

Background

Parents often seek the use of antibiotics for their children even when viral infections are present, which do not warrant antibiotic interventions. The community of Mount Orab was concerned about this issue, especially in light of recent antibacterial resistance across the country.

Objectives

This project aimed to teach third grade students the differences between viral and bacterial infections through active learning, as well as addressed the school's concern about the misunderstanding of causes and treatments of different illnesses.

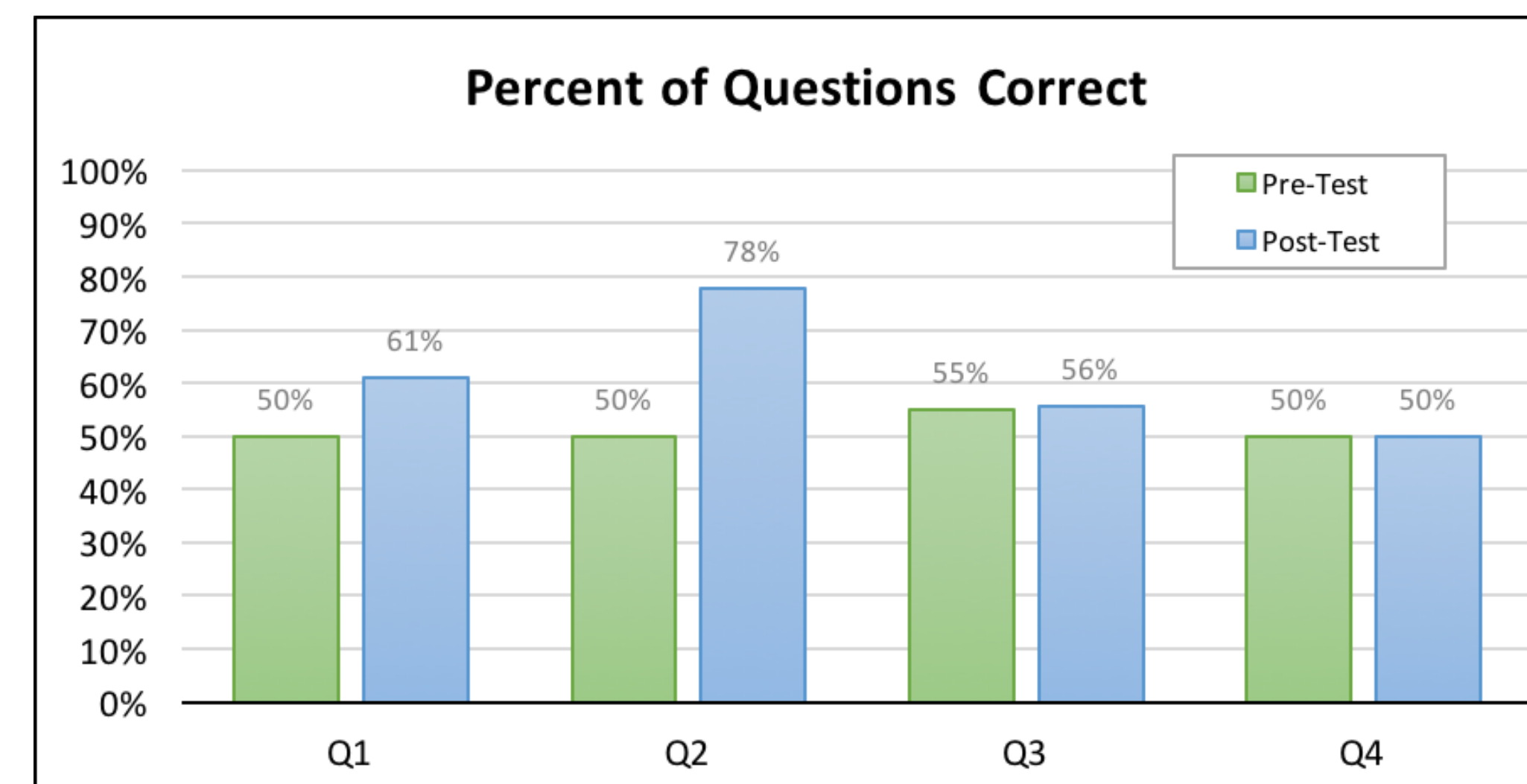
Methods

Presentation effectiveness and students' retention of information were assessed using a game and post-quiz. A question and answer style presentation was utilized to teach differences between viral and bacterial illnesses, as well as the appropriate management of each. An interactive game of "doctor and patient" was then played, during which students were given a bacterial or viral infection scenario and choose associated symptoms and management utilizing pre-made answer cards. Finally, a post-quiz was administered to determine short-term change in knowledge.

Results

Of the 20 participants that took the pre-quiz:

- A subset of 18 were available to take the post-quiz. In the overall analysis of post-test questions:
- There was an increased number of correct answers on the post-quiz after the presentation and game.
- The improvement of Question 2 was trending towards significance, with a p value of .08, however our data was not significant ($p > 0.05$)
- Students were better able to distinguish between types of infections and determine proper preventative care and management.

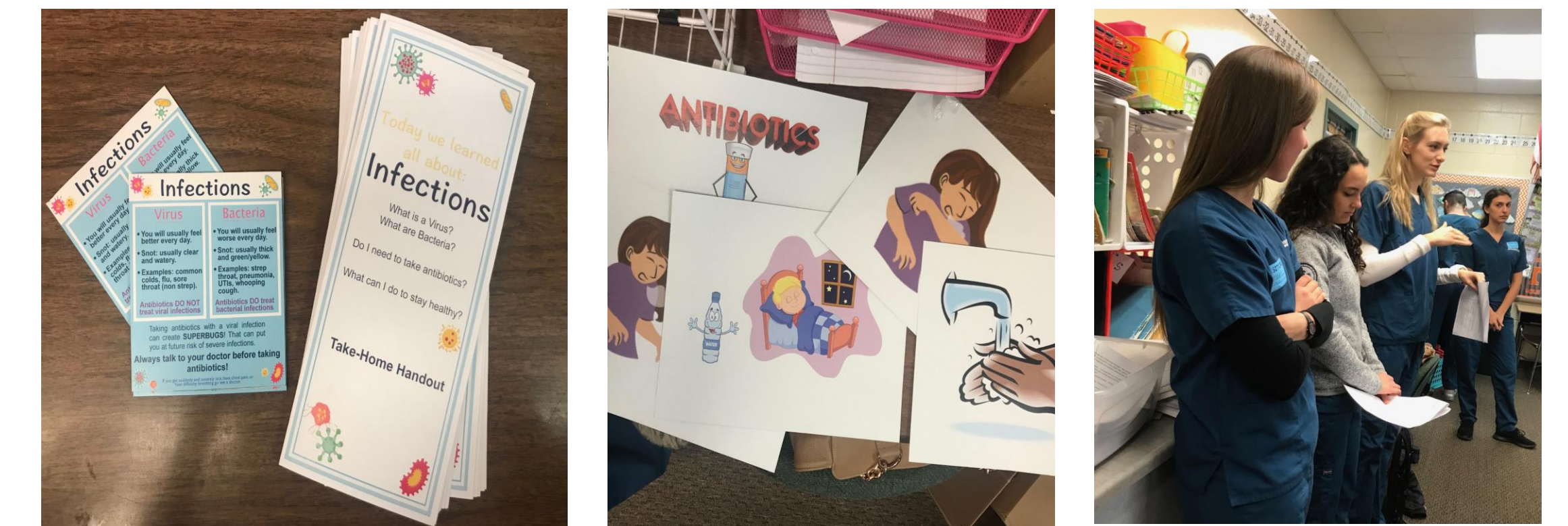


Conclusions

Following the presentation and game, students were better able to understand the differences between viruses and bacteria, as well as appropriate management of each. In future studies with larger parameters, a significant difference can be made in children and their families' understanding of antibiotics, reducing misuse and misunderstanding.

Discussion

Understanding the signs, symptoms, and differences between viral and bacterial infections may help community members seek appropriate care and may reduce requests for antibiotics. It is more likely that the community as a whole will use antibiotics correctly if they have a better understanding of when they are warranted.



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