

Replacing Non-functional Distractors to Improve the Quality of MCQs: A Quasi-experimental Study

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ABSTRACT The quality of multiple-choice questions (MCQs) can be determined by the discrimination index (DsI), difficulty index (DI), and distractor efficiency (DE) in post exam analysis. Selection of distractors is one of the most neglected aspects of MCQ preparation. The present study evaluated the effect on DsI by replacing non-functional distractor (NFD) with more plausible alternatives using a quasi-experimental study model. The DsI and NFD values were obtained from the MCQ examinations that were conducted during the year 2017 from 37 courses with each containing 50 MCQ's in the College of Dentistry, Majmaah University. The post exam analysis results were informed to the course directors and the faculty were given orientation program about replacing the NFD's with more plausible options. In the following year (2018), sixty percent of the previous year MCQ's were used with modified NFD's in those questions (1100 MCQ's). The average DsI and NFD were significantly improved from the year 2017 to 2018 ($P < 0.000$) with significant negative correlation between them ($P < 0.000$). This study shows that the psychometric properties of MCQs can be improved by creating better distractors. The researchers recommend providing faculty with more training on how to use distractors effectively in MCQ writing.