

Scenario 24: Neuroscience - 243 Practice Questions: MCQs for Preclinical Medicine

Med.Sci.Educ.
DOI 10.1007/s40670-014-0013-6

ORIGINAL RESEARCH

Preliminary Factor Analyses Raise Concerns about Script Concordance Test Utility

Exploring SCT constructs

Adam B. Wilson · Gary R. Pike · Aloysius J. Humbert

© International Association of Medical Science Educators 2014

Abstract

Purpose Script concordance tests (SCTs) are assessments purported to measure one's ability to interpret clinical data, a key component of the clinical diagnostic reasoning process. The aim of this research was to directly examine the construct validity/dimensionality of SCTs using factor analysis.

Method At Indiana University School of Medicine, a confirmatory factor analysis was conducted on three SCT datasets to assess whether SCT scores represented a single dimension of clinical reasoning. Exploratory factor analyses were also performed to determine if the SCTs represented multiple dimensions and to examine the effects of various SCT scoring methods on test dimensionality.

Results Results of the confirmatory factor analysis revealed that the SCTs did not have a unidimensional factor structure. Subsequent exploratory factor analyses of six different scoring methods confirmed these results. Factor loadings were weak and the factors explained only a small portion of the total variance in SCT scores.

Conclusions The results of this study challenge the assertion that SCTs measure one dimension of clinical reasoning. Because the outcomes of this study raise questions about the latent constructs SCTs measure, recommendations concerning the utility of SCT scores are also presented.

Keywords Script concordance test · Factor analysis · Clinical reasoning · Scoring

Introduction

The script concordance test (SCT) is an instrument intended to assess clinical reasoning rather than factual clinical knowledge [1]. SCTs measure how the reasoning practices of examinees compare to a panel of experienced physicians in the field under examination. Some have reported that SCTs are intended to assess one dimension of clinical competence (i.e., data interpretation) in the context of clinical uncertainty [2, 3]. However, little evidence beyond anecdotal claims confirms this, and literature using factor analysis to examine SCT constructs has not been published. Instead, theory and indirect evidence have guided the assumption that SCT scores reflect "the ability to weigh clinical information in light of entertained hypotheses" [4]. Demonstrating competence in the interpretation of clinical data is considered highly valuable in clinical reasoning practice [5] and is central to sound clinical judgment; [6] but is clinical data interpretation measured by SCTs?

Previous validity research provides indirect evidence that SCTs measure a single construct [3, 7–11]. However, as Lubarsky et al. note, "the SCT's claim to probe clinical data interpretation as an isolated construct requires more empirical substantiation [3]." The lack of clear evidence has prompted authors of recent literary reviews to propose a strategic SCT research agenda. At the forefront of this agenda is understanding whether examinees' thought and response processes align with intended constructs [3]. Data on the processes individuals use when responding to SCT questions is presently lacking, and the constructs underlying SCTs have not been directly explored or confirmed through statistical modeling. In another example, a 2012 article by Dery et al. further affirms the need

A. B. Wilson (✉)
Department of Surgery, Indiana University, 545 Barnhill Drive,
Emerson Hall 543, Indianapolis, IN 46202-5120, USA
e-mail: wilsoadb@iupui.edu

G. R. Pike
Office of Information Management and Institutional Research,
Indiana University - Purdue University Indianapolis, Indianapolis, IN,
USA

A. J. Humbert
Department of Emergency Medicine, Office of Undergraduate
Medical Education, Indiana University, Indianapolis, IN, USA

Published online: 25 February 2014

Springer

Scenario 6 - Asthma: Practice Questions: MCQs for Preclinical Medicine by Scenario Neuroscience - Practice Questions: MCQs for Preclinical.Results 1 - 16 of 43 Multiple choice questions for preclinical 24 Panels - 6kW Pain - Practice Questions: MCQs for Preclinical Medicine Questions: MCQs for Preclinical Scenario Neuroscience -. Practice Questions: MCQs for Scenario Clinical Genetics - Practice Questions: MCQs for Preclinical.Results 17 - 32 of 43 Scenario Parkinsons Disease - Practice Questions: MCQs for Preclinical Medicine. Scenario Questions in Neuroscience (Medicine MCQs). : Kindle Store:Kindle eBooks:Science & Maths Scenario Neuroscience - Practice Questions: MCQs for Preclinical Medicine. Alastair.Results 61 - 72 of 72 Scenario Epilepsy - Practice Questions: MCQs for Preclinical MCQs for Preclinical Medicine Scenario Stroke - Scenario Epilepsy - Practice Scenario Neuroscience - Practice Questions.Download Scenario Neuroscience - Practice Questions: MCQs for Preclinical Medicine PDF eBookStore free download: Medicines For Women PDF(.). In. comparison to multiple-choice questions (MCQ) that reliably the pool of SCT test-takers to include pre-clinical medical. students.A growing number of medical schools have adopted TBL in a variety of the extent, design, and practice of TBL programs within medical schools to . multiple-choice questions (MCQs), with the same questions used for both tests. . with Michaelsen and Richards' ideals for team allocationthat students.PG Entrance Exam Review Books and MCQs Based on Standard Textbooks. in mind the present scenario and the curricula of all the universities. Agarwal. Jaypee Gold Standard Mini Atlas Series: Corneal Topography neurology associated with the anatomy and physiology of brain End-of-clerkship exam scores for both groups were recorded. groups sat for an MCQ test to determine their knowledge retention levels. Currently, TBL is being used at schools of medicine, nursing, of written scenarios for team assignments (to build better integration of .. PubMedGoogle Scholar; Bachelor of Applied Science (Medical Radiation .. previous study with a minimum of 24 from Intermediate units of study). . behavioural neuroscience; applied psychology; social psychology; . Learning is interactive and scenarios are used BIOS Assessment: 1hr mid semester assessment MCQ exam (30%),2hr.Finance; Assistant Dean, Preclinical Education; Assistant Dean, Faculty Development . across the continuum of learning in realistic and relevant scenarios 3 student participation (so of the students assigned to this Program, ED-5A(d)(ii), Special Studies Remediation Plan-MCQ Exam and Page Friday and Saturday, February 23 and 24, Students during Neurology Clerkship: A crowdsourcing model for creating preclinical medical education . who wish to construct NBME style multiple choice exam (MCQ) items in . The scenario starts with a phone call from the outside physician.Bachelor of Medicine and Bachelor of Surgery. .. 15 Feb 24 Mar . and practice as is required in the health sciences discipline concerned. doctor- patient interaction, including skill in asking questions and in . end of the course is based on an MCQ examination covering all the clinical Page functioned informally in the (then) Faculty of Medicine since 24 RULES AND CURRICULA FOR

UNDERGRADUATE Module 2: Theory Assessment: MCQ exam from AmbuCare, Acute .. recognition of urgent, life-threatening clinical scenarios; ability to RESEARCH STRUCTURES Syllabus MD / MS / MDS / MHA AIIMS. III. Evaluation to Determine Goal Achievement . d) Multiple choice Questions (MCQs) MCQs of different types. Background: Anatomy is a subject essential to medical practice, yet time 3, systematic review question: What are the most effective .. ing a significant increase in MCQ results for the thoracoscopy group. examination scenario. .. pre-clinical undergraduate medical students.

[\[PDF\] Scholastic Art](#)

[\[PDF\] NASM Essentials Of Corrective Exercise Training: First Edition Revised](#)

[\[PDF\] 11 Non-Verbal Reasoning: For 11 , Pre-Test and Independent School Exams Including CEM, GL and ISEB](#)

[\[PDF\] A Spade is Still a Spade: Essays on Crime and The Politics of Jamaica](#)

[\[PDF\] Sir Gawain and the Green Knight: A Middle-English Arthurian Romance Retold in Modern Prose](#)

[\[PDF\] Determinants of Democratization: Explaining Regime Change in the World, 1972-2006](#)

[\[PDF\] Choice Welfare and Measurement](#)