

# Exploration of the Application Rules and Clinical Significance of Acupoints in Acupuncture Treatment of Migraine Based on Data Mining [Response to Letter]

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## Dear editor

We sincerely thank Shen et al for the time and effort spent reviewing our article and for offering constructive feedback based on its strengths.<sup>1</sup> Your encouraging words and insightful suggestions are highly valued and will surely help improve our work. We believe that implementing your advice will greatly refine our research. Please find our detailed response to your feedback below.

First, despite Kaiser's (1974) classic standard that a KMO value  $\geq 0.6$  is the minimum acceptable threshold, many studies indicate that in some specific research fields, factor analysis may still be feasible with a KMO value slightly below 0.6, supplemented by other tests (eg, Bartlett's test of sphericity). If the KMO value is slightly low (0.5–0.6) but the Bartlett's test is significant ( $P < 0.05$ ), factor analysis can still be cautiously conducted to reject the assumption of variable independence.<sup>2–6</sup> In this study, the Bartlett's test yielded a  $P < 0.001$ , indicating that factor analysis is appropriate. In addition, whether the sample size is sufficiently large is also a factor that needs to be considered in determining the suitability for performing exploratory factor analysis.<sup>7</sup> Therefore, in practical applications, researchers need to consider these indicators comprehensively, rather than relying on a single standard to determine the applicability of exploratory factor analysis.<sup>8</sup> In numerous studies and literature, a cumulative variance explained percentage exceeding 50% is generally regarded as a fairly reasonable reference criterion, indicating better model interpretability in exploratory factor analysis.<sup>9–13</sup> However, given that the exploratory factor analysis results have not reached an optimal state, although they possess a certain degree of explanatory power, they should be interpreted with caution.

Second, as you mentioned, the sample size of 10 patients is indeed small. However, we referred to many similar articles published in top domestic journals of acupuncture (*Chinese Acupuncture and Moxibustion* and *Acupuncture Research*). Most of these articles impose no restrictions on sample size,<sup>14–16</sup> and those that do typically set the sample size also at over 10.<sup>17</sup> This is generally because there are various syndrome types in the differentiation of diseases in traditional Chinese medicine. Most clinical studies include multiple syndrome types and select acupoints based on syndrome differentiation. However, few studies specify the sample size for each syndrome type. Our study incorporates the selection of acupoints based on syndrome differentiation for each syndrome type. Thus, the 10 - case sample size is aimed at roughly meeting the basic sample size for each syndrome type on average. The actual total sample size for each study is far more than 10 cases. Regarding the literature span issue, our inclusion criteria state: "Patients were diagnosed with migraine according to the diagnostic criteria established and applied in the clinical studies during that particular period." This statement pertains to the diagnostic criteria for our study. In reality, many meta - analyses and data mining

studies incorporate databases from their inception to the present. This is a conventional practice for this type of article, aiming to cover a broader range of data. Even so, as you mentioned in the letter, in future research, we can conduct further subgroup analyses on different periods, sample size, and subtypes and compare their similarities and differences.

Thirdly, as you mentioned in the letter, the proportion of the number of acupoints in the head and neck region should be 37.02%. We truly appreciate your keen - eyed comments.

We look forward to potential future communication and joint efforts with you. It is our expectation that, under your guidance and with your backing, we will achieve more meaningful results in the field of Traditional Chinese Medicine research.

## Disclosure

The authors have no conflicts of interest to declare in this communication.

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