

EDUCATION SECTION

MODEL ANSWERS FOR A CRITICAL REVIEW PAPER: CONJOINT EXAMINATION FOR MALAYSIAN MASTER OF MEDICINE (PSYCHIATRY) AND MASTER OF PSYCHOLOGICAL MEDICINE FOR NOVEMBER 2013

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Abstract

Objective: This paper aims to guide the postgraduate students to answer a Review Paper based on the May 2013 Examination for the Malaysian Master of Medicine (Psychiatry). The paper studied the Validity of a short clinical interview for psychiatric diagnosis: The mini-SCAN **Methods:** One of the papers from the final postgraduate exam in November 2013 was selected to exemplify the requisite for students' critical appraisal skill in the examination. **Results:** Model answers were provided at the end of the Critical Review Paper. **Conclusion:** This review paper provides the postgraduate students an essential understanding and critical thinking on the topic of Validity of a short clinical interview for psychiatric diagnosis. This paper may serve as a guideline to teach students on how to critically appraise topic related to psychiatry. *ASEAN Journal of Psychiatry, Vol. 15 (1): January – June 2014: 113-116.*

Keywords: Critical Review, Psychiatric Postgraduate Examination, Model Answer

TITLE OF PAPER: Validity of a short clinical interview for psychiatric diagnosis: The mini-SCAN, by F. J. Nienhuis, G. van de Willige, C. A. Th. Rijnders, P. de Jonge and D. Wiersma *BJP* 2010, 196:64-68.

The Schedules for Clinical Assessment in Neuropsychiatry (SCAN) is a semi-structured psychiatric interview. To promote clinical application of the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) system a shorter version (the mini-SCAN) was devised. Its psychometric properties were unknown. Objective of this paper is to establish the validity and practical properties of the mini-SCAN. **Methods section:** One hundred and six participants were interviewed

twice, once with the SCAN and once with the mini-SCAN. They were interviewed within a week with a minimum of a 2-day interval. Individuals were not made aware of the outcome by the interviewer. After completion of both interviews the diagnosis (if any) was communicated with the attending psychiatrist or resident, who could discuss the outcome with the participant. Interviews were administered by very experienced and well trained clinical psychologists and training psychiatrists. The level of agreement was established for the categories: no disorder, affective disorders, anxiety disorders, non-affective psychotic disorders, affective psychotic disorders.

Results

Table 1 Prevalence of diagnostic classes according to the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) and mini-SCAN in the sample ($n = 106$)

Diagnostic class	n (%)	
	SCAN	mini-SCAN
No disorder	15 (14)	15 (14)
Affective disorder	30 (28)	32 (30)
Affective psychosis	12 (11)	11 (10)
Anxiety disorder	34 (32)	33 (31)
Non-affective psychosis	15 (14)	15 (14)

The sensitivity, specificity and positive and negative predictive value were calculated using the SCAN as gold standard. Mean duration of the mini-SCAN interviews was 25

minutes shorter than the SCAN interviews. Participants and interviewers were generally satisfied with the interview format and questions.

QUESTIONS *(Answers were given, after the dotted line)*

- Based on Table 2, which diagnostic categories had the highest prevalence rate? (1 mark)

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Anxiety disorder

- Name two other types of validity that was not measured in this study? (2 marks)

(i)

(ii)

Factorial validity
 Cross validity
 Predictive validity
 Criterion validity
 Face validity

- Define sensitivity and specificity? (2 marks)

(i) Sensitivity

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(ii) Specificity

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- (iii) Sensitivity – the proportion of people of who have the disorder who are correctly identified as positive by test. It is the ability to make a true diagnosis, which in this case, is based on the SCAN diagnosis.
- (iv) Specificity - the measure for identifying a true non-case. It is the ability to exclude a true negative, which is based on the SCAN diagnosis.

Table 2.

Mini-SCAN (Affective disorder)	SCAN (Affective disorder)	
	Cases (+)	Non-Cases (-)
Cases (+)	28	4
Non-cases (-)	2	30

4. Based on the above 2 x 2 Table, in the context of affective disorder domain of new scale

- (i) What is the true positive (TP)? (1 mark)

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 = 28

- (ii) What is the false negative (FN)? (1 mark)

.....
 = 2

- (iii) Calculate the true positive rate (TPR). [Please show your calculation flow-chart] (2 marks)

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 TPR = sensitivity = $TP / (TP + FN) = 28 / (28 + 2) = 28 / 30 = 93.3\%$

- (iv) Calculate the specificity of the new scale. [Please show your calculation flow-chart] (2 marks)

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 TNR = specificity = $TN / (FP + TN) = 30 / (30 + 4) = 30 / 34 = 88.2\%$

- (v) Define positive predictive value (PPV). (2 marks)

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 The proportion of positive test results that are true positives (such as correct diagnosis)

- (vi) Calculate the PPV. [Please show your calculation flow-chart] (2 marks)

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$$\text{PPV} = \text{TP}/(\text{TP} + \text{FP}) = 28/(28 + 4) = 28/32 = 87.5\%$$

- (vii) Does the new rating scale have a good concurrent validity?

[Yes, No: Please circle the answer](1 mark) Give the reasons. (2 marks)

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Yes. There is good correlation between the tested scales with another validated scale.

5. State two benefits of Mini-SCAN use in primary care unit. (2 marks)

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- a. Short
- b. Reliable
- c. Valid

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