

QUANTITATIVE AND QUALITATIVE ASSESSMENT OF UNDERGRADUATE PEDIATRICS OBJECTIVE WRITTEN EXAMS AT QENA FACULTY OF MEDICINE - SOUTH VALLEY UNIVERSITY

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Introduction

In 1990, Miller designed a hierarchical model for the assessment of clinical competence. This model starts with the assessment of cognition and ends with the assessment of behavior in practice. The assessment of cognition measures knowledge and its application (knows, knows how), and this could include the levels of Bloom's taxonomy of educational objectives from the level of comprehension to the level of evaluation. The most common method for the assessment of knowledge is the written method. Among the various written test methods, multiple choice questions (MCQs) are widely used to assess knowledge. The revised Blooms' cognitive taxonomy is mostly used to test different levels of learning by MCQs. MCQs are objective and scored easily and quickly. It could measure a high level of thinking. MCQs are used for a large number of students and are easy to grade.

Aim of the work

The purpose of this study was to analyze the quality of pediatrics multiple choice questions in terms of: difficulty and discrimination indices, distractor efficiency and internal consistency reliability (MCQ item analysis).

Subjects and Methods

Quantitative and qualitative analysis of MCQs examination paper of Pediatrics final exam were done.

Results

A total of 54 objective items (42 Single Best Answers [SBAs], and 4 Extended Matching Questions [EMQs] sets with 3 stems for each) were evaluated. Number and percentage of SBAs at different Modified Bloom's taxonomy levels (Figure 1). Distribution of Difficulty index (DIF I) of EMQ items (Table 1).

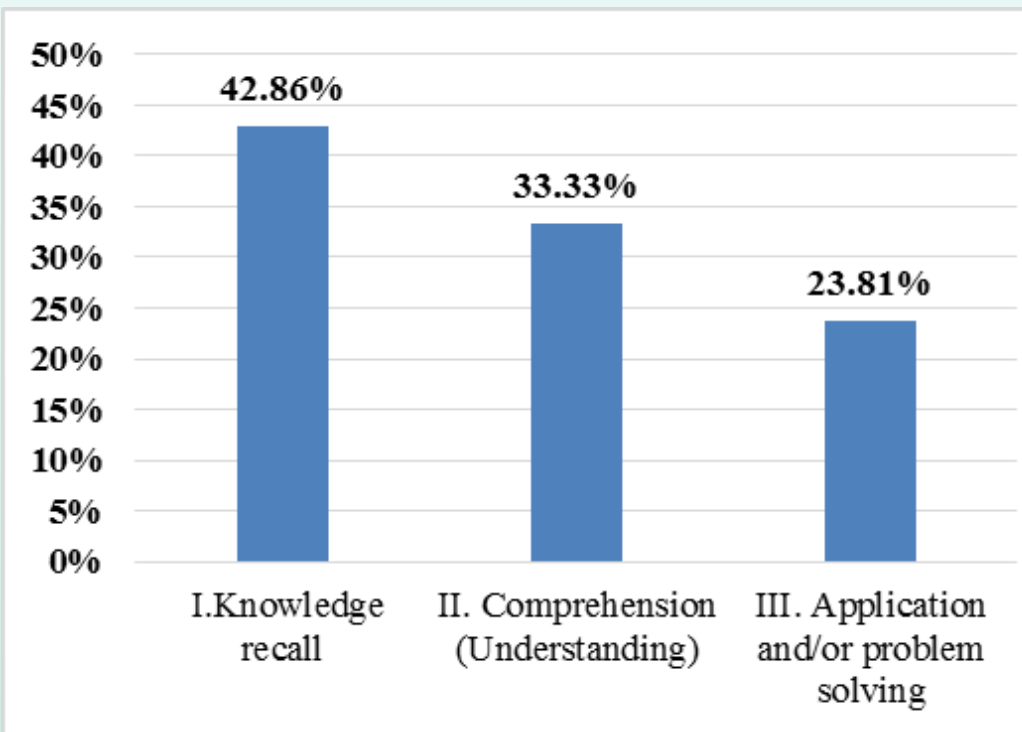


Figure 1: Percentage of SBAs addressing different modified Bloom's levels of cognitive skills

Table 1: Distribution of Difficulty index (DIF I) of EMQ items

Parameter	Interpretation	EMQ items%
Difficulty Index (DIF-I)		
< 0.3	Difficult	2(16.67%)
0.3-0.7	Moderate	2(16.67%)
0.7-1	Easy	8(66.67%)
Mean ± SD (range)		70.92±28.64(88.26)

Conclusion

In the Pediatrics exam paper, less than half SBAs tested recall of factual knowledge and EMQs were addressing higher order cognitive skills (Application and/or problem solving). The relatively high proportion of non-functioning distractors suggests that Pediatrics staff have some difficulty in developing plausible distractors.