

Original article

MINI International Neuropsychiatric Schedule: clinical utility and patient acceptance

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Received 17 December 2002; received in revised form 16 March 2003; accepted 25 March 2003

Abstract

Objective. – Clinical diagnosis has been shown to be unreliable compared to structured diagnostic schedules. However, clinicians rarely use structured diagnostic schedules due to concerns about the feasibility in clinical practice and about patient acceptance. Mini International Neuropsychiatric Schedule is a short diagnostic instrument validated against SCID and CIDI but its feasibility and patient acceptance has not been studied.

Subjects and methods. – One hundred and eleven patients admitted to a partial program were administered Mini International Neuropsychiatric Schedule and the interview was timed. A short questionnaire was administered to assess patients' views about the interview. For a subgroup of patients, diagnoses by both open interviews and Mini International Neuropsychiatric Interview (MINI) were available. These were compared to look for agreement in primary diagnoses and co-morbid conditions.

Results. – MINI took an average of 16.4 min to administer. Patients' views of MINI were positive. It was considered comprehensive enough to cover all patient symptoms and at the same time not unduly lengthy. Patients were not bothered by the interview format. There was disagreement between MINI primary diagnosis and open diagnosis in 42% cases. In 33% the disagreement was of substantial clinical significance. MINI diagnosed more co-morbid conditions (average 2.05 compared to 0.5 in open interview).

Conclusions. – MINI is a short diagnostic interview schedule that can be easily incorporated into routine clinical interviews. It has good acceptance by patients.

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Keywords: MINI; Clinical diagnosis; Structured diagnosis; Patient acceptance; Comorbidity

1. Introduction

In the absence of objective laboratory testing, psychiatric diagnoses are based solely on diagnostic clinical interviewing. Approximately 40% of open clinical interviews are considered to be inadequate for valid psychiatric diagnoses [1], with substantial diagnostic disagreement between clinicians [2] and with structured diagnostic instruments like SCID [3]. In addition co-morbid psychiatric diagnoses are usually under-recognized [4]. Studies of co-morbidity rates in patients whose conditions were diagnosed by clinicians in routine clinical setting are one half to one third the co-morbidity rates reported in studies using standard research diagnostic interviews [5].

Several structured psychiatric interviews have been developed that increase reliability of psychiatric diagnoses when

compared to open interviews [6]. The most widely utilized are the Structured Clinical Interview for DSM-IV-TR Axis I (SCID-I) [7] and the Composite International Diagnostic Interview (CIDI) [8]. Despite these tests' established validity and reliability, practicing psychiatrists rarely use them.

To be useful in clinical practice, a structured interview must have four characteristics: validity, reliability, feasibility, and patient acceptance. Structured interview feasibility most commonly relates to interview length. Patient acceptance relates to the avoidance of ambiguous or complex phrasing of questions, the gradual rather than abrupt transitioning from one symptom area to another, and the type of response format utilized [9,10].

The Mini International Neuropsychiatric Interview (MINI) was developed to address the feasibility shortcomings of the SCID-I and CIDI [11]. Whereas the SCID-I and CIDI can take up to 3 h to administer and score, the MINI has a much shorter format. The MINI covers 17 axis I categories

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in a shortened format. It has good correlation with SCID-I and CIDI. The kappa values for most psychiatric diagnoses with SCID-I were 0.70 or above. Five diagnoses including current mania, current agoraphobia, obsessive–compulsive disorder, current alcohol dependence and lifetime drug dependence had kappa values between 0.60 and 0.70. Three diagnoses including current dysthymia, social phobia, and current psychotic disorder scored between 0.50 and 0.60 while current drug dependence scored 0.43 [12]. The kappa values with CIDI were 0.70 or above for most diagnoses. Four diagnoses including current and lifetime manic episode, panic disorder, current and life time psychotic disorder scored between 0.60 and 0.70; three diagnoses including agoraphobia, social phobia, lifetime bulimia scored between 0.50 and 0.60 and two diagnoses including generalized anxiety disorder and simple phobia scored under 0.50 [13].

There has been no research conducted into whether the MINI is feasible in an actual clinical practice and how it would impact on psychiatric diagnosis. To address the feasibility of using the MINI in a normal clinical practice, the current study examines the time required to administer and score the MINI in an outpatient/partial care setting. It examines the question of whether or not the MINI is acceptable to patients through use of a short patient questionnaire. To examine the impact of MINI on clinical diagnosis, the study compares the primary and secondary diagnoses in a subset of 42 patients who were diagnosed both by clinical interview and by the MINI to look for diagnostic agreement between the two diagnostic formats.

2. Subjects and methods

This is a study of 111 consecutive adult psychiatric outpatients from an acute partial hospitalization program in South Jersey. Exclusion criteria included patients who were hearing impaired, not fluent in English, age 65 and older, or were diagnosed with mental retardation. The institutional review board approved this study. After patient consent was obtained, all participants were administered MINI as part of the initial psychiatric interview. All MINI structured interviews were administered by one of the authors (N. Pinninti), a board certified psychiatrist who has extensive experience in the administration of various rating scales including SCID and MINI. Time was closely calculated for administering and scoring the MINI.

After the MINI interview was completed, all participants were asked to complete a three-item questionnaire regarding the structured diagnostic interview (Table 1). The questionnaire was designed to determine whether patients felt the questions on the MINI were excessive, were comprehensive in regards uncovering all their psychiatric symptoms, and whether they found the structured interview format in any way disturbing.

A subset of 42 patients was recently discharged from in-patient settings and had discharge diagnoses. These diag-

Table 1
Questionnaire of patient acceptance

Compared to usual method of asking questions, please give your reactions to the questionnaire type of the interview you had by answering the following questions:	
(1) Were the questions too many for you?	
–Yes	–No
(2) Did the questions cover all your symptoms?	
–Yes	–No
(3) Did reading the questions bother you in any way?	
–Yes	–No
(4) Do you have any other comments about the interview?-----	

noses were through unstructured interviews by the physicians who discharged them. The primary and secondary diagnoses of this group from open and MINI interviews were compared. Open and structured interviews were given within 1 week of each other (mean 4 days). The author-administering MINI was blind to the diagnosis by open clinical interview. The difference, in both primary and secondary diagnoses, was compared to ascertain the degree of agreement between open clinical interview and structured diagnostic interview with MINI. Also the number of comorbid conditions by both interviews was compared.

3. Results

The age range of the sample was 18–64-years-old (mean = 37 and S.D. 11.5). Fifty-two percent of the sample was female ($n = 58$) and 48% male ($n = 53$). Caucasians constituted 78% ($n = 87$), African–Americans 21% ($n = 23$) and others less than 1%. The educational background of the subjects ranged from seventh grade to professional education (mean = 12 and S.D. 2.4).

The actual time taken for the diagnostic schedule to be completed ranged from 8 to 31 min (mean = 16.4 min and S.D. 4.4). Only one patient was unable to complete the interview, due to paranoia and agitation.

Eighty-four percent of the patients ($n = 100$) considered that the interview was not lengthy. Ninety-four percent ($n = 105$) reported that it covered all their symptoms. Eighty-nine percent ($n = 103$) mentioned that they were not troubled in any way by structured reading of questions to them as opposed to free flowing interview. Twenty-three patients made additional comments. These collateral comments were collated. Fourteen of these patients said that the questions were very specific and helped them remember some symptoms; three patients said that some questions were complex; three patients said that yes or no answers were difficult for some questions.

The 42 participants with diagnoses from both unstructured and structured interviews showed great disparity in their primary diagnoses (Fig. 1). There was diagnostic disagreement in 42% of the subjects ($n = 18$). For the primary

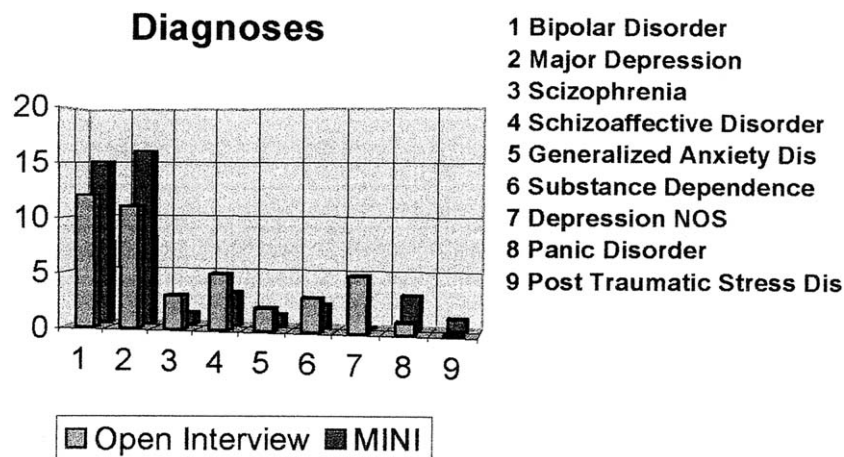


Fig. 1. Comparison of primary diagnoses by clinical interview and MINI.

diagnoses, MINI found more bipolar disorder, major depression, panic disorder, and post traumatic stress disorder compared to open interview where clinicians diagnosed more schizophrenia, schizoaffective disorder, and depression NOS. The diagnostic disagreement was further categorized as of slight or substantial clinical significance. The categorization was based on whether the disagreement meant a substantial change in pharmacological treatment and prognosis. In 14 subjects (33%), the diagnostic disagreement was of substantial nature.

MINI identified an additional 86 co-morbid conditions in the 42 subjects compared to 26 co-morbid conditions diagnosed by open interview. For each subject, open interview identified on average 0.5 additional diagnoses compared to 2.05 by MINI. The 60 more diagnoses that MINI identified and not picked up in clinical interview primarily consisted of generalized anxiety disorder ($n = 18$), PTSD ($n = 11$), alcohol and drug dependence ($n = 10$) and panic disorder ($n = 9$).

4. Discussion

Psychiatrists rely exclusively on clinical interviews for evaluating patients despite proven superiority of structured interviews. One of the reasons is that most structured psychiatric diagnostic interviews are too lengthy to be practical or appropriate for general clinical practice. Physicians on average spend no more than an hour for initial psychiatric assessment. In one study of community mental health center, physicians spent about 45 min for initial psychiatric assessment [3]. With a mean of 16.4 min, the time needed to administer and score, MINI structured interview is suitable to be incorporated into routine psychiatric assessments in an outpatient and partial hospital setting without unduly lengthening the time of evaluation. The time taken to administer MINI in this setting is slightly lower than the 18 min it took to administer it in the validity studies [10].

Patients' views and reactions should be an important component of evaluating any diagnostic instruments. Patients' assessment of the MINI was very positive. Most of the

patients considered that MINI covered all their symptoms and at the same time was not too lengthy. Patients were not disturbed by the format of interviewing. Spontaneous comments by the patients were more revealing. Sixty percent of those who had spontaneous comments reported that the specific questions helped them remember some symptoms. Marshall et al. [14] reported similar findings. In their study the SDI and self-report questionnaires were perceived by patients as slightly to moderately helpful in promoting new insight about themselves and in facilitating therapy. They were not considered to be intrusive.

There was agreement between primary MINI and clinical diagnosis in only 58% of the cases. In 14 patients (33%) the disagreement was categorized as major. Bosco and others reported similar disagreements between open and structured diagnostic interviews. In their study routine clinical diagnosis was inaccurate in 50% of the cases they studied compared to SCID. Most of the inaccuracies were categorized as major and had substantial treatment and prognostic implications. This degree of diagnostic disagreement is a matter of concern. There could be number of reasons for this discrepancy. One is the time gap between open interview and structured interview of 4–7 days. However, it is unlikely that this short time gap would account for the substantial differences. Second, almost all the open diagnoses were made in inpatient setting. There could be diagnostic drift towards diagnoses with higher reimbursement in inpatient settings. The third possibility is that clinical diagnosis is not reliable in substantial proportion of patients.

MINI diagnosed substantially more number of co-morbid conditions particularly in the two groups of anxiety disorders and substance dependence. These findings are consistent with other reports in literature. Zimmerman and others found that clinical interview detected only half to a third of co-morbid conditions compared to SCID. Co-morbidity is extremely common, usually under diagnosed, impacts on treatment and prognosis and may be a reason why some patients' seek medical attention [15]. Detection of co-morbidity is important for therapeutic, prognostic and patient satisfaction

reasons. MINI, in this study has shown to be a good instrument to detect co-morbidity.

There are some weaknesses in study design. These include using a short patient questionnaire that was produced by the authors and not validated. This questionnaire had dichotomous responses and use of a Likert scale response would have given more precise information of patient's views. There was a time span between when the open-ended interviews and MINI were given that was not controlled, but in no case was this greater than 7 days. One author conducted all the interviews and patients' reactions to the MINI could be influenced by the individual physician's style and personality. The patients studied were in outpatient/partial hospitalization setting with moderate psychopathology. The utility of MINI for inpatient setting and for severe psychopathology remains to be studied. Future studies should include multiple clinicians, patients with severe psychopathology and evaluate outcomes for patients diagnosed by open interview and structured interview with MINI.

5. Conclusions

MINI is a rapidly administered diagnostic interview that can be incorporated into routine clinical settings. It is acceptable to patients and should improve diagnostic accuracy. Further feasibility studies using MINI are warranted.

Acknowledgements

Acknowledgements are due to Maxine Voght and Lisa Schmidt for help with data analysis, Dr. Robert Steer for critique of manuscript.

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