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Harnessing health information to foster disadvantaged teens' community engagement, leadership skills, and career plans: a qualitative evaluation of the Teen Health Leadership Program

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This paper describes a qualitative evaluation of a small-scale program aiming to improve health information literacy, leadership skills, and interest in health careers among high school students in a low-income, primarily minority community. Graduates participated in semi-structured interviews, transcripts of which were coded

with a combination of objectives-driven and data-driven categories. The program had a positive impact on the participants' health information competency, leadership skills, academic orientation, and interest in health careers. Program enablers included a supportive network of adults, novel experiences, and strong mentorship. The study suggests that health information can provide a powerful context for enabling disadvantaged students' community engagement and academic success.

INTRODUCTION

Thirty-six percent of US adults have limited health literacy, which puts them at risk for underuse of preventative care, suboptimal health-related decisions, and poorer health [1]. Low health literacy and its negative implications disproportionately hurt minorities and those living in poverty [2]. Health information literacy is the component of health literacy that encompasses the ability to locate and evaluate health information [3]. Helping at-risk groups develop health information literacy is one of the key missions of health librarianship. The National Library of Medicine (NLM) 2006-to-2016 long-range plan stresses the importance of developing health information outreach programs for underserved populations, including school-age youth [4]. It also emphasizes the importance of creating a diverse health care workforce by increasing the visibility of health-related careers among K-12 students.

The Teen Health Leadership Program (THLP) is a small pilot program that engages at-risk high school students in health information advocacy and outreach, aiming to increase their (1) health information literacy (and, possibly, health knowledge and behaviors), (2) leadership skills and community engagement, and (3) interest in careers in health care and biomedicine. Offered at St. John's High School on Johns Island near Charleston, South Carolina, THLP is funded by NLM and conducted in collaboration with the Medical University of South Carolina (MUSC), Charleston County School District, and Communities in Schools (CIS) national network. This paper presents the results of a qualitative evaluation of the program.

Program context and description

Johns Island, located across the Intercostal Waterway from downtown Charleston, is a rural community in flux. Despite recent development efforts, much of the island's community remains relatively poor and isolated, and income and educational disparities between non-Hispanic Whites and African Americans and Hispanics are very sizable [5]. St. John's High School serves a primarily minority, low-income community. Seventy-seven percent of the students are African American, 11% are Hispanic, and 80% are eligible for free or reduced-cost lunch [6].

Students enroll in the program at the beginning of the eleventh or twelfth grade. The CIS youth specialist (Mr. T), whose daily presence in the school is partly supported by the program, and an MUSC health sciences librarian meet with them once a week, focusing on health topics that the students have identified as health concerns in their community. After learning about reliable, authoritative health information websites, students use them to develop and conduct school and community outreach activities, such as mentoring peers and exhibiting at local health fairs. The emphasis is on leadership, community service, and community organization. Students also have opportunities to visit MUSC and travel to NLM. Between 2009 and 2013, five to twelve students enrolled in the program each year, amounting to a total of thirty-three graduates by 2013. Thirty-one of the graduates were African American and two Hispanic; twenty-five were female and eight male.

Evaluation objectives

Starting in 2009, MUSC program staff has been collecting statistical data about the program's effectiveness (e.g., students' health literacy scores and graduation rates). The current evaluation is an in-depth qualitative study focusing on how students' experiences in the program shaped their:

- knowledge of health information resources and health information self-efficacy
- health knowledge and behaviors
- leadership skills and sense of self and community
- career aspirations

If the program worked, the authors also wished to identify the characteristics that enabled its effectiveness.

METHODS

Participants

This evaluation focused on two cohorts of THLP scholars: the graduating classes of 2012 and 2013. Eleven of the fourteen cohort scholars participated in the evaluation. Nine participants were female, two were male, and all were African American.

Procedure

The study protocol received institutional review board (IRB) exemption from the National Institutes of Health (NIH) Office of Human Subjects Research. The former THLP scholars participated in one-on-one, semi-structured interviews about their experiences in the program, health information practices, leadership activities, and career plans.

Data analysis

All interviews were audio-recorded, transcribed, and coded into a combination of objectives-driven and data-driven categories using NVivo 10. After establishing a satisfactory level of agreement with four

Table 1
Selected coding categories and subcodes

Coding category	Subcodes
Health information literacy	Health information resources known Website's evaluation criteria Location of health information for self and others
Program benefits	Health information literacy Sense of empowerment Health knowledge Health behaviors Leadership skills Opportunities for participating
Leadership and health promotion activities since graduation	Activities Roles in activities Community impact Barriers to participating

interviews, two evaluators divided coding of the remaining ones [7]. Table 1 presents selected coding categories and subcodes.

RESULTS

Impact on health information literacy, knowledge, and behavior

Health information literacy. Nine participants commented on the program's impact on their ability to find credible health information. In the words of Participant 11, "As far as reliable information, I know exactly where to go." Participants were able to name several specific consumer health information websites, including MedlinePlus, HandsOnHealth, "NIH," MUSC website, WebMD, "NLM," and Mayo Clinic. Three participants described situations in which they used or recommended these sites after graduating from THLP. Participants mentioned a number of valid criteria for credible sites, including the domain, authors' credentials, recentness, and presence of links to other reliable sites.

Health information-related sense of empowerment. Several participants commented on how their knowledge of health information resources gained through THLP brought a sense of competence and empowerment to their interactions with family and community. Describing cancer information awareness activities at the school, Participant 10 stressed that "a lot of [non-THLP] students didn't know about some of the treatments like chemotherapy," adding that "it was good to give them that information." This empowerment could continue beyond high school years, as seen in Participant 11's description of discussions with college friends, "Just doing research on the website...the stuff that I radiate—...it makes me feel good to know that I'm right, cause they don't believe me, and they go look for themselves, and they see that the information is true."

Health knowledge and behaviors. Participants often referred to their improved health knowledge when discussing THLP benefits. Ten participants indicated that THLP impacted their health behavior, bringing

changes to their diet and exercise. Several talked about how working with health information led them to take a critical look at their habits. In the words of Participant 1, "Once you learn more about diabetes..., you'll start [thinking]—would I want to be one of these patients? Once you learn about health, it's kind of hard to not adjust your lifestyle so that you can be healthier." Individual behavioral changes were reinforced by the program's practices, when participants exercised as a group. Participants contrasted these changes with the larger food culture of the island (e.g., Participant 6 said, "McDonald's is...the most visited restaurant, probably, on John's Island").

Impact on leadership and community engagement

Leadership skills and confidence. When asked about "main things learned in the program," eight participants explicitly mentioned acquiring leadership skills, including confidence to speak up and take initiative, collaborate, and manage time effectively. For example, Participant 1 talked about changing from being "the person at the back of the class who doesn't speak much" to one comfortable with "having to give ideas and speak up." Desire to see their efforts make an impact drove participants to overcome shyness. For example, Participant 10 talked about a school fundraiser, where the sales initially were not going well, "So I took it upon myself to start driving more customers to come to the table and then tell why we were selling these...and we raised a lot of money that night." Participants also talked about the impact of THLP on their interest in assuming leadership roles in other areas of their lives (e.g., faith groups), because "having leadership roles in one group makes you want to be a leader in other groups" (Participant 6).

Sense of community membership. Participants frequently talked about the impact of THLP on their sense of community membership and interest in community engagement. For example, Participant 3 stated, "The main things I learned [are] the importance of giving back to the community and making it a better place, because it's so small." Participant 5 said, "Teen Health, they played a major role, because [before], I would just be like, OK, they're eating bad, they're not exercising, it's whatever." In the course of the program, however, this student came to "want to see them being better than the statistics." These words of Participant 2 highlight the resulting sense of accomplishment, "That was some of the best work ever, cause we did something good for the community."

Perceived impact of the program on communication skills. Improved communication skills were frequently mentioned by the participants as key lessons in leadership development. These skills were developed through a broad range of outreach activities directed at diverse audiences. In the words of Participant 10, "I've learned to talk to professors,...to dress professionally...—to carry yourself in a professional manner." Participants particularly stressed the value of

developing presentation skills, which came from sustained practice. According to Participant 10, “We practiced presenting. We practiced making eye contact. Trying to speak professional.” Several participants talked about the impact of their improved communication skills on their college preparedness.

Leadership activities beyond the Teen Health Leadership Program years. Eight participants were able to give examples of their leadership activities post-THLP. For four participants, these activities had a health-related focus, such as taking part in community health fairs. While participants continued applying their leadership skills beyond THLP, they also talked about challenges of doing so while balancing classes, homework, and employment. Participants 1 and 5 also talked about the challenge of continuing activism in the absence of the established, supportive THLP community. For example, Participant 1 admitted, “I am not as familiar with my whole community...I’m not as good at that on my own as I was with the group.”

Impact on career planning

Academic performance, college application, and resume building. Several participants discussed the program’s emphasis on their career trajectory, “[The mentors] always encouraged us to go to college, and go past college, and go as far as you can” (Participant 9). Echoing several others, Participant 10 described the role of THLP mentors in the process of college application: “They helped throughout [the] scholarships [process], and we all sat down to do college applications together. They wrote recommendation letters. Anything that you need, they were there for you to help you out.” Students also talked about tutoring they received from the mentors and study groups’ support from their cohorts. Finally, eight participants also talked about the impact of the THLP experience as a “resume builder.”

Knowledge of health careers. Among the health occupations that the participants were able to name, doctors and nurses were mentioned the most frequently. Seven also discussed less visible health occupations, such as physical therapists, pharmacists, nutritionists, phlebotomists, health promoters, health policy workers, biology teachers, and biomedical researchers. When asked about the sources of their knowledge of health careers, participants mentioned biology classes, family members, and popular media, but also described many THLP activities, including presentations by guest speakers and visits to MUSC. Participant 9 remembered the visit to the MUSC Simulation Center as “the most memorable” THLP experience, “I’ve never seen anyone make a mannequin give birth [before]...I talk about it all the time because I’ve never seen anything like it.”

Interest in pursuing health careers. At the time of the interviews, all participants were in college, and all but

one had chosen their undergraduate majors. Five had declared majors potentially related to careers in health and biomedicine: biology and nursing. Two planned to become nurses, two wished to be biomedical researchers, and one hoped to become an obstetrics/gynecology physician. Participants discussed THLP as one of the influences on their career choices. Participant 5 said, “Before I entered this program, I wasn’t that science type of girl. But once I got into Teen Health Leadership,...it really opened my eyes to the science field.”

Unplanned enablers of success

In addition to the planned variables discussed above, two other factors had a strong impact on the students’ self-image, participation, and plans for the future.

Exposure to people and experiences. Students frequently talked about how exposure to people and experiences outside their everyday realm, such as MUSC and NLM, as well as seeing themselves through the eyes of their audiences, had a positive impact on their self-image. For example, Participant 3 gave this account of an MUSC event, “We’re getting all this acknowledgement and love and respect from others that we didn’t even think this program would bring to us.” Participant 9 said the following about the NLM visit, “Where we come from, we’ve never been like on a plane, or a train, or any other type of transportation apart [from] cars—so experiencing that, and...meeting so many influential people who have to do with our medicine [was a powerful experience].”

Role of mentors. One striking theme apparent in participants’ interviews was the level of supportive involvement of the program staff in the students’ lives. When describing the three adults from the program with whom they interacted on a regular basis, students called them “great advisors” and people who “really get” the students and encourage them to “be the best that you can be” and whom the students “love, love, love” (Participant 10). Of the three staff members, one in particular—Mr. T, the CIS youth specialist, who was at the school every day—had played a role far beyond teaching and coaching. Mr. T got to know the students’ lives and interests, met with their families, and gave students rides to program events. He also made it his personal mission to help every participant navigate the college application process. According to Participant 9, “He was like, the best person ever...He teaches you, and keeps you focused...gives you best advice...He looks out for you; he wants nothing but the best for all his students. [This] makes us want to step up and do that as well.” Students also talked about finding a positive role model in Mr. T. For many, the relationship persisted beyond high school graduation.

DISCUSSION

This study suggests that THLP has been successful in achieving its objectives of helping students from a

minority, low socioeconomic status rural community develop health information literacy, leadership skills, and interest in health care and biomedicine careers. Participating in a year or two of the THLP curriculum also appears to have resulted in greater awareness of healthy lifestyle choices and healthier behaviors. The program's influence continued into the early college years.

The success of the program seems to be most attributable to two factors: (1) the community leadership application context of health information skills and (2) the supportive program staff and horizon-broadening experiences, with both factors positively affecting the students' self-image, relationship to their community, and career outlook. Health information literacy became participants' unique area of expertise, in which they could compare themselves favorably with many peers and adults. Leadership and outreach activities provided a context for applying this expertise in order to develop communication skills, confidence, and positive self-image. Participants' success was also reinforced by strong mentorship and a supportive community with shared goals and values.

While this is a small pilot project, it illustrates value of health information in engaging school-age students in meaningful character- and leadership-skills-building community service. Drawing on this success, THLP enrolled thirty-five students in 2013/14, thus increasing its reach and diversity, but also facing potential growth pains. The authors plan to continue evaluating the program, documenting the successes and challenges of this growth.

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