Medical education research in obstetrics and gynecology

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TO THE EDITORS: The recently published article "Implementation and Validation of a Retroperitoneal Dissection Curriculum"[1] describes the design and evaluation of a surgical curriculum in gynecology. The authors should be congratulated on an innovative method for teaching a difficult subject aiming to improve patient care. From a scientific point of view, however, there are several concerns about the publication of this type of research.

First, there is no generalizable concept that is being tested or explored and no underlying theoretical framework is used to explain what constituted the active ingredients that caused the observed effects. This makes replication highly difficult and limits the application of study results in other contexts significantly. In other words, evaluation of courses and curricula may be useful and of local interest but they rarely add anything to our existing knowledge base.[2,3]

Second, as a scientific community we need to carefully evaluate study methods regardless of the topic being explored. The present study, for example, used a pretest posttest design to conclude that participants learned something when being taught. While the obvious nature of this conclusion may seem intuitive, it begs the question: is there any type of teaching and training that would fail to improve trainees' knowledge and skills over time? And does this design allow us to make causal inferences?[4]

We should ask ourselves if we would accept the same conclusions in clinical research using the same study design and outcome measures as those used in the present study (and in many other education studies published in clinical journals). For example, would we accept a study that concluded that a new operative method results in improved outcomes based on differences before and after the intervention? Probably not, just as we should not accept the use of self-assessments, which repeatedly have proven to be poor indicators of actual skills or knowledge.[5] In other words, if the journal and our community wish to take medical education research seriously, we need to apply the same standards as expected in clinical research to medical education research, while emphasizing the role of improving our conceptual understanding of a subject rather than concluding that training works or that trainees loved the course. ■

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REPLY

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We thank Dr Tolsgaard for his thoughtful letter regarding our article "Implementation and Validation of a Retroperitoneal Dissection Curriculum."[1] Although residency programs understand the need for simulation-based training, there are limited evidence-based curricula available, particularly in gynecology. Our study presented a comprehensive, multimodal teaching approach to laparoscopic retroperitoneal dissection.

Dr Tolsgaard raised a concern regarding the lack of a theoretical framework guiding our research. Although not explicitly stated, we followed the framework of Zevin et al[2] for curriculum design and validation, including both cognitive and technical skills components. This framework draws on the theory of cognitive integration, explaining how transfer is improved when training incorporates both conceptual *and* procedural knowledge.[3] Our curriculum began with a video-based lecture regarding *Why* (conceptual) task elements and technical model practice for *How* (procedural) task elements.

To Dr Tolsgaard's second point about the assumption that teaching in any form leads to improvement in knowledge and skills, we contend this has yet to be proven in surgical