

# Analysis of Acupoint Selection and Combinations in Acupuncture Treatment of Trigeminal Neuralgia: A Protocol for Data Mining [Letter]

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## Dear editor

We read with great interest the study protocol entitled “Analysis of Acupoint Selection and Combinations in Acupuncture Treatment of Trigeminal Neuralgia: A Protocol for Data Mining” by He et al.<sup>1</sup> By integrating descriptive statistics, association-rule mining, and cluster analysis, this protocol provides a comprehensive framework for analyzing intricate acupuncture point patterns. Given the clinical heterogeneity in trigeminal neuralgia management, this protocol constitutes a significant step toward acupuncture standardization. To strengthen its methodological rigor further, we respectfully suggest the following points for consideration.

## Inadequate Management of Temporal and Terminological Heterogeneity

While the protocol includes literature from the past 30 years, based on “contemporary authoritative standards” it fails to address critical differences in the evolving versions of the International Classification of Headache Disorders (ICHD)—for example, the ICHD-3 requirement that MRI be used to exclude secondary causes in classical trigeminal neuralgia. This oversight may lead to the inclusion of secondary cases, potentially distorting the assessment of acupuncture point efficacy.<sup>2</sup> Additionally, acupuncture point nomenclature is standardized per the national standard, but alias mapping rules are not disclosed, which impedes reproducibility.<sup>3</sup> It is recommended to adopt the ICHD-3 classification and publish a terminology governance protocol.

## Uncontrolled Confounding from Synergistic Therapies

Acupuncture is allowed alongside other interventions, such as traditional Chinese medicine or neuroblockade, yet the protocol does not require separate reporting of data for the pure acupuncture group, violating CONSORT guidelines for nonpharmacological trials.<sup>4</sup> This flaw complicates isolating acupuncture-specific effects from those of combined therapies and introduces bias, particularly by excluding post-surgery acupuncture treatments while retaining other therapies. It may be helpful to consider separating pure acupuncture prescriptions and conducting stratified sensitivity analyses to better understand any potential confounding effects.

## Lack of Evidence-Based Statistical Thresholds Compromises Model Validity

The threshold for  $KMO > 0.5$  is set for factor analysis, but no statistical standards are provided to support this criterion. Research suggests that a  $KMO$  value of 0.50–0.59 indicates data is only “barely suitable” for factor analysis, with significantly weaker factor structure stability compared to the  $\geq 0.60$  threshold.<sup>5</sup> This inadequate threshold could lead to

unreliable acupuncture point combinations. We recommend a dual-threshold approach: perform EFA with KMO  $\geq 0.60$ , and principal component analysis for KMO values between 0.50 and 0.59.

## Conclusion

Finally, this protocol employs multidimensional data mining techniques to analyze acupuncture point selection patterns in trigeminal neuralgia. Further enhancement of its methodological rigor could offer crucial evidence-based support for the standardization of acupuncture treatment, thereby promoting the precision management of neuropathic pain.

## Disclosure

The authors report no conflicts of interest in this communication.

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