Creating a Transdisciplinary Childhood Obesity Prevention Program. A Focus on Interprofessional Education and the Triple Aim


1South Dakota State University, Brookings, SD; 2University of Nebraska, Lincoln, NE

ABSTRACT: To evaluate the effect of collaborative learning and experiential experiences provided within an ongoing graduate certificate program in Transdisciplinary Obesity Prevention (TOP) on perceptions and attitudes related to communication, teamwork, and interprofessional education, interprofessional interactions and collaboration, and community engagement. Our team included South Dakota State University (SDSU) and the University of Nebraska-Lincoln (UNL) collaborated to build a TOP certificate program engaging graduate students in transdisciplinary coursework, experiential learning, and research. The TOP program recently partnered with the National Center for Interprofessional Practice and Education to further explore the program’s ability to prepare students for interprofessional interactions, teamwork, and community engagement. Evaluation: Process evaluation is used to assess and continually improve the certificate program. Surveys, such as the ACE 15 and the Interprofessional Socialization and Valuing Scale are used to assess change in TOP student perceptions and attitudes in the areas of communication, teamwork, interprofessional education, interprofessional interactions and collaboration and community engagement in childhood obesity prevention efforts. Conclusion and Implications: The TOP graduate certificate program is one of the only sites working in collaboration with the National Center for Interprofessional Practice and Education that is located at a land-grant institution and is focused on providing interprofessional education and experiential experiences in childhood obesity prevention within a community, rather than a clinic setting. Our collaboration with the National Center for Interprofessional Education and Practice further assisted our team in creating a model to inform the creation of interprofessional education experiences focused on childhood obesity prevention at land grant institutions.

GOALS & OBJECTIVES

The primary Goal of the TOP program is to provide an innovative, research-based graduate certificate that includes transdisciplinary experiential training in the field of childhood obesity prevention. The TOP program teaches team management skills while introducing students to the transdisciplinary nature of childhood obesity. The TOP program also provides students the opportunity to gain hands on experience developing and implementing evidence-based, transdisciplinary approaches to childhood obesity prevention. The strength of this program is the transdisciplinary approach to childhood obesity prevention, which will allow students to think critically about the complexity of factors contributing to childhood obesity and develop the skillset required to create innovative solutions. In the fifth year of funding (2015-2016), our primary efforts were focused on interprofessional education and the Triple Aim.

Interprofessional Education and the Triple Aim: In an effort to attenuate the dissatisfaction of healthcare in the United States, the Institute of Healthcare Improvement proposed three main goals: 1. improve the patient experience of care, 2. reduce per capita cost of healthcare, and 3. improve the health of populations. They called this set of goals the Triple Aim. The World Health Organization and the Institute of Medicine subsequently voiced a need for Interprofessional Education to prepare collaborative, practice-ready health care providers who were able to meet these goals. They defined interprofessional education as occurring when students from two or more professions learn about, from, and with each other to enable effective collaboration and health outcomes.

The TOP Program provides interprofessional education through coursework and experiential experiences in community-based childhood obesity prevention efforts. The majority of interprofessional education programs are based within medical schools and are focused on having students work in teams with direct patient care. The TOP program provides an interprofessional education experience at a land grant institution for professions that may not work directly with patient care, but are integral to community public health efforts focused on childhood obesity prevention.

RESULTS

• Thirty-one students have earned their graduate certificate in TOP since the program start in 2011 and 41 students are currently enrolled with the intention of completing the certificate program. Twenty-nine graduate research assistantships have been provided.
• During the SDSU TOP practicum course, two groups of students worked with a city wellness department on conducting a Healthy Eating Active Living: Mapping Attributes using Participatory Photographic Survey (HEAL MAPS). The goal of this project was to make it easier for families in the community to eat healthily and be physically active. Another group of students worked with a Registered Dietitian employed by a school system to enhance their staff role modeling efforts towards childhood obesity prevention. Lastly, a team of students provided iKidQuest nutrition and physical activity based program to a group of students in a local school district. Brief summaries of their experiences can be found on the SDSU TOP Facebook page: https://www.facebook.com/SDSU-TOP.
• TOP students, faculty, and Extension personnel participated in a variety of transdisciplinary research projects focused on areas such as: school wellness policies, fitness testing in children, the development and feasibility of a culturally appropriate nutrition and physical activity intervention program for Native American populations, the impact of obesity on running biomechanics in children, the efficacy of the iKidQuest program to change nutrition and physical activity behaviors when implemented in the classroom and afterschool settings in tweens, the effectiveness of the iGrow Readers curriculum to change nutritional and physical activity knowledge and behavior in 3-5 year old children and their caregivers, and body size stereotypes in 3-5 year old children.
• A sample size of 15 TOP students from SDSU were administered pre and post surveys as part of the evaluation plan with the National Center for Interprofessional Practice and Education. Mean responses from pre to post survey results with increases in agreed/strongly agree responses.
  - 23% increase in confidence level of debating issues within a team.
  - 6% increase in the teams perception on how team members contribute to setting and evaluating goals.
  - 11% increase in team members appreciation of each others roles and expertise.
  - 14% increase in all voices on the team being heard and valued.

CONCLUSIONS

In conclusion, the team of TOP investigators have developed a novel curriculum that includes coursework, experiential learning opportunities, and research experiences focused on childhood obesity prevention. Preliminary data suggest that the TOP program is an innovative graduate certificate that positively impacts students' ability to work in transdisciplinary teams. The TOP graduate certificate program is one of the only sites working in collaboration with the National Center for Interprofessional Practice and Education that is located at a land-grant institution and is focused on providing interprofessional education and experiential experiences in childhood obesity prevention within a community, rather than a clinical setting. Our collaboration with the National Center for Interprofessional Practice and Education further assisted our team in creating a model to inform the creation of interprofessional education experiences focused on childhood obesity prevention at land grant institutions.

METHODS

Education: SDSU and UNL began offering the Transdisciplinary Obesity Prevention (TOP) Graduate Certificate during the 2011-2012 academic year. Three TOP specific graduate courses comprise the core requirements for each universities’ board of regents approved certificate.

Extension: TOP students have the opportunity to gain experience working with community based childhood obesity prevention efforts with SDSU Extension through their practicum course and collaborative research projects.

Research: TOP research efforts are promoted through student-lead obesity prevention thesis projects, student-lead obesity prevention grant writing projects, and faculty and Extension-lead transdisciplinary obesity prevention projects.

Evaluation: Bi-annual process evaluations, including focus groups and surveys, continue to foster strengths and improve identified weaknesses of the TOP courses. Annual process evaluation via personal interviews with all TOP graduates provide feedback regarding the strengths and weaknesses of the TOP program as a whole. Pre and post program student perceptions and attitudes in the areas of communication, teamwork, interprofessional education, and community engagement in childhood obesity prevention efforts are assessed via the ACE 15 and the Interprofessional Socialization and Valuing Scale surveys.

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