

REVIEWER'S REPORT

Manuscript No.: IJAR-57191

Title: Comparative evaluation of vibrotactile device with topical anaesthetic patch to reduce pain during administration of local anaesthesia in paediatric dental patients.

Recommendation:

Accept as it is

Accept after minor revision.....Yes.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality	•			
Techn. Quality	•			
Clarity	•			
Significance	•			

Reviewer's ID: JPR-Dr. Sireesha Kuruganti

Detailed Reviewer's Report

This review evaluates the manuscript titled "Comparative evaluation of vibrotactile device with topical anaesthetic patch to reduce pain during administration of local anaesthesia in paediatric dental patients."

Manuscript Review Report

1. Abstract and Introduction

* *Conciseness*: The abstract provides a clear summary of the study's aim, methodology, and primary findings.

* *Context*: The introduction effectively establishes the challenge of needle phobia in pediatric dentistry.

* *Theoretical Framework: The explanation of the **Gate Control Theory* (Lines 55–62) provides a solid scientific basis for using vibration as an analgesic.

* *Refinement Suggestion*: In Line 3, the phrase "painless administration... is crucial" is repeated almost verbatim in Line 20. One instance should be removed to reduce redundancy.

2. Materials and Methodology

* *Study Design*: The randomized allocation into two groups of 10 children each is clearly stated (Lines 81–82).

* *Procedural Detail*:

* *Group 1 (V-pen)*: The protocol of placing the device 1 minute prior and continuing for 10 seconds post-injection is well-detailed (Lines 82–84).

* *Group 2 (TAP)*: The preparation of the topical patch using sterile discs and air-drying (Lines 86–88) is innovative and clearly described.

* *Pain Assessment*: The use of both an objective scale (SEM) and a subjective scale (Wong-Baker FPR) enhances the study's validity (Lines 92–93).

* *Blinding*: Line 102 correctly notes that the assistant was blinded to avoid bias during SEM calibration.

3. Results and Statistical Analysis

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* **Wong-Baker Scale**: A statistically significant difference ($p=0.01$) was found, favoring the V-pen (Lines 111–112, Table 1).

* **SEM Scale**: No significant difference was found ($p=0.39$) (Line 115, Table 2).

* **Visual Aids**: The bar charts (Figs 3 and 4) on Page 10 accurately reflect the mean ranks provided in the tables.

* **Clarification Needed**: There is a discrepancy in the reporting of the SEM mean rank for the TAP group. Table 2 (Line 269) and the chart (Fig 4) show a value of 11.45, but the text summary for SEM results does not explicitly discuss why the subjective and objective scales yielded different significance levels.

4. Discussion and Conclusion

* **Literature Integration**: The discussion effectively compares results with existing studies, acknowledging both supporting evidence (Blair, Tandon et al.) and conflicting data (Yoshikawa et al.).

* **Mechanism Analysis**: The author correctly identifies that the variability in the anesthetic patch's performance may be due to penetration depth or application duration (Line 141).

* **Limitations**: The manuscript honestly addresses its small sample size (20 children) and age restrictions (5–12 years) as limitations (Lines 146–147).

* **Conclusion**: The conclusion that the vibrotactile device is more efficient than the patch is supported by the Wong-Baker data (Lines 149–150).

5. Technical and Formatting Notes

* **Line 16**: The phrase "finally THE data" contains an unnecessary capitalization of "THE".

* **Line 90**: There is a typo where "is placed" is repeated twice.

* **Citation Consistency**: Ensure all references in the text (e.g., [7], [21]) align perfectly with the numbered list on Pages 6–8.