HIGH SCHOOL EDITION
Journal of Student Research
Volume 12 Issue 1 (2023)

The Viability of Implementing Blue Zone Practices Within the United States

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ABSTRACT

The majority of population health risk factors in the United States are closely related to the social, demographic, environmental, economic, and geographic characteristics of the areas where people live and work (Harold, 2014). Despite an exponential increase in health risks and mortality rates, Blue Zones exist. The term "Blue Zone" refers to an area or community with a high concentration of centenarians and populations of people who have lived to old age free of "disease and/or health conditions such as obesity, cancer, diabetes, and heart issues" (Marston et al., 2021). Factors identified as commonalities between Blue Zones can be applied to communities regardless of their social, demographic, environmental, economic, and geographic characteristics. Thus, the examination and implementation of Blue Zone practices may be applicable to the improvement of public health within the United States. While a variety of actions may be taken to improve health within the United States, this paper examines the viability of the implementation of Blue Zone practices within communities, the implementation of lifestyle medicine framework within healthcare facilities, and ultimately, suggests the implementation of a synthesis of the respective frameworks.

The Problem

The United States is facing a public health crisis as it is failing to safeguard millions of individuals from rising health risks such as overdoses, diabetes, and maternal mortality (Commonwealth, 2022). However, the United States is not alone in this crisis. Global societies' health is deteriorating; this is shown by both the population's shortened lifespan and the rising prevalence of comorbidities. The still-evolving COVID-19 pandemic has highlighted the risks and debilitating effects of unhealthy lifestyles (Janecka, 2020). As a result of these unhealthy lifestyles, noncommunicable diseases are on the rise, contributing to "71% of global deaths" (Kreouzi, M. et al., 2022). Coronary artery disease, stroke, cancer, and diabetes mellitus are becoming increasingly common, putting a majority of the population at risk (Kreouzi, M. et al., 2022). Furthermore, in developed nations such as the United States, 50% of premature deaths are caused by "modifiable lifestyle behavioral risk factors," including smoking, poor nutrition, and inactivity (Kreouzi, M. et al., 2022).

Additionally, the Centers for Disease Control and Prevention acknowledge that "reducing the number of earlier than expected deaths from the leading causes of death requires the joint effort of public health and heath-care organizations and personnel" (Harold, 2014). Lifestyle medicine framework embodies this idea. Although lifestyle medicine is not a new concept, one of the most ground-breaking projects now being undertaken in the healthcare sector is the widespread integration of evidence-based modalities into healthcare systems (J. Krishnaswami et al., 2019). Community-engaged lifestyle medicine provides the framework for effective implementation of lifestyle medicine practices.

Blue Zones

There are five geographic areas where the populations significantly outlive the average lifespan expected by civilization, and they do so by delaying the onset and impact of illness and incapacity (Poulain et al., 2021). These regions termed “Blue Zones" include Loma Linda, CA, USA; Nicoya, Costa Rica; Sardinia, Italy; Ikaria, Greece; and Okinawa, Japan (Buettner & Skemp, 2016; Poulain et al., 2021). After being the first to identify the world's Blue Zones, National Geographic and American National Geographic Fellow, Dan Buettner dispatched teams of experts to each location to identify lifestyle factors that could explain the populations extraordinary lifespan. They discovered that, despite the fact that Blue Zone communities are located in very different places of the world, their members share nine distinct characteristics that lead to longer, healthier, and happier lives.

These nine lifestyle characteristics identified across the five original Blue Zones are termed the “Power 9” and include: “move naturally, down shift, purpose, wine at 5, plant slant, 80 percent rule, loved ones first, belong, and right tribe” (Roundtable, 2015). Each of these characteristics fall into one of four categories: connection, activity, outlook, and diet.

Lifestyle Choices in Relation to the Built Environment

In comparison to the environment and culture within identified Blue Zones, the American environment and culture is significantly different, leading to a lifestyle that is comparatively problematic. One reason for this may be differences in the built environment. Dr. Andrew Wister, director of the Gerontology Research Centre at Simon Fraser University, establishes that “healthy community components can be viewed as closely linked to the built environment” (Wister, 2005). Therefore, the enhancement of communities throughout the United States, such as in ways that parallel the lifestyle and environmental characteristics of Blue Zones, may mitigate many problematic lifestyle practices resulting from an unideal built environment. Dr. Wister suggests the expansion of walking and bike pathways; neighborhood crime prevention programs; urban renewal; and reduction of noise and air pollution through road design (Wister, 2005). Despite the fact that the influence of these programs and policies on health and lifespan has yet to be determined, an ecological approach to health promotion has enormous potential utility (Herbert, C. et al., 2022).

American Healthcare: Economic Considerations

Health issues arising from problematic lifestyles impact not only individuals, but America as a whole. In 2019, the current spending for national health expenditures amounted to $3.795 trillion (Centers, 2020). This number is representative of the amount spent on healthcare and related activities such as “private and public health insurance, health research, and public health activities” (Centers, 2020). In comparison, Costa Rica spends only 15 percent of what America does on health care, yet the Nicoya peninsula of Costa Rica has the “lowest rate of middle-age mortality in the world” (Roundtable, 2015). Moreover, socioeconomic status plays a large role in an individual's access to healthcare in the United States (Batomen et al., 2021). Dan Buettner disputes the idea that socioeconomic status implicitly plays a role in health by emphasizing that socioeconomic status and access to superior healthcare are not necessary to be healthy, as people in Nicoya are more than twice as likely as Americans to reach a healthy age 90 (Buettner & Skemp, 2016).

The Blue Zones Project

The places people live, work, and play affect the decisions they make. Designing environments that make it easy for citizens to make healthy choices, such as making grocery stores easier to access and bike lanes with direct access to work, retail centers, beaches, and parks are therefore necessary to create healthy communities

(Cheong, C. et al., 2015). Furthermore, communities may enhance the wellbeing of their citizens by enacting legislation encouraging people to eat better and move more (Baska et al., 2021). However, legislation is not necessarily crucial to enhancing well being. In *Democracy in America*, Alexis De Tocqueville argues that the undertakings performed by the American citizen every day are far greater than any political or legislative power (Tocqueville, A., 1838). This re-emphasizes current research on the viability and success of community-lead collective impact approaches within the United States, as studies have shown that collective impact approaches implemented through communities are an essential aspect of health reform (Christensen et al., 1999; Jyrki et al., 1981; Riley et al., 2021). Furthermore, De Tocqueville states that "Americans make great and real sacrifices to welfare and… hardly ever failed to lend faithful support to each other" (Tocqueville, A., 1838). American communities have historically been devoted to helping each other both throughout daily life and many hardships without the need for legislation. The support granted by communities through this national health crisis should be no different.

This idea has been exemplified by The Blue Zones Project. The Blue Zones Project is an initiative to improve community well-being that seeks to simplify healthy decisions by making long-term changes to a city's environment and social networks (The Blue Zones, 2022). Because healthier environments naturally encourage people to make healthier choices, The Blue Zones Project concentrates on transforming the "Life Radius", the area near home wherein people spend 90% of their life. In order to implement Blue Zone practices, The Blue Zones Project employs "people and places" as levers to improve both the built and natural environment (The Blue Zones, 2022). The project makes use of Buettner's findings that working with local partners to implement programs will guide a community toward optimal health and well-being.

Previous Success in Implementation

The first Blue Zone Project pilot town was established in Albert Lea, Minnesota, in 2009, and the results were revolutionary. Since then, in partnership with Sharecare, the concept has been put into practice in more than 70 municipalities across North America, affecting more than 4.35 million citizens. Currently, "the two Health Districts in California; fifteen cities in Iowa; Fort Worth, Texas; Corry, Pennsylvania; Brevard, North Carolina; Walla Walla Valley, Florida; and areas in Hawaii, Illinois, Oklahoma, Oregon, and Wisconsin" are all part of the population health solution (Riley et al., 2021; The Blue Zones, 2022).

The Blue Zones Project has shown benefits at the population level, including a 30% increase in physical activity in Albert Lea, Minnesota, a 14% decrease in obesity rates and a 30% decrease in smoking in the Beach Cities of Los Angeles, California (The Blue Zones, 2022). Focusing specifically on the Health Districts in California, through the implementation of community-based public health initiatives focused on well-being and cardiovascular disease prevention, the Beach Cities of Los Angeles have been recently classified as a "certified Blue Zone community" (S. Lakshmanan et al., 2020). The Beach Cities' transformation into a "certified Blue Zone community" has also been largely attributed to improvements in environmental conditions and alterations in lifestyle patterns similar to those seen in Blue Zones around the globe (S. Lakshmanan et al., 2020). The Blue Zones Project has had great success in implementation and proven the effectiveness of creating change revolving around the built environment. However, while Blue Zone practices address social, demographic, environmental, economic, and geographic characteristics in relation to the built environment, implications for healthcare providers are yet to be addressed by this framework.

Lifestyle Medicine by Definition

The American College of Lifestyle Medicine defines lifestyle medicine as the use of "a whole-food, plant-predominant eating pattern, regular physical activity, restorative sleep, stress management, avoidance of risky substances, and positive social connection" as therapeutic interventions based on lifestyle and scientific evidence to prevent, treat, and frequently reverse disease. In order to effectively treat groups of patients with

chronic diseases, this framework provides a physician-led, interdisciplinary approach that frequently "leverages shared medical encounters," provided either in person or online (J. Krishnaswami et al., 2019).

Community-engaged lifestyle medicine is an evidence-based, participatory strategy that can target health equity and better health by addressing health inequities through lifestyle medicine (J. Krishnaswami et al., 2019). The University of Texas Rio Grande Valley Preventive Medicine Residency program created community-engaged lifestyle medicine in 2015 to address lifestyle-related health inequalities in disadvantaged border areas. Evidence-based principles such as “community participation, cultural competency, and use of multilevel and intersectoral methods” are included in the framework (J. Krishnaswami et al., 2019). This adaptable methodology capitalizes on the sense of community that is fostered by group engagement while simultaneously supporting the necessary behavior change that is at the heart of lifestyle intervention.

While community-engaged lifestyle medicine framework can effectively address disparities in the treatment of chronic conditions contributing to decreased longevity throughout the United States, the primary mode of implementation of community-engaged lifestyle medicine is through physicians within healthcare facilities; therefore, further measures are needed to continue these practices within communities and specifically, to assist in the implementation of multilevel approaches. The implementation of Blue Zone practices parallels this framework while setting communities up for success, thereby allowing lifestyle medicine practices implemented through a community-engaged lifestyle medicine framework to be continually effective.

Conclusion

Though Blue Zone practices focus on social, demographic, environmental, economic, and geographic aspects in relation to the built environment, implications for healthcare practitioners have not yet been addressed by this framework, which limits the advantages of Blue Zone practices overall. The application of community-engaged lifestyle medicine is crucial to bridging this gap. Therefore, both Blue Zone practices and community-engaged lifestyle medicine framework must be examined and eventually used in conjunction with one another. This will create a fully inclusive approach to community wellness, both within communities and within healthcare facilities, leading to widespread, long-lasting change within communities and ultimately, the United States.

Acknowledgments

I would like to thank my advisor for the valuable insight provided to me on this topic.

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