JOSH GEORGE and KRISTY HENSON, Fairmont State University, Fairmont, WV 26554. Exploring mathematic struggles among STEM students at Fairmont State University

Mathematics serves as the cornerstone of every STEM major, and proficiency in this subject is paramount for achieving academic success, societal integration, and meaningful participation in the workplace. However, numerous students encounter challenges in mastering mathematical concepts. In West Virginia, students face an additional hurdle, poverty, with households in the state ranking among the lowest earners in the nation. This can have significant implications for the funding and resources available to the West Virginia School System. Recognizing the interplay between socioeconomic factors and academic performance is crucial for devising targeted interventions and providing necessary support. In pursuit of this understanding, during the 2023-2024 school year, we administered a survey in 50 STEM courses at Fairmont State University (n = 447) and collected data from the LEAD Center on tutoring. Preliminary results show that math made up 50% and chemistry 37% of requested tutoring subjects in STEM and 69.7% receiving tutoring were in their first two years. Survey demographics are the following: gender identity: 212 male, 212 female, and 4 non-binary; economic status: 82% were middle class, 13% working class, and 4% on assistance; 29.5% are first generation; 62% are within their first two years of study. The most common math completed in high school was algebra (24.8%), trigonometry (34%), and calculus (24.4%). There was a strong correlation between major and enjoying math (0.99) and having a good math teacher in high school (0.62). Through data analysis and working with students directly, our goal is to discover why students struggle with math and how to better prepare future generations.