**Background**

The need for nutrition education has created an opportunity for nutrition educators to expand their work to include the knowledge and health of the high school population in this country. Nutrition education has been utilized to help all different populations increase their understanding of nutrition and improve healthy behaviors in individuals. Due to the growing pandemics of obesity, there is a great need for nutrition education, especially targeting the high school population.

**Objectives**

The objective of this research was to evaluate the effectiveness of nutrition education to improve nutrition knowledge, attitudes, and behaviors in high school students in the School District of Philadelphia (SDP) after receiving a series of lessons from the Drexel University Eat.Right.Now. (DU ERN) High School Curriculum, administered by DU ERN nutrition educators.

**Results**

Knowledge-related topics that showed significant improvement included:
- Identification of soda as containing “empty calories”
- Understanding the importance of a healthy diet and physical activity
- Behavior-related topics that showed significant improvement included:
  - An increase in students drinking 100% fruit juice
  - An increase in consumption of vegetables
  - A decrease in computer use

**Background**

Eat.Right.Now. is the official Pennsylvania (PA) Nutrition Education TRACKS Program of the SDP. It is funded by the Pennsylvania (PA) Department of Human Services (DHS) through PA Nutrition Education Tracks, a part of USDA’s Supplemental Nutrition Assistance Program (SNAP). DU ERN is a partner to the SDP ERN program, providing nutrition education lessons to students in approximately 70 schools in the PA Nutrition Education Tracks, a part of USDA’s SDP. It is funded by the Pennsylvania (PA) Department of Human Resources. Eat.Right.Now. is administered by DU ERN nutrition educators.

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**Methods**

- Eight schools were randomly selected to participate in the 2014-2015 high school evaluation.
- During the course of the evaluation, the two schools previously eliminated.
- A minimum of fifty students in at least three, but no more than five classrooms were selected from each selected school.
- The Nutrition and Physical Activity Survey was administered to 445 students pre-intervention.
- Five structured lesson plans were conducted by DU ERN nutrition educators.
- The same survey was administered again at the completion of the lessons.
- Pre and post intervention data was analyzed for behavior, knowledge, and attitudes regarding the following categories:
  - Fruit/Vegetables
  - Dairy
  - Physical Activity
  - Screen Time
  - Gender
  - Grade
  - Race

**Abstract**

The Nutrition and Physical Activity Survey was administered to 445 students pre-intervention. A minimum of fifty students in at least three, but no more than five classrooms were selected from each of the schools. Eight schools were randomly selected to participate in the 2014-2015 high school evaluation. During the course of the evaluation, the two schools previously eliminated. A minimum of fifty students in at least three, but no more than five classrooms were selected from each selected school.

**Demographics**

Student’s knowledge of nutrition and health-related topics (Table 1) were compared before (pre) and after (post) the Eat.Right.Now. education intervention was administered in the schools.

**Results by Race & Gender**

Race

<table>
<thead>
<tr>
<th>Gender</th>
<th>Black % Desired</th>
<th>Hispanic % Desired</th>
<th>Female % Desired</th>
<th>Male % Desired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
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</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Behavior Results Overall**

Student’s fruit and vegetable consumption (Table 2), dairy and soda consumption (Table 3), and reported physical activity and screen time (Table 4) were compared before (pre) and after (post) the Eat.Right.Now. education intervention was administered in the schools.

**Conclusions**

- **Limitations:**
  - The post-test sample size was not the same as the pre-test (-34 students).
  - Student identifiers were not used, so pre- and post-intervention surveys could not be matched.
  - Cold weather may have prevented students from going outside to engage in activity, or consume a greater variety of fruits and vegetables.
  - The timing of the question the survey may have lead to confusion/incorrect answers.
  - Results relied on student self-reporting; student behaviors were not monitored.
  - No equal gender or race representation would be present.

- **Limitations:**
  - This intervention utilized a five-lesson subset of the DU ERN High School Curriculum.
  - Further evaluation of the effectiveness of a larger subset of lessons should be considered.

- **Conclusions:**
  - Positive changes were seen in nutrition knowledge and behaviors, which supports the theory that nutrition education in the school system can lead to positive changes in the minds of high school students.
  - There should be more programs like the one implemented by EAT.RIGHT.NOW, which was successful in its ability to increase nutrition knowledge and behaviors of high school aged students living in the Philadelphia school district.