BACKGROUND:

The University of Maryland, Baltimore (UMB) CURE Scholars Program is a groundbreaking science pipeline program funded by the National Cancer Institute’s Center to Reduce Cancer Health Disparities. The national CURE program began in 1997 and has supported hundreds of underrepresented high school students in biomedical research and career development.

The UMB CURE Scholars Program prepares underrepresented students beginning in middle school. Students are selected for admission based on their commitment to a long-term program and their interest in science and health career. The program currently enrolls 80 students between 6th and 8th from three schools in West Baltimore. Scholars receive weekly mentoring, tutoring, and science enrichment from over 250 volunteers within the Baltimore community, most of whom are UMB students, faculty, and staff.

HYPOTHESES:

**Primary Hypothesis:** UMB Cure academic activities at UMB and the mentoring relationships will enhance CURE Scholars’ interest in science; will encourage academic engagement in terms; of grades and school attendance; will foster career aspirations towards health-care and scientific careers, including careers in oncology; and will promote hope about future academic and career planning and preparation.

**Secondary Hypothesis:** The psychosocial and environmental support services facilitated by the UMB Cure Scholars Program and in conjunction with services provided by the schools and in collaboration with UMB’s Office for Community Engagement and the Community Engagement Center and the UMB School of Social Work will foster greater family support for their CURE Scholar.

METHODS:

The research component of this study utilizes a mixed methods nonequivalent control group design in order to evaluate Scholars learning, academic progress, career aspirations, and hope as they participate in the program. A comparison group of all students from across Baltimore City will be used in order to more rigorously estimate the relationship between CURE participation and outcomes for grades and attendance.

The evaluation of the UMB CURE Scholars Program is depicted in the following word cloud:

**SURVEY INSTRUMENTS:**

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholars’ interest in science</td>
<td>Modified Attitudes Toward Science Inventory (Weinburg &amp; Steele, 2000)</td>
</tr>
<tr>
<td>Mentoring experiences for scholars</td>
<td>The Youth Survey (National Mentoring Center, 2002)</td>
</tr>
<tr>
<td>Mentoring experiences for mentors</td>
<td>Mentors Efficacy Scale; also through focus group questions</td>
</tr>
<tr>
<td>Scholars’ aspirations for academic progress and career over time</td>
<td>Adapted from a career aspiration scale; also through focus group questions</td>
</tr>
<tr>
<td>Scholars’ sense of hope over time</td>
<td>Six-item measure of child hope from the Nat’l Child Traumatic Stress Network; also through focus group questions</td>
</tr>
<tr>
<td>Scholars and parents’ knowledge of cancer</td>
<td>Knowledge of Cancer scale (4th grade reading level)</td>
</tr>
<tr>
<td>Family needs, stress, resiliency, and strengths</td>
<td>SEEK questionnaire</td>
</tr>
<tr>
<td>Scholars’ grades, standardized testing, and attendance</td>
<td>School records</td>
</tr>
</tbody>
</table>

CONCLUSIONS:

Findings from the surveys provide information about Scholars career choice, school absenteeism, math scores/grades over time, science scores/grades over time and standardized testing scores.

**IRB Approved Measure of Success: Career Aspirations Over Time**

Over the summer, 35 Scholars completed the career survey. Scholars indicated that they plan to take more science in high school and college and pursue health related careers. Some Scholars have shifted somewhat from careers they wanted to do last year (such as being an athlete to more science-related careers), but quite a few consistently want the same career, e.g., vet, lawyer. Different career interests include: Veterinarian, Surgeon, Robotics Engineer.

Prime motivators for career choices:

- Parents
- Personal Goals
- Ability to succeed in the field

**IRB Approved Measure of Success: Grades**

(Below are the findings from the analyzed UMB CURE Scholars’ GPA data from the past two academic years; “Cohort 1” refers to current 8th grade students and “Cohort 2” refers to current 7th grade students). Scholars are performing at a B level in science. Cohort 1 has an overall average score of 83 and Cohort 2 has an overall average score of 81 in their science courses. In total, the Scholars received a combined average of 82 in their science courses. Scholars are performing at a C level in math. Cohort 1 has an overall average score of 79 and Cohort 2 has an overall average score of 76 in their math courses. In total, the Scholars’ received a combined average of 77 in their math courses. SWBCS demonstrated the strongest performance overall, with Scholars’ receiving an average score of 85 in science and 80 in math. GSA demonstrated the strongest performance in science with an average score of 88. SWBCS demonstrated the strongest performance in math with an average score of 80.

**IRB Approved Measure of Success: Standardized Testing**

(UMB CURE Scholars i-Ready and MAPS Data)

**SELECTED RESULTS:**

Findings from the surveys provide information about Scholars career choice, school absenteeism, math scores/grades over time, science scores/grades over time and standardized testing scores.

- **Parents**
- **Personal Goals**
- **Ability to succeed in the field**

Scholars at both FSEMS and GSA had average gains of 21 points in math.