

# Evaluation of the Item Analysis of Multiple-Choice Pediatric Exams: A College of Medicine Departmental Review

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## ABSTRACT

**Objectives:** To evaluate the detailed indices of the analysis of the items of the written multiple-choice questions (MCQs) exams in the Department of Child Health, Faculty of Medicine over the last four academic years (1439-1443 AH) and to construct the outlines of a plan for improving the upcoming written MCQs exams.

**Methods:** This was retrospective cross-sectional study on the item analysis of the exams in the MBBS course of pediatrics-2 for both boys and girls group in the Child Health Department, Faculty of Medicine, King Khalid University, Saudi Arabia for the midterm MCQs exams in the years of 1439,1440,1441,1442 and the first semester of girl group in 1443. The total number of items studied in these 16 exams were 643 items. The data was obtained constitute the difficulty, discrimination, point biserial reliability and distractor analysis of each of the exams items. The data was tabulated and the statistical significance determined for some variables in the analysis.

**Results:** Total number of students enrolled in the study were 1002. The total number of items studied were 643 items. Regarding students' scores were as follows: A scored by 73 students (7.3%), B by 219 (21.8%), C by 331 (33%), D by 214 (21.4%) and F by 165 (16.5%). Difficulty index: considering a difficulty index of 80% as easy item of 30% or less as difficult item and that between 30% and 80% of moderate difficult; we obtain 3 categories of items: difficult items were 43 (6.6%) of the total items, moderate difficulty items were 343 (53.4%) and easy items 257 (40%). There was significant statistical correlation ( $p \leq 0.05$ ) when these difficulty levels compared over the exam years.

**Conclusions:** Departmental exam committee needs to work comprehensively to improve the difficulty of the exams towards moderate intermediate class also the quality of the questions need extensive work on refining the distractors and revision of the correctness and the suitability of a considerable number of items.

**Keywords:** Item analysis, multiple choice questions, Difficulty index, Discrimination index, Distractors, Non-functional distractor, Reliability.

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