



MEDICAL EDUCATION
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Objective structured assessment of normal vaginal delivery skill (OSADS)

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Background/Purpose: Objective assessment of technical skills is becoming increasingly important in the evaluation of medical trainees. Additionally, it may be useful for trainees to practice their skills on simulators prior to refining them through actual patient management. For simulation to be effective, the learner needs timely and objective feedback. Although objective structured assessment tools have been developed for other surgical procedures, no such tool exists for the performance of normal vaginal delivery. The objective of this study was to develop such a tool and to obtain data necessary to calculate the sample size required to demonstrate construct validity.

Methods: A rating scale was devised to assess operator skill in performing a normal vaginal delivery. The performance of a normal vaginal delivery was separated into seven steps. For each step, an integer score from one to five can be assigned. A higher score reflects better performance. Content validity and face validity were obtained by consultation with practicing obstetricians throughout the process of developing the scale. Two independent raters who were both considered “experts” in the performance of normal vaginal delivery each graded the same series of videos of performance of six normal vaginal deliveries using the rating scale. For the purposes of a sample size calculation for this Likert-type rating scale, we converted the scores to a dichotomous outcome (yes or no answer). We chose a score of three or above as proficient (yes) or below three as not proficient (no). **Results:** Two-thirds of the sample had a score of three or higher for each step. Using the results from this pilot project, a sample size was calculated to validate the rating scale. For a two-tailed alpha of 0.05, power of 80% and proportion of positive ratings (score of three or higher) of 0.70, the sample size was calculated to be 44. **Conclusions:** A sample size was calculated based on pilot data to establish construct validity of the OSADS. Once validated, this tool may be of use for future investigation to assess the effectiveness of simulation on the quality of performance of normal vaginal deliveries by trainees.