

Introduction

Traditionally, journal clubs have been conducted within graduate medical programs to help integrate evidence-based learning. This study will be focused on beginning to integrate journal club into the pre-clinical years while implementing successful techniques used in past journal clubs.

One study conducted within a residency journal club found that a significant difference between test scores was only found among those who attended six or more times³. Another study concluded that using some type of instrument or checklist to analyze the clinical article yielded beneficial results⁴. These are both expected findings because as more clinical cases are analyzed, there is a higher likelihood that the individual participating in journal club will reap the benefits. Discussing cases, ideas, and differentials is how students and physicians learn so it is important to integrate this type of learning as early as possible. Also, for those who have not previously participated in a journal club, a set checklist is helpful to organize one's thoughts and help recognize important details and facts. For these reasons, this embark project will integrate both attendance and usage of a standardized review instrument while conducting the study among students in pre-clinical education.

Our hypothesis is that, with a structured review instrument in place to help analyze clinical articles, students will be able to benefit from monthly journal clubs and fully grasp concepts taught in these pre-clinical years. Overall, the results will contribute significantly in determining the efficacy of journal club and whether or not it can be a valuable tool in medical education.

Aims and Objectives

Aim I:

Understand the aims behind current journal clubs in order to identify their importance and how they can affect patient care

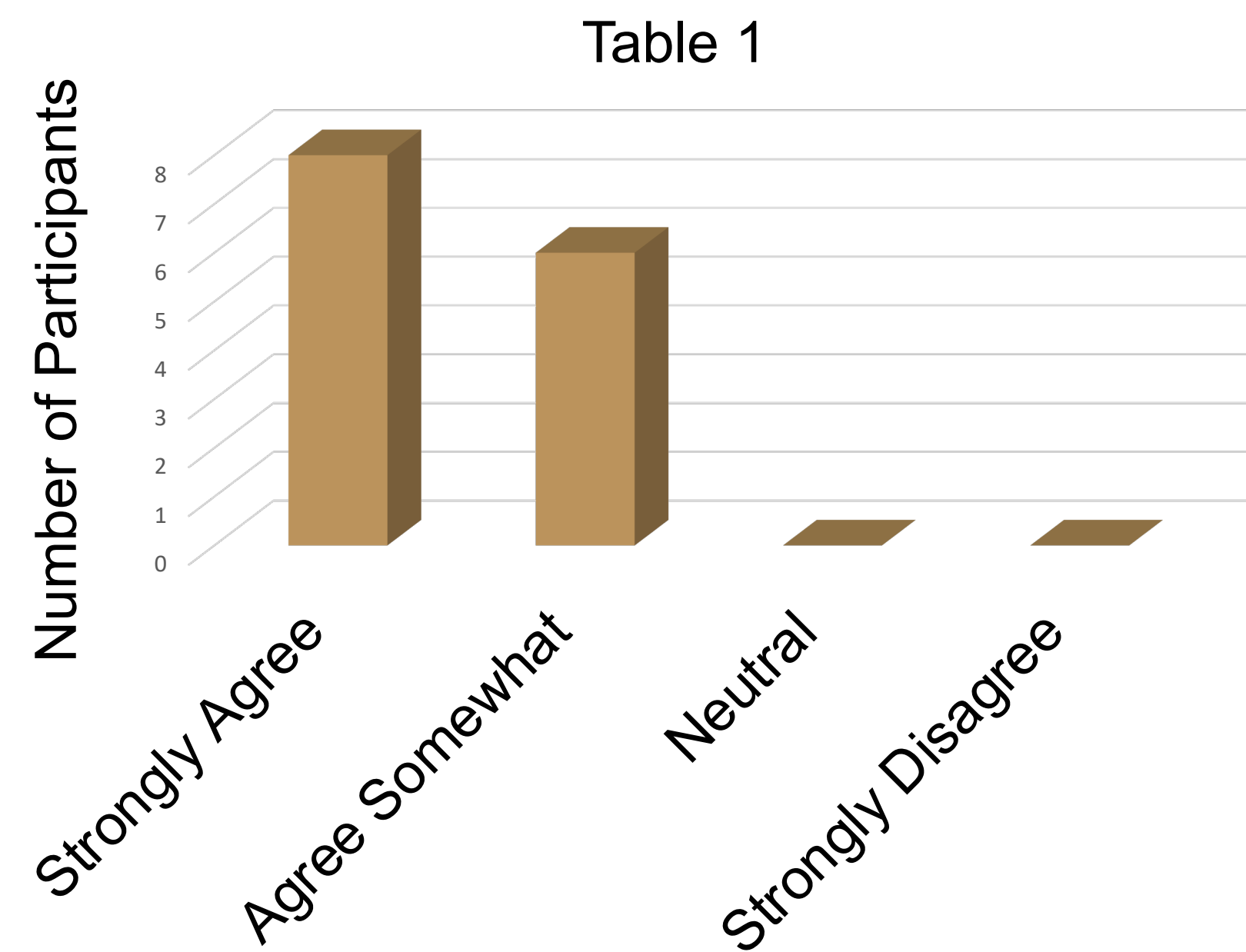
Aim II:

Statistically analyze student surveys to determine if there is a benefit in implementing journal clubs within the curriculum for those in the pre-clinical years of medical school

Methods

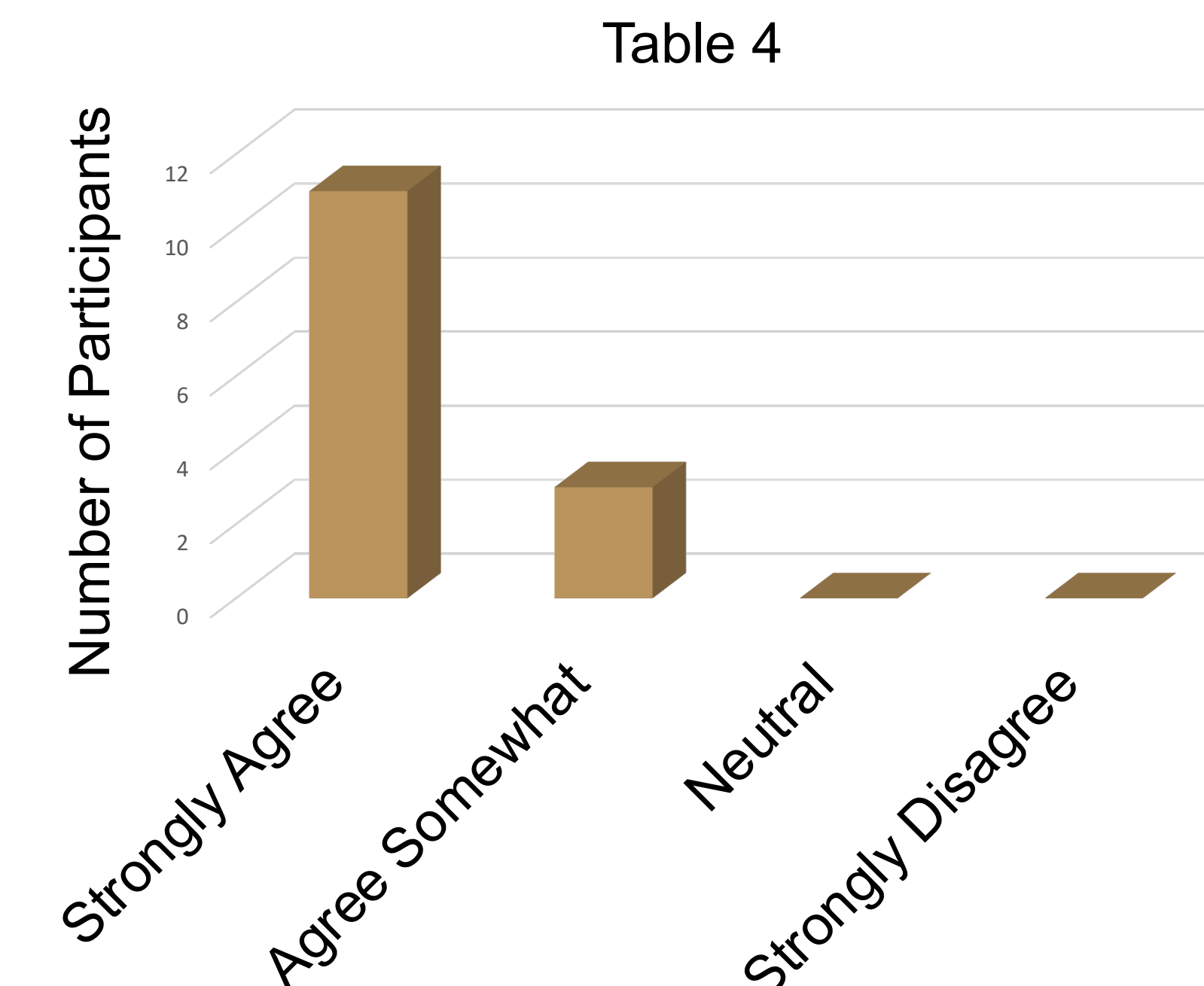
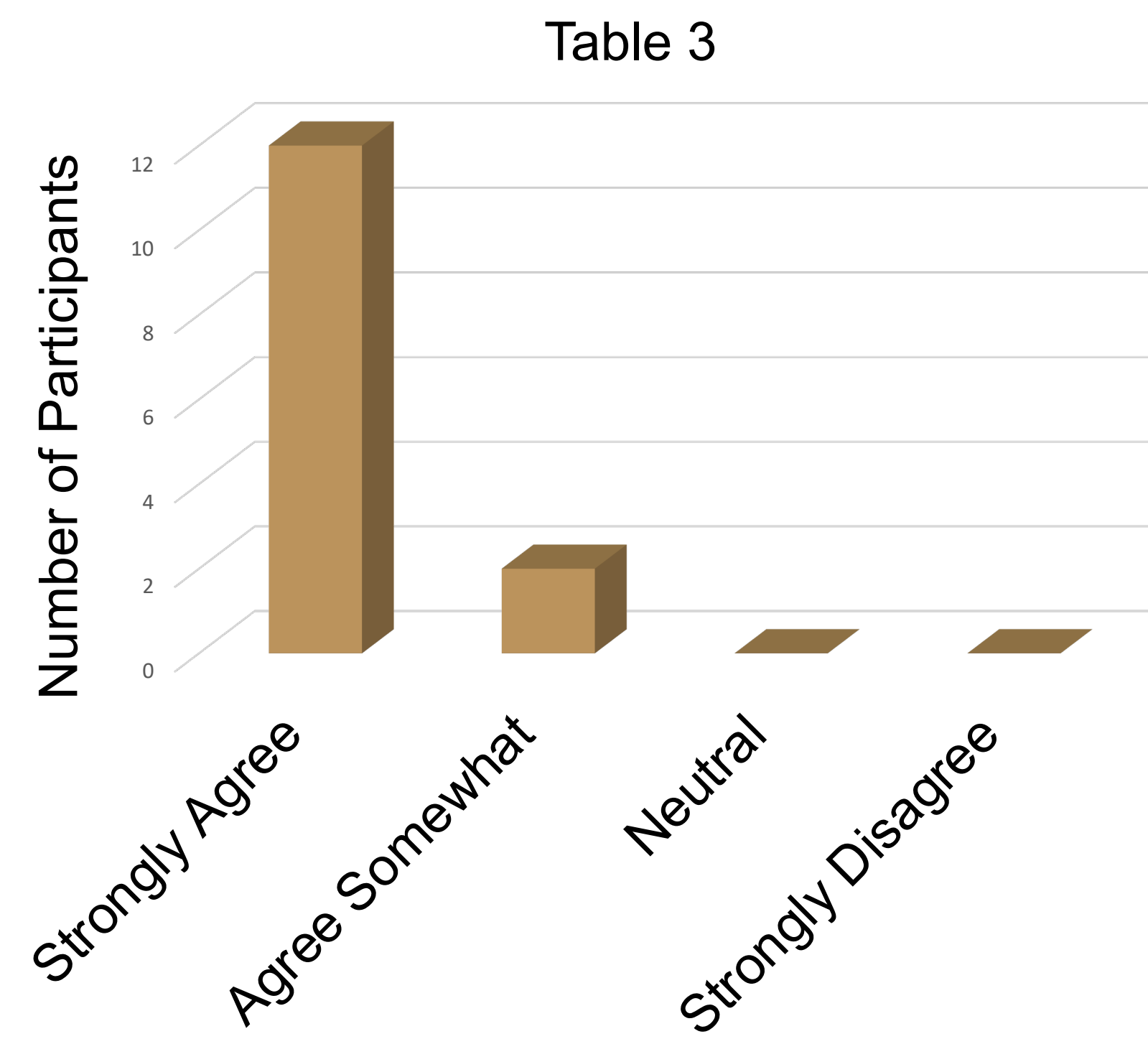
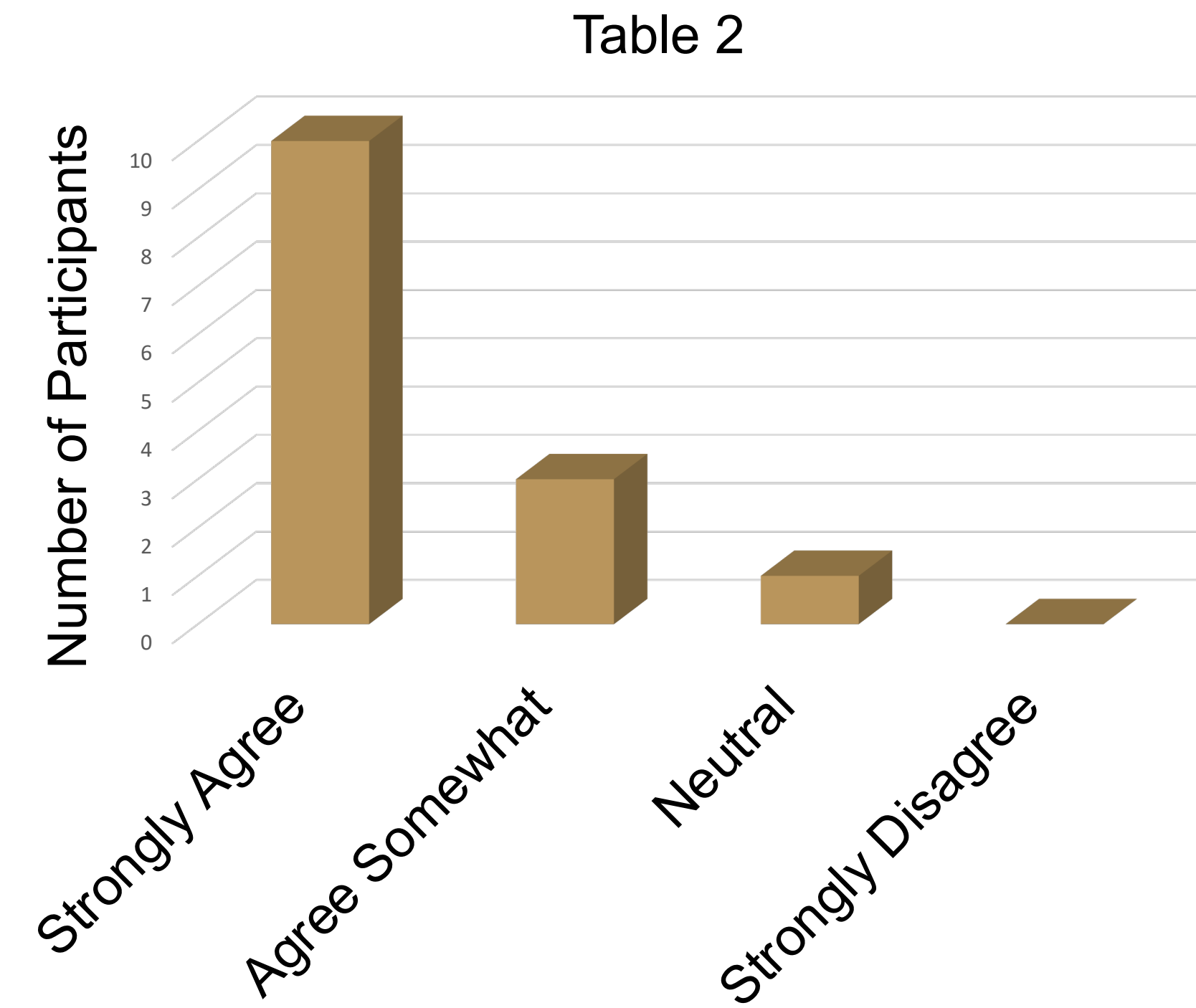
- **Study Design:** This was a prospective study that consisted of 14 2nd year medical students from August 2020 to April 2021. Each month, a one-hour journal club was held virtually over Zoom, where students used a structured review instrument to discuss and analyze journal articles. Journal club articles correlated with the pre-clinical curriculum at Oakland University William Beaumont School of Medicine (OUWB) and were emergency medicine based, as it is a broad field that encompasses all organ system courses. At the end of April 2021, all 14 students were asked to complete a 10-question survey determining whether or not the monthly journal clubs were helpful in providing them with a better understanding of organ system material.
- **Recruitment and Enrollment:** Students were recruited from OUWB and any pre-clinical medical student who was willing to participate was eligible. Pre-clinical medical students who did not fill out a consent form were excluded from the research project.
- **Consent Process:** An online consent form was emailed at the beginning of the study in order to receive approval from all students who were enrolled to participate in the study.
- **Timeframe:** The research study was conducted from August 2020 to April 2021 and followed pre-clinical students in organ system courses throughout that school year.
- **Statistical Analysis:** Descriptive statistics was used to analyze the survey responses.

Results



Graph Key:

- Table 1 statement: My pre-clinical education benefited from the monthly journal clubs.
- Table 2 statement: Other students would benefit from integrating journal clubs into their M1 & M2 years.
- Table 3 statement: Integrating these journal clubs would help benefit my future education in residency.
- Table 4 statement: I have a good understanding on how journal clubs work and how they can be applied to clinical medicine.



All 14 students either "strongly agreed" or "agreed somewhat" when asked if their pre-clinical education benefited from the monthly journal clubs as well as when asked if integrated journal clubs would benefit their future education in residency. Overall, students were in agreement that journal clubs were helpful in establishing a solid foundation before clinical rotations. They had a better understanding of disease management and treatment plans because the articles chosen were landmarks for how clinical practice is performed today. Students also stated that journal clubs aided in simplifying difficult concepts.

Conclusions

The results support the hypothesis that medical students would benefit from integrating journal club into the pre-clinical curriculum. Students felt that journal club positively impacted their education and was applicable in order to start practicing evidence-based medicine. However, there were some limitations to the research project. One limitation was the small sample size. With the sample size contributing to the reduced power of the study, there was an increase in the margin of error that we had to be aware of. Another main limitation to the study was that it was a survey study. The 10 questions on the survey all had the possibility of being interpreted differently by the respondents. Lastly, there was also a possibility of confounding variables based on the various learning styles of students.

Further studies may demonstrate whether journal clubs can improve clinical performance throughout medical school and into residency.

References

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