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## EVALUATION OF NUTRITION AND PHYSICAL ACTIVITY CURRICULA BASED ON THE SOCIAL COGNITIVE THEORY

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# EVALUATION OF NUTRITION AND PHYSICAL ACTIVITY CURRICULA BASED ON THE SOCIAL COGNITIVE THEORY



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## ABSTRACT:

**Background:** Childhood obesity has increased over the past two decades, causing numerous complications. Currently, there is no required standardized curriculum for nutrition/physical activity in the United States. The objective of the current study is to examine the effects of a three-week, social cognitive theory-based nutrition/physical activity curricula on changes of behaviors among 5<sup>th</sup> grade students.

**Methods:** This study will be conducted in Lincoln Public Schools, involving three phases:

**Phase 1:** A Social Cognitive Theory based survey measuring behavior change, knowledge, self-efficacy, and environment will be developed and validated using eight nutrition experts. The survey will be pilot tested with a fifth grade class from a Lincoln parochial school never exposed to the curricula.

**Phase 2:** The validated and tested surveys will be distributed in four Title I (intervention) and four non-Title I (control) schools that have been randomly selected (sample size ~ 800-1000 fifth grade students). Surveys will be analyzed using SPSS and results will be used to assess the current curricula and recommend changes for Phase 3.

**Phase 3:** The current curricula will be modified or new curricula will be developed and then piloted.

**Implications:** Survey results would identify if the current nutrition/physical activity curricula is effective for positive behavior change. In addition, areas to improve the curricula will be identified to enhance positive nutrition and physical activity education and behavior change.

## BACKGROUND:

Childhood obesity has increased over the past two decades. Approximately one third of children are currently overweight or obese. This growing trend is concerning for the future generation due to the negative physical, mental, social, emotional, and economic consequences associated with increased adiposity. Lack of proper nutrition and physical activity knowledge and lack of confidence in performing nutrition- and physical activity-related behaviors are two possible barriers to desired behavior change. In response to the growing obesity epidemic, the University of Nebraska-Lincoln developed age-appropriate, interactive educational activities based on the social cognitive theory as part of a curricula for Title I elementary schools in 1999. Two years ago, this curricula was expanded to non-Title I schools’ kindergarten through 2<sup>nd</sup> grade (K-2) classrooms under a program called Growing Healthy Kids. Due to the timing of implementation of this curricula in Title I and non-Title I schools, the current year’s 5<sup>th</sup> grade students in non-Title I schools have never been exposed to the curricula during their time in elementary school, while those in Title I schools have received this education since kindergarten. This study will evaluate the addition of the Growing Healthy Kids K-2 curricula in non-Title I schools by comparing this existing control and intervention population in the areas of behavior, knowledge, and self-efficacy.

## PURPOSE:

The purpose of this study is to determine if a social cognitive theory-based supplemental nutrition and physical activity curricula has an effect on nutrition- and physical activity-related knowledge, behavior, and self-efficacy. A second purpose of this study is to identify curricula area(s) to be modified or replaced with new educational component(s).

## METHODS:

### PHASE I:

A social cognitive theory-based survey instrument measuring behavior change, knowledge, self-efficacy, and environment was developed based on the Growing Healthy Kids K-2 curriculum. It was validated using eight nutrition experts. Four parochial schools were recruited using convenience sampling, resulting in a sample size of approximately 110 fifth grade students. After parent consent and student assent have been obtained, surveys will be conducted in each school by the primary investigator. Participants will be asked to complete surveys and make notes on any items that need to be modified. Results will be analyzed for reliability using Cronbach’s alpha. Surveys will be modified based on feedback.

### PHASE II:

All Lincoln Public Elementary Schools will be separated into one of four geographic quadrants based on 27<sup>th</sup> and O Street. Two Title I (intervention) and two non-Title I (control) schools will be randomly selected from each quadrant. This will result in an approximate sample size of 800-1000 fifth grade students. After parent consent and student assent have been obtained, surveys will be conducted in each school by the primary investigator. Results will be analyzed using SPSS to determine which survey items show a statistically significant difference between intervention and control groups. Areas that have not resulted in significant changes will be identified.

### PHASE III:

Areas identified in Phase II that have not resulted in significant changes will be further assessed. Priority areas for modification will be identified. The current K-2 curricula will then be modified, or new curricula will be developed. The evaluation of this modified/new K-2 curricula will be pilot tested using a mixed methods design in schools yet to be exposed to the curricula. Evaluation measures will be developed for both students and teachers to assess effectiveness, including a survey instrument, focus groups, interviews, and observations. Data will be analyzed to determine the effectiveness of this modified/new curriculum on behavior, knowledge, and self-efficacy.

## IMPLICATIONS:

The results of this study will identify if the current K-2 nutrition and physical activity curricula is effective for positive behavior change. In addition, areas to improve the K-2 curricula will be identified to enhance positive nutrition and physical activity education and behavior change. Identification of change and improvement of curricula will help to justify the curricula’s use and its expansion to other sites.



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