

Effectiveness of Virtual Reality on Anxiety in Patients Undergoing Diagnostic Medial Branch Blocks for Facet Joint Pain Syndrome

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Introduction

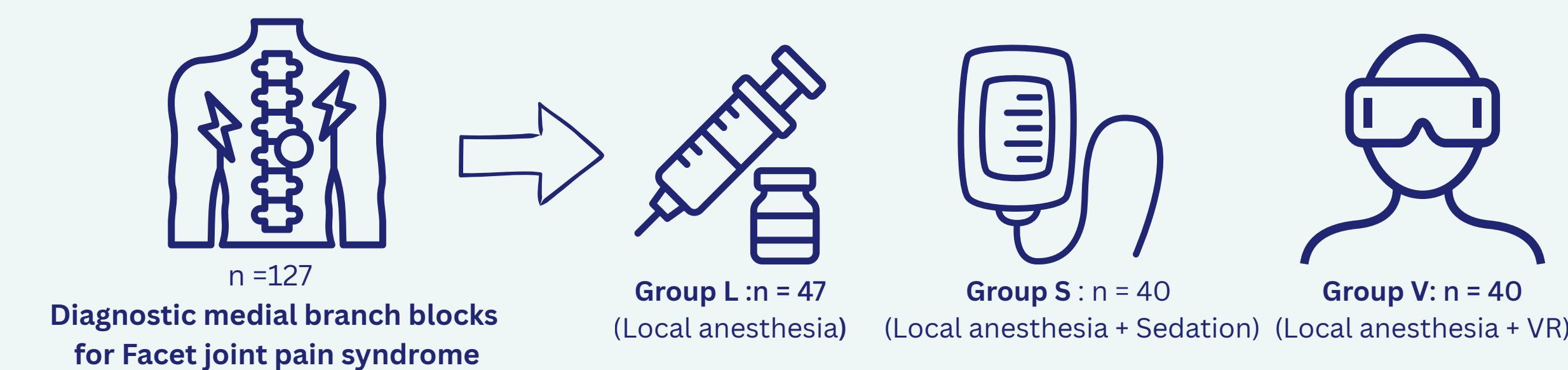
Anxiety and stress are common problems during interventional pain management¹. While the latest guidelines do not recommend the routine use of sedation²⁻⁴, Virtual reality (VR) technology has become a novel intervention to manage anxiety and pain⁵.

Methods

Design :

- Two - center Randomized controlled study.
 - Phramongkutklao Hospital, Royal Thai Army, Thailand (Feb 2023–Sept 2025).
 - Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Thailand (Sept 2024–Sept 2025).

Population :



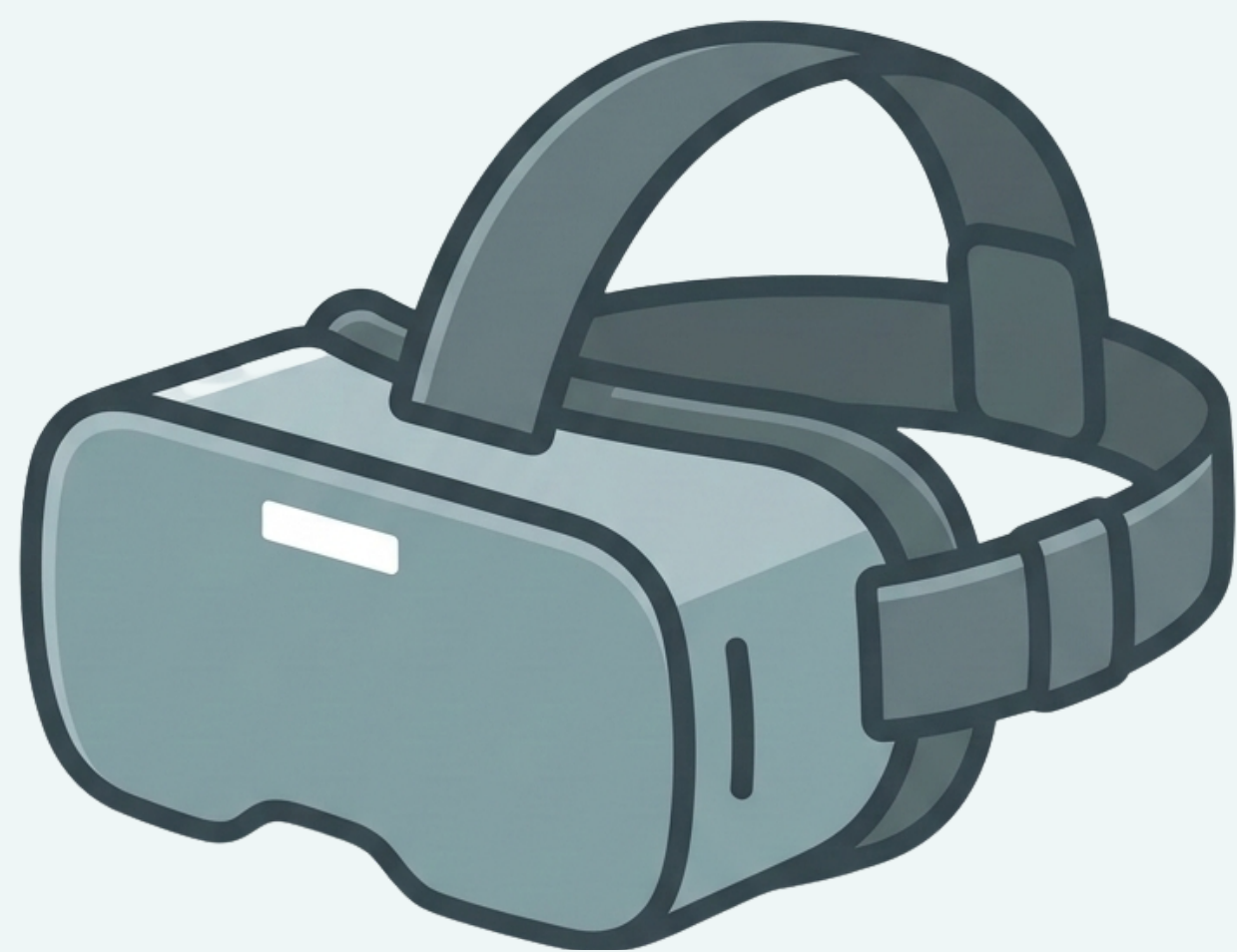
Analysis :

- Anxiety scores : State-Trait Anxiety Inventory (STAI)
 - Pre & Post Procedure.
- Pain scores: Visual Analog Scales (VAS).
- Side effects.

Results

- Post procedure total STAI scores were significantly decreased in Virtual reality group (Adj. p-value = 0.001).
- No difference in post procedure total STAI scores in Virtual reality group compared to Sedation group (Adj. p-value = 0.333).

Conclusion



Virtual Reality (VR) technologies are an effective, Non-pharmacological intervention for reducing anxiety and pain in patients undergoing diagnostic medial branch blocks for Facet joint pain syndrome.

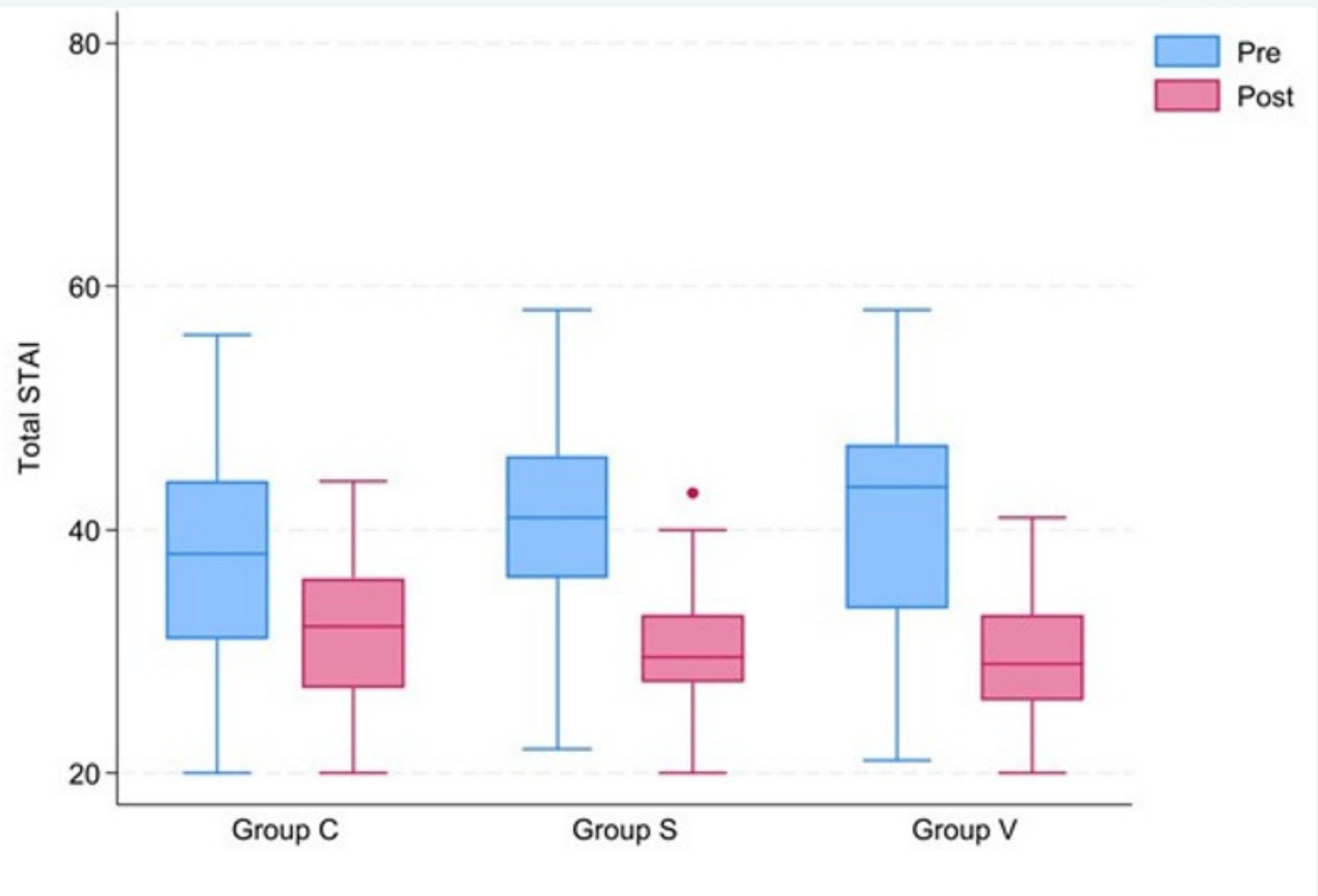


Preserved Patient-Physician Communication



VR provides non-inferior outcomes comparable to sedation techniques without the associated impairment of patient-physician communication.

Future studies should employ larger cohorts and next-generation devices.



- Total STAI scores (Pre – Post procedure) were lower in both Sedation and Virtual reality group compared to Local anesthesia (Group S mean difference -3.87 (-7.50, -0.24) Adj. p-value = 0.033, Group V mean difference -5.84 (-9.48, -2.21) Adj. p-value < 0.001).
- Subcutaneous pain scores and Procedure-related pain scores were also significantly lower in both Sedation and Virtual reality group compared to Local anesthesia.
- Side effects were found
 - Drowsiness in Sedation group (22.5%).
 - Dizziness in Virtual reality group (22.5%).

References

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