is concerning is that long-term exposure to pollution impacts all aspects of a healthy life. Exposure to air pollution is linked to increased mortality rates, respiratory and cardiovascular health problems, and even cognitive symptoms associated with the hallmarks of Alzheimer's disease.<sup>3,4</sup>

Hispanics and other minorities have been excluded from research studies due to misconceptions about their willingness to participate and the research methodologies that fail to be more inclusive.<sup>5</sup> This lack of research is detrimental for the Hispanic population and other minority groups as less is understood about the effects that air pollution has on them. One of the objectives of this study is to minimize the gap between research and the participation of ethnic minority populations in studies. It is because of this reason that this research study focuses only on Hispanics, specifically Mexican-Americans.

There has been an increased interest in researching the effects that air pollution has on the brain, and for that reason, the study's second objective is to gather data through air quality sensors, blood collection, and MRI (Magnetic Resonance Imaging) scans. The MRI scan is carefully analyzed by the researcher to test for correlation with medium- and long-term exposure to poor air quality. According to the CDC, Hispanics are at a greater risk for developing Alzheimer's Disease as they age. Thus, more research must be done to examine how air pollution may increase the risk or even cause Alzheimer's Disease to develop in the brains of Mexican-Americans as they age.

## References

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