

# Response to “Medical Education Electives Can Promote Teaching and Research Interests Among Medical Students” [Letter]

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## Dear editor

Upon examining Arja et al's study concerning the influence of medical education electives on students' teaching and research interest, we commend the authors for exploring a crucial subject.<sup>1</sup> As advocates for innovative medical education, we hope to provide additional perspective on this topic. The qualitative phenomenology approach used was well-suited for delving into the experiences and perceptions of students regarding the elective. This approach allowed for nuanced exploration of the topic, providing valuable insights into students' perspectives.

The authors should be commended for critically evaluating their methodology, recognising limitations such as the reliance on a small sample size and the potential of bias through convenience sampling. However, the significance of these factors as a source of type I error may undermine the relevance of the study's outcomes in practice.<sup>2</sup> The study could benefit largely from a broader, more diverse sample pool, as limiting the sample to a single institution hinders generalisability and may amplify characteristics of that population, such as pre-existing research enthusiasm. Moreover, repeating the study with students who did not take part in an elective could help in visualising the differing experiences, thus creating a control group.

The elective's multi-modular structure allows students to choose modules covering educational research methods, curriculum development, learning theories, accreditation and regulation. Yet, the evaluative form was consistent across all elective students, regardless of selected modules. With education research methodology and learning theories more popularly-chosen, the study may benefit from individualised evaluation of each module, to hold relevance to designing future electives.

While the online survey method offers efficiency, reliance on free-text and self-reported data may introduce internal response bias and capture neither the advantages of depth from semi-structured interviews, nor the generalisability of quantitative data. For example, less-engaged individuals may similarly be less willing to provide depth in free-text responses, limiting the full extent of captured insights. Employing discrete data collection via closed-ended questions may offer quantitative insight that would allow greater comparison of this study's outcomes with wider literature. Conversely, in-depth face to face interviews like those employed by Hayashi et al, could provide a richer understanding of student experiences as they are more personalised.<sup>3,4</sup>

Moreover, the absence of dissenting opinions in the identified themes suggests potential bias in the analysis towards positive outcomes. Therefore, exploring both positive and negative aspects of electives with regards to both the students and the locals, could offer a more balanced perspective.<sup>5</sup>

Despite these limitations, Arja et al shed light on the positive impact of medical education electives, emphasising the need for future studies to address methodological shortcomings.<sup>1</sup> Improved sampling methods, rigorous data collection, and analysis procedures, along with consideration of broader contextual factors, can enhance this. Investigating the long-term

effects of electives on students' careers and academic achievements would be an intriguing avenue for future research, as this could indicate benefits that extend beyond the electives, similar to the findings of Hayashi et al.<sup>3</sup>

We commend the authors for highlighting this important topic in medical education.

## Disclosure

The authors report no conflicts of interest in this communication.

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