

Contents lists available at [ScienceDirect](#)

## Integrative Medicine Research

journal homepage: [www.imr-journal.com](http://www.imr-journal.com)

## Commentary

## Novel statistical approach offers new way to investigate the uses of acupuncture points

S. Birch <sup>a,\*</sup>, T. Alraek <sup>a,b</sup><sup>a</sup> School of Health Sciences, Kristiania University College, Oslo, Norway<sup>b</sup> National Research Centre in Complementary and Alternative Medicine, Faculty of Medicine, Department of Community Medicine, UiT The Arctic University of Norway, Tromsø, Norway

## ARTICLE INFO

## Article history:

Received 27 January 2020

Accepted 27 January 2020

Available online 1 February 2020

The paper 'Statistical inference of acupoint specificity: forward and reverse inference' by Hwang and colleagues<sup>1</sup> presents a very interesting study that proposes novel statistical approaches for analysing use and indications of acupuncture points in the treatment of different symptoms. It possibly contributes to a better understanding of the thought processes practitioners of acupuncture might use as they choose treatment for patients.

There do remain however certain limitations and caveats with this study. What is acupuncture and how do traditional Korean medical (KM) doctors use it? We raise the questions because the study does not seem to address critical issues that derive from how they are answered. Acupuncture is used as one of several treatment systems within KM, but is it used more on the basis of addressing KM diagnoses, which are not diseases or symptoms, or is it used more on the basis of addressing symptoms and disease? If acupuncture was prescribed by the 80 KM doctors in the study only on the basis of the latter approach (disease/symptoms), then the results of the study remain valid. But if some or all of the 80 KM doctors prescribed acupuncture for some or all of the patients on the basis of the former approach (Traditional East Asian Medicine diagnoses [TEAM]), then the results of the study are problematic and validity of the conclusions questionable. Did the researchers question the 80 KM doctors about whether or how they used KM diagnosis-based treatments? It appears not, thus open-ended questions remain about their results. If all of the KM doctors were instructed to *only* prescribe treatments on the basis of the diseases or symptoms and all the KM doctors were shown to have done this, then the results remain valid, but the study has weak generalizability. It is common practice in TEAM of which KM is one example, to use TEAM theories

and methods to gather data and formulate TEAM based diagnoses from that data. Some acupuncture treatment points are selected on the basis of those TEAM diagnoses (the root treatment [zhibenfa]) and some acupuncture treatment points are selected on the basis of the disease/symptoms (the branch treatment [zhibiaofa]). Since many systems of acupuncture follow this combined approach<sup>2,3</sup> results related to the KM symptom treatments described in this study will only be generalizable to that form of KM practice.

While the study has developed novel methods and performed interesting analyses, it is difficult at this stage for us to understand how to use the current results. Perhaps future studies employing similar methods can make clearer the different aspects of how treatment prescription decision making was made, so that we can understand better how relevant the results are for different systems of practice. Further, the novel statistical approaches and reasoning that the researchers have developed could also be employed for teasing out the role of signs and symptoms and how they are used in pattern identification research. While we are waiting for further relevant studies, we also want to highlight the use of a Delphi process as a way to increase the reliability and validity of use of acupoints in treatment. Such an approach can also help us to answer the important question - what is best clinical practice based on?

## Author contribution

This commentary was commissioned by Editor of IMR. SB drafted the manuscript and TA contributed the revision. Both authors approved the final version of this manuscript.

## Conflict of interest

None declared.

\* Corresponding author.

E-mail address: [sjbirch@gmail.com](mailto:sjbirch@gmail.com) (S. Birch).

### **Funding**

None.

### **Ethical statement**

No ethical approval was required for this manuscript as this study did not involve human subjects or laboratory animals.

### **Data availability**

Not applicable.

### **References**

1. Hwang YC, Lee YS, Ryu YH, Lee IS, Chae YB. Statistical inference of acupoint specificity: Forward and reverse inference. *Integr Med Res* 2020, <http://dx.doi.org/10.1016/j.imr.2020.01.005>. In press.
2. Birch S, Alraek T. Traditional East Asian medicine: how to understand and approach diagnostic findings and patterns in a modern scientific framework? *Chin J Integr Med* 2014;20(5):333–7.
3. Birch S, Felt R. *Understanding Acupuncture*. London: Churchill Livingstone; 1999.