

Comprehension of Physicians' Orders: A Comparison of Students and Student-Athletes in Division III Undergraduate Institutions



Briana L. Draeger
 Master's of Science in Athletic Training, The College of Saint Scholastica, Duluth, Minnesota
 Todd Neuharth, Thesis Advisor



Background & Significance

Although low health literacy levels are more prevalent among vulnerable populations, any population can fall victim to the issue and can be seen in any healthcare setting. Lack of patient comprehension, during physician visits in particular, can have lasting and dire consequences. Misinterpretation of physicians' orders can lead to harmful or adverse health effects, misuse of medications, or improper treatment compliance. These consequences can be changed with health literacy awareness and further education.

The college-aged population is an important area of health literacy awareness as educational curricula and campus activities can be utilized to improve health literacy education. Increased awareness and education within this age group could increase health literacy at a younger age and possibly continue through to older age, as most health literacy disparities occur with elderly populations. Few studies have looked at the importance of physician order comprehension, or health literacy levels, within the college-aged population. Many studies have suggested that this age group is functionally health literate and able to navigate our nation's healthcare system. This study is a challenge to that notion. If disparities exist within the college-aged population, health literacy courses could be incorporated into education systems. It is important that the people in this population improve this aspect of health literacy so that they can be more informed medical consumers and start down a path of greater health literacy for their futures.

Methods

There were 60 participants in the study. Participants were undergraduate students and student-athletes in Division III institutions in either Minnesota or Wisconsin.

The participants first read, and agreed to, the consent form to participate in the study using the survey program Qualtrics. They then filled out a demographics section, followed by the 1 minute 17 second mock scenario physician visit on strep throat. The video was created using the video program Dartfish. Immediately proceeding the video the participants answered a 12 question questionnaire, to determine comprehension of the mock physician visit.

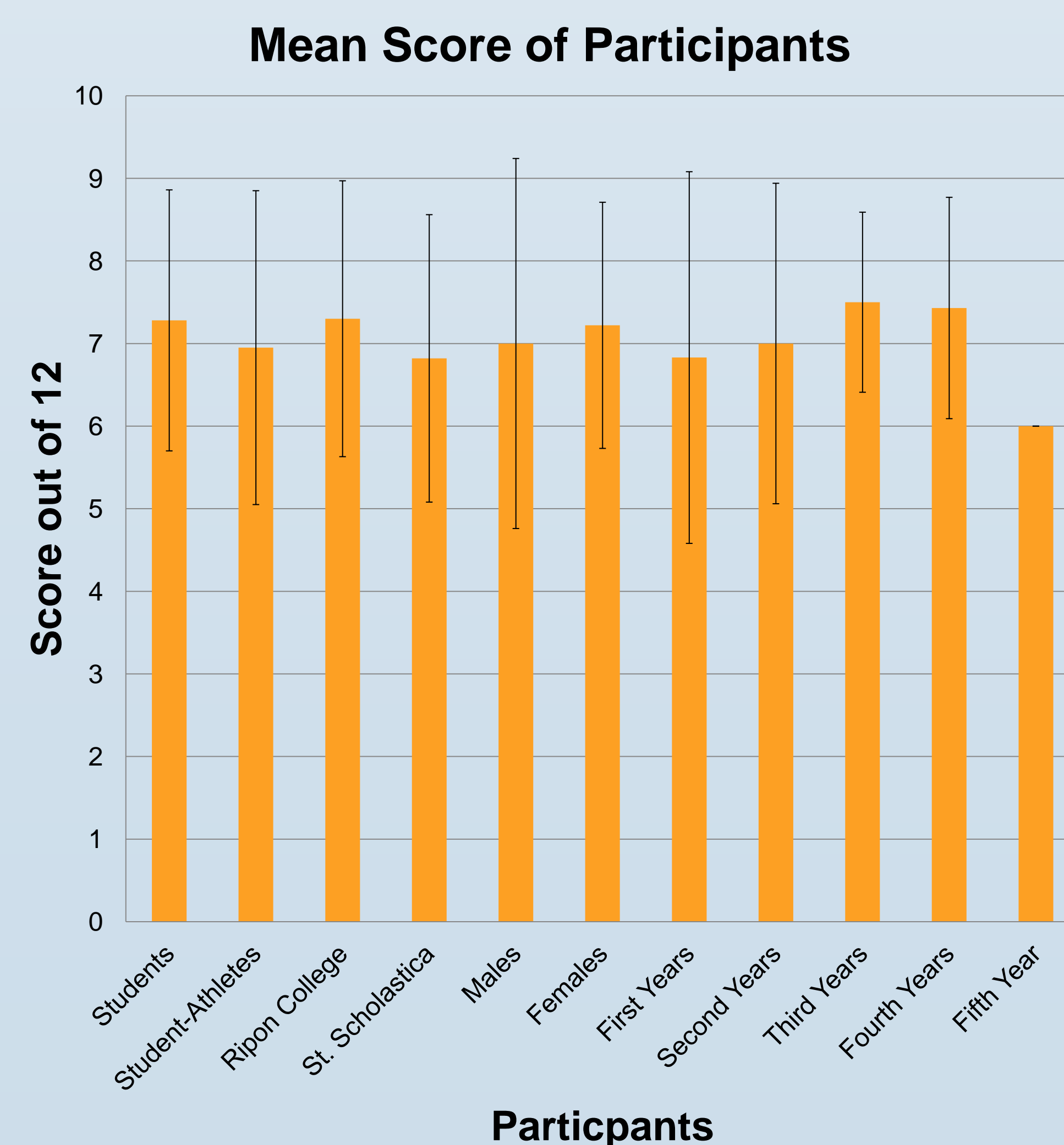
Data was collected from Qualtrics and then transferred to the Statistical Package for the Social Sciences (SPSS) Version 22 to analyze data received from participants. A score of 75% was determined to signify comprehension.

Methods

Strep Throat Video Script

"Based upon today's examination, you have a Streptococcal infection, more commonly referred to as strep throat. It is inflammation of the pharynx and tonsils in the back of your throat. You will be infectious for up to 3 days and it can be passed via coughing or sneezing, sharing food or drinks, or from touching infected surfaces and transferring it to your nose, mouth or eyes. We will be treating it with Penicillin pills. You will take 1 pill 3 times a day, 6-8 hours apart. You will take the pills for 10 days. It is very important that you finish the entire course of the medication, otherwise the symptoms can return and your body can become resistant to the medication. You should not return to school or work until your fever is gone and you have been taking the antibiotic for at least 24 hours. If you do not take the antibiotic, strep throat can lead to serious complications such as a rash, rheumatic fever, inflammation of the kidneys, scarlet fever and blood infections. Things you can do to help you feel better are ibuprofen, gargling warm salt water, throat lozenges, soft foods, cool drinks, and popsicles. Make sure to get plenty of rest and drink plenty of water. Come back to visit if your symptoms do not get any better within 48 hours after taking the antibiotic."

Results



Results (cont.)

College Students and Student-Athletes

No significant difference was found ($t(60) = .487, p > .05$) between the mean score of the college students and student-athletes. The percentage of comprehension of college students was 60.63% (7.28/12) compared to 57.92% (6.95/12) by student-athletes.

Division III Institutions

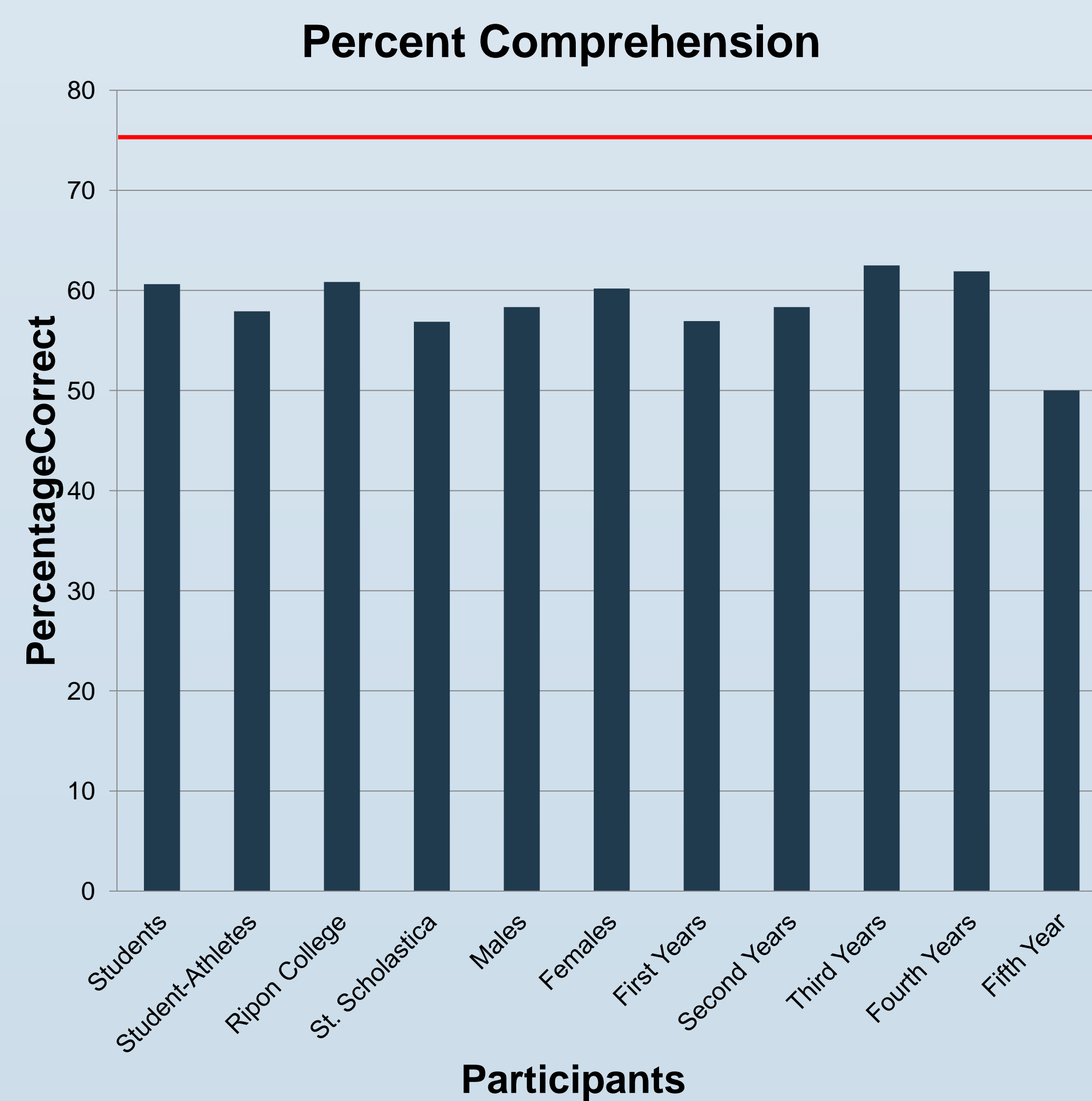
No significant difference was found ($t(60) = .327, p > .05$) between the mean score of the participants from Ripon College and The College of Saint Scholastica. The percentage of comprehension of participants from Ripon College was 60.85% (7.30/12) compared to 56.86% (6.82/12) by The College of Saint Scholastica.

Males and Females

No significant difference was found ($t(60) = .663, p > .05$) between the mean score of the male and the female participants. The percentage of comprehension of male participants was 58.33% (7.00/12) compared to 60.19% (7.22/12) by female participants.

Year in School

No significant difference was found ($F(4,55) = .485, p > .05$) between participants in any year of schooling. The percentage of comprehension of first years was 56.94% (6.83/12). Second years' comprehension was 58.33% (7.00/12). Third years' comprehension was 62.50% (7.50/12). Fourth years' comprehension was 61.91% (7.43/12). The comprehension score of the fifth year was 50% (6.00/12).



Conclusion & Discussion

Using the Test of Functional Health Literacy in Adults (TOFHLA) it was discovered that the mean health literacy scores were 93.83 for upper-class undergraduate students (Juniors and Seniors).¹⁶ The 2003 National Assessment of Adult Literacy has shown college students to have high levels of health literacy while another article stated that 20% of college students with a 4-year degree and 30% with a 2-year degree had only basic quantitative literacy skills.⁵¹ They also found that a high percentage of college students scored below the proficient level in literacy which would indicate they are unable to make informed healthcare decisions.⁵¹

The results of other studies are mixed about the functional health literacy of college students. This study has shown that while college students may have higher health literacy scores than some other populations, they still do not have adequate functional health literacy to be able to navigate the complex healthcare system we currently have. The composite scores were well below what would be considered at a level of comprehension of physicians' orders based upon past validated tests for health literacy.

Future Application

Although past research studies have suggested that the college-aged population has functional health literacy, this study has challenged that. Using a physician visit mock scenario video on strep throat, students and student-athletes within undergraduate institutions in the Midwest comprehended very little of physicians' visits. Further research needs to be done on this population so that educational curricula and campus activities can be utilized to raise awareness and education on health literacy. This may improve our society's health literacy and ability to navigate our complex healthcare system.

References

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For a complete list of references please ask.