

Examining the Impact of the LSUHSC-NO Science Youth Initiative on Learning Outcomes and Career Pathways among Louisiana High School Students

Authors and Affiliations

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Background

Since 2009, the LSUHSC-NO Science Youth Initiative (SYI) has served as a science education pipeline for Louisiana elementary, middle, and high school (K-12) students. LSUHSC-NO trainees (graduate students, medical students, allied health professional students and post-doctoral fellows) and faculty perform hands-on experiments and demonstrations to complement the K-12 curriculum. SYI goals include 1) translating science concepts to appropriate levels, 2) improving academic performance, 3) introducing students to diverse professional role models, 4) increasing awareness of science careers, and 5) providing health education to historically underserved populations. The SYI reached > 3,000 K-12 students. In 2025, public health education and career components were updated for the high school curriculum.

Objectives

To assess the impact of the revised curriculum on high school students' knowledge gains, interest in pursuing advanced degrees, and awareness of public health-related careers.

Methods

From 2025-2026, high school students attending SYI workshops completed anonymous pre/post paper surveys to evaluate their learning of the covered lessons, awareness of science and public health careers, future education intentions, and workshop satisfaction. Descriptive statistics and paired t-tests determined pre-post survey changes.

Results

Of the 119 students who completed the survey: 86% identified as Black/African American, 66% were female, 78% attend public schools, 52% were interested in attending Louisiana colleges, and 56% wanted to pursue STEM fields. A statistically significant increase (6% to 74%) in understanding of public health and science topics was observed following the workshops.

Conclusion

Preliminary data showed that the SYI program increased the participants' public health and STEM knowledge after participating in the program. Students also demonstrated an interest in attending Louisiana colleges and pursuing STEM fields particularly in the health sciences.

Recommendations

Comparison between the past and updated SYI curriculum and long-term tracking of participants will provide further information regarding how the program helps students with career paths.