Project BEAM: Newark Based Community Centered Educational Intervention Program to Improve Health Literacy

Kwame Awuku, New Jersey Medical School, 2019

ABSTRACT

• Socioeconomic position plays an important role in poor health behaviors. People of lower socioeconomic status suffer disproportionately from nearly all diseases and have higher rates of mortality than people of higher socioeconomic status. Many of the conditions that have a strong association with socioeconomic status include cardiovascular diseases, infant and maternal mortality, unintended injury, homicide, suicide, and the prevalence of various other diseases. According to a journal by the Future of Children Organization, some of these diseases, which include, arthritis, heart disease, ulcers, diabetes, hypertension, and chronic bronchitis persist both at the community level and at the individual level.

• Newark, the largest city in New Jersey, holds an alarming rate of underserved populations. These groups of individuals endure health disparities. The disparities in health outcomes have persisted in this region for the past 20 years. There are many components that contribute to poor health status.

BACKGROUND

Our initiative was made possible through close partnership and collaboration with the students and administration at Great Oaks Legacy Charter High School, Science Park High School and Weequahic High School. They, like us, have recognized that the hostile and crime-ridden environment that their students grow up in often stunts their innate abilities and it is their desire to help students, along with their families, overcome the barriers in place to receiving a high quality, rigorous education that will prepare students to succeed both now and in the future. To that end, the members of Project BEAM have worked closely with Great Oaks Legacy to provide one aspect of their education we know will have a tangible, long-term impact on the lives of the students: improved health literacy. Health literacy affects people’s ability to navigate the healthcare system, engage in self-care and chronic disease management, as well as understand the concepts behind disease probability and risk. It has been linked to racial, as well as socioeconomic factors, and represents an intervenable target to decrease healthcare disparities within a community. We hope to leverage the knowledge and interest that we are able to instill in these students at a young age in order to impact the health outcomes for the community as a whole.

OBJECTIVES

Our program actively engaged at-risk youths in Newark, NJ in order to expose them to the different health topics in an interactive and informative way. By instilling knowledge, we can produce desirable outcomes and reduce the health disparities among the community of Newark as a whole. With the help and support from our non-profit, O’Darah Outreach, we were able to achieve our goals.

Objectives for the youth participants of our program is to:

1. Gain an immediate understanding and appreciation for the impact of health literacy on their personal health and community as a whole
2. Apply the knowledge gained through sessions to make measurable and sustainable improvements in adverse health behaviors
3. Receive support, guidance, and mentorship for their personal and professional endeavors from preceptors

Objectives for the graduate/medical students of our program is to:

2. Gain experience implementing focused interventions directly within communities
3. Develop leadership abilities through serving as a mentor to at-risk youth
4. Apply medical knowledge to convey information in a digestible, culturally competent manner to non-health professionals in the local community

METHODS

Target Population: 9th-12th Graders in High School (Great Oaks Legacy Charter High School, Science Park High School and Weequahic High School)

• Our target population were at-risk youths in Newark, NJ. Over 325 students expressed interest in the program and were able to participate.

• Sessions were held for a consecutive four days (Monday-Thursday) ranging from one-week per month to twice per day. Each session would last approximately one-hour.

• The first 15-25 minutes, discussions were held to gauge prior knowledge regarding the topic(s) to be discussed that week; the next 15-25 minutes were spent on interactive and creative health topics, followed by a Kahoot quiz that addressed leadership and teamwork skills that will aid students as they grow, whether it’s in school or in their future careers.

• Presentations were structured to be engaging and easily understood, with question-driven discussion highly encouraged in order to spark interest and convey impact of topics being discussed.

• Preceptors were able to learn alongside the students they taught, as much of the discussions brought up specific and relevant topics that required further research and follow-up during subsequent sessions. Preceptors were also required by necessity to learn to connect the attention of the class during such discussions, thus developing their ability to communicate effectively with the class and build a rapport as their teacher and mentor.

• Pre and Post-survey sessions were given to the students participating in the program to measure their intention and understanding of the material covered during each session, as well as get feedback for improvement in future sessions.

RESULTS

Conclusions

● Through the use of pre and post-survey, we were able to reproduce and quantify the fact that disparities in the context of health literacy are prevalent within the community that we serve
  ○ Every health topic covered was characterized by a low level of understanding before any intervention
  ○ Post-survey results showed a high level of retention of the material covered, as well as a high level of interest in the corresponding topics
● The health topic with the most interest was the session on Asthma and Diabetes with a high interest level of 90%
  ○ In the future, we aim to tailor our topics and sessions to address the concerns and interests of the students as measured by our survey
● The most engagement between the students and the health topics came when the students were able to use either a medical device that related to the topic such as the stethoscope for our vital signs module or a glucometer for our diabetes and nutrition module
  ○ Future sessions will aim to include more hands-on activities to that end