

Evaluating the Impact of Culturally Targeted Stroke Prevention Programs

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Received Date: May 06, 2025 | **Accepted Date:** June 18, 2025 | **Published Date:** July 04, 2025

Citation: Vivian Liang, Garrett Chin, James Keane, Leonard B. Goldstein, (2025), Evaluating the Impact of Culturally Targeted Stroke Prevention Programs, *International Journal of Clinical Reports and Studies*, 4(4); **DOI:**10.31579/2835-8295/125

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Abstract

Stroke remains a leading cause of disability and death in the United States, disproportionately affecting Black, Latinx, and Asian or Pacific Islander populations. Atrial Fibrillation (AF), a prevalent arrhythmia, further elevates stroke risk. This article reviews the impact of culturally tailored prevention programs on health equity, particularly in underserved populations. Evidence from studies highlights the effectiveness of culturally specific education in improving stroke awareness, prevention behaviors, and emergency response in minority communities. Programs that integrate cultural beliefs and address systemic barriers show promise in reducing stroke-related disparities. However, challenges in sustaining long-term behavior change and addressing healthcare access persist. Future research should focus on refining these programs, fostering trust between patients and providers, and overcoming systemic obstacles to improve stroke outcomes for all populations.

Keywords: acutest elevation myocardial infarction; cardiogenic shock; percutaneous coronary intervention; double culprit vessel occlusion

Introduction

Stroke is a leading cause of serious long-term disability and death in the United States [1, 2]. Black and Latinx populations are disproportionately affected by stroke and are likely to experience gaps in health care. Black, Latinx, and Asian or Pacific Islander individuals lag and suffer more from adverse stroke-related outcomes compared to Caucasians, including higher rates of recurrent stroke [3, 4]. Black Americans are currently at the highest risk of mortality, with Latinx men projected to have the highest increase in stroke mortality rates by 2030 [5]. Atrial Fibrillation (AF) is the prevailing cardiac arrhythmia in clinical practice, afflicting a current global population of 335 million people, resulting in an overall prevalence rate of 2.9%. This burden of AF is underscored by its well-established role as a risk factor for ischemic stroke [6,7]. This article will examine the impact of culturally targeted stroke prevention programs, and how we may achieve health equity in the prevention of ischemic stroke for all populations.

Discussion:

Results from various studies highlight the critical role of culturally tailored programs in addressing stroke disparities among minority populations. The “South Asian Health Awareness About Stroke” (SAHAS) program, which provided culturally appropriate stroke education in South Asians in New Jersey, demonstrated a modest but significant improvement in stroke knowledge. This finding supports the notion that culturally targeted interventions can improve stroke awareness and outcomes in high-risk populations, especially when the content is tailored to address cultural practices and beliefs (8). Singh et al.’s systematic review of community-based culturally tailored education programs for Black communities demonstrated

that such programs could significantly improve health outcomes related to stroke, cardiovascular disease, diabetes, and hypertension. The review emphasized the need for interventions that address cultural and systemic barriers, illustrating the importance of culturally informed models of care in reducing stroke risk [9]. The “Worth the Walk” intervention for Latino, Korean, Chinese, and White seniors, as described by Menkin et al., showed that culturally tailored interventions could enhance physical activity and stroke preparedness. While the program was successful in increasing daily steps and improving stroke knowledge, it highlighted challenges in sustaining long-term behavior change, particularly in the absence of continued intervention [10]. A study evaluating the effectiveness of two 12-minute culturally tailored stroke films found that these narrative-based interventions increased participants’ intent to call 911 during a stroke event. These findings suggest that culturally relevant media can be a powerful tool in promoting timely stroke response and improving stroke outcomes in Black and Hispanic communities [11]. Choi et al.’s focus group study on developing a stroke prevention walking program for Korean immigrant seniors found that incorporating cultural beliefs, such as the concept of “Hwa” (bottled anger), into stroke education could enhance the program’s effectiveness. The study emphasized that addressing fatalistic attitudes and culturally specific barriers is crucial to designing successful interventions [12]. Levine et al.’s examination of various stroke prevention and treatment interventions concluded that culturally targeted programs addressing hypertension, diabetes, and stroke awareness have the potential to reduce racial and ethnic disparities in stroke outcomes. However, the effectiveness of these programs is often limited by systemic issues such as access to care and healthcare provider biases [13]. A recent study by Shankar et al.

compared the experiences of white and minority stroke patients and providers at MedStar Georgetown University Hospital. The study expanded upon significant disparities in patient-provider communication and perceived support. The comparison identified minorities feeling less understood and supported than whites. This difference underscores the vital importance of culturally tailored interventions in closing the communication gap and harmonizing the concerns of patients and providers, especially within minority communities [14]. The results suggest that culturally tailored programs work by addressing specific cultural beliefs, values, and barriers that may hinder stroke prevention efforts in minority populations. For instance, the inclusion of culturally relevant content in the SAHAS program improved stroke awareness by making the information more relatable and actionable for South Asian participants. Similarly, the narrative-based media interventions for Black and Hispanic populations improved emergency response behaviors by presenting stroke education in a culturally resonant format. The strengths of the reviewed studies lie in their focus on culturally targeted interventions, which are critical for addressing health disparities. These programs demonstrate the potential to improve stroke knowledge, preventive behaviors, and emergency response in high-risk populations. Furthermore, culturally tailored interventions are essential for addressing specific beliefs, barriers, and facilitators unique to each community. However, several limitations exist across the studies. For example, the sustainability of behavior changes induced by short-term interventions, such as the walking programs and media interventions, remain uncertain. Additionally, the variability in program designs and outcomes makes it challenging to compare their effectiveness. More research is needed to explore the long-term impact of culturally tailored interventions and to identify the most effective strategies for diverse populations. The findings of the reviewed studies are consistent with broader research on health disparities and culturally tailored interventions. Studies have shown that culturally sensitive health education can reduce disparities in chronic disease outcomes. However, the research also highlights the persistent challenges of achieving long-term behavior change and addressing systemic barriers to care. Several confounding factors may influence the results of the studies. Socioeconomic status, language barriers, and access to healthcare were common challenges across the programs. These factors, which are often intertwined with race and ethnicity, may have limited the effectiveness of some interventions. Furthermore, variations in program delivery and participant engagement may have contributed to differences in outcomes.

Conclusion:

Culturally targeted stroke prevention programs have the potential to reduce health disparities and promote health equity, particularly in high-risk populations such as Black, Latinx, and Asian communities. These programs are most effective when they address cultural beliefs, barriers, and facilitators unique to each community, and when they incorporate culturally relevant education and behavioral interventions. However, the sustainability of behavior changes and the long-term impact of these programs remain as areas for further research. Future studies should focus on developing and evaluating long-term culturally tailored interventions, with an emphasis on addressing systemic barriers to care and fostering trust between healthcare providers and minority patients. By continuing to refine and expand culturally sensitive stroke prevention programs, we can work towards achieving health equity and reducing the burden of stroke across all populations.

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