

Abstract

Title: The development and validation of performance ratings of medical students

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Abstract (350 words):

Background:

Assessment of professional competencies of medical students is a challenging task due to the complexity of clinical work that involves many contexts and multiple assessors. A traditional approach for performance ratings where different clinical services employed different rating forms using different criteria to determine students' competencies resulted in unreliable assessment results that were difficult to evaluate students' progress. Faculty of Medicine Siriraj Hospital developed a new scale for clinical performance assessment of sixth-year medical students that was used in all clinical services where students worked. This study examined the process of development and validation of this new performance assessment tool.

Methods:

A performance rating scale was developed based on a framework of medical competencies defined by the Medical Council of Thailand. The instrument was reviewed by all clinical faculty members and it was modified based on their feedback. This resulted in a performance rating scale that contained 12 items, each was scored on a four-category behavioral-anchored rating scale (poor, pass, good, and excellent). We employed many training sessions to instruct clinical teachers how to score students' performance. We then collected the ratings obtained from all clinical services that sixth-year medical students passed through in one academic year. We validated the rating scale functioning using a three-faceted partial credit Rasch model.

Results:

Over one academic year, a researcher collected 5,339 sheets of performance ratings of 241 medical students obtained from 78 clinical services in four departments. This includes 63,019 valid ratings. A researcher carried out a three-faceted partial credit Rasch model analysis where the probabilities of receiving ratings were determined by the student's performance, the rater stringency, and the item difficulty. The analysis revealed that all items and rating scales showed proper fit with the measurement model. The ratings of poor, pass, good, and excellent were used in 1, 5, 60, and 34 percent, respectively. The obtained ratings showed internal consistency reliability of 0.94. Seven items showed four functioning rating categories, while five items showed three functioning categories.

Conclusion:

The new 12-item clinical performance rating scale is a valid and reliable tool to assess medical students in clinical workplace settings.

Keywords: performance assessment, clinical performance ratings, medical students, Rasch model