HHS Public Access

Author manuscript

Int J Health Sci Educ. Author manuscript; available in PMC 2015 December 01.

Published in final edited form as:

Int J Health Sci Educ. 2014 October ; 2(2): .

Reflections from an Undergraduate Student Peer Facilitator in the Team Up for Healthy Living School-Based Obesity Prevention Project

Caroline E. Crenshaw,
Physical Therapy, East Tennessee State University

Diana M. Mozen,
Department of Kinesiology, Sport & Recreation Management, College of Education, East Tennesse State University

William T. Dalton III, and
Department of Psychology, East Tennessee State University

Deborah L. Slawson
Department of Community Health, East Tennessee State University

Abstract

Team Up for Healthy Living was a cluster-randomized trial to evaluate a cross-peer school-based obesity prevention program in Southern Appalachia. Undergraduate students from the disciplines of Kinesiology, Nutrition, and Public Health were trained as peer facilitators to deliver an 8-week curriculum in high school *Lifetime Wellness* classes. The focus of the curriculum was on improving diet and physical activity with an additional emphasis on enhancing leadership and communication skills. Control group participants received their regularly scheduled *Lifetime Wellness* curriculum. The current article is about the experiences of an undergraduate kinesiology student participating as a peer-facilitator in the *Team-Up for Healthy Living* trial. A brief overview of the program and peer facilitator training is followed by this students reflections on both personal development and student outcomes.

Keywords

obesity; peer facilitator; prevention; student

Introduction

The prevalence of childhood and adolescent obesity in the United States is approximately 17% (Odgen, Carroll, Kit & Flegal, 2012). According to the Centers for Disease Control and

Address Correspondence to: William T. Dalton III, Ph.D., Department of Psychology, East Tennessee State University, Johnson City, Tennessee, USA, daltonw@etsu.edu.

Prevention (CDC), the obesity rates for children have more than doubled in the past 30 years and have more than tripled for adolescents in the same time frame, putting more and more youth at risk for developing health complications including high cholesterol, high blood pressure, prediabetes, sleep apnea, and bone and joint problems, as well as long-term complications including adult obesity, heart disease, stroke, and type 2 diabetes. In addition to these health complications, obesity puts children and adolescents at risk for developing psychological issues such as poor self-esteem (CDC, 2013). Analysis of prevalence rates from the National Survey of Children's Health showed that childhood obesity rates are higher for those individuals that live in rural areas as compared to those who live in metropolitan areas (Lutfiyya, Lipsky, Wisdom-Behounek & Inpanbutr-Martinkus, 2007). Obesity rates have also been shown to differ based on ethnicity, with those rates for non-Hispanic black children and Hispanic children higher than those of non-Hispanic white children (Odgen et al., 2012).

A variety of intervention methods have been used with both children and adolescents to combat childhood obesity, with the school system being a particularly popular setting for intervention programs to be implemented. Though numerous approaches to prevention have been tested, many of which were successful in reducing excess body weight in participants, the most significant components for a successful intervention program are still unknown (Khambalia, Dickinson, Hardy, Gill, & Baur, 2012). The optimal age for intervention programs to be implemented is also debatable, though most programs focus on children as opposed to adolescents. In an analysis of 32 randomized controlled trials of school-based obesity prevention programs from 2006-2012, intervention programs implemented for children were shown to have a greater effect on body mass index (BMI) scores than those for adolescents, possibly because interventions for children tended to be longer and more comprehensive than those for adolescents (Sobol-Goldberg, Rabinowitz, & Gross, 2013). However, in a systematic review of 64 prevention trials for children, preadolescents, and adolescents, it was found that adolescents generally had more success with these programs, thought to be due to their ability to better grasp intervention material when compared to younger participants (Stice, Shaw, & Marti, 2006).

The high prevalence rates in combination with the health consequences of childhood obesity, as well as the controversy over optimal intervention age and identification of the most important intervention components, highlight the need for additional obesity prevention studies targeting adolescents. This supposition is further supported based on the mixed success found in previous studies suggesting novel approaches may be needed to fit the needs of specific populations (Khambalia, et al., 2012).

One approach that shows potential is the peer facilitator method. According to Myrick and Erney (2000), *Caring and Sharing: Becoming a Peer Facilitator*, which was used as one of the interventionist training manuals in *Team Up for Healthy Living*, peer-led groups have been used in a variety of settings and for a variety of purposes. Peer facilitators are often used in prevention programs but are not limited to just this genre. A peer facilitator is not simply a teacher who happens to be a peer, but is someone whose role is much more extensive. A true peer facilitator is not focused on giving advice or prioritizing problem-solving, but rather is someone who is willing to discuss the thoughts and feelings of an

individual in need. Peer facilitators encourage individuals to examine themselves and find their own answers instead of being told what they should do, and in so doing help individuals to reach a conclusion that best fits their personal needs and desires. Peer facilitators can be used across a variety of age groups, but regardless of age the facilitators still have the same objective of helping individuals experience growth within themselves through encouraging self-searching and reaching responsible and well thought out conclusions (Myrick & Erney, 2000).

Though the effectiveness of many peer education groups is yet to be evaluated, using this method as a means to increase proper nutrition awareness as well as improve nutrition seems to be a promising tool. In fact, the use of community health workers or peer educators to target proper diet and nutrition via the Expanded Food and Nutrition Education Program dates back to the 1960s (Pérez-Escamilla, Hromi-Fiedler, Vega-López, Bermúdez-Millán, & Segura-Pérez, 2008). More recently, Buller and colleagues (1999) using peer facilitators with lower socioeconomic, multicultural labor workers found an improvement in fruit and vegetable intake not only during the intervention (which lasted a total of nine months) but also after a six month follow-up survey after the actual intervention had been completed. Both adolescents and teachers have been found to have high acceptance rates for peer-led groups in the classroom setting. Based on findings from the TEENS Study, a peer-led nutrition education program for adolescents, educational groups have been found to be reasonable for the delivery of nutritional information amongst peers, with over half of participants reporting that peer facilitators were helpful to learning and two thirds of the peer facilitators stating they improved their eating habits because they had been a facilitator (Story, Lytle, Birnbaum, & Perry, 2002).

There has been some research using peer facilitators to increase physical activity. In a study with older adults as peer facilitators for a 35-week workout program targeting older adults, the use of peer facilitators in this setting had a positive effect. Individuals in the intervention group showed a significant improvement in most areas of fitness tested (Dorgo, King, Bader, & Limon, 2011). Similarly, in research with adolescents, youth who had a peer or a friend with whom to interact were more motivated to be engaged in physical activity than those who did not have another individual to motivate them to be active, thus suggesting that the use of peers to increase physical activity levels may be promising (Salvy, *et al*., 2013).

Though there appears to be a growing literature suggesting benefits of peer facilitation, less is known regarding the interpretation of the programs' effects from the peer facilitator's perspective, and the effects the programs have on the peer facilitator's themselves. One example of such a study involved the use of 9^{th} to 11^{th} grade peers in educating other students on HIV/AIDS. The researchers found that the amount that the peer educators were invested in the program was directly related to the outcome of the peers that they were educating. Post intervention, the peer educators were found to be more likely to talk to their parents about the use of alcohol and the occurrences of unwanted sex due to intoxication (Ebreo, Feist-Price, Siewe, & Zimmerman, 2002). Though the overall results of this particular intervention did not favor the use of peer facilitators to present this kind of information, it did shed some light on the effects that an intervention program can have on the facilitators themselves. Similarly, peer facilitators used in a study to help increase

adolescent motivation to participate in physical activities enjoyed being peer facilitators and actually felt that they learned more in a role as a peer facilitator than they would have otherwise (Story, Lytle, Birnbaum, & Perry, 2002).

Given the benefits, or at least the potential benefits, of a peer facilitator approach, and the limited exploration of the peer facilitator's perspective, this communication focuses on a peer facilitator's reflections in an obesity prevention trial in high schools in rural Southern Appalachia. The purpose of the current study is to build on this small body of literature by describing the experiences of an undergraduate kinesiology student participating as a peer facilitator in the *Team Up for Healthy Living* school-based obesity prevention trial. A program overview emphasizing peer facilitator training will be followed by the first author's reflections on personal development regarding the peer facilitator role and student outcomes. A more comprehensive description of the trial may be found elsewhere (i.e., Mozen, Dalton, McKeehan, & Slawson, 2014; Slawson et al; in press).

Methods

Program Overview

Team Up For Healthy Living is a federally grant funded project that was developed at East Tennessee State University (ETSU) by a local team of researchers. Through funding from the National Institute on Minority Health and Health Disparities in the National Institutes of Health, this project addresses obesity prevention in adolescents through a cross-peer intervention. The specific aims of the project were to: a) develop a peer-based health education program focusing on establishing positive peer norms and supportive peer relationships toward healthy eating and physical activity among high school students, b) test the efficacy of the program, and c) explore the mechanisms underlying the program.

The intervention is based on the Theory of Planned Behavior (Ajzen, 1991), which presupposes that human behavior is primarily driven by factors such as attitude, subjective norms, perceived behavior control, and social support. Through influencing these components, the intervention is expected to improve eating behavior, increase physical activity, and lead to healthier body weight among adolescents in Southern Appalachia. The long-term goal of the study is to establish an effective academia-community partnership program to address adolescent obesity disparity in Southern Appalachia.

Using a cluster-randomized trial design, 10 area high schools located in Eastern Tennessee were randomized to intervention or control. Schools were matched based on demographics (school size and number of students enrolled). A cross-peer intervention delivery model formed the basis of program implementation, whereby undergraduate students from the disciplines of Kinesiology, Nutrition, and Public Health were trained as peer facilitators to high school age students. Peer facilitators were trained via didactics, experiential activities, and role plays with feedback by members of the multidisciplinary research team. The peer facilitators served as temporary, paid employees and had the opportunity to earn credit towards their respective degrees if approved by the specific program.

Intervention participants received the eight-week *intervention* curriculum delivered by the peer facilitators in *Lifetime Wellness* classes which were typically taught by a high school teacher. The curriculum, which was developed by a multidisciplinary team of experts at ETSU, consisted of eight weeks of material focusing on nutrition awareness, physical activity, leadership, and communication skills. The topics for this curriculum included Nutrition Awareness, Eating Styles and Portion Control, Active Living, Effective Communication, Weight Bias, and Leadership. Each lesson, which lasted approximately 40 minutes long, addressed the above issues as well as encouraged students to use communication, teamwork, and some higher level thinking skills via didactics and activities. For example, many of the weeks included team challenges or in or out of class activities that the students completed as groups or with others. Control group participants received their regularly scheduled *Lifetime Wellness* curriculum taught by the high school teacher. Informed consent/assent was obtained by explaining the study to students and distributing flyers to be taken home to parents. These flyers asked for the child's participation via a passive parental consent form that included potential risks, benefits, and inclusion/exclusion criteria. Student assent was also assessed and obtained prior to study initiation. Primary end points for the larger study included body mass index, dietary behavior, and physical activity, which were assessed at baseline, and at 3 and 12 months post-baseline. In addition, peer group norms, body image, supportive peer relationships, role modeling, behavioral control/ self-efficacy, attitudes, and intentions toward healthy eating and physical activity were also assessed. The study was initiated in two phases over the course of one year.

Peer Facilitator Training

Peer facilitators used to implement this program consisted of undergraduate students at ETSU. The intervention was delivered in two phases, one beginning in fall 2011 and the other in spring 2012. The first phase of the intervention used nine peer facilitators, while the second phase used eight, two of which were returning facilitators from the first phase. For each phase of the intervention, peer facilitators were taught the eight weeks of the intervention material that they would be teaching to the high school students. In addition, the peer facilitators underwent thorough training on how to become a successful peer facilitator, as well as completing required reading on a more in-depth look at nutritional standards, physical activity standards and suggestions, and psychological aspects related to the program material for this peer facilitator trial. During the course of the training, the facilitators presented each week of the material to their fellow facilitators as well as some of the various researchers that worked on the intervention. Each practice session was video recorded, and facilitators viewed themselves on video and critiqued their performance as a teacher. A reflection for each video was then written on the facilitators' strengths as well as areas for improvement.

The actual intervention consisted of two to three peer facilitators teaching at a time, taking turns and working together as a team to present the material to the intervention students. The lessons were audio recorded for future evaluation of treatment fidelity. For each lesson completed, interventionists also completed an evaluation of their reflections on the lessons and overall class time as well as anything he/she or the program could do to improve the lesson or learning experience for the students. These logs were important to ensure treatment

fidelity and monitoring of the intervention. Each week a debriefing meeting was held among the facilitators with the project coordinator as well as various other researchers that had contributed to the development of the intervention. These meetings were used to discuss the aspects of the weekly lessons that had gone well for the classes taught and to discuss the aspects that needed improvement. Time was then used to discuss ways to address the problems that arose, many of which were improved for the second phase of the intervention.

Reflections on Personal Development

The peer facilitators participated in much of the same components of the intervention during the course of their training as the students to whom they delivered the program, such as certain challenges (for example, wearing a pedometer and recording fruit and vegetable intake) as well as completing some of the same extensive questionnaires the students completed for data collection. The personal effects I (the first author and a Peer Facilitator) experienced as a result of being trained in and delivering the obesity intervention center around my lifestyle as well as academic and professional skills. The effects the program had on my own eating and exercise habits can be seen through a series of diet and exercise logs I recorded during the course of the program. It should be noted that I considered myself a healthy individual in the healthy weight range at the beginning of the intervention.

I noticed a linear increase in exercise time and fruit and vegetable intake during the first phase, whereas during the second phase I experienced a slight decrease in desirable exercise and nutritional habits. I believe these differences in personal outcomes across the phases mirror the responses of the student and faculty at the intervention sites. During the first phase of the program, both the students and the faculty seemed very intrigued and invested in the material as well as the facilitators of this program, which was not the case during the second phase of the program (as discussed in detail in the following section of this manuscript). Further, the positive responses I received during the first phase motivated me to adhere to my goals of increased physical activity and better eating. In contrast, the decrease in interest that frequented the second phase of the program dispirited my own personal drive for my goals that were associated with the curriculum, and thus my gains plateaued and eventually slightly declined.

The extensive training the facilitators received prior to the intervention portion of the project has provided many benefits to my academic career as a college student. The public speaking component of the training, which was practiced extensively to ensure proper delivery of the program material to the intervention students, has provided me with the skills to be a confident public speaker and an efficient communicator. These skills have not only helped me in day to day tasks as a student but will also be useful skills for my future.

Time management and being adaptive were two skills I sharpened during the execution of the intervention portion of this program. Though the presentations that were delivered each week to the intervention students had been thoroughly practiced multiple times, the timing occasionally came out differently than the practiced time. During presentations and activities, we had to be adaptive to the allotted time; either shortening the program or adding questions and reviews to fill the time given. Due to events, such as fire drills, where our time

was taken from us, we had to prioritize material and judiciously pick activities so the fundamentals of the lesson plan could still be covered. Being able to work around time constraints in the moment including the ability to distinguish which material to cover provided professional development in these areas.

Leadership and teamwork were two other personal skills that were further enhanced over the course of this program. Being in a leadership role in front of a large number of individuals over the course of an eight week program allowed me to enhance my qualities of leadership, such as assertiveness. My teamwork skills were extremely heightened over the course of the intervention program through the utilization of team teaching with another peer facilitator. Though teamwork was not an area I struggled with prior to this program, the ease with which I am now capable of working and complimenting team members is far greater than what it was prior to my participation in this program.

Reflections on Student Outcomes

Participation in both the first and second phase of our obesity intervention program provided an opportunity to observe noticeable differences in students and teachers across the phases in addition to student responses to the overall intervention. It is important to note that a total of three high schools were under my own personal observation, two schools differing from the first and second phase and one school being observed for both phases of the intervention. The groups of students themselves between the two phases of the intervention as well as between different schools were different as the curriculum was delivered in a freshman level course.

Overall, my perception of student's response to the intervention was mixed. For students who were invested in the program and participated well with the activities, I observed a much greater change than in those who were not fully invested. These students tended to interact more during class activities, complete their assignments, and put more effort into the group activities assigned during class time. It was also noted that several students started bringing healthier snacks and drink options to class than when the program first began. These results varied between classrooms and between both phases of the intervention, but there seemed to be more willingness and enthusiasm to participate in the first phase of the intervention than the second for some of the reasons discussed below.

The most notable difference between the first and second phase of students was the level of respect shown by the students themselves. The first phase of students were very respectful toward us as the facilitators, being more compliant with practices such as raising their hands to speak and answering our questions with appropriate, reflective comments. The students were more attentive during our lessons, respected our floor time, and completed the activities they were given in class in a more timely fashion. There were, of course, some individuals who chose to be disrespectful (as there always are in classrooms), but overall for all classes taught at both schools during the first phase of the intervention, the students were much more engaged than in the second phase.

The level of student interest during the first phase of the intervention was also substantially greater than that of the second phase of the intervention. Students during the first phase

initially were timid but soon engaged themselves in the class. Many would give very meaningful and in-depth answers to the questions we would present to them, and it was clear that many of them were taking the information in and actually processing it. Students would also ask for additional information on many health-related topics after the lessons were completed.

The second phase of intervention students were not so eager to learn the material presented to them in this peer facilitator intervention. From the first day, students in the second phase of intervention in almost all the classes observed were disrespectful to some degree, though they were slightly more cooperative in the beginning than they were at the conclusion of the intervention. Unlike the first phase of students, the second phase of intervention students were very straightforward about the fact that they were not going to treat us as guests much less figures of authority while we were in their classrooms. Not only did they talk through the majority of our presentations, but when asked to participate in class discussions they were not willing to do so. The students were also much more disrespectful in general toward myself and the other peer facilitator, often making inappropriate comments or asking inappropriate questions, either completely unrelated to the subject material or inappropriate in an overall manner. The second phase of students also did not complete the classroom activities in a timely manner, nor did they put the same amount of effort into the projects they completed as the first phase of students.

During week eight of the intervention (our last class session hitting on main points via a Jeopardy-style game) it was clear that the first phase of intervention students had retained a greater amount of the information and were more willing to share than the second phase. Not to say that the second phase had not picked up information over the course of the program, but if they had they were not eager to show that they had like the first phase was (though this would be in character of the second phase because they were not very eager to share in a lot of instances.) The first phase of students answered the questions in a timely manner, and got many of the questions correct without needing to look them up in their notebooks as compared to the students in the second phase. The first phase of students seemed to view the Jeopardy game as a test of their knowledge and a chance to show what they had learned (which is what it was intended to do), whereas the second phase of students did not take it seriously and seemed to view it more as a break from actual class time.

There was also a significant difference in the level of support and respect from the teachers during the two phases of the intervention possibly accounting for some of the behavior of students in regards to eagerness to participate and complete assignments versus rejection of the intervention program and difficulty remaining engaged in class activities. During the first phase of the intervention, the teachers were very supportive of our obesity intervention trial and the importance of the information that was being presented to the students. The teachers were very respectful to us as the facilitators while we were in the classroom, and would often take part in the lessons we were conducting. At times when the students got too loud or were getting off topic, the teachers would intervene to re-establish order or otherwise address the situation. Most of the teachers during the second phase of the intervention did not react to us as the peer facilitators in a similar manner. When we were in the classroom we were often ignored or talked over if the teacher wanted to interject something during our

lesson and sometimes the teachers cut our lessons short. Most of the teachers during the second phase of the intervention did not display as much interest in the material nor were they as concerned with whether their students were paying attention to the material we were sharing. Having the support of the classroom teacher seemed essential to facilitating peer facilitators' work with the adolescents.

Summary

The *Team Up for Healthy Living* program provided a catalyst for several changes in my own personal life including improvements in lifestyle behaviors, such as diet and physical activity, and improvements in academic/professional skills including public speaking, time management, adaptability, and leadership/teamwork skills. These positive personal changes seemed to be a result of a combination of the training process to prepare us to become peer facilitators, participation in the intervention program itself, and the influence of the teaching environment, including mixed acceptability of the program amongst the students as well as the teachers. Overall, my perceptions of the program on student outcomes was that it was effective in increasing students awareness of the need for proper nutrition and physical activity, especially for those individuals who were engaged in the program and had the benefit of a supportive learning environment facilitated by their teachers. In this study, phase one included more of these types of students/settings. Serving in a peer facilitator role in school settings also taught me the value of engagement or buy-in of individuals in positions of authority based on the influence these individuals had in my ability to adhere to and successfully present this program. Other undergraduate students would be likely to reap similar benefits and develop professionally as a result of participation in a multidisciplinary training experience such as the program presented herein.

References

Ajzen I. The theory of planned behavior. Organizational Behavior and Human Decision Processes. 1991; 50(2):178–211.

Buller DB, Morrill C, Taren D, Aickin M, Sennott-Miller L, Buller MK, Wenizel TM. Randomized trial testing the effect of peer education at increasing fruit and vegetable intake. Journal of the National Cancer Institute. 1999; 91(17):1491–1492. [PubMed: 10469751]

Centers for Disease Control and Prevention. Childhood Obesity Facts. Jul 10. 2013 Retrieved from http://www.cdc.gov/healthyyouth/obesity/facts.htm

Dorgo S, King GA, Bader JO, Limon JS. Comparing the effectiveness of peer mentoring and student mentoring in a 35-week fitness program for older adults. Archives of Gerontology and Geriatrics. 2011; 52(3):344. [PubMed: 20537413]

Ebreo A, Feist-Price S, Siewe T, Zimmerman RS. Effects of peer education on the peer educators in a school-based HIV prevention program: Where should peer education research go from here? Health Education and Behavior. 2002; 29(4):411–423. [PubMed: 12137235]

Khambalia AZ, Dickinson S, Hardy LL, Gill T, Baur LA. A synthesis of existing systematic reviews and meta-analysis of school-based behavioral interventions for controlling and preventing obesity. Obesity Reviews. 2012; 13(3):214–233. [PubMed: 22070186]

Lutfiyya MN, Lipsky MS, Wisdom-Behounek J, Inpanbutr-Martinkus M. Is rural residency a risk factor for overweight and obesity for U.S. children? Obesity. 2007; 15(9):2348–2356. [PubMed: 17890504]

Mozen D, Dalton WT, McKeehan T, Slawson DL. Report of a curriculum used in a peer-delivered intervention to reduce obesity of adolescents in Southern Appalachia and its relationship to the

national health education standards. International Journal of Health Sciences Education. 2014; 2(1) Retrieved from http://dc.etsu.edu/ijhse/vol2/iss1/4.

Myrick, RD.; Erney, T. Caring and sharing: Becoming a peer facilitator. Education Media Corporation; Minneapolis: 2000.

Odgen CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity and trends in body mass index among US children and adolescents, 1999-2010. Journal of American Medical Association. 2012; 307(5):483–490.

Pérez-Escamilla R, Hromi-Fiedler A, Vega-López S, Bermúdez-Millán A, Segura-Pérez S. Impact of peer nutrition education on dietary behaviors and health outcomes among Latinos: a systematic literature review. Journal of Nutrition Education and Behavior. 2008; 40(4):208–217. [PubMed: 18565462]

Salvy SJ, Roemmich JN, Bowker JC, Romero ND, Stadler PJ, Epstein LH. Effect of peers and friends on youth physical activity and motivation to be physically active. Journal of Pediatric Psychology. 2013; 34(2):217–225. [PubMed: 18617572]

Slawson D, Dalton W, Dula T, Wang L, Southerland J, Schetzina K, Wu T. College students as facilitators in reducing adolescent obesity disparity in Southern Appalachia: team up for healthy living. Contemporary Clinical Trials. in press.

Sobol-Goldberg S, Rabinowitz J, Gross R. School-based obesity prevention programs: a meta-analysis of randomized controlled trials. Obesity. 2013; 21(12):2422–2428. [PubMed: 23794226]

Stice E, Shaw H, Marti CN. A meta-analytic review of obesity prevention programs for children and adolescents: The skinny on interventions that work. Psychological Bulletin. 2006; 132(5):667–691. [PubMed: 16910747]

Story M, Lytle LA, Birnbaum AS, Perry CL. Peer-led, school-based nutrition education for young adolescents: Feasibility and process evaluation of the TEENS study. Journal of School Health. 2002; 72(3):121–127. [PubMed: 11962228]