

## INTRODUCTION

Research shows that patients who have a radical mastectomy are likely to have moderate to severe postoperative pain (Grape et al., 2020). According to FitzGerald et al., approximately 1/3 of mastectomy patients experience uncontrolled acute pain postoperatively. Regional anesthesia has become a means of relieving postoperative pain while enhancing recovery. Two common blocks used to aid in postoperative pain in mastectomy patients are the thoracic paravertebral nerve block and the pectoral nerve block. This study aimed to educate anesthesia providers about the deficits of each block and the effectiveness of each technique in controlling pain in mastectomy patients.

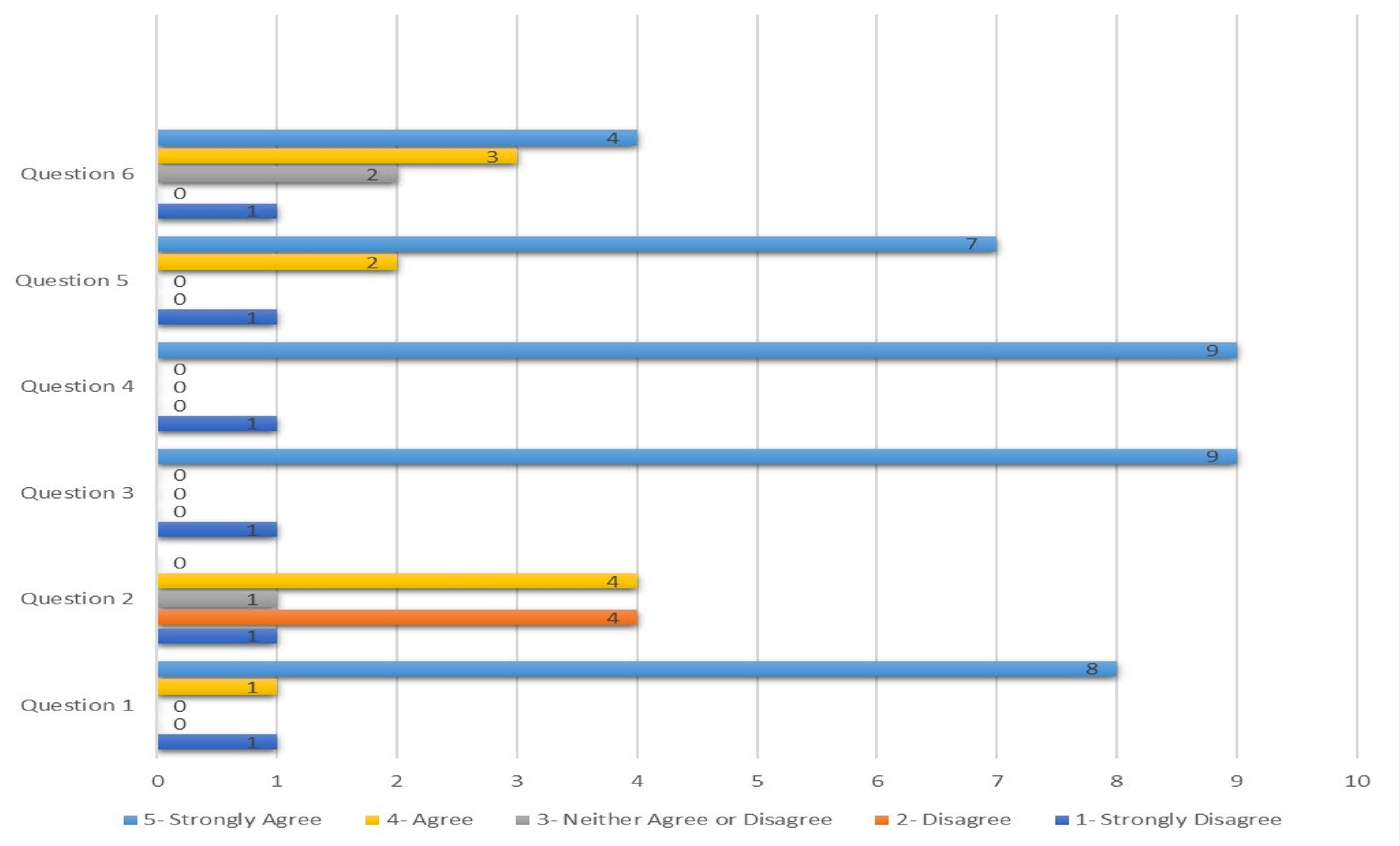
## OBJECTIVES

The purpose of this research is to bring awareness and understanding of the effectiveness of the thoracic paravertebral block in comparison to the pectoral nerve block in mastectomy patients. The goal is to evaluate the current understanding of the effectiveness of these blocks in mastectomy patients and evaluate if this presentation improved understanding and if it will influence the future treatment of this patient population.

## METHODS

Searched databases included ScienceDirect, CINAHL, Ovid MEDLINE, and PubMed. Inclusion criteria for literature review were publications within the last ten years (2010-2020); with the population being mastectomy patients undergoing a pectoral (PECS) or thoracic paravertebral nerve block (TPVB). The material was verbally presented at Magnolia Regional Hospital to the attending anesthesiologist, seven nurse anesthetists, and two student nurse anesthetists. A 5-point Likert Scale was conducted following the presentation.

Results of 5- Point Likert Scale



## 5- Point Likert Scale

1. The presented material was useful to my anesthesia practice.
2. Before this presentation, I was aware and understood the effectiveness of the thoracic paravertebral block in comparison to the pectoral nerve block in mastectomy patients.
3. After this presentation, I am aware and understand the effectiveness of the thoracic paravertebral block in comparison to the pectoral nerve block in mastectomy patients.
4. The presentation enhanced my understanding of the effectiveness of the TPVB and the PECs in the mastectomy population.
5. I would like to incorporate PECS blocks in my practice.
6. I would like to incorporate thoracic paravertebral nerve blocks in my practice.

1- Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree

## LIMITATIONS

A limitation of this study was the small number of participants available.

## RESULTS

Upon evaluating the studies included in this review, the PECS block appears to be an effective alternative to the TPVB for pain management postoperatively in mastectomy patients. While both are effective, this review found the PECS block to be the superior choice over the TPVB for mastectomy patients. The presentation of this material proved to be effective and is likely to lead to future practice change. Nine of the participants strongly agreed that they better understood the effectiveness of both blocks in compared to each other.

## IMPLICATIONS FOR NURSING PRACTICE

This project was successfully educated anesthesia providers on the usefulness of the PECS block and TPVB in mastectomy patients. The literature review showed that the PECS block provided superior pain management in this patient population, and the participants were receptive to the findings. Many providers strongly agreed that they were likely to utilize the PECS block in future practice when caring for mastectomy patients following the presentation. Overall, this could lead to practice change at Magnolia Regional Hospital in the future when caring for this patient population.

## CONCLUSION

The pectoralis nerve block provides effective pain management in mastectomy patients and has fewer associated complications than the thoracic paravertebral block. The results of this project are likely to change future practice based on Likert Scale results.