Cardiothoracic surgical education research is NOT for dabblers anymore

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It is widely known that education is an undervalued profession, despite its importance in society. In the world of cardiothoracic surgical research, educational research has been considered a less meaningful contribution to science than attempts to cure aortic stenosis and lung cancer. As a result, cardiothoracic surgical education research (CSER) has suffered a dearth of quality and rigor. Many CSER investigators have been guilty of “dabbling” in CSER by doing a “simple” simulation study or a survey that lacks the same rigorous scientific methodologies as scientific literature asking clinical questions. In this issue of the *Journal*, Dr Antonoff and colleagues¹ offer potential CSER investigators a snapshot into common methodologic pitfalls that frequently plague CSER articles during the peer-review process and opportunities to improve the scientific rigor of CSER.

Scientific rigor is used to improve clinical outcomes leading to better patient care, so why can it not be used to improve CSER and surgical education? This question is one of the central themes of the article, “Conducting High-Quality Research in Cardiothoracic Surgical Education: Recommendations From the Thoracic Education Cooperative Group.”¹ The authors have set out to describe a formalized step-by-step approach to designing an educational study that can be used to improve the training of our residents.

Antonoff and colleagues¹ emphasize the importance of a valid scientific question for CSER. Much like basic science and clinical research, the question for CSER must be relevant, focused, and testable. The authors encourage the use of a literature search to guide the generation of a valid question. Next, the importance of choosing a rigorous and appropriate methodology to answer the research question is stressed. In addition, they encourage the use expert collaborators to assist with design and analysis of data, just as would be used for large-scale multicenter trials.

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Central Message

CSER suffers from a dearth of rigor and quality. The Thoracic Education Cooperative Group authors provide a guide to improve rigor in surgical education research for cardiothoracic surgeons.

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Antonoff and colleagues¹ also attempt to change the mindset that educational research should only be destined for editorials to educational research can be deeply rooted in scientific principles and appear in peer-reviewed journals with high impact factors. Antonoff and colleagues¹ have done a brilliant job arguing for scientific rigor and detailing how to achieve this in CSER. Nonetheless, under the leadership of the Thoracic Education Cooperative Group, we should see the niche of surgical education blossom with scientific studies.

For those interested in CSER, this article will serve you well as a guide on where to start and to see your project through to completion. With the advent of the Accreditation Council for Graduate Medical Education milestones, we have enhanced the rigor of our training programs, and in today's era of evidence-based medicine it is time to hold the same standards for our educational research.² Let us make Dr William S. Halsted proud by bringing scientific rigor to educational research. CSER dabblers be aware, rigor is required for publication in 2018 and beyond!

References

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