Transdisciplinary Graduate Program in Childhood Obesity

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Collaborations

• Dr. Kemmer and Dr. Koszewski initiated proposal discussion fall, 2009.

• How the project became multi-institutional:
  – Initial SDSU brainstorming session recognized the opportunity and need to invite another institution
    • Transdisciplinary nature of the proposal.
    • Multi-state emphasis behind many funding institutions
    • Funding amount of grant allowed for collaborations.
    • An SDSU faculty member noted strong previous strengths of UNL faculty and the history of successful collaborations.
    • UNL and SDSU strengths complimented each other in the design of a well-rounded program.
    • Desire to expand and test efficacy of KidQuest
Collaborations

• Proposal concept for the Transdisciplinary Childhood Obesity Prevention Program (T.O.P.) was shared and fine-tuned to meet both institutions requirements.

• Recruited a transdisciplinary focused team from both institutions.
Collaborations

• The transdisciplinary team SDSU
  – College of Education and Human Sciences, Department of Health and Nutritional Sciences
    • Teresa Kemmer, Ph.D., nutrition
    • Becky Jensen, MS, extension and nutrition
    • Jessica Meendering, Ph.D., exercise science
    • Suzanne Stluka, MS, education, extension, family and consumer sciences, and nutrition
    • Kendra Kattelmann, Ph.D., nutrition
  – College of Nursing
    • Howard Wey, Ph.D., biostatistics.
Collaborations

• The transdisciplinary team UNL
  – College of Education and Human Sciences,
    • Child, Youth and Family Studies
      – Maria DeGuzman, Ph.D., Youth and Adolescent Development/Extension
    • Department of Nutrition and Health Sciences
      – Wanda Koszewski, Ph.D., RD, Nutrition Education/Extension
      – Jean Ann Fischer, MS, RD, Nutrition Education/Extension
      – Timothy Carr, Ph.D., Nutritional Biochemistry
      – Shinya Takahashi, Ph.D., Exercise and Health Promotion
  • Bureau of Sociological Research
    – Mindy Knott Anderson, MS, Program Evaluation
Unique Resources

• Transdisciplinary faculty already working collaboratively
• University support to expand current graduate programs
• Ability to facilitate experiential learning opportunities
• Access to underserved/underrepresented populations
• SDSU Smart Classrooms
• UNL/SDSU Strong Nutrition Extension Programs
• SDSU’s vision to expand KidQuest
• Similarity of state populations
• Linking of programs by former students
Conceptualizing the program

• Ensuring a transdisciplinary faculty and student focus.
• Distance and technology issues.
• Percentage of faculty time required?
• How many graduate students can we handle?
• How many graduate students can we fund?
• Relatively new PhD program vs. established program.
• Do we include MS and PhD students?
Conceptualizing the program

• Research opportunities.
• Incorporation of experiential learning opportunities.
• Focus on assisting underserved and minority populations.
• Timeline to design, obtain approval and initiate program.
• Determine stakeholders and supporting organizations.
• What courses and how many should be incorporated?
Conceptualizing the program

• Review existing curriculums to determine new courses.
• Establish new degree or certificate program?
• Management of a multi-state program.
• Implement a program using two very different learning delivery systems:
  – Desire 2 Learn (D2L): SDSU & Blackboard: UNL
• Plan for program sustainability
What is transdisciplinary?

- Transdisciplinary research refers to scientific inquiry that cuts across disciplines, integrating and synthesizing content, theory and methodology from any discipline area which will shed light on the research questions.

- Transdisciplinary, as distinguished from multidisciplinary and interdisciplinary, requires that researchers invent new science together by exploring research questions at the intersection of their respective fields, conducting joint research projects and developing methodologies that can be used to re-integrate knowledge.
Simply defined

- Transdisciplinary is designed to get us out of our silos.
- With the complex issue of obesity it is critical for this to happen.
Team Visits

• SDSU visited UNL in Sept, 2011 to conduct KidQuest Training.

• UNL visited SDSU in October to meet with TOP graduate students and faculty.

• Annual face-to-face meetings are planned.
Goal

• The primary *Goal* of the T.O.P graduate program is to develop an innovative, research-based graduate education program that includes transdisciplinary experiential research training in the field of childhood obesity prevention.
Objectives

• Combine faculty and resources from SDSU and UNL to develop a sustainable transdisciplinary graduate program to address childhood obesity prevention.

• Recruit and educate a transdisciplinary group of graduate students in fields of nutrition, family and consumer sciences, child development, exercise and sports science and other related fields of study.

• Design and implement three core graduate courses and supporting courses to address childhood obesity and research methods.
Objectives

• Establish an ongoing research program addressing factors influencing excessive weight gain in children and develop and test effective interventions to prevent childhood obesity.

• Incorporate experiential learning opportunities to provide hands-on interaction with children, schools, communities, organizations, etc. to increase graduate student awareness of the multifaceted and cultural issues associated with childhood obesity.
Objectives

• Prepare graduate students to effectively work as applied, basic researchers and experts to design, implement and evaluate childhood obesity prevention programs.

• Integrate graduate coursework, experiential learning opportunities and research through faculty and peer mentoring within school systems, families, communities, research centers and extension.
## Funded Assistant Research Positions

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<tr>
<th>Degree and University</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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Expected Student Outcomes

• Demonstrate the ability to apply a working knowledge of childhood obesity prevention in professional practice/education and/or future research.
• Effectively summarize, communicate, and apply current research in the area of childhood obesity prevention.
• Demonstrate the ability to formulate research questions and work as a transdisciplinary researcher in the area of childhood obesity prevention.
• Disseminate research findings via poster or oral presentations at local, state, national or international professional meetings.
Expected Student Outcomes

• Demonstrate the skills to prepare and submit manuscripts for submission to professional journals.

Additional Outcomes for Doctoral Students:
• Possess the knowledge and skills necessary to apply for grants to sustain his/her future research.
• Demonstrate the ability to formulate research questions
• Has the skills to perform as a transdisciplinary researcher in the area of childhood obesity prevention.
New Program Specific Courses:

• NFS 750/NUTR 810-Transdisciplinary Obesity Prevention (3 credits)
  – SDSU is the lead institution
  – Taught in the Fall

• NFS 751-751L/NUTR 910-Research Methods in Childhood Obesity (3 credits) and Assessment Skill Laboratory (1 credit)
  – UNL is the lead institution
  – Taught in the Spring
Experiential Learning Experiences

• UNL
  – School Lunch Program
  – Physical Activity in Schools
  – Assessing Nutrition and Physical Activity Behaviors of 4th and 5th graders

• SDSU
  – Develop KidQuest Training Videos
  – Native American Focus Groups and Class Presentation
Prevention Research Purpose-
NIH Task Force Report

• Looks at populations or subpopulations to decrease the number who are overweight or obese and to reduce additional weight gain in those who are already overweight.

• Need for transdisciplinary studies that separately test efficacy, effectiveness and translation/dissemination.
Environmental Interventions

- Home
- Child Care Settings
- School
- Community
- Recreational facilities
- Community and Transportation Infrastructure
SDSU Research Opportunities

- Determine efficacy of KidQuest in 5th and 6th graders.
- Determine the impact of a commodities backpack in Native American children and families.
- Investigate leisure time/recreational constraints in Native American Communities.
- Evaluate effects of a social marketing directive involving the SDSU Jackrabbit and posters on fruit and vegetable intake. Target audience is 4th graders.
- Evaluate the iGrow Readers (pre-K literacy and wellness education) program.
- Evaluating food deserts in SD children living in food deserts and associations with body mass index (BMI).

Determining if disparity exists in the nutritional status between parents and children living in rural Honduras.
UNL Research Opportunities

• Developing and Evaluating KidQuest Club in afterschool programming.
  
  Youth
  
  Parents
• Exploring Family Determinants of Obesity: A Transdisciplinary Approach
• Self Esteem and Depression in Middle School Students in relation to weight, physical activity and diet.
• Impact of the Backpack program on food choice, dietary intake, and BMI.
• School Food Environment and Childhood Obesity Prevention in Nebraska
Unexpected Rewards

• SDSU/UNL collaborations have been exceptional due to the quality and commitment by the team.
• The program was approved and implemented in both universities within 6 months of obtaining funding.
• The satellite learning delivery system, even with a few issues, performed better than anticipated.
• Experiential learning opportunities, even though challenging to establish, have presented exceptional opportunities for students and have lead to expanded collaborative efforts for faculty.
• Overwhelming support from stakeholders & collaborators.
• Students embraced the transdisciplinary approach.
Challenges

- UNL
  - Technology
  - No support for blended course that uses distance education and in person
  - Developing Community Partners
  - Getting Parents and Families involved in the experiential learning experiences
  - Time and Effort
  - Getting UNMC Involved
Challenges

• SDSU
  – Occasional technical issues with the satellite system.
  – Ensuring faculty and students engagement in transdisciplinary research requirement.
  – Parental engagement in research programs.
  – SDSU/UNL have different learning delivery systems requiring both universities to post information on separate systems.
  – Faculty Time and Effort
Lessons Learned

- Need to remind presenters to engage students from both institutions.
- Incorporate data from both states into the presentations and discussions.
- Good communication is key.
- Flexibility is essential (We have been good at that).
- Different academic schedules (i.e., semester start dates and school breaks) have to be worked out.
- Technology can be a challenge. UNL is techno challenged.
- Managing institution unique issues.
Recruiting

- Recruitment brochures have been distributed by SDSU and UNL.
- UNL T.O.P. Webpage: [http://cehs.unl.edu/nhs/graduate/TOP%20brochureUNL.pdf](http://cehs.unl.edu/nhs/graduate/TOP%20brochureUNL.pdf)
- Brochures have been provided to the USDA program directors for distribution.
- Word of mouth.
- No problems with recruiting highly qualified applicants from a variety of specialties.
Future Directions

• Partner with additional institutions to expand program.

• Replicate program model in other institutions.

• Recruit/integrate more professions in the transdisciplinary courses and research efforts.
What Administrators Can Do

• Encourage faculty to get out from under their desk and lab.
• Work on developing effective teams across state lines.
• Flatten silos.
• Find resources to help develop transdisciplinary teams.
• Need support for technology, administration, etc.
• Recognize the extra time and effort that faculty put into these projects to make it a good learning experience for students.
Thank You

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• Abstract:
  – [Link](http://cris.nifa.usda.gov/cgi-bin/starfinder/0?path=fastlink1.txt&id=anon&pass=&search=R=44935&format=WEBFMT6NT)

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