Summarizing the evidence of the benefit of surgical simulation in gynecologic surgery

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We appreciate the interest in our research and the important topic of evidence-based surgical training by Shen et al. While we agree with the concern about pooling randomized and observational studies, we believe that in the setting of limited evidence, as is the case regarding simulation training for gynecologic surgeries, analyzing all studies together provides the clearest summary of the evidence. In contrast with the suggestion by Shen et al., the evidence does not suggest differences in findings between the randomized trials and nonrandomized comparative studies. It is erroneous to compare only statistical significance of different groups of studies; this does not determine whether there are differences in findings but likely says more about power differences than statistical differences.

Although we omitted the data from our manuscript, we conducted linear regression analyses to determine whether the trials and observational studies had significantly different findings. In brief, none did (high fidelity vs. usual scores, \( P=0.63 \) between study designs; high fidelity vs. usual operating time, \( P=0.81 \); low fidelity vs. usual scores, \( P=0.10 \)).

Regarding GRADE methodology, we used the same rigorous system in all studies to assess their methodologic limitations, and downgraded the observational studies as per the ROBINS-I tool. This is consistent with guidance from the ROBINS-I and GRADE authors. Lastly, sample size is only one component to consider the precision of the quality of the evidence. We focused on the confidence interval and statistical significance of the estimates in our determinations of precision, and concluded that the estimates were sufficiently precise for our conclusions.

We believe our conclusions still hold as originally stated. We would like to again emphasize the need for more randomized trials, with larger numbers of trainees, that report patient-related outcomes.
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