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Educational Pipeline Programs for Health Research and Health Care Workforce as a Strategy to Address Health Disparity

Ling Shi[1], Dennis Miezah[2]

Background

Health disparity is a great burden on all countries around the world and affects all aspects of health, especially regarding health behaviors, access to and delivery of health care, and health outcomes. In the United States, despite improvements in population health, disparities greatly persist (Davis et al., 2021). The delivery of equitable healthcare services has become profoundly challenging due to the increasing diversity of the population (Penney, 2022).

Healthy People 2030 defined health disparity as "a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage" (Office of Disease Prevention and Health Promotion). Health disparity adversely affects people who "have systematically experienced greater obstacles to health based on their racial or ethnic group, religion, socioeconomic status, geographic location, or other characteristics historically linked to racism, discrimination, or exclusion". These factors may result in poor access to healthcare resources (including health insurance) and adverse health outcomes (such as decreased life expectancy) (Skolarus et al., 2020). The minority population is more likely to be negatively impacted by the disparities in healthcare resulting from less access to healthcare, and unhealthy behaviors which eventually elevate the prevalence of chronic conditions and increase the rates of morbidity and mortality in racial minority communities (Willey et al., 2021).

In this study, we reviewed literature on disparities in health behaviors, healthcare accessibility, quality of care, and health outcomes, and discussed the potential use of educational pipeline programs as a strategy to address health disparity issues.

Disparities in Health Behaviors

According to Fiscella and Sanders (2016), health behaviors are the very lifestyle and attitudinal behaviors people put up with, that tend to affect their health, such as unhealthy diet, poor sleeping patterns, inactivity, excessive smoking and drinking, and risky sexual behaviors that may lead to unimproved health or increased risk of diseases. Health behaviors differ in meaningful ways and may affect health disparities as a cause or consequence. For example, smoking requires an individual action to purchase cigarettes, whereas underserved communities may have disproportionally high exposure and easy access to cigarettes. Lack of exercise involves inaction and can lead to adverse health outcomes, whereas underserved communities and populations may have fewer resources for physical activities (Pampel et al., 2010). One major factor attributed to a country's morbidity and mortality rates results from the health behaviors of individuals across the country, therefore, information on the prevalence of health behaviors in all population groups is necessary to improve public health awareness about healthy living to improve their health and life expectancy (Mokdad & Remington, 2010).

Most significant disparities in health behaviors exist in populations of disadvantaged socioeconomic conditions, minorities (race/ethnicity), and racial residential segregation. Socioeconomic conditions such as poverty, unemployment, and lack of safety significantly affect the health behavior of people in the form of physical inactivity, unhealthy diet, smoking, and excessive alcohol drinking, etc. These unhealthy lifestyle behaviors lead to poor health outcomes and expose disadvantaged populations to heart disease, diabetes, cancer, and homicides (Thorpe Jr et al., 2015). Moreover, the segregation of population groups into various neighborhoods is a major contributing factor to disparities in health behaviors. The social and physical environments in which people live can promote or limit the initiation and maintenance of healthy behaviors. In addition, neighborhoods may impact individuals' health behaviors by providing or limiting their access to resources such as food, alcohol, tobacco, and facilities for physical activity.

[1] Department of Nursing, University of Massachusetts Boston
[2] Department of Nursing, University of Massachusetts Boston

A racially segregated black neighborhood is less likely to have grocery stores that sell healthy fresh foods than white communities (Thorpe Jr et al., 2015). Black communities have been considered the least healthy group in the United States, with a high prevalence of chronic diseases, low life expectancy, and high mortality rates compared to other racial communities (Noonan et al., 2016). In another study, Willey et al. (2021), found that for people seeking asylums, their health is usually threatened, due to poor housing conditions, malnutrition, and exposure to unhealthy lifestyles such as smoking, alcoholism, and risky sexual behaviors.

Disparities in Access to Healthcare

The remarkable improvements in medical and surgical treatments in the United States have not improved the equitability of care, partially due to disparities in healthcare accessibility. There have been persistent disparities in racial and ethnic minority groups' access to healthcare. Medical care accounts for only a small portion of the variation in life expectancy while social and behavioral factors play a much more substantial role in determining how long people live (Kaplan, 2014). Torr (2022), stated that the social class system contributed greatly to inequalities and disparities in healthcare access and health outcomes in the United States. Primary care practices are often where patients seek their medical and mental healthcare, placing the burden for treating behavioral health problems on the primary care system, and most racial and ethnic minority populations find it challenging to access advanced healthcare (O'Loughlin et al., 2019). International comparison studies suggest that the life expectancy for Americans is falling behind other wealthy countries due to the significant disparity in healthcare accessibility and varying quality of care based on race or ethnicity and social status. For example, the study by Yedjou et al. (2019), found that breast cancer mortality rates were significantly higher among African American women compared to White women and other ethnic groups in the United States. It was discovered that the high mortality rate among such minority groups was attributable to the late-stage diagnosis due to the barriers to health care accessibility, the prevalence of residential areas risk factors, and unequal access to advanced cancer treatments.

Health and health care are essential to communities' well-being and productivity. Therefore, inequities in the accessibility to healthcare pose real threats to national well-being.

Disparities in Healthcare Quality from Providers

Healthcare providers are the main backbone of the health status, survival rate, and improved life expectancy of people across a country base on the services they render. However, not everyone in the population gets equal access to the care rendered by clinicians due to healthcare disparities. Some of these disparities arise from race, geographic location or neighborhood, individual financial status, and ethnic preferences, therefore most healthcare providers prefer to render adequate care to patients of the same race compared to other racial patients (Cuevas et al., 2017). Access to quality healthcare usually depends on an individual ability to have active health insurance coverage, sustaining job, and quality education, however, this is not the case for some people from racial minority backgrounds who have all these qualities and yet experience disparities in the care rendered to them (Johnson-Agbakwu et al., 2022). Again, a study by Lane-Fall et al. (2017), revealed that there is a lower number of racial minority groups in critical care in the United States which in turn has resulted in a decrease in the care rendered to such groups with critical conditions. There has been a great disparity in recruiting staff from racial minority groups into the health sector and even rarer to be promoted to various leadership positions at work. The recruitment and promotion process tends not to favor these minority groups, therefore there is an underrepresentation of such groups in the health workforce. The complex nature of healthcare disparities such as disparities in treatment, access, and outcomes is impacted by the lack of racial and ethnic representation at higher levels of employment within the healthcare sector (Flores & Combs, 2013).

Efforts and investment from partners at all levels of the healthcare system are warranted to make progress toward reducing racial and ethnic inequality in healthcare (Wheeler & Bryant, 2017). In the United States, health equity is achievable if the population could reach their full health potential, with easy access to health services, services being offered in a language they could understand, and treatment effectively incorporating their cultural perspectives from health professionals who are from the same background (Penney, 2022). It is, therefore, necessary to develop appropriate national policies and strategies to reduce racial and ethnic health disparities by ensuring healthcare accessibility and improving quality-of-care delivery to the populations.

Disparities in Health Outcomes

Health disparity has been a great challenge to almost every minority group in the United States, exposing them to a disproportionally higher risk of disease conditions. The health disparities are reflected as inaccessibility to healthcare and facilities, low-quality of care, lack of insurance, high rate of chronic conditions, exposure to toxic substances, decreased life expectancy, and increased premature death in minority racial groups (Phelan & Link, 2015).

According to Gadson et al. (2017), most pregnant women in racial minority groups experience delays in the initiation of prenatal care. The delay in maternal healthcare services leads most of such women into pregnancy-related conditions such as pre-eclampsia, preterm birth, low birth weight, and a high rate of maternal morbidity and mortality.

Another disparity in the field of maternal and child health is delayed breastfeeding and the introduction of complementary food to infants among minority women in the United State. This is due to a lack of breastfeeding-friendly policies, such as unpaid maternal leave and lack of baby-friendly hospital certification for minority women, and socioeconomic vulnerability. For example, migrant parent workers and refugees often lack the skill of English language proficiency in terms of expressing themselves adequately to be heard by the public and have limited access to health care. Therefore, most of their children are exposed to chronic pediatric conditions with childhood obesity being the highest. A broad category of maternal and child health professionals including physicians, midwives, and lactations consultants can play a critical role to achieve the highest level of care for such women and their infants. However, due to disparities in the delivery of healthcare services these women and children are always overlooked (Louis-Jacques et al., 2017). According to Bambino et al. (2020), the COVID-19 pandemic revealed one of the greatest disparities and implicit biases among clinicians and healthcare workers to minority communities in the U.S. As an outcome, COVID-19-related morbidity and mortality were substantially higher in these communities. The socioeconomic disadvantage status of such patients contributed to poorer communication from clinicians to patients, mistrust, and low quality of care received during the outbreak of the Covid-19, which potentially affected the outcomes of care and the survival rate of most patients from racial minority communities.

Strategies to Address Health Disparities

A diverse workforce in the healthcare system is essential to achieving a successful outcome of culturally sensitive and equitable care delivery to all populations across the nation (Aysola et al., 2018). In the healthcare systems, new knowledge and approaches to care delivery are easily developed and disseminated if the workforce consists of individuals from varying socioeconomic, cultural and faith backgrounds with different experiences, therefore being capable of integrating diverse minds with multiple perspectives (Aysola et al., 2018). For these reasons, it is essential to ensure that diverse backgrounds and values are represented in the healthcare system and health research (Lane-Fall et al., 2017). Therefore, a practical approach to resolving health disparity is to ensure the training of more scientists and health professionals from various racial, ethnic, and cultural backgrounds to improve the quality of care and research in all populations across the United States.

Effective implementation of the strategies to address health disparities in clinical practice and research should start from early childhood education and parental support programs for all minority and disadvantaged populations to improve the outcomes for both parents and children and to produce ongoing health and socioeconomic benefits. Over a period, the adequate implementation of these interventions can yield a sizable return through the adoption of a life-course perspective, reducing and eliminating health disparities, and improving population health (Thornton et al., 2016). Furthermore, to ensure fairness and equity in the delivery of healthcare services to all groups irrespective of their socioeconomic status and racial/ethnic background, it is important to create feasible measures that will allow the enrolment of a diverse clinical practice workforce. This approach will help improve the quality of care by offering clinicians from all backgrounds to engage, communicate and render care to patients (Lane-Fall et al., 2017). Additionally, health organizational employers can broaden their horizons by reviewing organizational mission and vision to align with diversity, equity, and inclusion of all racial groups in the workforce. Allowing the opportunity for inclusion of all racial groups in the health workforce will help to easily identify the unmet health needs of each population group. This will help to develop opportunities to meet the health needs of these populations through the diverse workforce created (Sherman et al., 2020).

Generating Pipeline for Research and Health Care to Address Health Disparity

The demographic of the U.S. population is becoming more diverse with different cultural and race/ethnicity groups. As a result, there is a need to create educational and training pipeline programs geared toward healthcare training and research opportunities in underserved populations (Bouye et al., 2016). Education is a key opportunity to help reduce health disparities and meet the needs of low-income and minority groups. The educational system should be structured to meet the needs of minority communities by focusing on preparing such students for various careers with specific pipeline programs. Pipeline training programs for minority students with a focus on scientific health research and biomedical sciences will be a great avenue to increase the number of health workers and scientific researchers from underrepresented racial minority population groups in the United States (Taylor et al., 2019).

Moreover, Upshur et al. (2018), reported that various efforts have been made by relevant educational institutions to increase minority student enrollment to improve the representation of such students in the healthcare workforce and biomedical research, however, there has always been only a very small number of them showing interest in health and related biomedical sciences. It is therefore important to adopt and expand pipeline programs that will create opportunities for these students to get early exposure to health research and healthcare work, therefore enhancing their interest and potential for a future career path in science and health-related work. The focus of the pipeline programs should be directed towards scientific research with adequate sponsorship to ensure the successful completion of all students enrolled. This will therefore help to promote research intervention and reduce clinical care disparities attributed to racial minority groups.

Also, Salsberg et al. (2021), reported that there has been little improvement in diversity among graduates of healthcare professional programs across the United States. Students from racial minority groups are less likely to complete their studies due to multiple reasons such as monetary constraints, inadequate role models and mentorship, and discrimination from academic tutors. Therefore, there should be more innovative and effective policies to improve the support system and training opportunities for minority students. Academic institutions are in the best position to motivate students from racial minority groups to achieve successful careers in research and healthcare. This is because higher education institutions can increase underrepresented minority student's involvement in biomedical research through their vision and mission and by the creation of outreach research programs with racial minority students to increase community research capacity and by sponsoring workshops so that these students can learn about approaches to conducting research and the available grants for research funding (James et al., 2014).

Currently, some educational pipeline programs are targeted toward minority representation in the healthcare force. For example, the Chicago Cancer Health Equity Collaborative Research Fellows provides a pipeline program aimed at providing mentorship, sponsorship, professional growth, and academic support for underrepresented students to progress toward healthcare carrier services (Taylor et al., 2019). The Florida Prostate Cancer Research Training Opportunities for Outstanding Leaders Program has created a pipeline program to promote the career progression of racial minority students focused on reducing disparities in cancer care (Odedina et al., 2018).

In summary, there is substantial disparity in health behaviors, healthcare accessibility and quality, and health outcomes across the United States. One of the strategies to address health disparity is to develop educational pipeline programs that provide educational and training opportunities to underrepresented populations to increase their interest in health research and healthcare practice, therefore improving the representation of these groups in health research and healthcare workforce, and ultimately reducing or eliminating health disparities across the nation.

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