



# Medical Students' Attitude and Perception Towards Embryology Course at Debre Markos University, Ethiopia [Letter]

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## Dear editor

We read with great interest the paper by Sume,<sup>1</sup> which examines medical student attitudes to Embryology. We would like to offer our comments on this study and the role of questionnaire-based research in medical education, from the perspective of recent UK medical school graduates.

The study recruited a sample size of 246 medical students, however, more than half were either in pre-clinical or first year clinical training. These individuals would, therefore, have little to no relevant experience to draw upon when responding to survey statements directly related to clinical applications of embryology. We would instead propose a greater emphasis on later year groups or even newly qualified doctors, as they would be better placed to offer a retrospective opinion on the embryology teaching they received at medical school and its application to clinical practise.

We note that the questionnaire used by Sume is based on a prior study by Moxham et al,<sup>2</sup> which sought to evaluate medical student opinions on embryology in Europe using Thurstone and Chave attitude analysis. We commend Sume's modification of using a Likert scale in this study, which reduces the potential for subjective biases. However, we find that the statements which make up the questionnaire have not been adequately adapted to suit this difference in methodology. For instance, including directly opposing statements such as "Embryology is a vital tool in medical practise" and "Embryology has no significance in contemporary medicine", which is an intentional element of Thurstone and Chave attitude analysis, becomes redundant when using a Likert scale and may make results difficult to interpret. Furthermore, studies assessing best practises in questionnaire design support the use of questions rather than statements, as participants find questions easier to process and respond to. In addition, the use of agree/ disagree responses has been criticised for promoting acquiescence bias.<sup>3</sup>

Artino et al<sup>4</sup> have produced guidance for the Association of Medical Education in Europe, which proposes a series of steps underpinning good questionnaire design. We appreciate that Sume has followed some of these principles, including the appropriate use of pre-testing to assess questionnaire clarity. Indeed, a recent paper highlighted that only 6.77% of survey articles published in medical education journals report pre-testing when using a new tool.<sup>5</sup> However, there is no information on what the pre-testing process entailed in Sume's study and we feel that the wording of some survey statements remains ambiguous. To improve on this further, we suggest that Sume could have conducted focus-groups or cognitive-interviews<sup>5</sup> to gauge student understanding of the questionnaire statements. This approach would allow wording and use of jargon to be tailored to the target population, thus optimising comprehensibility.

In summary, the study by Sume provides insight into medical student attitudes to embryology but also demonstrates some common pitfalls in survey design and population selection. As medical education research relies heavily on questionnaire-based studies, it is crucial that researchers adhere to the principles of good survey design to ensure that the data produced is accurate and meaningful.

## Disclosure

The authors report no conflicts of interest in this communication.

## References

1. Sume B. Medical Students' Attitude and Perception Towards Embryology Course at Debre Markos University, Ethiopia. *Adv Med Educ Practice*. 2022;13:789–796. doi:10.2147/AMEP.S377999
2. Moxham B, Emmanouil-Nikoloussi E, Brenner E, et al. The attitudes of medical students in Europe toward the clinical importance of histology. *Clin Anatomy*. 2017;30(5):635–643. doi:10.1002/ca.22889
3. Saris W, Revilla M, Krosnick JA, Shaeffer EM. Comparing Questions with Agree/Disagree Response Options to Questions with Item-Specific Response Options. *Surv Res Methods*. 2010;4(1):61–79. doi:10.18148/srm/2010.v4i1.2682
4. Artino A, La Rochelle J, Dezee K, Gehlbach H. Developing questionnaires for educational research: AMEE Guide No. 87. *Med Teach*. 2014;36(6):463–474. doi:10.3109/0142159X.2014.889814
5. Colbert CY, French JC, Arroliga AC, Beth Bierer S. Best practice versus actual practice: an audit of survey pretesting practices reported in a sample of medical education journals. *Med Edu*. 2019;24:1. doi:10.1080/10872981.2019.1673596

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