Reviewer's report

Title: Script Concordance Tests: Guidelines for Construction

Version: 2 Date: 18 February 2008

Reviewer: J. F. Arocha

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Author: J. P. Fournier et. al
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The main objective of the study is to provide practical guidelines for the construction of the Script Concordance Test. I believe that they achieve that result effectively and clearly. The SCT is a case-based assessment tool for the evaluation of clinical reasoning in ambiguous situations. The test is based on the notion of "script," as developed in script theory. SCT has been used in clinical assessment in recent years. The purpose of the paper is to present some guidelines for construction of SCT items.

Scripts as a form of memory organization has a long history in cognitive science. The basic notion, which has been amply tested in many disciplines is that when confronted with problems in their domains, professionals approach the problem with networks of linked concepts that serve to diagnose the situations and provide solutions (as opposed, for instance, of generating single hypothesis and testing each of them separately). Related notions include "schema" or 'mental models," which have been used also in the literature for other tasks.

The authors do s good job in briefly presenting the SCT's components and the steps in its construction. The SCT appears to be a promising form of clinical reasoning assessment and some studies have shown their reliability and validity as assessment tools. From a scientific point of view, what distinguishes SCT from other assessment tools is that it is based on a relatively-well validated theory of clinical reasoning. Assessment tools based on cognitive theory and research are still the minority in much of medical education. The paper is a welcome addition to the further dissemination of the test for clinical skill testing.

In general, this is a good paper. It is well written and contains important information for the improvement of assessment of clinical reasoning skills to complement other measures.

One question:

Given that the test guidelines call for having a 15-member panel. I think there are situations where this number may not be met. Are there some minimum standards when following the optimal strategy may not work?
What next?: Accept after discretionary revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.