

Our Campus, Our Health: A Model for Undergraduate Health Education Research Engagement

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ABSTRACT

Research experience prepares undergraduate students for graduate school, a competitive job market, and their future as the next generation of leaders in public health education. This article describes a model, Our Campus, Our Health, to engage undergraduate students in the delivery of a college health behavior assessment. Through this project, students oversee data analysis, disseminate the findings to stakeholders, and use health communication strategies to promote health behavior change. The project showcases health education as an exciting career choice, provides a valuable resource for the entire campus, and student researchers gain hands-on experience in Certified Health Education Specialist (CHES) responsibilities.

Keywords: undergraduate research, health education, student engagement

INTRODUCTION

The United States Bureau of Labor Statistics estimates a 37% increase in demand for health education specialists by the year 2020, which translates to a promising career outlook for emerging health professionals (U.S. Bureau of

Labor Statistics, 2012). The growth projections demonstrate the need for higher education institutions to prepare undergraduate students with the skill set to meet the needs of an evolving health care system and diverse population to promote wellness. Research experience is essential to undergraduate health

education students to effectively prepare them for a competitive job market and their future as the next generation of researchers and leaders in public health. Undergraduate research students report a number of benefits to participating in research programs including improvement in analytical thinking, better communication skills, and the ability to integrate theory into practice (Petrella & Jung, 2008). The skills learned through research experience are transferable beyond the academic world and are critical to the development of emerging health education leaders, practitioners, and researchers.

Barriers for faculty to effectively engage undergraduate students in research are myriad. Undergraduate students, for the most part, are unfamiliar with research practices which require extensive training from the faculty member already burdened with teaching, research, and service demands (Tompkins, Rogers, & Cohen, 2009). Faculty mentoring is often directed to graduate students who offer the best opportunity to advance faculty research agendas. The lack of scholarships for undergraduate research is another barrier as the students are often unfunded and work on a voluntary basis. For instance, undergraduate students volunteer to participate in research projects and there is evidence students will attend to more essential demands of work and course assignments before devoting time to voluntary research (Henkel, 2006). Regardless of the barriers, it is worthwhile to involve undergraduates in meaningful research - both for the student and the faculty member. Faculty members have an inquisitive nature, by way of their chosen profession, and have an opportunity beyond the classroom to pass on that curiosity about the world to their undergraduate research students. "As a consequence of their undergraduate research experiences, student researchers go on to develop qualitatively better research projects, and are better prepared for graduate school and employment" (Henkel, 2006, p. 506).

The purpose of this article is to describe the process of engaging undergraduate health education students in research through the development and delivery of a comprehensive health behavior survey.

Teaching Method

With over 21 million students enrolled in colleges across the United States, college

students make-up a significant portion of the population with unique health needs (U.S. Department of Education, 2012). Surveillance data of health risk behaviors provide college health researchers and practitioners an opportunity to design targeted health education programs to reduce risky health behaviors and minimize chronic health conditions. The Our Campus, Our Health (OCO) model was developed because funding was not allocated to annually administer the most widely-used college health behavior surveillance instrument, the National College Health Assessment (NCHA) by the American College Health Association.

Our Campus, Our Health: A Student-led Campus Health Assessment is a model to engage undergraduate students in the development and implementation of a college health behavior assessment. With faculty guidance, students oversee data analysis, disseminate the findings to stakeholders, and use health communication strategies to promote health behavior change.

Teaching Procedures

The student research team is recruited from the undergraduate Community Health Education program. Applicants are solicited through classroom visits to the introductory health education course, Foundations of Health Education, and through the program learning management software, Blackboard. Program faculty screen applications and human resource specialists are invited from the community to formally interview the selected applicants. The inclusion of community partners creates a more realistic interview for the applicants and fresh perspective for the lead faculty advisor. The human resources specialists develop a series of behavioral questions for the applicants and evaluate their answers with the same rubric used for their internal hiring process. The lead faculty member on the project serves on the interview panel to answer student questions about the project. After the formal interview, the applicants meet with the veteran student researchers (if applicable) for an informal debrief. After all interviews, the human resource specialist and faculty rank candidates and then consult with the current students for congruency for the top candidates to fill the remaining positions on the four member research team. It should be noted that some student researchers are recruited during their junior year and

dependent on their performance, they may be asked to stay on the team during their senior year. Offers are made from the lead faculty member and those not selected are notified promptly.

Students serve a one-year term and are required to reapply at the end of their term. A team leader is chosen and serves as the liaison between the lead faculty member and the rest of the research team. The IRB process is handled by the lead faculty. The lead faculty conducts a thorough orientation with an overview of the project and reviews research ethics trainings from the IRB office. The team collectively develops objectives for the academic year, assigns roles and develops a timeline for completion. See Figure 1 for a sample timeline.

The research team developed a 108-item web-based health behavior instrument modified from the CDC's Behavioral Risk Factor Surveillance Survey (CDC, 2011). The survey is organized by the leading health indicators established by the American College Health Association; physical activity, overweight and obesity, tobacco use, substance abuse, responsible sexual behavior, mental health, injury and violence, environmental health, and access to healthcare (ACHA, 2013). Once the survey has been created, future research teams primarily focus on editing and improving the instrument. Additionally, the student researchers conduct literature reviews within their assigned health indicator to look for emerging health behaviors specific to the college population (i.e.: texting while driving, hookah, prescription drug use with alcohol). Students search for established psychometrically sound questions to capture the emerging behaviors. If psychometrically sound questions are not available, students contact survey design and content experts to develop questions. The modified survey is piloted tested, undergoes cognitive interviewing, and is reviewed by a panel of content experts.

The survey is delivered over a four-week period through Web-based survey software, Qualtrics, to a random sample of the entire student body, both undergraduate and graduate. The sample population is emailed a week prior to delivery explaining the importance of their participation, the incentives available for their participation, and are encouraged to be on the lookout for the survey in their email. Once

delivered, the sample population receives weekly reminders to participate. At the end of the survey, participants have the option to click to another website to enter their name, phone number, and email to be entered in a drawing to win prizes as appreciation for their time.

During data collection, students are trained to create a data dictionary and are given a brief introduction to basic statistical analysis. After data collection, the dataset is de-identified by the lead faculty and analysis is conducted using SAS 9.1 (The SAS Institute, Cary, NC). It should be noted that the students would benefit from instruction using SPSS given the intuitive nature of the program, however, the lead faculty is proficient in SAS. Data analysis is conducted with the student research team with frequencies for demographic variables; most behavioral questions are also reported as frequencies with some chi-square and t-test analysis between groups.

The research team created an executive summary of findings, a fact sheet, and delivered an annual *State of the Student Health Address* to share the results with students, faculty, administrators, and community stakeholders. The executive summary is provided to local media and available for review on the project website. To accommodate the learning needs of a technology-driven society, a video summarizing the results is also posted on the project website. A series of infographic posters, developed in Adobe Illustrator with the assistance of a graphic designer, are developed for each health indicator. Each poster has three key messages; (1) a statistic from the results (47% of students do not do any form of flexibility training); (2) a local resource (the campus fitness center has three yoga classes every day); and (3) a takeaway message (what are YOU doing to improve our campus health?). The posters are disseminated throughout campus and posted on the project website. In addition to the basic operations described above, the student researchers are encouraged to develop a data-driven campus intervention or research question.

Assessment Procedures and Evaluation Rubric

The student researchers apply competencies from all CHES responsibilities. See Figure 2.

DISCUSSION

The transformational learning opportunity teaches basic research methodology to grow the next generation of health education leaders while offering a valuable resource to the campus and community. While the Our Campus, Our Health project is beneficial to the university and community, it is most valuable to the student researchers involved. The initiative is in the 4th year of implementation and is now supported by internal funding aimed at broadening students' intellectual experience and positively impacting their personal and professional growth. The funding provides scholarships for the students to present their work at local and national conferences.

Our Campus, Our Health fosters interdisciplinary collaboration by engaging students in other majors in dialogue about health behaviors on campus and how individual students can improve their health while inspiring other students to a healthier life. Additionally, the visibility of the Our Campus, Our Health showcases health education as an exciting career choice to undecided underclassmen. The initiative is a win all the way around because risky student health behaviors receive much needed attention and student researchers professionally benefit with leadership experience and robust resume enhancement.

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Figure 1: Sample Timeline

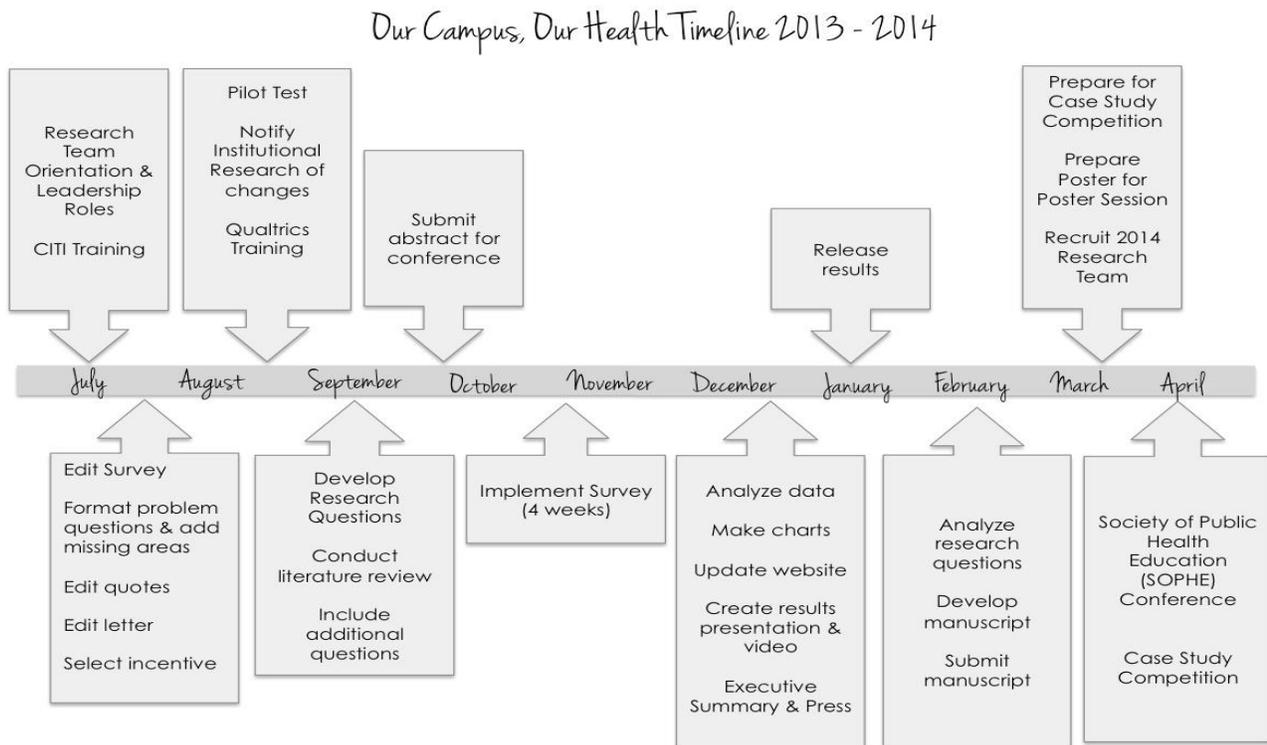


Figure 2: Certified Health Education Specialist (CHES) Responsibilities

CHES Responsibility	Our Campus, Our Health Fulfillment
I- Assess Needs, Assets, and Capacity for Health Education	Students and content experts are identified as resources and stakeholders in the assessment process. The students are trained on data collection, analysis, and ethics after which they design and create the survey instrument. The students are then responsible for interpreting and reporting the assessment findings through the executive summary.
II- Plan Health Education	Through the planning process the researchers are responsible for developing goals, objectives, and a timeline; they are expected to adhere to all legal and ethical standards learned through their ethics training. The program is then pilot tested to ensure implementation proceeds as planned.
III- Implement Health Education	Once the pilot testing is complete the researchers assess, develop, and finalize their plan for implementation. They are responsible for continual monitoring and modification of the implementation process as necessary.
IV- Conduct Evaluation and Research Related to Health Education	The researchers evaluate and synthesize the existing literature on college health behavior risks to determine their areas of focus. Using the information gained through their research they review existing survey instruments, such as the CDC Behavioral Risk Factor Surveillance Survey, and write new items for the instrument they will administer. Data collection is monitored daily through the survey software then analyzed and compared to American College Health Association's national statistics. The researchers are then responsible for communicating their findings to stakeholders.
V- Administer and Manage Health Education	Student researchers are awarded scholarships for their work on the project and these resources must be managed appropriately. Researchers are responsible for communicating with stakeholders and coordinating strategies for program support, they are also involved in developing partnerships to meet program goals which can include incentives for those asked to participate in the survey.
VI- Serve as a Health Education Resource Person	The student researchers serve as health education resources by presenting their findings through classroom presentations, conference poster sessions, and the research project website to the campus and community members. The students are responsible for training and providing assistance to new researchers to achieve program goals.
VII- Communicate and Advocate for Health and Health Education	Researchers address emerging health risks to college students by incorporating the newly identified issues into the survey instrument. The information is disseminated to the priority population through the use of video and posters based on findings. Promotion of the health education profession is achieved through the training and experience the researchers obtain through the program, they act as mentors to others, engage in professional development, and advance the health education profession through their work.