

Bridging the Gap from Classroom to Microscope: An Educational Case Study to Strengthen the Laboratory Workforce

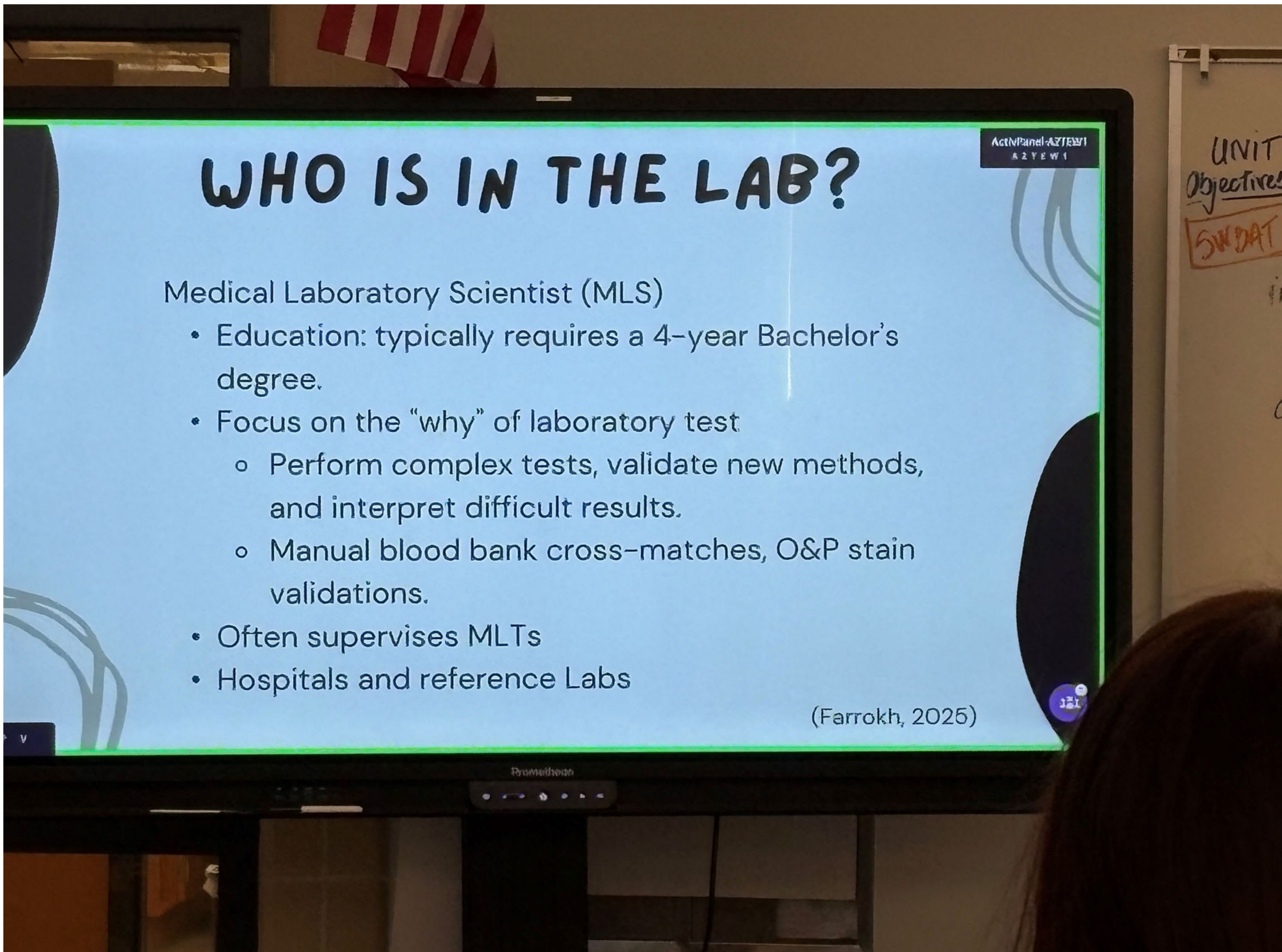
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Introduction

The Medical Laboratory Science (MLS) profession is experiencing significant workforce shortages due to a combination of factors, including low career visibility, increased proportion of retirements, and increasing demand for diagnostic testing. Despite the essential role laboratory professionals play in patient care, awareness of the field remains limited, particularly among high school students and underrepresented minority populations. Previous research highlights that the primary barrier to recruitment is not a lack of interest, but rather a lack of early exposure to the profession. Addressing this gap through targeted educational outreach is critical for improving interest, increasing diversity, and strengthening the future laboratory workforce. This study explores whether an informational presentation can effectively raise awareness and interest in MLS careers among high school students.

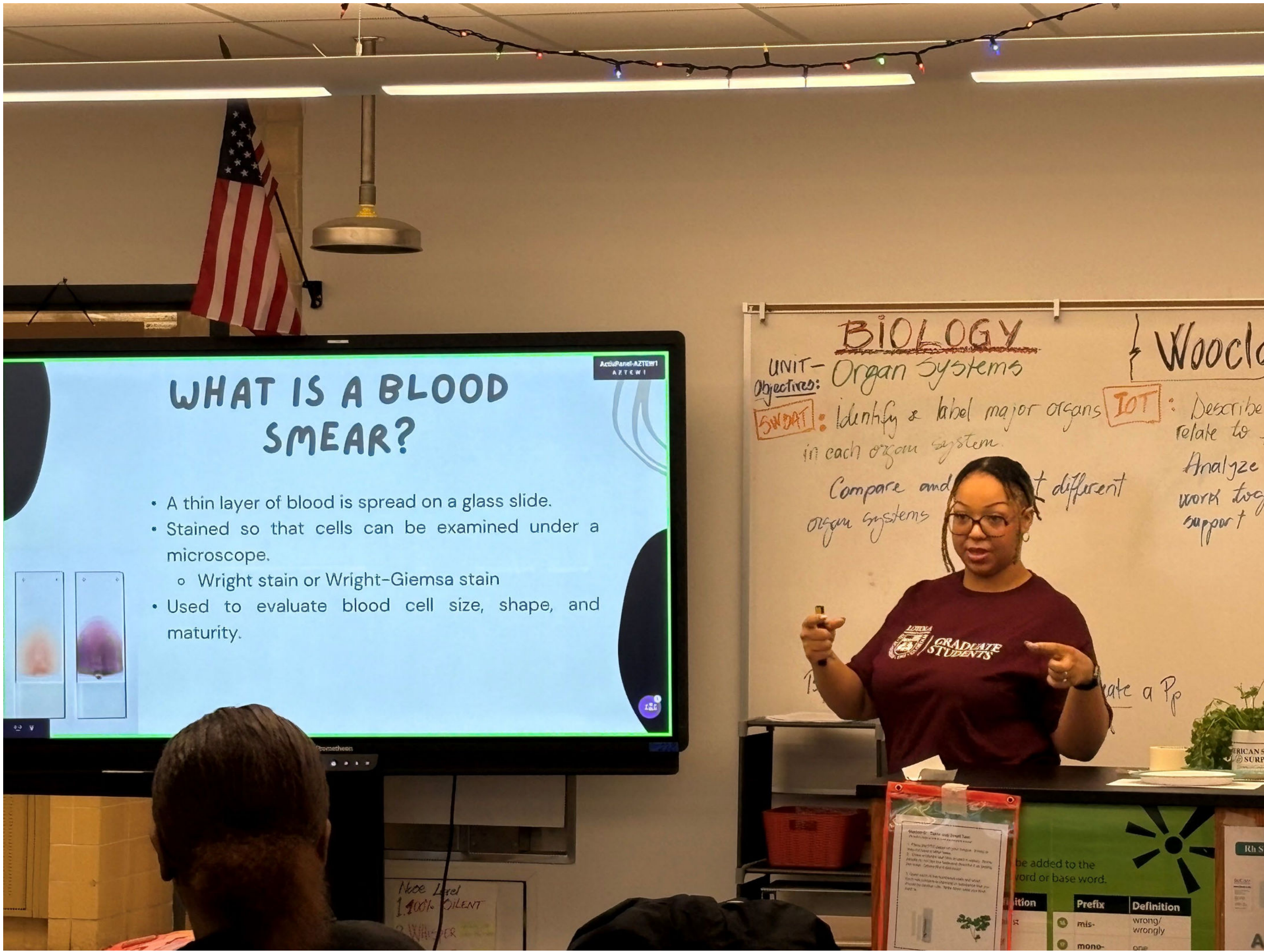
Objectives

The objectives of this study were to assess the baseline awareness of the Medical Laboratory Science (MLS) profession among high school students and to evaluate whether an educational outreach presentation could increase student interest in MLS careers. Additionally, the study aimed to test the hypothesis that targeted outreach efforts can improve recruitment into the MLS field by increasing awareness and engagement among students.



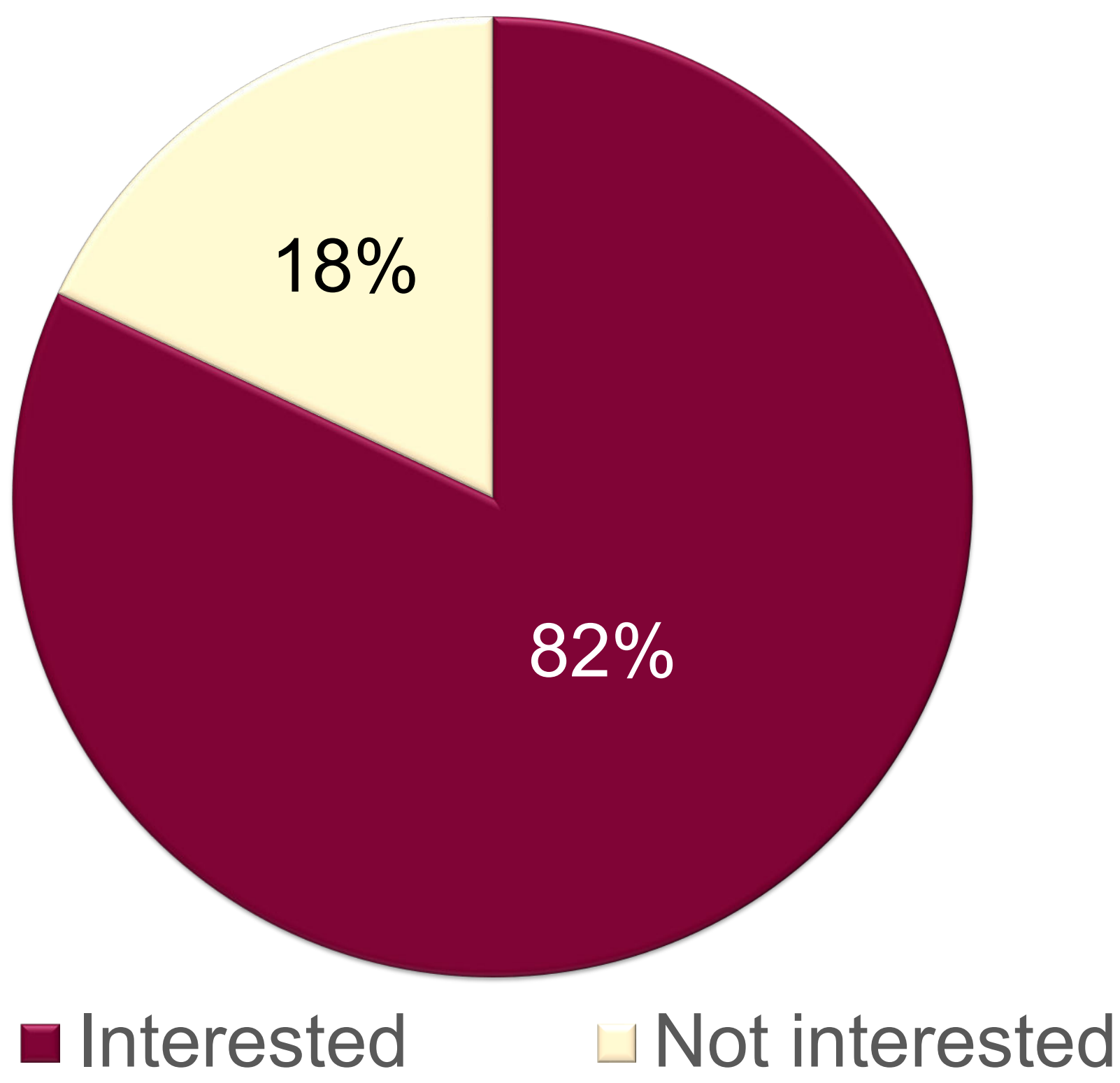
Methods

This study utilized a descriptive educational intervention to evaluate the impact of an informational outreach presentation on student knowledge and interest in the MLS field. Participants included 70 high school students from a diverse public school in Maywood, Illinois, with a majority minority population. The intervention consisted of a presentation outlining the roles, responsibilities, and educational pathways of medical laboratory professionals, followed by a hands-on microscopy activity. After the session, students completed a survey assessing their prior awareness of the MLS profession and their interest in learning more. A total of 44 completed surveys were analyzed using Microsoft Excel to determine trends in awareness and interest.



Results

Students



The findings revealed extremely low baseline awareness of the MLS profession, as none of the students could accurately describe the role of a medical laboratory professional prior to the presentation. Following the intervention, there was a substantial increase in interest, with 82% of students expressing a desire to learn more about MLS careers, while 18% reported no interest. These results indicate that the educational presentation was effective in increasing student interest, leading to the rejection of the null hypothesis. Overall, the data suggest that lack of awareness is a significant barrier to entry into the MLS profession.

Conclusion

The results of this study demonstrate that limited awareness, rather than lack of interest, is the primary factor contributing to low recruitment into the Medical Laboratory Science field. Educational outreach initiatives, such as informational presentations, are effective in increasing awareness and generating interest among high school students. Expanding these efforts may play a key role in improving recruitment, enhancing diversity, and addressing ongoing workforce shortages. Continued collaboration between educational institutions and healthcare organizations, along with sustained investment in outreach and education, will be essential for building a stronger and more sustainable laboratory workforce.

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