
Facilitating Education, Advocacy, and Empowerment: Community Health Fairs can Increase Perceived Competence Among Health Education Students

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Abstract

This study examined the impact of planning and implementing a community health fair on perceived competence in the seven areas of responsibility among predominantly Hispanic health education students at a minority-serving university on the U.S./Mexico border. The study highlights the impact of facilitational advocacy on perceived competence among health education students, and serves as an example of how a community health fair can facilitate education, advocacy, and empowerment within a priority population. Students completed The Self Assessment for Health Educators – Perceived Competence from the National Commission for Health Education Credentialing. Perceived student competence significantly improved in six of the seven responsibility areas. Evaluation was the only responsibility area in which a significant increase in perceived competence was not noted.

Introduction

Health fairs can be viewed as advocacy from two perspectives: first, as health advocacy for the priority population; and second, as advocacy for the health education profession. The World Health Organization (WHO) emphasizes the importance of conducting health promotion within communities and describes such activities as “creative and effective ways of improving health and quality of life” (WHO, 2008). The National Commission for Health Education Credentialing (NCHEC) highlights the need to “promote the health education profession individually and collectively” as one of the competencies in Area of Responsibility VII: Communicate and Advocate for Health and Health Education (NCHEC, 2007).

Health educators advocate for increased health equity while working with disadvantaged, under-represented, and/or marginalized groups. In turn, these communities empower themselves to improve their own health outcomes. This process has been described as facilitational advocacy (Carlisle, 2000). The present study highlights the impact of such facilitational advocacy on perceived competence among health education students, and serves as an example of how a community health fair can facilitate education, advocacy, and empowerment within a priority population.

Background

According to the Hispanic Dental Association (HDA), incorporating important cultural values into health programs and interventions designed for Hispanic communities can improve oral health outcomes. In particular, the concept of *familismo* has been described as “collective loyalty to the extended family that outranks the needs of the individual” (Flores, 2000, p. 16). Capitalizing on normative cultural values such as familismo within the context of health fairs may facilitate the adaptation of positive health behaviors within Hispanic communities; the diffusion of innovations theory (see Rogers, 1983) can thus be revisited as a platform from which to build culturally appropriate and facilitational models of advocacy.

Specifically defined, health fairs are outreach events which are part of a strategically planned community health intervention that can be tailored to address the needs of a specific segment of a community and increase awareness of a featured health issue (Goldman & Schmalz, 2004). Successful health fairs have been found to include education and screening. They are one way to provide accurate information to communities regarding pressing health issues and concerns in a familiar, non-threatening, and even festive environment (Bean & Hutchinson, 1996). They also can increase organizational visibility within a community, while examining health behaviors, and facilitating positive lifestyle changes (Jennings-Sanders, 2003).

A health fair is a cost-effective strategy utilized by health educators to increase awareness in and disseminate health information to a variety of priority populations. Historically, other professions in health, such as nursing, have included health fairs as a routine part of their teaching methodology (Fournier, Harea, Ardalan, & Sobin, 1999). Health fairs require students to be active learners, and in turn, students gain valuable skills. Students have self-reported increases in competency and self-confidence following planning and implementation of health fairs (Levy & Lehna, 2002).

Health fairs have also served as teaching methodology for health education students and can address several of the areas of responsibility of health educators. Students can hone their skills through participation in the planning, implementation, and evaluation of a health fair (Fournier et al., 1999). They are afforded the opportunity to interface

with community members and practice their individual delivery strategies. Through this type of participation, students can network with professionals in the field and cultivate relationships that could potentially enhance their future career prospects. Moreover, health fairs provide an opportunity for students to build advocacy skills in several key areas: communication techniques, promotion of the profession, and refinement of individual abilities and expertise.

Dental care was determined to be a priority and a topic of interest based on data collected among residents of *colonias* in four catchment areas in El Paso, Texas, during a needs assessment as part of the Community Outreach Core of a National Institutes of Health (NIH) R24 Export grant through the Center on Minority Health and Health Disparities. A *colonia* is a Spanish term for neighborhood or community. In Texas, *colonia* refers to an unincorporated settlement that may lack basic water and sewer systems, paved roads, and safe and sanitary housing (Federal Reserve Bank of Dallas [FRBD], 2006).

Research has found a connection between oral diseases and major systemic diseases such as heart disease, stroke, or diabetes (Piero, 2005). Children as young as two years of age can begin to have dental problems; therefore, it is important that oral health promotion and disease prevention be targeted at all ages (Mouradian, 2001). Oral health education and promotion is an approach utilized to prevent oral diseases, and health education programs have been shown to improve oral health behaviors and reduce plaque levels at 6-months follow-up (Watt & Marinho, 2005).

The diagnosis of dental/oral health conditions and provision of treatment was beyond the scope and budget of this grant; however, increasing awareness and knowledge regarding oral/dental health and related area services were determined to be viable and potentially effective strategies. In addition, respondents of the same needs assessment reported health fairs were a preferred method to receive health promotion and education. The purpose of this study was to examine the impact of planning and implementing a community dental health fair on perceived competence in the areas of responsibility for health educators among predominately Hispanic health education students at a university on the U.S./Mexico border. Specifically, participants aimed to promote oral health among the priority population, and empower health fair participants to improve individual, family, and community health outcomes. Consequently, students involved in this study were engaged in and practiced facilitational advocacy as a result of their health fair planning, implementation, and evaluation.

Method

Participants

Participants in this study included students enrolled in

an upper-division community health course at a minority serving institution on the US/Mexico border. Students enrolled in the course were either majoring or minoring in Health Promotion. A total of thirty-two students were enrolled in this class. This particular class consisted of students in their sophomore ($n=1$), junior ($n=6$), senior ($n=24$), and other ($n=1$) year in college. One participant was lost to attrition. Approximately 80% of the students at this university are Hispanic (including 10% Mexican nationals); this class was ethnically representative of the student body. Students were mainly of Hispanic origin ($n=26$) (Table 1). Most (67%) students reported working while attending the university ($n=21$) (Table 2).

Instrument

A questionnaire that consisted of a demographic profile and the Self Assessment for Health Educators – Perceived Competence (SAHE) from NCHEC was administered to students prior to and after participation in the community health fair (NCHEC, 2000). The demographic profile consisted of the following variables: college classification (junior, senior, etc.), GPA, job status, race/ethnicity, and language spoken. The second part of the instrument queried respondents on the perceived level of competence in the seven responsibility areas with 79 competency statements. Students were asked to rank these perceived competency statements on a 1 to 4 scale with 1 being not competent and 4 being very competent.

Setting

The participants attended a university in the Southwest US that is a designated minority-serving institution. A recent estimate placed the Hispanic density of the El Paso Metropolitan Statistical Area at 81.4% (U.S. Census, 2006). In 2004, the 16.2% poverty rate in Texas exceeded the national average of 12.7%; the 24.6% poverty rate for El Paso County is over twice the national average (U.S. Census, 2008). Given area demographics, it is not surprising that most of the students reported working while attending school.

Procedure

The research team prioritized the need for a community health fair specifically designed to provide education and promotion of dental and oral health and related issues. Hispanic participants of low socioeconomic status who may not have access to regular dental services residing in the *colonias* on the U.S./Mexico border were the prioritized population. Issues such as brushing and flossing, oral cancer, cavities, water fluoridation, tobacco, nutrition, and other related topics were addressed. The dental fair was held at

Table 1. Ethnicity and Grade Point Average of Participants ($n = 32$)

<i>Ethnicity</i>	<i>n</i>	<i>(%)</i>
Chicana	1	3.1
Mexican	4	12.5
Mexican-American	16	50.0
Spanish/Latin/Hispanic American	5	15.6
White	2	6.3
Other	4	12.5
<i>Grade Point Average*</i>	<i>n</i>	<i>Mean</i>
Overall	29	3.13
Major	28	3.27
* Based on a 4.00 scale		

Table 2. Working status of participants ($n = 31$)

<i>Employment status</i>	<i>n</i>	<i>(%)</i>
Part-time	13	41.9
Full-time	7	22.5
Other	1	3.2
Does not work	10	32.3

the local high school in the *colonia* of Montana Vista Community, which is on the US/Mexico border with over 8000 residents. Currently, Texas has the largest *colonia* population (FRBD, 2006).

Participating students self-selected groups based on interest in the aforementioned topics. An assignment sheet with delineated expectations and guidelines was distributed. Students worked throughout the course of a fifteen-week semester to develop a project with literature, activities, visual aids, and educational incentives in Spanish and English to be displayed at a booth at the dental health fair. A coordination group was also formed to administer the overall effort, recruit relevant area agencies to participate, and address logistical concerns. Specifically, they developed flyers, contacted the agencies and organization, solicited donations, distributed flyers around the city, and coordi-

nated the groups. The students worked independently, and were also provided blocks of course time throughout the semester to develop their projects.

Before the actual dental fair, student groups presented the content of their projects to two practicing Certified Health Education Specialists from the Office of Tobacco Prevention and Control in the Texas Department of State Health Services (formerly the Texas Department of Health). These experienced health educators were also dental hygienists and experts in oral/dental health and health education delivery strategies. These health educators provided feedback and input to the student groups for the improvement and refinement of their projects.

The study employed a pre/post test survey design and sampled 31 participants. A triangulated methodology was used to analyze the data. Quantitative methods were employed to analyze the data, and qualitative methodologies were used to identify themes and trends present in the narrative text. Descriptive statistics (means and frequencies) were used to provide a participant profile. Independent t-tests were run to compare the post versus pre test results in mean competency (Responsibilities 1-7 and the Overall mean). The alpha level was set at ≥ 0.05 . The effects of demographic variables Work (yes versus no) and Major Grade Point Average were analyzed on mean competency for responsibilities 1-7 and the grand mean, using Multivariate Analysis of Variance and Wilks' Lambda statistic.

Results

Students' involvement in the community health fair resulted in a significant gain in perceived confidence in six of the seven areas of responsibility of a health educator, as well as overall competency levels (Table 3). The only area that did not significantly increase was perceived competence in the area of evaluation. Neither *Work* (yes versus no) nor *Major Grade Point Average* had a significant effect on mean competency for responsibilities 1-7 or the grand mean. Only *Major Grade Point Average* was included in the analysis since it was significantly correlated with overall *Grade Point Average* (correlation coefficient = 0.5789, $p = 0.00$).

In addition to assessing the SAHE, students were asked to write their opinion, feelings, or reflections on the community health fair. Twenty of the thirty-two students elected to write comments. Qualitative analyses indicated that students became aware of the skills health educators need in order to implement a health fair, and expressed an increase in competence of these skills. Students also wrote statements concerning the need for health educators to have communication, organization, and leadership skills. A representative quote indicated that, *"Participating in the dental health fair, I learned that it is important to keep in mind and not forget who we are trying to educate. The community we are trying to help determines what type of program we develop and implement. It also determines how we convey that information. I also learned that it takes a whole lot of people to make a program like this a success, it is by no means an individual effort."*

Students also recognized the uniqueness of the border and the importance of language in order to convey information to this population. One student illustrated this point by stating, *"I learned a lot about my inadequacies not knowing Spanish...It was especially frustrating because I knew what people were asking, but I can't speak Spanish; I can*

only reply in English." Additionally, students were amazed by the lack of dental knowledge in the community. As a result, students were able to educate and inform participants about proper techniques and general information to improve oral health. One student wrote, *"All in all it was a rewarding experience, especially when someone had a fallacy and I was able to show them."* Overall, students felt that planning and implementing the community health fair was a useful learning experience. Many students expressed an increase in self-confidence and the following statement represents the comments written by the students: *"I feel the dental fair has made me more confident in delivering health education to individuals."*

Discussion

Perceived student competence improved in six of the seven responsibility areas as a result of participating in the planning and implementation of the community dental health fair. Evaluation was the only responsibility area in which a significant increase in perceived competence was not noted. This would stand to reason. The community health course in which the students were enrolled is one of the first upper division courses that they take. Most students enrolled in this course had not yet taken required curriculum courses such as statistics, program planning and evaluation, or research design methodology; program evaluation was not a major component of this project. Future efforts should employ more rigorous evaluation methods to enhance the students' evaluative experience and skill level.

In addition, an analysis of student advocacy skills gained as a result of health fair participation should be conducted from an individual, professional, and community perspective. Specifically, students should evaluate their own ability to communicate health information and the efficacy of the overall health promotion endeavor on their own confidence to advocate for the priority population through the improvement and refinement of future health promotion interventions, initiating policy changes, or attracting focus to a health issue of concern.

Students commented on the usefulness of the health fair as a learning tool. As a result of designing, organizing, and implementing the community health fair, students' skills improved as well as their perceived competence and confidence as health educators. The health fair also exposed the student to the diversity of this unique border population. Students realized the importance of being able to design a community health fair tailored to meet the needs of this U.S./Mexico border population. Not only were students made aware of the need to recognize the population characteristics, they were also expected to be the experts in dental health and to be able to communicate effectively this information to their audience in a culturally appropriate and sensitive manner.

Table 3. Differences in Students' Perceived Competence Pre and Post Community Health Fair

<i>Responsibility</i>	<i>Difference in Competency Achieved Pre-Fair to Post-Fair (mean)</i>	<i>t-value, sig., p value</i>
1. Assessing Individual and Community Needs	4.16/5.30	$t(32) = 4.44, p < .001$
2. Planning Effective Programs	7.47/7.66	$t(32) = 5.52, p < .001$
3. Implementing Programs	7.23/9.08	$t(31) = 4.43, p < .001$
4. Evaluating Effectiveness of Programs	3.13/9.19	$t(31) = 1.90, n.s.$
5. Coordinating Provision of Services	4.19/7.58	$t(32) = 3.13, p < .01$
6. Resource Person	5.66/6.98	$t(32) = 4.59, p < .001$
7. Communicating Health needs, concerns, and resources	4.50/6.13	$t(32) = 4.15, p < .001$
8. Overall Responsibility of Services	36.43/42.72	$t(30) = 4.67, p < .001$

Addressing oral health in Hispanic communities is of paramount importance; Hispanics in the U.S. have nearly twice the rate of untreated oral disease (40%) compared with non-Hispanic whites (24%) (Hispanic Dental Association [HDA], 2008). The Hispanic Dental Association suggests improvement strategies including mobilizing communities around oral health issues, involving community members in research planning and implementation, use of *promotores* (community health workers), and integrating important cultural values into education and intervention programs (HDA, 2008). Each of these strategies can be incorporated into health education curriculums in an effort to promote cultural awareness, competence, and confidence among health professionals.

By consistently acknowledging and incorporating strategies related to advocacy in a multi-sectoral (i.e., inclusive, participatory, and well coordinated) approach (WHO, 2009a), health educators in faculty, professional, and student roles can foster a collaborative and interdisciplinary environment in which advocacy goals, skills, and outcomes are promoted and evaluated.

Based on the results of the SAHE and students comments, health fairs appear to be an effective tool for preparing health educators for their expected roles following graduation. Although health educators have been using health fairs for some time, there is a dearth of published health fair evalua-

tions. Other areas, such as nursing, have been using health fairs as a means to educate their students (Fournier et al., 1999; Maltby, 2006). It is imperative that health educators also begin to evaluate and publish the results of their efforts with an emphasis on advocacy issues. For example, results might include discussions of how students perceive their own advocacy skills development, the impact of a health fair on community mobilization around a specific health issue, and an analysis of the health outcomes achieved among fair or program participants longitudinally. Although long-term health behavior change as a result of a short-term program or intervention can be difficult to assess, evaluators can assess increases in behavior change contemplation as a program outcome (Rees & Goldsmith, 2003). This type of evaluative process can highlight the impact of health fairs on advocacy at all levels as well as on community health and perceived student competence.

Limitations

Other factors may have influenced the increase in students' perceived competence. The increase may not be solely attributed to participation in the community health fair. Threats to internal validity, such as history and maturation, could possibly have affected the results. This study was conducted over a fifteen week semester and perceived

student competence may have been influenced by knowledge gained as a result of other health promotion courses in which the students were enrolled, participation in other course projects, participating in events sponsored by Eta Sigma Gamma, and/or community health volunteerism.

Summary and Conclusions

The results of this study indicate that participation in the planning and implementation of a community health fair resulted in increased perceived competence in six of the seven responsibility areas. Health fairs are common interventions staged by health educators and are often utilized as teaching tools for health educators-in-training. More rigorous evidence based teaching practice in health education should be explored. As health education instructors, we often employ pedagogical methodologies that experience and instinct indicate are productive and useful for health education students. We must rigorously evaluate these methodologies empirically to determine if they are sound and truly beneficial in order to provide the optimal preparation for our health education students. Health educators should strive to incorporate a multi-sectoral approach to their advocacy efforts in an effort to capitalize on the power of facilitational advocacy. Increasing student competence in terms of personal, professional, and community advocacy should be prioritized in classroom and practicum settings.

It is currently estimated that Hispanics will become the largest ethnic minority group in the U.S. early in the 21st century (U.S. Census, 2000). In 2000, 12.5% of the U.S. population (35 million persons) was Hispanic, and people of Mexican origin were its largest (58.4%) subgroup (U.S. Census, 2000). The Hispanic population of Texas is overwhelmingly of Mexican origin. Thus, studying the effectiveness of various teaching methodologies in the preparation of health educators is of paramount importance. It is necessary to adequately prepare the future public health education workforce to address the pressing needs of this unique U.S./Mexico region specifically, and reduce health disparities among Hispanics in the United States generally. Fostering advocacy skills and incorporating advocacy training into health education curriculums can help promote health equity in prioritized populations.

The use of a health fair to disseminate information regarding oral health behaviors was considered a success in this population. Increases were seen in knowledge attitudes, beliefs, and future intentions among the low-income Hispanic female colonia residents who attended the health fair (Hanson, Thompson & Huereque, 2008). Universities, professional credentialing organizations, and individual health educators have been encouraged to collaborate with communities to both improve health outcomes and advocate for better health policy (Chapman, 2004). Successful proponents

of community oral health must be knowledgeable, outspoken, and resolute in their advocacy efforts (Bresch, Luke, McKinnon, Moss, Pritchard, et al., 2006). Community Health Fairs can facilitate professional competence among health educators, and can empower prioritized populations to advocate for their own health needs at individual, family, and community levels. Incorporating facilitational advocacy into health education and promotion programs within communities on the U.S. – Mexico border is a critical component of public health efforts to improve oral health in the priority population. Socio-cultural determinants of health such as low education and high poverty levels are known to increase the risk of oral disease (WHO, 2009b); health educators can develop, refine, and use their professional advocacy skills to foster facilitational advocacy in the communities in which they serve.

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