

## PROPOSAL NARRATIVE

### Assessing the Needs and Capacity Issues Related to Greater Physical Activity and Nutrition Among Adolescents in San Miguel, Costa Rica

#### **A. Abstract**

Physical activity and nutrition are two important determinants of health. Lack of physical activity and poor nutrition can lead to serious health issues in the future, such as Cardiovascular Disease, Diabetes, and Stroke. The purpose of my research is to assess the needs and capacities regarding greater physical activity and nutrition of adolescents in San Miguel, Costa Rica. I will collaborate with the TELL Volunteer Organization and the local physician, Dr. Frederico, to plan, implement, and evaluate an 8-week school-based program aimed at increasing physical activity and healthy eating behaviors among the primary school students at the Luis Demetrio Tinoco School in San Miguel. The results of the evaluation of the program will guide future efforts regarding physical activity and nutrition among the adolescent population in San Miguel. I hypothesize that this project will improve physical activity and nutrition among adolescents in San Miguel, and lay the groundwork for continued work in these areas in the future.

#### **B. Background/Statement of the Problem/Significance of the Project**

Noncommunicable diseases (NCDs) such as cardiovascular disease, cancer, and chronic respiratory diseases kill over 36 million people each year. Physical activity and nutrition are two of the risk factors of NCDs (WHO, 2011). These health behaviors are modifiable lifestyle behaviors that anyone can incorporate into their lives to improve their health. In fact, according to the Centers for Disease Control and Prevention, "Only a few lifestyle choices have as large an impact on your health as physical activity. People who are physically active for about 7 hours a week have a 40 percent lower risk of dying early than those who are active for less than 30 minutes a week" (CDC, 2011). Choosing to engage in physical activity and choosing to maintain a healthy diet are important health behaviors, and can benefit your health in multiple ways, but on the other hand, lack of physical activity and poor nutrition can contribute to serious health complications such as: Diabetes, Heart Disease, and Stroke. In addition, physical activity also can improve your mental and emotional health. Research has shown that physical activity can positively impact depression, self-image, social skills, and anxiety (Taylor, 1985). Adolescents are an important target population in relation to increasing physical activity because they will be able to continue using these health behaviors throughout their life. Prevention is key in relation to NCDs, and the earlier physical activity and nutrition are addressed, the better. I spoke with the director of TELL Volunteers in Costa Rica, Gloria Oliu, who said that childhood obesity is a major health need in San Miguel, and suggested working with the 5<sup>th</sup> and 6<sup>th</sup> grade students at the Luis Demetrio Tinoco School (G. Oliu, personal communication, March 7, 2013). In addition, I communicated with a physician in San Miguel, Dr. Frederico, who recommended focusing on adolescents as my priority population (Frederico, personal communication, March 6, 2013). These key informants from the community led me to choose adolescents as my target population and specifically, 5<sup>th</sup> and 6<sup>th</sup> grade students at the Luis Demetrio Tinoco School in San Miguel. According to the Centers for Disease Control and Prevention, "Well designed school-based interventions directed at increasing physical activity in physical education classes have been shown to be effective" (CDC, 1999). I plan to implement a school-based intervention aimed at increasing physical activity and improving healthy eating habits in adolescents during my preceptorship experience with TELL Volunteers during the fall of 2013.

#### **References**

- Physical Activity for Everyone: The Benefits of Physical Activity. (2011, February 16). Centers for Disease Control and Prevention. Retrieved March 8, 2013, from <http://www.cdc.gov/physicalactivity/everyone/health/index.html#StrengthenBonesMuscles>
- Taylor, C., Sallis, J., & Needle, R. (1985). The relation of physical activity and exercise to mental health. *Public Health Reports*, 100(2), 195-202. Retrieved March 8, 2011, from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1424736/?page=1>
- Physical Activity and Health, Adolescents. (1999, November 17). Centers for Disease Control and Prevention. Retrieved March 10, 2013, from <http://www.cdc.gov/nccdphp/sgr/adoles.htm>

Noncommunicable Diseases. (2011). World Health Organization. Retrieved March 20, 2013, from [www.who.int/mediacentre/factsheets/fs355/en/](http://www.who.int/mediacentre/factsheets/fs355/en/)

### **C. Objectives**

The following process will aim to answer the following research questions: (1) What are the needs of the adolescent population in San Miguel regarding building greater physical activity and nutrition into their lives? (2) What resources (capacity) do the adolescents in San Miguel have to draw upon to encourage and support greater levels of physical activity and healthy eating? These two research questions will guide my efforts as I plan, implement, and evaluate a program in the school.

### **D. Research Methods**

To complete this research project, I will be addressing Areas 1-4 of the National Commission for Health Education Credentialing, which are stated as follows:

Area I: Assess Needs, Assets and Capacity for Health Education

Area II: Plan Health Education

Area III: Implement Health Education

Area IV: Conduct Evaluation and Research Related to Health Education

My preparation will begin immediately, as I continue to search the literature, communicate with key informants to gain insights into the community and their health needs, and develop a program to be used in the school. I have already begun communication with Gloria Oliu, director of TELL Volunteers, Janine Foggia (past UW-L preceptee), and Dr. Frederico, concerning the physical activity and nutritional needs of the population. I plan to use a previously developed survey with the target population when I arrive in San Miguel to get a baseline measure of where the participants are at in regards to physical activity and nutrition. A possible survey is the NSW Schools Physical Activity and Nutrition Survey (SPANS) that was used and evaluated in Australia in 2004 (Booth, 2005) to use or to consult as a model. Some example questions are:

- 1.) How many days per week are you moderately active for at least 30 minutes?
  
- 2.) On average, how many servings of fresh vegetables do you eat per day?

Before beginning the proposed intervention, I will assess the perceived needs and capacity of the students in regarding physical activity and nutrition using a single-step survey. Some sample questions will include:

- 1.) What do you feel are some barriers that prevent you from eating healthy?
  
- 2.) What are some of the available resources in San Miguel that promote physical activity?

It will be important to understand the barriers that the target group feels will prevent them from adopting the behaviors. I will then analyze the results I receive from the needs and capacity assessments of the target group in order to plan an appropriate program to increase physical activity and healthy eating among adolescents in San Miguel. I will look for trends and patterns in the responses as I analyze the qualitative data collected. The Health Belief Model will be used in planning a program to target the perceived barriers and perceived risk of the

participants. I will be collaborating with Gloria Oliu and Dr. Frederico in the planning of the program. I will aim to increase self-efficacy and empowerment of the students to realize that they can change their behaviors and improve their quality of life and health outcomes. After planning the intervention, with Gloria Oliu and Dr. Frederico, I will implement an intervention among the adolescents in San Miguel. The intervention will be in the form of an 8-week physical activity program in the school. I will conduct weekly process evaluation of the program to measure changes in the population with brief surveys to be distributed at the end of the session. I will do an extensive outcome evaluation of the intervention after the program is finished and present these findings to the community before returning to the United States.

#### References

Booth, M., Denney-Wilson, E., Okely, A., & Hardy, L. (2005). Methods of the NSW Schools Physical Activity and Nutrition Survey (SPANS). *Journal of Science and Medicine in Sport*, 8(3), 284-293. Retrieved March 21, 2013, from <http://www.sciencedirect.com/science/article/pii/S1440244005800398>

#### **E. Final Products and Dissemination**

Upon completion of my research, I will summarize my findings in a research report. In addition, I will create a PowerPoint presentation to clearly communicate my research and results to multiple audiences. I plan to present my findings to the community members in San Miguel before returning to the United States. I will communicate the results of the program and offer possible next steps to continue the work I started. I will leave a resource binder that I will compile during my research with the director of TELL Volunteers, Gloria Oliu, to use in the future. Also, I will be presenting my findings at a Community Health Education Sharing Session in Wings Technology Center at UW-La Crosse after completing my preceptorship. Lastly, I will present my findings at the 2014 Celebration at UW-La Crosse.

#### **F. Budget justification**

**Travel:** Airfare: \$686.00 (lowest price I found for a roundtrip ticket from Minneapolis to San Juan, Costa Rica departing in early September and returning late December on Expedia.com)

**Office Supplies:** \$50.00 (Photo copies, handouts, surveys, pencils, educational materials, etc.)

**Stipend:** \$600.00 (I would use this money to offset the living costs I will have while living in San Miguel such as food, transportation, and lodging)

**Books:** Needs and Capacity Assessment Strategies for Health Education and Health Promotion by Dr. Papa Smurf (\$63.00 on Amazon.com)

I will be conducting this research while completing an internship with the TELL Volunteer organization in San Miguel, Costa Rica. I will be able to budget my time to complete the research because the research project will be incorporated as a part of my internship. I have already discussed the research proposal with the director of TELL Volunteers and the physician in San Miguel who both are on board for this project. I will be living with a host family and traveling to the school, clinic, and around the community using public transportation. I will use the Papa Smurf book both to guide my research and to use as a resource when I am in San Miguel.

#### **2. Letter of Support**

March 26, 2013

Undergraduate Research Review Committee

University of Wisconsin-La Crosse

Dear Review Committee Members:

I am writing a strong letter of support for Ms. Smurfette as she submits her Undergraduate Research proposal in alignment with her Fall Community Health Education Preceptorship experience in San Miguel, Costa Rica. First, for background, it needs to be stated that this Preceptorship experience requires a highly prepared, dedicated candidate who is willing to spend 4 months in another country working and living with community members for the entirety of the experience. It also requires an ability to speak Spanish and a willingness to adapt to a unique cultural experience. Ms. Smurfette is fully up to these important responsibilities. Since I had established San Miguel as an authorized Preceptorship site last year, only three other Community Health Education candidates have served in this Preceptorship role. Each individual has performed admirably in working with community members for the health enhancement of the population. Ms. Smurfette clearly has the preparation and commitment to this important experience to continue to advance the health enhancement opportunities.

The research proposal is based upon the assessed health-related needs from the work of the three previous preceptees in San Miguel, coupled with an assessment phase that I went through with Abby in setting up her Preceptorship experience. In discussions and communications with the preceptor, Gloria Oliu, for TellVolunteers in San Miguel (the Preceptorship Organization) along with the local clinic physician, the specific need for the development, implementation, and evaluation of a balanced approach to nutrition and physical activity for grade school children emerged. Abby has been conscientiously developing the curricular and evaluation parameters for this health education opportunity during the last two months in preparation for the Preceptorship experience in the Fall of 2013. It will be noted that the learning objectives are clearly stated, along with proposed educational methods, and accompanied by specific evaluation procedures with the youth.

Given the support that already has been provided by Ms. Oliu (the preceptor), the local physician, and the grade school teachers, coupled with the realistic learning activities that Ms. Smurfette will be initiating, this project has a strong potential of cultivating key health promotional skill sets within the youth. The resulting health promotional actions taken by the youth will be able to be observed and measured during the time period that Smurfette is in San Miguel. Evaluation over time will involve both qualitative and quantitative measurements. A report back to the community regarding the status of the health education event will take place during the implementation phase, along with a final community update at the end of the Preceptorship experience.

Overall, I am confident that Smurfette will apply the principles and practices of good community-based participatory research and education throughout her time in San Miguel this Fall Semester. She is a highly conscientious and dedicated candidate in our nationally-accredited BS-CHE program. I will continue to serve as her faculty mentor throughout her Preceptorship experience. Overall, I am in full support of this research endeavor.

Sincerely,

Papa Smurf

Professor and Director

Graduate Community Health/Public Health Programs