

## **Racial/Ethnic & Socioeconomic Status Disparities in Cognitive Disorders**

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### **Introduction**

A study conducted by the Centers for Diseases Control & Prevention (CDC) found that chronic diseases account for 7 in 10 American deaths and 78 cents of every health care dollar spent. As the American population becomes increasingly diverse, members of certain minorities, socioeconomic backgrounds, and ethnic backgrounds are at higher risk of developing cognitive diseases than other populations. Current physician practices, treatment options, and public health strategies have all factored into such disparities. This literature review will examine the detection of cognitive diseases, treatment options for different backgrounds, and gaps in literature and policy. It will also discuss the importance of healthcare equity in the United States.

### **Cognitive Disease Detection**

In the United States, racial minorities and low-income individuals tend to have an increased prevalence of cognitive diseases. This is because studies have shown that racial minorities receive less timely cognitive disease diagnosis than their white counterparts. A study conducted by Lennon et al. published by the Alzheimer's Association was conducted to examine if there is a correlation between race and detection of Dementia Tracking 15 years of data from 2005-2020, the study found that 36.1% of white participants were diagnosed with Dementia, compared to 26.8% of black participants at baseline visits. However, this raises an equity concern as the study also showed that, at initial visits, there is a 35% lower chance of black individuals having an Alzheimer's diagnosis, compared to their white counterparts. This is a public health concern since delayed screenings of cognitive diseases result in missed

opportunities for interventions, recoveries, and good healthcare. A similar study conducted by Tsoy et al. published by the University of California, San Francisco found that Asians were 6.6% less likely, blacks 7.5% less likely, and Hispanics 7.5% less likely to receive a comprehensive diagnostics screening than whites using data from 10,472 Medicare beneficiaries. Furthermore, an association was found between socioeconomic status and cognitive function.

A study published in 2005 by Lee et al. at Harvard Medical School involving 6,314 women over the age of 66 found that cognitive function increased as household income levels increased. The study found that participants with household income levels over 50,000 USD have a 50% lower cognitive impairment risk than participants with household income levels over 50,000 USD. Although research on the association between racial/ethnic and socioeconomic status is still minimal, studies have shown that racial minorities and lower socioeconomic households in the United States (Blacks, Hispanics, and Asians) have lower cognitive disease diagnosis rates and reduced cognitive impairment.

### **The Importance of Early Detection**

Although cognitive diseases are underdiagnosed, early detection is imperative to allow the individual to live a productive life after diagnosis. A study conducted by the Centers for Diseases Control & Prevention (CDC), found that among older adults who have been diagnosed with Dementia, only 35% were aware that they have the disease. A study by Rasmussen and Langerman in 2019 found that early diagnosis of cognitive impairment reduces drug costs since treatment plans can be created earlier. Furthermore, the study also found that if the patient is aware of their disorder in earlier stages, further medical issues can be prevented. Lastly, medications and treatments are most effective at reducing the rate of cognitive impairment when

they are implemented early. This highlights the importance of addressing the racial/ethnic and socioeconomic disparities in detecting cognitive diseases.

### **Treatment Options for Various Backgrounds**

Examining the differences in treatment options among minority groups with Dementia is fundamental in addressing the wide gap in survival rates. A study conducted at the University of Maryland, School of Medicine by Zuckerman et al. in 2008, found that anti-Dementia medication usage varied by race. The study consisted of 1,120 medicare beneficiaries with Dementia from 2001-2003. At the time of the study, the U.S. Food and Drug Administration approved two types of drugs to treat symptoms of cognitive deficit in cognitive impairment patients: cholinesterase inhibitors (donepezil, rivastigmine, galantamine, and tacrine) and an N-methyl-D-aspartate receptor antagonist (memantine). Analyzing the prescriptions physicians provided to the patients, the study found that non-Hispanic whites were prescribed anti-Dementia medicine 30% higher, compared to other racial/ethnic populations in the United States.

The difference in treatment options between racial/ethnic groups can be associated with implicit bias. Implicit bias compromises the health of racial/ethnic populations, which is when healthcare providers are not consciously aware of their views of racial minorities, which allows them to make unintentional harmful medical decisions for people of color. Furthermore, healthcare providers and physicians are less likely to provide minorities with stronger medications because of the stigma that minority races fake their health symptoms.

### **Moving Forward & Public Health Solutions**

To reduce the racial/ethnic and socioeconomic disparities among cognitive disease populations, it is imperative to increase treatment and detection practices for the public. A study conducted by Lines et al., published by the Research Institute International, found that it is

crucial to match needs to services, rather than providing each community with the same resources. This includes ensuring that healthcare providers are employing diverse and bilingual staff that is representative of the community. Cultural norms training should also be mandatory for healthcare professionals. Furthermore, ensuring local governments and public health agencies reach out to minority communities through churches, mosques, synagogues, and other places of worship is vital to reach diverse populations to hold awareness events on cognitive diseases. Lastly, healthcare providers should utilize “culture-blind” cognitive screening tests to reduce the difficulties physicians encounter in identifying Dementia due to various racial/ethnic and socioeconomic factors. Such changes to the healthcare community would support early intervention for people with cognitive diseases and improve detection rates across all socio-demographic populations.

### **Conclusion**

The purpose of this literature review was to examine the relationship between racial/ethnic disparities and cognitive diseases in the United States. The main findings of the literature review were that significant discrepancies exist in the detection and treatment of cognitive impairment among Asian, Hispanic, Black, and low-income populations, compared to the white population. To solve this healthcare crisis and address healthcare equity, it is imperative to address implicit bias, increase diversity within the healthcare field, carry out culture-blind medical practices, hold cognitive diseases awareness events, and reach out to minority communities.

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