

ORIGINAL RESEARCH

Dance for health: The importance of community engagement and project sustainability

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ABSTRACT

Dance for Health is an intergenerational approach to increasing activity, reducing the risk of obesity, and improving health awareness in an urban community. The purpose of this research was to explore the impact of community engagement in Dance for Health on graduate nurse practitioner (NP) students and inner city high school (HS) students, and to describe the factors that impact project sustainability. Qualitative surveys were administered to all students to explore their experience with community engagement. Attendance was taken and quantitative surveys were administered to community participants to evaluate the factors impacting sustainability of the intervention. We deduced the following themes from the student surveys: 1) Intergenerational togetherness, 2) Positive environment, 3) Increased awareness, 4) HS student leaders, 5) Health careers exposure for HS students, 6) Community exposure for NP students, 7) Rewarding collaboration. Eighty-eight percent of community participants continued to attend the events two months after the University involvement ceased. Community participants most commonly responded that they attended the events because it was good exercise, fun, safe, and made them "feel good". Students who were involved stated that engagement in a community-driven, culturally relevant intervention enriched their education and leadership skills. To increase this kind of activity and improve community health overtime, universities must promote sustainability of their interventions by partnering with communities to understand their goals and priorities, and providing a culturally relevant, positive environment for physical activity and education.

Key Words: Program sustainability, Public health, Exercise, Dancing, Mentors

1. INTRODUCTION

Obesity is an increasingly common public health issue for many of the 1.5 million residents in Philadelphia, Pennsylvania.^[1] Approximately 70% of the adults and 41% of the youth are overweight or obese, with 25% of youth participating in physical activity less than once a week.^[1] Children in high risk, vulnerable populations may lack knowledge of nutrition and physical fitness.^[2] One evolving method of addressing complex health problems such as obesity is community-based participatory research (CBPR). CBPR involves collaborating with communities to identify and ad-

dress local concerns.^[3] CBPR extends beyond traditional research methods to focus on building relationships between academic and community partners to develop mutually beneficial community and research interventions.^[4] However, public health programs have only proven to be beneficial to communities over time if the community is able to sustain the initiatives.^[5] There are numerous barriers associated with sustaining relationships and commitments to community programs, such as lack of resources and challenges in maintaining morale.^[6] Academic partners play a key role in catalyzing change in a community, but it is the engage-

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ment of community members that yields a sustainable change over time.^[3]

Driven by the Affordable Care Act, healthcare is evolving towards care coordination across settings.^[7] Additionally, the United States healthcare system is shifting its focus towards preventive health, through clinical and community preventive services.^[8] As healthcare evolves to emphasize preventive care and public health initiatives, there will be increasing efforts to promote community-based health initiatives. Dance is an enjoyable, low cost, and easily accessible approach to activity that can be used in community and home settings. It is a culturally relevant activity that has been used to reduce the risk of obesity among low-income or sedentary African American women.^[9,10] Dance is an effective therapy for improving depression, disability, and dysfunction in older adults, as well as enhancing well-being among healthy individuals.^[10,11] Adolescents participating in dance interventions have higher self-reported health ratings than those who do not.^[12] Children have been reported to greatly enjoy dance activities and to be excited to incorporate dance into their personal lives at home.^[13] Utilizing peer educators has been a highly successful approach to addressing community health issues.^[14] For programs to continue to produce positive outcomes and improve community health in the long run, they need to be community-led and sustainable without dependence on university support.

The Dance for Health program is an intergenerational and innovative initiative for increasing activity and improving fitness for children, adults, and families in inner city recreation centers.^[15] Community members catalyzed the development of Dance for Health, as the program was developed based on surveys and focus groups with students from local schools and their families.^[13] Dance for Health provides line dance events, led by a community dance instructor, and a healthy meal. These events offer an opportunity for community members to increase their activity and learn strategies for healthy lifestyles. After participating, adult women weighed significantly less and reported enjoying the activity.^[13] Dance for Health includes a partnership between nurse practitioner (NP) students at a university in Philadelphia and inner city high school (HS) students. At each event, the NP and HS students measure the participants' weights, heart rates, pedometer steps, perceived exertion and levels of enjoyment. The NP students serve as mentors for the HS students by educating and empowering them as leaders within the community. The NP students educate the HS students on health topics such as healthy eating and strategies to reduce the risk of obesity and diabetes; the HS students share their experience related to living in the community. This partnership allows the HS students to develop leadership skills and broaden their knowl-

edge regarding health improvement, event organization, and data collection. The NP students are offered the unique opportunity to engage with members of the West Philadelphia community and serve as mentors.^[13] There is a need for further studies on the formation of community partnerships and their role in addressing community health concerns.^[10] The purpose of this study was to assess the role of community engagement and sustainability in Dance for Health.

1.1 Study phases

The first phase of the program was the student-led Dance for Health events with University support. The second phase was the continuation of Dance for Health when the HS and NP students were no longer engaged. This analysis will focus on the impact of community engagement on students in the first phase and the factors impacting sustainability in the second phase.

1.2 Objectives

- (1) To explore the impact of community engagement on graduate nursing students and inner city high school students.
- (2) To describe the factors that impact project sustainability of a community-based health initiative.

2. METHODS

2.1 Recruitment

NP students who were enrolled in an academically-based community service nursing course were recruited. HS students were recruited as part of a health and leadership afterschool program. Participants attending Dance for Health were provided information about the study. Interested participants were recruited and provided written consent.

2.2 Data collection

Data were collected at a recreation center immediately after Dance for Health events, from January 2015 to April 2015.

To evaluate the impact of community engagement, surveys were collected evaluating HS and NP student leaders' perceptions. Qualitative surveys were administered to HS and NP students querying their experience in Dance for Health. HS and NP students were asked to describe their experience regarding the impact of Dance for Health on the community, the collaboration between themselves and community participants, and the impact of the experience on themselves. The open-ended surveys were developed as a result of discussions with the students from local schools and themes from prior research with this population.^[13]

To evaluate project sustainability, the number of participants at each event was tracked throughout the student-run and

community-run events. In addition, data were collected through a survey evaluating the rationale for attendance at a Dance for Health event that took place approximately two months after the last HS and NP student-run event. The sustainability survey was developed to evaluate factors impacting the community events when they are community-led, without the attendance of the NP and HS students. The survey was constructed based on data collection measures used in previous Dance for Health studies, and was designed to be applicable to all ages.^[13]

2.3 Data analysis

The qualitative survey data from the HS and NP students were analyzed based on the constant comparative method. Survey responses were read and coded by the principal investigator (J.F.). The codes were reviewed and grouped together to form themes. The analyst then returned to the response data to confirm the frequency of codes and confirm themes.^[16] Frequencies were computed to analyze the quantitative data for the sustainability surveys.

2.4 Ethical consideration

The proposal was reviewed and approved by the Institutional Review Board of the University of Pennsylvania. The aims and goals of the study were explained to community participants, as well an emphasis that participation was voluntary, and consent was obtained.

3. RESULTS

3.1 Recruitment

Twenty-two students engaged in Dance for Health were recruited: 15 NP students and 7 HS students. Of the HS students, the majority were female. Most of the NP students were female. The Dance for Health participants ranged in age from 8 years to 73 years ($m = 35$ yr). Of the 22 community participants recruited, 77% ($n = 17$) were female.

3.2 Community engagement

The following themes related to Dance for Health and the role of community engagement were derived from the study of the NP and HS students.

3.2.1 Intergenerational togetherness

HS and NP students alike emphasized the power of Dance for Health to unite a community. Dance for Health promoted a feeling of togetherness and allowed the community participants to unite to support one another in living healthier lifestyles. These events “help bring the community together” (HS student). Events promoted a sense of community that extended through generations. By encouraging family participation and attendance by community participants of all ages,

these events “united generations” (NP student) and allowed the HS students to “become more adept at working with older adults” (NP student).

3.2.2 Positive environment

Dance for Health provided a safe, comfortable and free environment that “brings community members out [of their homes] and initiates socialization” (NP student). These events increased activity in “a safe place for the community members that is rooted in wellness and encourages fun physical activity” (NP student). As a “fun way to exercise with others” (HS student), the events illustrated that being healthy can be enjoyable and social.

3.2.3 Increased awareness

Dance for Health improved health awareness by bringing community participants together and providing education in a positive environment. The program “encouraged [community members] to improve their health in a way that takes into consideration their lifestyle and personal preferences” (NP student). The events were social gatherings, with “secondary gains of exercise and health promotion” (NP student). Dance for Health served as a forum for at-risk community participants to learn more about healthy eating, diabetes risk and prevention, and increased awareness about obesity. The events impacted the community by “helping people work out the way they want to and informing them about health” (HS student).

3.2.4 High school student leaders

Dance for Health empowered HS students to be leaders in their community. Through the NP and HS student partnership, the HS students had the opportunity to learn and then serve as educators and leaders in their community. By not only educating the HS students about important health issues, but also preparing them to educate others, the HS students served as a resource for community participants and leaders in promoting health awareness. HS students described how they are better leaders as a result of Dance for Health because they can be more involved in their communities and acquire “hands-on experience in the health field” (HS student). Similarly, NP students described this feeling of leadership and empowerment within the HS students, explaining that the HS students became “more prominent members in the community” (NP student). By co-leading these events, HS students experienced “how their involvement helps others adopt healthy habits” (NP student).

“Dance for Health made me a better leader by being able to come into a situation and make a good outcome. When someone has a problem, I can help and make it better.” – HS student

3.2.5 Health careers exposure for high school students

Dance for Health also provided exposure for the HS students to careers in healthcare. The HS students described their appreciation of learning basic healthcare skills, such as taking heart rates, weights, and heights, and understanding body mass index. They were “very motivated to become various forms of future health educators, and it’s very rewarding for them to take on this role while they are still in high school” (NP student). The NP students served as mentors for the HS students; this mentorship sparked the HS students’ interest in health fields and health awareness promotion. It also demonstrated to HS students that “research can be engaging and fun for participants. It gets them involved in community service and an academic project.” (NP student)

“[Dance for Health] has made me want to be a nurse one day.” –HS student

3.2.6 Community exposure for nurse practitioner students

Many NP students described how Dance for Health and the collaboration with the HS students increased their understanding of patients and their communities. To illustrate, “when a family says they aren’t eating healthy, I [now] have a broader view. Maybe they don’t have access to [healthy foods], not that they aren’t trying. We don’t usually see where our patients live and what type of opportunities they have available” (NP student). NP students explained that working with HS students provided insight into barriers to being healthy, and allowed them to better understand the patients they see in the hospital and outpatient setting. A NP student described how this experience “opened my eyes to the various aspects that influence a patient’s health and will challenge me to consider alternative ways to encourage a patient to strive for a healthy lifestyle” (NP student). Collaborating with the HS students was “enlightening because they brought up issues of discrimination and lack of access/money in honest conversation” (NP student).

“As healthcare providers, we will interact with patients

from various communities. To provide adequate care, we need to understand where patients come from, the resources available to them, and the support system surrounding them” (NP student).

3.2.7 Rewarding collaboration

The partnership between the NP students and the HS students was rewarding and beneficial for both groups. HS students expressed that co-leading these events allowed them to use their knowledge to “make a difference” (HS students). NP students augmented that concept stating, “[it’s] inspiring to meet such young people so motivated to make changes in and outside of their community” (NP student). A NP student described “how driven [HS] students are to accomplish their goals”. Many NP and HS students explained that being a part of this project was rewarding and gave them the chance to positively impact the community. NP students were impressed with the level of motivation the HS students displayed. A NP student explained how she “engaged in conversations with several different [HS] students about their future and how they want to make a difference” (NP student).

3.3 Project sustainability

Numbers of participants at the events fluctuated throughout the duration of the program; 26 participants attended the last student-run event. Eighty-eight percent of participants ($n = 23$) attended the event in the last week in April, when students no longer attended. Potential barriers to attendance included weather and miscommunications regarding the location.

Table 1 depicts the complete survey results regarding community participants’ rationale for continuing to attend the events. All of the study participants responded that they came to Dance for Health because it was good exercise, fun, safe, and makes them “feel good”. The least common reason for attending Dance for Health, with 73% of participants responding, was the proximity of the event location to home.

Table 1. Community participant responses to sustainability survey

| Sustainability Items | Responses | | | | |
|---|-----------|-----|----|----|-----------|
| | Yes | | No | | Sometimes |
| | N | % | N | % | |
| I come to Dance for Health because it is good exercise | 22 | 100 | 0 | 0 | N/A |
| I come to Dance for Health because it is fun | 22 | 100 | 0 | 0 | N/A |
| I come to Dance for Health because the location is close to home | 16 | 73 | 6 | 27 | N/A |
| I come to Dance for Health because it makes me feel good | 22 | 100 | 0 | 0 | N/A |
| I come to Dance for Health because my friends/family come | 21 | 95 | 1 | 5 | N/A |
| I come to Dance for Health because I want to lose weight | 17 | 77 | 5 | 23 | N/A |
| I come to Dance for Health because it is free | 18 | 82 | 4 | 18 | N/A |
| I come to Dance for Health because it is social | 21 | 95 | 1 | 5 | N/A |
| I come to Dance for Health because it is a safe place to exercise | 22 | 100 | 0 | 0 | N/A |
| I dance at home | 14 | 64 | 3 | 14 | 5 |

In addition to the dichotomous survey questions, participants were provided with an open-ended opportunity to address the reason(s) they came to Dance for Health. Answers suggested a range of influential factors, both physical and psychological, including: “to keep cholesterol down”, “to stay healthy and not have problems with my body”, “because I love it”, “release some stress and have a good exercise”, “because I love to dance, exercise, and socialize”.

4. DISCUSSION

Dance for Health is an intergenerational approach to improving fitness and activity in an urban community. The events are student-led through a partnership between graduate nurse practitioner students and inner city high school students. At the end of the student-led events, the events continue with community leadership. This analysis focused on exploring the impact of community engagement on the students and identifying the factors that impacted the sustainability of these events. Our findings demonstrated that Dance for Health had a positive impact on the HS and NP students involved, and was sustainable due to the enjoyable, safe, and family-oriented environment.

Community engagement involves collaboration between faculty, community partners, staff, and/or students on a research, teaching, or service activity, which is mutually beneficial to the partnership members and the public.^[17] Lay educators, such as the HS students, may be an acceptable and feasible method of delivering health education to communities.^[18] Furthermore, Dance for Health provided an educational, interactive environment that benefitted the students themselves. The HS students explained their heightened interest in careers in healthcare and their developing leadership skills as a result of their participation in Dance for Health. Student engagement in research and practice is an increasingly important prerequisite for success, particularly in underserved, vulnerable communities.^[19]

Our findings indicated that community engagement instilled in the NP students a deeper understanding of their patients' lives and barriers to healthy living. Engaging nurses in research and community collaboration can enrich the research and promote a productive learning experience.^[13] The NP students will be better prepared to care for their patients and families across settings as a result of their engagement with individuals, families, and communities. They will have an improved understanding of the barriers patients face. Increasing healthcare professionals' knowledge of the social determinants of health may contribute to improved health and healthcare for undeserved communities.^[20] Engagement in the community, and observing the social determinants of health, allowed NP students to better understand the life ex-

periences of their patients outside of the walls of the hospital. After the cessation of student-led events, the community-led events continued. Eighty-eight percent of participants continued to attend the community-led events, indicating that Dance for Health was sustainable beyond the student-led period. Many participants emphasized the social and enjoyable aspects of Dance for Health, which is consistent with literature that supports the preference for social support and family inventions among African Americans.^[21] Unsafe neighborhoods may lead to reduced opportunities for physical activity for children and an increased risk for obesity, particularly among African Americans in urban areas.^[22,23] Dance for Health was embraced by the community, with all of the participants indicating that they attended because it was enjoyable and provided a safe environment for physical activity. This finding is a major strength of this program. The importance of sustainable interventions is clear, although a number of components of community programs have not been shown to be sustainable.^[24,25] We recommend healthcare professionals promote enjoyment, socialization, healthy benefits, and safety in future community interventions to promote long-term sustainability of the events.

A primary limitation of the study was the small number of participants. Second, we were only able to track attendance at the community-led events two months after the student-led events, inhibiting our ability to evaluate the sustainability of the events after a 6-month and 1-year period. We recommend future studies evaluate the factors impacting sustainability and community engagement with a larger sample to determine long-run outcomes.

5. CONCLUSION

“Community engagement is being an active participant in the community to improve health, diet, and resources. It's about going into the community, identifying needs, strengths and barriers of that community, and working with the community to make a positive change” (NP student). The Dance for Health events catalyze intergenerational physical activity, where NP students can become integrated into the community to better understand needs and barriers, and encourage health awareness in a friendly environment. This engagement promotes a community-driven, culturally relevant intervention and enriches the education and leadership skills of HS and NP students. Community participants continue to attend the events beyond the student-led period, indicating the importance of developing enjoyable and sustainable interventions. University faculty and students must promote sustainability of their community-based interventions by engaging communities to understand their preferences, to improve community health in the long run.

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CONFLICTS OF INTEREST DISCLOSURE

The authors declare that there is no conflict of interest.

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